

22 Dec 95

MEMORANDUM THRU Area Engineer, NOAO *Op RBF*
C/Const Div, ATTN: Contr Admin Br

⇒ FOR C/Engr Div

SUBJECT: Narrative Completion Report for Contract No. DACW29-93-C-0071, Lake Pontchartrain, Louisiana & Vicinity, High Level Plan, New Orleans Lakefront Levee West of IHNC, Orleans Avenue Canal Flood Protection Improvement Phase II-B, (West Side: Sta. 64+51.53 B/L to Sta. 90+26.91 B/L), Orleans Parish, Louisiana

1. The subject contract dated 8 Jun 93 was awarded to Johnson Brothers Corporation of Louisiana, 2002 20th Street, Suite B101, Kenner, Louisiana 70062. The Notice to Proceed was issued on 25 Jun 93 with construction to start no later than 5 Jul 93. The original completion date was set for 17 Dec 94, with the estimated amount of the contract being \$5,078,484.
2. Required work under this contract included the construction of a pile supported, reinforced concrete, T-type floodwall; clearing, grubbing, and degrading of existing levee for structure construction as well as structural backfill; furnishing and driving 86,724 linear feet of prestressed concrete piles, approximately 86,361 square feet of permanent steel sheet piling, and steel sheet piling for cofferdam; placement of cofferdam backfill; dewatering; demolition of existing wall concrete cap and sheet piling; fertilizing, seeding, and mulching; cleaning and coating of existing retaining wall; placing erosion control silt fence; performing miscellaneous paving; and all other incidental work to floodwall constructions including site restoration.
3. The Preconstruction Conference was held at the New Orleans Area Office on 25 Jun 93. Detailed minutes of this meeting are located in the contract file.
4. The Notice to Proceed was signed by the Contractor on 25 Jun 93. The contractor began mobilizing equipment, preparing staging area T-4, and performing preliminary survey work on 28 Jun 93. The project trailer and the T-4 yard area including security fence were completed by 12 Jul 93. Work on staging area T-5 began on 27 Jul 93. Driving of cofferdam sheets began on 18 Aug 93. A P&H 670 crane, Ice 612 vibratory hammer with power pack, and a 17-foot motorized flatboat was mobilized for this task.

CELMN-CD-NO-Q

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5. This contract provided for 14 major construction phases: (1) Clearing and Grubbing, (2) Fertilizing, Seeding, and Mulching (3) Structural Excavation and Backfill, (4) Cofferdam Backfill, (5) Steel Sheet Piling, Type PSA-23, (6) Steel Sheet piling, PZ-27, (7) Steel Sheet Piling, PZ-22, (8) Steel Sheet Piling, PZ-27 and PSA-23, Cofferdam, (9) Piling, Concrete Precast, Prestressed, (14-inch x 14-inch), (10) Reinforced Concrete Floodwall, (11) Miscellaneous Metalwork and Specialty Items, (12) Sidewalk Concrete, (13) Selective Demolition, (14) Clean and Coat Existing Retaining Wall. Some of the work phases were of a routine nature; however, there were some phases that required a certain amount of skill to obtain satisfactory results such as the reinforced concrete floodwall and driving the precast concrete piles.

6. The driving of cofferdam sheets began on 18 Aug 95 with the closure at approximate Wall-Line Sta. 35+87. The 58-foot-long CZ-114 sheets were driven to a tip elevation of -47.5 feet using stationary barges as a template. The cofferdam was composed of 8 cells with additional closures at Wall-Line Sta's. 33+29, 31+29, 28+92, 25+40, 19+97, 16+44, 12+82, and 9+88. Work primary to each cell was completed before the next cell was started, with the sheets being advanced from one cell to the next. Equipment used in this phase of work was one 4000 Manitowac crane, two 30-by 120-foot barges, one Ice 612 vibratory hammer, one P&H 670 crane (initially), and one 17-foot motorized flatboat. The last of the cofferdam sheets were extracted on 21 Jul 95.

7. On 23 Nov 93, the driving of 85,602 square feet of CZ-114, 493.3 square feet of PSA-23, and 266 square feet of PZ-22 permanent steel sheet piling began. A cold rolled sheet piling substitute (CZ-114) was used instead of the PZ-27, PZ-22, and most of the PSA-23 sheets; two CZ101 sheets were substituted for PSA-23 sheets as well. Pilings were driven from wall-line stations 9+95.17 to 35+80.21. The sheets were aligned using secured mats for a template, and all were driven to tip elevation of -38.5 feet. Cathodic protection was installed concurrent with the installation of the structural reinforcement. Equipment used to drive the piling was one 4000 Manitowac crane, two 30-by 120-foot barges, one Ice 612 vibratory hammer with power pack, and one 17-foot motorized flatboat. This phase of work was completed on 6 Jun 95.

8. The driving of the first 14- by 14-inch precast, prestressed concrete piles began on 10 Dec 93. A total of 396 77-foot 3-inch piles and 726 79-foot 3-inch piles were driven on a 2V to 1H

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batter. A Manitowoc 4000 barge-mounted crane was used to drive the concrete piles. During driving operations, an extensive guide template was used to assure correct alignment. Quality assurance was maintained during the driving by using a transit, marking the pile footage, and recording blow counts for the 86,724 linear feet of 14-inch-square, prestressed, precast piles. All concrete piles were driven to grade. Equipment used included one 4000 Manitowoc crane, two 30- by 120-foot barges, one Vulcan 512 air hammer, and one 17-foot motorized flatboat. Concrete pile driving was completed on 31 May 95.

9. The contractor commenced construction of the reinforced concrete floodwall on 11 Jan 94. The work consisted of constructing 66 T-type concrete monoliths. The contractor used a forming system designed and supplied by Karlson Forming Specialties, Inc. A gang form construction technique was used employing laminated sheeting and wooden structural members secured with she-bolts and braced with screwjacks attached to the footing and/or concrete deadmen. The floodwall was constructed atop its footing in 2 placements throughout the first 16 monoliths, W/L Sta's 35+75-29+51. Following the deletion by modification P00013 of the construction joint at elevation 4.00 feet, they were placed monolithically. The concrete was delivered to the job site by concrete mixer trucks and was placed into the forms by use of elephant trunks (tremees) of various lengths. One and three yard concrete buckets were used. In addition, the following equipment/material was used: one Manitowoc 4000 crane (occasionally); one 599 American crane; two concrete dump buckets; two concrete vibrators; form oil; curing compound; miscellaneous hand tools; two electric generators; and electrically driven power tools. Quality control was maintained daily through use of 1246 check-out list. Air content tests, slump tests, and molding of test cylinders were performed by Delta Testing. All concrete cylinders were tested at the soils lab at the New Orleans District. This phase of work was completed on 23 Jun 95.

10. On 26 Aug 93, the contractor began excavating the first cell. Structural backfill and excavation were performed on an intermittent basis depending on cell requirements and weather conditions. Backfill material was also placed as cofferdam backfill until deleted in compliance with modification P0002, which raised the bottom of the footing to elevation -6.33 feet. Thereafter, excavated fill was stored and processed at the west levee storage area. In addition to the on-site material, 11,276 truck-yards of spillway material was incorporated into the structural backfill. Because of the sequential nature of the

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work necessitated by the use of multiple cells, the backfill operation became a critical choke point in the steady progression of the work. As a result of untimely rains, which adversely effected the backfill operations, work over the entire project was sometimes halted. Equipment used for this phase of work included at one time or another the following: one Mikasa vibratory roller; one plate compactor; one Cat D-8 dozer; one Cat D-5 dozer; one Cat D-4 dozer; one Cat 235 backhoe; four dump trucks; one 166 Bantam backhoe; and occasionally the 4000 Manitowoc with clam bucket. Structural Excavation of the final cell ended on 2 May 95; Structural Backfill was completed on 24 Jul 95.

11. Selective Demolition began on 15 Sep 93 and concluded on 29 Apr 95 with the removal of approximately 2,600 feet of concrete cap and sheet piles. Concrete cap was crushed with a La Bounty hydraulic concrete crusher either mounted on a 235 Cat backhoe or the 4000 Manitowoc crane. The existing sheet piles were extracted with the Ice 612 vibratory hammer. Equipment used consisted of one La Bounty concrete crusher, one 235 Cat backhoe, one 4000 Manitowoc crane, one Ice vibratory hammer, and one dump truck.

12. Cementitious paining of the floodwall began on 27 Apr 95 and continued intermittently through 11 Aug 95. The cleaning and coating of the existing retaining wall began on 11 Aug 95 and was completed on 12 Aug 95. The subcontractor presented several test panels before one was found acceptable. The cementitious coat was applied in a two-coat system following the manufacturer's directions, followed by two coats of Acrylic Emulsion. The cementitious coat was applied with rollers, while the Acrylic was both rolled and applied by hairless sprayer. The retaining wall received one coat of Acrylic Emulsion, as well as one coat of clear sealer. Both the floodwall and retaining wall were cleaned with a 2,500 psi pressure washer. Equipment used included the pressure washer, one 8- by 24-foot barge, one airless sprayer, and miscellaneous hand tools.

13. The subcontractor, Economy Grassing, Inc., performed the fertilizing, seeding, and mulching phases of work. Work began on 23 Aug 95 with the protected side of the west embankment, which was completed on 24 Aug 95. The east levee embankment, storage sites, and yard area were started on 2 Oct 95 and completed on 3 Oct 95. After the fertilizer was broadcast, it was cut-in to a depth of 2 inches with a harrow. Bermuda grass seed was broadcast and then sealed with a pass of a culti-packer. Finally, mulch was applied with a Hydro-mulcher. A total of 4.93

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acres was prepared. The contractor used one farm tractor, one spike-tooth harrow, one Hydro-mulch sprayer, one culti-packer, one tractor-mounted rotary broadcaster, and one farm tractor.

14. There were 19 modifications on the contract, and a summary of each follows.

a. P00001, dated 14 Sep 93, modified the contract by adding a remittance address to Block 16 on SF-1442.

b. P00002, dated 28 Oct 93, modified the contract to raise the T-wall base elevation to -6.33.

c. P00003, dated 12 Nov 93, extended the required completion date of the contract 2 calendar days as a result of unusually severe weather.

d. P00004, dated 19 Jan 94, modified the contract to provide funds for payment in accordance with Special Clause H-28, an increase of 1,427,000.

e. P00005, dated 26 Jan 94, modified the contract to exclude the raised garland, column patterns, chamfer, dummy joints, and urns from receiving a cementitious finish. The contract price was increased by \$4,158.09 and the contract time remained unchanged.

f. P00006, dated 28 Jan 94, defined the parameters of UCO-01, Mod P00002. Bid Item 0016, Adjustment of T-wall Elevation, was added, which increased the contract price by \$230,019.80 and increased the contract time by 95 calendar days.

g. P00007, dated 7 Feb 94, extended the required completion date of the contract 8 calendar days as a result of unusually severe weather.

h. P00008, dated 26 Apr 94, modified the contract to provide funds for payment in accordance with Special Clause H-28, an increase of \$1,989,484.

i. P00009, dated 4 May 94, extended the required completion date of the contract 8 calendar days as a result of unusually severe weather.

j. P00010, dated 6 Jun 94, modified the contract to drive

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6,151.25 square feet of PZ-27 steel sheet piling 2-feet 0-inches from the protected side face of the existing floodwall from B/L Sta. 65+79 to Sta. 67+64. Note Mod P00011.

k. P00011, dated 20 Jul 94, modified the contract by adding Bid Item 0017, Lump Sum Adjustment for driving steel sheet piling between Sta's. 65+79 and 67+64. The contract price was increased by \$18,403.74 and the contract time was increased by 2 calendar days.

l. P00012, dated 2 Aug 94, extended the required completion date of the contract 44 calendar days as a result of unusually severe weather.

m. P00013, dated 15 Sep 94, modified the contract to remove the construction joints on the floodwall via a Value Engineering change proposal. Bid Item 0018, Removal of Construction Joints, and Bid Item 0019, VECP Payment Lump Sum for Removal of Construction Joints, were added. The contract price was decreased by \$10,800 with no change in contract time.

n. P00014, dated 18 Oct 94, modified the contract to tie-in the open areas at each end of the emergency sheet piling. Bid Item 0020, Emergency Flooding Protection (CIN-05). The contract price was increased by \$905 with no change in contract time.

o. P00015, dated 9 Nov 94, extended the required completion date of the contract 18 calendar days as a result of unusually severe weather.

p. P00016, dated 13 Feb 95, extended the required completion date of the contract 11 calendar days as a result of unusually severe weather.

q. P00017, dated 8 May 95, extended the required completion date of the contract 50 calendar days as a result of unusually severe weather.

r. P00018, dated 15 Aug 95, extended the required completion date of the contract 29 calendar days as a result of unusually severe weather.

s. A0001, dated 8 Nov 95, extended the required completion date of the contract 38 calendar days as a result of unusually severe weather.

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15. Following is a list of major suppliers on the subject contract:

- a. Concrete - Carlo Ditta, Inc., Harvey, LA
- b. Reinforcing Steel - Lulich Steel Corp., Slidell, LA
- c. Concrete Piling - Gulf Coast Pre-Stress, Inc., Pass Christian, MS.
- d. Waterstop - Building Specialties, Inc., New Orleans, LA.
- e. Steel Sheet Pilings - Casteel Group, Inc., Covington, La.
- f. Cathodic Protection - Cathodic Protection Services Co., Metairie, LA.
- g. Cementitious Paint - Construction Materials, Inc., Baton Rouge, LA.
- h. Forms - Karlson Forming Specialties, Inc., Amery, WI.
- i. Spillway Material - Hamps Trucking Co., New Orleans, LA.

16. Subcontractors performing work on this project along with subcontractor amounts and contract responsibilities are as follows:

- a. McMillion Dozer Service, Inc., 11204 Jefferson Highway, River Ridge, LA 70123. This subcontract payment was over \$100,000. with payment made under 04 - Structural Excavation and Backfill.
- b. Scott Derr Painting Co., 1904 San Joaguin Parkway, Friedship, TX 77546. This subcontract payment was for under \$50,000. with payment made under Items 11 and 15 - Reinforced Concrete Floodwall and Clean and Coat Existing Retaining Wall, respectively.
- c. Economy Grassing Inc., 7054 W. T. Hall Rd., Ethel, LA 70002. This subcontract payment was for under \$25,000. with payment made under Item 3 - Fertilizing, Seeding, and Mulching.

17. The contractor submitted and enforced an adequate Accident Prevention Program. Weekly tool box safety meetings were held. The contractor was cooperative in the performance of the work, and there were no lost time accidents.

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18. The contractor was efficient and professional in the performance of the work and the extra work required to complete this project. The equipment used was generally in excellent condition and capable of performing the work. The contractor maintained an adequate quality control organization and system which helped him complete the project on schedule.

19. Included herewith is a comparison of contract quantities versus actual quantities. A copy of the as-built drawings and surveys of the reference marker elevations are also enclosed.

Item No.	Description	Qty & Unit	Unit Price	Est. Amt.	Qty	Earnings to Date
1	Mob & Demob	LS	LS \$	150,000	100%	\$ 150,000
2	Clear & Grubbing	LS	LS \$	29,000	100%	\$ 29,000
3	Fert, Seed, and Mulch.	LS	LS \$	5,000	100%	\$ 5,000
4	Struc Excavation & Backfill	LS	LS \$	350,000	100%	\$ 350,000
5	Cofferdam Backfill	LS	LS \$	20,000	100%	\$ 20,000
6	Piling, Steel Sheet, Type PSA-27	465 SF	30. \$	13,950	493.3	\$ 14,799
7	Piling, Steel Sheet, Type PZ-27	85,441 SF	9. \$	768,969	85,602	\$ 770,418
8	Piling, Steel Sheet, Type PZ-22	244 SF	9. \$	2,196	266	\$ 2,394
9	Piling, Steel Sheet Type, PZ-27 & PSA-23 Cofferdam	LS	LS \$	850,000	100%	\$ 850,000
10	Piling, Concrete Precast, Prestressed, (14-Inch 14-Inch)	86,724 LF	12.25 \$	1,062,369	86,724	\$1,062,369
11	Reinforce Concrete Floodwall	LS	LS \$	1,504,158.09	100%	\$1,504,158.09

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12	Misc. Metalwork & Specialty Items	LS	LS	\$ 3,000	100%	\$ 3,000
13	Sidewalk Concrete	LS	LS	\$ 4,000	100%	\$ 4,000
14	Selective Demolition	LS	LS	\$ 300,000	100%	\$ 300,000
15	Clean and Coat Existing Retaining Wall	LS	LS	\$ 20,000	100%	\$ 20,000
16	Change in Elevation of T-wall, Base Slab (P00006)	LS	LS	\$230,019.80	100%	\$ 230,019.80
17	Lump Sum Adj. for Driving Sheet Piling between Sta. 65+79 & to Sta. 67+64	LS	LS	\$18,403.74	100%	\$18,403.74
18	Removal of Const. Joint	LS	LS	(\$ 24,000)	100%	(\$ 24,000)
19	VECP Payment for Removal of Const. Joints	LS	LS	\$ 13,200	100%	\$ 13,200
20	Emergency Flood- ing Protection	LS	LS	\$ 905	100%	\$ 905

20. The contract was completed in accordance with the contract plans and specifications with final acceptance on 12 Dec 95.



Encl

CHRIS WAGNER
Project Engineer
New Orleans Area Office

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DACW29-93-C-0071, Lake Pontchartrain, Louisiana & Vicinity,
High Level Plan, New Orleans Lakefront Levee West of IHNC,
Orleans Avenue Canal Flood Protection Improvement Phase II-B,
(West Side: Sta. 64+51.53 B/L to Sta. 90+26.91 B/L),
Orleans Parish, Louisiana

CF:

CELMN-CD-Q

CELMN-PA

CELMN-CT

CELMN-ED-C

CELMN-CD-B

CELMN-PP

CELMN-CD-CS

CELMN-OD-ON

Proj Engr (Wagner)

Proj Insp (B. Brogna)

Ofc Engr w/as-built

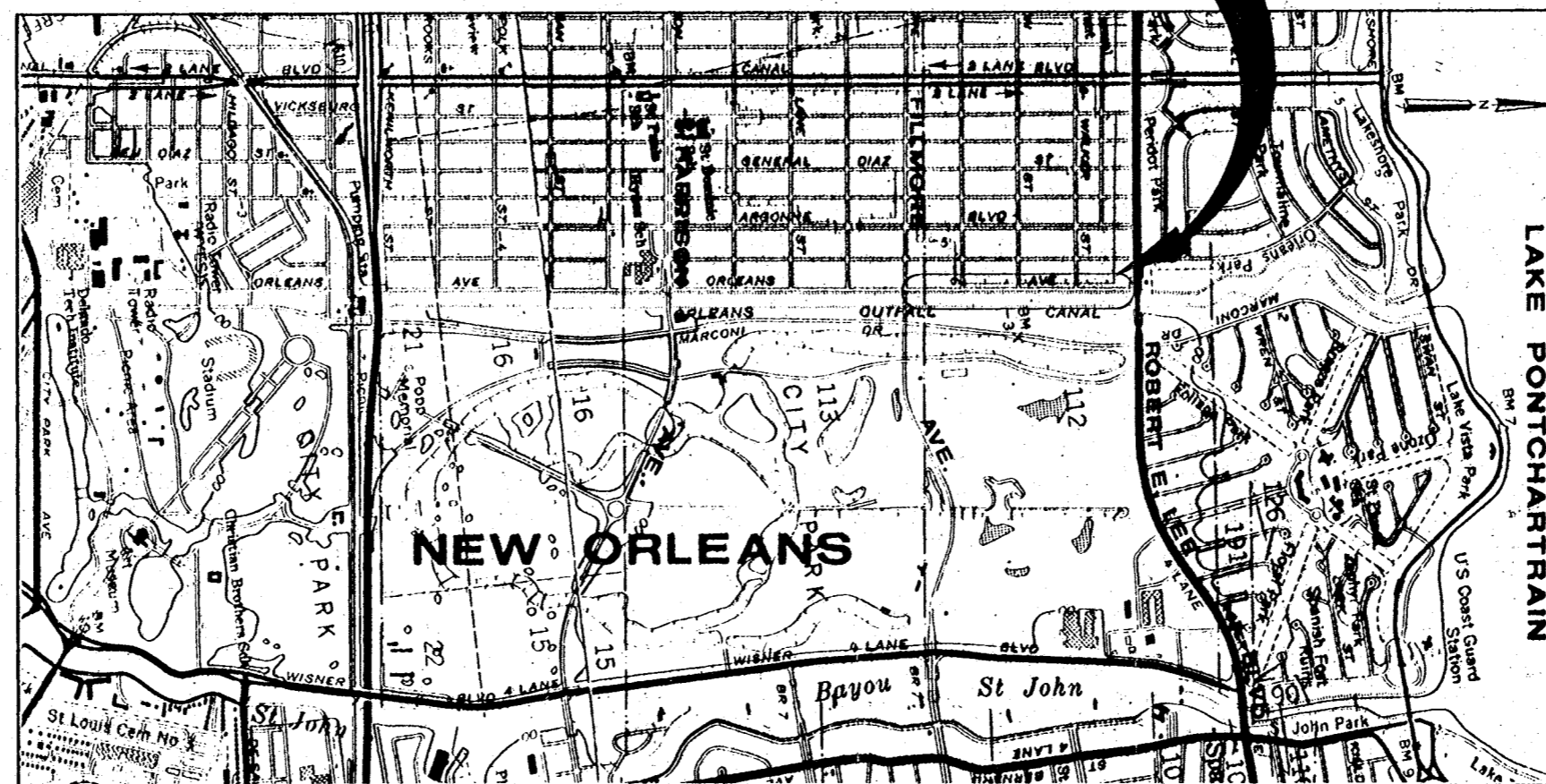
Safety is a Part
of Your Contract

ORLEANS AVENUE CANAL "As built"

FLOOD PROTECTION IMPROVEMENT PROJECT

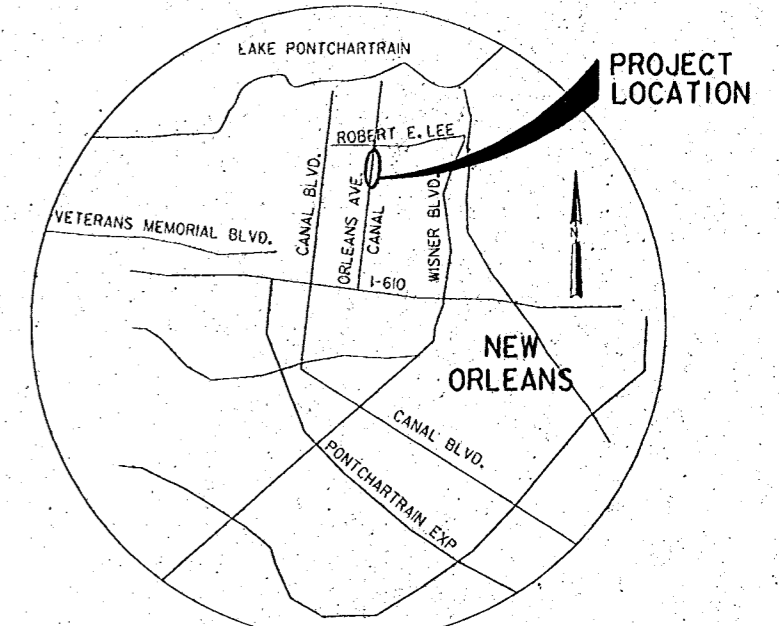
ORLEANS PARISH, LOUISIANA

PHASE II-B LOCATION OF WORK



LOCATION MAP

SCALE IN FEET
0 1000 2000 3000 4000



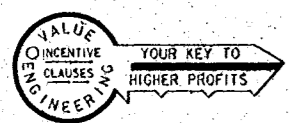
VICINITY MAP

SCALE IN FEET
0 5000 10000 15000 20000

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

DRAWING INDEX			
DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
1	TITLE SHEET, INDEX TO DRAWINGS, LOCATION MAP	20	COFFERDAM AND EQUIPMENT ACCESS DETAILS
2	LEGEND, ABBREVIATIONS & GENERAL NOTES	21	STEPS NEAR FILMORE AVENUE
3	AERIAL PROJECT MAP	22	RIGHTS OF WAY AND STORAGE AREA
4	GEOMETRIC LAYOUT	23	SOIL BORING LOGS
5-9	PLAN/PROFILE SHEETS AND AERIALS WITH IMPROVEMENTS	23a	SOIL BORING LEGEND
10	TYPICAL SECTION	24	BORROW AREA LOCATION
11	PILING, MONOLITH AND SHEET PILING LAYOUT	25-28	CROSS SECTIONS
12	EXCAVATION AND COFFERDAM LAYOUT		
13	RESERVED		
14	CONCRETE PILE DETAILS		
15	TYPICAL WALL JOINTS		
16	SHEET PILE DETAILS		
17	MISCELLANEOUS DETAILS		
18	TYPICAL T-WALL SECTION		
19	WALL ARCHITECTURAL TREATMENT		
19A	WALL ARCHITECTURAL TREATMENT		

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE STA. 64+51.53 TO STA. 90+28.91) ORLEANS PARISH, LOUISIANA LOCATION AND VICINITY MAP			
DESIGNED BY: DESIGN ENGINEERING, INC.	APPROVED BY: <i>Robert Amey</i>	CADD FILE: P-805	PILOT DATE: MAR. 1993
DRAWN BY: PAUL KELLEN	CHECKED BY: T.M. SMITH	DATE: MAR. 1993	DESIGN BRANCH: SOLICITATION NO. DACW29-93-B-0059
SCHEMATIC BY: DESIGN ENGINEERING, INC.	APPROVED BY: <i>James W. Smith</i>	FILE NO. H-4-30960	DWG. NO. 1 OF 28
APPROVED BY: COLONEL C. E. DISTRICT ENGINEER			



2 Not in CAD file JDD: Feb. 7, 2000

Safety is a Part of Your Contract

GENERAL SYMBOLS EXISTING

- o 8" Ø OAK TREE AND TRUNK DIAMETER
- B-54 SOIL BORING AND NUMBER
- B-54 5" Ø SOIL BORING AND NUMBER
- BM BENCH MARK
- Y Y Y Y BANK OR SLOPE LINES
- PL PROPERTY LINE
- ROW, PROPERTY LINE
- X-X- FENCE
- G GAS (NATURAL)
- S SANITARY SEWER
- SFM SEWER FORCE MAIN
- D STORM DRAIN
- W WATER MAIN
- T BURIED TELEPHONE CABLE
- >< DRAINAGE CULVERT (UNDER 36"Ø)
- [] DRAINAGE CULVERT (36" AND OVER)
- Ⓢ SANITARY SEWER MANHOLE
- Ⓣ STORM DRAIN MANHOLE
- B-75 SHALLOW SOIL BORING AND NO.
- E ELECTRIC CONDUIT (BURIED)
- E ELECTRIC CABLE (OVERHEAD)

- C.B. CATCH BASIN
- Ⓜ DROP INLET
- Ⓣ TELEPHONE MANHOLE
- Ⓣ TELEPHONE JUNCTION BOX
- Ⓢ WATER MANHOLE W/VALVE
- FH FIRE HYDRANT
- Ⓢ GAS OR WATER VALVE
- Ⓢ GAS MANHOLE
- PISTA. 3+14.16 SURVEY BASELINE AND PISTATION
- 2+00 45°23' 4+00 BASELINE
- TRAFFIC OR RR SIGNAL LIGHT
- POWER POLE OR TELEPHONE POLE
- POWER POLE AND GUY ANCHOR
- TRANSMISSION TOWER
- ▨ STRUCTURE (HOUSE, GARAGE)
- ▨ GRADE
- CONC. DRIVEWAY OR WALK
- Ⓢ ELECTRIC (NOPS) MANHOLE
- SL STREET LIGHT
- ▨ TOP OF EXISTING FLOODWALL

PROPOSED

PROFILES & SECTIONS

- AREA OF LEVEE DEGRADING
- W/L (FLOOD SIDE) REQ'D. STEEL SHEET PILING OR T-WALL STEM
- AREA OF FILL (SEMI-COMPACTED FILL) LEVEE OR BERM
- REQ'D. BANK OR SLOPE LINES

- REQ'D. TOP OF SHEET PILING OR T-WALL
- EL. -7.5 REQ'D. CONCRETE T-WALL W/BOTTOM OF CONCRETE ELEVATION
- EL. -40.0 REQ'D. STEEL SHEET PILING W/BOTTOM OF PILING ELEVATION
- AREA OF FILL
- REQ'D. GRADE OF LEVEE OR BERM
- AREA OF LEVEE DEGRADING

Reinforcement Embedment and Splice Table

Bar Size	Minimum Embedment Length, Inches		Minimum Lap Length Inches	
	Top Bars	Other	Top Bars	Other
3	13	12	16	12
4	17	12	22	16
5	21	15	27	20
6	27	19	35	25
7	37	26	48	34
8	48	35	63	45
9	61	44	80	57
10	78	56	101	72
11	96	68	124	89
14	130	93	•	•
18	169	120	•	•

PROJECT BENCH MARK (M.S.L. EL = NGVD EL.)
 EL. 7.11 M.S.L. (1983 DATUM), C. & G.S. REFERENCE MARK DISK "CHRYSLER RM." AT NEW ORLEANS, ABOUT 0.45 MILES EAST ALONG LAKESHORE DRIVE FROM JUNCTION OF CANAL BOULEVARD, 125 YARDS NORTHWEST OF THE NORTHWEST CORNER OF LAKESHORE DRIVE BRIDGE OVER ORLEANS CANAL, SET IN THE TOP OF THE CONCRETE SEA WALL ALONG SHORE OF LAKE PONTCHARTRAIN, 33 FEET NORTHEAST OF THE NORTH ONE OF A GROUP OF PALM TREES, 66 FEET WEST OF CHRYSLER STATION DESCRIBED, 270 FEET NORTH OF THE CENTER LINE OF LAKESHORE DRIVE AND ABOUT 2 FEET ABOVE THE LEVEL OF THE DRIVE.

- Notes:
- Values in the table shall apply for bars spaced laterally, not less than 3db and when bars have concrete cover which complies with ACI 7.7.1.
 - When bar spacing laterally is greater than 5db and when bars have 2.5db or more inches of concrete cover, the values in the table may be reduced by a factor of 0.8.
 - Embedment and splice lengths shall be a minimum of 12 inches.
 - *Number 14 and 18 bars shall not be lap spliced. These bars shall be spliced with mechanical butt splices only.
 - Top bars are horizontal bars and bars inclined less than 45 degrees with respect to a horizontal plane which are placed such that more than 12 inches of concrete is cast in the member below the bar.

ABBREVIATIONS

- BM BENCH MARK
- BP BRACE POLE
- CB CATCH BASIN
- CMP CORRUGATED METAL PIPE
- CN CONCRETE NAIL
- CONC CONCRETE
- CP CONCRETE PIPE
- CSP CORRUGATED STEEL PIPE
- CY CUBIC YARD
- DI DROP INLET
- DIA DIAMETER
- D/W DRIVEWAY
- EL ELEVATION
- EXIST EXISTING
- FND FOUND
- FT FOOT
- HORIZ HORIZONTAL
- HWY HIGHWAY
- ID INTERNAL DIAMETER
- INV INVERT
- IR IRON ROD
- LF LINEAR FEET
- LG LONG
- LT LEFT
- MAX MAXIMUM
- MH MANHOLE
- MIN MINIMUM
- MSL MEAN SEA LEVEL
- OD OUTSIDE DIAMETER
- OLB ORLEANS LEVEE BOARD
- PI POINT OF INTERSECTION
- POT POINT ON TRAVERSE
- PROJ PROJECT
- PVC POLYVINYL CHLORIDE PIPE
- RCP REINFORCED CONCRETE PIPE
- RD ROAD
- RET RETAINING
- REINF REINFORCING
- REQ'D REQUIRED
- ROW OR R/W RIGHT-OF-WAY
- RR RAILROAD
- RRS RAILROAD SPIKE
- RT RIGHT
- SECT SECTION
- SMH SEWER MANHOLE
- ST STREET
- STA BASELINE STATION
- TC TOP OF CURB
- TEL TELEPHONE
- TYP TYPICAL
- UG UNDERGROUND
- USCGS UNITED STATES COAST & GEODETIC SURVEY
- VERT VERTICAL
- WT WEIGHT
- WS WATER SURFACE
- C/L CENTER LINE LEVEE/WALL
- Ⓢ OR W.Ⓢ WEST BASELINE
- W/L WALL LINE
- GIP GALVANIZED IRON PIPE
- NIC NOT IN CONTRACT
- NGVD NATIONAL GEODETIC VERTICAL DATUM

GENERAL NOTES

- All azimuths are true south azimuths turned in a clockwise direction from 0 degrees (due south).
- All elevations are expressed in feet and refer to National Geodetic Vertical Datum (N.G.V.D.).
- All R/W and construction easement lines are parallel with or perpendicular to the baseline, unless otherwise indicated.
- For log of borings, see DWG 23.
- For existing utilities location and approximate location of relocated utilities see 'Plan and Profile' drawings.

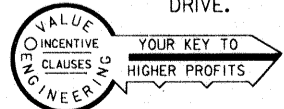
STEEL NOTES (STRUCTURAL STEEL)

- All structural steel shall be ASTM A36, unless otherwise noted.
- To prevent corrosion by moisture between steel surfaces in contact, all such contacts shall be sealed watertight by running a continuous 1/8" fillet weld along all edges of the contact, unless otherwise noted.
- All welding shall be electric welding. Workmanship and technique where applicable shall conform to the American Welding Society specifications AWS D1-83 Structural Welding Code.
- Welding symbols shown are those adopted by the American Welding Society and indicate only size and type of welds required. Detailed information shall be shown on the shop drawings and submitted by the contractor for approval.
- Items marked C.R.S. shall be corrosion resistant steel (Stainless Steel). See specifications.

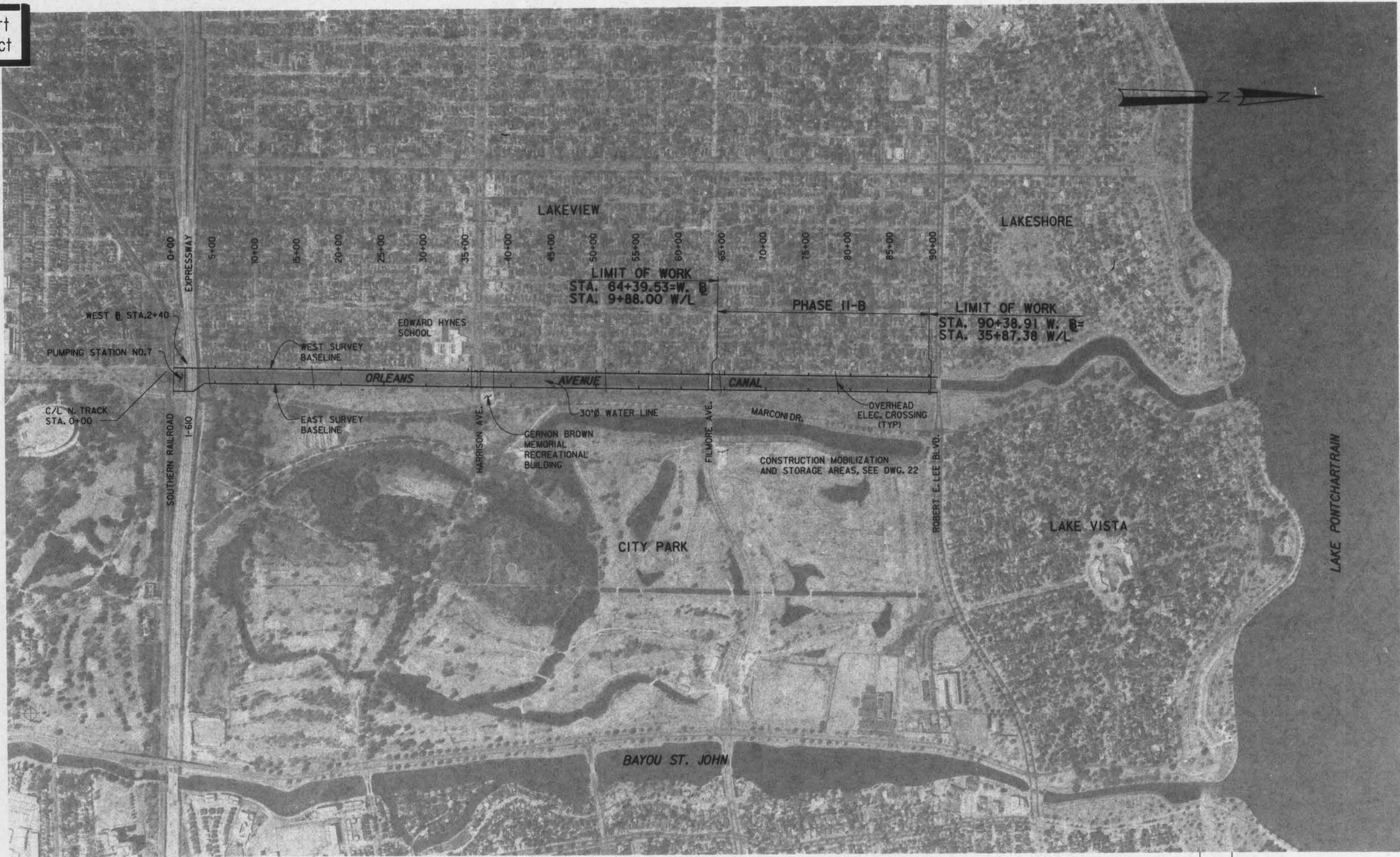
CONCRETE NOTES (CAST-IN-PLACE CONCRETE)

- f'c = 3000 PSI, fy = 60,000 PSI.
- All unformed surfaces shall be given a float finish, unless otherwise specified.
- All exterior formed surfaces not covered by backfill shall be class 'A' finish and surfaces covered by backfill shall be class 'D' finish, unless otherwise noted.
- Construction joints shall be provided where shown.
- Unless otherwise noted, provide 3/4" chamfer at all exposed joints, edges, external corners, vertical expansion joints and horizontal construction joints.
- All primary reinforcement shall have a minimum cover of 3" unless otherwise noted. The cover for secondary reinforcement may be reduced from the above by the diameter of the bar.
- All bends of reinforcement and all bar spacers and supports shall be in accordance with the American Concrete Institute 'Manual of Standard Practice for Detailing Reinforced Concrete Structures' in effect at the time of fabrication.
- Reinforcing bar designation numbers conform to the current numbering system of the Concrete Reinforcing Steel Institute.
- All reinforcing shall be lapped or embedded according to the tables on this drawing, unless otherwise noted.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
GENERAL NOTES AND LEGEND			
DESIGNED BY: M.B. SHUKLA	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: P.M. KILLEN	CADD FILE: II-B02S	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		
SOLICITATION NO. DACW29-93-B-0059		DWG. 2 OF 28	



Safety is a Part of Your Contract




AERIAL PROJECT MAP

PLAN

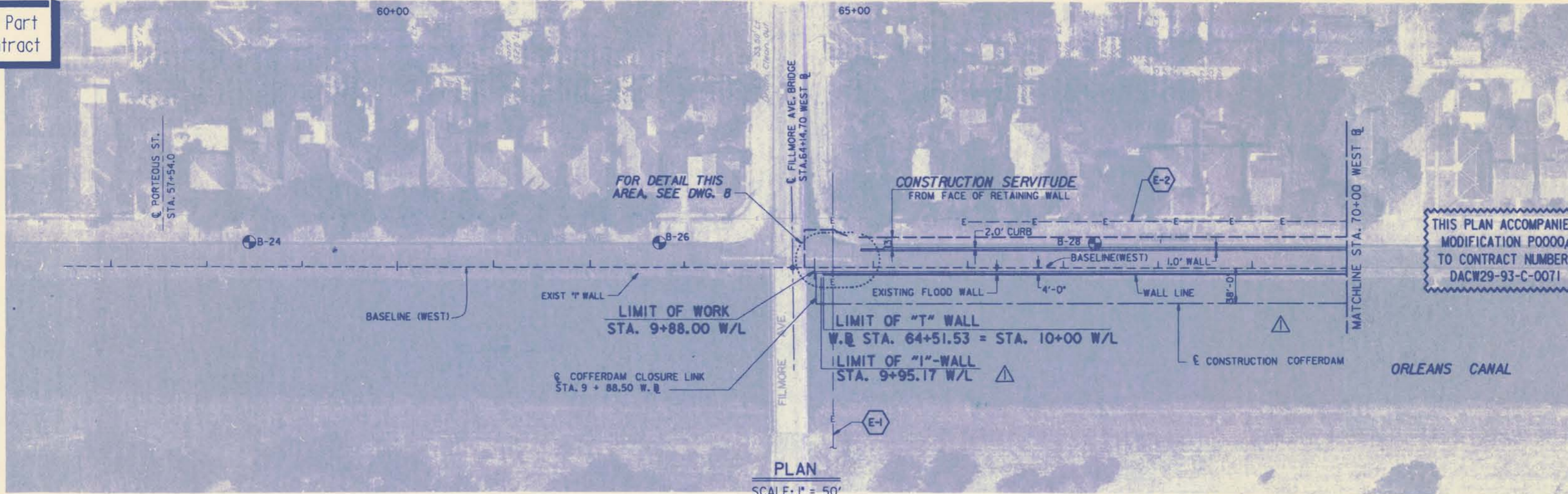
SCALE: 1" = 500'



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPERANZA AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+28.91) ORLEANS PARISH, LOUISIANA			
AERIAL PROJECT MAP			
DESIGNED BY: T.M.SMITH	DATE: MAR, 1993	PLOT SCALE: 1	PLOT DATE: MAR, 1993
DRAWN BY: KCR & PMK	CHECKED BY: T.M.SMITH	CADD FILE: II-B03S	FILE NO. H-4-30960
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		SOLICITATION NO. DACW29-93-B-0059	DWG. 3 OF 28

Safety is a Part of Your Contract

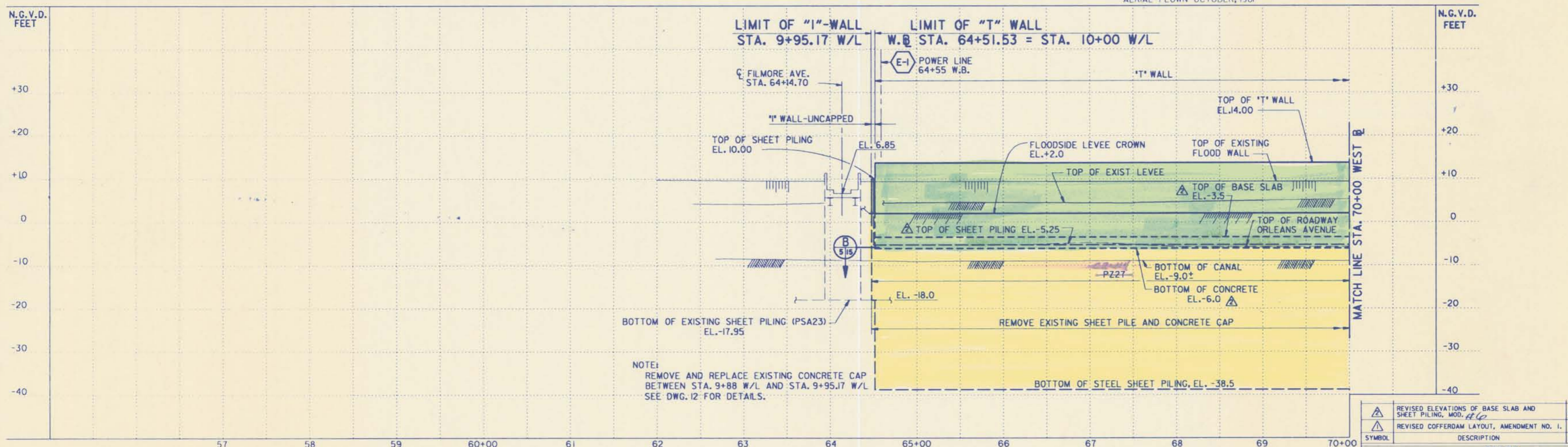
LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.



THIS PLAN ACCOMPANIES MODIFICATION P0000 TO CONTRACT NUMBER DACW29-93-C-0071

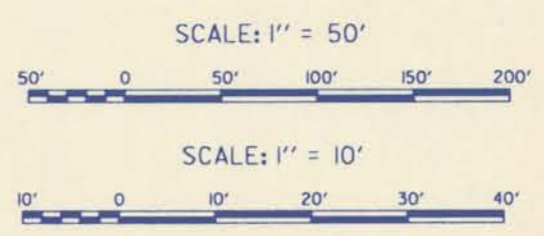
PLAN
SCALE: 1" = 50'

AERIAL FLOWN OCTOBER, 1981



WEST SIDE PROFILE
SCALE: 1"=50'-0" HORIZONTAL
1"=10'-0" VERTICAL

EXISTING FACILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-1	AERIAL POWER L.	64+55±	NEW ORLEANS PUBLIC SERVICE INC.	TO BE RELOCATED CONCURRENT WITH CONTRACT BY OWNER
E-2	AERIAL POWER L. 13,000 V. TRANS.	ALONG ORLEANS AVE.	NEW ORLEANS PUBLIC SERVICE INC.	TO BE DE-ENERGIZED BY OWNER AS REQ'D BY CONT.



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED ELEVATIONS OF BASE SLAB AND SHEET PILING, MOD. #10	10-27-93	M.D.
△	REVISED COFFERDAM LAYOUT, AMENDMENT NO. 1.	4-2-93	M.D.

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

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE AVE. S.
METAIRIE, LOUISIANA 70002

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN

**NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.**

ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

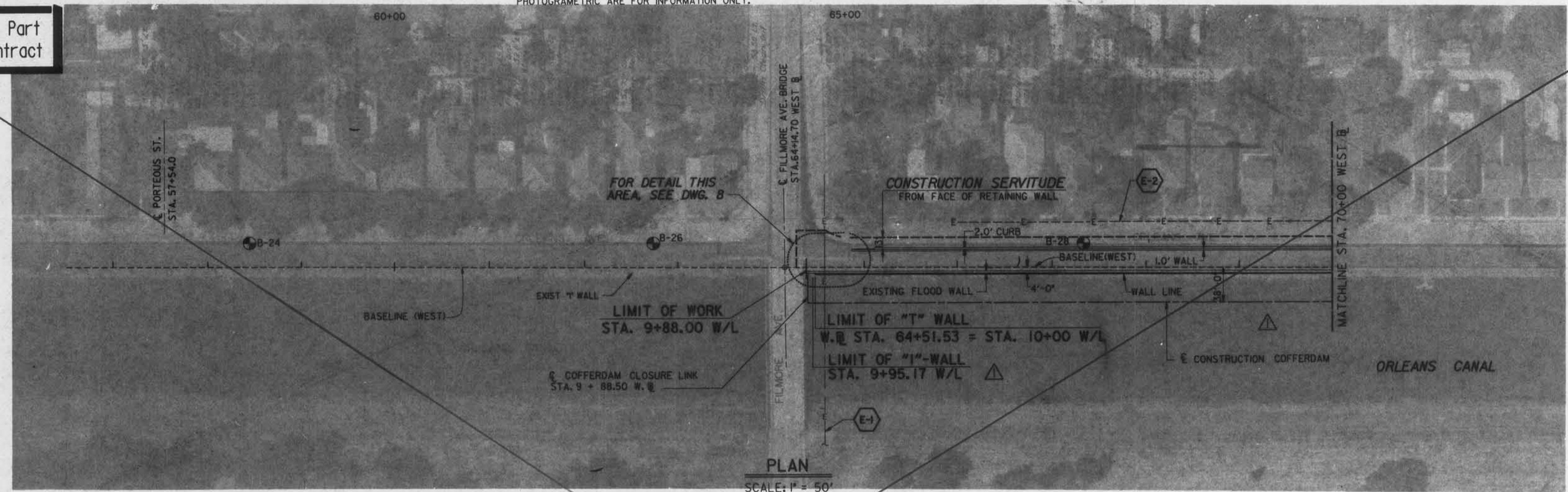
PLAN/PROFILE SHEET

DESIGNED BY: M.B.SHUKLA	DATE:	PLOT SCALE:	PLOT DATE:
DRAWN BY: K.C.REID		I	FEB. 1993
CHECKED BY: T.M.SMITH	CADD FILE:	II-BOSS	FILE NO.
SUBMITTED BY:	SOLICITATION NO.	DACW29-93-B-0059	H-4-30960
DESIGN ENGINEER			DWG. 5 OF 28

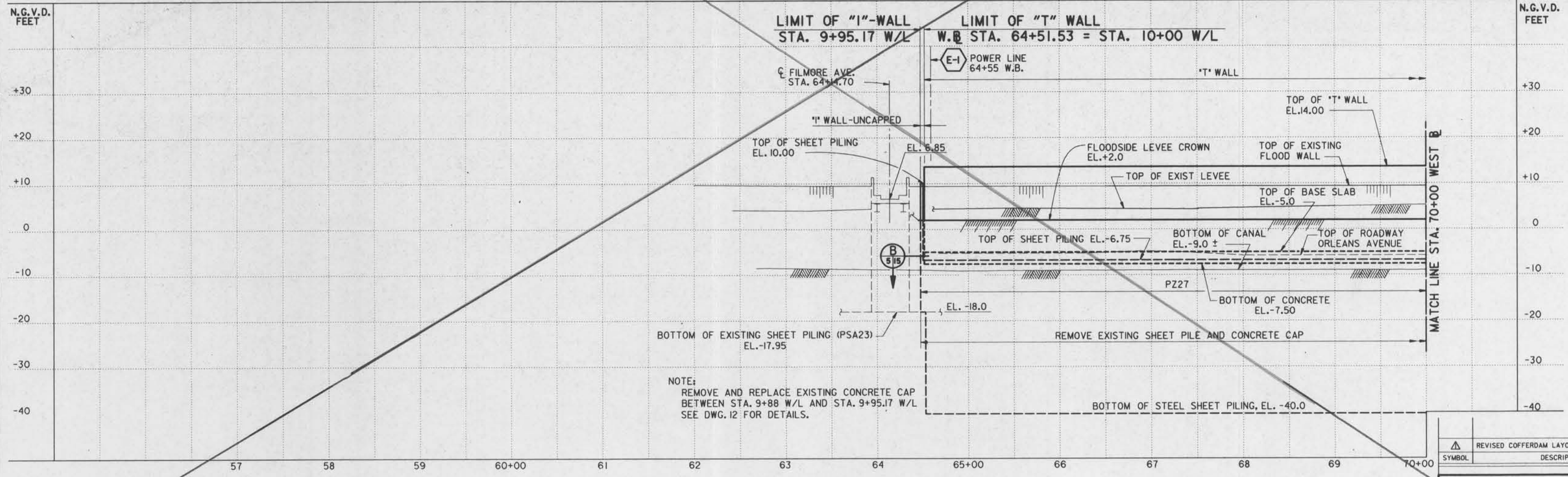


Safety is a Part of Your Contract

LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.

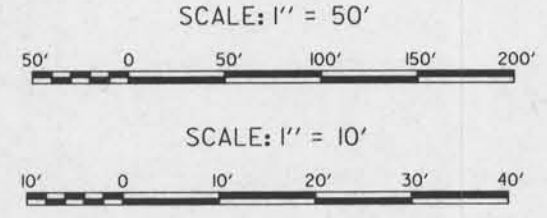


PLAN
SCALE: 1" = 50'



WEST SIDE PROFILE
SCALE: 1"=50'-0" HORIZONTAL
1"=10'-0" VERTICAL

EXISTING FACILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-1	AERIAL POWER L.	64+55±	NEW ORLEANS PUBLIC SERVICE INC.	TO BE RELOCATED CONCURRENT WITH CONTRACT BY OWNER
E-2	AERIAL POWER L. 13,000 V. TRANS.	ALONG ORLEANS AVE.	NEW ORLEANS PUBLIC SERVICE INC.	TO BE DE-ENERGIZED BY OWNER AS REQ'D BY CONT.



SYMBOL	REVISIONS	DATE	APPROVED
△	REVISED COFFERDAM LAYOUT, AMENDMENT NO. 1.	4-2-93	M.D.
	DESCRIPTION		

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

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE AVE. S.
METAIRIE, LOUISIANA 70002

LAKE RONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN

**NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.**
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS -
PHASE II-B (WEST SIDE STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

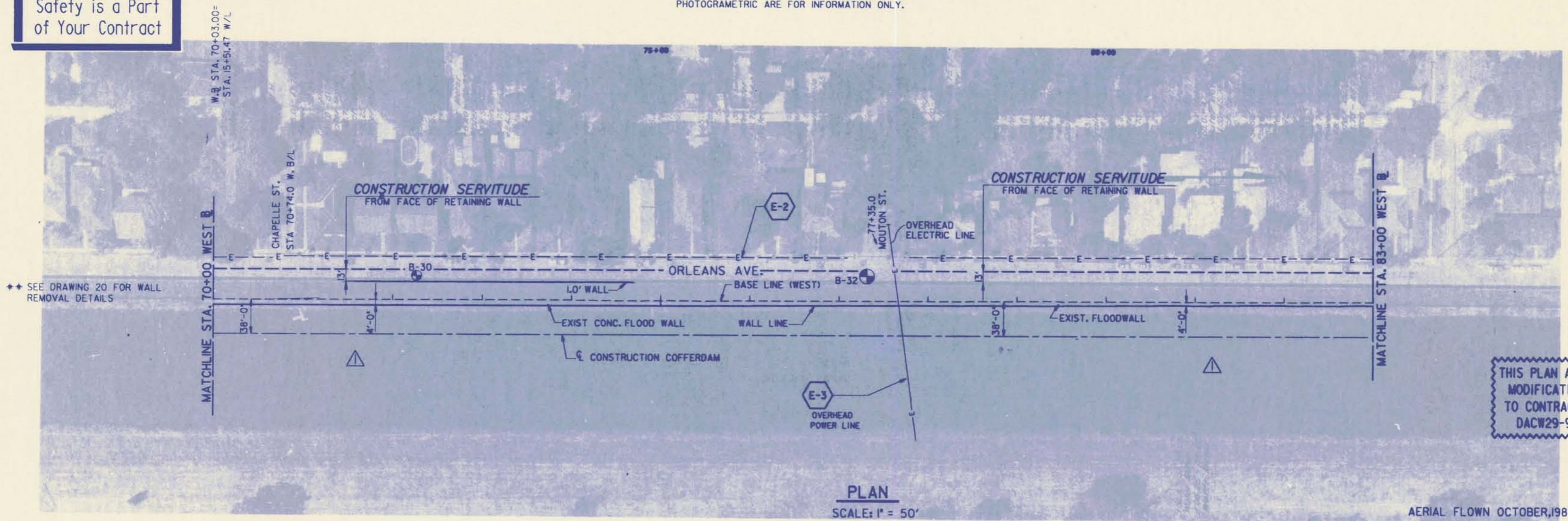
PLAN/PROFILE SHEET

DESIGNED BY: M.B.SHUKLA	DATE:	PLOT SCALE: I	PLOT DATE: FEB. 1993
DRAWN BY: K.C.REID			
CHECKED BY: T.M.SMITH			
SUBMITTED BY: DESIGN ENGINEERING, INC.	CADD FILE: II-BOSS	FILE NO. H-4-30960	
DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0059	DWG. 5 OF 28	

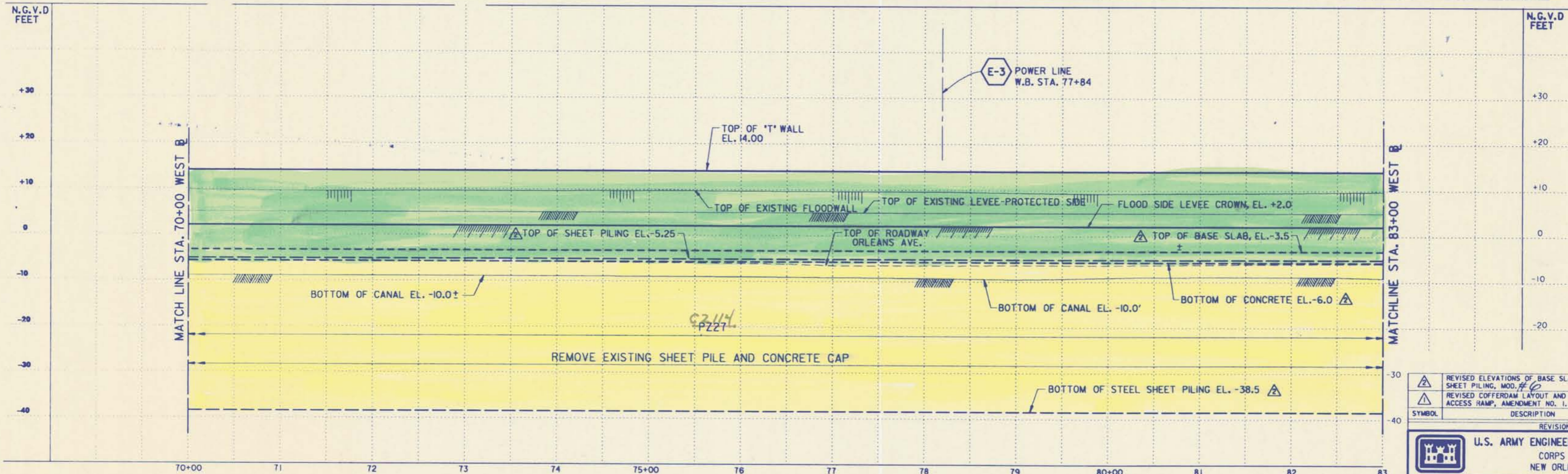


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LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.



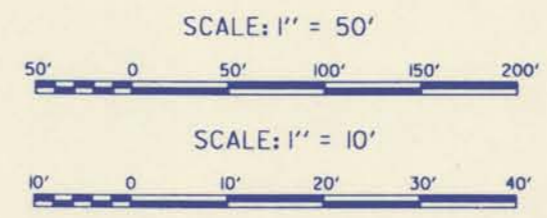
THIS PLAN ACCOMPANIES MODIFICATION 00006 TO CONTRACT NUMBER DACW29-93-C-0071



EXISTING FACILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-2	AERIAL POWER L. 13,000 V. TRANS.	ALONG ORLEANS AVE.	NEW ORLEANS PUBLIC SERVICE INC.	TO BE DE-ENERGIZED BY OWNER AS REQ'D BY CONT.
E-3	AERIAL POWER L.	77+84±	NEW ORLEANS PUBLIC SERVICE INC.	TO BE REMOVED DAILY BY OWNER

WEST SIDE PROFILE

SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED ELEVATIONS OF BASE SLAB AND SHEET PILING, MOD. # 6	10-27-93	M.D.
△	REVISED COFFERDAM LAYOUT AND DELETED ACCESS RAMP, AMENDMENT NO. 1.	4-2-93	M.D.

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

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE AVE. S.
METAIRIE, LOUISIANA 70002

LAKE PONTCHARTRAIN, L.A. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

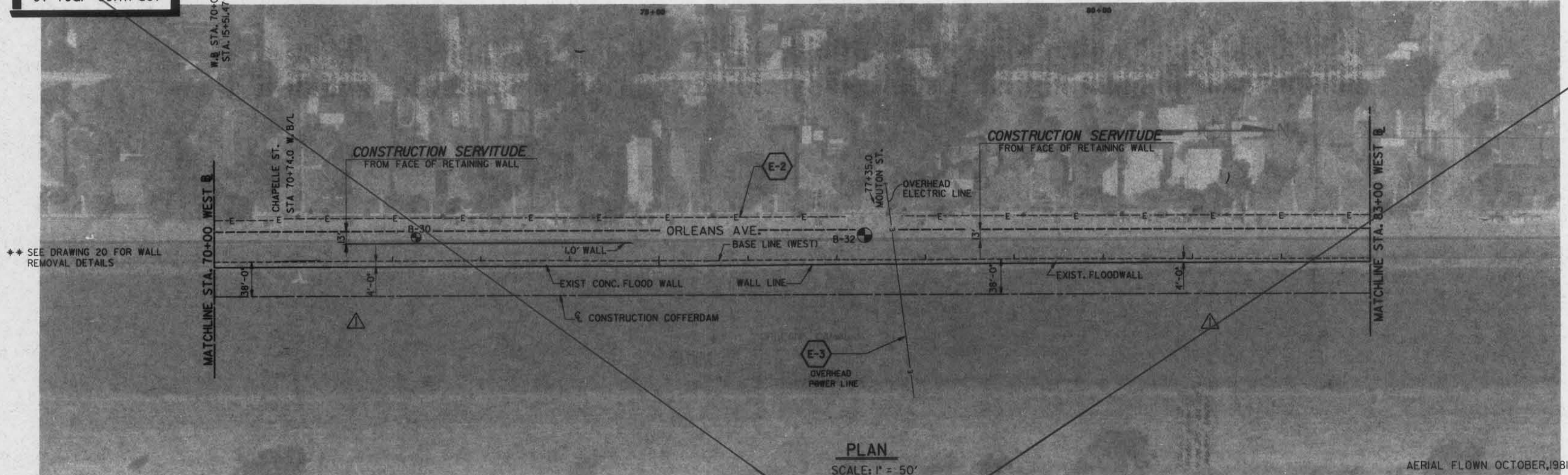
PLAN/PROFILE SHEET

DESIGNED BY: M.B. SHUKLA	DATE: 10-27-93	PLOT SCALE: 1	PLOT DATE: FEB. 1993
DRAWN BY: K.C. REID	CADD FILE: II-B065	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0059	DWG. 6 OF 28



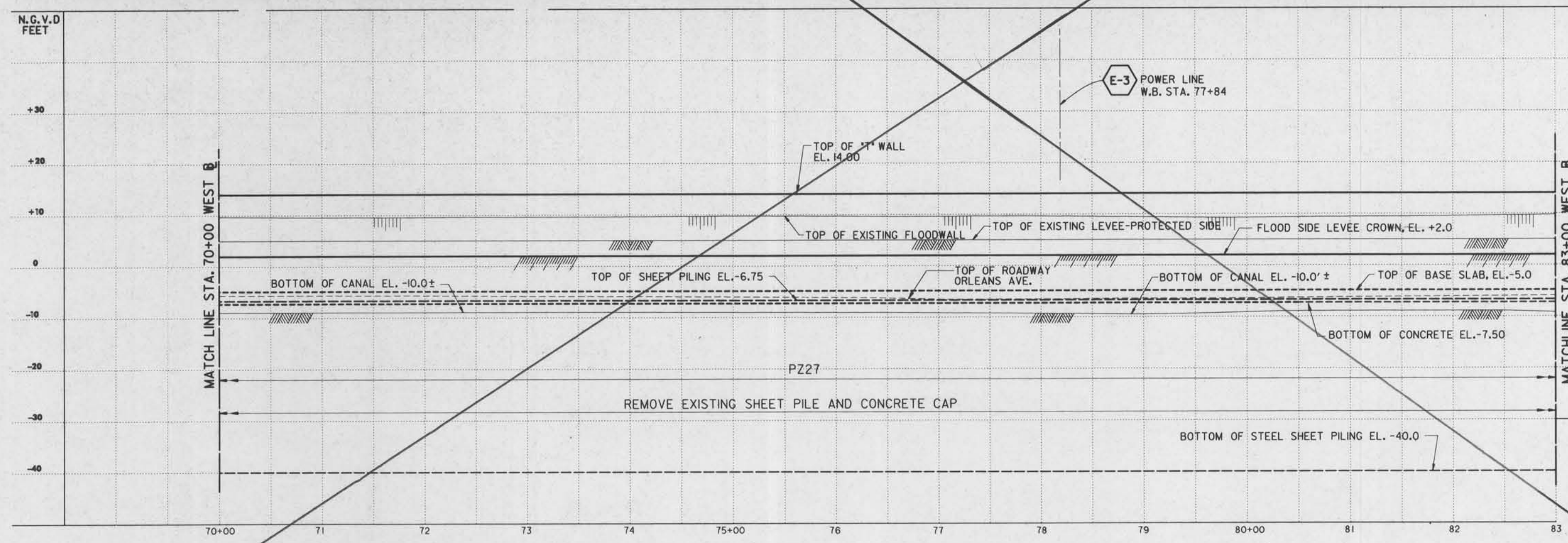
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LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.

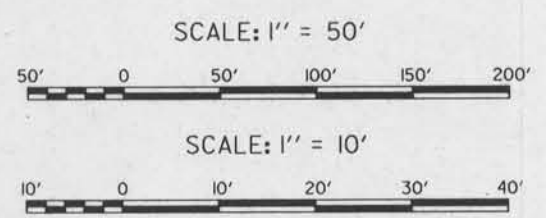


PLAN
SCALE: 1" = 50'

AERIAL FLOWN OCTOBER, 1981



WEST SIDE PROFILE
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



EXISTING FACILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-2	AERIAL POWER L. 13,000 V. TRANS.	ALONG ORLEANS AVE.	NEW ORLEANS PUBLIC SERVICE INC.	TO BE DE-ENERGIZED BY OWNER AS REQ'D BY CONT.
E-3	AERIAL POWER L.	77+84±	NEW ORLEANS PUBLIC SERVICE INC.	TO BE REMOVED DAILY BY OWNER

SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED COFFERDAM LAYOUT AND DELETED ACCESS RAMP, AMENDMENT NO. 1.	4-2-93	M.D.

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

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE AVE. S.
METAIRIE, LOUISIANA 70002
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

PLAN/PROFILE SHEET

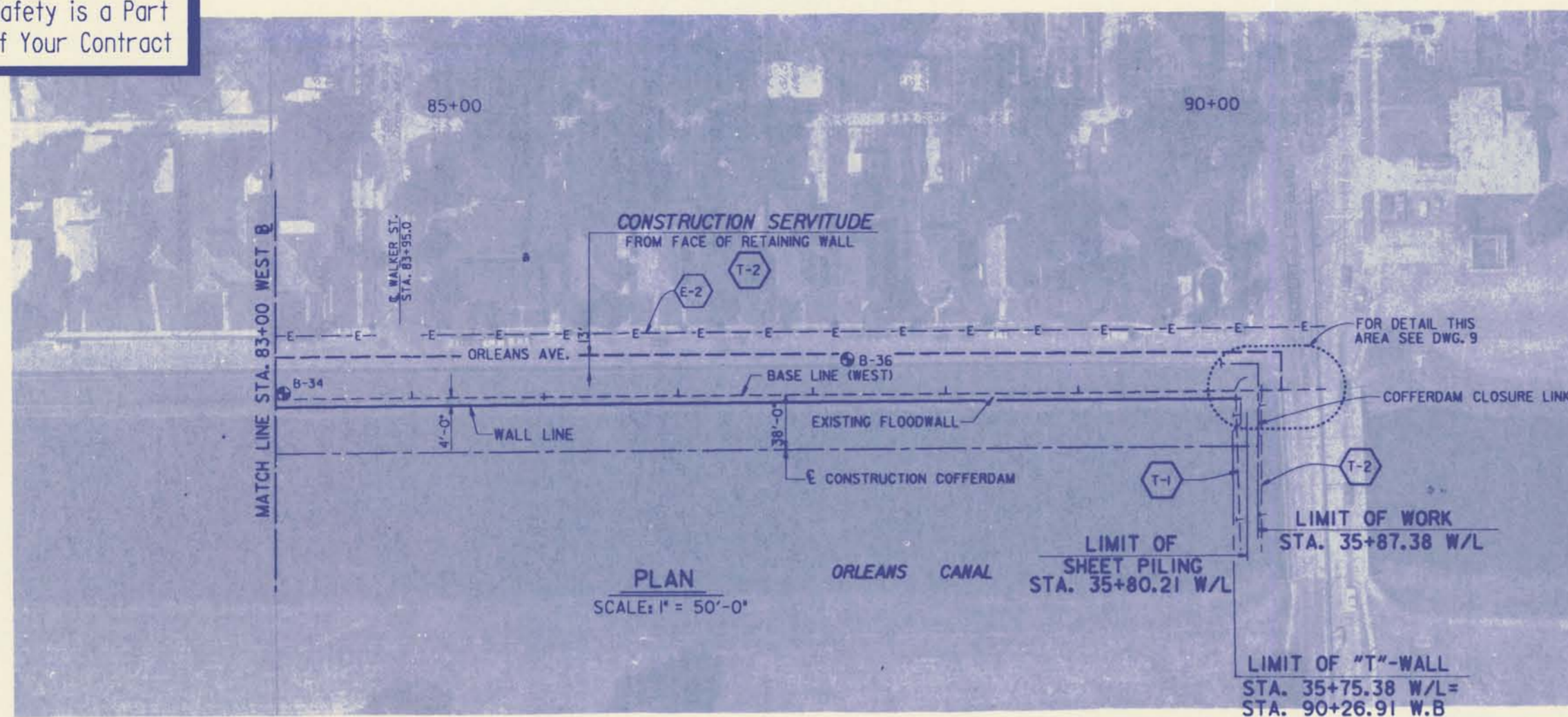
DESIGNED BY: M.B. SHUKLA	DATE:	PLOT SCALE: I	PLOT DATE: FEB. 1993
DRAWN BY: K.C. REID	CADD FILE: II-B065	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 6 OF 28	



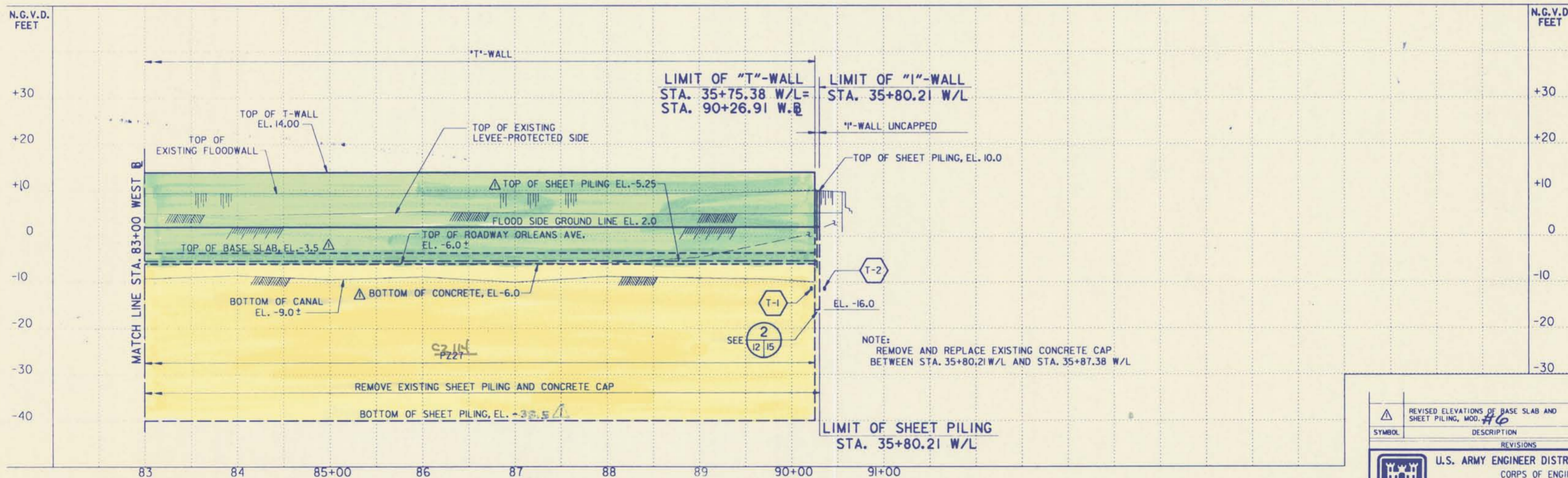
Safety is a Part of Your Contract

LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.

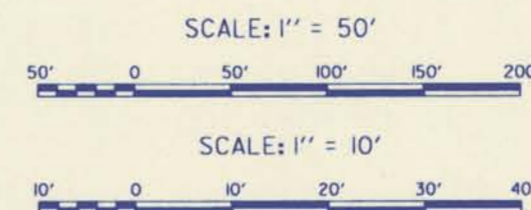
EXISTING FACILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-2	AERIAL POWER L. 13,000 V. TRANS.	ALONG ORLEANS AVE.	NEW ORLEANS PUBLIC SERVICE INC.	TO BE DE-ENERGIZED BY OWNER AS REQ'D. BY CONT.
T-1	SUBMARINE CABLE	90+24	SOUTH CENTRAL BELL	ABANDONED CABLE LEFT IN PLACE
T-2	SUBMARINE CABLE	90+39	SOUTH CENTRAL BELL	ABANDONED CABLE LEFT IN PLACE



AERIAL FLOWN OCTOBER, 1981



THIS PLAN ACCOMPANIES MODIFICATION P0000 TO CONTRACT NUMBER DACW29-93-C-0071



REVISIONS	DATE	APPROVED
Δ REVISED ELEVATIONS OF BASE SLAB AND SHEET PILING, MOD. #6	10-26-93	M.D.

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

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE AVE., S.
METAIRIE, LOUISIANA 70002

LAKE PONTCHARTRAIN, LA, AND VICINITY
HIGH LEVEL PLAN

NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.

ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

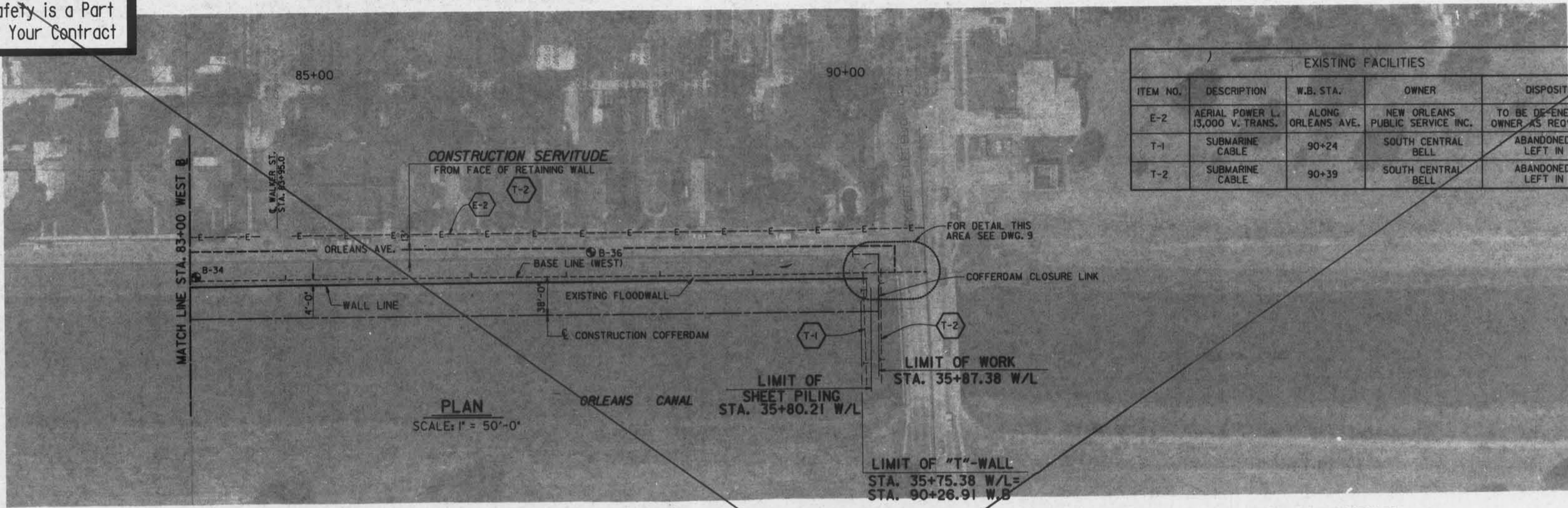
PLAN/PROFILE SHEET

DESIGNED BY: M.B. SHUKLA	DATE: MAR, 1993	PLOT SCALE: 1	PLOT DATE: MAR, 1993
DRAWN BY: K.C. REID	CHECKED BY: T.M. SMITH	CADD FILE: II-B075	FILE NO. H-4-30960
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0059	DWG. 7 OF 28	



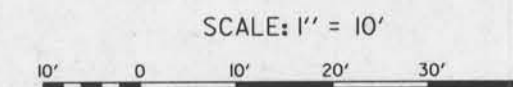
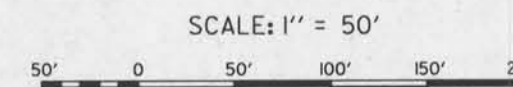
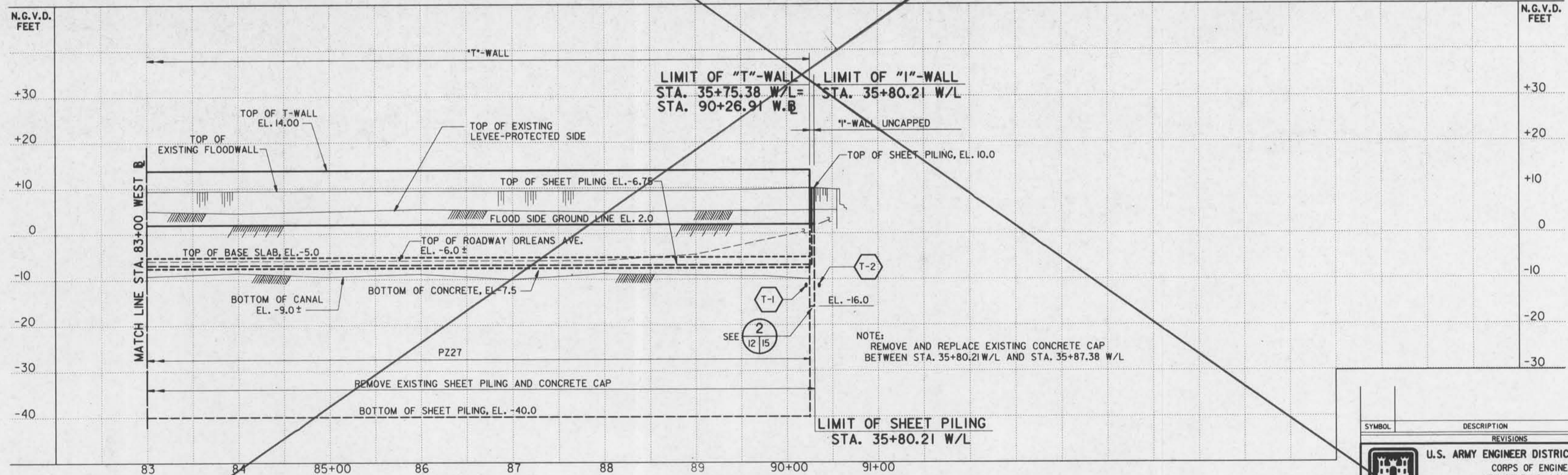
Safety is a Part of Your Contract

LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.

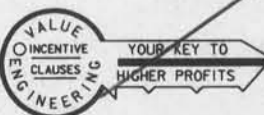


EXISTING FACILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-2	AERIAL POWER L. 13,000 V. TRANS.	ALONG ORLEANS AVE.	NEW ORLEANS PUBLIC SERVICE INC.	TO BE DE-ENERGIZED BY OWNER AS REQ'D. BY CONT.
T-1	SUBMARINE CABLE	90+24	SOUTH CENTRAL BELL	ABANDONED CABLE LEFT IN PLACE
T-2	SUBMARINE CABLE	90+39	SOUTH CENTRAL BELL	ABANDONED CABLE LEFT IN PLACE

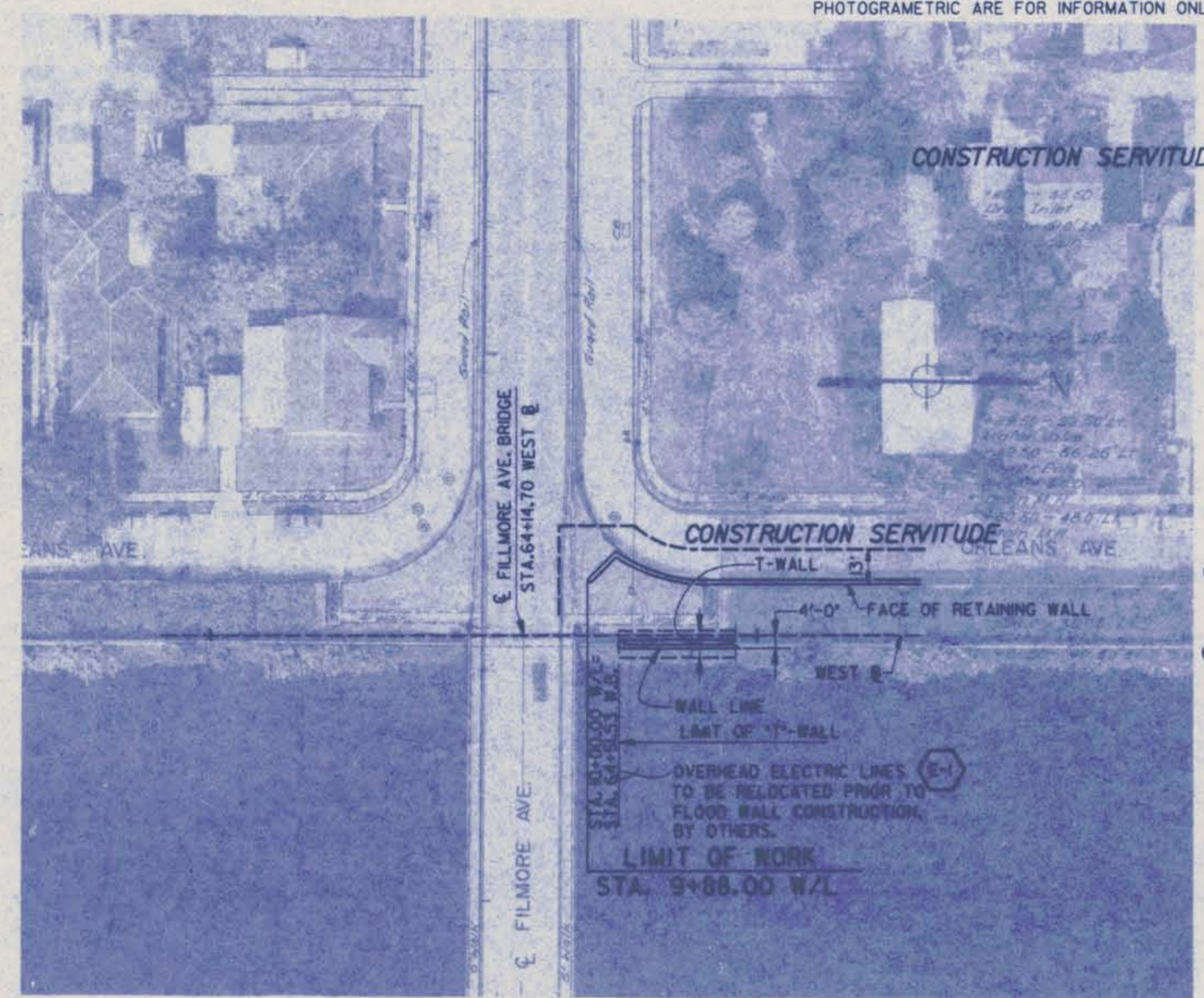
AERIAL FLOWN OCTOBER, 1981



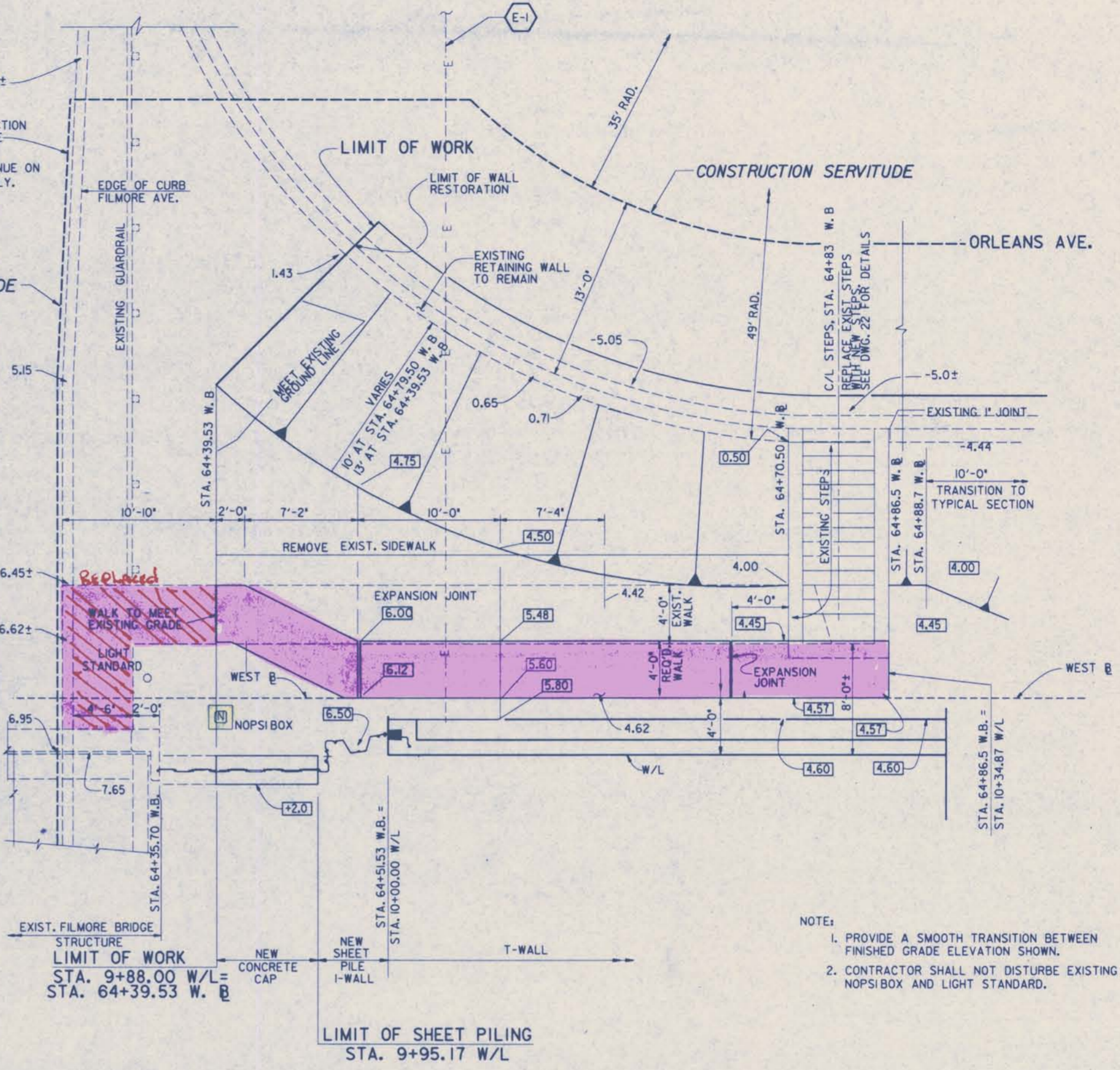
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE STA. 84+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
PLAN/PROFILE SHEET			
DESIGNED BY: M.B. SHUKLA	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: K.C. REID	CADD FILE: II-B075	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 7	OF 28
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			



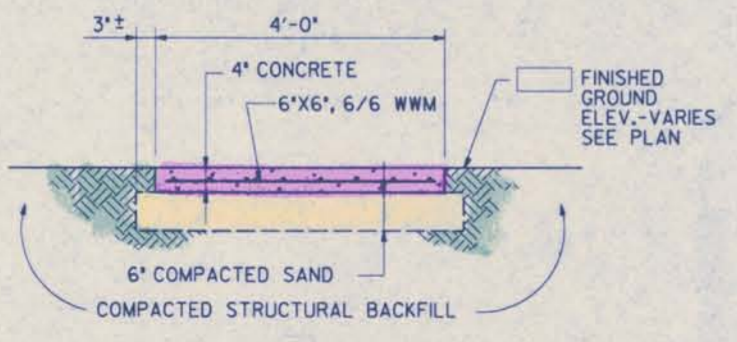
Safety is a Part of Your Contract



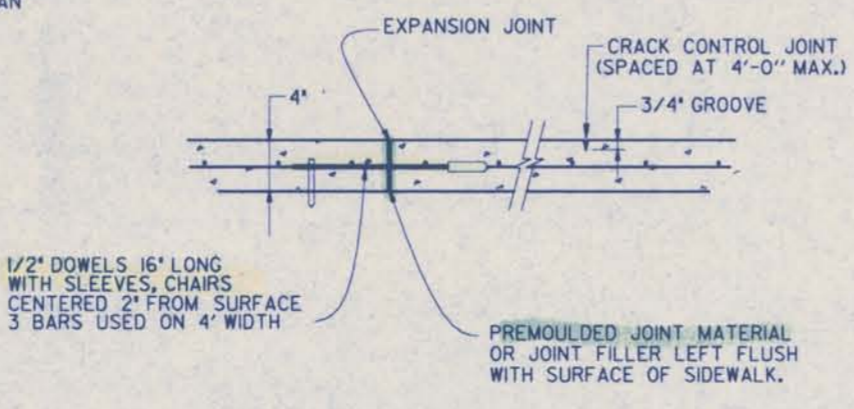
AERIAL PHOTOGRAPH WITH IMPROVEMENTS
SCALE: 1" = 30'-0"



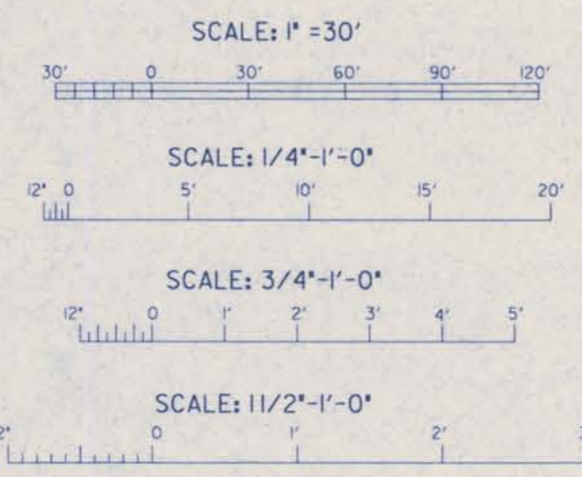
PLAN OF FINISHED GRADES & DETAILS OF WORK NEAR FILMORE AVENUE
SCALE: 1/4" = 1'-0"



TYPICAL SIDEWALK SECTION
SCALE: 3/4" = 1'-0"
NOTE:
REQUIRED WALK TO BE CONSTRUCTED TO GRADES SHOWN.



SIDEWALK JOINT DETAIL
SCALE: 1 1/2" = 1'-0"



LEGEND

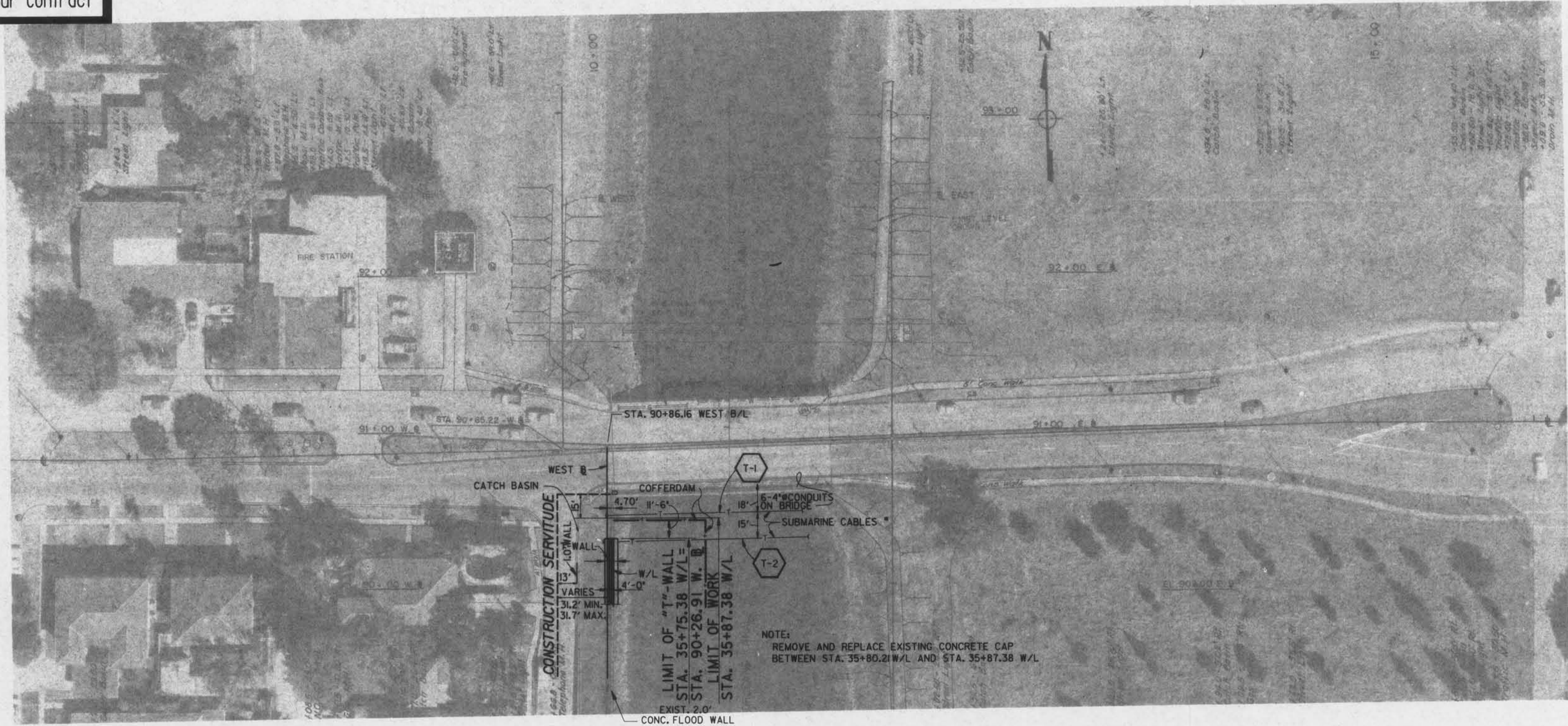
[6.35]	REQUIRED FINISHED GROUND ELEVATION.
11.43	EXISTING SURFACE ELEVATION
---	EXISTING TOPOGRAPHY
---	NEW

- NOTE:
1. PROVIDE A SMOOTH TRANSITION BETWEEN FINISHED GRADE ELEVATION SHOWN.
 2. CONTRACTOR SHALL NOT DISTURB EXISTING NOPSIS BOX AND LIGHT STANDARD.



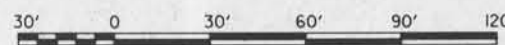
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE., S. METAIRIE, LOUISIANA 70002	
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
AERIAL WITH IMPROVEMENTS NEAR FILMORE AVE.			
DESIGNED BY: T.M. SMITH	DATE: MAR. 1993	PLOT SCALE: I	PLOT DATE: MAR. 1993
DRAWN BY: K.C. REID	CADD FILE: II-BOBS	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 8 OF 28	
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			

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PLAN

SCALE: 1" = 30'



• SOUTH CENTRAL BELL SUBMARINE CABLES T-1 & T-2 HAVE BEEN DEACTIVATED AND ABANDONED BY SOUTH CENTRAL BELL CO., INC. REPLACEMENT LINES HAVE BEEN PLACED INTO THE EXISTING 4" CONDUITS ON BRIDGE PRIOR TO CONTRACT AWARD.

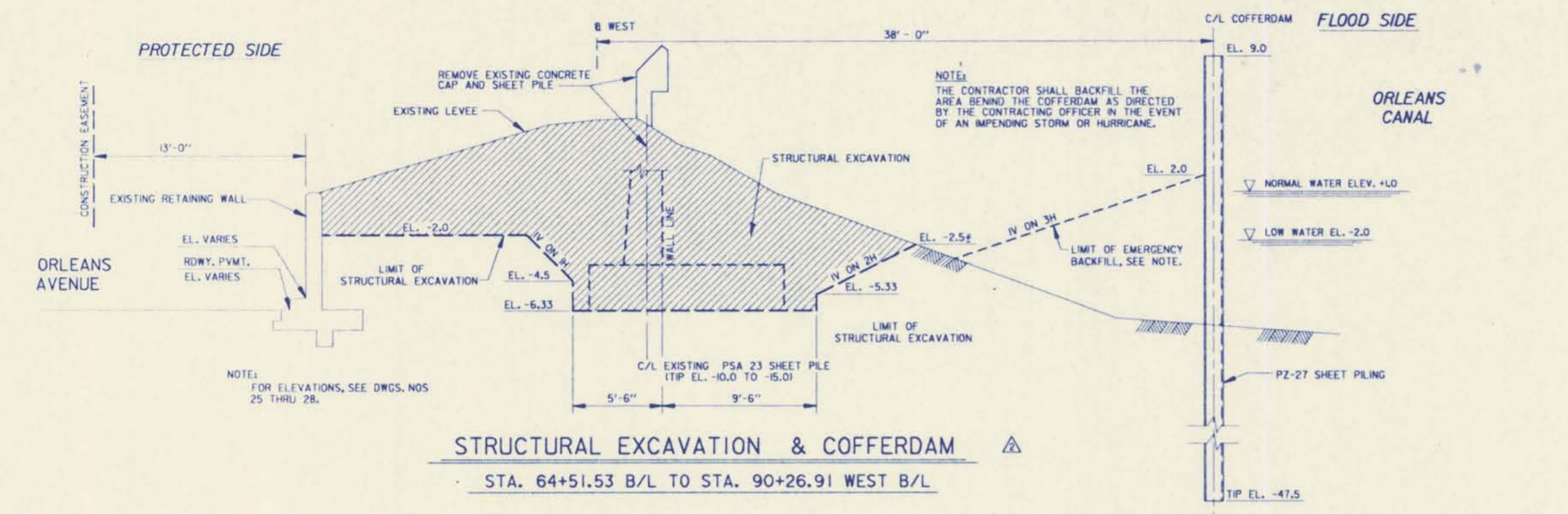
CONTRACTOR SHALL DRIVE REQUIRED SHEET PILING THROUGH ABANDONED SUBMARINE CABLES.

NOTE:
LABELS FOR UTILITIES ALONG ROBERT E. LEE BOULEVARD ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.

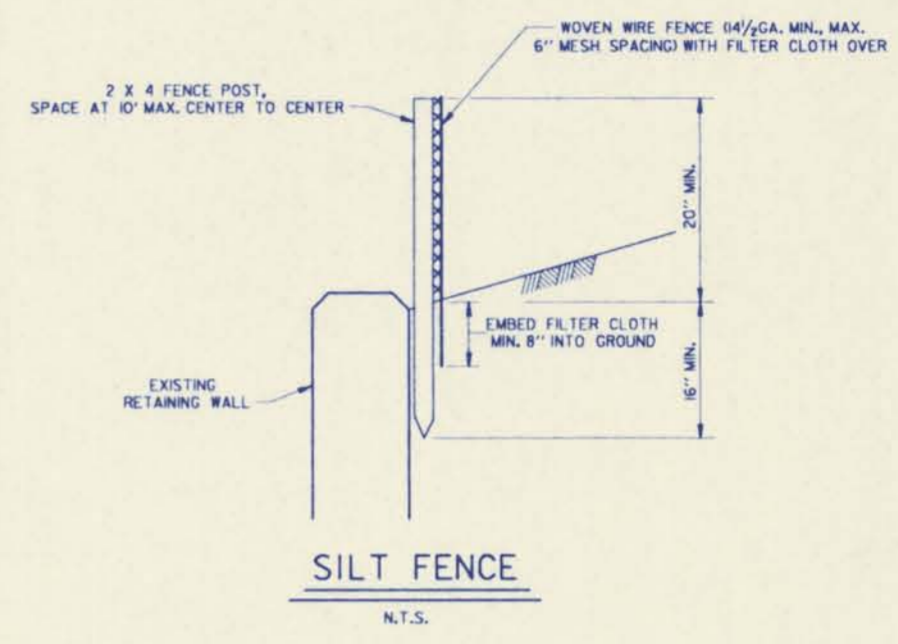


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, L.A. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
AERIAL WITH IMPROVEMENTS NEAR ROBERT E. LEE			
DESIGNED BY: T.M.SMITH	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: K.C.REID	CADD FILE: II-B095	FILE NO. H-4-30960	
CHECKED BY: T.M.SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 9	OF 28
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			

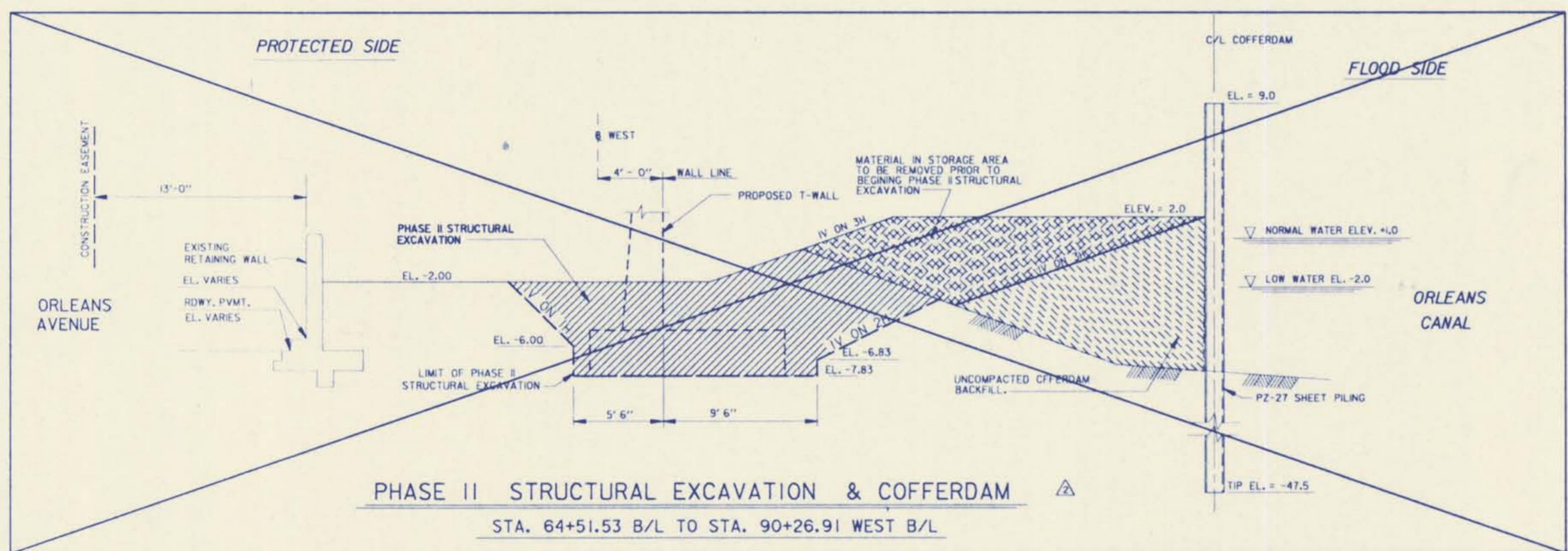
Safety is a Part of Your Contract



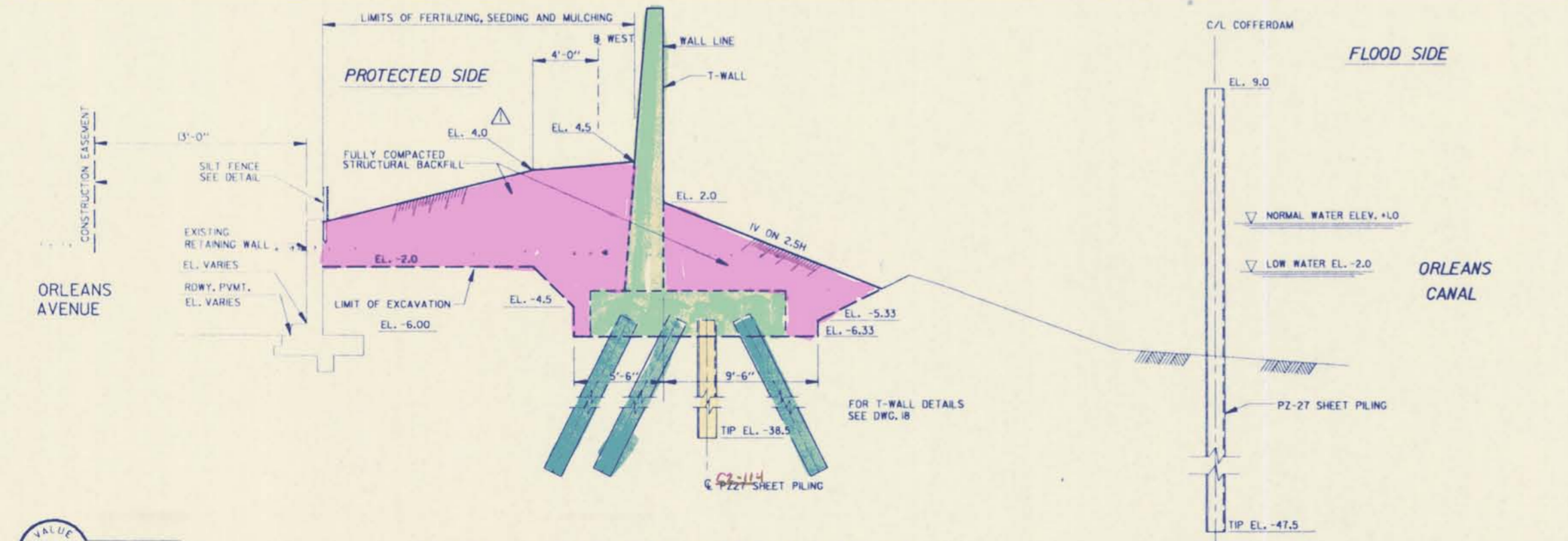
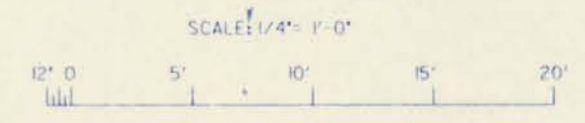
STRUCTURAL EXCAVATION & COFFERDAM
STA. 64+51.53 B/L TO STA. 90+26.91 WEST B/L




THIS PLAN ACCOMPANIES
MODIFICATION P00006
TO CONTRACT NUMBER
DACW29-93-C-0071



PHASE II STRUCTURAL EXCAVATION & COFFERDAM
STA. 64+51.53 B/L TO STA. 90+26.91 WEST B/L



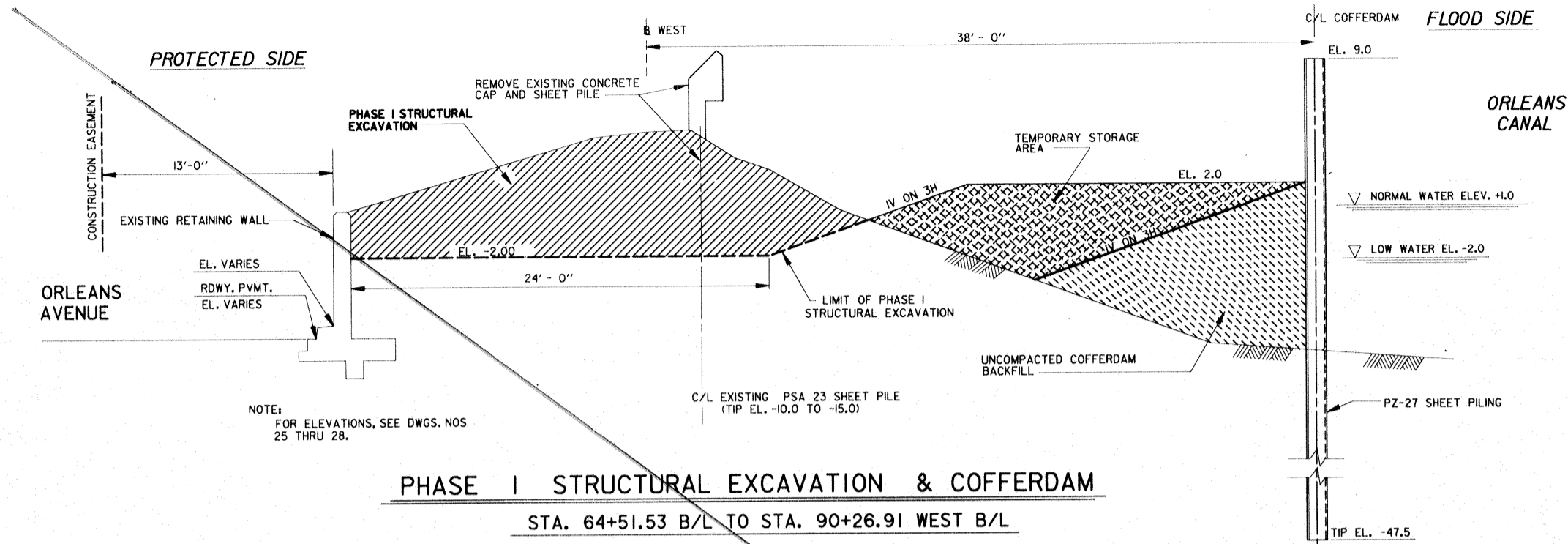
TYPICAL STRUCTURAL BACKFILL SECTION
SCALE: 1/4\"/>




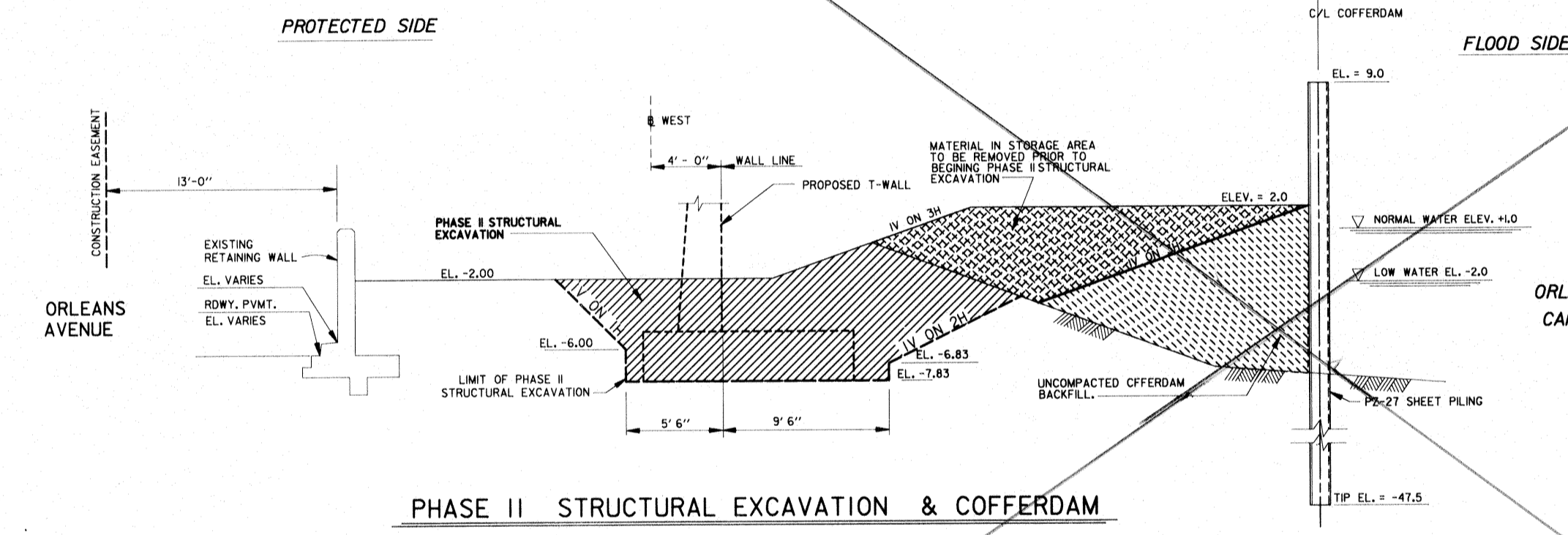
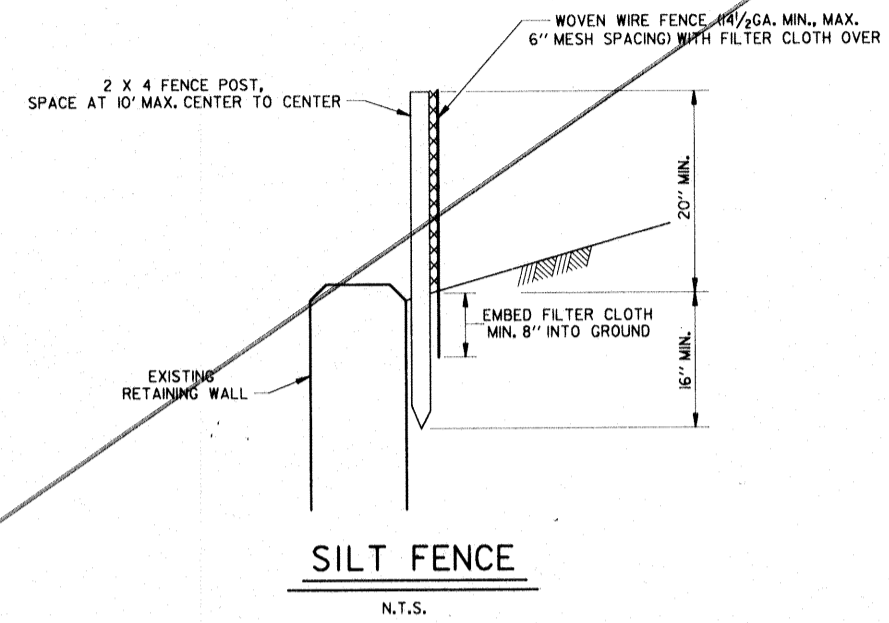
SYMBOL	DESCRIPTION	DATE	APPROVED
△	GENERAL REVISIONS TO STRUCTURAL EXCAVATION AND BACKFILL PLAN, MOD #6	10-26-93	M.D.
△	REVISED EL. IN TYPICAL T-WALL SECTION, AMENDMENT NO. 1.	4-2-93	M.D.

REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
TYPICAL SECTION			
DESIGNED BY: M. DESAI	DATE: MAR., 1993	PLOT SCALE: 1	PLOT DATE: MAR., 1993
DRAWN BY: B. DORCEY	CADD FILE: II-BIOS	FILE NO. H-4-30960	
CHECKED BY:	SOLICITATION NO. DACW29-93-B-0059	DWG. NO. 10 OF 28	
SUBMITTED BY: J. ROMERO, DESIGN ENGINEER			

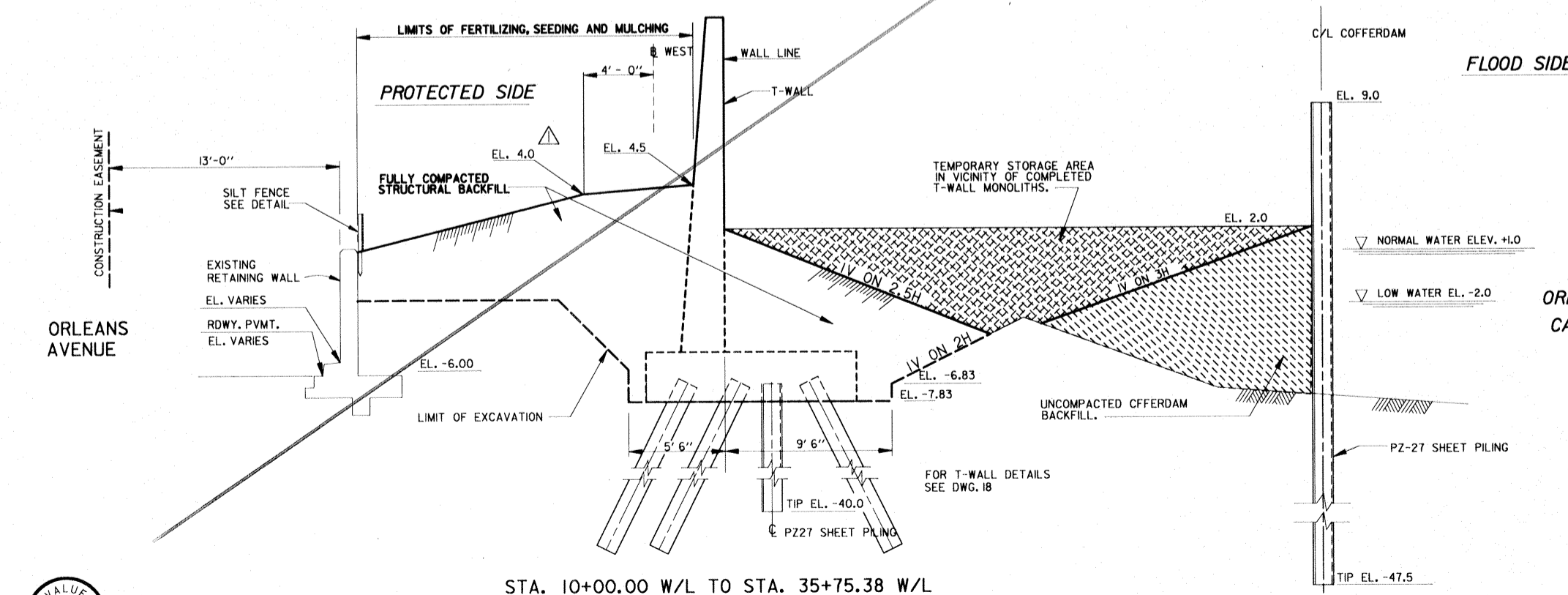
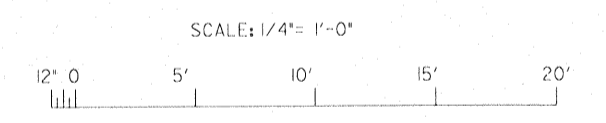
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PHASE I STRUCTURAL EXCAVATION & COFFERDAM
STA. 64+51.53 B/L TO STA. 90+26.91 WEST B/L

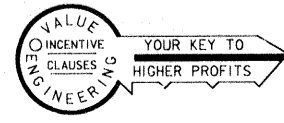


PHASE II STRUCTURAL EXCAVATION & COFFERDAM
STA. 64+51.53 B/L TO STA. 90+26.91 WEST B/L

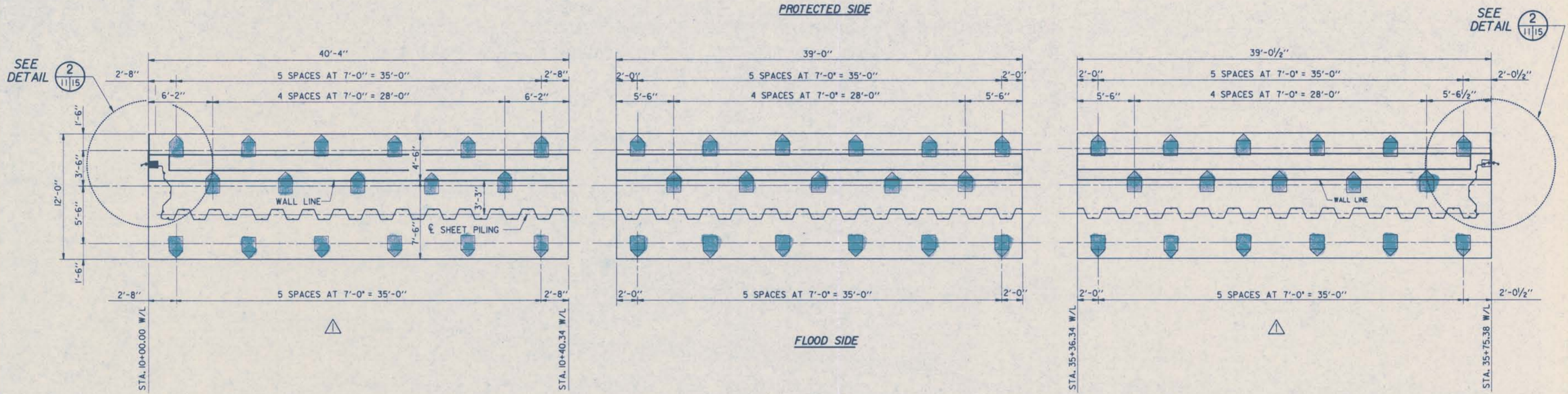


STA. 10+00.00 W/L TO STA. 35+75.38 W/L
TYPICAL T-WALL SECTION
SCALE: 1/4" = 1'-0"

SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED EL. IN TYPICAL T-WALL SECTION, AMENDMENT NO. 1.	4-2-93	M.D.
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA TYPICAL SECTION			
DESIGNED BY:	M. DESAI	DATE:	MAR., 1993
DRAWN BY:	B. DORCEY	PLOT SCALE:	1
CHECKED BY:		PLOT DATE:	MAR., 1993
SUBMITTED BY:	J. ROMERO	CADD FILE:	II-BIOS
DESIGN ENGINEER:		SOLICITATION NO.:	DACW29-93-B-0059
		FILE NO.:	H-4-30960
		DWG. NO. OF TB:	10 OF 28

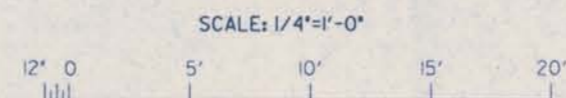


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LEGEND

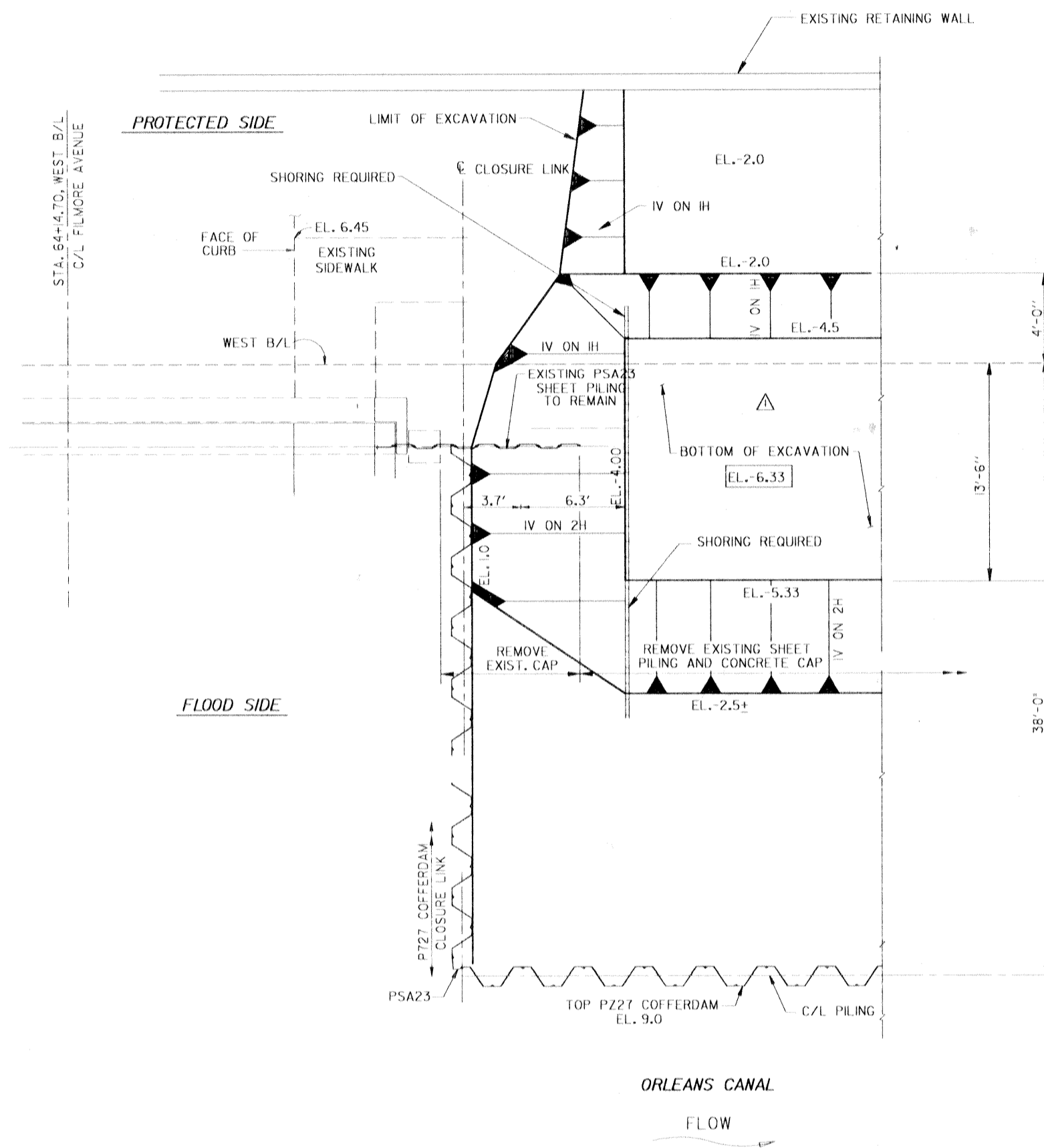
- 14'x14' P.P.C. BATTER PILES.
- TRIANGLE SIDE INDICATES DIRECTION OF BATTER.
- DENOTES MONOLITH NUMBER



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISED MONOLITHS LAYOUT, AMENDMENT NO. 1.	4-2-93	M.D.

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002		
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 04+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
PILE, MONOLITH AND SHEET PILING LAYOUT			
DESIGNED BY: M.B.SHUKLA	DATE: MAR, 1993	PLOT SCALE: 1	PLOT DATE: MAR, 1993
DRAWN BY: C.J.KOCH	CADD FILE: II-B115	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 11	OF 28
SUBMITTED BY: DESIGN ENGINEERING, INC.	DESIGN ENGINEER		

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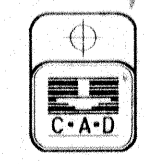
THIS PLAN ACCOMPANIES
MODIFICATION 00006
TO CONTRACT NUMBER
DACW29-93-C-0071

EXCAVATION PLAN AND COFFERDAM FILL LAYOUT

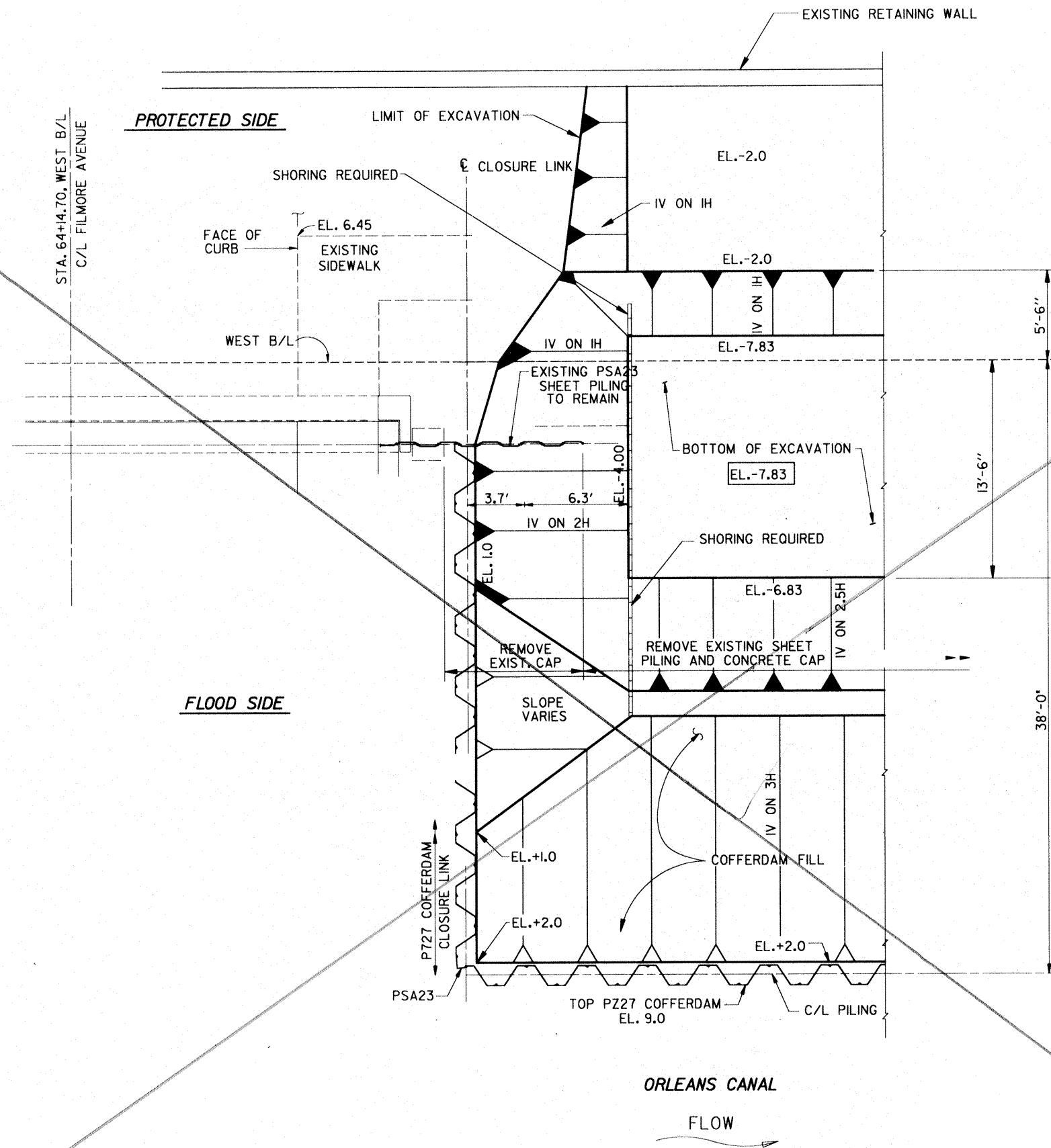


SYMBOL	DESCRIPTION	DATE	APPROVED
△	GENERAL REVISIONS TO EXCAVATION PLAN. MOD. NO. #6	10-27-93	M.D.

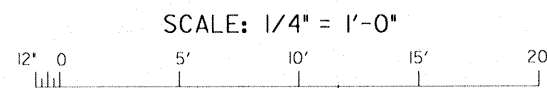
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
EXCAVATION AND COFFERDAM FILL LAYOUT			
DESIGNED BY:	M. DESAI	DATE:	MAR., 1993
DRAWN BY:	B. BORCEY	PLOT SCALE:	1
CHECKED BY:	J. ROMERO	PLOT DATE:	MAR., 1993
SUBMITTED BY:	J. ROMERO	FILE NO.:	H-4-30960
DESIGN ENGINEER		SOLICITATION NO.:	DACW29-93-B-0059
		DWG. NO.:	12 OF 28




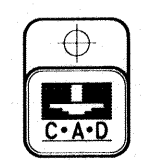
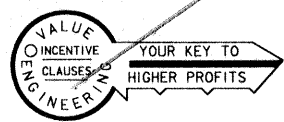
Safety is a Part
of Your Contract



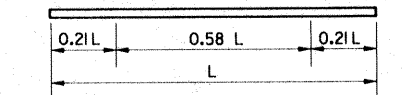
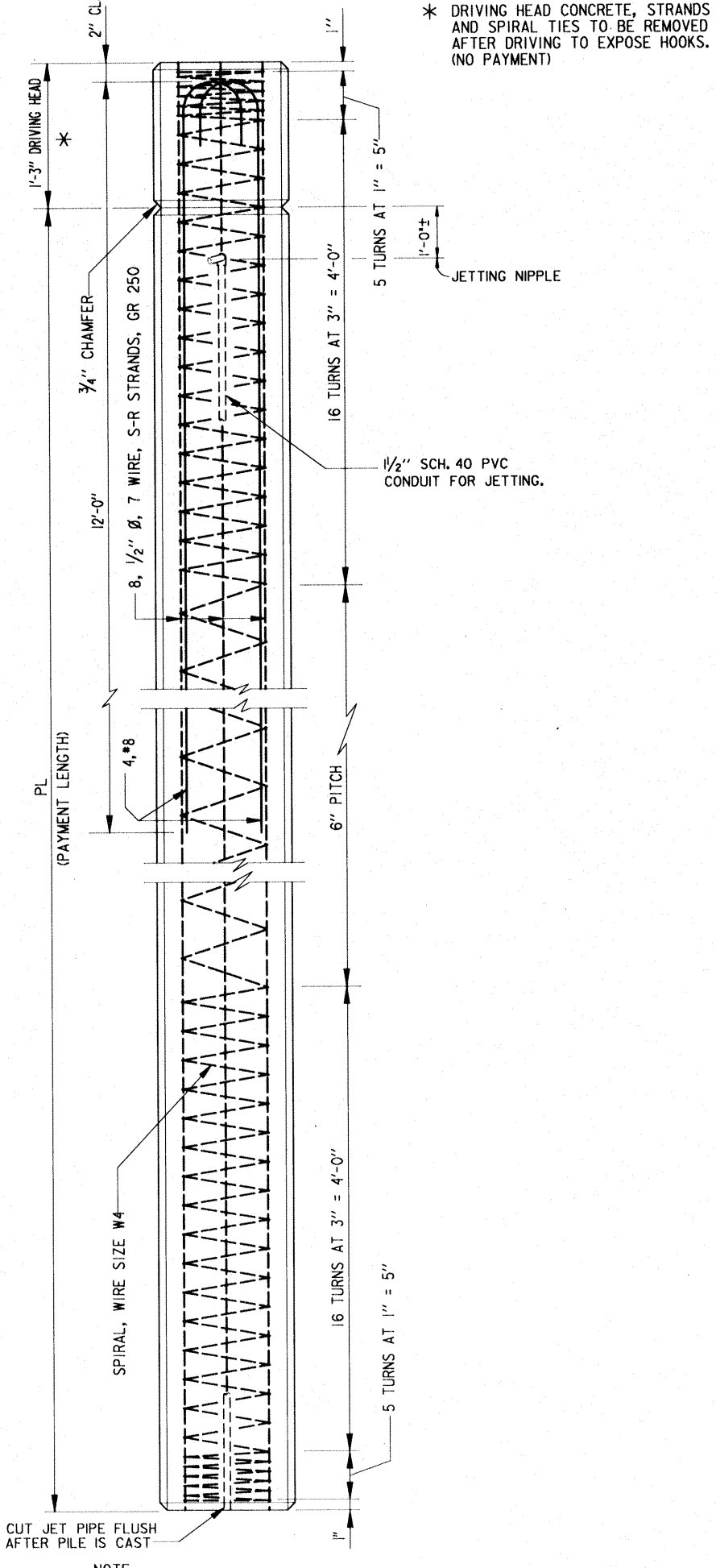
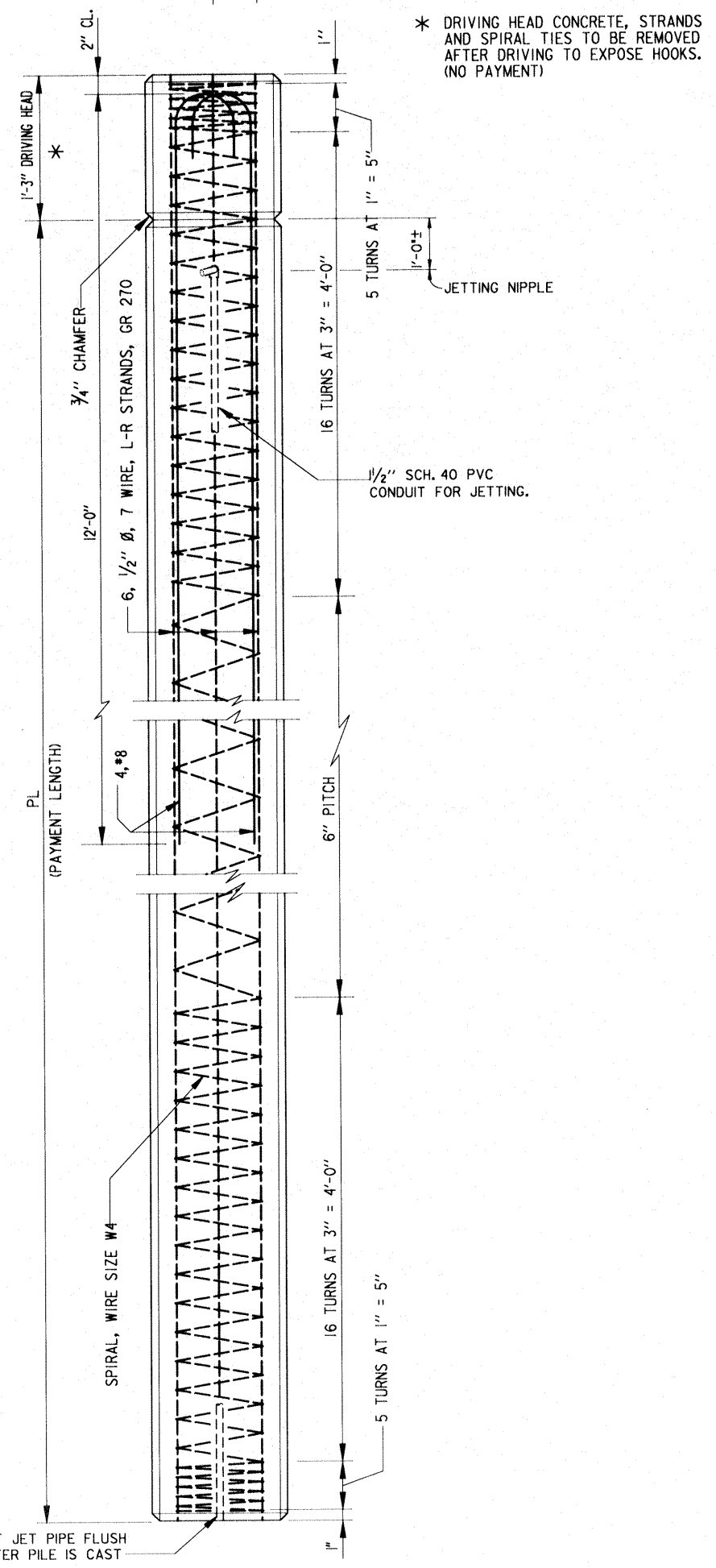
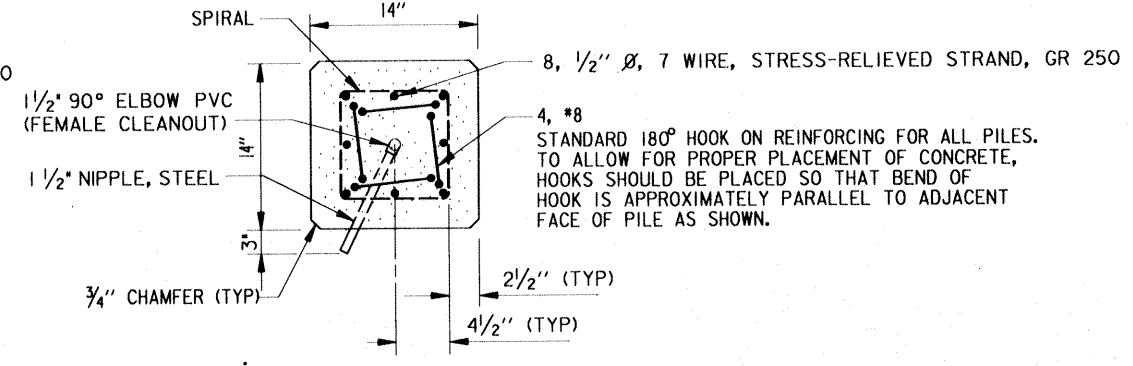
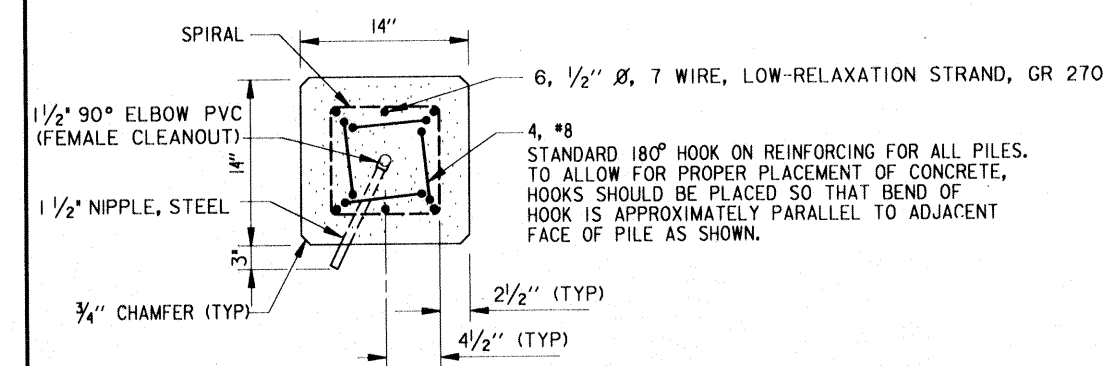
EXCAVATION PLAN AND COFFERDAM FILL LAYOUT



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
EXCAVATION AND COFFERDAM FILL LAYOUT			
DESIGNED BY: M. DESAI	DATE: MAR., 1993	PLOT SCALE: 1	PLOT DATE: MAR., 1993
DRAWN BY: B. DORCEY	CADD FILE: II-B12S	FILE NO. H-4-30960	
CHECKED BY: J. ROMERO	SOLICITATION NO. DACW29-93-B-0059	DWG. 12 OF 28	
SUBMITTED BY: J. ROMERO, DESIGN ENGINEER			



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2 POINT PICKUP (L < 83') 14" X 14" PILE

NOTE: PICKUP POINTS TO BE PLAINLY MARKED ON PILES

MONOLITH NOS.	PILE SIZE	NUMBER OF PILES	PILE BATTER	PAYMENT LENGTH			ALLOWABLE JETTING PRESSURE	
				FLOOD SIDE	CENTER ROW	PROTECTED SIDE	EL. -10 TO APPROX. EL. -27	APPROX. EL. -27 TO EL. -48
B02 THRU B67	14"x14"	396	2V ON IH	76'-0"			MAX. 80 PSI	MAX. 150 PSI
		330	2V ON IH	78'-0"				
		396	2V ON IH		78'-0"			

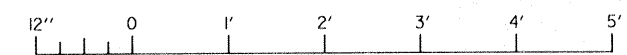
NOTES

- FOR GENERAL NOTES, SEE DWG. 2
- ALL OF THE PILES SHALL HAVE A CONDUIT FOR JETTING INSTALLED WITHIN THE PILE. JET SHALL DISCHARGE FROM THE TIP OF THE PILE ONLY. SEE SPECIFICATIONS C2H-6.3.
- THE CONTRACTOR MAY ADJUST, WITH CONTRACTING OFFICER'S APPROVAL, JETTING PRESSURE AT APPROXIMATELY EL. -27.0 TO BETTER CONFORM TO TOP OF SAND STRATA ELEVATIONS.

REFERENCE DRAWINGS

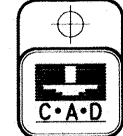
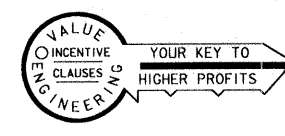
- PILING AND MONOLITH LAYOUT, DWG. II

SCALE: 1" = 1'-0"



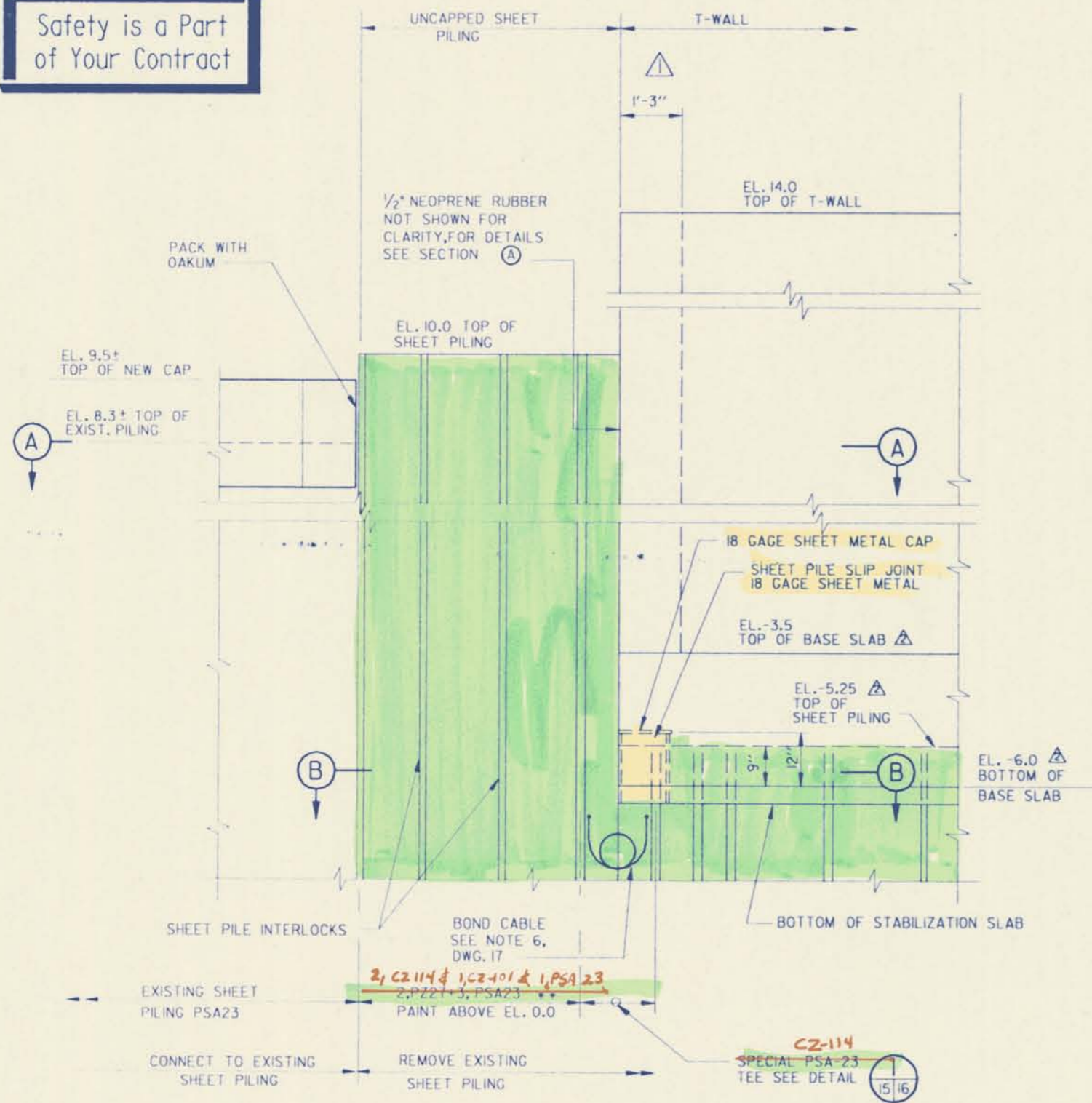
14" X 14" PRESTRESSED PRECAST CONCRETE PILE

14" X 14" PRESTRESSED PRECAST CONCRETE PILE



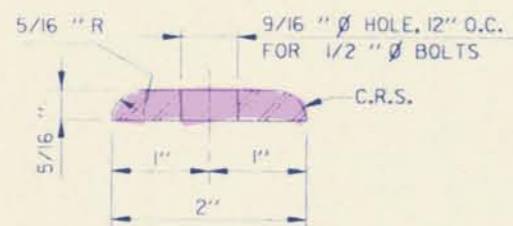
SYMBOL	DESCRIPTION	DATE	APPROVED
<p>U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA</p> <p>BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA</p> <p>DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002</p> <p>LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN</p> <p>NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA</p> <p>CONCRETE PILE DETAILS</p>			
DESIGNED BY:	M.B. SHUKLA	DATE:	MAR. 1993
DRAWN BY:	C.J. KOCH	PLOT SCALE:	1
CHECKED BY:	T.M. SMITH	CADD FILE:	II-614S
SUBMITTED BY:	DESIGN ENGINEERING, INC.	SOLICITATION NO.:	DACW29-93-B-0059
		FILE NO.:	H-4-30960
		DWG. NO.:	14 OF 28

Safety is a Part of Your Contract



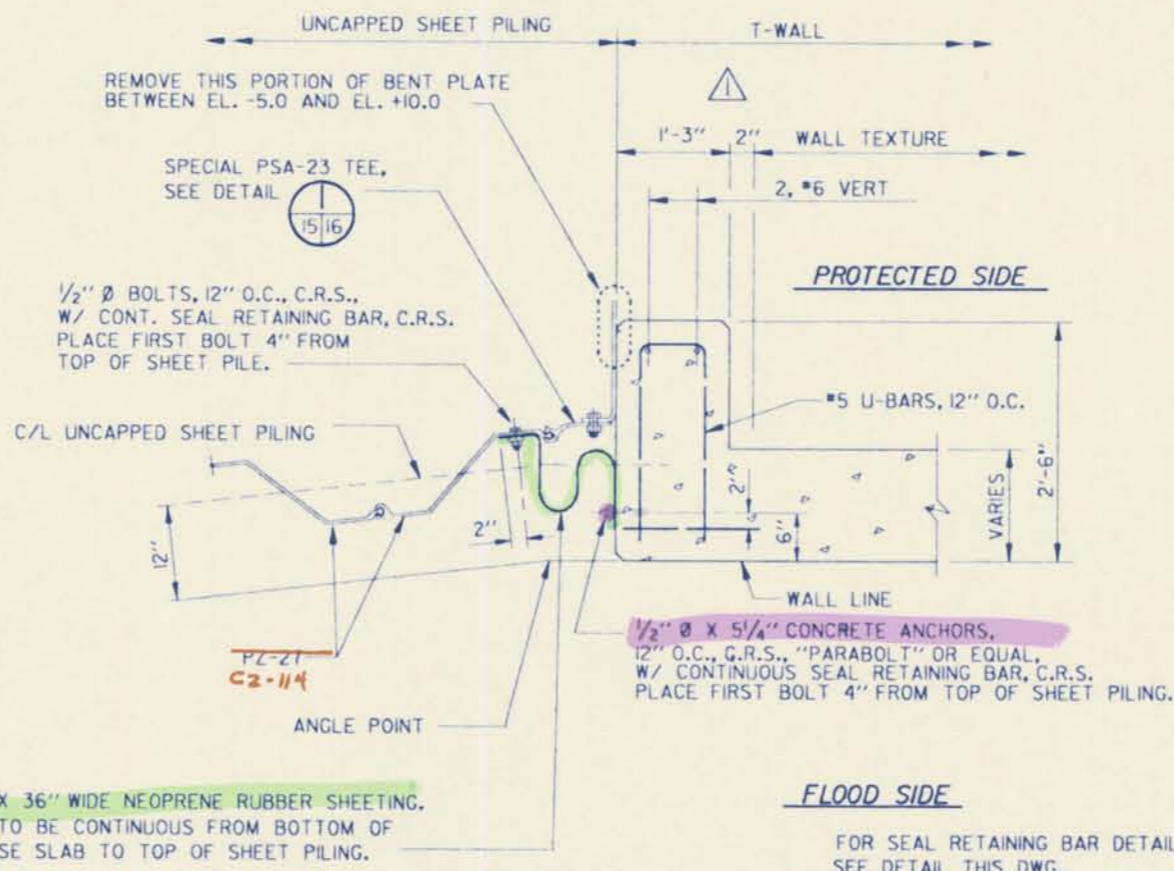
FLOOD SIDE ELEVATION
I-WALL (UNCAPPED SHEET PILING) TO T-WALL
 SCALE: 3/4" = 1'-0"

VIEW NEAR FILMORE AVE. SHOWN
 VIEW NEAR ROBERT E. LEE BLVD. IS OPPOSITE HAND

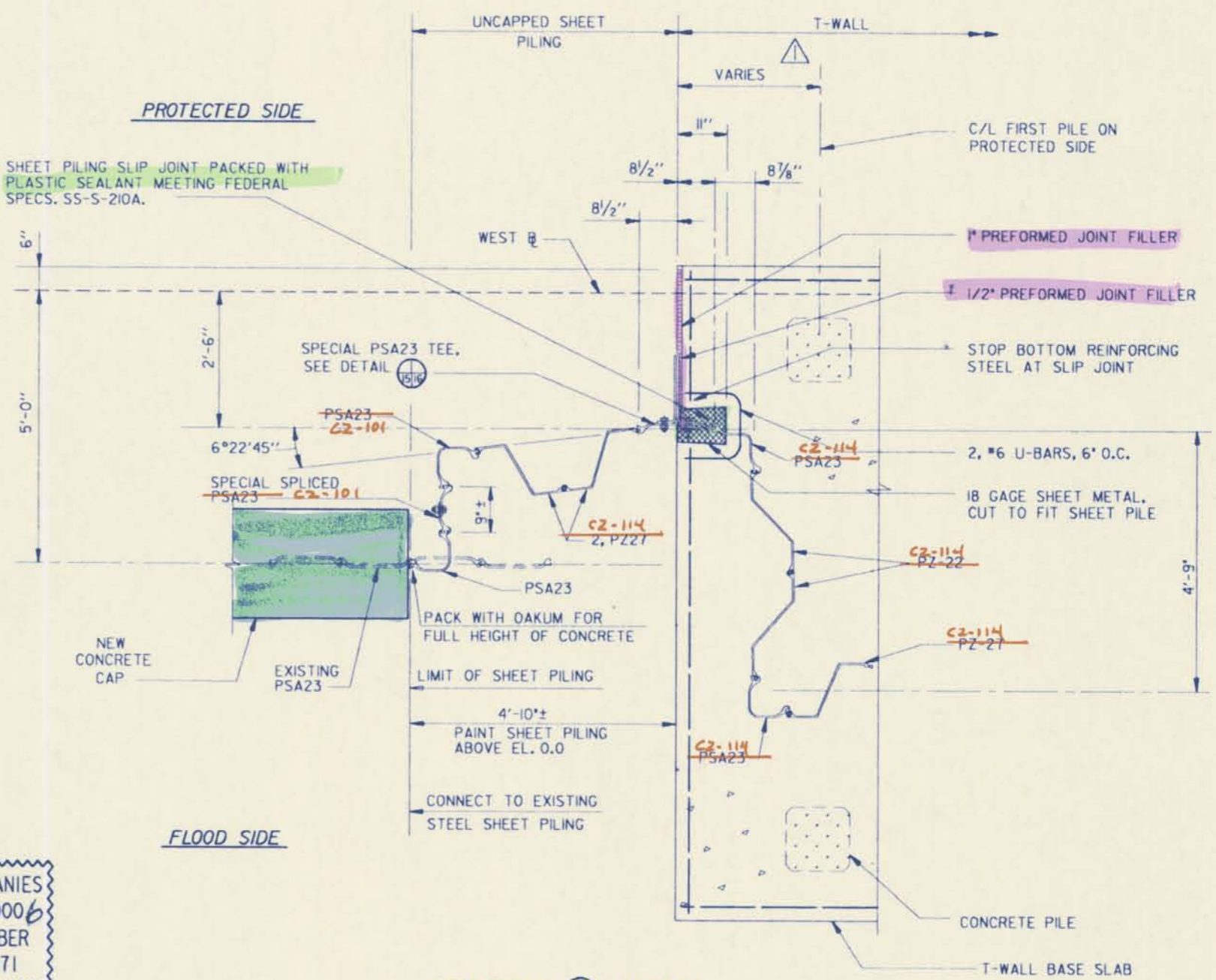


SEAL RETAINING BAR
 SCALE: 1/2" = 1'-0"

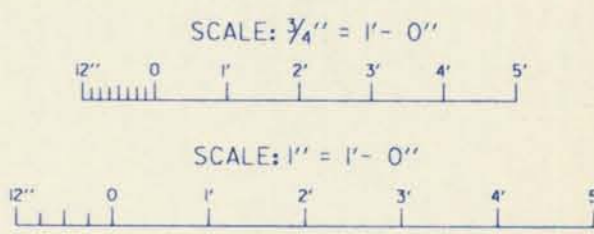
THIS PLAN ACCOMPANIES
 MODIFICATION P00006
 TO CONTRACT NUMBER
 DACW29-93-C-0071



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



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



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED ELEVATIONS OF BASE SLAB AND SHEET PILING, MOD. NO. #6	10-27-93	M.D.
△	GENERAL REVISIONS, AMENDMENT NO. 1.	4-2-93	M.D.

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

BOARD OF LEVEE COMMISSIONERS
 ORLEANS LEVEE DISTRICT
 NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
 3330 W. ESPRANADE AVE. S.
 METAIRIE, LOUISIANA 70002

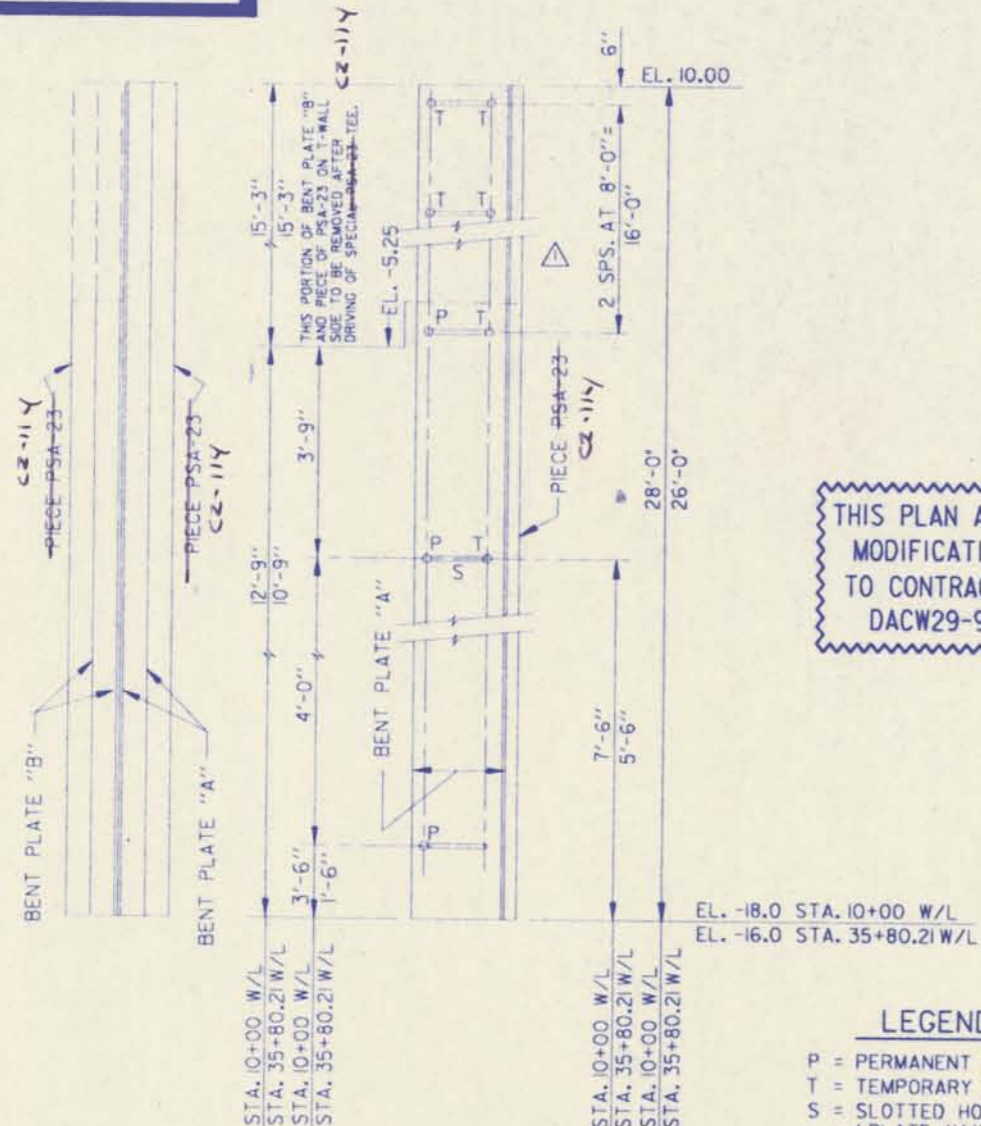
LAKE PONTCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN

NEW ORLEANS LAKEFRONT LEVEE
 WEST OF I.H.N.C.
 ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
 PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91)
 ORLEANS PARISH, LOUISIANA

TYPICAL WALL JOINTS			
DESIGNED BY: U.S.A.C.E.	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: C.J. KOCH	CADD FILE: II-B155	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 15 OF 28	



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THIS PLAN ACCOMPANIES MODIFICATION P0000 TO CONTRACT NUMBER DACW29-93-C-0071

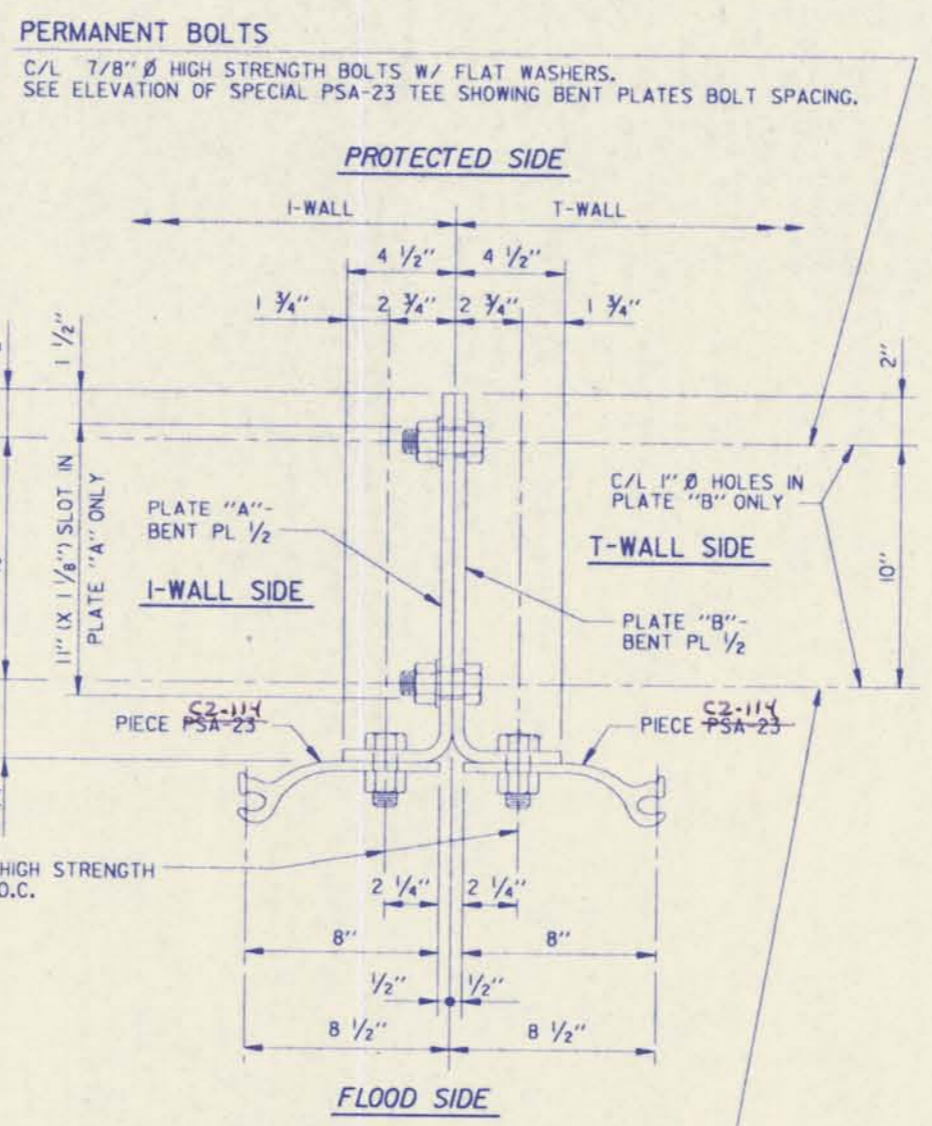
LEGEND
P = PERMANENT BOLT
T = TEMPORARY BOLT
S = SLOTTED HOLE (PLATE "A" ONLY)

PROTECTED SIDE ELEVATION
STA. 35+80.21 W/L
STA. 10+00 W/L

I-WALL SIDE ELEVATION
-SHOWN
-OPPOSITE HAND

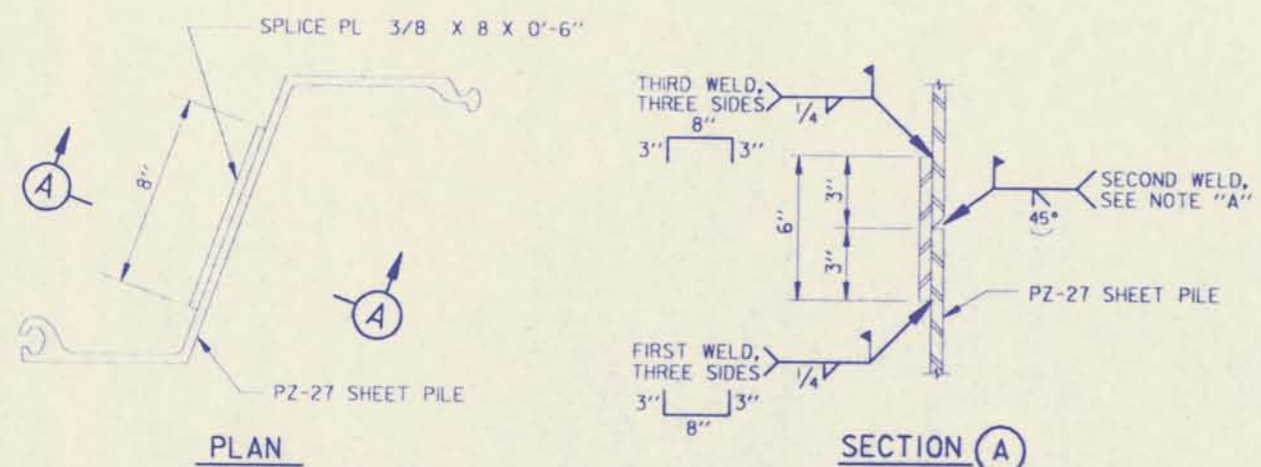
ELEVATION OF SPECIAL PSA-23 TEE SHOWING BENT PLATES BOLT SPACING

NOT TO SCALE



SHEET PILE NOTES:

- HOLES CUT IN STEEL SHEET PILING FOR PASSING REINFORCING BARS SHALL NOT EXCEED 2" Ø. WHERE HOLES FALL WITHIN THE WEB OF THE STEEL SHEET PILE, THE HOLE SHALL BE SLOTTED 4" HORIZONTALLY TO ACCOMMODATE PASSING THE REINFORCING BARS.
- ANY SUBSTITUTIONS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER REPRESENTATIVE FOR APPROVAL.
- STEEL SHEET PILE SURFACE PREPARATION AND PAINTING SHALL BE IN ACCORDANCE WITH SECTION C9A OF THE SPECIFICATIONS. STEEL SHEET PILING NOT ENCASED IN CONCRETE AND EXPOSED TO AIR SHALL BE PAINTED ON BOTH SIDES FROM TOP OF PILING TO A LEVEL 2'-0" BELOW LOWER FINISHED GROUND LINE. SECTION (B), SHEET 15.



SHEET PILE SPLICE DETAIL

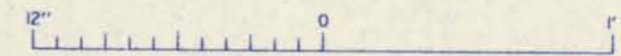
SCALE: 3" = 1' - 0"

NOTE "A"
GROOVE WELD SHALL EXTEND THE FULL LENGTH OF THE SHEET PILE WEB AND FLANGES EXCLUDING THE INTERLOCKS.

NOTES

1. FOR GENERAL NOTES, SEE DWG. 2

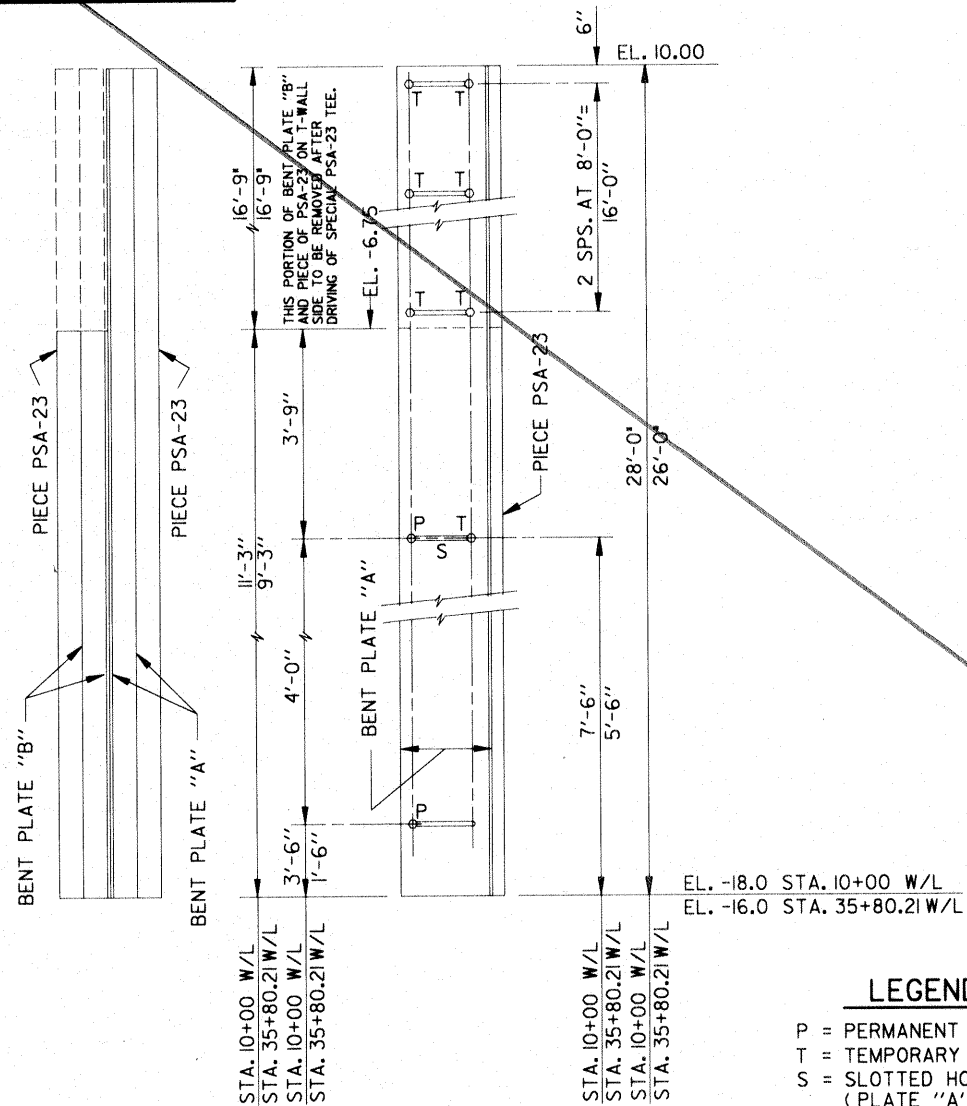
SCALE: 3" = 1' - 0"



REVISOR	REVISIONS	DATE	APPROVED
△	REVISED DIMENSIONS AND ELEVATIONS OF SPECIAL PSA-23 TEE, MOD. NO. 1516	10-27-93	M.D.
SYMBOL	DESCRIPTION	DATE	APPROVED
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002 LAKE PORTCHARTRAIN, LA, AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA SHEET PILE DETAILS			
DESIGNED BY: U.S.A.C.E.	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: P. MARLEEN	CADD FILE: II-BIGS	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 16 OF 28	
SUBMITTED BY: DESIGN ENGINEERING, INC.			



Safety is a Part of Your Contract



PROTECTED SIDE ELEVATION
 STA. 35+80.21 W/L
 STA. 10+00 W/L

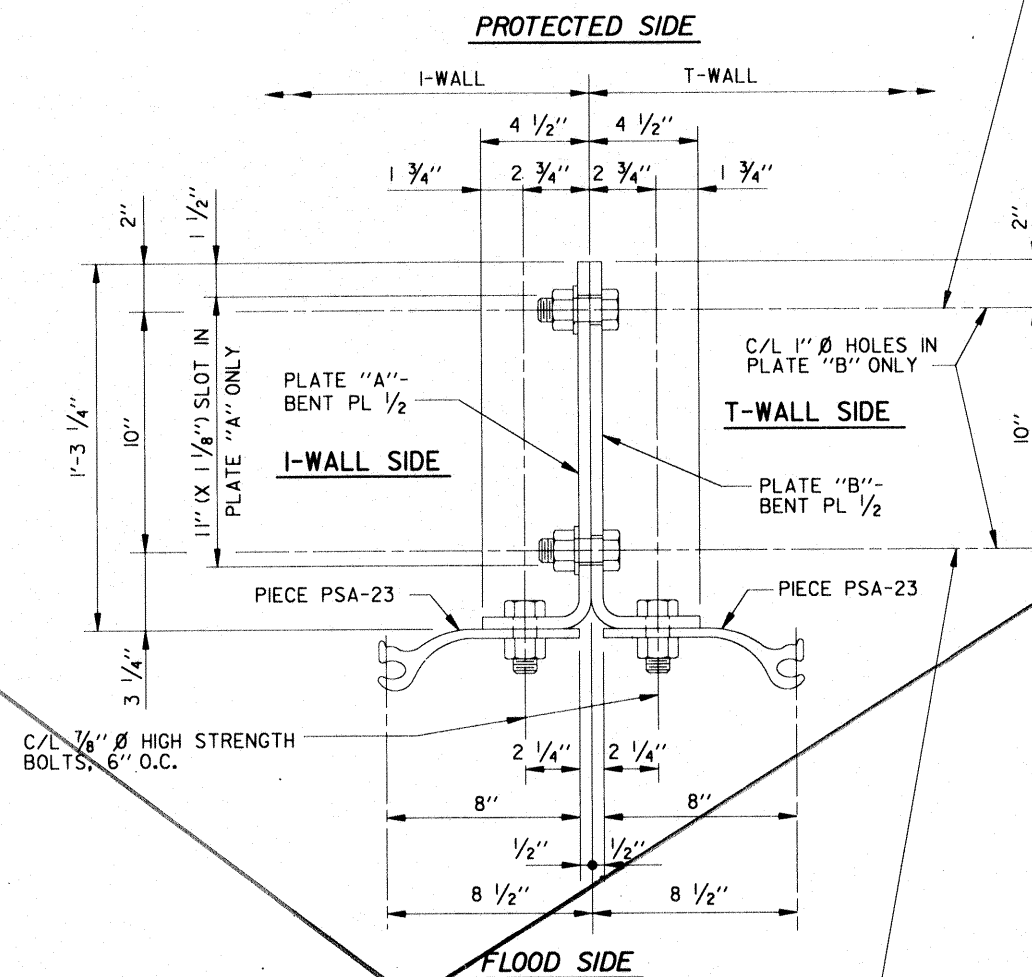
I-WALL SIDE ELEVATION
 - SHOWN
 - OPPOSITE HAND

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

NOT TO SCALE

PERMANENT BOLTS

C/L 7/8" Ø HIGH STRENGTH BOLTS W/ FLAT WASHERS.
 SEE ELEVATION OF SPECIAL PSA-23 TEE SHOWING BENT PLATES BOLT SPACING.



TEMPORARY DRIVING BOLTS

C/L 7/8" Ø HIGH STRENGTH BOLTS W/ FLAT WASHERS.
 SEE ELEVATION OF SPECIAL PSA-23 TEE SHOWING BENT PLATES BOLT SPACING.
 THESE BOLTS ARE TO BE REMOVED AS SPECIAL PSA-23 TEE IS DRIVEN,
 SO THAT UPON COMPLETION OF DRIVING NO TEMPORARY BOLTS SHALL REMAIN.

DETAIL 1516
SPECIAL PSA-23 TEE

SCALE: 3" = 1' - 0"

SHEET PILE NOTES:

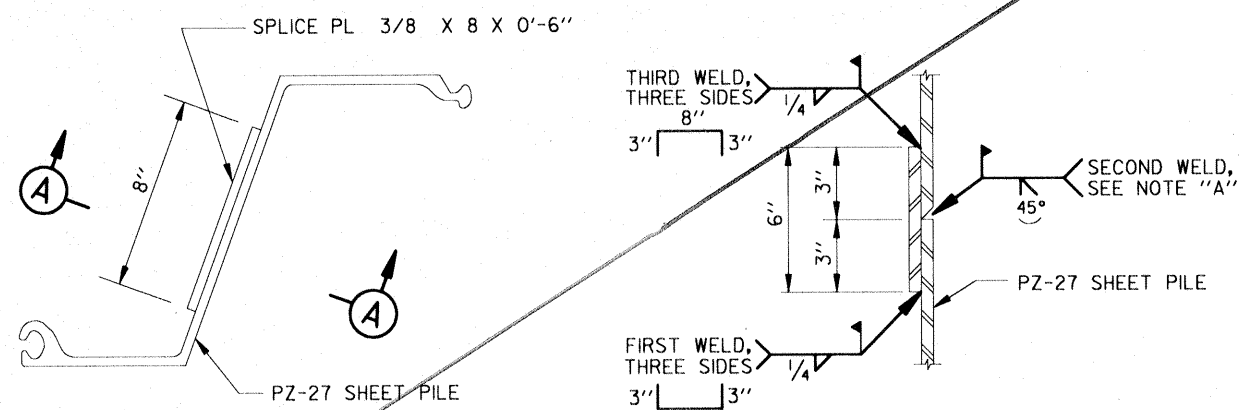
- HOLES CUT IN STEEL SHEET PILING FOR PASSING REINFORCING BARS SHALL NOT EXCEED 2"Ø. WHERE HOLES FALL WITHIN THE WEB OF THE STEEL SHEET PILE, THE HOLE SHALL BE SLOTTED 4" HORIZONTALLY TO ACCOMMODATE PASSING THE REINFORCING BARS.
- ANY SUBSTITUTIONS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER REPRESENTATIVE FOR APPROVAL.
- STEEL SHEET PILE SURFACE PREPARATION AND PAINTING SHALL BE IN ACCORDANCE WITH SECTION C9A OF THE SPECIFICATIONS. STEEL SHEET PILING NOT ENCASED IN CONCRETE AND EXPOSED TO AIR SHALL BE PAINTED ON BOTH SIDES FROM TOP OF PILING TO A LEVEL 2'-0" BELOW LOWER FINISHED GROUND LINE. SECTION (B), SHEET 15.

LEGEND

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

NOTES

1. FOR GENERAL NOTES, SEE DWG. 2

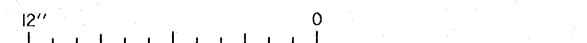


PLAN SHEET PILE SPLICE DETAIL

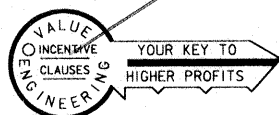
SCALE: 3" = 1' - 0"

NOTE "A"
 GROOVE WELD SHALL EXTEND THE FULL LENGTH OF THE SHEET PILE WEB AND FLANGES EXCLUDING THE INTERLOCKS.

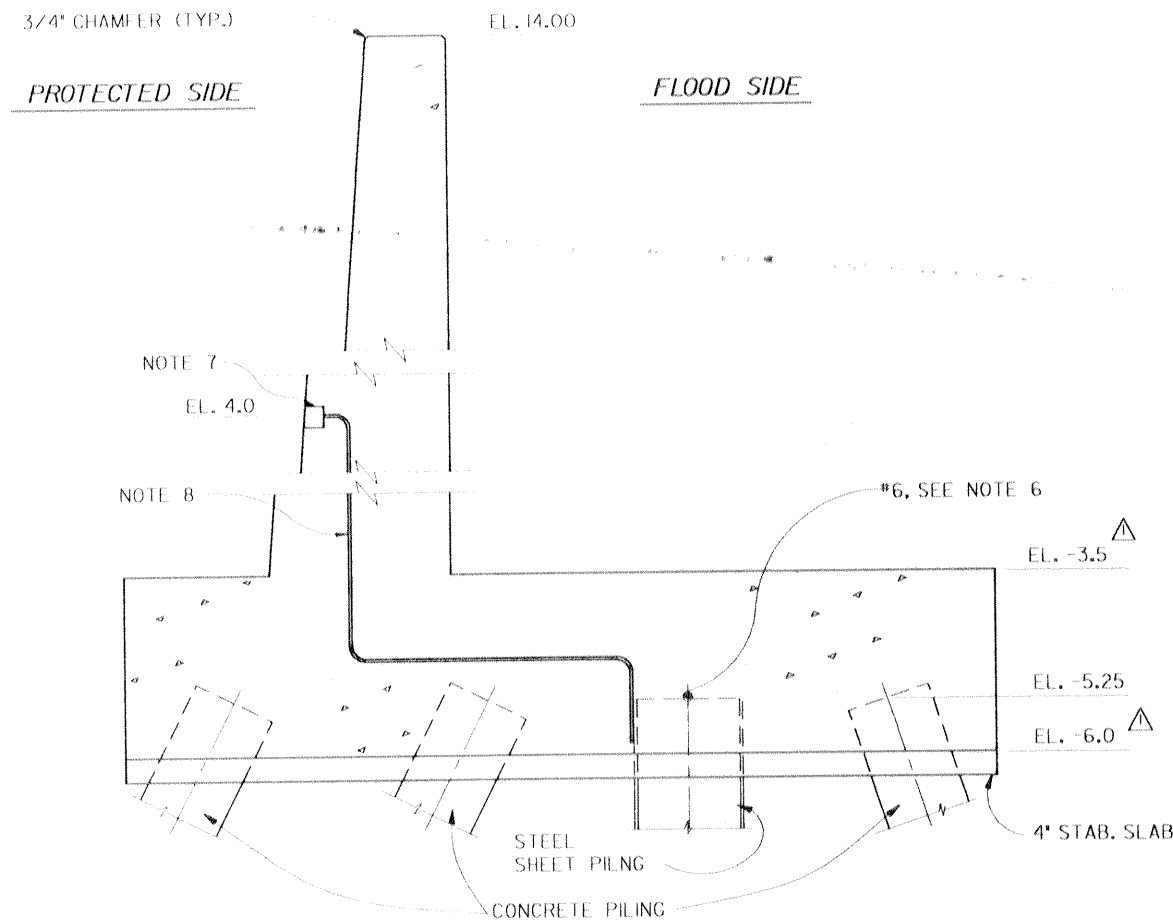
SCALE: 3" = 1' - 0"



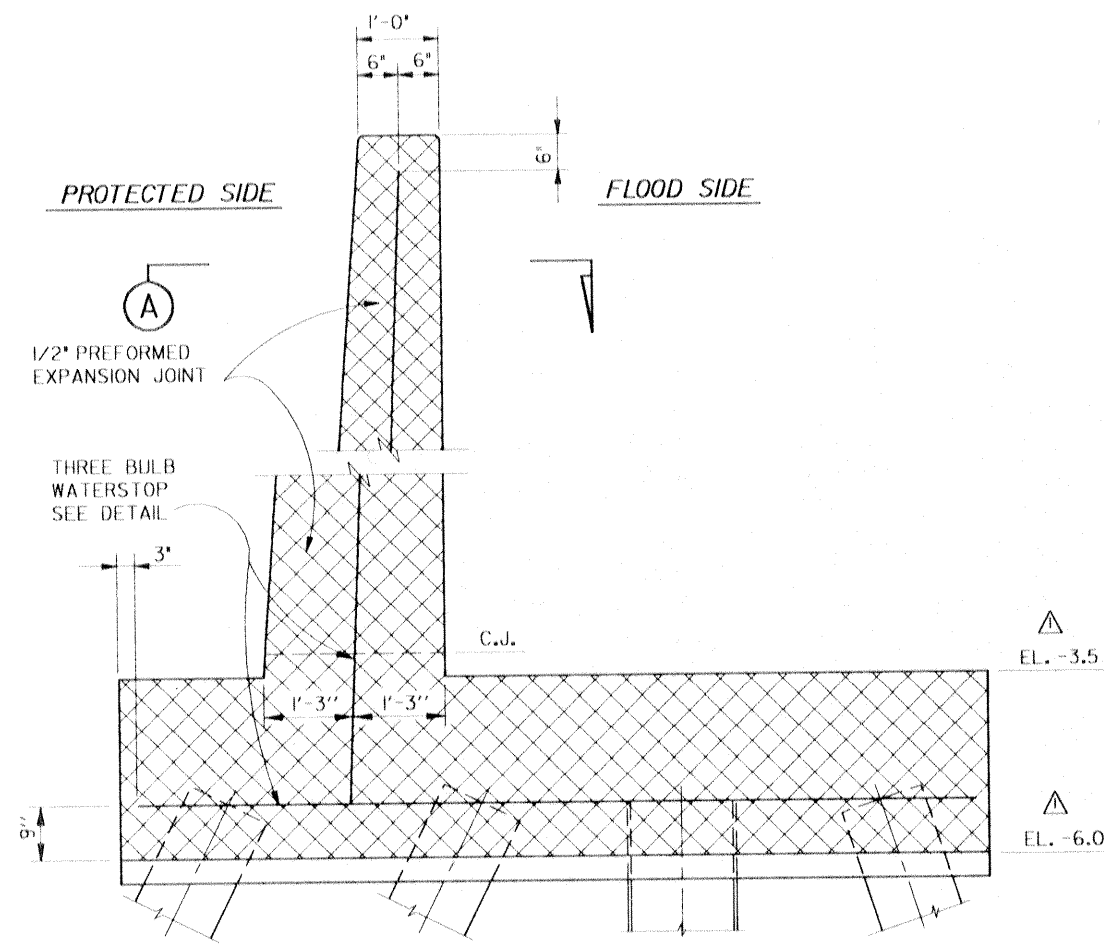
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
SHEET PILE DETAILS			
DESIGNED BY: U.S.A.C.E.	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: P.M.KILLEEN	CHECKED BY: T.M.SMITH	CADD FILE: II-BIG5	FILE NO. H-4-30960
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0059	DWG. 16	OF 28



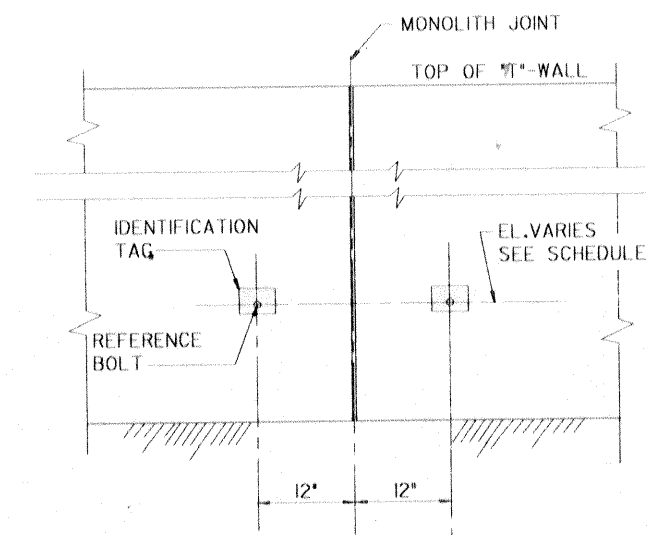
Safety is a Part of Your Contract



CORROSION PROTECTION DETAIL
T-TYPE WALL
SCALE: 3/4" = 1'-0"



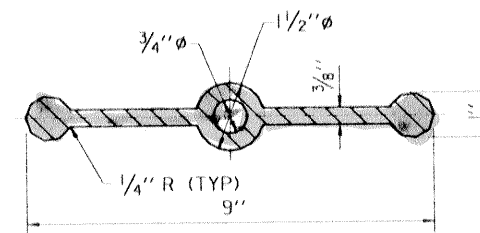
TYPICAL T-WALL JOINT
SCALE: 3/4" = 1'-0"



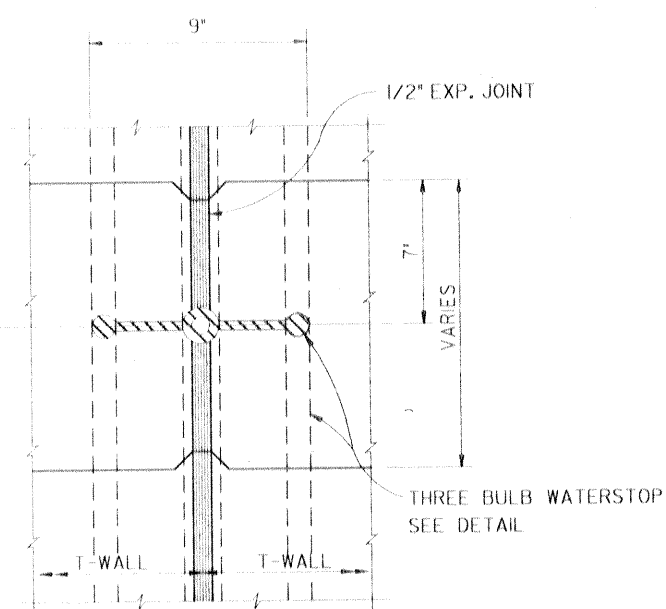
REFERENCE BOLT
N.T.S.

IDENTIFICATION TAG
N.T.S.

SETTLEMENT REFERENCE MARKER DETAILS



THREE BULB WATERSTOP DETAIL
N.T.S.



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

***T*-WALL NOTES**

- FOR GENERAL STRUCTURAL NOTES, SEE SHEET NO. 2.
- ALL HOLES CUT IN STEEL SHEET PILING FOR REINFORCING STEEL OR, ANCHOR BOLTS SHALL NOT EXCEED 2" DIAMETER, UNLESS OTHERWISE INDICATED.
- ALL HOLES CUT THROUGH STEEL SHEET PILING SHALL MISS INTERLOCKS.
- FOR WALL REINFORCEMENT DETAILS, SEE SHEET NO. 1B.
- STABILIZATION SLABS ARE REQUIRED.
- #6 REINFORCING BAR TO BE WELDED TO THE TOP OF EACH STEEL SHEET PILE. #6 REINFORCING BAR SHALL NOT EXTEND ACROSS THE MONOLITH JOINT. INSTALL BOND CABLE AT ALL T-WALL AND I-WALL JOINTS AND AT ALL TRANSITIONS FROM T-WALL TO I-WALL JOINTS. BOND CABLE SHALL HAVE AN 8" DIAMETER LOOP TO ALLOW FOR STRESSES. BOND CABLES SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL PILES 12" BELOW THE BOTTOM OF BASE SLAB FOR T-WALL JOINTS, 7" BELOW BOTTOM OF CONCRETE CAP FOR I-WALL JOINTS AND AT TRANSITIONS FROM T-WALL TO I-WALL JOINTS. WELDED CONNECTIONS SHALL BE COATED WITH SPLICING EPOXY TO OBTAIN MOISTURE PROOF JOINT. SEE SPECIFICATIONS.
- 6" STANDARD IRON BODY FERRULE WITH BRASS SCREW PLUG. THE FERRULE WILL BE LOCATED AT STA. 10+03 (+/-).
- #6 REINFORCING BAR WELDED TO STEEL SHEET PILE AND TERMINATED IN THE FERRULE WITHIN 1/2" OF THE COVER.

SETTLEMENT REFERENCE MARKER SCHEDULE

S.R.M. NO. *	W/L STA. *	FINAL ** ELEVATIONS	S.R.M. NO.	W/L STA. *	FINAL ** ELEVATIONS
B-02	10+01.00	6.0	B-36	23+64.69	6.0
B-08	12+72.69	6.0	B-37	23+66.69	6.0
B-09	12+74.69	6.0	B-43	26+37.69	6.0
B-15	15+45.69	6.0	B-44	26+39.69	6.0
B-16	15+47.69	6.0	B-50	29+10.69	6.0
B-22	18+18.69	6.0	B-51	29+12.69	6.0
B-23	18+20.69	6.0	B-57	31+83.69	6.0
B-29	20+91.69	6.0	B-58	31+85.69	6.0
B-30	20+93.69	6.0	B-67	35+74.38	6.0

- W/L STATIONS ARE APPROXIMATE. LOCATE REFERENCE BOLTS AT NEAREST W/L STATION TO THOSE SHOWN.
- ** THE CONTRACTOR SHALL TAKE FINAL ELEVATIONS OF ALL SETTLEMENT MARKERS AND SHALL SUBMIT THIS DATA TO THE CONTRACTING OFFICER REPRESENTATIVE (COR).

SETTLEMENT REFERENCE MARKER SCHEDULE

S.R.M. NO. *	W/L STA. *	FINAL ** ELEVATIONS	S.R.M. NO.	W/L STA. *	FINAL ** ELEVATIONS
B-02	10+01.00	5.996	B-36	23+64.69	5.98
B-08	12+72.69	5.99	B-37	23+66.69	5.992
B-09	12+74.69	6.005	B-43	26+37.69	5.977
B-15	15+45.69	5.932	B-44	26+39.69	5.979
B-16	15+47.69	5.965	B-50	29+10.69	5.97
B-22	18+18.69	5.942	B-51	29+12.69	5.982
B-23	18+20.69	5.93	B-57	31+83.69	6.026
B-29	20+91.69	5.967	B-58	31+85.69	6.015
B-30	20+93.69	5.975	B-67	35+74.38	6.03

- W/L STATIONS ARE APPROXIMATE. LOCATE REFERENCE BOLTS AT NEAREST W/L STATION TO THOSE SHOWN.



10-27-93	M.O.
DATE	APPROVED

T, NEW ORLEANS
ERS
SIANA
ENGINEERING, INC.
515 CANAL AVE. S.
LOUISIANA 70002
NITY

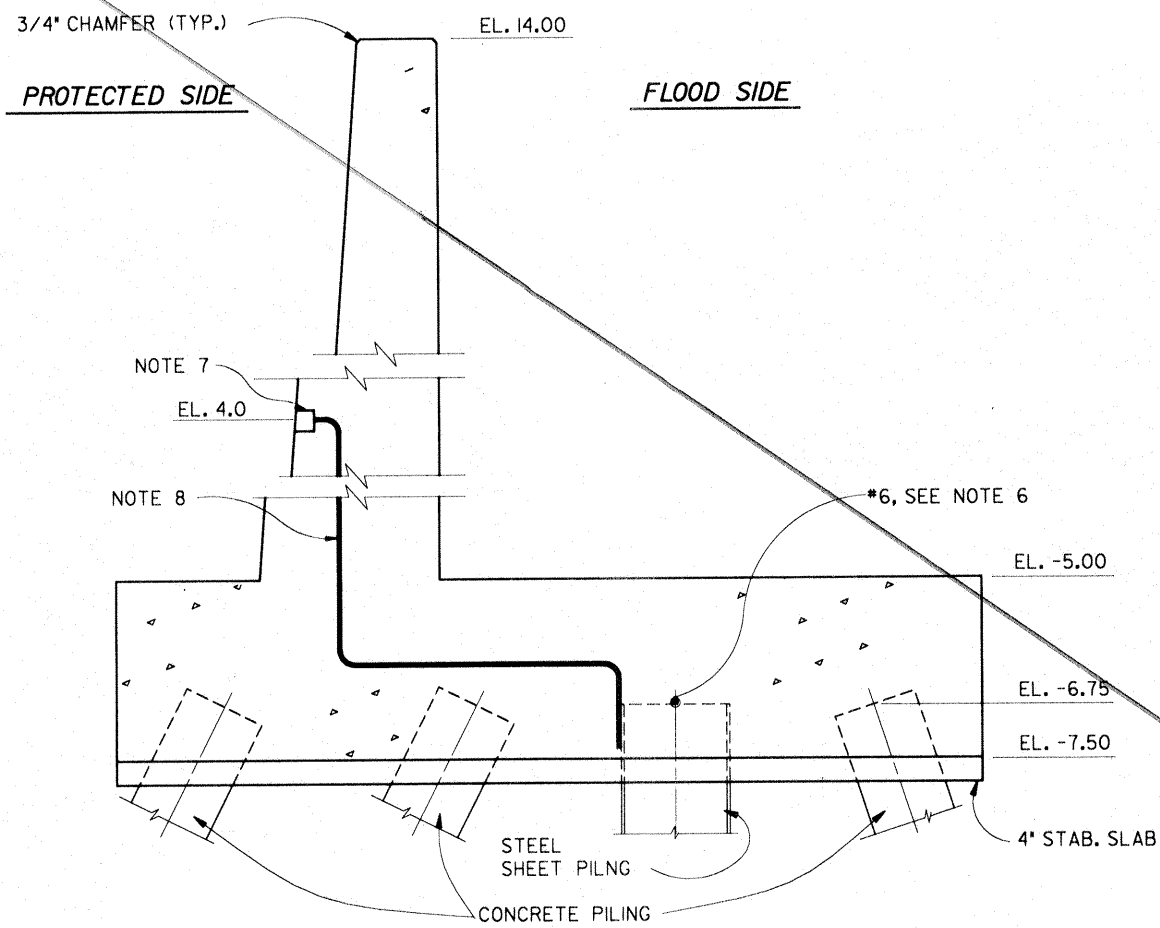
LEVEE

IMPROVEMENTS
I STA. 90+26.91

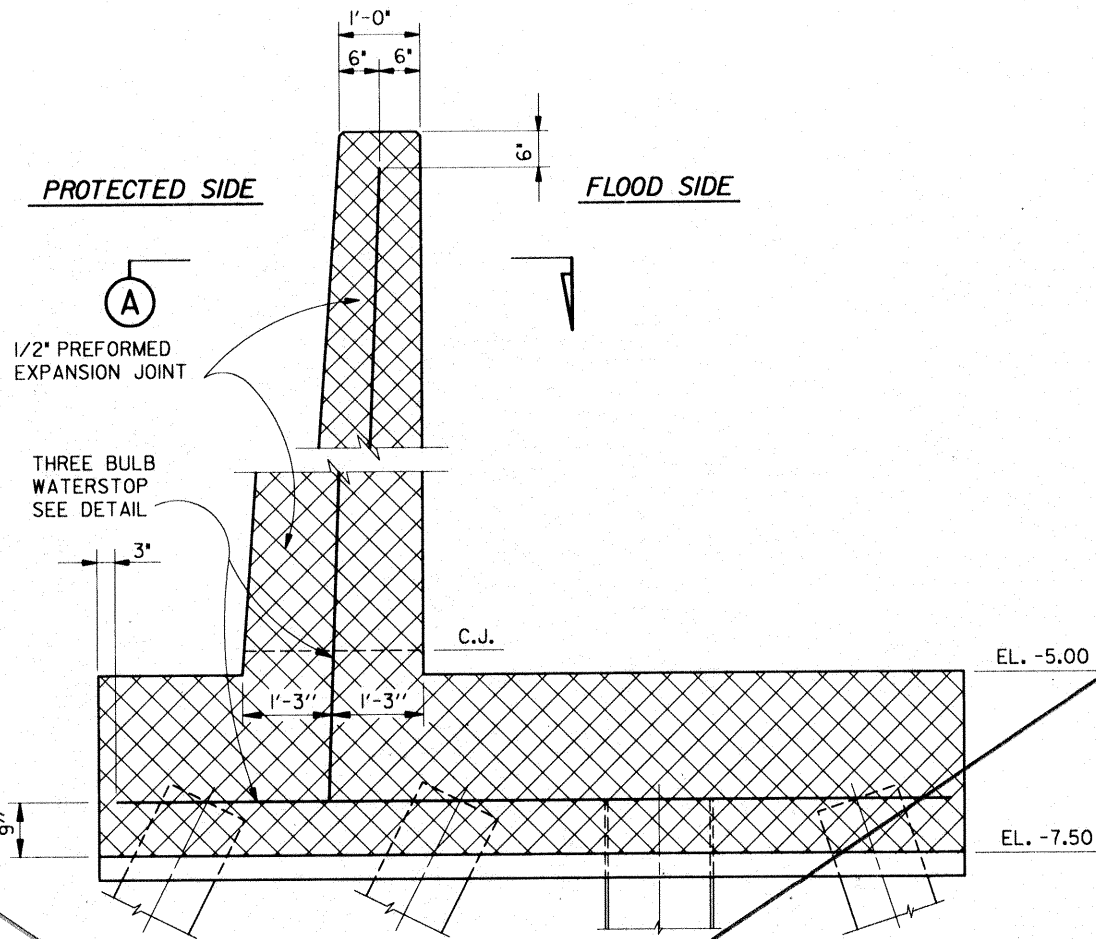
TAILS

PLOT DATE:
MAR, 1993
FILE NO.
H-4-30960
DWG. 17 OF 28

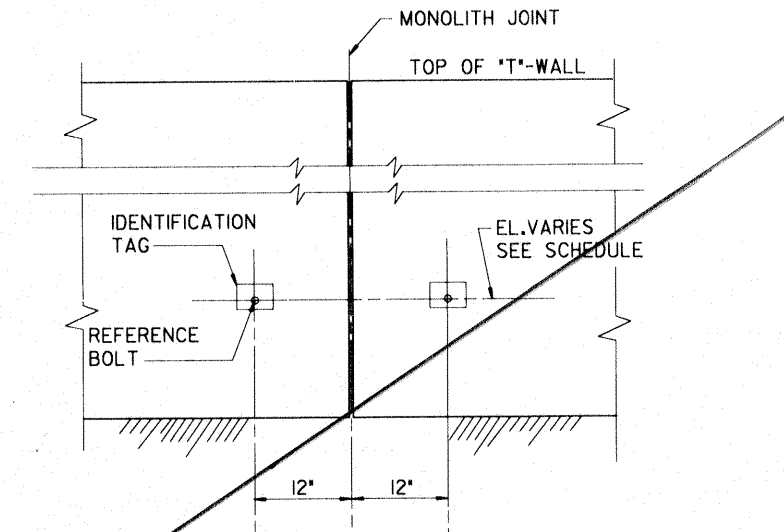
Safety is a Part of Your Contract



**CORROSION PROTECTION DETAIL
T-TYPE WALL**
SCALE: 3/4" = 1'-0"

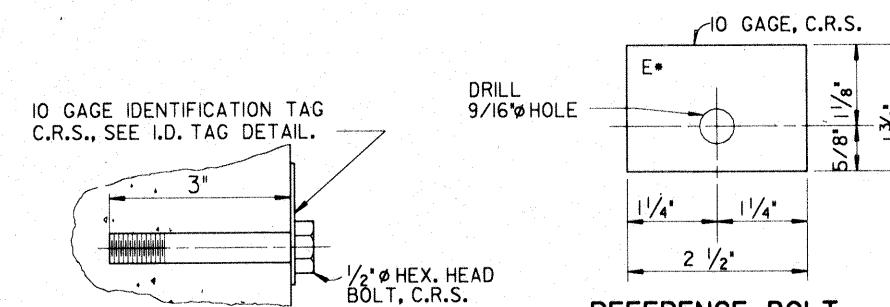


TYPICAL T-WALL JOINT
SCALE: 3/4" = 1'-0"



PROTECTED SIDE
N.T.S.

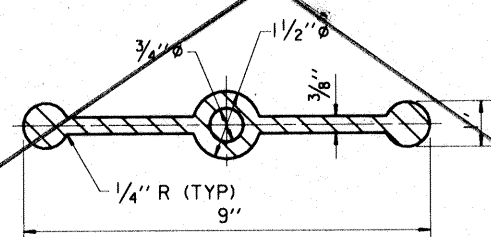
* REFERENCE TAGS TO BE STAMPED WITH S.R.M. NOS. SHOWN IN SCHEDULE.



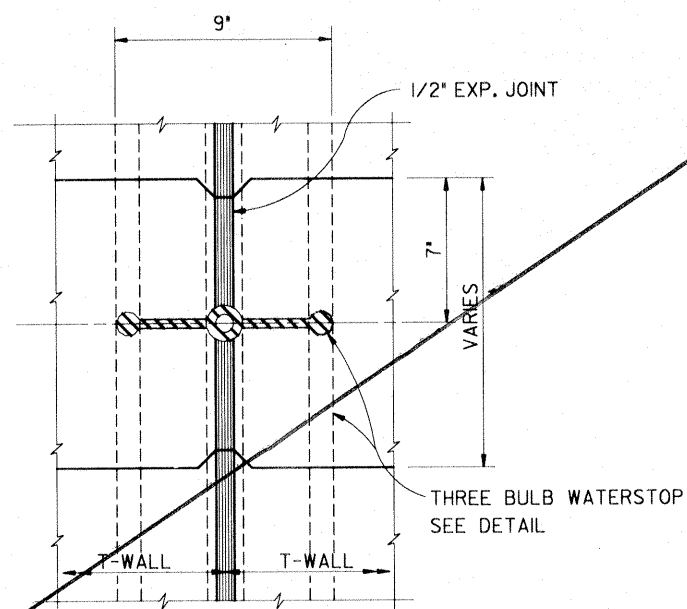
REFERENCE BOLT
N.T.S.

REFERENCE BOLT IDENTIFICATION TAG
N.T.S.

SETTLEMENT REFERENCE MARKER DETAILS



THREE BULB WATERSTOP DETAIL
N.T.S.



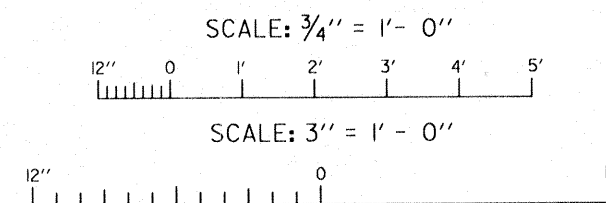
SECTION A
SCALE: 3" = 1'-0"

T-WALL NOTES

- FOR GENERAL STRUCTURAL NOTES, SEE SHEET NO. 2.
- ALL HOLES CUT IN STEEL SHEET PILING FOR REINFORCING STEEL OR ANCHOR BOLTS SHALL NOT EXCEED 2" DIAMETER, UNLESS OTHERWISE INDICATED.
- ALL HOLES CUT THROUGH STEEL SHEET PILING SHALL MISS INTERLOCKS.
- FOR WALL REINFORCEMENT DETAILS, SEE SHEET NO. 18.
- STABILIZATION SLABS ARE REQUIRED.
- #6 REINFORCING BAR TO BE WELDED TO THE TOP OF EACH STEEL SHEET PILE. #6 REINFORCING BAR SHALL NOT EXTEND ACROSS THE MONOLITH JOINT. INSTALL BOND CABLE AT ALL T-WALL AND I-WALL JOINTS AND AT ALL TRANSITIONS FROM T-WALL TO I-WALL JOINTS. BOND CABLE SHALL HAVE AN 8" DIAMETER LOOP TO ALLOW FOR STRESSES. BOND CABLES SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL PILES 12" BELOW THE BOTTOM OF BASE SLAB FOR T-WALL JOINTS, 7" BELOW BOTTOM OF CONCRETE CAP FOR I-WALL JOINTS AND AT TRANSITIONS FROM T-WALL TO I-WALL JOINTS. WELDED CONNECTIONS SHALL BE COATED WITH SPLICING EPOXY TO OBTAIN MOISTURE PROOF JOINT. SEE SPECIFICATIONS.
- 6" STANDARD IRON BODY FERRULE WITH BRASS SCREW PLUG. THE FERRULE WILL BE LOCATED AT STA. 10+03 (+/-).
- #6 REINFORCING BAR WELDED TO STEEL SHEET PILE AND TERMINATED IN THE FERRULE WITHIN 1/2" OF THE COVER.

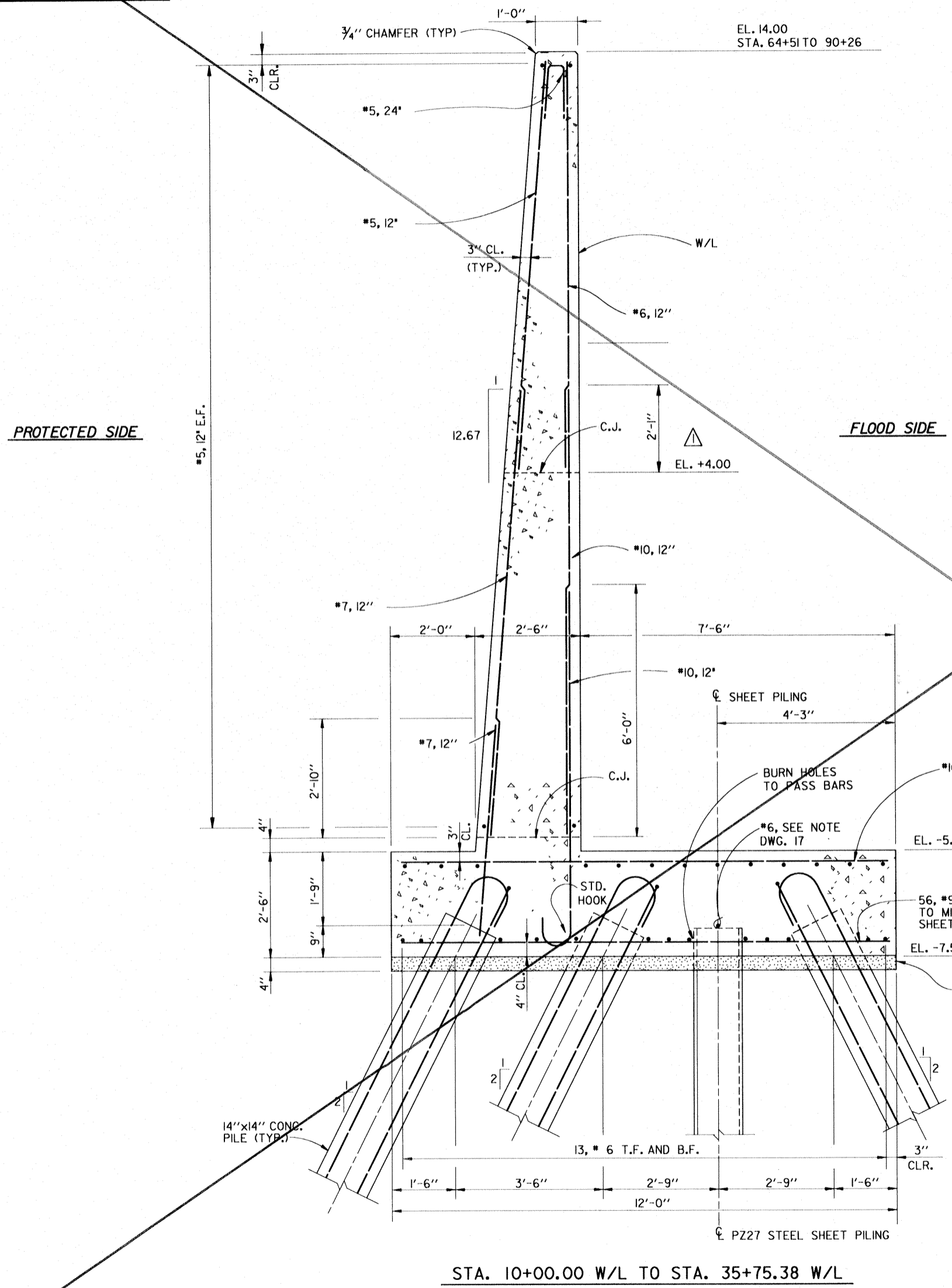
- W/L STATIONS ARE APPROXIMATE. LOCATE REFERENCE BOLTS AT NEAREST W/L STATION TO THOSE SHOWN.
- THE CONTRACTOR SHALL TAKE FINAL ELEVATIONS OF ALL SETTLEMENT MARKERS AND SHALL SUBMIT THIS DATA TO THE CONTRACTING OFFICER REPRESENTATIVE (COR).

SETTLEMENT REFERENCE MARKER SCHEDULE					
S.R.M. NO. *	W/L STA. *	FINAL ** ELEVATIONS	S.R.M. NO.	W/L STA. *	FINAL ** ELEVATIONS
B-02	10+01.00	6.0	B-36	23+64.69	6.0
B-08	12+72.69	6.0	B-37	23+66.69	6.0
B-09	12+74.69	6.0	B-43	26+37.69	6.0
B-15	15+45.69	6.0	B-44	26+39.69	6.0
B-16	15+47.69	6.0	B-50	29+10.69	6.0
B-22	18+18.69	6.0	B-51	29+12.69	6.0
B-23	18+20.69	6.0	B-57	31+83.69	6.0
B-29	20+91.69	6.0	B-58	31+85.69	6.0
B-30	20+93.69	6.0	B-67	35+74.38	6.0



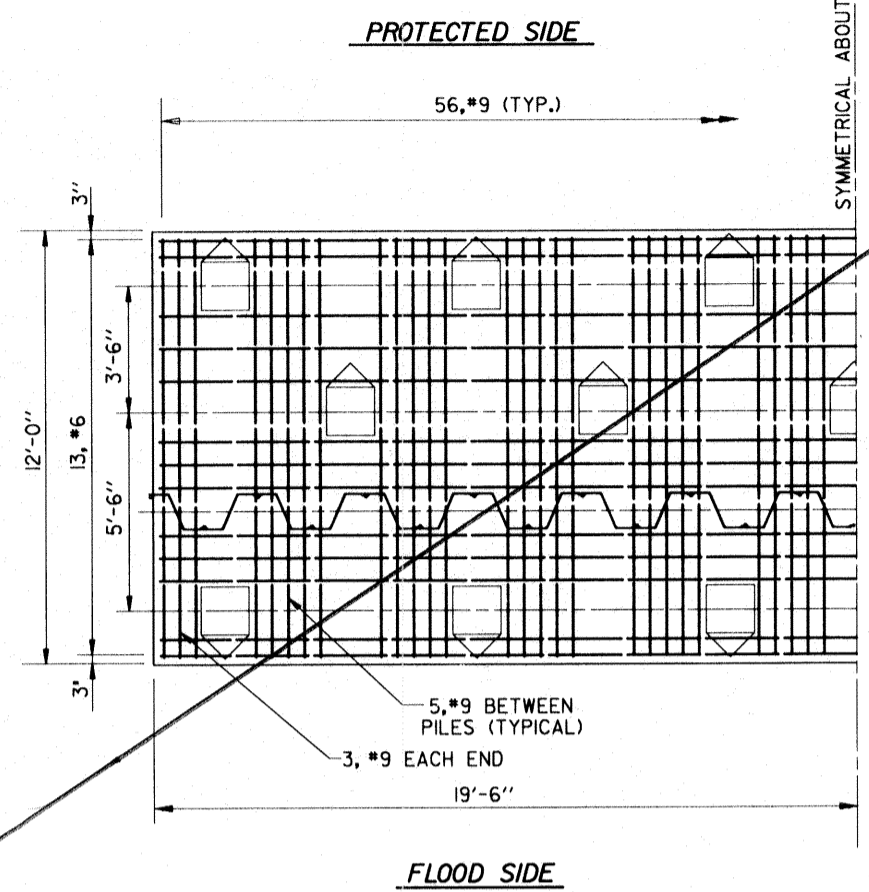
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 04+51.53 TO STA. 90+28.91) ORLEANS PARISH, LOUISIANA			
MISCELLANEOUS DETAILS			
DESIGNED BY: T.M.SMITH	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: P.M.KILLEEN	CHECKED BY: T.M.SMITH	CADD FILE: II-B17S	FILE NO. H-4-30960
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0059	DWG. 17 OF 28	

Safety is a Part of Your Contract



"T"-WALL SECTION MONOLITH

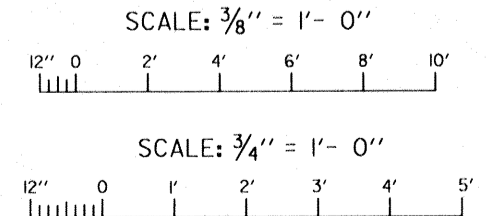
SCALE: 3/4" = 1'- 0"



PLAN SHOWING BOTTOM BARS

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

FOR CONCRETE NOTES, SEE DRAWING 2.



SYMBOL	DESCRIPTION	DATE	APPROVED
△	MODIFIED CONST. JOINT EL., AMEND. NO. 4.	4-16-93	M.D.

REVISIONS	

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA	
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002

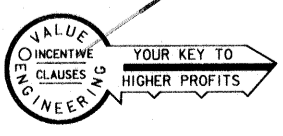
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN

NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.

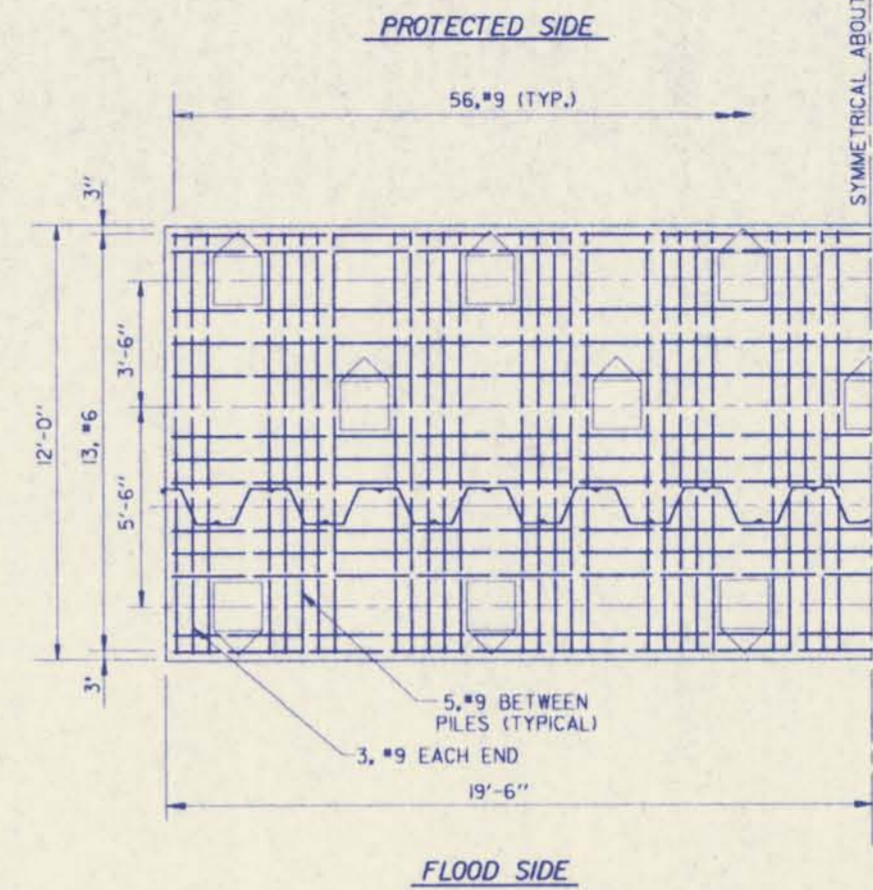
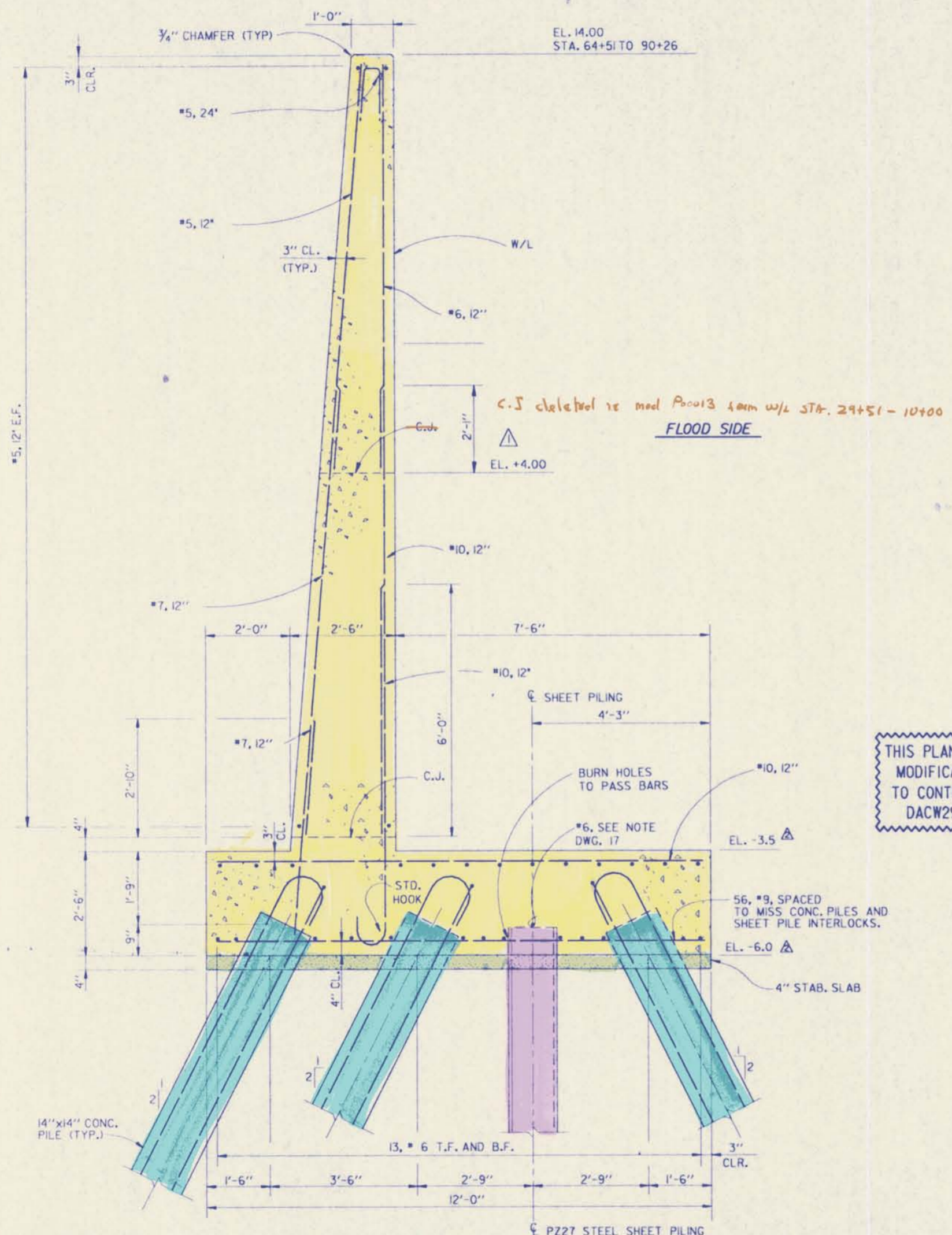
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

TYPICAL "T"-WALL SECTION

DESIGNED BY: M.B.SHUKLA	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: APR. 1993
DRAWN BY: C.J.KOCH	CADD FILE: II-BIBS	FILE NO. H-4-30960	
CHECKED BY: T.M.SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 18	OF 28
DESIGNED BY: DESIGN ENGINEERING, INC.			



Safety is a Part of Your Contract



PLAN SHOWING BOTTOM BARS
SCALE: 3/8" = 1'-0"

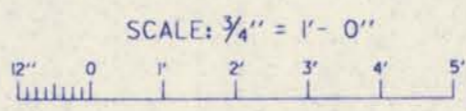
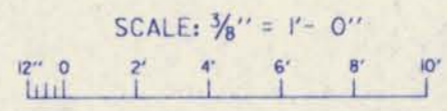
THIS PLAN ACCOMPANIES MODIFICATION P0000 TO CONTRACT NUMBER DACW29-93-C-0071

FOR CONCRETE NOTES, SEE DRAWING 2.

STA. 10+00.00 W/L TO STA. 35+75.38 W/L

"T"-WALL SECTION MONOLITH

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



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED ELEVATIONS OF BASE SLAB, MOD. NO. #0	10-27-93	M.D.
△	MODIFIED CONST. JOINT EL., AMEND. NO. 4	4-16-93	M.D.

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

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE AVE. S.
METAIRIE, LOUISIANA 70002

LAKE PONCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN

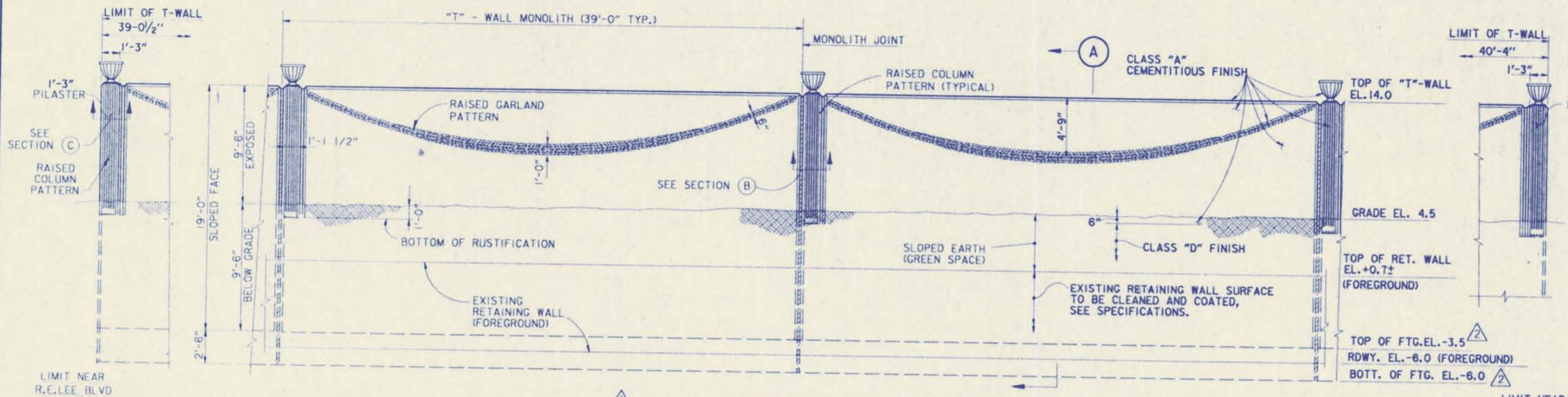
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

TYPICAL "T"-WALL SECTION

DESIGNED BY: M.B. SHUKLA	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: APR. 1993
DRAWN BY: C.J. KOCH	CADD FILE: II-BIBS	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0059	DWG. 18 OF 28



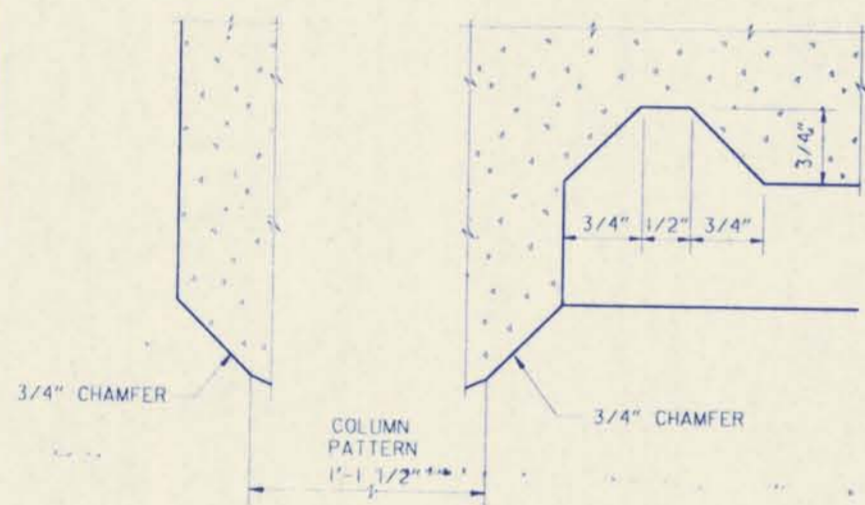
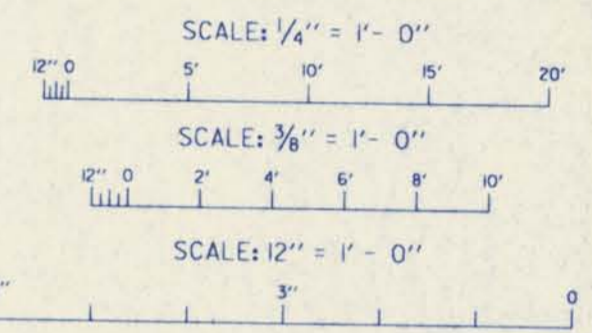
Safety is a Part of Your Contract



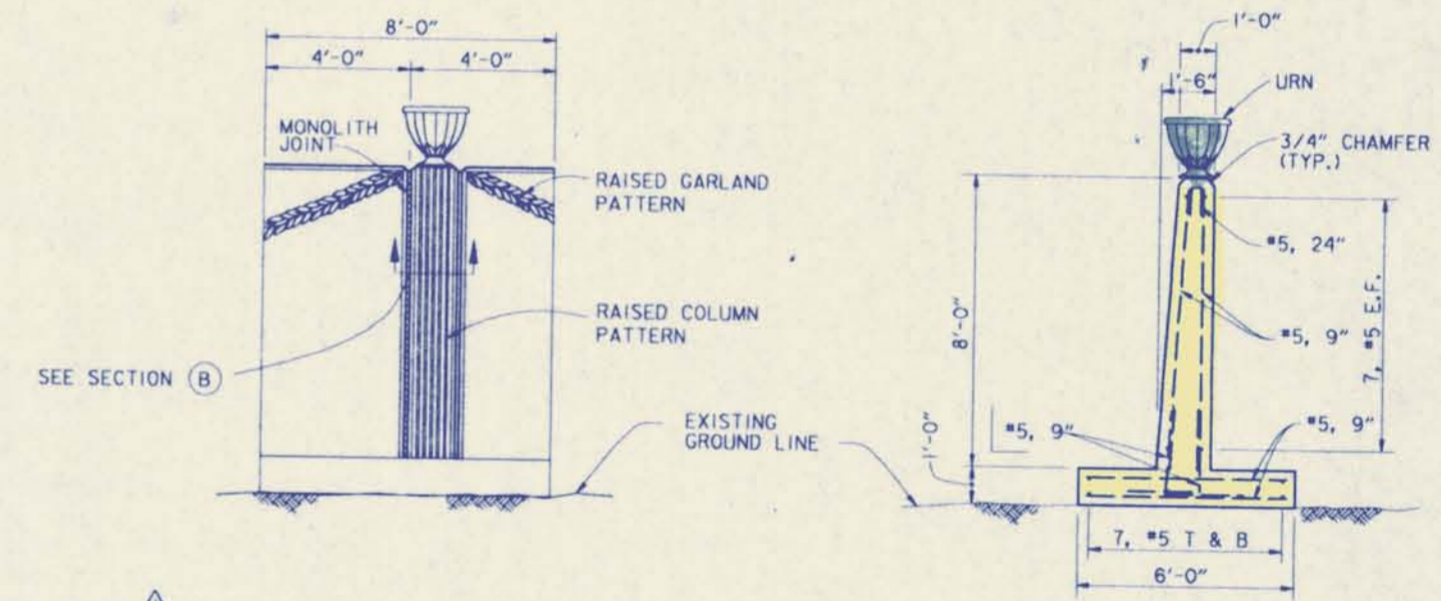
PROTECTED SIDE ELEVATION
TYPICAL "T"-WALL TREATMENT

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

- NOTES**
- CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING THE LOCATION OF ALL JOINTS IN ALL FORMS USED FOR CONSTRUCTION FOR PRIOR APPROVAL.
 - ALL EXPOSED SURFACES SHALL BE FINISHED BY COATING WITH CEMENTITIOUS PAINT, SUCH AS "THORSEAL" BY STANDARD DRY WALL PRODUCTS OR EQUAL, (FED. SPEC. A-A-1555) TO A DEPTH OF 0'-6" BELOW FINAL GRADE. A COLOR, BEIGE, IS TO BE ADDED TO THE COATING.
 - OMIT CHAMFERS ON ALL HORIZONTAL CONSTRUCTION JOINTS.



SECTION C
FULL SCALE



PROTECTED SIDE ELEVATION

CLASS "A" CEMENTITIOUS FINISH TO BE APPLIED TO SURFACES AS REQUIRED FOR "T"-WALL.

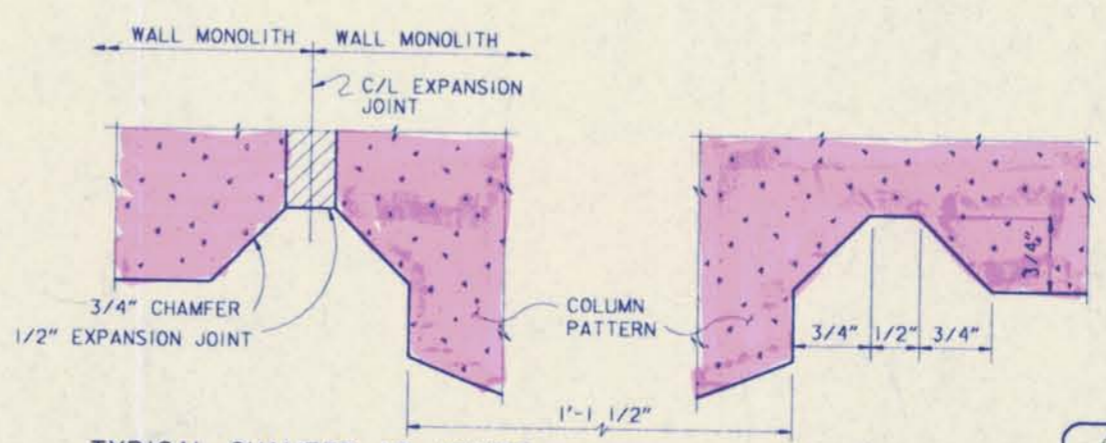
WALL SECTION

3" CLEAR ON REINFORCING

THIS PLAN ACCOMPANIES MODIFICATION P0006 TO CONTRACT NUMBER DACW29-9-C-0071

"T"-WALL MOCK-UP

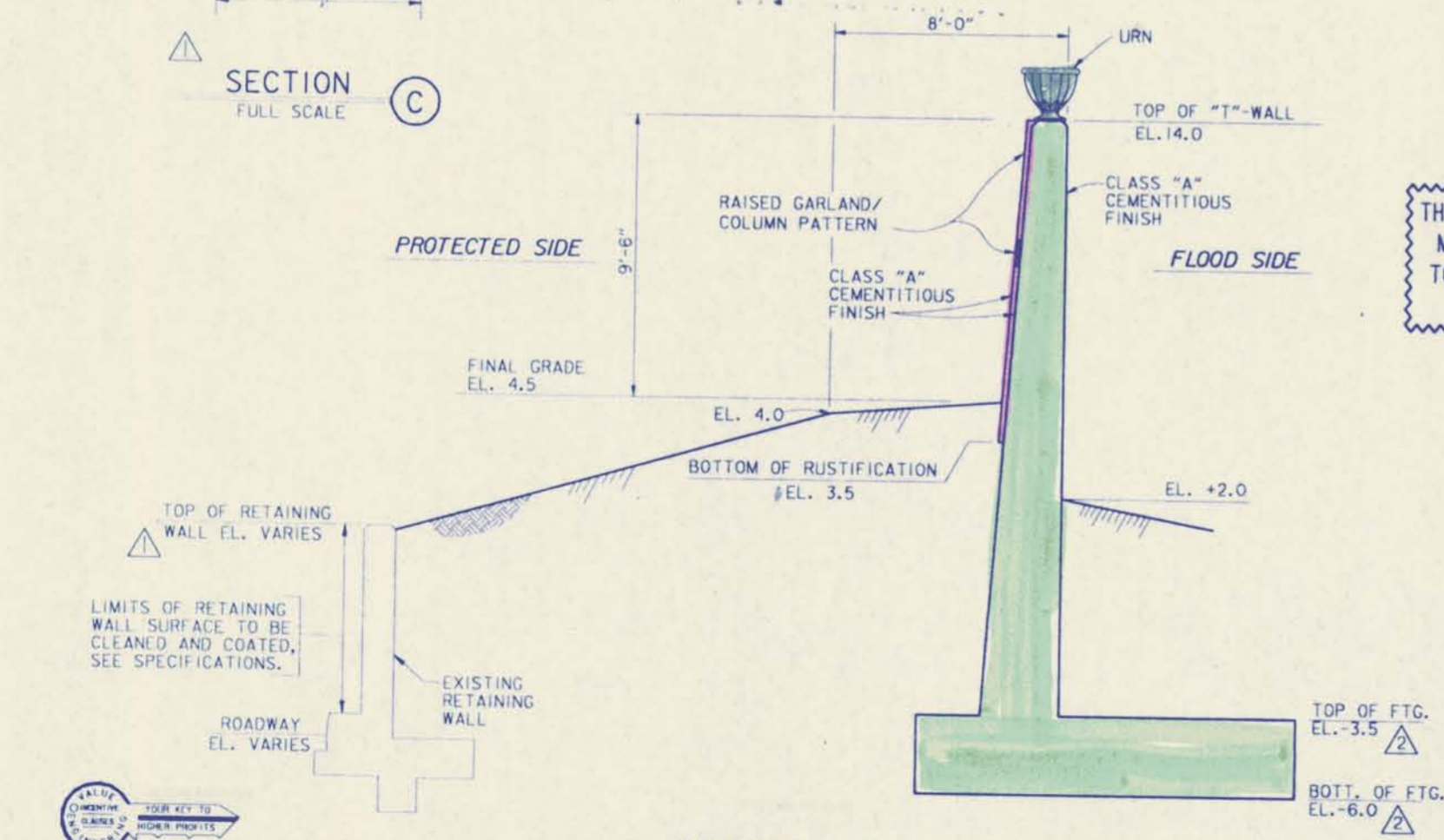
SCALE: 3/8" = 1'-0"



TYPICAL CHAMFER AT JOINTS

SECTION B
FULL SCALE

DUMMY JOINT



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

SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED ELEVATIONS OF BASE SLAB, MOD. NO. 10	10-27-93	M.D.
△	GENERAL REVISIONS, AMENDMENT NO. 1.	4-2-93	M.D.

REVISIONS

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

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE AVE., S.
METAIRIE, LOUISIANA 70002

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN

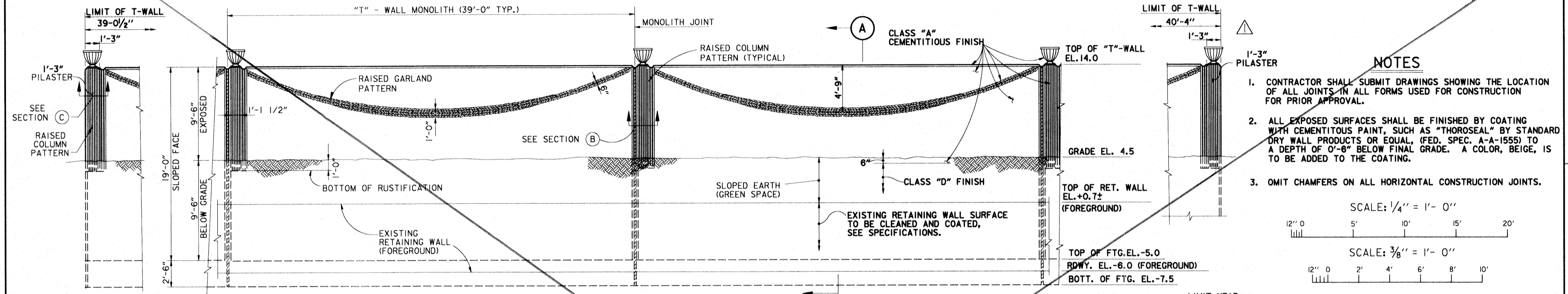
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

"T"-WALL ARCHITECTURAL TREATMENT

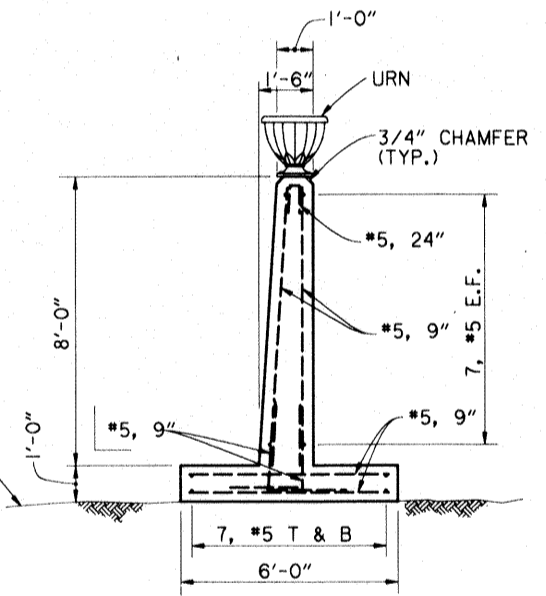
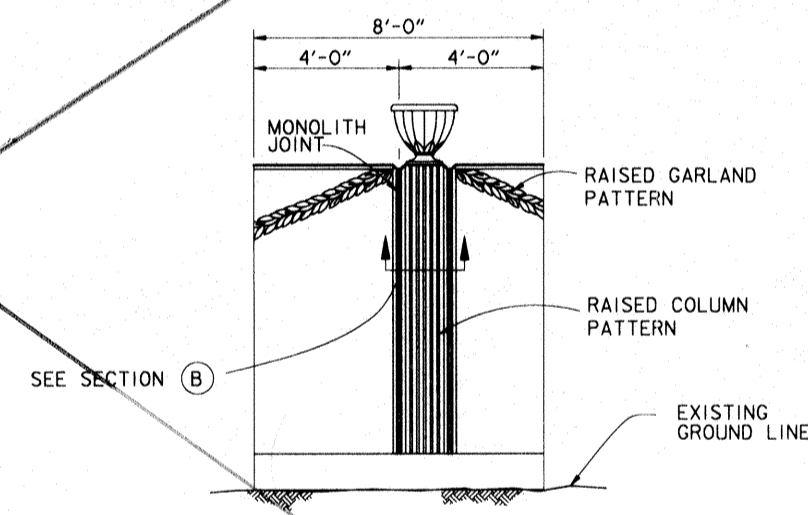
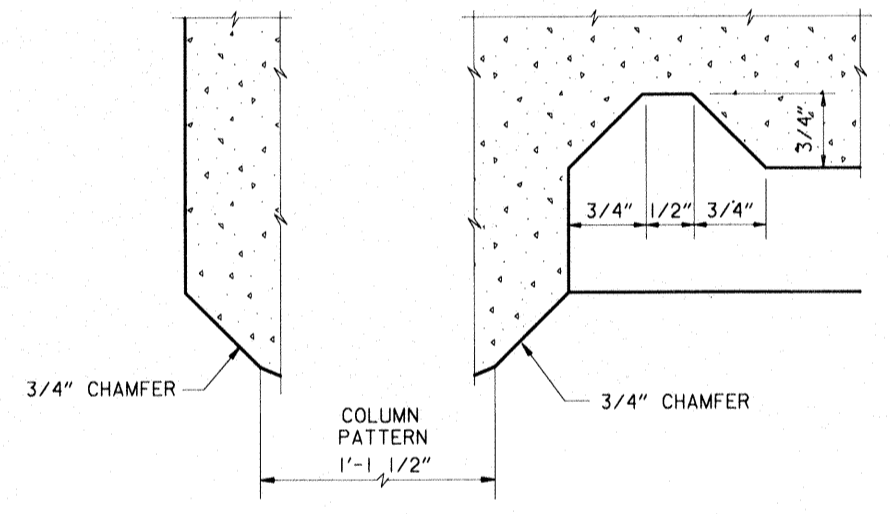
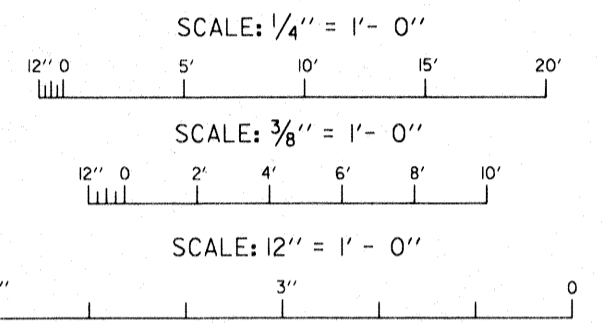
DESIGNED BY: T.M. SMITH	DATE: MAR 1993	PLOT SCALE: 1	PLOT DATE: MAR 1993
DRAWN BY: K.A. WOLITKA	CADD FILE: P11-b19.dgn	FILE NO. H-4-30960	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0059	DWG. 19 OF 28	



Safety is a Part of Your Contract



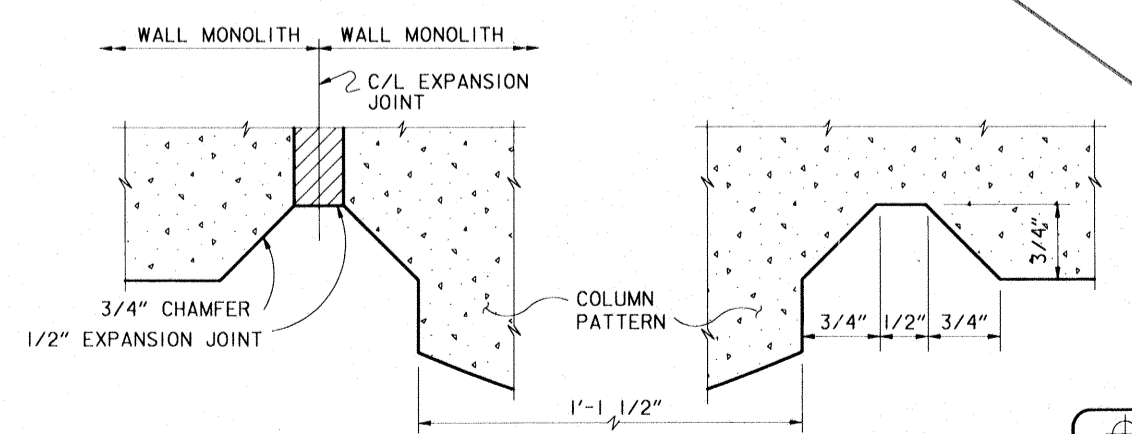
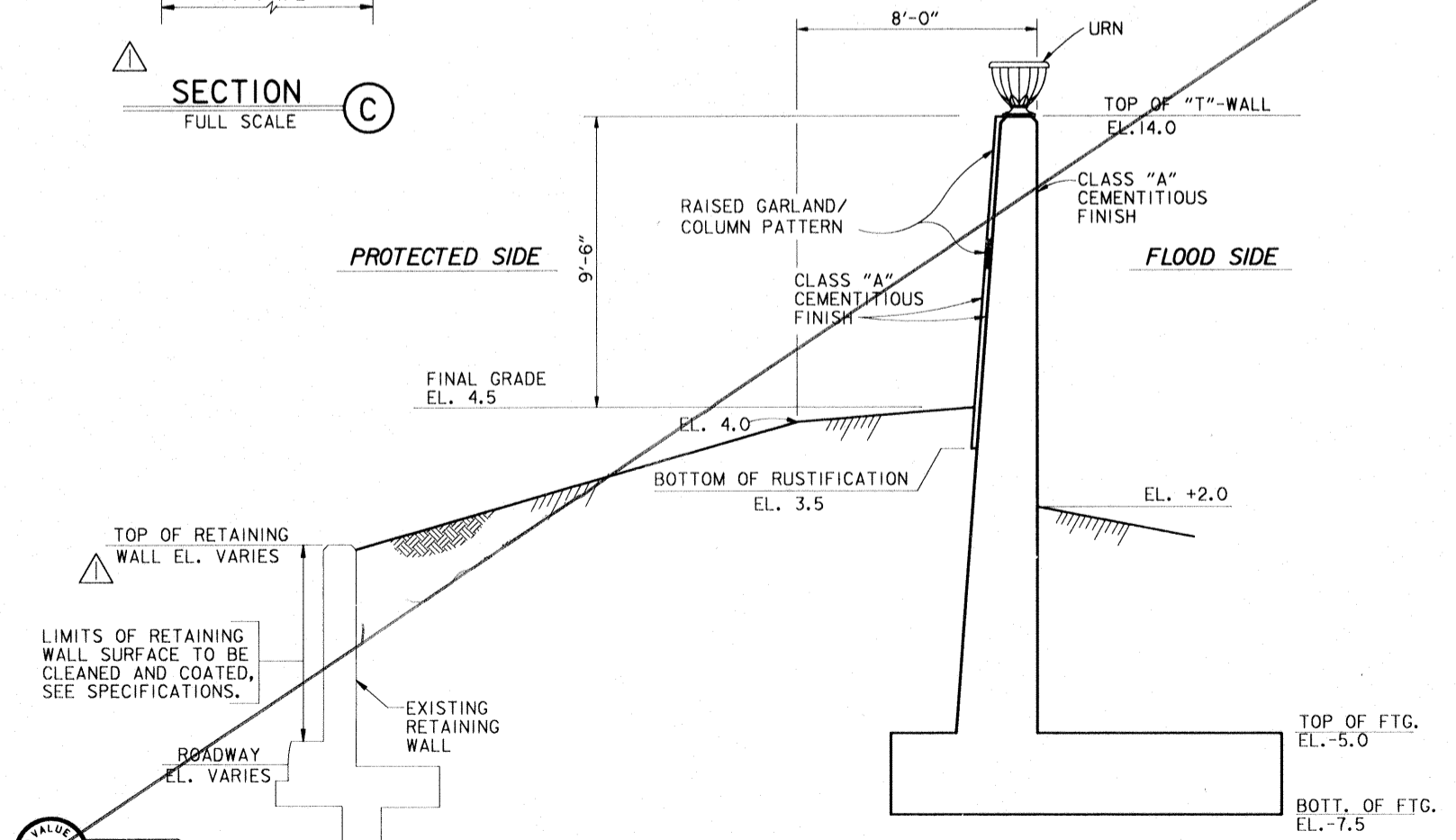
- NOTES**
1. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING THE LOCATION OF ALL JOINTS IN ALL FORMS USED FOR CONSTRUCTION FOR PRIOR APPROVAL.
 2. ALL EXPOSED SURFACES SHALL BE FINISHED BY COATING WITH CEMENTITIOUS PAINT, SUCH AS "THOROSEAL" BY STANDARD DRY WALL PRODUCTS OR EQUAL, (FED. SPEC. A-A-1555) TO A DEPTH OF 0'-6" BELOW FINAL GRADE. A COLOR, BEIGE, IS TO BE ADDED TO THE COATING.
 3. OMIT CHAMFERS ON ALL HORIZONTAL CONSTRUCTION JOINTS.



SECTION C FULL SCALE

PROTECTED SIDE ELEVATION CLASS "A" CEMENTITIOUS FINISH TO BE APPLIED TO SURFACES AS REQUIRED FOR "T"-WALL.

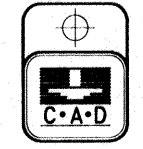
WALL SECTION 3" CLEAR ON REINFORCING



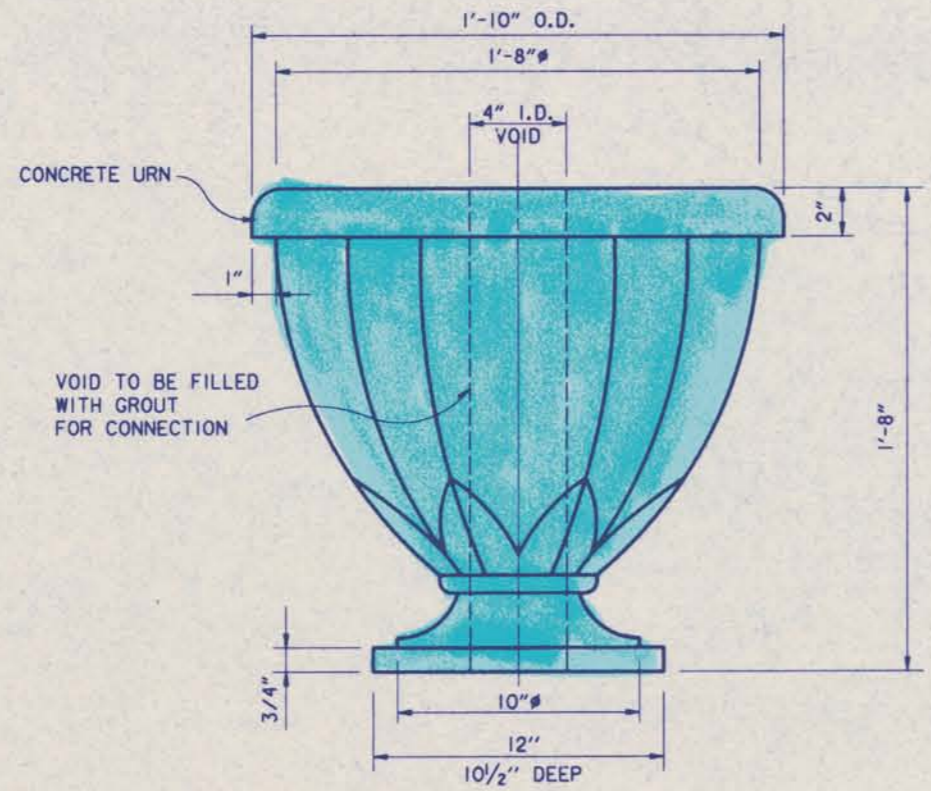
TYPICAL CHAMFER AT JOINTS SECTION B FULL SCALE

DUMMY JOINT

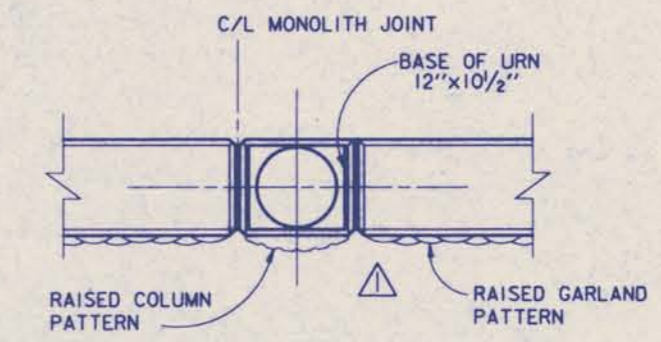
SYMBOL	DESCRIPTION	DATE	APPROVED
△	GENERAL REVISIONS, AMENDMENT NO. 1.	4-2-93	M.D.
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA BOARD OF LEEVE COMMISSIONERS ORLEANS LEEVE DISTRICT NEW ORLEANS, LOUISIANA DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002 LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEEVE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA "T"-WALL ARCHITECTURAL TREATMENT			
DESIGNED BY:	T.M. SMITH	DATE:	MAR 1993
DRAWN BY:	K.A. WOJCIK	PLOT SCALE:	1
CHECKED BY:	T.M. SMITH	PLOT DATE:	MAR 1993
SUBMITTED BY:	DESIGN ENGINEERING, INC.	CADD FILE:	r11-b19.dgn
DESIGN ENGINEER:		SOLICITATION NO.:	DACW29-93-B-0059
		FILE NO.:	H-4-30960
		DWG. NO.:	19 OF 28



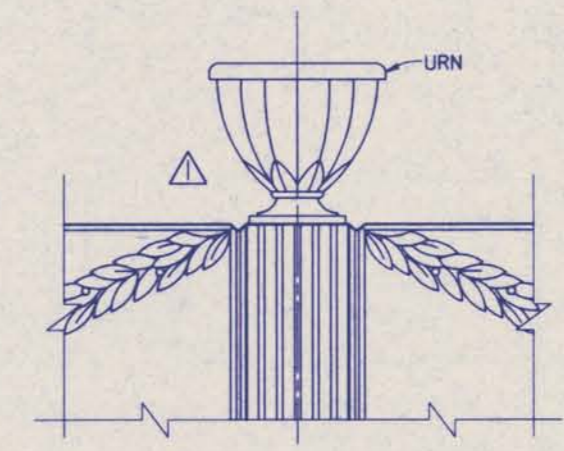
Safety is a Part of Your Contract



URN



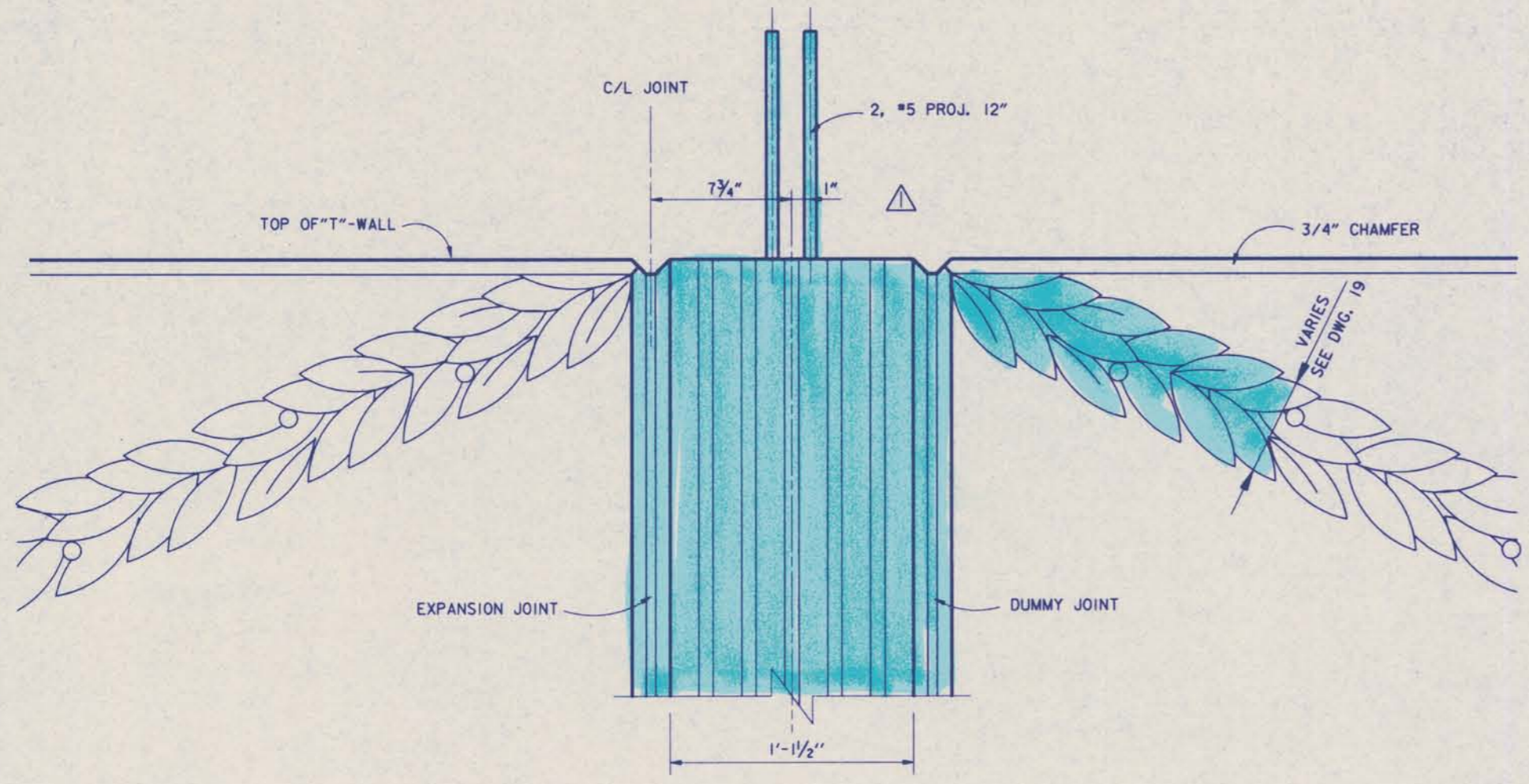
PLAN



ELEVATION

ASSEMBLED VIEWS

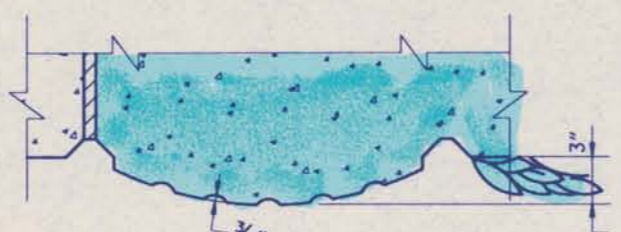
SCALE: 1" = 1'-0"



COLUMN AND GARLAND

DETAIL VIEWS

SCALE: 3" = 1'-0"

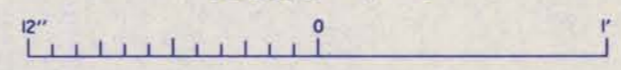


COLUMN PLAN

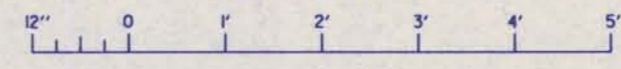
NOTES:

1. FIBERGLASS NEGATIVE MOLDS OF THE GARLAND AND COLUMN TEXTURE WILL BE FURNISHED TO THE CONTRACTOR BY THE GOVERNMENT. FROM THESE NEGATIVE MOLDS THE CONTRACTOR SHALL CAST POSITIVE MOLDS TO BE USED FOR MAKING REQUIRED FORM LINERS.
2. THE GOVERNMENT WILL FURNISH TWO RUBBER URN FORMS TO THE CONTRACTOR.
3. URNS TO BE PRECAST AND INSTALLED ONTO BARS WHICH PROJECT FROM THE TOP OF "T"-WALL. FILL VOID IN URN WITH GROUT TO CONNECT URN TO "T"-WALL.

SCALE: 3" = 1' - 0"



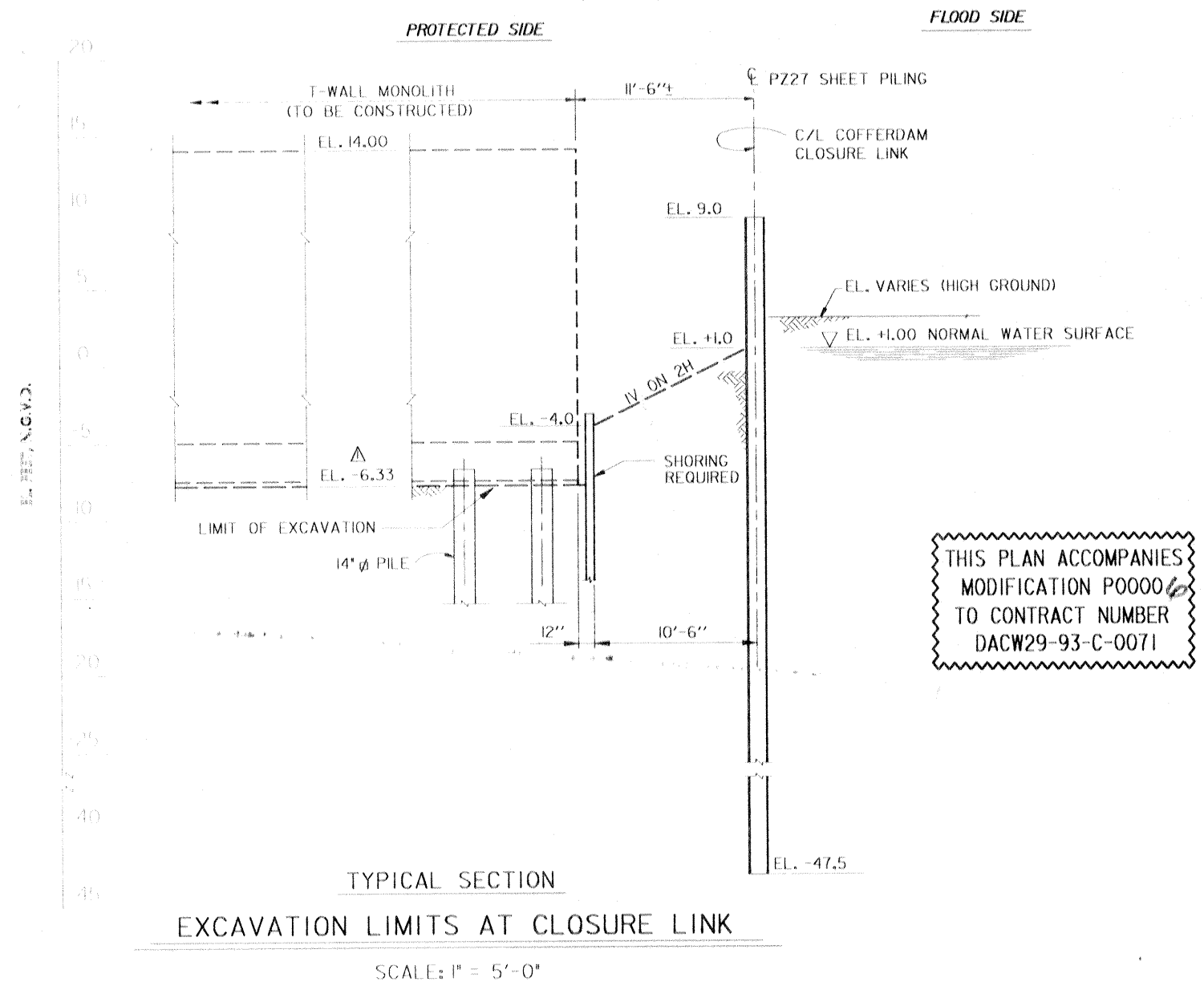
SCALE: 1" = 1' - 0"



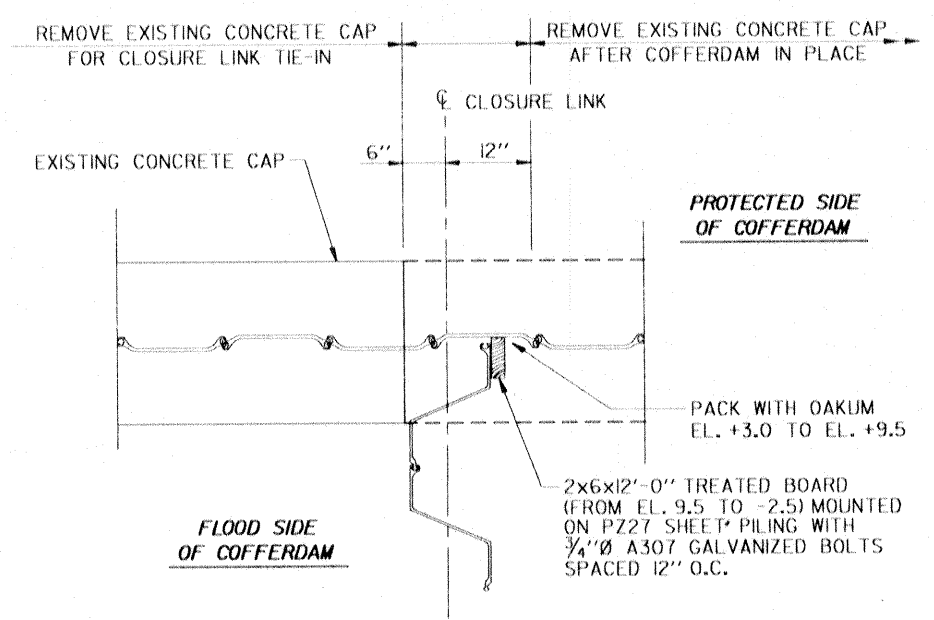
SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED NOTES, AMENDMENT NO. 4.	4-16-93	M.D.
△	GENERAL REVISIONS, AMENDMENT NO. 1.	4-2-93	M.D.

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA	
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STL. 04+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA "T"-WALL ARCHITECTURAL TREATMENT	
DESIGNED BY: E. ALFEREZ DRAWN BY: K.A. WOJTALA CHECKED BY: T.M. SMITH	DATE: MAR. 1993 CAD FILE: 11-b19a.dgn SOLICITATION NO. DACW29-93-B-0059
PLOT SCALE: 1 PLOT DATE: APR. 1993 FILE NO. H-4-30960	DWG. 19A OF 28

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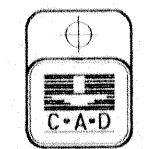
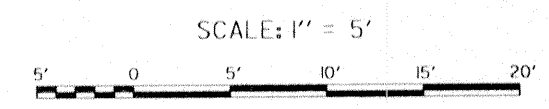



THIS PLAN ACCOMPANIES MODIFICATION P0000 TO CONTRACT NUMBER DACW29-93-C-0071



COFFERDAM CLOSURE LINK AT EXISTING SHEET PILING
N.T.S.

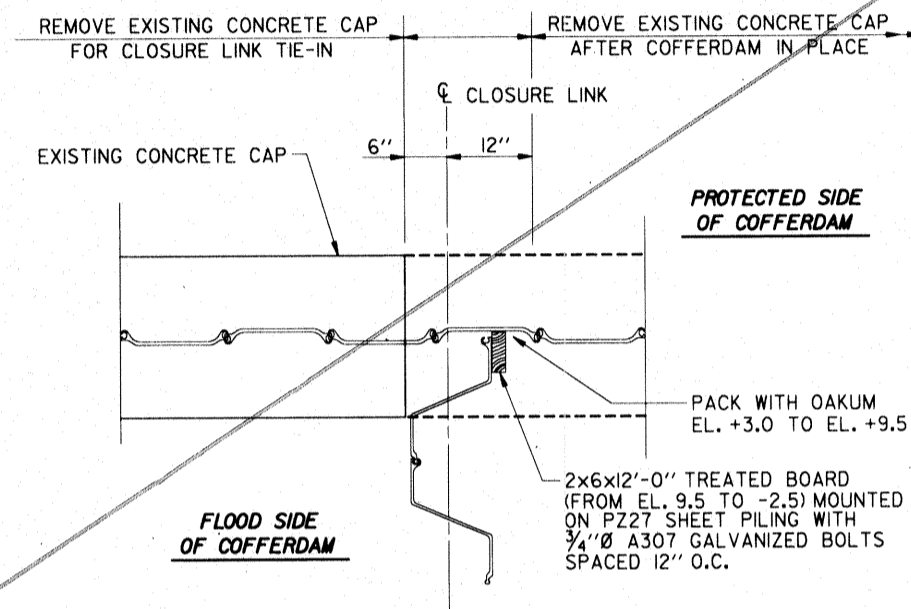
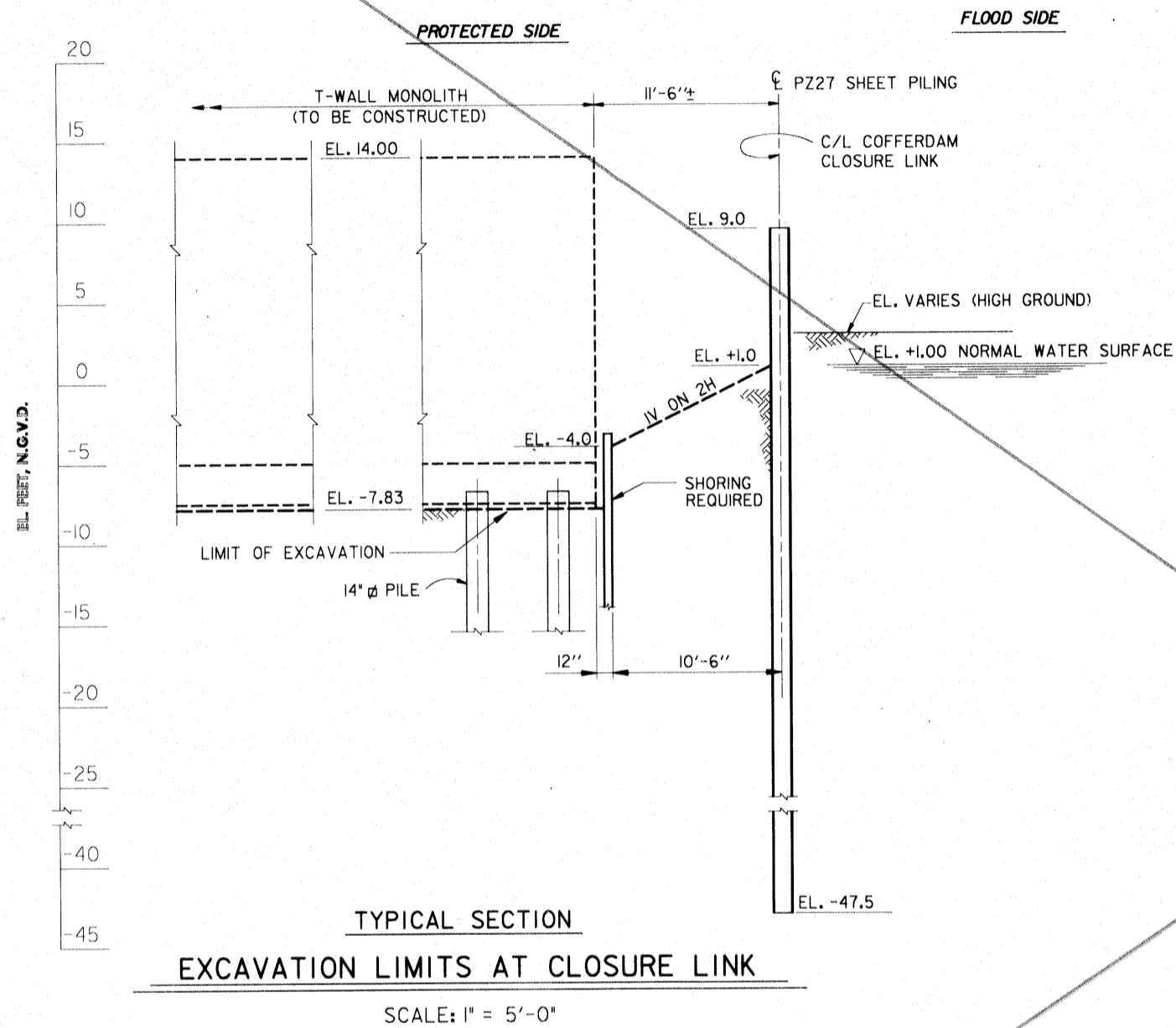
TYPICAL SECTION
EXCAVATION LIMITS AT CLOSURE LINK
SCALE: 1" = 5'-0"



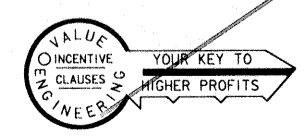
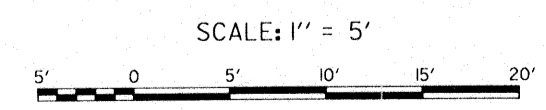
△	REVISED BOTTOM OF EXCAVATION, MOD. NO. #10	10-27-93	M.D.
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARSIS, LOUISIANA MISCELLANEOUS DETAILS AT CLOSURE LINK			
DESIGNED BY: M. DESAI	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE:
DRAWN BY: B. BORCELY	CADD FILE: H-B205	FILE NO. H-4-30960	
CHECKED BY: J. ROMERO	SOLICITATION NO. DACW29-93-B-0059	DWG. 20 OF 28	
SUBMITTED BY: J. ROMERO DESIGN ENGINEER			




Safety is a Part
of Your Contract

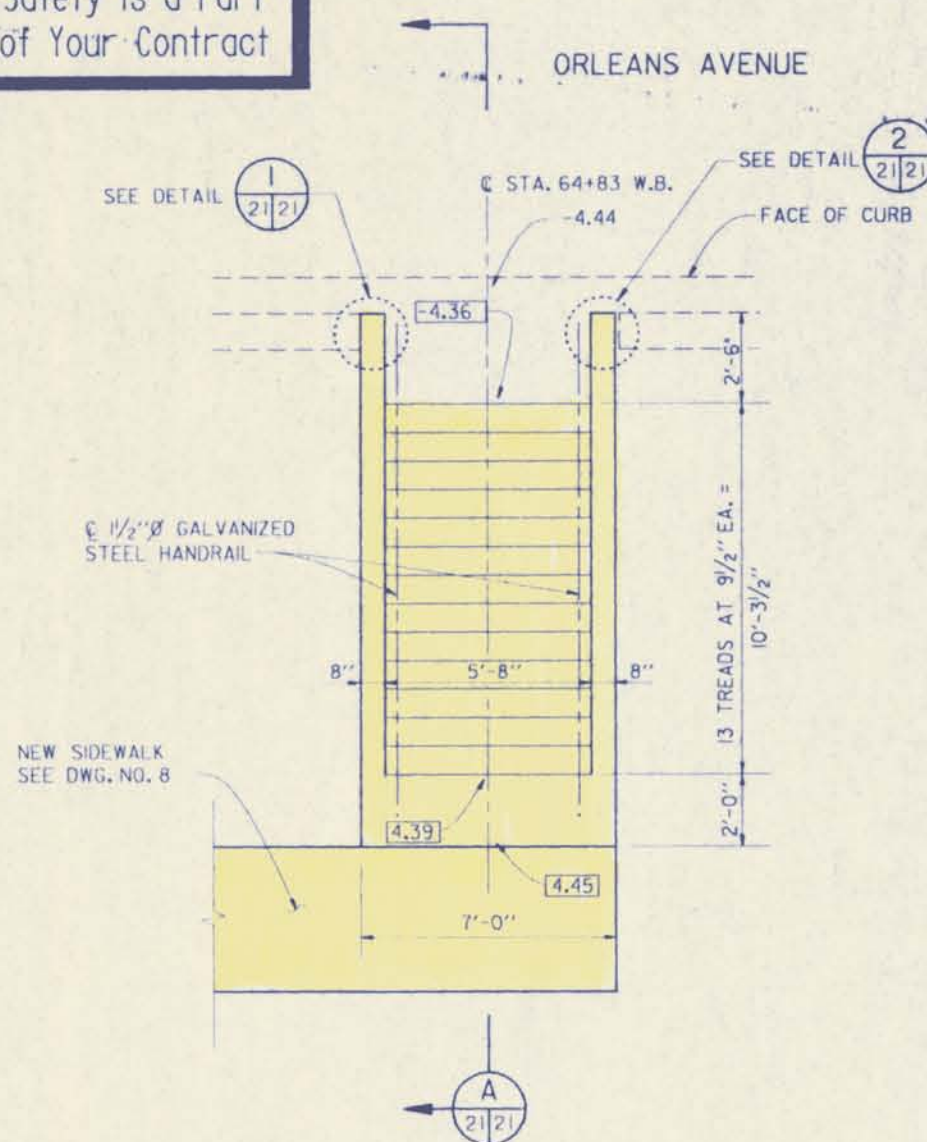


**COFFERDAM CLOSURE LINK
AT EXISTING SHEET PILING**
N.T.S.



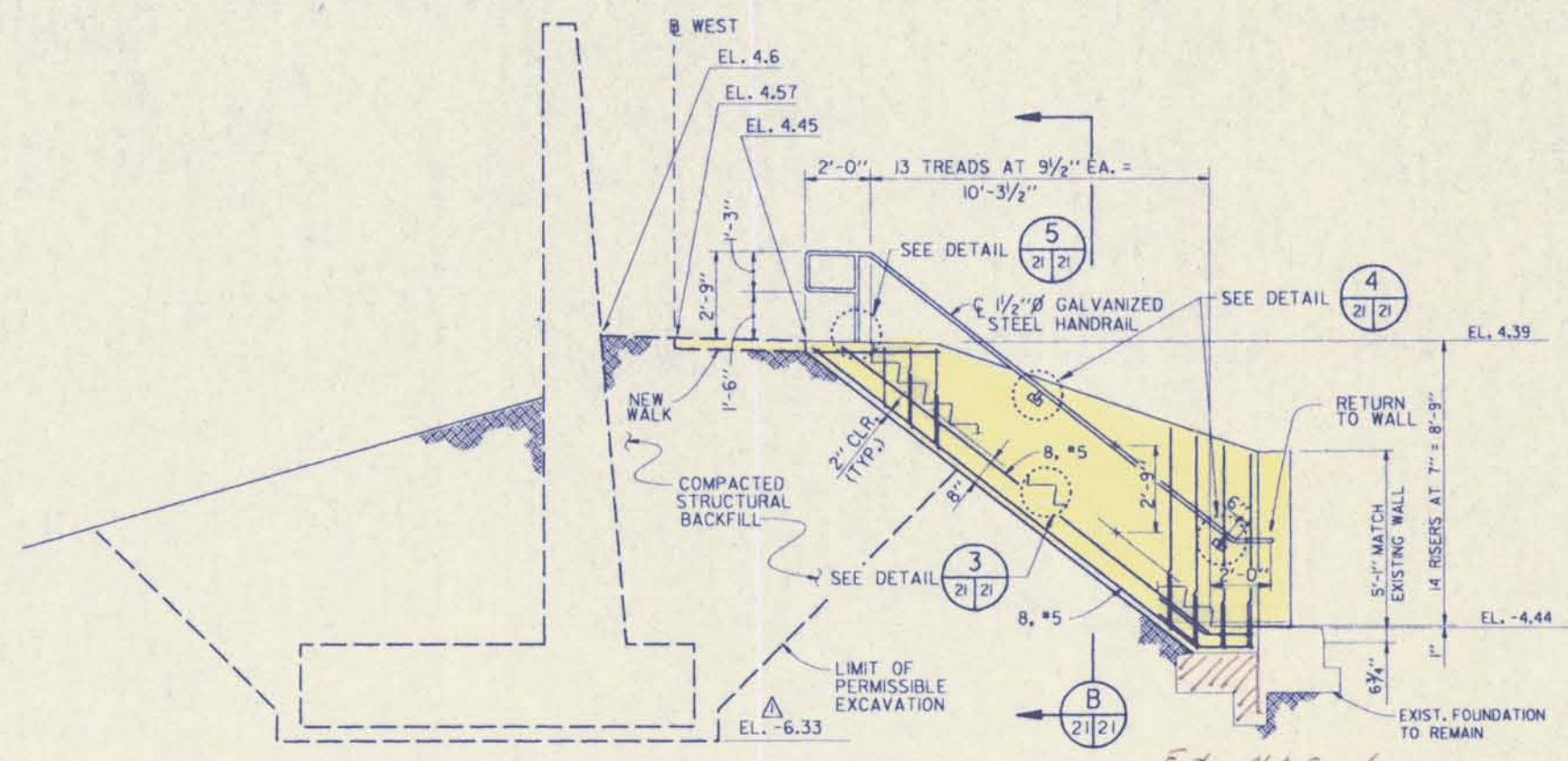
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
MISCELLANEOUS DETAILS AT CLOSURE LINK			
DESIGNED BY: M. DESAI	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE:
DRAWN BY: B. DORCEY	CADD FILE: II-B205	FILE NO. H-4-30960	
CHECKED BY: J. ROMERO	SUBMITTED BY: J. ROMERO	SOLICITATION NO. DACW29-93-B-0059	DWG. 20 OF 28
		DESIGN ENGINEER	

Safety is a Part of Your Contract



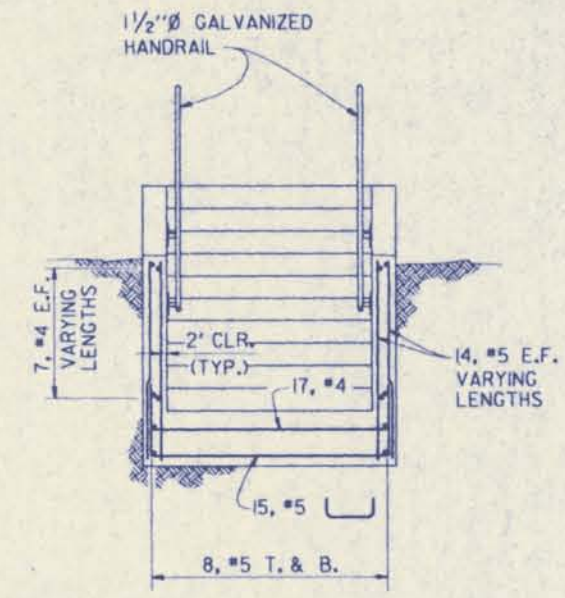
PLAN OF REQUIRED STEPS

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



SECTION A

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

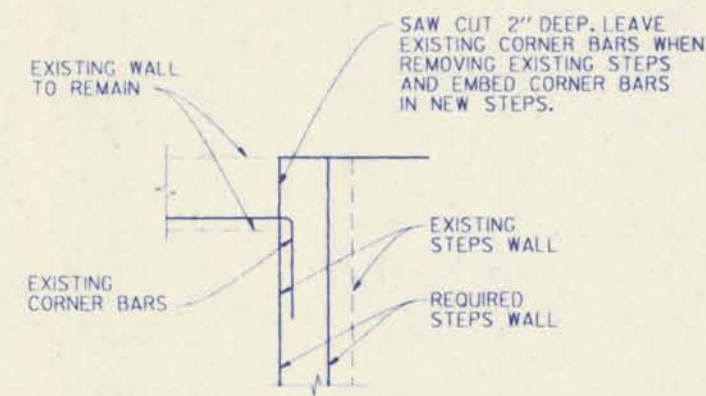


SECTION B

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

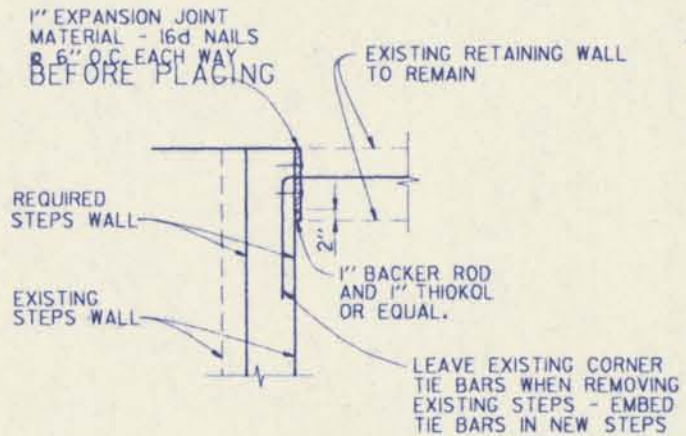
THIS PLAN ACCOMPANIES MODIFICATION P0000 TO CONTRACT NUMBER DACW29-93-C-0071

NOTE: ALL VERTICAL SURFACES SHALL BE COATED WITH A CLEAR SILICONE, SILANE OR ACRYLIC BASED WATER REPELLANT (FED. SPEC. SS-W-80C) SUCH AS "THOROCLEAR 777" STANDARD DRY WALL PRODUCTS OR EQUAL.



DETAIL 1

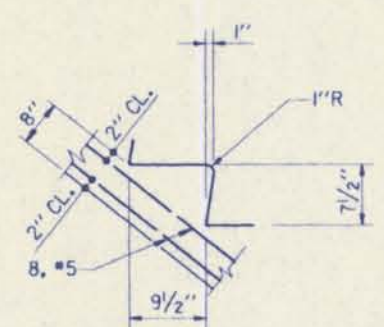
SCALE: 3/4" = 1'-0"



DETAIL 2

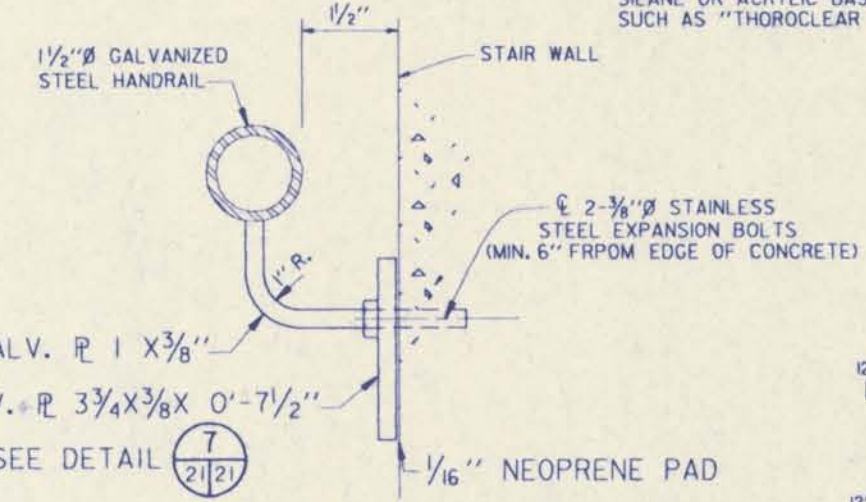
SCALE: 3/4" = 1'-0"

NOTE: REFER TO DRAWING NO. 8 FOR LOCATIONS



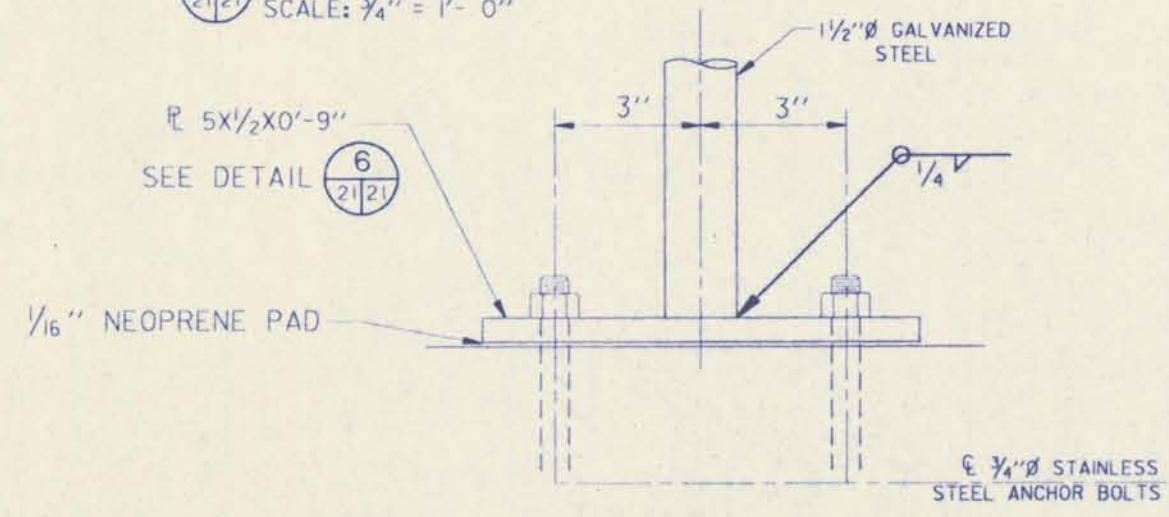
DETAIL 3

SCALE: 1" = 1'-0"



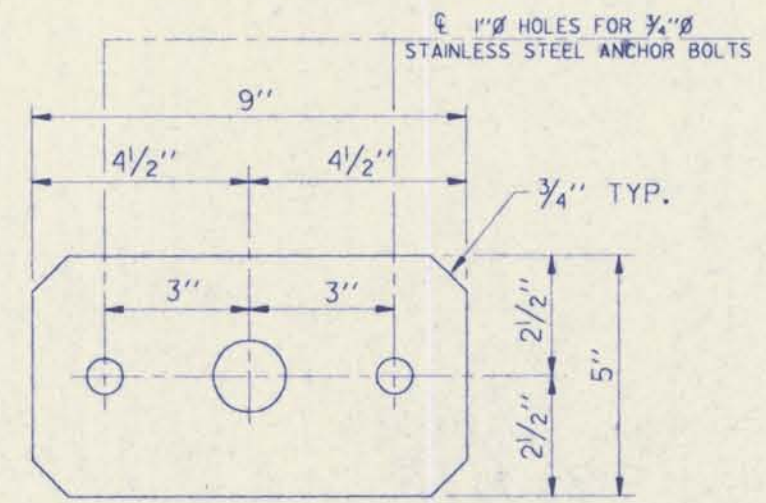
DETAIL 4

NOT TO SCALE



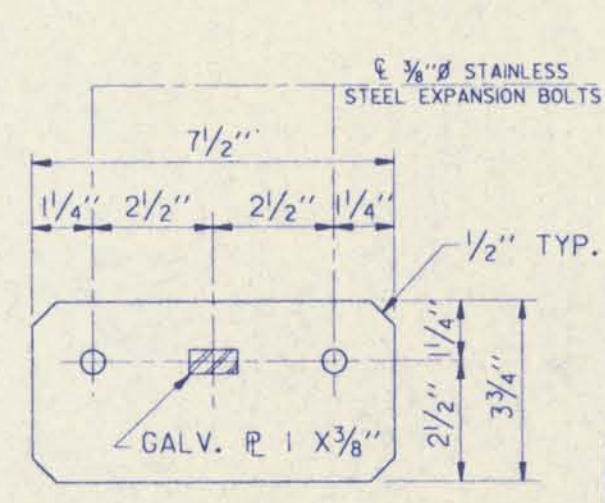
DETAIL 5

NOT TO SCALE



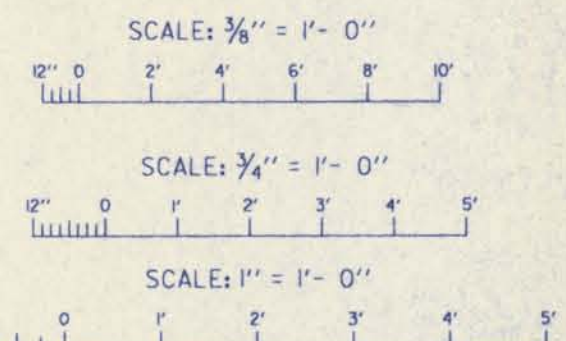
DETAIL 6

NOT TO SCALE



DETAIL 7

NOT TO SCALE



SYMBOL	REVISIONS	DATE	APPROVED
▲	REVISED BOTTOM OF EXCAVATION, MOD. NO. 10	10-27-93	M.D.

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

BOARD OF LEVEL COMMISSIONERS
ORLEANS LEVEL DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE, AVE. 5,
METairie, LOUISIANA 70002

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN

NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91)
ORLEANS PARISH, LOUISIANA

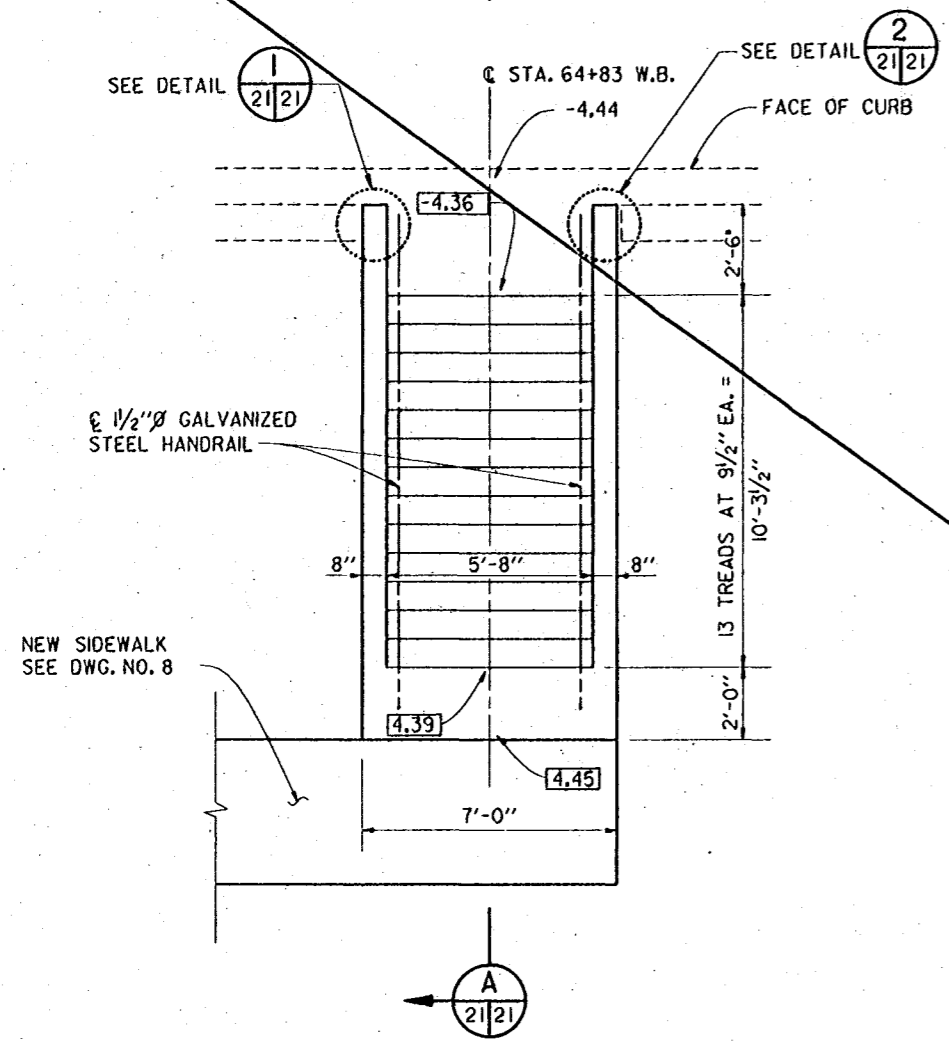
STEPS NEAR FILMORE AVE.

DESIGNED BY: V.P. PANNELL	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: G.F. GETSCHER	CHECKED BY: T.M. SMITH	CADD FILE: 11-B215	FILE NO. H-4-30960
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0059	DESIGN ENGINEER	DWG. 21 OF 28



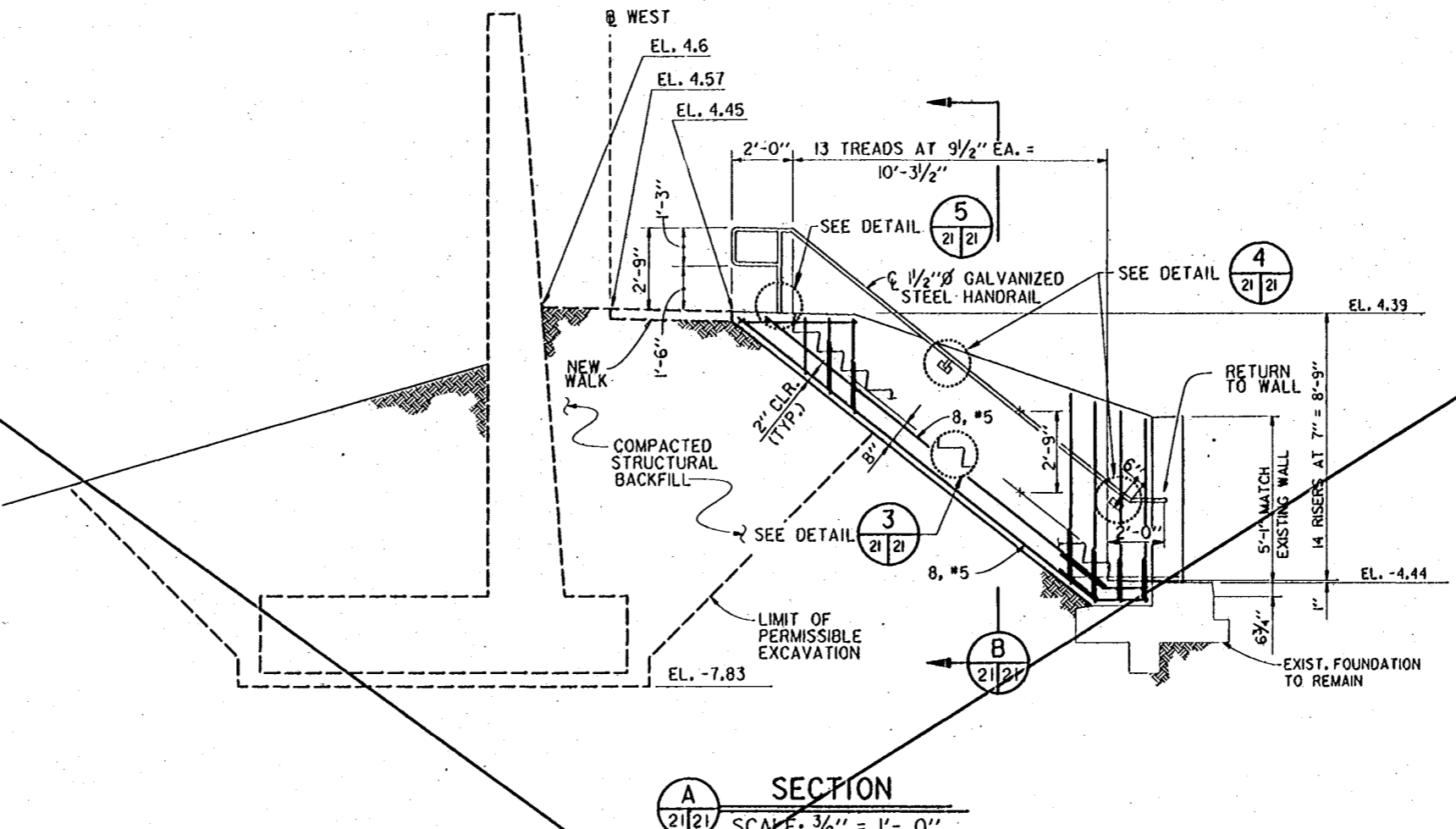
Safety is a Part of Your Contract

ORLEANS AVENUE



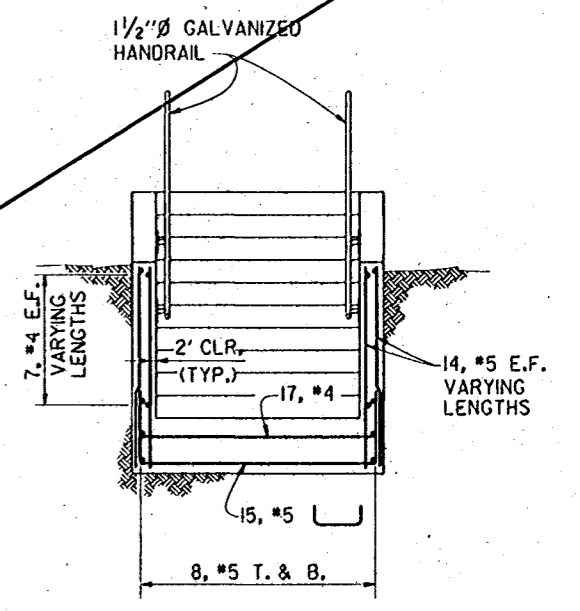
PLAN OF REQUIRED STEPS

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



SECTION A-A

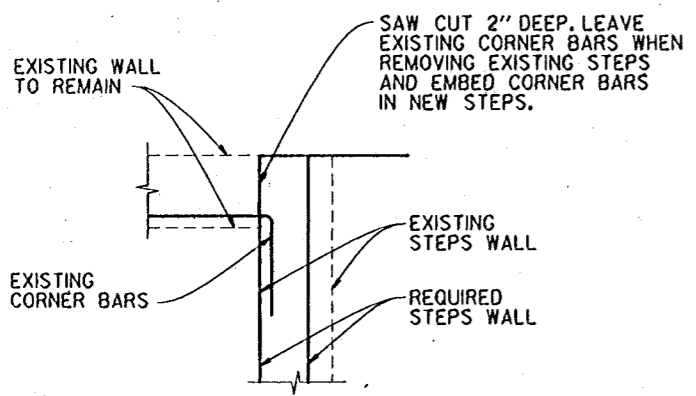
SCALE: 3/8" = 1'-0"



SECTION B-B

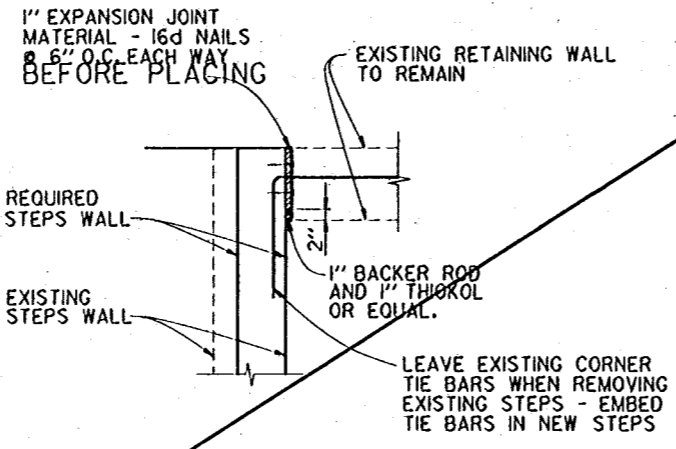
SCALE: 3/8" = 1'-0"

NOTE: ALL VERTICAL SURFACES SHALL BE COATED WITH A CLEAR SILICONE, SILANE OR ACRYLIC BASED WATER REPELLANT (FED. SPEC. SS-W-110C) SUCH AS "THOROCLEAR 777" STANDARD DRY WALL PRODUCTS OR EQUAL.



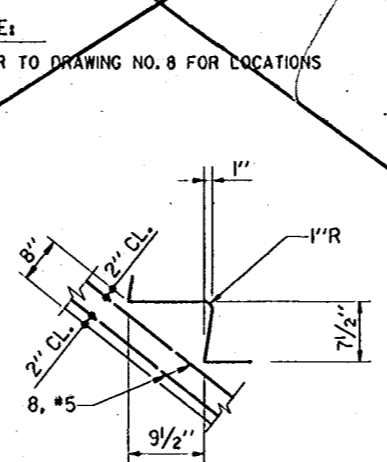
DETAIL 1

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



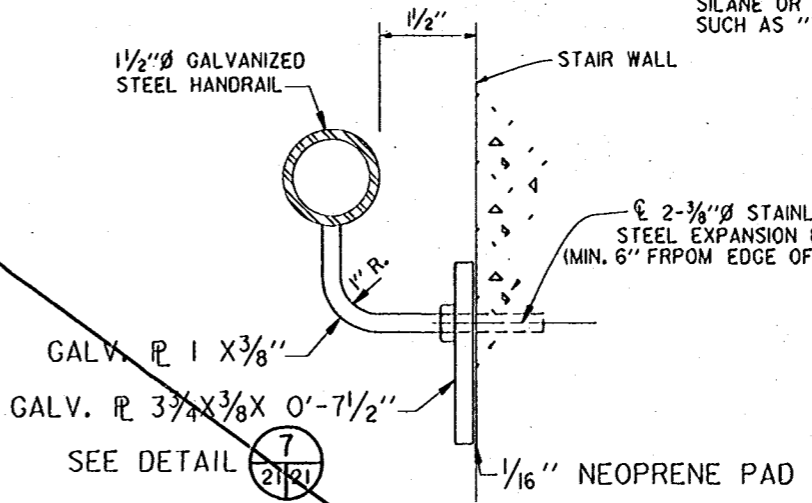
DETAIL 2

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



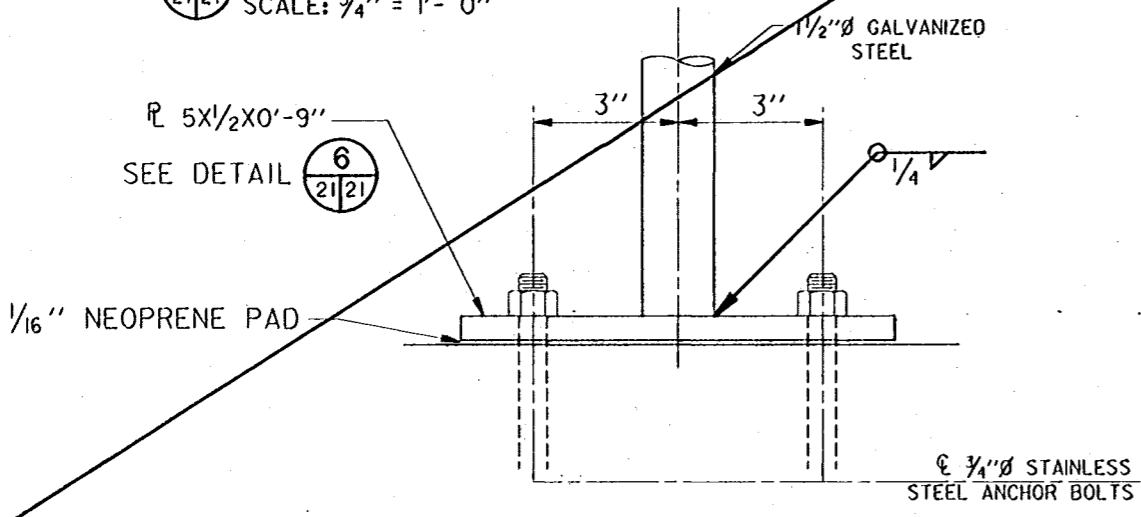
DETAIL 3

SCALE: 1" = 1'-0"



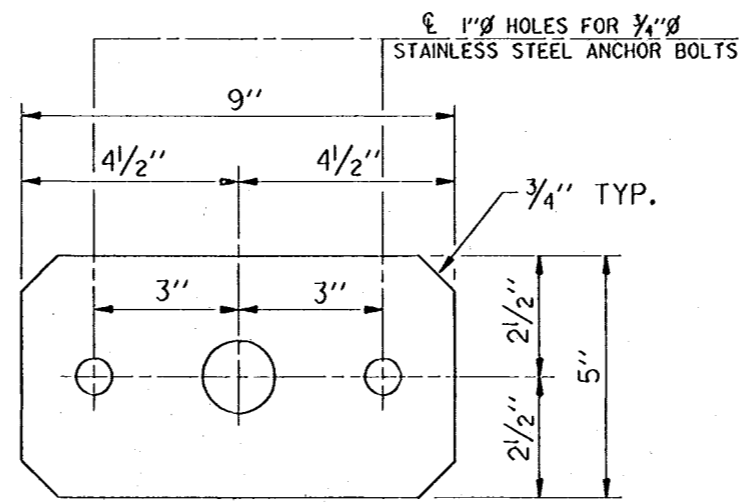
DETAIL 4

NOT TO SCALE



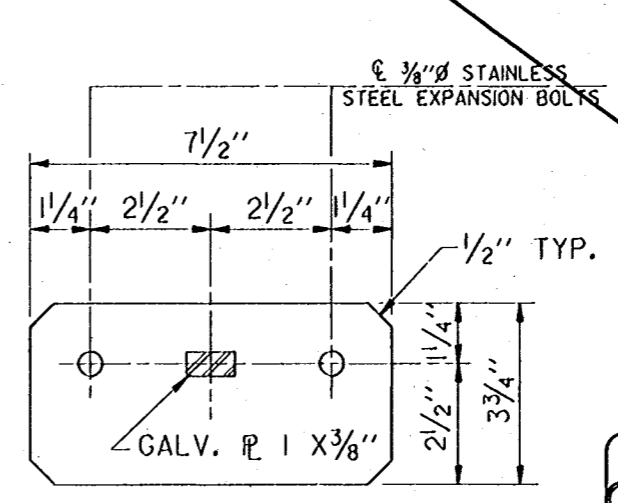
DETAIL 5

NOT TO SCALE



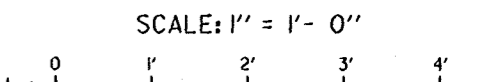
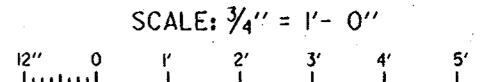
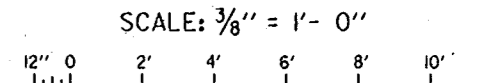
DETAIL 6

NOT TO SCALE



DETAIL 7

NOT TO SCALE



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

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

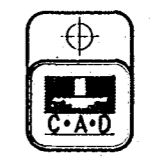
BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPLANADE AVE. S.
METAIRIE, LOUISIANA 70002

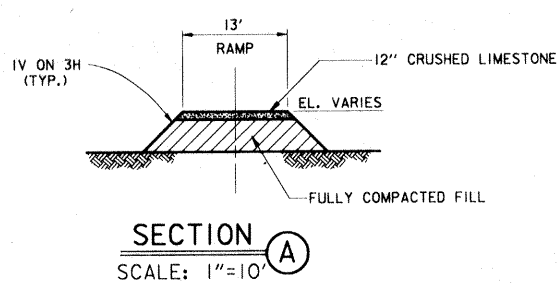
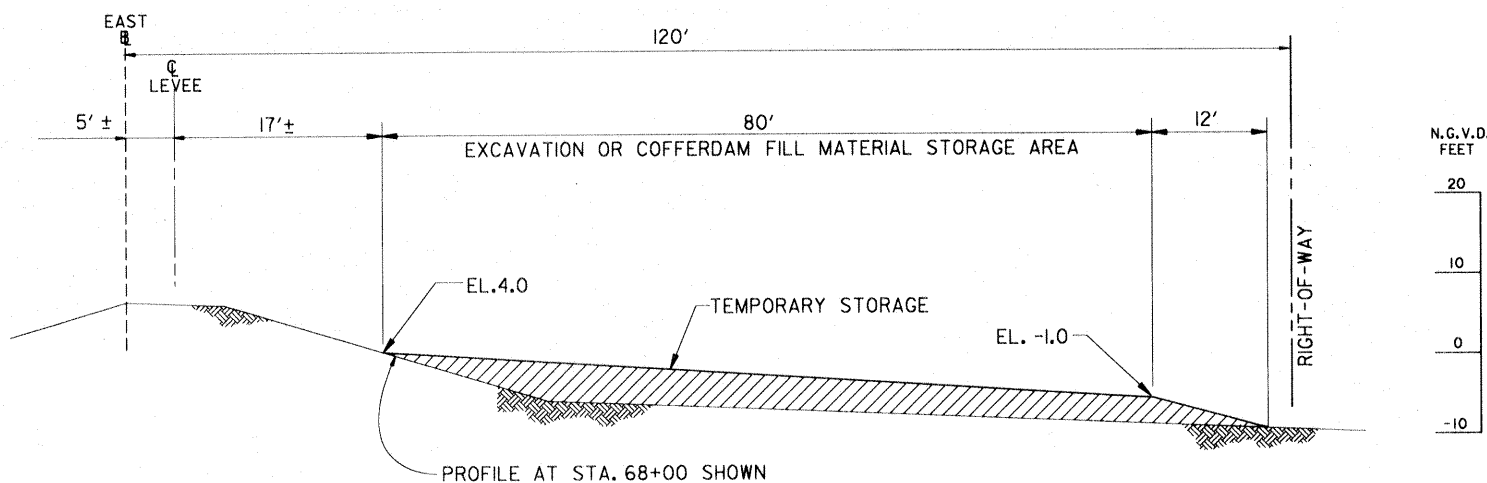
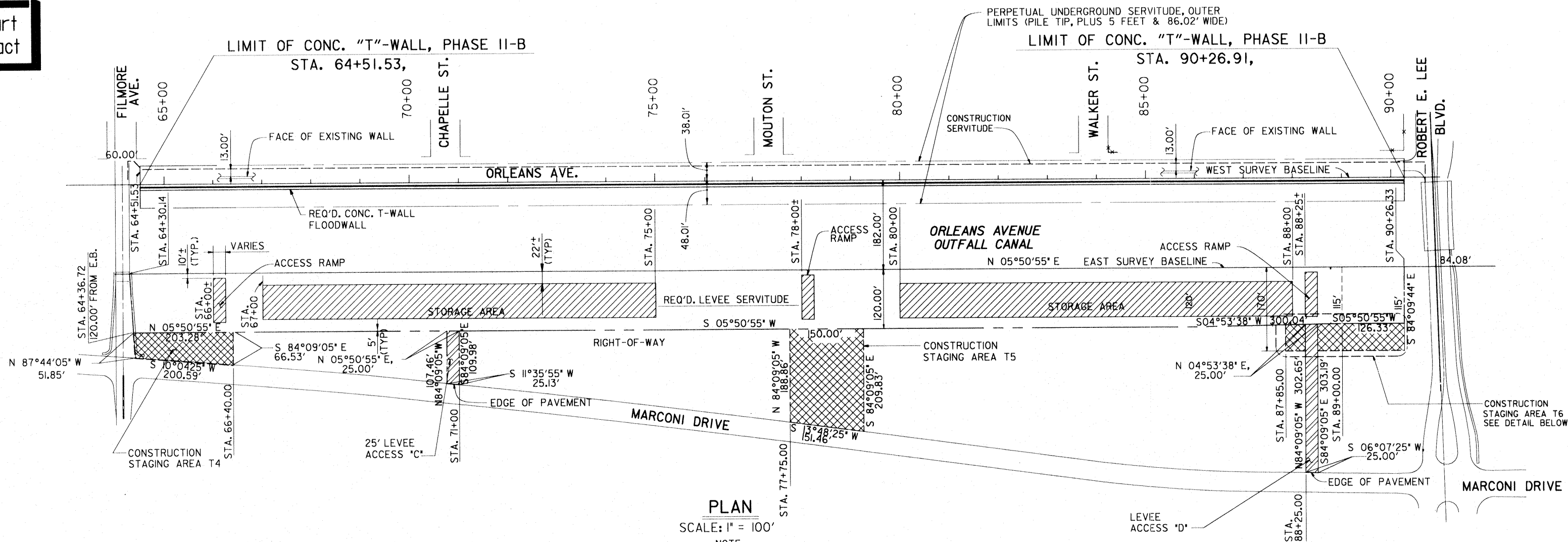
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS
PHASE II-B (WEST SIDE-STA. 84+51.53 TO STA. 90+28.91)
ORLEANS PARISH, LOUISIANA

STEPS NEAR FILMORE AVE.

DESIGNED BY: V.P. PANSELL	DATE: MAR. 1993	PLOT SCALE: 1	PLOT DATE: MAR. 1993
DRAWN BY: G.F. GETSCHER	CHECKED BY: T.M. SMITH	CADD FILE: II-B21S	FILE NO. H-4-30960
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0059	DESIGN ENGINEER	DWG. 21 OF 28

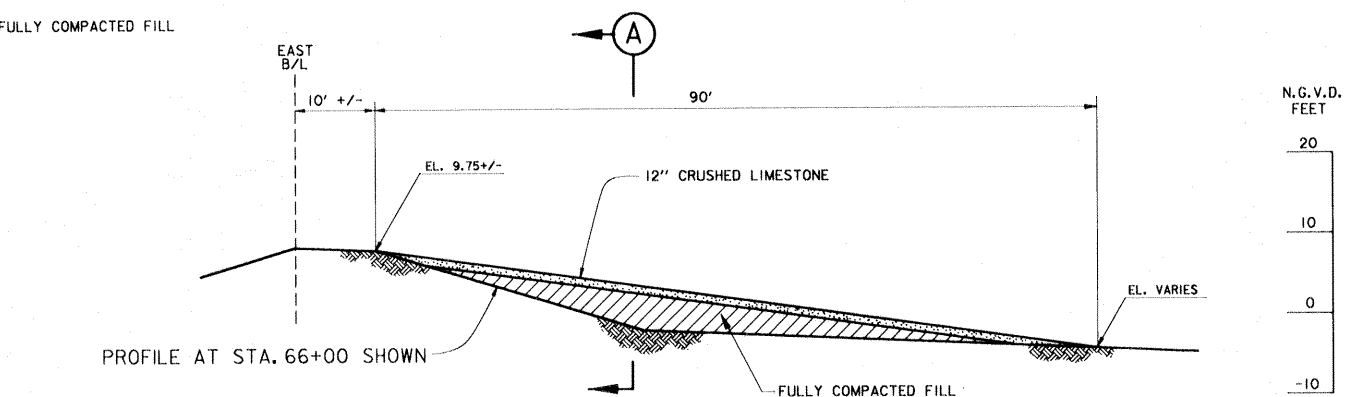


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STORAGE AREA DETAIL

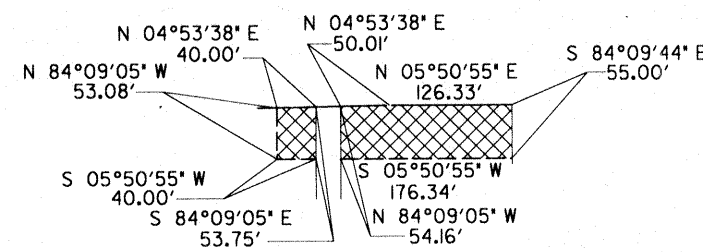
SCALE: 1" = 10'



ACCESS RAMP DETAIL

SCALE: 1" = 10'

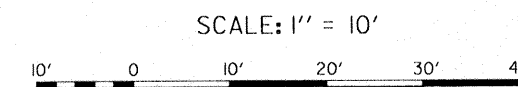
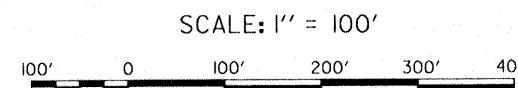
TYPICAL: STA. 66+00 ± SOUTH LIMIT
STA. 78+00 ±
STA. 88+25 ±



SCALE: 1" = 100'

NOTES:

- EXISTING TREES ALONG MARCONI DR. IN THE WAY OF STAGING AREA AND LEVEE ACCESS SHALL BE TRIMMED AS REQUIRED BY THE CONTRACTOR. THESE TREES MAY BE REMOVED ONLY IF APPROVED BY THE CONTRACTING OFFICER.
- AREAS USED FOR MATERIAL STORAGE ARE TO BE RESTORED TO EXISTING PROFILES AND FERTILIZED AND SEEDING AFTER STORAGE MATERIAL IS REMOVED.
- LEVEE AREAS USED FOR ACCESS RAMPS ARE TO BE RESTORED TO ORIGINAL DESIGN SECTION AND FERTILIZED AND SEEDING AFTER RAMP MATERIAL IS REMOVED.
- THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN A TEMPORARY SAFETY FENCE AROUND THE CONSTRUCTION STAGING AREAS AND ACCESS RAMPS WHICH ARE USED. SEE H-10 G.
- EXCESS SUITABLE MATERIAL, NOT REQUIRED FOR STRUCTURAL EXCAVATION, SHALL BE LEFT IN THE STORAGE AREA BELOW THE PROFILE LINE FOR PERMANENT STORAGE.

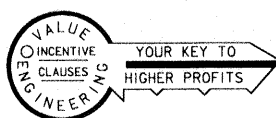


LEGEND

- RIGHT-OF-WAY
- PERPETUAL UNDERGROUND SERVITUDE
- CONSTRUCTION SERVITUDE
- BASELINE

SYMBOL	REVISIONS	DATE	APPROVED
▲	REVISED ACCESS RAMP DETAILS, AMENDMENT NO. 1.	4-2-93	M.D.
	DESCRIPTION		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA	
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA RIGHTS-OF-WAY AND STORAGE AREA	
DESIGNED BY: T.M.SMITH DRAWN BY: G.F.GETSCHER CHECKED BY: T.M.SMITH	DATE: MAR. 1993 CADD FILE: 11-b22s.dgn
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0059 DWG. 22 OF 28
PLOT SCALE: 1 PLOT DATE: MAR. 1993 FILE NO. H-4-30960	



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UNIFIED SOIL CLASSIFICATION

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

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

NOTES:

FIGURES TO LEFT OF BORING UNDER COLUMN " W OR D₁₀ "

Are natural water contents in percent dry weight

When underlined denotes D₁₀ size in mm*

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

Are liquid and plastic limits, respectively

SYMBOLS TO LEFT OF BORING

∇ Ground-water surface and date observed

⊙ Denotes location of consolidation test**

⊛ Denotes location of consolidated-drained direct shear test**

⊗ Denotes location of consolidated-undrained triaxial compression test**

⊕ Denotes location of unconsolidated-undrained triaxial compression test**

⊖ Denotes location of sample subjected to consolidation test and each of the above three types of shear test**

FW Denotes free water encountered in boring or sample

FIGURES TO RIGHT OF BORING

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

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

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

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

*The D₁₀ size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D₁₀.

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

DESCRIPTIVE SYMBOLS

COLOR		CONSISTENCY FOR COHESIVE SOILS			MODIFICATIONS	
COLOR	SYMBOL	CONSISTENCY	COHESION IN LBS./SQ.FT. FROM UNCONFINED COMPRESSION TEST	SYMBOL	MODIFICATION	SYMBOL
TAN	T	VERY SOFT	< 250	vSo	Traces	Tr
YELLOW	Y	SOFT	250-500	So	Fine	F
RED	R	MEDIUM	500-1000	M	Medium	M
BLACK	BK	STIFF	1000-2000	St	Coarse	C
GRAY	Gr	VERY STIFF	2000-4000	vSt	Concretions	cc
LIGHT GRAY	lGr	HARD	> 4000	H	Rootlets	rt
DARK GRAY	dGr				Lignite fragments	lg
BROWN	Br				Shale fragments	sh
LIGHT BROWN	lBr				Sandstone fragments	sds
DARK BROWN	dBr				Shell fragments	shf
BROWNISH-GRAY	brGr				Organic matter	o
GRAYISH-BROWN	gyBr				Clay strata or lenses	CS
GREENISH-GRAY	gnGr				Silt strata or lenses	SIS
GRAYISH-GREEN	gyGn				Sand strata or lenses	SS
GREEN	Gn				Sandy	S
BLUE	Bl				Gravelly	G
BLUE-GREEN	BlGn				Boulders	B
WHITE	Wh				Slickensides	SL
MOTTLED	Mot				Wood	Wd
					Oxidized	Ox

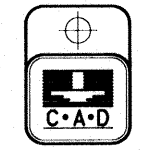
PLASTICITY CHART

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

TYPICAL NOTES:

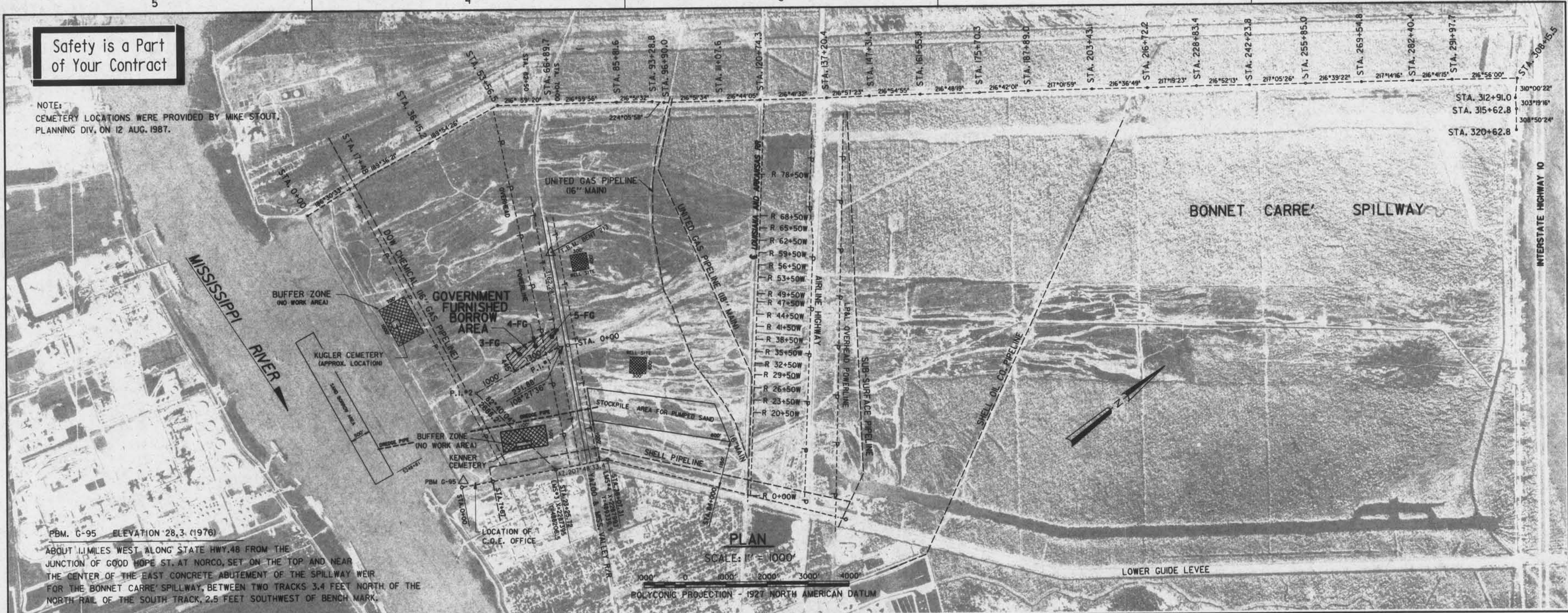
- While the borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches, local variations characteristic of the subsurface materials of the region are anticipated and, if encountered, such variations will not be considered as differing materially within the purview of the contract clause entitled "Differing Site Conditions".
- Ground-water elevations shown on the boring logs represent ground-water surfaces encountered in such borings on the dates shown. Absence of water surface data on certain borings indicates that no ground-water data are available from the boring but does not necessarily mean that ground-water will not be encountered at the locations or within the vertical reaches of such borings.
- Consistency of cohesive soils shown on the boring logs is based on driller's log and visual examination and is approximate, except within those vertical reaches of the borings where shear strengths from unconfined compression tests are shown.
- Unless otherwise noted:
 - Undisturbed borings, indicated by the letter "U", are taken with a 5" I.D. Piston Type Sampler.
 - General type borings are taken with a 1 7/8" I.D. Tube Sampler and/or a 1 3/8" I.D. Split Spoon Sampler.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
SOIL BORING LEGEND			
DESIGNED BY:	DATE:	PLOT SCALE:	PLOT DATE:
DRAWN BY:	MAR, 1993	I	MAR, 1993
CHECKED BY:	U.S.A.C.E.		
	CADD FILE:	II-B23AS	FILE NO.
			H-4-30960
SUBMITTED BY:	SOLICITATION NO.		DWG. 23A OF 28
DESIGN ENGINEERING, INC. DESIGN ENGINEER	DACW29-93-B-0059		



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NOTE:
CEMETERY LOCATIONS WERE PROVIDED BY MIKE STOUT,
PLANNING DIV. ON 12 AUG. 1987.



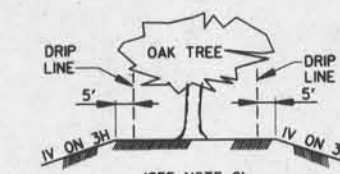
PBM. G-95 ELEVATION 28.3 (1976)

ABOUT 1.1 MILES WEST ALONG STATE HWY. 48 FROM THE
JUNCTION OF GOOD HOPE ST. AT NORCO, SET ON THE TOP AND NEAR
THE CENTER OF THE EAST CONCRETE ABUTMENT OF THE SPILLWAY WEIR
FOR THE BONNET CARRE SPILLWAY, BETWEEN TWO TRACKS 3.4 FEET NORTH OF THE
NORTH RAIL OF THE SOUTH TRACK, 2.5 FEET SOUTHWEST OF BENCH MARK.

PLAN

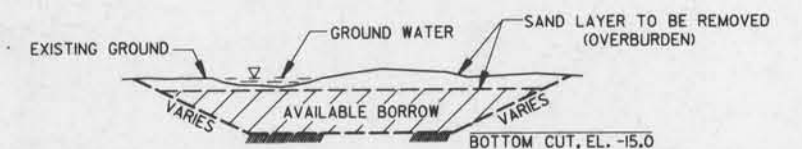
SCALE: 1" = 1000'

1000' 0 1000' 2000' 3000' 4000'
POLYCONIC PROJECTION - 1927 NORTH AMERICAN DATUM



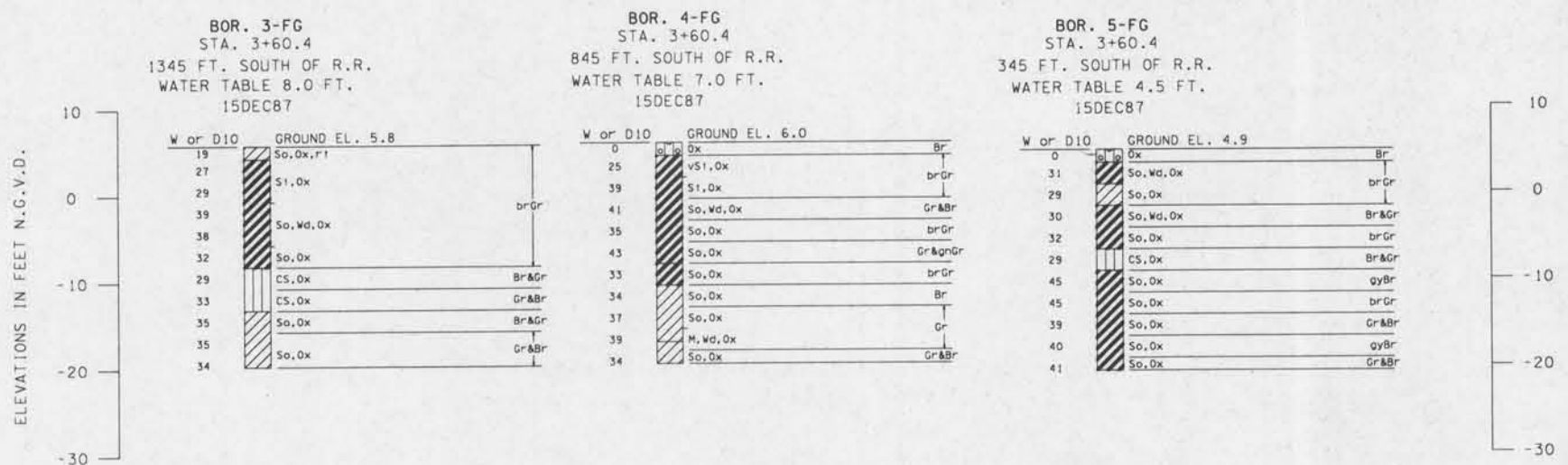
EXCAVATION IN VICINITY OF FLAGGED OAK TREES

NOT TO SCALE



TYPICAL EXCAVATION SECTION

NOT TO SCALE



CH - Fat Clay
 CL - Lean Clay
 ML - Silt, Low Plasticity
 SM - Silty Sand

NOTE:
BORINGS WERE TAKEN WITH A HAND AUGER
OR SPLIT SPOON.
FOR SOIL BORING LEGEND, SEE DWG. 23A.

NOTES:

- FOR GENERAL NOTES, SEE DWG. 2.
- ACCESS TO THE BORROW PIT LOCATION FROM AIRLINE HIGHWAY SHALL BE BY EXISTING DIRT ROADS LOCATED THROUGHOUT THE SPILLWAY.
- NO EXCAVATION WITHIN 100 FEET OF POWER POLES.
- SAND OVERBURDEN SHALL BE STOCKPILED PARALLEL TO THE SPILLWAY GUIDE LEVEE.
- THE GOVERNMENT HAS THE RIGHT TO REQUIRE THE CONTRACTOR TO MOVE OUT OF THE SPILLWAY WITH A 10 DAY NOTICE.
- SIDE SLOPES OF BORROW PIT SHALL NOT EXCEED IV ON 3H.
- EXCAVATION BELOW EL. -15.0 FEET IS NOT REQUIRED; HOWEVER, IF THE BORROW MATERIAL IS ACCEPTABLE BELOW EL. -15.0 FEET AND THE CONTRACTOR ELECTS TO EXCAVATE DEEPER, THE CONTRACTOR MAY DO SO IF APPROVED BY CONTRACTING OFFICER.
- EXCAVATION WITHIN THE BORROW AREA SHALL BEGIN AT THE MOST SOUTHERN END OF THE PIT AND SHALL PROGRESS FULL WIDTH AND DEPTH TOWARD THE NORTH END, THE CONTRACTOR SHALL BEGIN EXCAVATION OPERATIONS IN AREAS ADJACENT TO PREVIOUSLY EXCAVATED PITS.
- PRIOR TO CONSTRUCTION, CERTAIN EXISTING OAK TREES IN THE BORROW AREA SHALL BE ADEQUATELY MARKED WITH FLAGGING BY THE CONTRACTING OFFICER TO REMAIN UNDISTURBED. EXCAVATION AROUND THESE MARKED TREES SHALL BE AS DETAILED ON THIS DRAWING.
- IN THE EVENT THE BORROW AREA CONTAINS STANDING WATER, THE CONTRACTOR SHALL DEWATER THE AREA PRIOR TO CLEARING/GRUBBING AND EXCAVATING THE AREA.
- THE GROUND WATER TABLE IS SEASONAL, I.E. VARIES WITH THE AMOUNT OF RAINFALL AND WITH THE MISSISSIPPI RIVER STAGES. THEREFORE, THE ELEVATION OF THE GROUND WATER TABLE ENCOUNTERED DURING CONSTRUCTION COULD BE DIFFERENT FROM THAT SHOWN ON THE BORING LOGS.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPERANDE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS, PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
BORROW AREA LOCATION			
DESIGNED BY:	DATE:	PLOT SCALE:	PLOT DATE:
DRAWN BY: P.M.K.	MAR. 1993	I	MAR. 1993
CHECKED BY: T.M.SMITH	CADD FILE:	II-B245	FILE NO. H-4-30960
SUBMITTED BY:	SOLICITATION NO. DACW29-93-B-0059	DWG. 24 OF 28	
DESIGN ENGINEER			

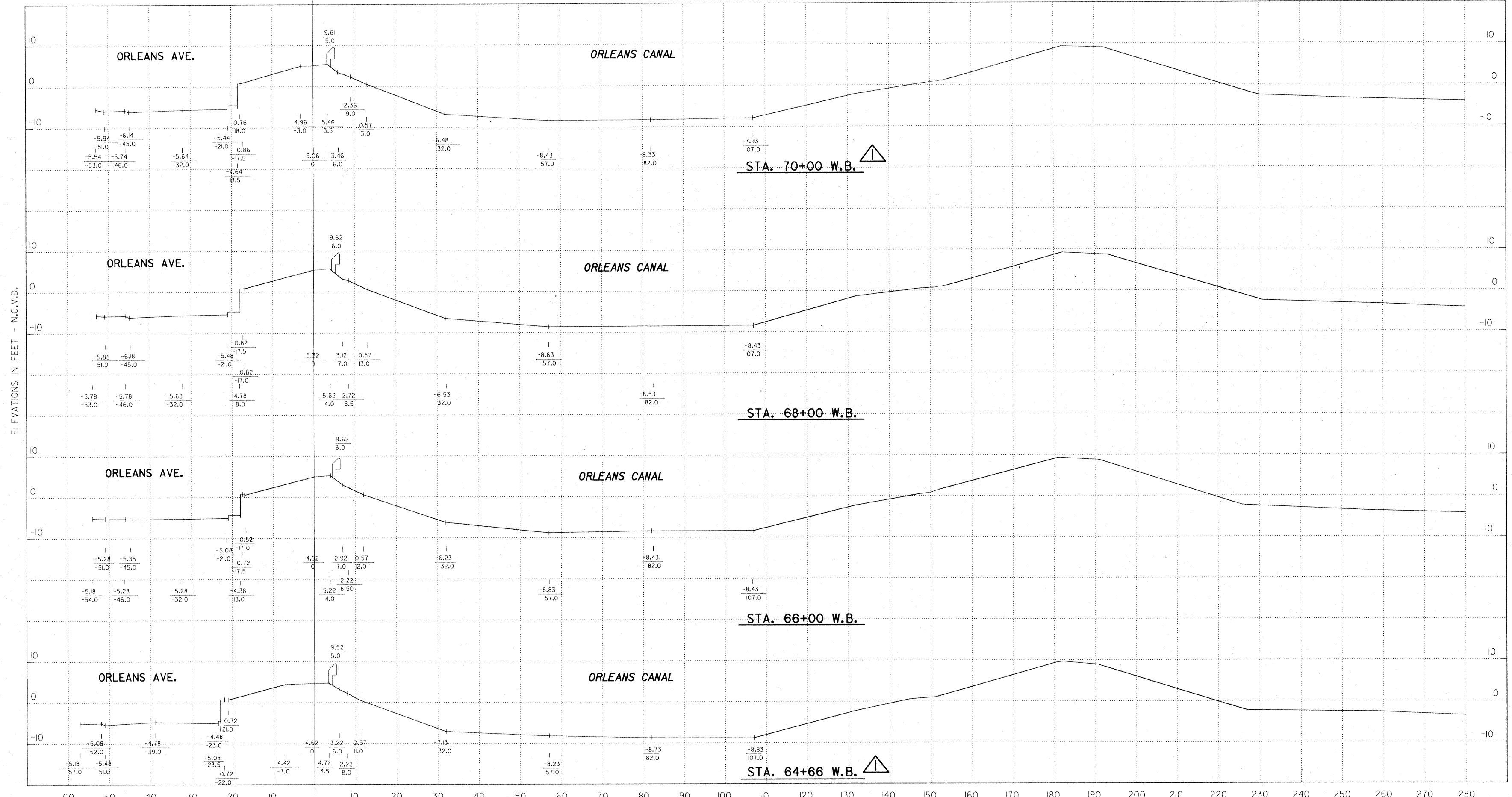


PROTECTED SIDE

WEST B/L

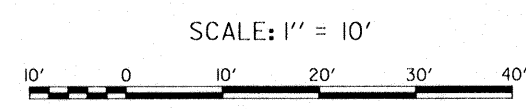
FLOOD SIDE

60 50 40 30 20 10 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280



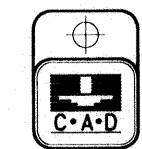
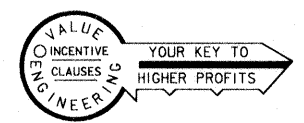
ELEVATIONS IN FEET - N.G.V.D.

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SYMBOL	REVISIONS	DATE	APPROVED
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	DESCRIPTION		

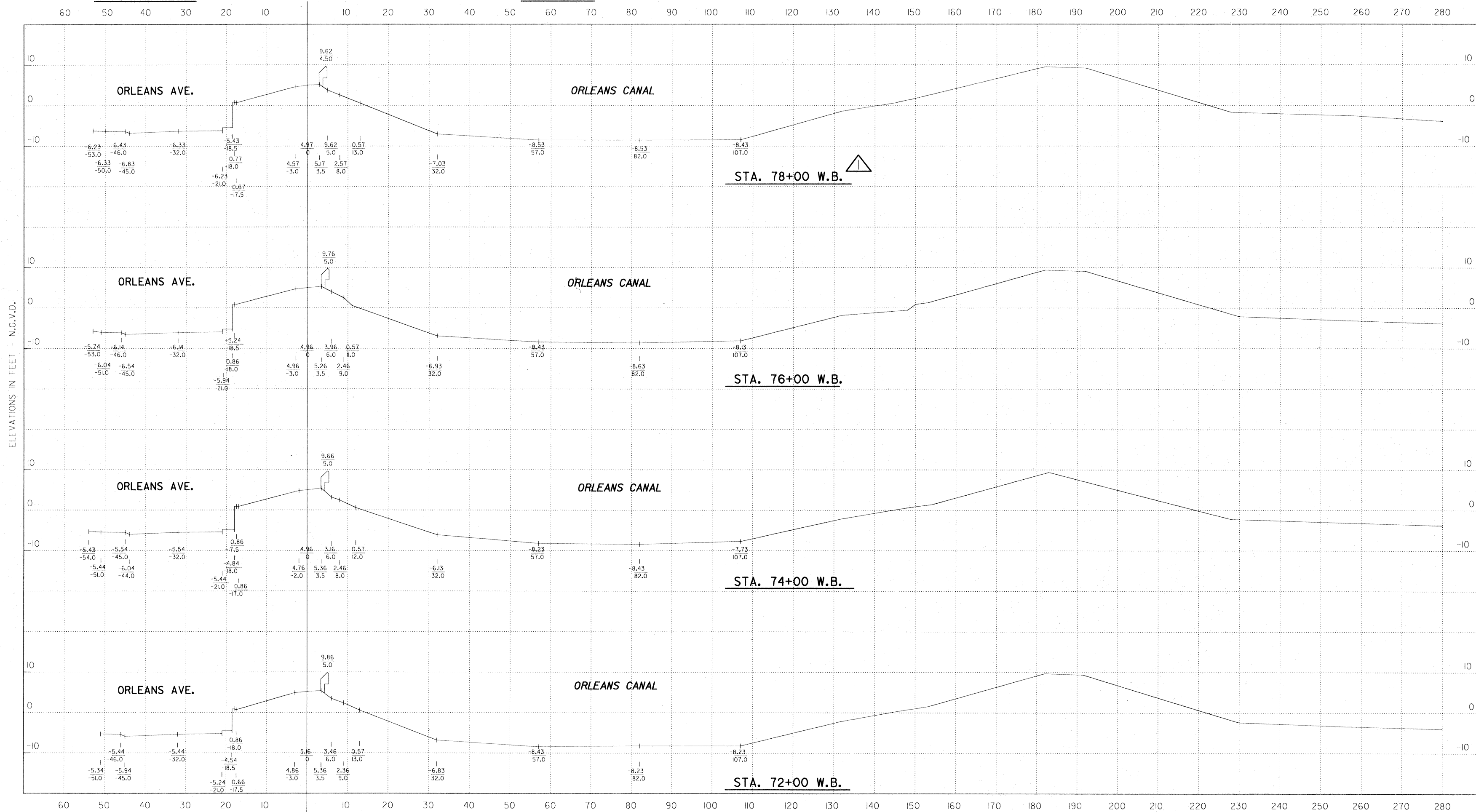
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA	
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE., SUITE 200 METAIRIE, LOUISIANA 70002
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+28.91) ORLEANS PARISH, LOUISIANA	
EXISTING GROUND LINE	
DESIGNED BY: DRAWN BY: P.M.KILLEN CHECKED BY: T.M.SMITH	DATE: MAR, 1993 CADD FILE: II-B25S
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0059
PLOT SCALE: 1 PLOT DATE: MAR, 1993 FILE NO.: H-4-30960	DWG. 25 OF 28



PROTECTED SIDE

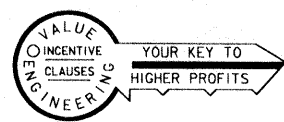
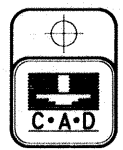
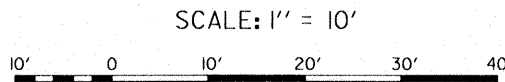
WEST B/L

FLOOD SIDE



ELEVATIONS IN FEET - N.G.V.D.

Safety is a Part of Your Contract



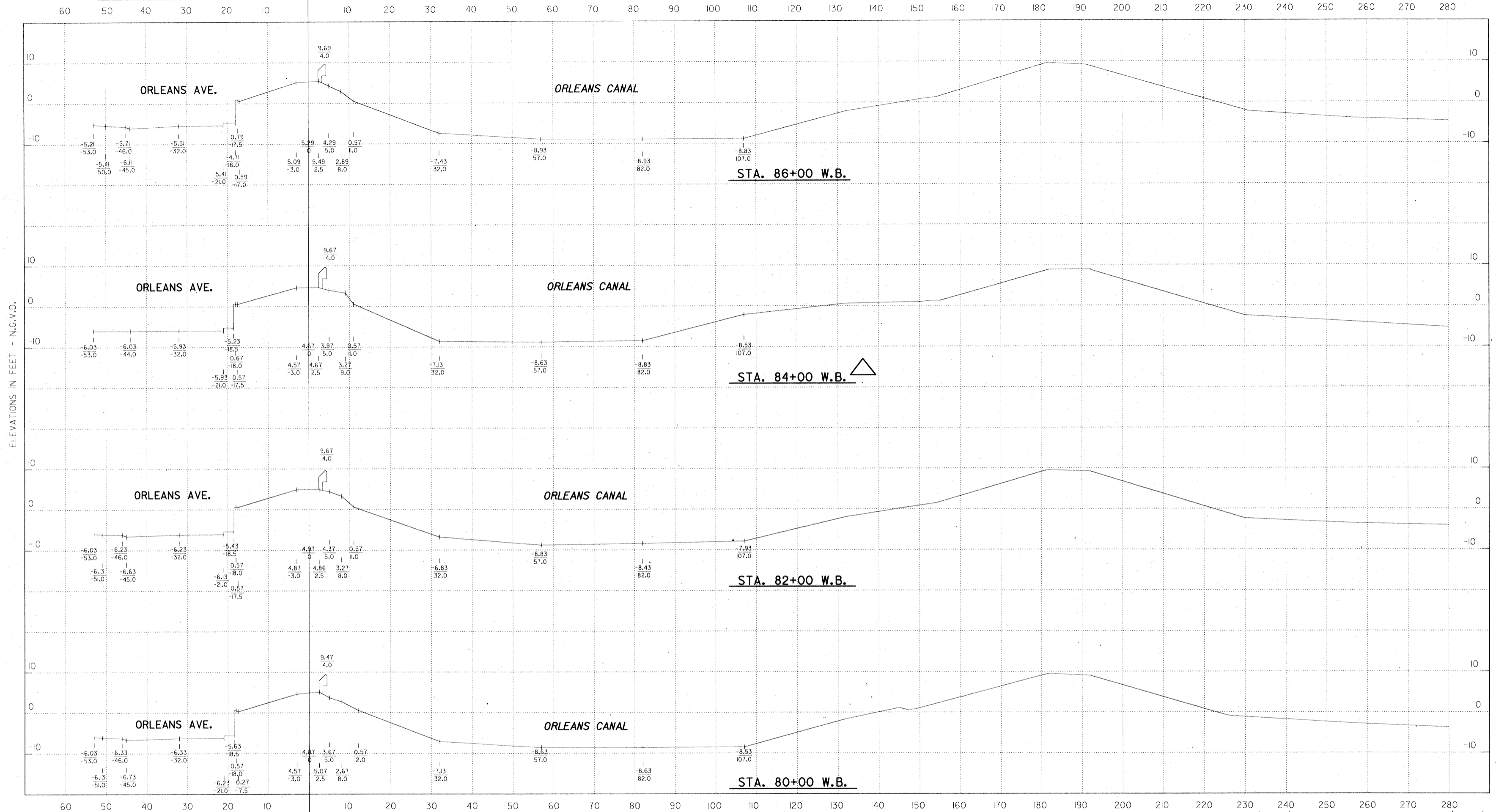
SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED ELEVATIONS, AMENDMENT NO. 1.	4-2-93	M. D.

REVISIONS	
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA	BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA
DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA
EXISTING GROUND LINE	
DESIGNED BY: DRAWN BY: P.M.KILLEEN CHECKED BY: T.J.SMITH	DATE: MAR. 1993 CADD FILE: II-B26S
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0059
PLOT DATE: MAR. 1993 FILE NO. H-4-30960	DWG. 26 OF 28

PROTECTED SIDE

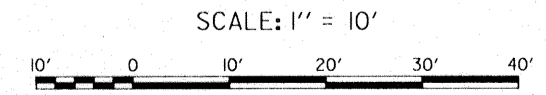
WEST B/L

FLOOD SIDE



ELEVATIONS IN FEET - N.G.V.D.

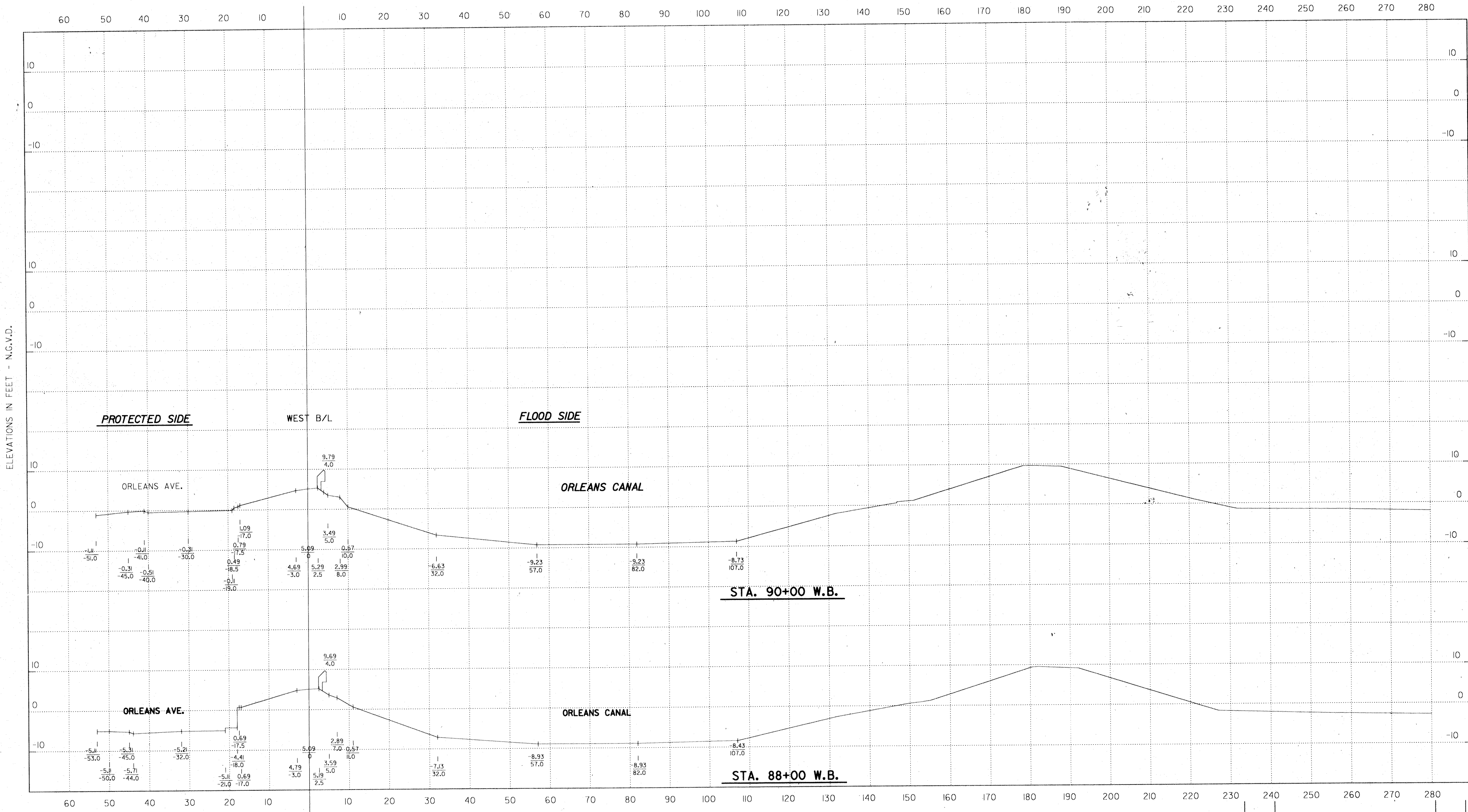
Safety is a Part of Your Contract



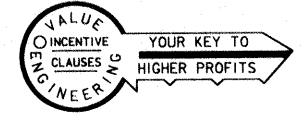
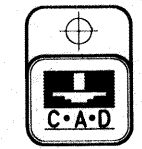
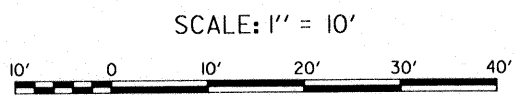
SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED ELEVATIONS, AMENDMENT NO. 1	4-2-93	M. D.

REVISIONS	
△	REVISED ELEVATIONS, AMENDMENT NO. 1

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002		
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 84+51.53 TO STA. 90+26.91) ORLEANS PARISH, LOUISIANA			
EXISTING GROUND LINE			
DESIGNED BY:	DATE:	PLOT SCALE:	PLOT DATE:
DRAWN BY: P.M.KILLEN	MAR. 1993	1	MAR. 1993
CHECKED BY: T.M.SMITH	CADD FILE: II-B27S		FILE NO. H-4-30960
SUBMITTED BY:	SOLICITATION NO. DACW29-93-B-0059		DWG. 27 OF 28
DESIGN ENGINEERING, INC.	DESIGN ENGINEER		



Safety is a Part
of Your Contract



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
<small>BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA</small>		<small>DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE., S. METAIRIE, LOUISIANA 70002</small>	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENTS PHASE II-B (WEST SIDE-STA. 64+51.53 TO STA. 90+28.91) ORLEANS PARISH, LOUISIANA			
EXISTING GROUND LINE			
DESIGNED BY:	DATE:	PLOT SCALE:	PLOT DATE:
DRAWN BY: P.M.KILLEEN	MAR. 1993	1	MAR. 1993
CHECKED BY: T.M.SMITH	CADD FILE:	II-B2B5	FILE NO.
			H-4-30960
SUBMITTED BY:	SOLICITATION NO.		DWG. 28 OF 28
DESIGN ENGINEERING, INC.	DACW29-93-B-0059		