

MEMORANDUM THRU Area Engineer, NOAO
C/Const Div ATTN: Contract Admin Sec.

FOR C/Eng Div.

SUBJECT: Narrative Completion Report for Contract Number DACW29-98-C-0050, Lake Ponchartrain, Louisiana and Vicinity, Hurricane Protection Project, High Level Plan, Orleans Parish Lakefront Levee, Orleans Marina Phase V – Sluice Gates, Orleans Parish, Louisiana.

1. The subject contract was awarded on 18 June 1998, to Boh Bros Construction Company, L.L.C., 730 S. Tonti St., New Orleans, LA 70153. The Notice to Proceed was issued on 18 July 1998, with construction scheduled to commence no later than 28 July 1998. The original completion date was scheduled for 14 September 1999 and the original contract amount was \$2,774, 760.00.
2. Required work under this contract included construction of an H-Pile supported foundation slab, reinforced concrete structure, aluminum bulkheads, sluice gates with electrical operators, access stairway and walkway, and other work as needed.
3. The Preconstruction Conference was held at the New Orleans Area Office on 16 July 1998. The detailed minutes of the meeting are located in the contract file. The Notice to Proceed was issued to the contractor at the Preconstruction Conference and physical construction began on 23 July 1998 with the mobilization of the field offices and the erection of the safety fence.
4. The contract provided for the following construction phases: (1) Electrical Ductbank Installation, (2) Underwater Excavation, (3) Temporary Cofferdam Construction, (4) Driving Steel H-Piles, (5) Catwalk and Weir Flap Gate, (6) Stone Placement, (7) Dewatering, (8) Concrete Demolition, (9) Misc. Metalwork, and (10) Sluice Gate Structure Construction.
5. Electrical Ductbank Installation: On 29 October 1998, the contractor held the preparatory meeting for installing the ductbank from Sewer and Water Board Pumping Station #12 to the location of the sluice gates structure. On 9 November 1998, the contractor began to selectively saw-cut sections of Lake Marina Dr. and Pontchartrain Blvd. in preparation for the ductbank installation. After saw-cutting the roadway material, asphalt and concrete, an 18" wide by 54" deep excavation was made for installation of the ductbank. The bottom of the ductbank was covered with an 8" layer of crushed concrete before various lengths of 16" x 16" ductbank sections were placed in the hole and covered with 18" of red color coded concrete. The remaining 14" of the excavation was filled with the previously excavated material followed by 8" of compacted crushed concrete and approximately 6" of hot asphaltic concrete to match the existing pavement. The work was done in various segments as

the ductbank was fabricated offsite and to avoid inconvenience to traffic. The electrical work was not complete until the sluice gate structure was brought on line in February 2000. During the construction, access to the local businesses was not interrupted, as 1" steel plates were used to cover all open excavations.

6. Underwater Excavation: On 3 November 1998, the contractor held the preparatory meeting for the underwater excavation. On 6 November 1998, the contractor began excavating the New Basin Canal within the jobsite construction limits. The contractor used a 4,000 Manitowoc crane to dig the canal to elevation -17.5', and watertight dump trucks hauled the excavated material to the disposal site at the New Orleans Lakefront Airport. All work associated with excavation of the canal was completed on 19 November 1998.
7. Temporary Cofferdam: On 20 November 1998, the contractor held the preparatory meeting for installation of the temporary cofferdam. On 1 December 1998, the contractor began driving the steel sheet piles for the cofferdam using an ICE 812 vibratory hammer. During this operation the contractor drove (24) 81.5' long AZ48 steel sheets piles, (38) 61.0' long AZ48 steel sheet piles, (6) 81.5' long AZ48 steel sheet piles and (14) 63.5' long AZ48 steel piles. The cofferdam was completed on 31 December 1998. Reference MOD A00009 attached.
8. Steel H-Piles: On 14 January 1999, the contractor began setting the template to assist in guiding the steel H-Piles underwater. On 20 January 1999, the contractor held the preparatory meeting for driving Steel H-Piles, and on 21 January 1999, the contractor drove the first H-Pile in the designated area for the sluice gate structure. A Boh/Vulcan 08 impact hammer and a Manitowoc 4000 crane were used to drive the 101' long piles to the required tip elevation. All of the piles had staggered splice marks, with the splice at least 40' from the end of the pile. The contractor completed driving of all H-Piles except the 7 affected by the underwater, concrete obstruction on 8 February 1999. These remaining 7 H-Piles were driven between 5-7 October 1999.
9. Catwalk and Weir Flap Gate: On 3 February 1999, the contractor held the preparatory meeting for the installation of the catwalk and weir flap gates along the temporary cofferdam. From 18 February 1999 through 22 February 1999, the contractor placed the catwalk with aluminum handrail and iron weir flap gates along the cofferdam on the north side of the project. The weir flap gates were steel plates totaling 91' 7" from east to west under the walkway, with the top elevation of 4.5 NGVD and the bottom elevation of 2.5 NGVD. The catwalk was 110' long from east to west and made of steel angle iron, aluminum grating and aluminum handrails equipped with Nu-Rail accessories. Once the work on the sluice gate structure was completed, the temporary cofferdam and catwalk system was removed from the New Basin Canal.
10. Stone: On 3 February 1999, the contractor held the preparatory meeting for bedding material and stone protection. On 24 February 1999, the contractor began placing the bedding material under water in the New Basin Canal starting at elevation -17.5' up to elevation -15.33', the bottom of the 4" stabilization slab. On 26 February 1999, the

contractor began placing the stone "A" along the south side of the cofferdam around the limits of the foundation slab. The stone "A" was placed from elevation -16.0 NGVD to elevation -11.5 NGVD. A 4,000 Manitowoc crane was used to place the stone in the flooded cofferdam and a survey party was present to verify the final grades. Throughout construction of the structure, the stone elevations were monitored and brought back to design grade as necessary. All stone work was completed on 2 March 1999 with final placement of the 18" riprap required for scour protection.

11. Dewatering: On 16 June 1999, the contractor held a Preconstruction meeting for dewatering the temporary cofferdam. On 6 July 1999, the contractor began the dewatering process by activating 2 pumps to remove the surface water from the cofferdam and discharge it into the adjacent New Basin Canal. When the surface water elevation, inside the cofferdam dropped from approximate elevation 3.0 NGVD to elevation -8.0 NGVD, the temporary cofferdam began to show signs of deflection and possible failure. To avoid a collapse of the cofferdam, the hole was flooded and the dewatering operation was shutdown until an analysis could be made to determine the necessity for added bracing to the cofferdam. The result of the analysis was to add a whale and strut system and to place additional crushed concrete to stabilize the cofferdam. On 31 August 1999, after placement of added bracing to both the west and east side of the cofferdam, the contractor was able to completely dewater the cofferdam. Through the use of sump pumps, ground water pumps and piezometers, the contractor was able to keep the cofferdam dewatered within acceptable limits during construction. Several times during the project, the Sewer & Water Board flooded the cofferdam area to facilitate operation of Pumping Station #12. All such occurrences took place without incidence and when pumping was complete, the flooded cofferdam area was again dewatered. It would take roughly 4 to 6 hours to pump all water from the cofferdam area. Upon completion of the sluice gate structure, the cofferdam was flooded a final time and the catwalk and all steel sheet pile were removed with an ICE 812 vibratory hammer and a Manitowoc 3900 crane.
12. Demolition of Concrete: On 13 September 1999, the contractor held a preparatory meeting on removal of the concrete face of the existing concrete. After this meeting, the contractor's subcontractor, A & A Enterprises, began to work to remove the portion of the concrete face from the existing culverts necessary for grouting of the new waterstop. The initial work was to saw-cut an outline in the concrete to be used as a guide for the jackhammers and chipping guns. When A & A Enterprises completed saw-cutting this outline in the concrete, jackhammers and chipping guns were brought in to complete the removal of the concrete face. On 1 October 1999, all work was complete with concrete removal from the face of the culverts. On 22 October 1999, after cleaning and smoothing the culvert face, #6 rebar dowels were inserted into the culverts and epoxied with HILTI HVU M20X170. To complete the new culvert face, a 9" waterstop was set in formwork around the culverts and #6 rebar, and concreted with 4000 psi concrete.
13. Sluice Gate Structure: On 14 October 1999, the contractor began setting the formwork for the 4" stabilization slab. This slab was poured in four segments

between 14 and 19 October 1999 with the use of an American 5399 crane and a ¾ CY concrete bucket. After placement of the stabilization slab was complete, the contractor began work on the foundation slab for the new structure. Daily quality assurance inspection was supplied to verify the correct formwork, steel rebar, and clearances, and on 5 November 1999, the foundation slab was placed with a concrete pump truck. After placement of the foundation slab, the contractor proceeded with construction of the walls and slabs necessary to frame the new structure. By 20 January 2000, all concrete placements had been made and the formwork removal began. A Combination of concrete buckets and pump trucks was used to place the concrete for these walls and slabs. By 27 January 2000, all of the formwork had been removed and the structure was ready to accept the new sluice gates and bulkheads. All handrails and finishing work on the new structure took place in the weeks that followed 27 January 2000.

14. Misc. Metalwork: On 21 June 1999, the contractor began driving the treated timber piles for the access walkway/stairway with a Lorraine 70 ton mobile crane and a Vulcan #1 air impact hammer. Once the timber piles were driven, 2 steel reinforced concrete pads were constructed as a foundation for the walkway/stairway. On 13 July 1999, the contractor began assembling the aluminum walkway over the floodway at gate L-4. On 15 July 1999, all work on the walkway over gate L-4 was complete with aluminum rails, grating and NU-Rail accessories installed where required. On 20 January 2000, the contractor began installing the walkway and handrails across the floodwall to the new sluice gate structure. The contractor used the required aluminum railings, grating and accessories where required. On 3 February 2000, all the misc. metalwork on the contract was complete.
15. Sluice Gates: On 4 February 2000, the contractor used a 3900 Manitowoc crane to start installing the sluice gates in the concrete structure. On 9 February 2000, the contractor had completed installing the four new sluice gates, stems, and motors. On 23 February 2000, all the electrical boxes were in place and power was connected to the sluice gates, and all interested parties were onsite to witness a successful demonstration of the new facility.
16. Demobilization: By 6 April 2000, the contractor had removed all equipment, scaffolds, fencing and containers from the job site. The roadways had been cleared, temporary roads and parking areas had been returned to their pre-construction conditions, and the project was called substantially complete.
17. Included herewith is a comparison of contract quantities versus actual quantities. A copy of the "As Built" drawings is also included.

Item	Description	Contract Quantity	Unit Price	Estimated Amount	Actual Quantity	Actual Amount
0001	Mob. & Demob.	Lump Sum	L.S.	\$150,000.00	100%	\$150,000.00
0002	Reserved	-	-	-	-	-
0003	Selective Demolition	Lump Sum	L.S.	\$20,000.00	100%	\$20,000.00
0004	Modifications to Existing Orleans Marina Boat Dock	Lump Sum	L.S.	\$1,000.00	100%	\$1,000.00
0005	Construction Dewatering	Lump Sum	L.S.	\$100,000.00	100%	\$100,000.00
0006	Cofferdam	Lump Sum	L.S.	\$600,000.00	100%	\$600,000.00
0007	Excavation	Lump Sum	L.S.	\$468,053.02	100%	\$468,053.02
0008	Riprap	415 Tons	\$50.00	\$20,750.00	351.40 Tons	\$17,570.00
0009	Stone "A"	340 Tons	\$50.00	\$17,000.00	343.33 Tons	\$17,166.50
0010	Bedding	230 CY	\$55.00	\$12,650.00	607.27 Tons	\$33,399.85
0011	Drainage Material	230 CY	\$55.00	\$12,650.00	0 Tons	\$0.00
0012	Timber Piles	2,550 LF	\$9.00	\$22,950.00	499.30 LF	\$4,493.70
0013	Pulled and Redriven Mooring Piles	Lump Sum	L.S.	\$100.00	100%	\$100.00
0014	Removal and Disposal of Existing Mooring Piles	Lump Sum	L.S.	\$12,000.00	100%	\$12,000.00
0015	Steel H-Piles	6,262 LF	\$30.00	\$187,860.00	6,262.00 LF	\$187,860.00
0016	Diving Services	Lump Sum	L.S.	\$22,500.00	100%	\$22,500.00
0017	Paving	Lump Sum	L.S.	\$20,000.00	100%	\$20,000.00
0018	Concrete	Lump Sum	L.S.	\$542,553.00	100%	\$542,553.00
0019	Tremie Stabilization Slab	Lump Sum	L.S.	\$0.00	0%	\$0.00
0020	Miscellaneous Metalwork	Lump Sum	L.S.	\$96,000.00	100%	\$96,000.00
0021	Aluminum Bulkheads	Lump Sum	L.S.	\$100,000.00	100%	\$100,000.00

Item	Description	Contract Quantity	Unit Price	Estimated Amount	Actual Quantity	Actual Amount
0022	Sluice Gates	Lump Sum	L.S.	\$380,000.00	100%	\$380,000.00
0023	Electrical Work	Lump Sum	L.S.	\$50,000.00	100%	\$50,000.00
0024	Removal of Local/Remote Switches	Lump Sum	L.S.	\$902.00	100%	\$902.00
0025	Constructive Suspense Costs Associated with Delays for Rewinding Electric Motors	Lump Sum	L.S.	\$84,391.48	100%	\$84,391.48
0026	Flood Repairs	Lump Sum	L.S.	\$14,657.36	100%	\$14,657.36
0027	Removal of Obstruction and Add Bracing N.W. Corner of Cofferdam	Lump Sum	L.S.	\$170,864.00	100%	\$170,864.00
0028	Add Bracing N.E. Corner of Cofferdam	Lump Sum	L.S.	\$133,694.00	100%	\$133,694.00
0029	Non Destructive Testing of Bulkheads	Lump Sum	L.S.	\$2,975.55	100%	\$2,975.55
0030	Reinforcement of Vertical Splice of Aluminum Bulkheads	Lump Sum	L.S.	\$4,052.07	100%	\$4,052.07

18. There were 36 modifications to the contract and a summary of each follows:

- a. P00001 (CAN-01) - Modified Payment Office. No changes to contract price or time.
- b. P00002 (CAN-03) - Incorporated Year 2000 Compliance. No changes to contract price or time.
- c. P00003 (FM-001) - Increased Available Funds by \$2,000,000.00. No changes to contract price or time.
- d. P00004 (FM-002) - Increased Available Funds by \$174,460.00. No changes to contract price or time.
- e. P00005 (CO-02) - Cancelled by P00006. No changes to contract price or time.
- f. P00006 (CO-02) - Allowed for removal of an underwater obstruction by replacing the 12-inch tremie slab with a 4-inch stabilization slab, replacing all drainage material with bedding material and adding additional reinforcement to the temporary cofferdam so that dewatering could take place in advance of foundation slab placement. No changes to contract price or time.
- g. P00007 (CAN-02) - Incorporated Electronic Funds Transfer Clause. No changes to contract price or time.
- h. P00008 (FM-003) - Decreased Available Funds by \$400,000.00. No changes to contract price or time.
- i. P00009 (FM-004) - Increased Available Funds by \$44,200.00. No changes to contract price or time.
- j. P00010 (FM-005) - Increased Available Funds by \$100,000.00. No changes to contract price or time.
- k. P00011 (CO-08) - Revised cofferdam bracing to avoid interference with upper walls. No changes to contract price or time.
- l. P00012 (FM-006) - Increased Available Funds by \$329,455.00. No changes to contract price or time.
- m. P00014 (CIN 05 and CIN 09) - Settled CO-02, CO-05 and CO-06 which allowed for removal of an underwater obstruction by replacing the 12-inch tremie slab with a 4-inch stabilization slab, replaced all drainage material with bedding material and added additional reinforcement to the temporary cofferdam so that dewatering could take place in advance of foundation slab placement. Increased contract price by \$269,558.00. Increased contract time increased by 98 calendar days. Increased Available Funds by \$269,558.00.

- n. P00015 (CAN-04) - CT Administrative Modification. No changes to contract price or time.
- o. P00016 (FM-007) - Increased Available Funds by \$129,929.48. No changes to contract price or time.
- p. A00001 (CO-01) - Provided for rewinding of the butterfly gate valve operators from 60 Hz to 25 Hz. No changes to contract price or time.
- q. A00002 (CIN-02) - Provided for addition re-steel at H-Piles. Increased contract price by \$1,554.00. No changes to the contract time.
- r. A00003 (CIN-01) - Definitized CO-01 which allowed for rewinding of the butterfly gate valve operators from 60 Hz to 25 Hz. No changes to contract price or time.
- s. A00004 (CO-03) - Removed the Local/Off/Remote switch from both the butterfly gate valve operator panels and the sluice gate operator panels. No changes to contract price or time.
- t. A00005 (CIN-04) - Revised the design of the sluice gate hoist beam. Increased contract price by \$26,000.00. No changes to the contract time.
- u. A00006 (CO-04) - Directed excavation of material from behind the dock. No changes to contract price or time.
- v. A00007 (CIN-06) - Definitized CO-03 which removed the Local/Off/Remote switch from both the butterfly gate valve operator panels and the sluice gate operator panels. Increased contract price by \$902.00. No changes to the contract time.
- w. A00008 (CO-05) - Directed the contractor to stop dewatering the cofferdam. No changes to contract price or time.
- x. A00009 (CO-06) - Added bracing to the northeast corner of the cofferdam. No changes to contract price or time.
- y. A00010 (CO-07) - Cancelled.
- z. A00011 (CIN-12) - Removed debris from 200 linear feet of box culvert downstream of Pumping Station #12. Increased contract price by \$44,200.00. Increased contract time by 11 calendar days.
- aa. A00012 (CIN-10) - Added a concrete bonding agent between the new and existing culverts. Increased contract price by \$999.00. No change to contract time.

- bb. A00013 (CIN-16) - Reimbursed contractor for costs incurred as a result of delays associated with rewinding butterfly gate valve operators. Increased contract price by \$84,391.48. Increased contract time by 80 calendar days.
 - cc. A00014 (CIN-11) - Reimbursed contractor for damage caused by operation of Pumping Station #12's pumps on 2 September 1999. Increased contract price by \$8,426.67. Increased contract time by 2 calendar days.
 - dd. A00015 (CIN-15) - Reimbursed contractor for damage caused by operation of Pumping Station #12's pumps on 12 December 1999. Increased contract price by \$930.49. No change to contract time.
 - ee. A00016 (CO-09) - Added a 3/8" thick by 6" wide flat bar over the bottom 10' of the vertical splice of bulkhead skin plate. No changes to contract price or time.
 - ff. A00017 (CIN-07) - Definitized CO-04 which directed excavation of material from behind the dock. Contract price increased by \$23,853.02. Contract time increased by 14 calendar days.
 - gg. A00018 (TE-001) - Extended contract time due to unusually severe weather between 17 July 1998 and 31 January 2000. No change to contract price. Increased contract time by 2 calendar days.
 - hh. A00019 (CIN-17) - Reimbursed contractor for setting aluminum bulkheads on stands for nondestructive weld testing. Increased contract price by \$2,975.55. No change to contract time.
 - ii. A00020 (CIN-18) - Definitized CO-09 which added a 3/8" thick by 6" wide flat bar over the bottom 10' of the vertical splice of bulkhead skin plate. Increased contract price by \$4,052.07. No change to contract time.
 - jj. A00021 (CIN-19) - Reimbursed contractor for damage caused by operation of Pumping Station #12's pumps on 20 and 21 September 1999 and 11 October 1999. Increased contract price by \$5,300.20. No change to contract time.
 - kk. A00022 (CAN-05) - Added drawings that were omitted from P00011.
 - ll. A00023 (CIN-14) Definitized CO-08 which revised cofferdam bracing to avoid interference with upper walls. Increased contract price by \$22,962.83. Increased contract time by 9 calendar days.
19. Subcontractors performing work on this contract along with their responsibilities were also follows:
- a. Barnes Electric Co., Inc., 432 Dakin St., Jefferson, LA. Installed all electrical ductbank and conduits.

- b. A & A Enterprises Inc., 2401 Piedmont St., Kenner LA. Demolition of existing culvert.
-
- 20. The contractor submitted and enforced an adequate Accident Prevention Program. The contractor performed daily safety inspections and weekly toolbox safety meetings. Monthly manager's safety meetings were also held. There were no accidents during the contract performance period.
 - 21. The contractor was efficient, professional and cooperative in the performance of the contract work, and Quality Control activities were performed throughout the life of the project. All noted deficiencies were promptly corrected.

Henry Carr
Quality Assurance Representative

SUBJECT: Narrative Completion Report for Contract Number DACW29-98-C-0050,
Lake Ponchartrain, Louisiana and Vicinity, Hurricane Protection Project, High Level
Plan, Orleans Parish Lakefront Levee, Orleans Marina Phase V – Sluice Gates, Orleans
Parish, Louisiana.

Project Engineer (Gremillion)

Project Inspector (Carr)

Team Leader (Wagner)

Office Engineer w/ as built (Thurmond)

CEMVN-CD-CS w/ as built

CEMVN-CD-C

CEMVN-CD-Q

CEMVN-CT

CEMVN-ED-C

CEMVN-ED-TF

CEMVN-PM

OFFICE ENGR "As Built" G.M.S.

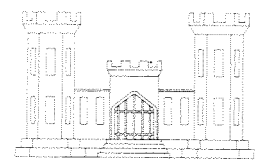
**Safety is a Part
of Your Contract**

PLANS FOR
HURRICANE PROTECTION
LAKE PONTCHARTRAIN, LOUISIANA
AND VICINITY
HIGH LEVEL PLAN
ORLEANS PARISH, LA.

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

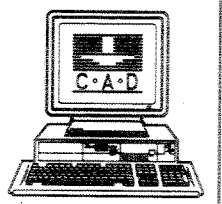
ORLEANS MARINA PHASE V - SLUICE GATES

ORLEANS PARISH, LOUISIANA

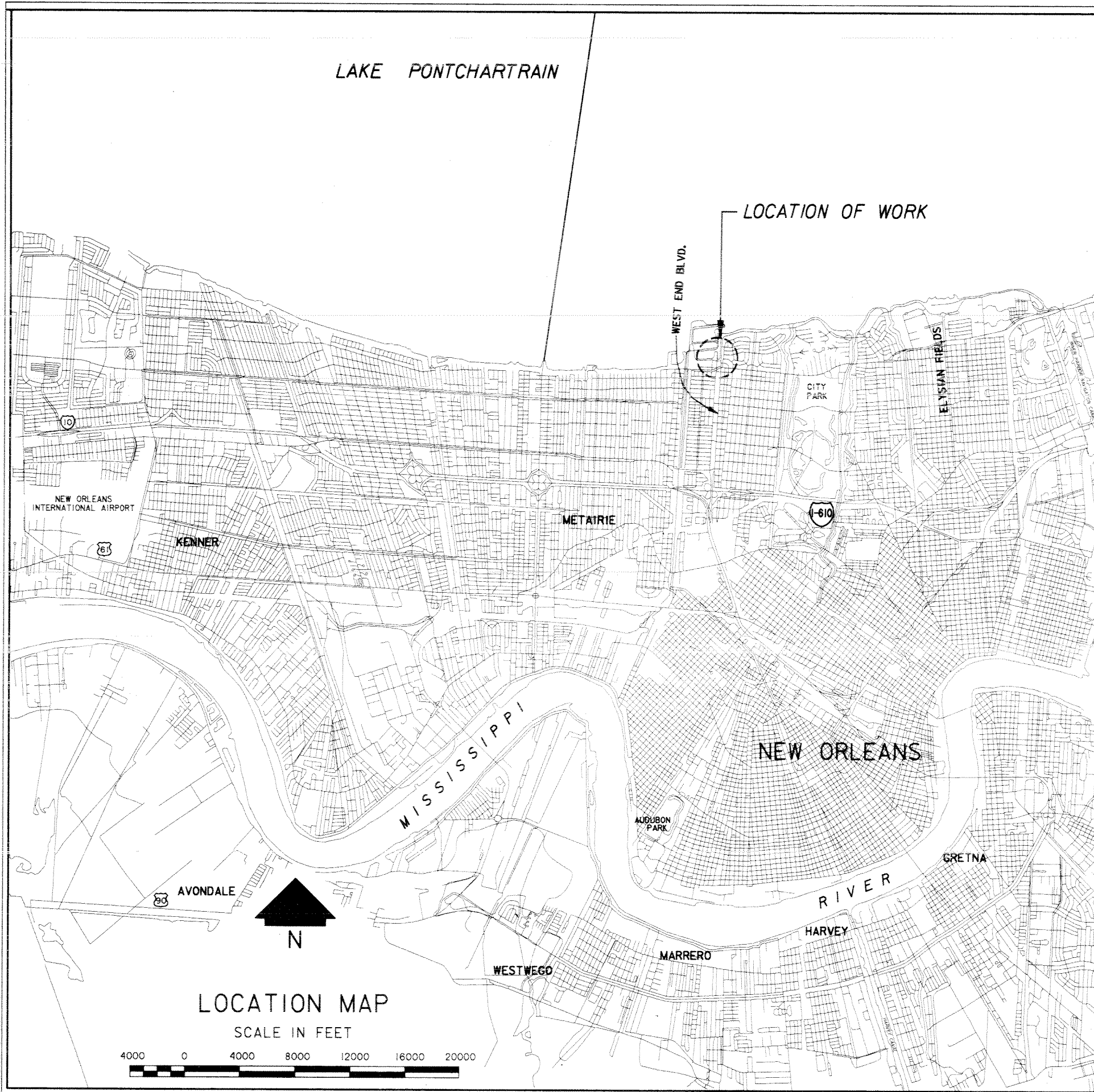


**US Army Corps
of Engineers
New Orleans District
1997**

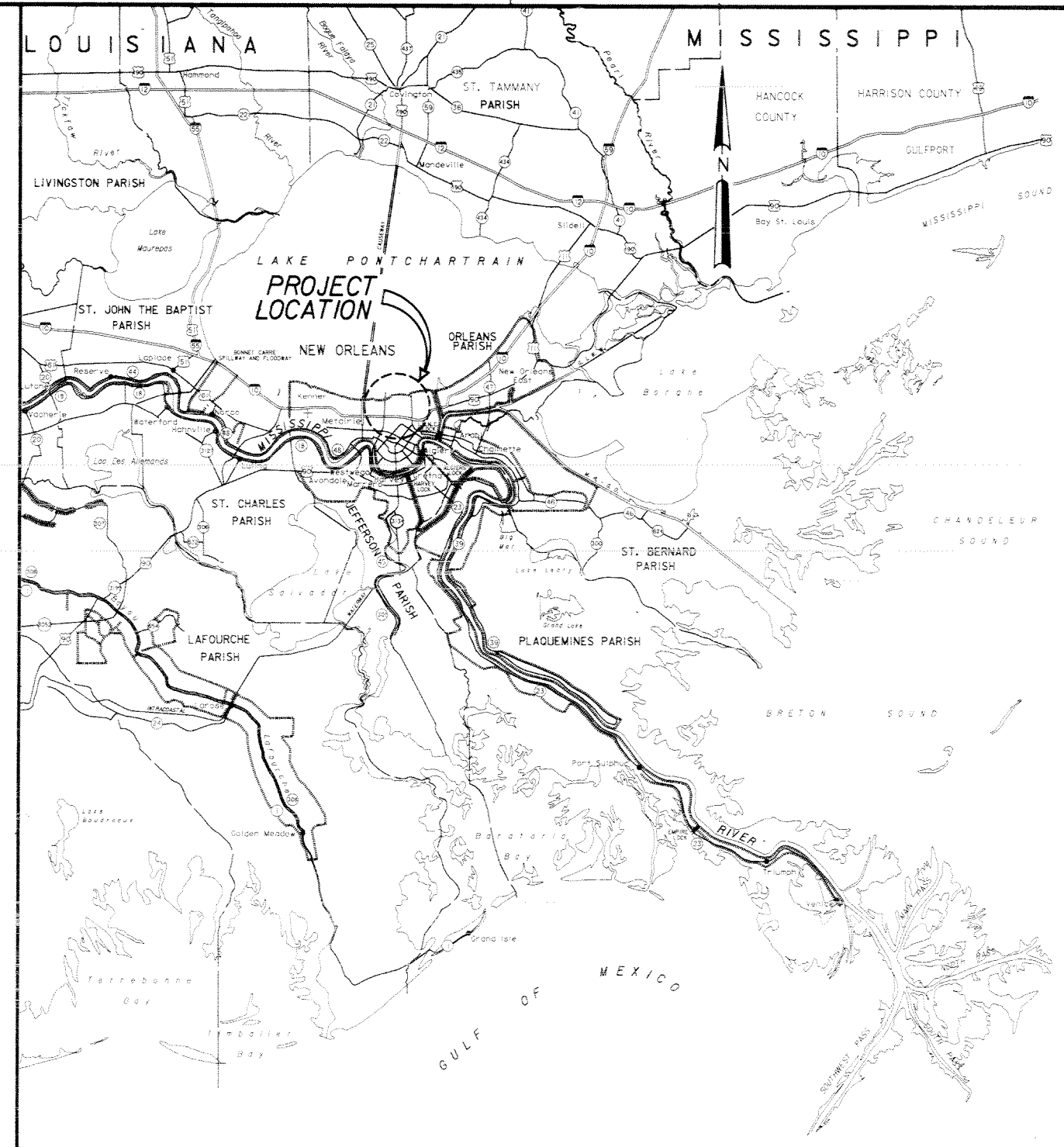
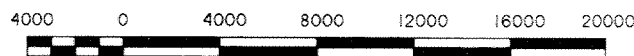
DRAWINGS IN THIS FOLIO
HAVE BEEN REDUCED ONE
HALF THE ORIGINAL SCALE



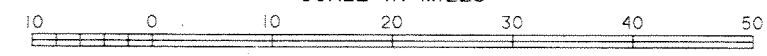
H-4-44778



LOCATION MAP
SCALE IN FEET



VICINITY MAP
SCALE IN MILES



TABULATION OF BENCH MARK

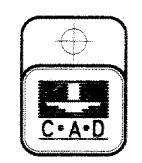
DESIGNATION	DESCRIPTION	ELEVATION
N GATE 2 NO. 3 1966	LOCATED IN THE NORTHWEST SECTION OF NEW ORLEANS, AT WEST END NEAR THE LAKE FRONT, BETWEEN PONTCHARTRAIN BLVD. AND WEST END BLVD. JUST NORTH OF ROBERT E. LEE BLVD., AT THE NEW ORLEANS SEWERAGE AND WATER BOARD PUMPING STATION NO. 12. IT IS 27.82 FEET SOUTH OF TRIANGULATION STATION N GATE 2 1966. ONE (1) FOOT NORTH OF THE NORTHEAST CORNER OF THE STAIRS 4 FEET EAST OF THE WEST RAIL OF THE HOIST. IT IS A STANDARD REFERENCE MARK DISK SET IN A DRILLED HOLE IN THE CONCRETE DECKING OF THE PUMPING STATION.	11.478 N.G.V.D. (1964 EPOCH)

THIS PROJECT WAS DESIGNED BY THE NEW ORLEANS DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEARING ON THESE PROJECT DOCUMENTS ARE WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152.

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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			
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
INDEX, LOCATION, AND VICINITY MAP			
DESIGNED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-0001	CADD FILE: 4477801.DGN	
DRAWN BY: J.DARBY	APPROVED BY: [Signature]	PLT DATE: 12/15/97	PLT SCALE: 4800
CHECKED BY: C.MESTAYER	DATE: DEC. 97	FILE NO. H-4-44778	
SUBMITTED BY: [Signature]		APPROVED BY: [Signature]	
CHIEF, STRUCTURAL DIVISION		CHIEF, ENGINEERING DIVISION	
CHIEF, DISTRICT ENGINEER		CHIEF, DISTRICT ENGINEER	
DWG. 1 OF 46			

Safety is a Part
of Your Contract

GENERAL NOTES:

1. AZIMUTHS SHOWN ARE MEASURED CLOCKWISE FROM THE SOUTH.
2. ELEVATIONS ARE IN FEET AND REFER TO NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.).
3. DIMENSIONS AND/OR ELEVATIONS MARKED THUS (±) ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN THE FIELD.
4. DIMENSIONS AND/OR ELEVATIONS MARKED THUS (N.T.S.) ARE NOT SHOWN TO SCALE.
5. DRAWINGS ARE GENERALLY TO SCALE, BUT SHOULD NOT BE SCALED. N.T.S. IS SHOWN ONLY WHERE DRAWING IS OBVIOUSLY OUT OF SCALE.
6. BENCH MARKS AND BASE LINES HAVE BEEN ESTABLISHED AT THE SITE BY THE GOVERNMENT.
7. WALL LINE (W/L) STATIONING IS MEASURED ALONG THE FLOOD SIDE FACE OF THE WALL.

STEEL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE ASTM A36, UNLESS OTHERWISE NOTED.
2. 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.
3. ALL WELDING SHALL BE ELECTRIC WELDING. WORKMANSHIP AND TECHNIQUE, WHERE APPLICABLE, SHALL CONFORM TO THE AMERICAN WELDING SPECIFICATIONS (SEE SPECS.) STRUCTURAL WELDING CODE.
4. 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.
5. DIMENSIONS SHOWN OR CALLED FOR ARE THE FINAL DIMENSIONS; ALLOWANCES MUST BE MADE FOR MACHINING.
6. ITEMS MARKED C.R.S. SHALL BE CORROSION RESISTANT STEEL (STAINLESS STEEL), SEE SPECIFICATIONS.

CONCRETE NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'_c) OF 4000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED.
2. STABILIZATION SLAB CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'_c) OF 3000 PSI AT 28 DAYS, 90 DAYS IF POZZOLAN IS USED.
3. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH (F_y) OF 60,000 PSI.
4. RESERVED.
5. CONSTRUCTION JOINTS SHALL BE PROVIDED WHERE SHOWN. WHERE NOT SHOWN, CONSTRUCTION JOINTS SHALL BE PLACED AT LOCATIONS LEAST LIKELY TO IMPAIR THE INTERGRITY OF THE CONCRETE STRUCTURE. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE CONTRACTING OFFICER.
6. UNLESS OTHERWISE NOTED, PROVIDE 3/4" CHAMFER AT ALL EXPOSED JOINTS, EDGES, EXTERNAL CORNERS, AND VERTICAL EXPANSION JOINTS.
7. ALL 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.
8. ALL BENDS OF REINFORCEMENT AND ALL BAR SPACERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SP-66, AMERICAN CONCRETE INSTITUTE DETAILING MANUAL - 1980.
9. REINFORCING BAR DESIGNATION NUMBERS CONFORM TO THE NUMBERING SYSTEM OF THE CONCRETE REINFORCING STEEL INSTITUTE.
10. REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS UNLESS OTHERWISE NOTED.
11. REINFORCEMENT, WHERE NECESSARY TO AVOID OPENINGS, PIPES, EMBEDDED ITEMS AND OTHER OBSTRUCTIONS, SHALL BE BENT OR SHIFTED AS DIRECTED BY THE CONTRACTING OFFICER.
12. THE EMBEDMENT AND SPLICE TABLE SHALL BE USED IN DETERMINING LAP SPLICES AND EMBEDMENT LENGTHS WHERE LENGTHS ARE NOT OTHERWISE INDICATED. SPLICE LENGTHS SHALL BE BASED ON THE SMALLER BAR BEING LAPPED. THE CONTRACTOR WILL BE ALLOWED TO MAKE SPLICES IN ADDITION TO THOSE INDICATED IN THE DRAWINGS, WHERE ESSENTIAL TO CONSTRUCTIBILITY, SUBJECT TO APPROVAL BY THE CONTRACTING OFFICER. SPLICES OTHER THAN THOSE SHOWN ON THE DRAWINGS AND OTHER THAN ANY ADDITIONAL SPLICES REQUIRED BY THE CONTRACTING OFFICER, WILL BE AT THE CONTRACTOR'S EXPENSE.
13. 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.

ABBREVIATIONS

- B/L = BASELINE
- BF = BOTTOM FACE
- BL = BOTTOM LAYER
- C = CENTER
- CB = CATCH BASIN
- C/E = CONSTRUCTION EASEMENT
- C.I. = CAST IRON
- CJ = CONSTRUCTION JOINT
- CL = CLEAR COVER
- C/L OR C = CENTER LINE
- C.R.S. = CORROSION RESISTANT STEEL
- Ø = DIAMETER
- D = DRAIN
- D.I. = DROP INLET
- D.P. = DRAIN PIPE
- D/S = DOWN STREAM
- DV MH = DRAIN VALVE MANHOLE
- E = ELECTRICAL
- EF = EACH FACE
- EJB = ELECTRICAL JUNCTION BOX
- EL. = ELEVATION
- ES = EQUALLY SPACED
- FH = FIRE HYDRANT
- FF = FAR FACE
- G = GAS
- LP = LIGHT POLE
- LS = LIGHT STANDARD
- LTF = LOWER TOP FACE
- MH = MANHOLE
- NF = NEAR FACE
- O.C. = ON CENTER
- OPT. = OPTIONAL
- PP = POWER POLE
- P.C. = POINT OF CURVATURE
- P.T. = POINT OF TANGENCY
- R/W = RIGHTS OF WAY
- S = SEWER
- S&WB = NEW ORLEANS SEWERAGE & WATER BOARD
- SB/L = SUB BASELINE
- SB/L = SUB BASELINE
- SC = SEWER CLEANOUT
- STD. HK. = STANDARD HOOK
- STA. = STATION
- T = TELEPHONE
- TD = TRENCH DRAIN
- TF = TOP FACE
- TEL MH = TELEPHONE MANHOLE
- TL = TOP LAYER
- TP = TEST PILE
- U/S = UP STREAM
- W = WATER
- W/L = WALL LINE
- WM = WATER METER
- WV = WATER VALVE
- WP = WORKING POINT

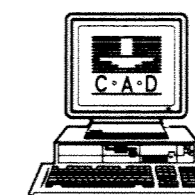
S&WB = NEW ORLEANS SEWERAGE & WATER BOARD
SB/L = SUBBASELINE


REINFORCEMENT EMBEDMENT AND SPLICE TABLES

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

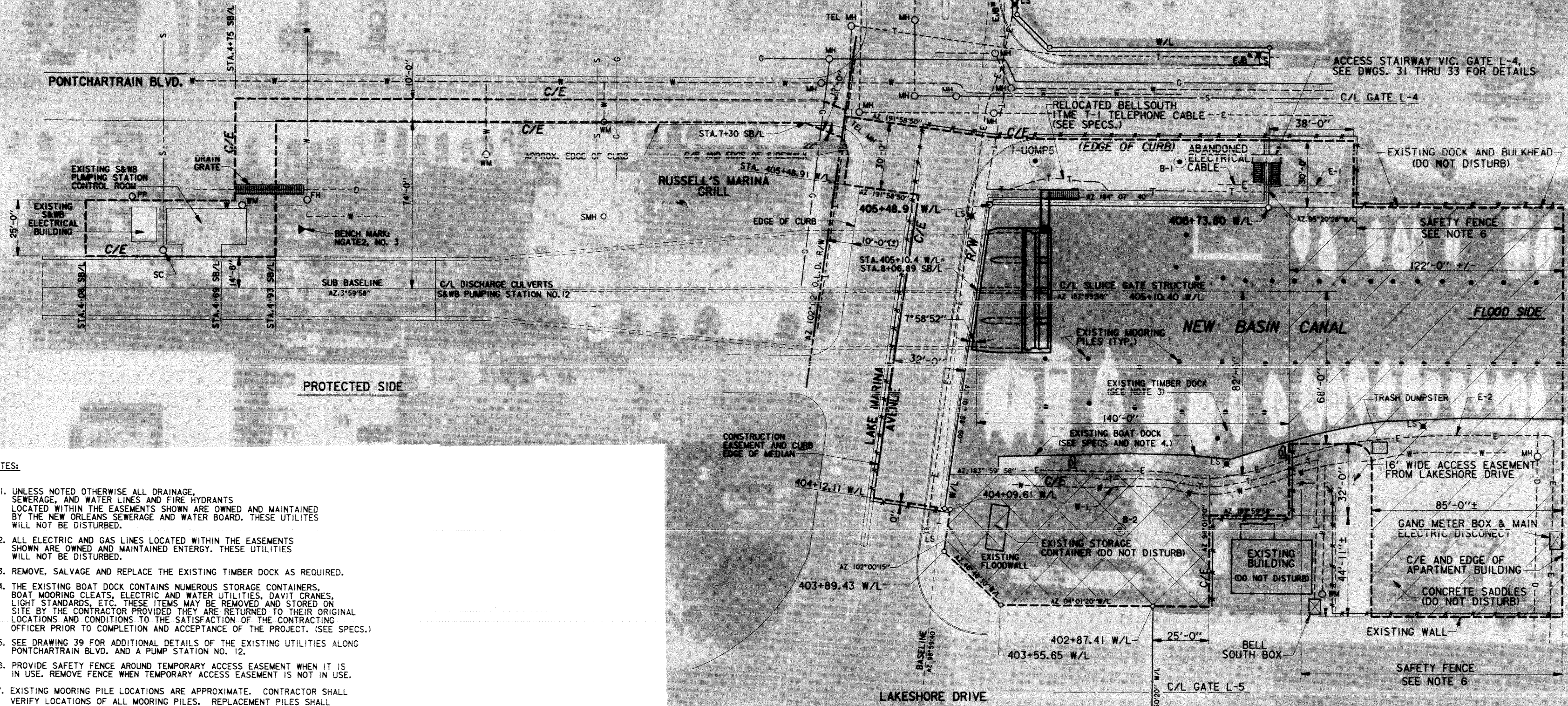
NOTES:

1. USE THE BASIC TABLE IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
 - A) CENTER TO CENTER BAR SPACING LATERALLY IS AT LEAST 3 BAR DIAMETERS
 - B) DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2 BAR DIAMETERS.
2. THE ALTERNATE TABLE MAY BE USED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
 - A) CENTER TO CENTER BAR SPACING LATERALLY IS AT LEAST 5 BAR DIAMETERS
 - B) DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2 1/2 BAR DIAMETERS.
3. IF CONCRETE COVER OR EDGE DISTANCE IS LESS THAN 1 BAR DIAMETER OR THE CENTER TO CENTER BAR SPACING LATERALLY IS LESS THAN 3 BAR DIAMETERS, SEE ACI 318 FOR APPROPRIATE GUIDANCE.
4. 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.
5. THE TABLES SHOWN ABOVE ARE FOR NORMAL WEIGHT CONCRETE AND UNCOATED REINFORCING BARS. IF LIGHTWEIGHT CONCRETE OR EPOXY COATED BARS ARE USED, SEE ACI 318 FOR ADDITIONAL CONSIDERATIONS.



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
GENERAL NOTES			
DESIGNED BY: C. WAUGAMAN	DATE: DEC. 97	PLOT SCALE: 1	PLOT DATE: DEC. 15, 1997
DRAWN BY: C. WAUGAMAN	CADD FILE: 44778015.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER		
SOLICITATION NO. DACW29-98-B-000		DWG. 2 OF 46	

Safety is a Part of Your Contract



NOTES:

- UNLESS NOTED OTHERWISE ALL DRAINAGE, SEWERAGE, AND WATER LINES AND FIRE HYDRANTS LOCATED WITHIN THE EASEMENTS SHOWN ARE OWNED AND MAINTAINED BY THE NEW ORLEANS SEWERAGE AND WATER BOARD. THESE UTILITIES WILL NOT BE DISTURBED.
- ALL ELECTRIC AND GAS LINES LOCATED WITHIN THE EASEMENTS SHOWN ARE OWNED AND MAINTAINED ENTIRELY. THESE UTILITIES WILL NOT BE DISTURBED.
- REMOVE, SALVAGE AND REPLACE THE EXISTING TIMBER DOCK AS REQUIRED.
- THE EXISTING BOAT DOCK CONTAINS NUMEROUS STORAGE CONTAINERS, BOAT MOORING CLEATS, ELECTRIC AND WATER UTILITIES, DAVIT CRANES, LIGHT STANDARDS, ETC. THESE ITEMS MAY BE REMOVED AND STORED ON SITE BY THE CONTRACTOR PROVIDED THEY ARE RETURNED TO THEIR ORIGINAL LOCATIONS AND CONDITIONS TO THE SATISFACTION OF THE CONTRACTING OFFICER PRIOR TO COMPLETION AND ACCEPTANCE OF THE PROJECT. (SEE SPECS.)
- SEE DRAWING 39 FOR ADDITIONAL DETAILS OF THE EXISTING UTILITIES ALONG PONTCHARTRAIN BLVD. AND A PUMP STATION NO. 12.
- PROVIDE SAFETY FENCE AROUND TEMPORARY ACCESS EASEMENT WHEN IT IS IN USE. REMOVE FENCE WHEN TEMPORARY ACCESS EASEMENT IS NOT IN USE.
- EXISTING MOORING PILE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL MOORING PILES. REPLACEMENT PILES SHALL BE PLACED AT THE SAME LOCATIONS AS THE ORIGINAL PILES. (SEE SPECS.)

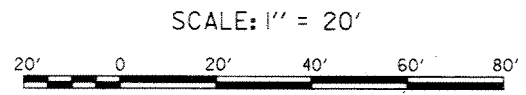
LEGEND

- TEMPORARY ACCESS EASEMENT (SEE SPECS)
- CONTRACTOR STAGING AREA
- SOIL BORING
- GAS LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND ELECTRIC LINE
- SEWER LINE
- WATER LINE
- LIGHT STANDARD
- DRAIN LINE
- LIMITS OF SAFETY FENCE
- LIMITS OF CONSTRUCTION EASEMENT
- RIGHTS OF WAY LIMIT
- EXISTING MOORING PILES
- EXISTING DAVIT CRANES

UTILITY RELOCATIONS

ITEM	DESCRIPTION	W/L STA.	OWNER	DISPOSITION
E-1	UNDERGROUND TELEPHONE CABLE	STA 406+84±	ENTERGY	ABANDONED UTILITY (REMOVE AS REQUIRED)
E-2	UNDERGROUND ELECTRIC SERVICE	AS SHOWN	WEST END LANDING, INC.	TEMPORARILY RELOCATE AS REQUIRED (SEE SPECS)
T-1	UNDERGROUND TELEPHONE CABLE	STA 406+81±	BELL SOUTH	RELOCATION BY OWNER (SEE SPECS)
T-2	UNDERGROUND TELEPHONE CABLE	AS SHOWN	BELL SOUTH	RELOCATION BY OWNER (SEE SPECS)
W-1	WATER SERVICE	AS SHOWN	WEST END LANDING, INC.	TEMPORARILY RELOCATE AS REQUIRED (SEE SPECS)

PLAN



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

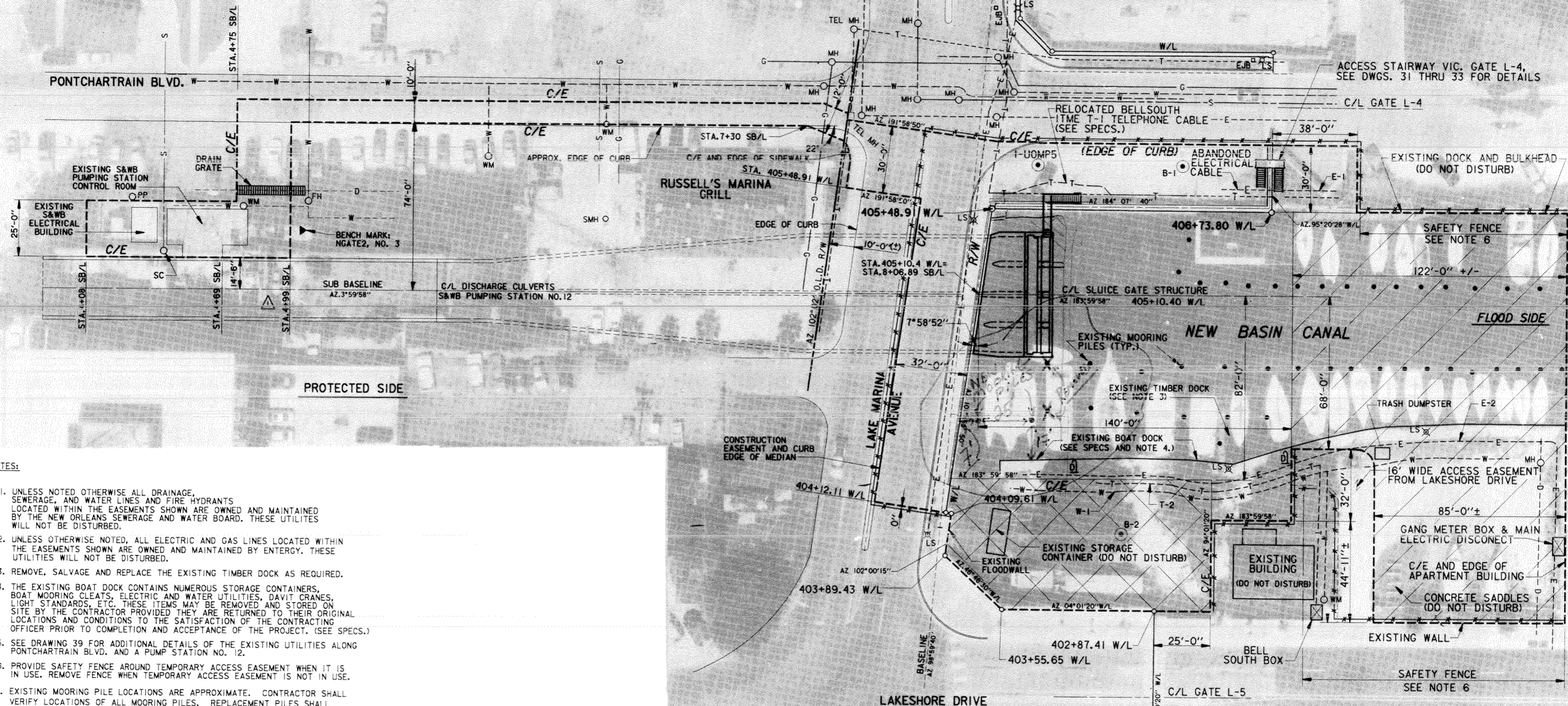
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
 CORPS OF ENGINEERS
 NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN
 NEW ORLEANS LAKEFRONT LEVEE
 WEST OF I.H.N.C.
 ORLEANS MARINA PHASE V - SLUICE GATES
 ORLEANS PARISH, LOUISIANA

SITE PLAN

DESIGNED BY: C.LABORDE	DATE: DEC. 97	PLOT SCALE: 240	PLOT DATE: DEC. 15, 1997
DRAWN BY: C.BRAND	CADD FILE: 44778C1.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-600!	DWG. 3 OF 46	
SUBMITTED BY: CHARLES A. LABORDE P.E. DESIGN ENGINEER			

Safety is a Part of Your Contract



NOTES:

- UNLESS NOTED OTHERWISE ALL DRAINAGE, SEWERAGE, AND WATER LINES AND FIRE HYDRANTS LOCATED WITHIN THE EASEMENTS SHOWN ARE OWNED AND MAINTAINED BY THE NEW ORLEANS SEWERAGE AND WATER BOARD. THESE UTILITIES WILL NOT BE DISTURBED.
- UNLESS OTHERWISE NOTED, ALL ELECTRIC AND GAS LINES LOCATED WITHIN THE EASEMENTS SHOWN ARE OWNED AND MAINTAINED BY ENTERGY. THESE UTILITIES WILL NOT BE DISTURBED.
- REMOVE, SALVAGE AND REPLACE THE EXISTING TIMBER DOCK AS REQUIRED.
- THE EXISTING BOAT DOCK CONTAINS NUMEROUS STORAGE CONTAINERS, BOAT MOORING CLEATS, ELECTRIC AND WATER UTILITIES, DAVIT CRANES, LIGHT STANDARDS, ETC. THESE ITEMS MAY BE REMOVED AND STORED ON SITE BY THE CONTRACTOR PROVIDED THEY ARE RETURNED TO THEIR ORIGINAL LOCATIONS AND CONDITIONS TO THE SATISFACTION OF THE CONTRACTING OFFICER PRIOR TO COMPLETION AND ACCEPTANCE OF THE PROJECT. (SEE SPECS.)
- SEE DRAWING 39 FOR ADDITIONAL DETAILS OF THE EXISTING UTILITIES ALONG PONTCHARTRAIN BLVD. AND A PUMP STATION NO. 12.
- PROVIDE SAFETY FENCE AROUND TEMPORARY ACCESS EASEMENT WHEN IT IS IN USE. REMOVE FENCE WHEN TEMPORARY ACCESS EASEMENT IS NOT IN USE.
- EXISTING MOORING PILE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL MOORING PILES. REPLACEMENT PILES SHALL BE PLACED AT THE SAME LOCATIONS AS THE ORIGINAL PILES. (SEE SPECS.)

LEGEND

- TEMPORARY ACCESS EASEMENT (SEE SPECS)
- CONTRACTOR STAGING AREA
- SOIL BORING
- GAS LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND ELECTRIC LINE
- SEWER LINE
- WATER LINE
- LIGHT STANDARD
- DRAIN LINE
- LIMITS OF SAFETY FENCE
- LIMITS OF CONSTRUCTION EASEMENT
- RIGHTS OF WAY LIMIT
- EXISTING MOORING PILES
- EXISTING DAVIT CRANES

UTILITY RELOCATIONS				
ITEM	DESCRIPTION	W/L STA.	OWNER	DISPOSITION
E-1	UNDERGROUND ELECTRIC SERVICE	STA 406+84±	ENTERGY	ABANDONED UTILITY (REMOVE AS REQUIRED)
E-2	UNDERGROUND ELECTRIC SERVICE	AS SHOWN	WEST END LANDING, INC.	TEMPORARILY RELOCATE AS REQUIRED (SEE SPECS)
T-1	UNDERGROUND TELEPHONE CABLE	STA 406+81±	BELL SOUTH	RELOCATION BY OWNER (SEE SPECS)
T-2	UNDERGROUND TELEPHONE CABLE	AS SHOWN	BELL SOUTH	RELOCATION BY OWNER (SEE SPECS)
W-1	WATER SERVICE	AS SHOWN	WEST END LANDING, INC.	TEMPORARILY RELOCATE AS REQUIRED (SEE SPECS)

PLAN

STA.316+45.71 B/L

SCALE: 1" = 20'



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISED CONSTRUCTION EASEMENT VICINITY OF PUMP STATION AND NOTE 2, AMEND. #0003	1/23/98	CAL

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

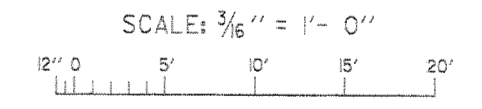
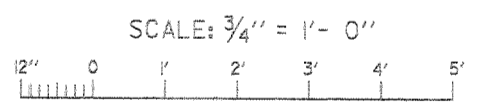
SITE PLAN			
DESIGNED BY:	DATE:	PLOT SCALE:	PLOT DATE:
C.LABORDE	DEC. 97	240	MAR. 6, 1998
DRAWN BY:	C.BRAND	CADD FILE:	FILE NO.
C.LABORDE		44778C11.DGN	H-4-44778
SUBMITTED BY:	SOLICITATION NO.	DWG. NO.	DWG. DATE
CHARLES A. LABORDE P.E. DESIGN ENGINEER	DACW29-98-B-0001	3	1998

Safety is a Part of Your Contract

- NOTES:
- SEE DWG. 5 & 6 FOR DETAILS OF COFFERDAM.
 - OPTIONAL TEMPORARY COFFERDAM FOR INSTALLATION OF BUTTERFLY VALVES IN THE DRY. COFFERDAM SHEETING SYSTEM TO BE PA36/18 OR AZ48. SHEETING TO BE REMOVED AFTER INSTALLATION OF BUTTERFLY VALVES (TYP.)
 - BUTTERFLY VALVE FRAMES WELDED TO SHEETING FRAMES CAN BE WELDED UNDER WATER WHERE REQUIRED. (TYP.)
 - ESTABLISH CONTROL POINTS AS SHOWN TO MONITOR MOVEMENTS AND SETTLEMENTS OF THE FLOODWALL AND BOAT DOCK. SEE SPECS.
 - RESERVED.
 - RESERVED.
 - SAW CUT AND REMOVE THE ENTIRE SLAB OBSTRUCTION AS SHOWN. UPON REMOVAL EXCAVATE BELOW SLAB OBSTRUCTION TO ELEV. -15.33.
 - DEWATER EXCAVATION TO ELEV. -5.0 TO CONSTRUCT NEW WATER AT ELEV. -4.0 BACKFILL WITH SAND BEHIND CONTRACTOR SHEETING AFTER NEW WATER AND STRUT SYSTEM IS IN PLACE.

LEGEND

- LOCATION AND EXTENT OF UNDERWATER BEDDING MATERIAL PLACEMENT TO ELEV. -15.33
- CONTROL POINT
- UNDERGROUND TELEPHONE LINE
- APPROXIMATE LIMITS OF 3' THICK SLAB OBSTRUCTION



SYMBOL	DESCRIPTION	DATE	APPROVED
3	ADDED WALER AND STRUTS TO RIGHT SIDE OF COFFERDAM TO STABILIZE SHEET PILE WALL.	JULY 99	CAL
2	ADDED SLAB OBSTRUCTION, REVISED COFFERDAM SHEET PILES, REMOV TREMIE CONC. & PVC PIPE	DEC 98	CAL
1	ADDED NOTES 5 & 6, AMEND. #1	1/23/98	CAL

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN
 NEW ORLEANS LAKEFRONT LEVEE
 WEST OF I.H.N.C.
 ORLEANS MARINA PHASE V - SLUICE GATES
 ORLEANS PARISH, LOUISIANA

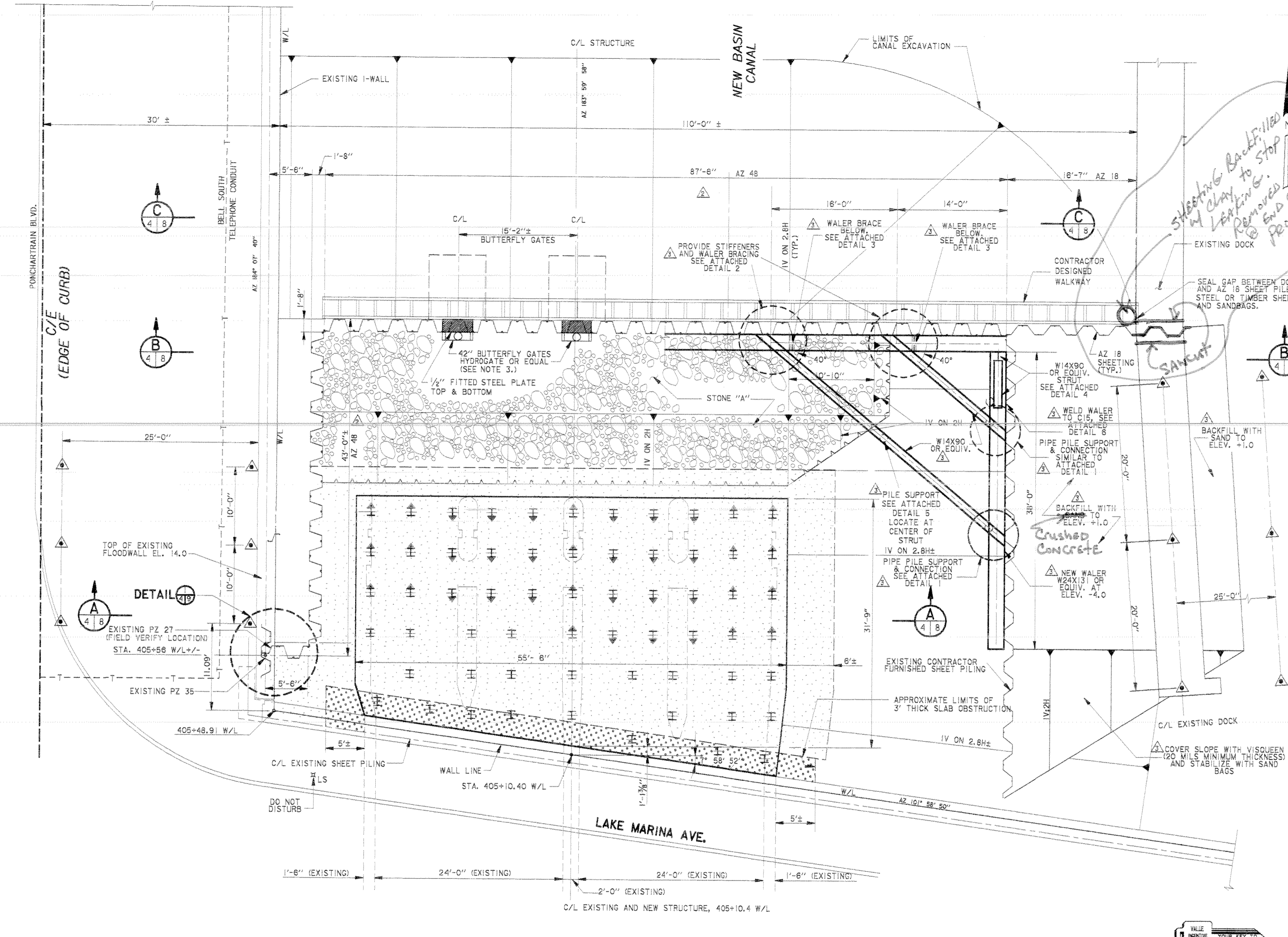
COFFERDAM AND EXCAVATION PLAN

DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 64	PLOT DATE: DEC. 15, 1998
DRAWN BY: V.COULLILLON	CADD FILE: 44778N08.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 4 OF 46

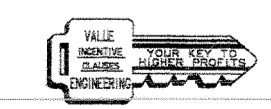
Sheeting Backfilled w/ clay to stop remaining. Removed @ END OF PROJECT

SAW CUT

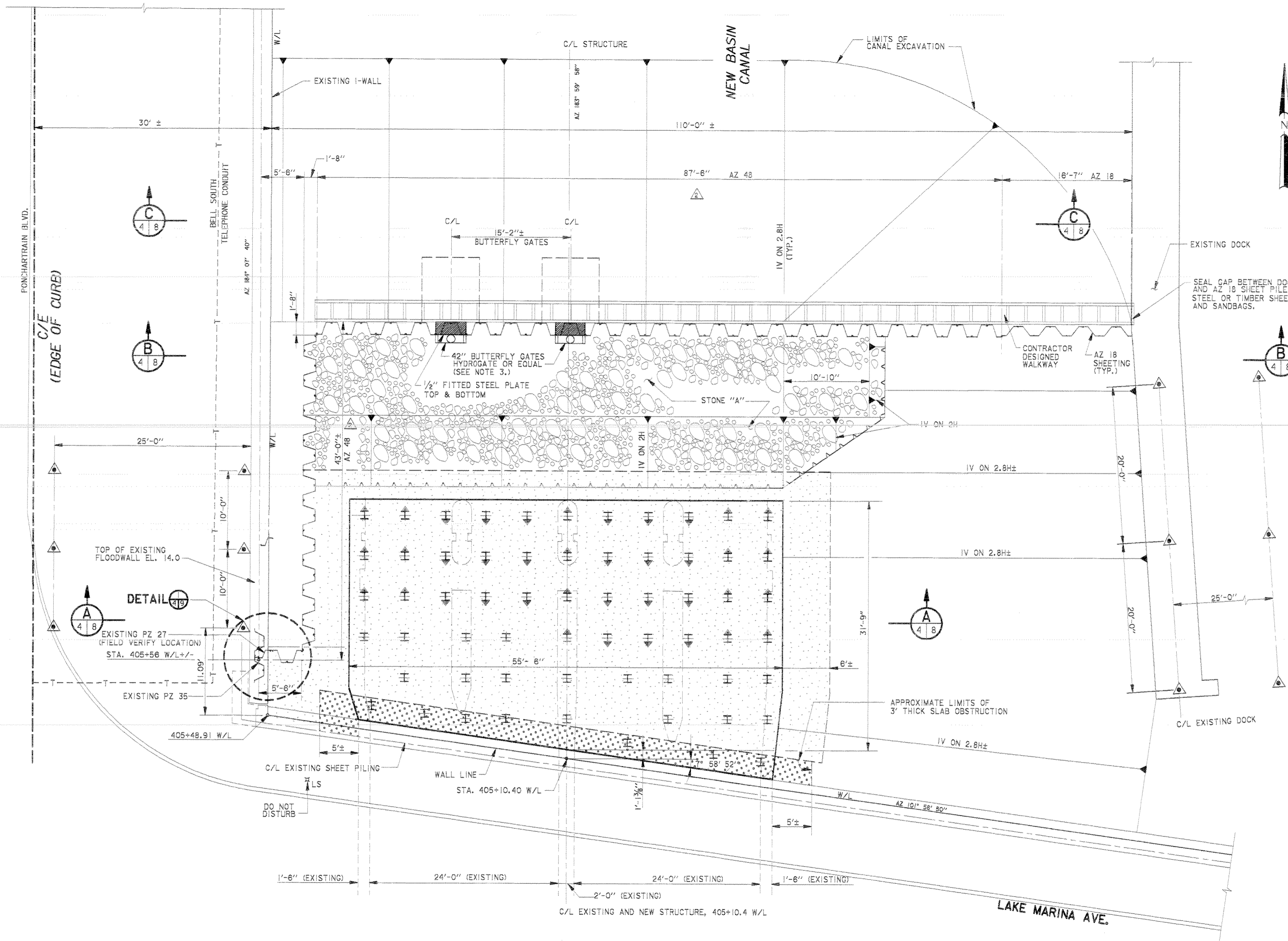
Crushed Concrete



SLUICE GATE STRUCTURE PLAN
 SCALE: 3/16" = 1'-0"



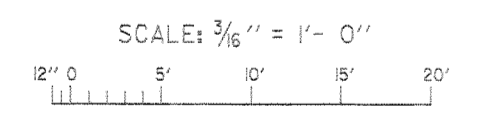
Safety is a Part of Your Contract



- NOTES:
- SEE DWG. 5 & 8 FOR DETAILS OF COFFERDAM.
 - OPTIONAL TEMPORARY COFFERDAM FOR INSTALLATION OF BUTTERFLY VALVES IN THE DRY. COFFERDAM SHEETING SYSTEM TO BE PA36/18 OR AZ48. SHEETING TO BE REMOVED AFTER INSTALLATION OF BUTTERFLY VALVES (TYP.)
 - BUTTERFLY VALVE FRAMES WELDED TO SHEETING FRAMES CAN BE WELDED UNDER WATER WHERE REQUIRED, (TYP.)
 - ESTABLISH CONTROL POINTS AS SHOWN TO MONITOR MOVEMENTS AND SETTLEMENTS OF THE FLOODWALL AND BOAT DOCK. SEE SPECS.
 - RESERVED.
 - RESERVED.
 - SAW CUT AND REMOVE THE ENTIRE SLAB OBSTRUCTION AS SHOWN. UPON REMOVAL EXCAVATE BELOW SLAB OBSTRUCTION TO ELEV. -15.33.
 - COFFERDAM BRACING NOT SHOWN FOR CLARITY. SEE DWG 4A FOR DETAILS OF COFFERDAM BRACING.

LEGEND

- LOCATION AND EXTENT OF UNDERWATER BEDDING MATERIAL PLACEMENT TO ELEV. -15.33
- CONTROL POINT
- UNDERGROUND TELEPHONE LINE
- APPROXIMATE LIMITS OF 3" THICK SLAB OBSTRUCTION



SLUICE GATE STRUCTURE PLAN

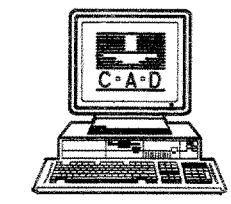
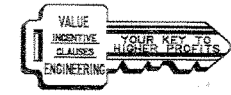
SYMBOL	DESCRIPTION	DATE	APPROVED
△	ADDED SLAB OBSTRUCTION, REVISED COFFERDAM SHEET PILES, REMOVED TREMIE CONG., & PVC PIPE	DEC 98	CAL
△	ADDED NOTES 5 & 8, AMEND. #1	1/23/98	CAL

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

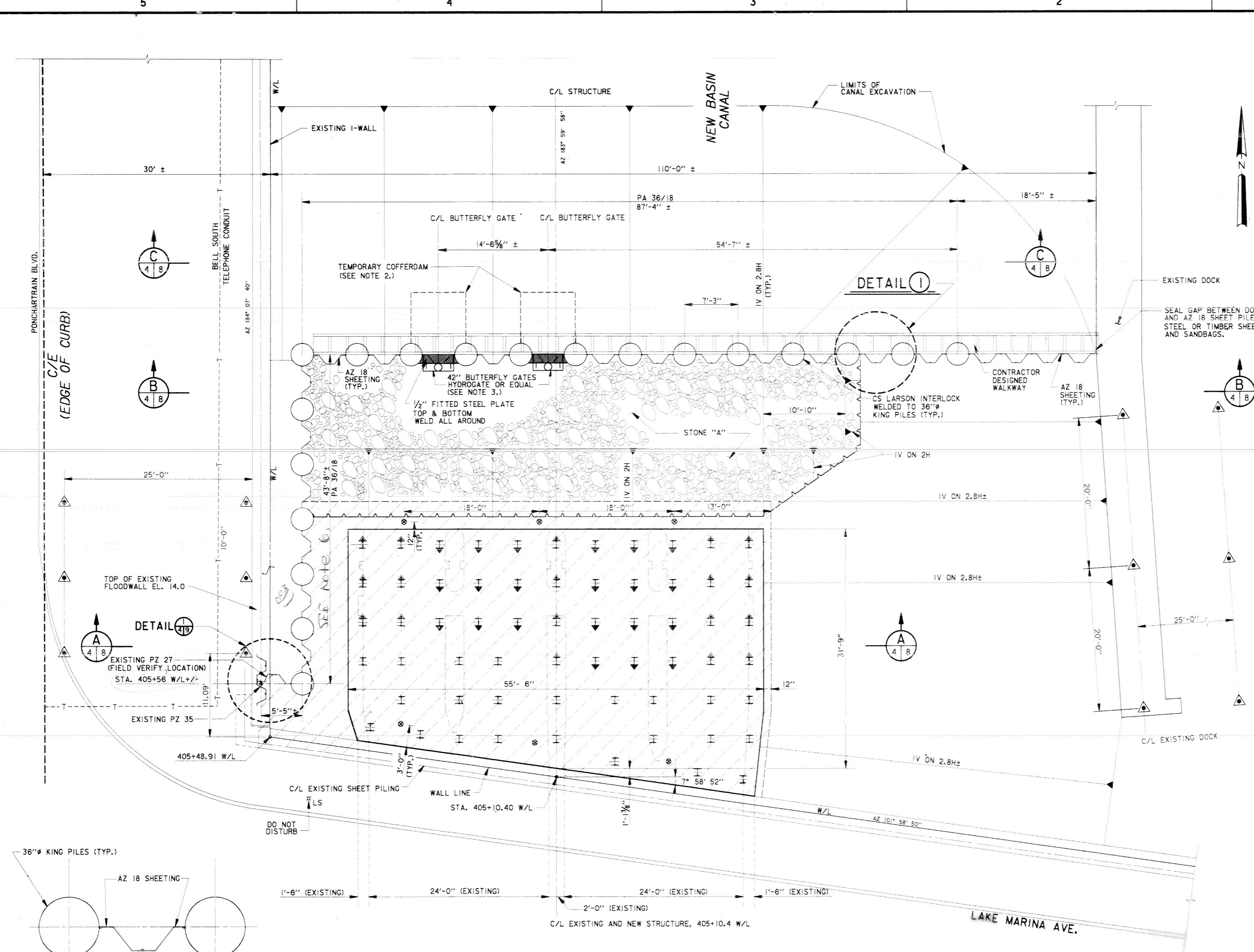
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

COFFERDAM AND EXCAVATION PLAN

DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 64	PLOT DATE: DEC. 3, 1998
DRAWN BY: V.COULLILLON	CADD FILE: 44778N08.DGN	FILE NO. H-4-44778	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 4 OF 16	



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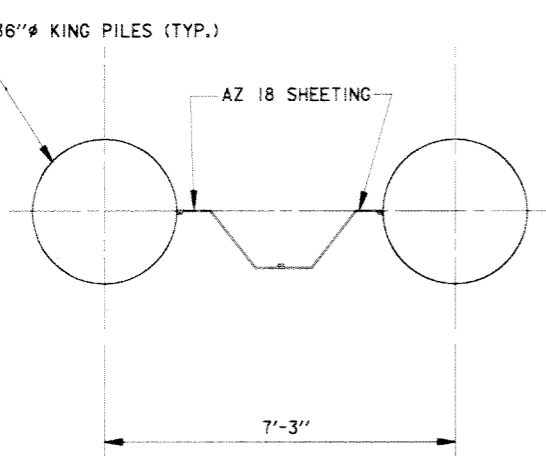
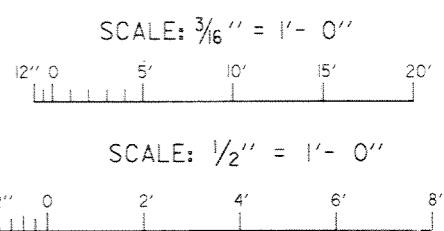


- NOTES:**
- SEE DWG. 5 & 6 FOR DETAILS OF COFFERDAM.
 - OPTIONAL TEMPORARY COFFERDAM FOR INSTALLATION OF BUTTERFLY VALVES IN THE DRY. COFFERDAM SHEETING SYSTEM TO BE PA36/18. SHEETING TO BE REMOVED AFTER INSTALLATION OF BUTTERFLY VALVES (TYP.)
 - BUTTERFLY VALVE FRAMES WELDED TO SHEETING FRAMES CAN BE WELDED UNDER WATER WHERE REQUIRED. (TYP.)
 - ESTABLISH CONTROL POINTS AS SHOWN TO MONITOR MOVEMENTS AND SETTLEMENTS OF THE FLOODWALL AND BOAT DOCK. SEE SPECS.

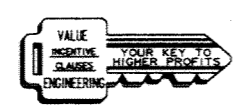
5. Below
6. 603

LEGEND

- LOCATION AND EXTENT OF TREMIE PLACED STABILIZATION SLAB
- CONTROL POINT
- UNDERGROUND TELEPHONE LINE
- 8" DIA. PVC PIPE FOR PRESSURE RELIEF DURING DEWATERING SEE DETAIL DWG. 5



DETAIL 1
TYPICAL PA 36/18 ASSEMBLY
SCALE: 1/2" = 1'-0"



SLUICE GATE STRUCTURE PLAN

5. PROVIDE COFFERDAM INCLUDING KING PILES AND INTERMEDIATE AZ-18 SHEETING, ETC., AS SHOWN. REMOVE ENTIRE COFFERDAM EXCEPT AS STATED IN NOTE 6 BELOW.

6. CUT AND REMOVE KING PILES ABOVE ELEVATION -14.5 LOCATED PARALLEL TO THE I-WALL AS SHOWN. REMAINING PORTION OF KING PILES BELOW ELEVATION -14.5 TO REMAIN.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA COFFERDAM AND EXCAVATION PLAN			
DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 64	PLOT DATE: DEC. 15, 1997
DRAWN BY: V.COUVILLON	CADD FILE: 44778C09.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 4 OF 46	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			

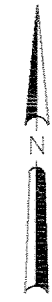
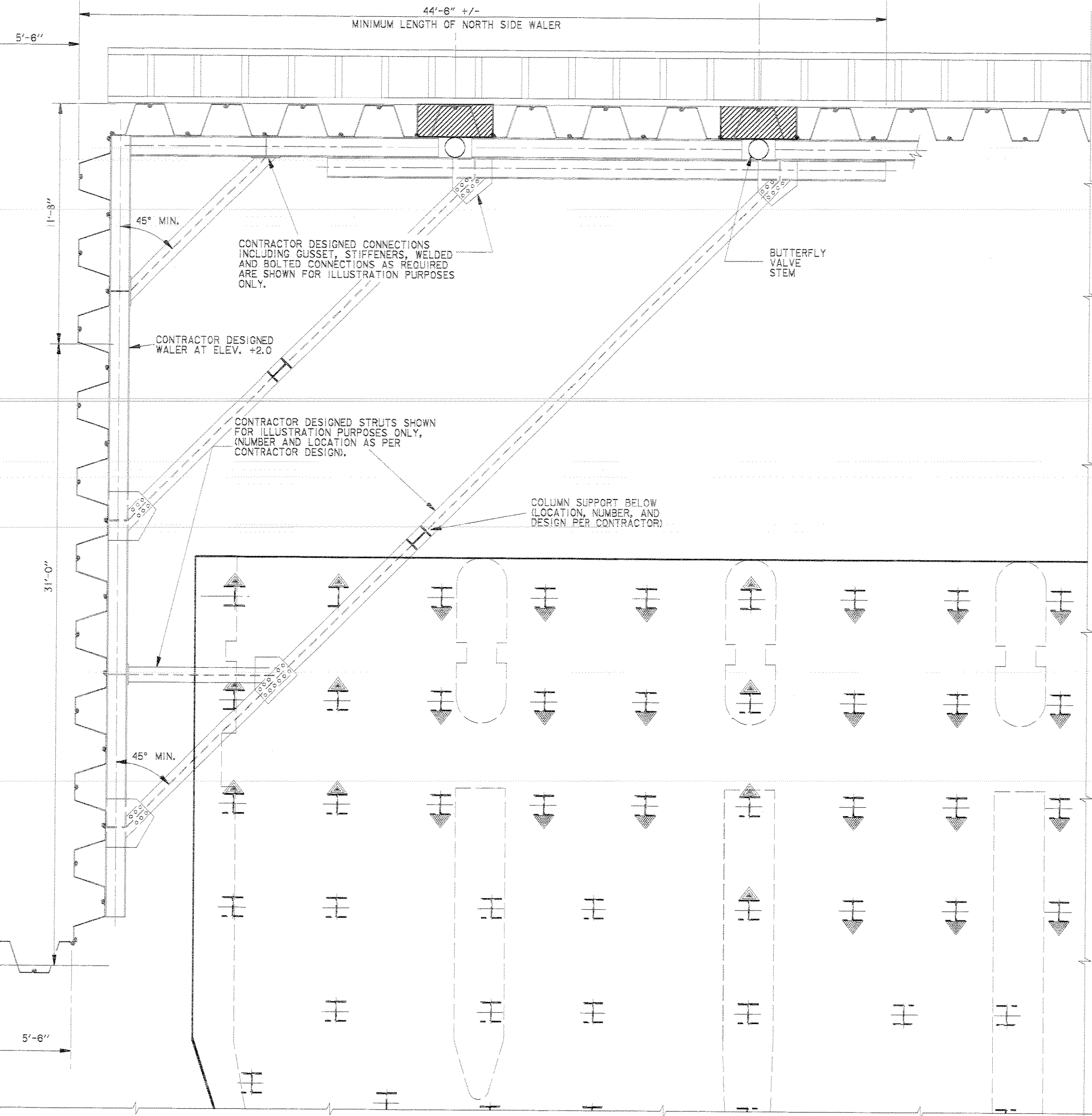
Safety is a Part of Your Contract

TOP OF EXISTING FLOODWALL EL. 14.0

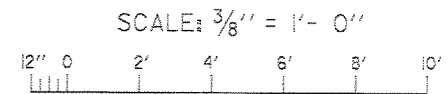
WALER DESIGN LOADING 9200 #/FT AT ELEV. +2.0.

PZ 27
STA. 405+58 W/L +/-
EXISTING PZ 35

AZ 184' 07" 40"



- NOTES:
1. RIPRAP AND BEDDING NOT SHOWN FOR CLARITY.
 2. DESIGN OF ALL WALERS, BRACING, PLATES, STRUTS, SUPPORTS AND ALL APPLICABLE DETAILS SHALL BE BY THE CONTRACTOR. (SEE SPECS.)



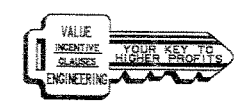
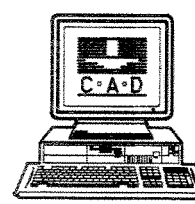
SYMBOL	DESCRIPTION	DATE	APPROVED
△	NEW DWG. FOR COFFERDAM BRACING REQUIREMENTS	DEC 98	CAL

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

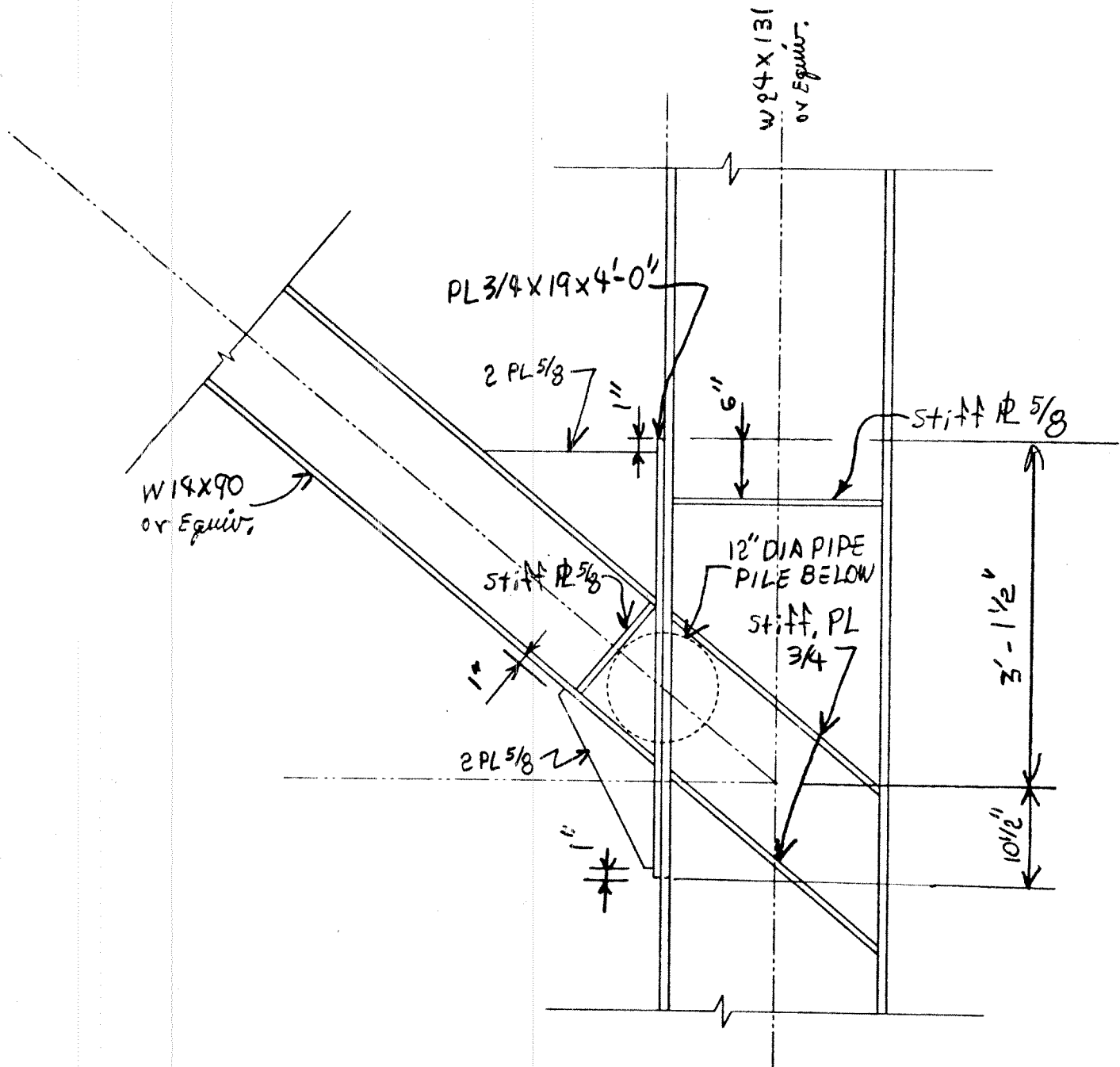
COFFERDAM BRACING

DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 32	PLOT DATE: DEC. 7, 1998
DRAWN BY: V.COUVILLION	CADD FILE: 44778N09.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 4A OF 46



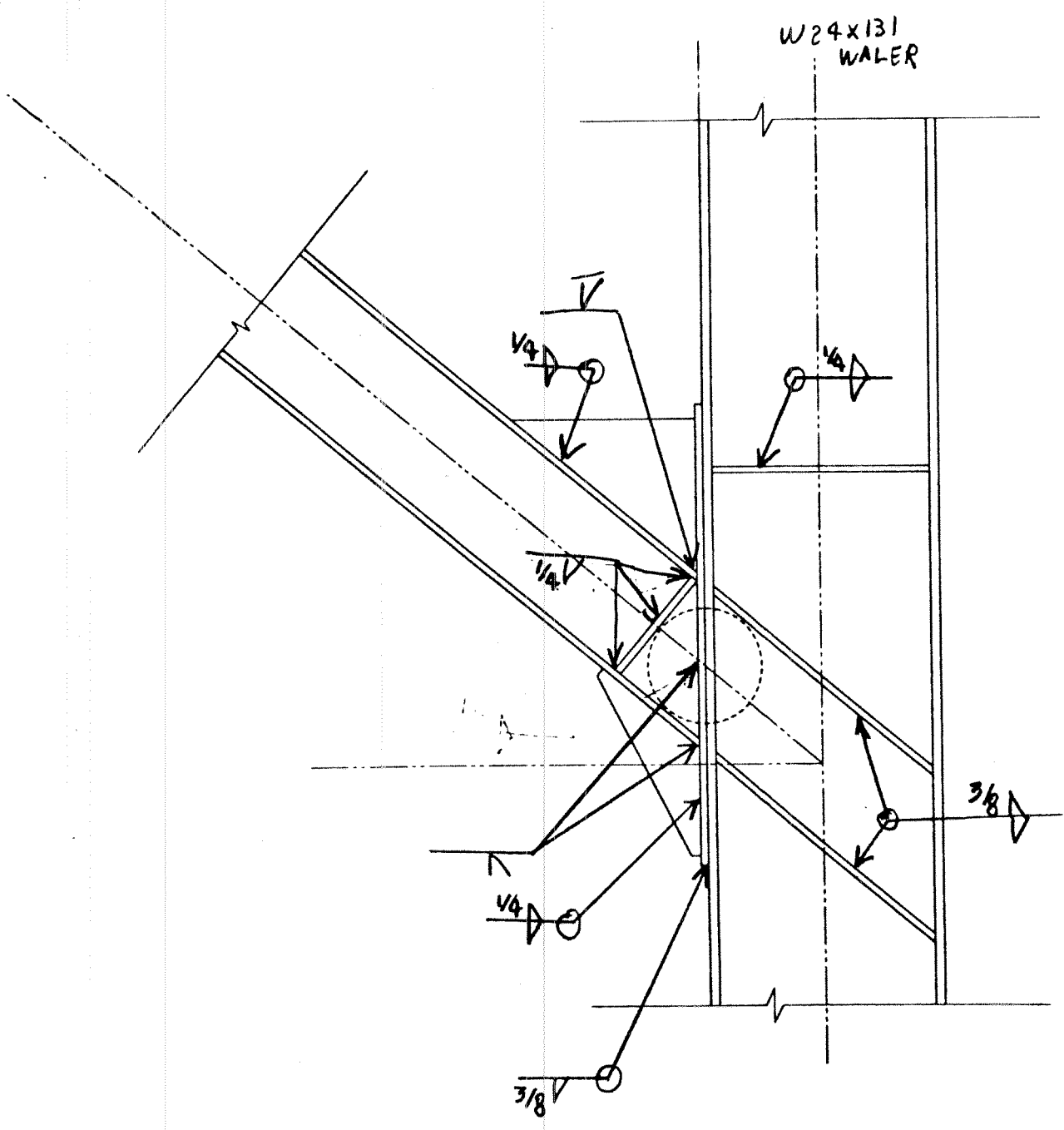
COFFERDAM BRACING

P00006



DETAIL (1)
NTS
(SIZES)

SKETCH 1

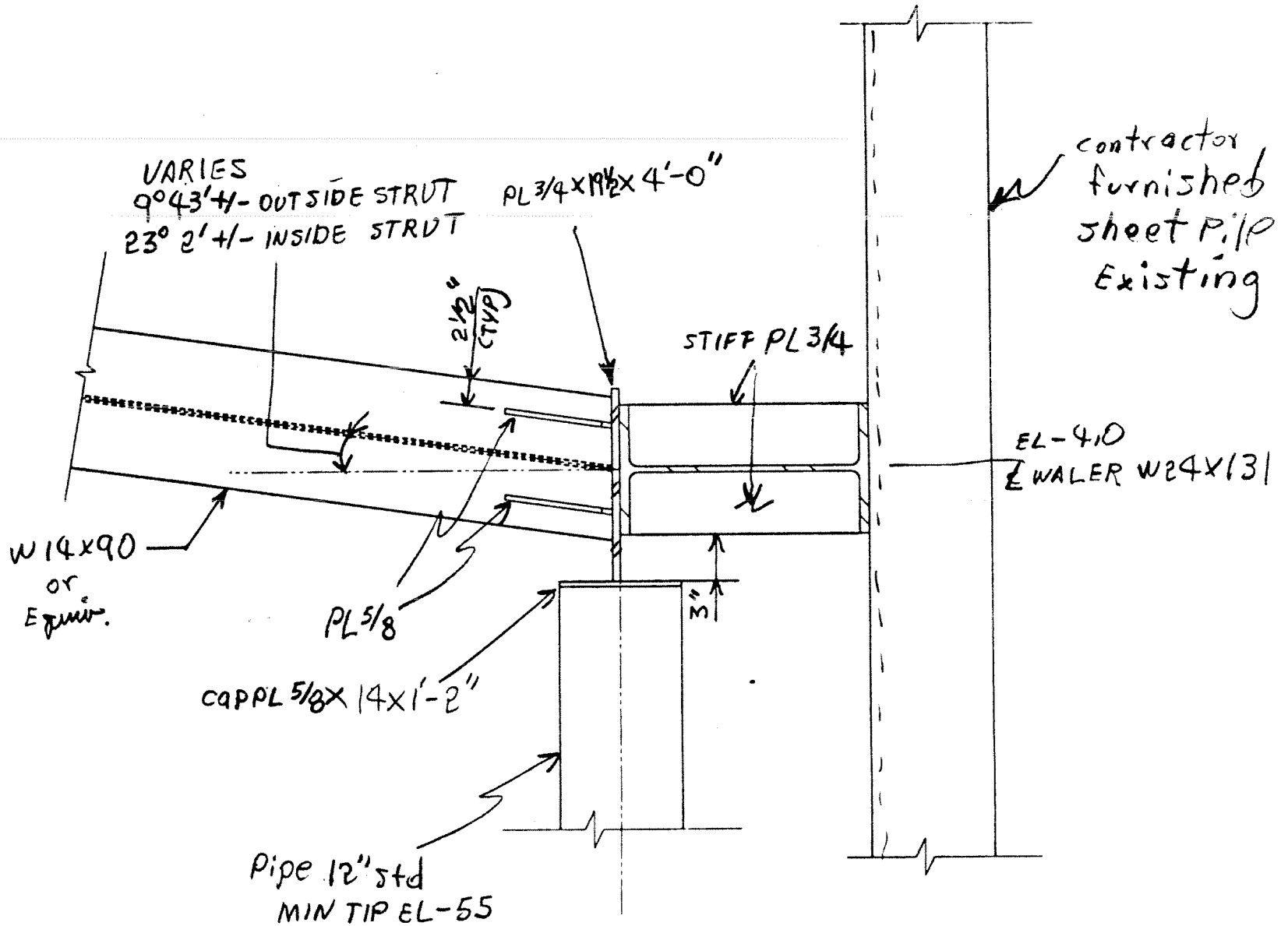


DETAIL ①

NTS
(WELDS)

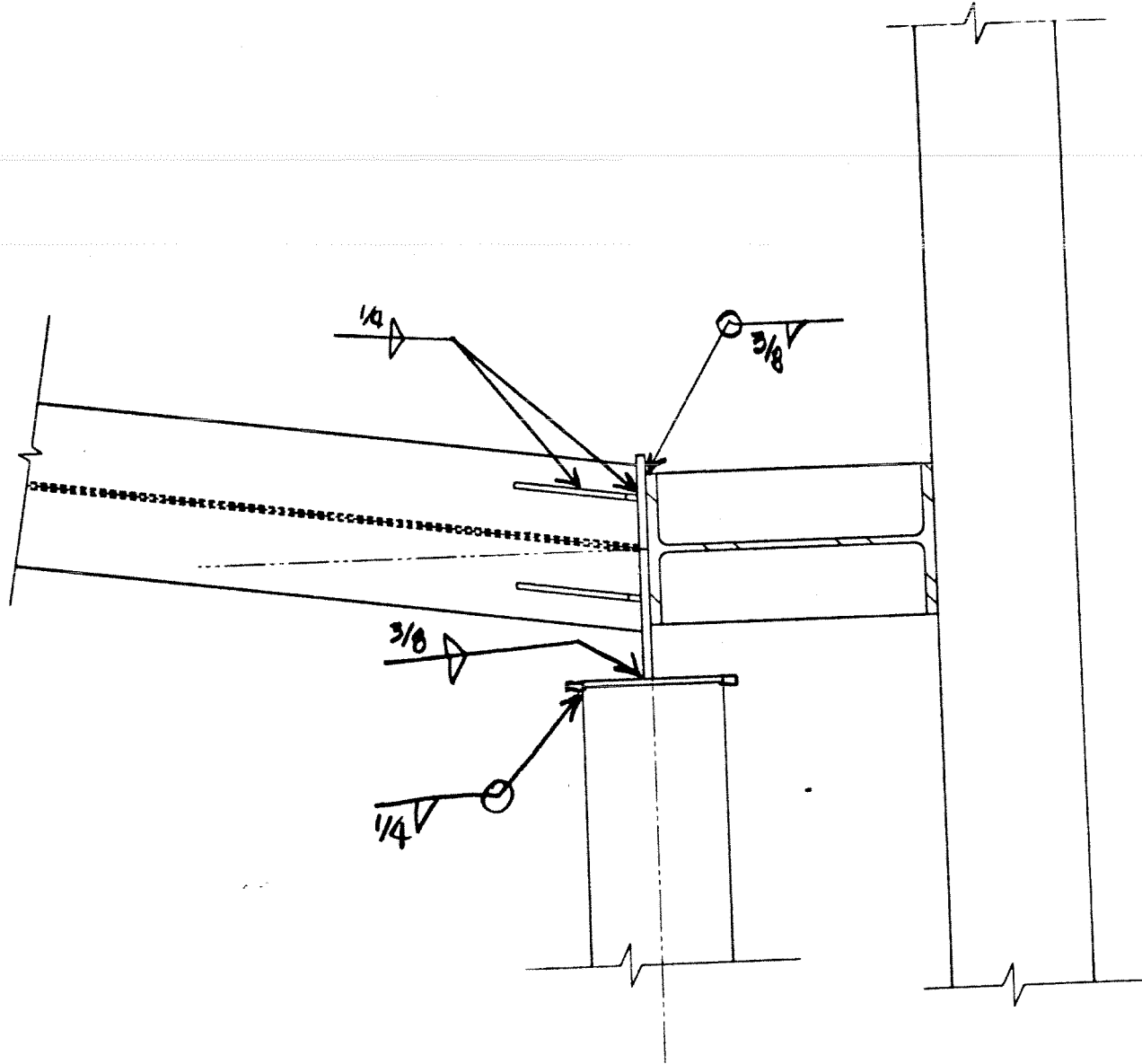
SKETCH 2

SECTION 3



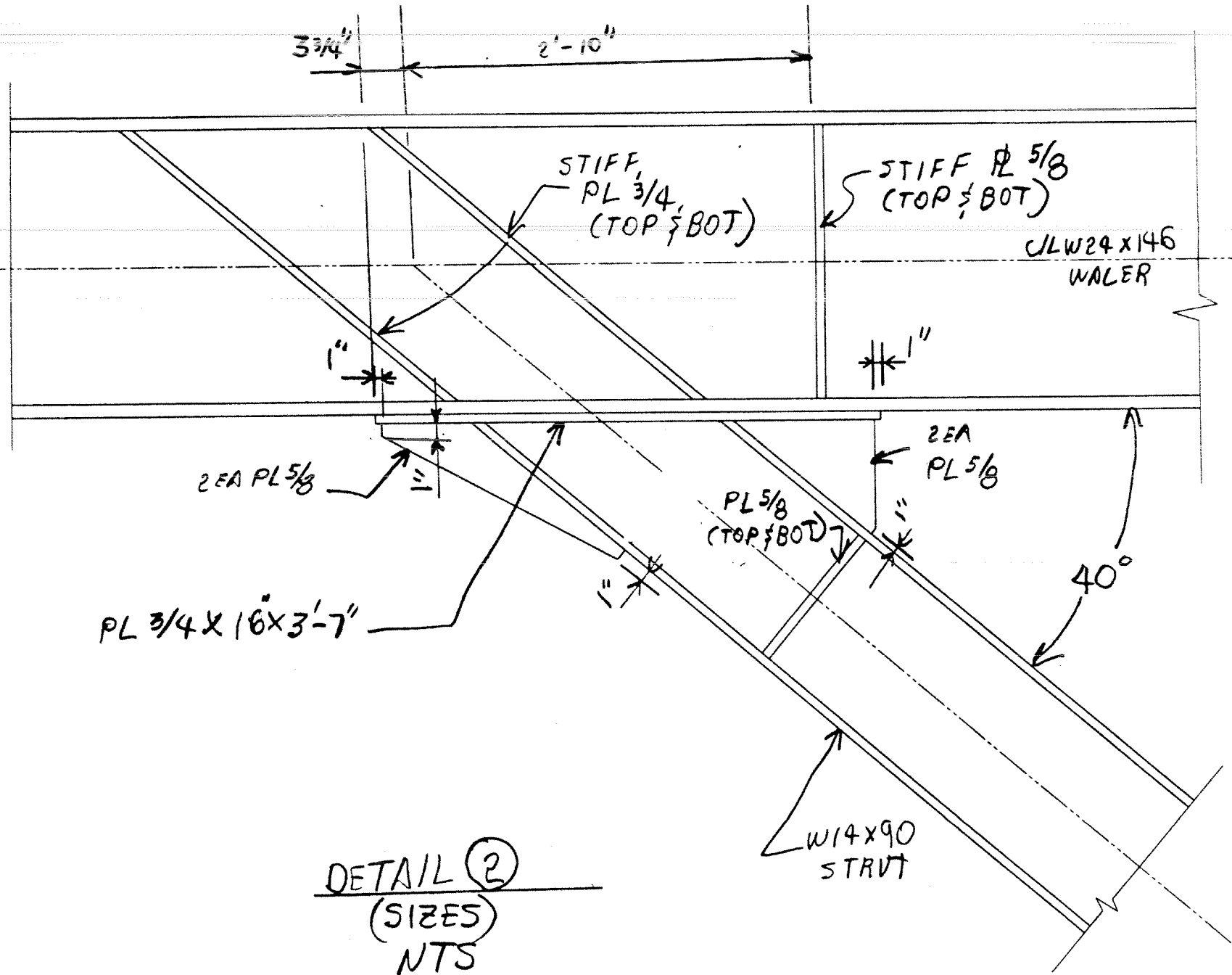
DETAIL (1)
NTS
(ELEVATION SIZES)

Sketch 4



DETAIL ①
NTS
(ELEVATION WELDS)

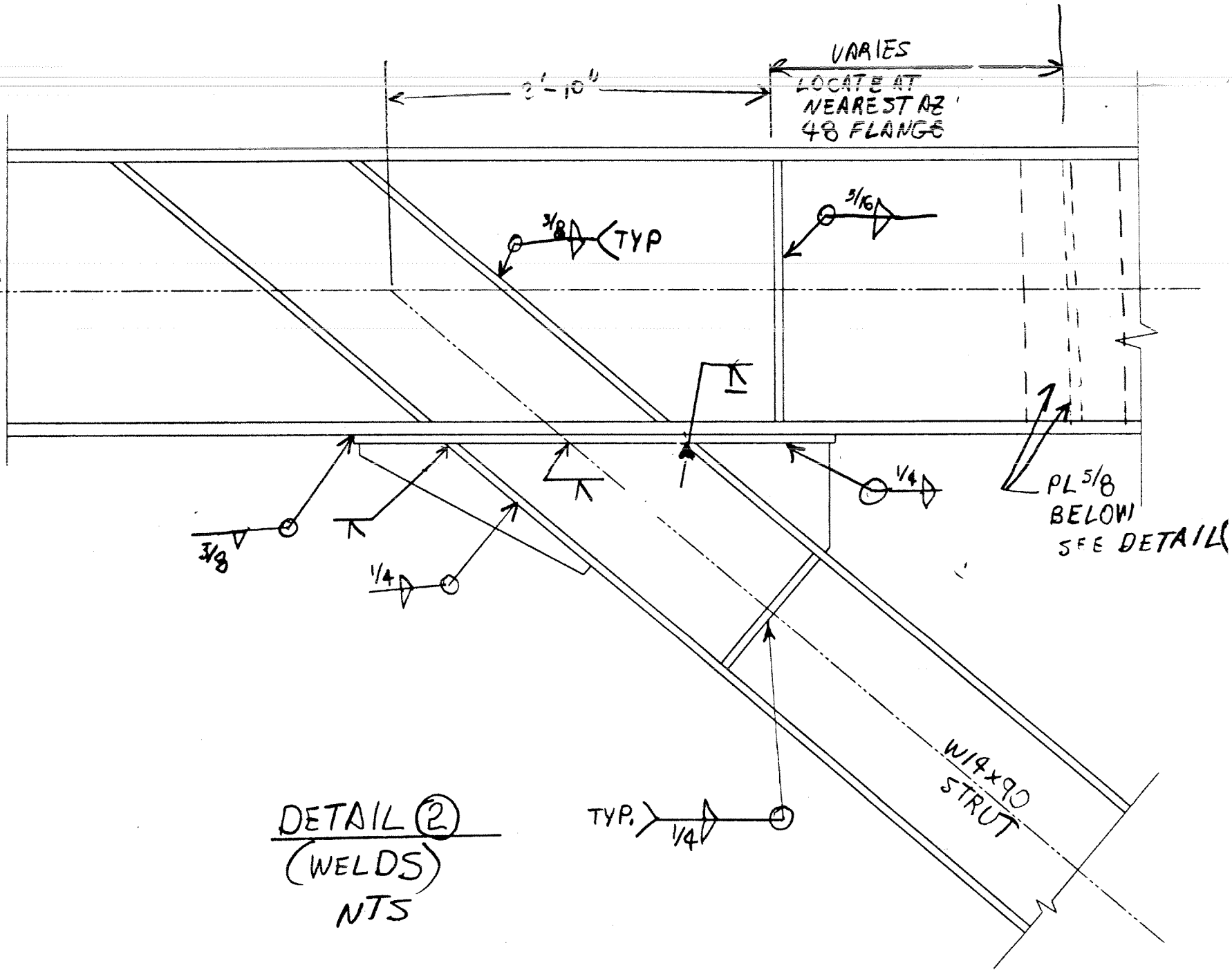
SKETCH 5



DETAIL (2)
(SIZES)
NTS

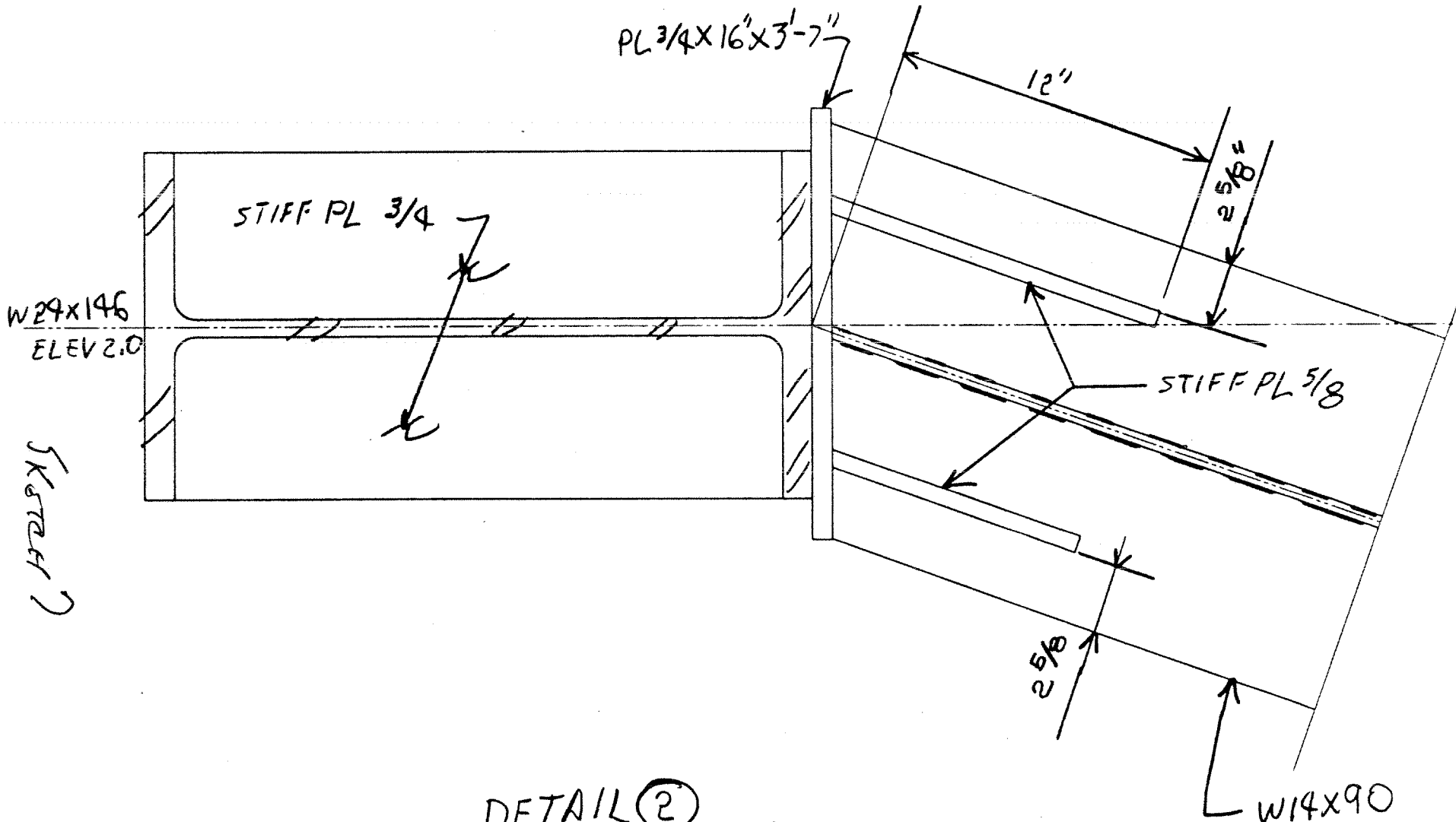
W 24x145

SKETCH 6



DETAIL (2)
(WELDS)
NTS

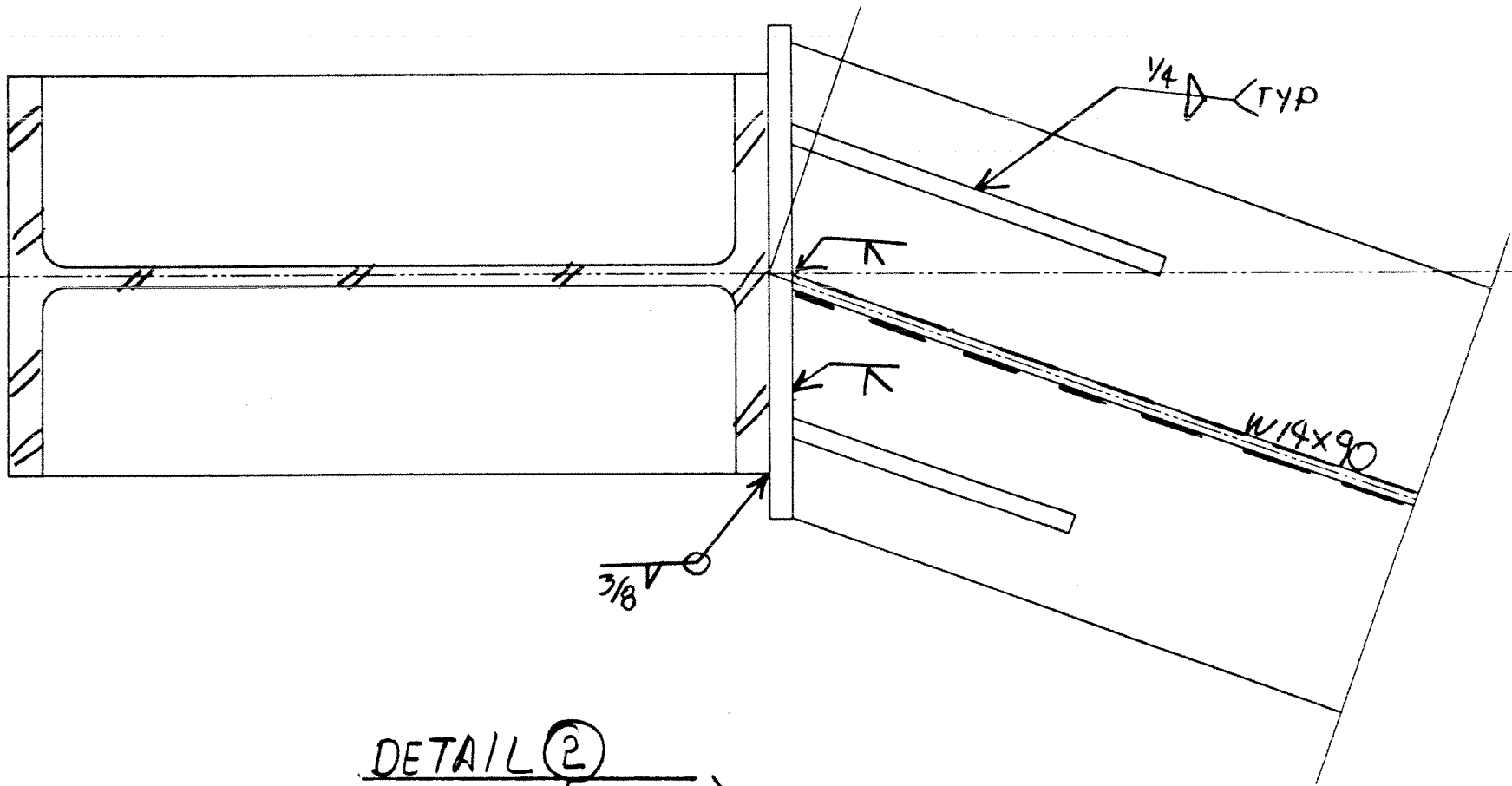
TYP. 1/4



DETAIL (2)
(ELEVATION SIZES)
NTS

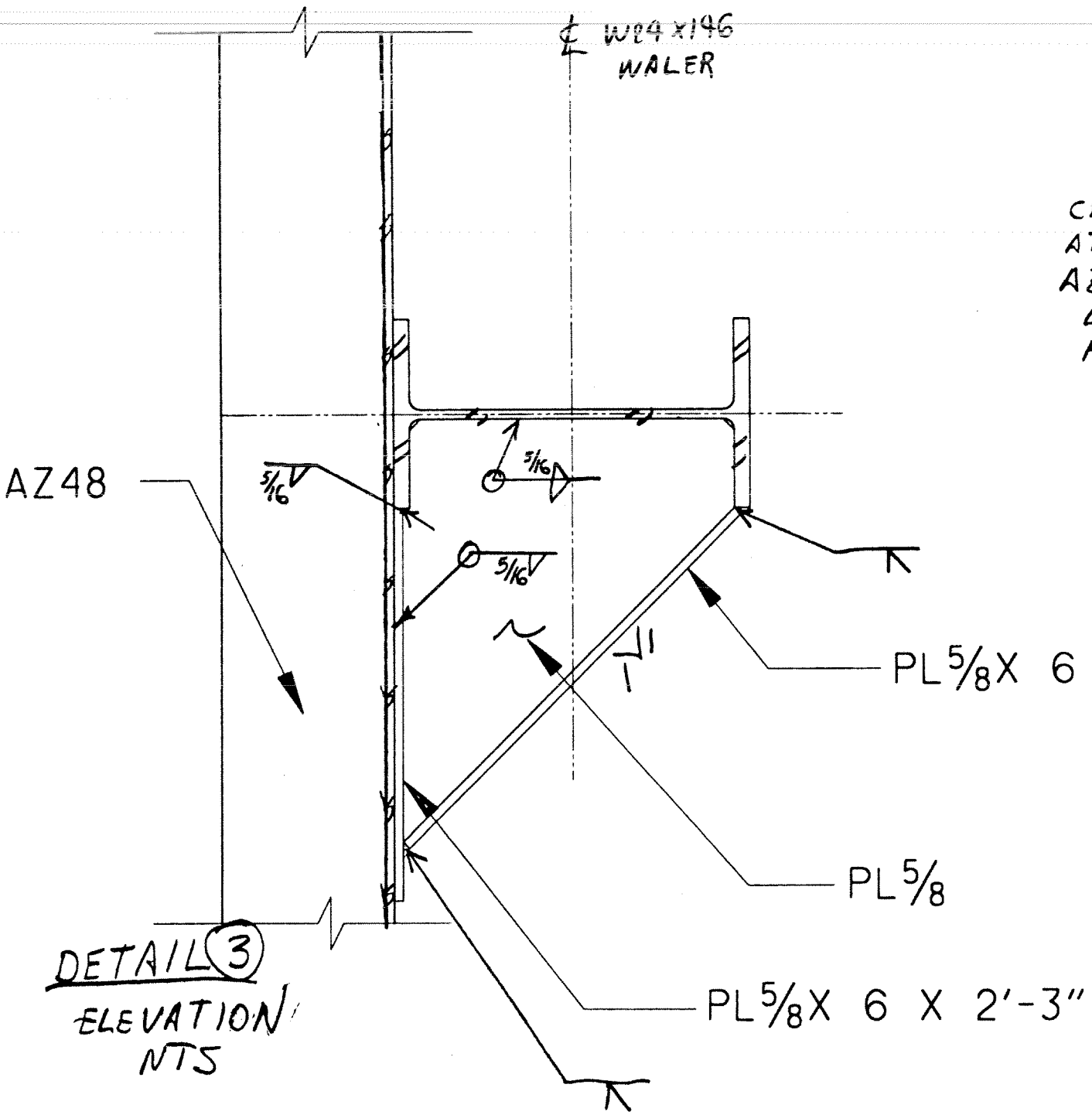
W24X146
EL 2.0

SKETCH



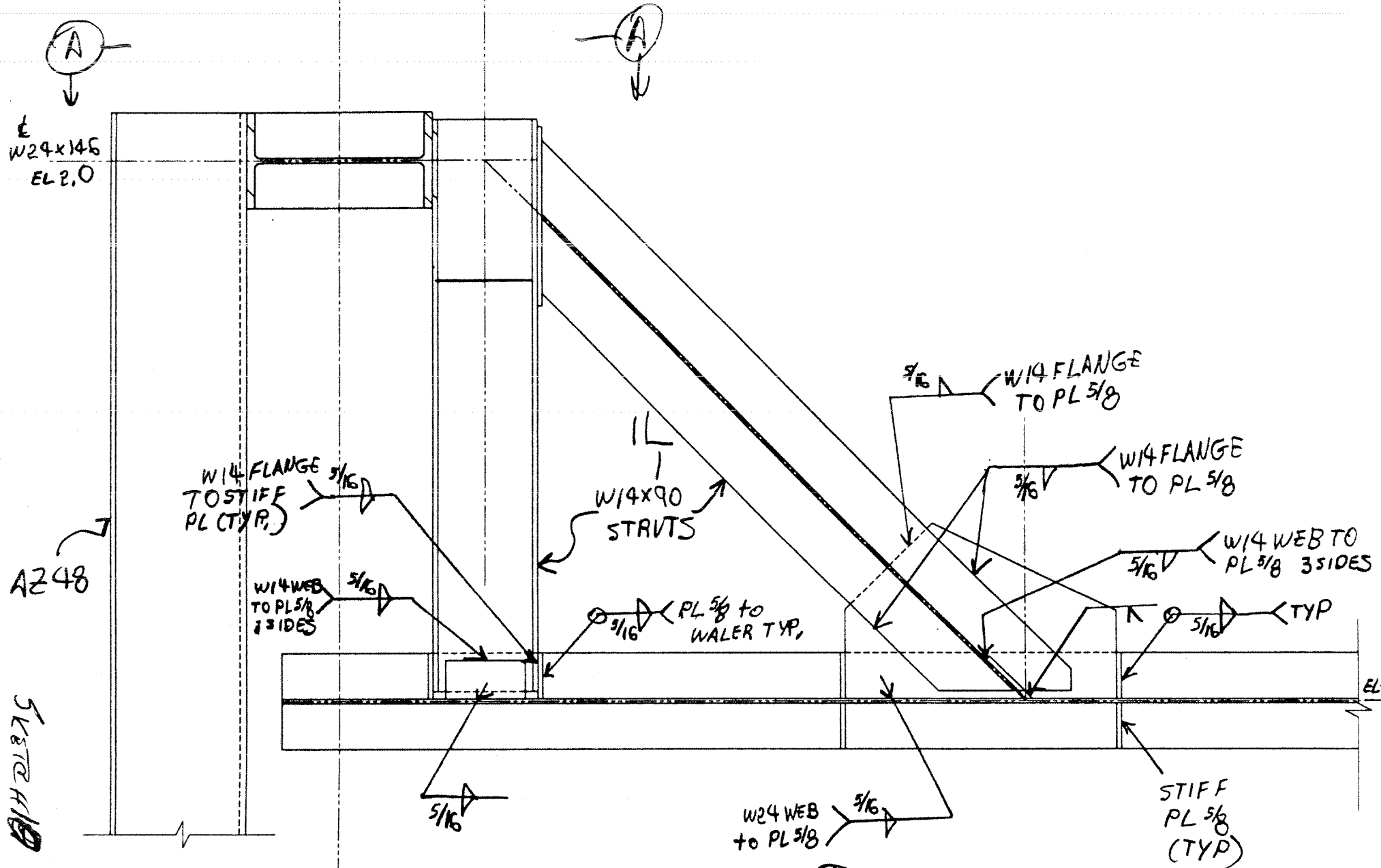
DETAIL 2
(ELEVATION SIZES)
- NTS

6 HOLES



CENTER PL'S
AT NEAREST
AZ48 FLANGE
LOCATION
FROM STRUT
CONNECTION

DETAIL (3)
ELEVATION
NTS



DETAIL (4)
 (ELEVATION WELDS)
 NTS

EL 2.0
CIL EXIST,
W 24 x 146
WALER

EXIST
A 248

SECTION

STIFF PL'S 5/8
2 STIFF PLS 5/8 x 18"
PL 5/8 x 16" x 2'-0"

W 14 x 90
STRUTS

STIFF
PL 5/8

STIFF
PL 5/8

PL 5/8 x 36 (1 AT EACH
W 14 FLANG)

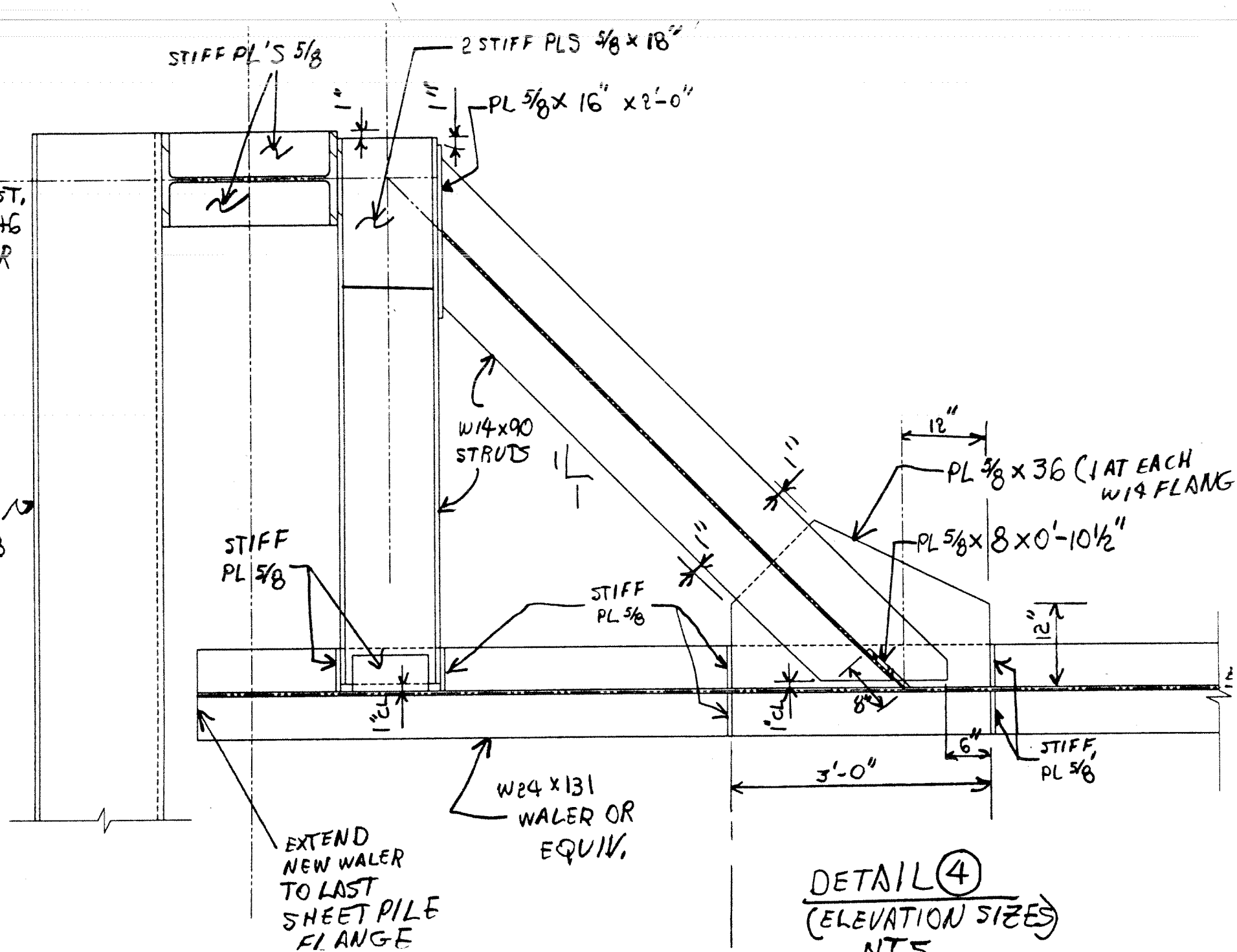
PL 5/8 x 8 x 0'-10 1/2"

STIFF,
PL 5/8

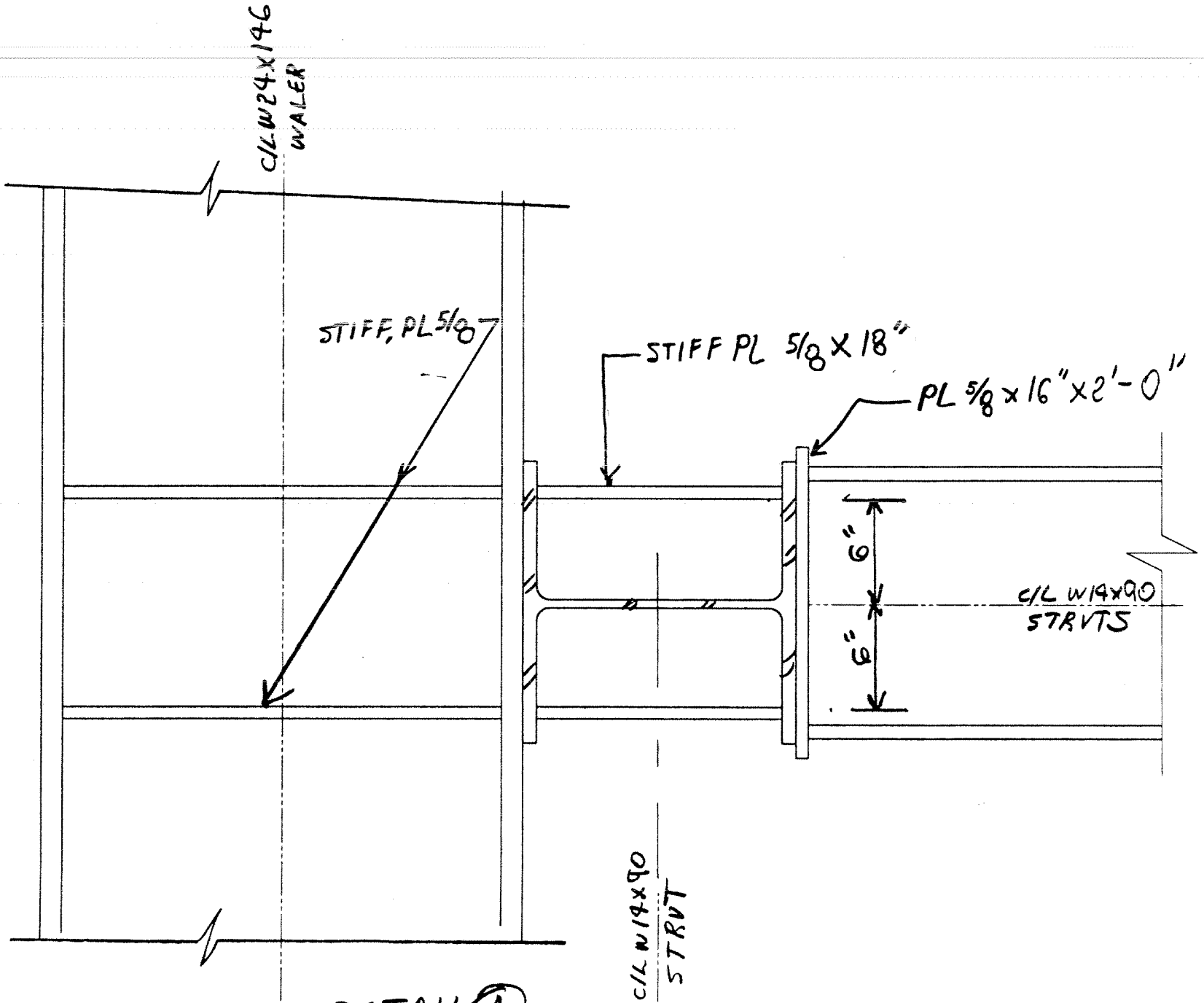
W 24 x 131
WALER OR
EQUIV.

EXTEND
NEW WALER
TO LAST
SHEET PILE
FLANGE

DETAIL (4)
(ELEVATION SIZES)
NTS

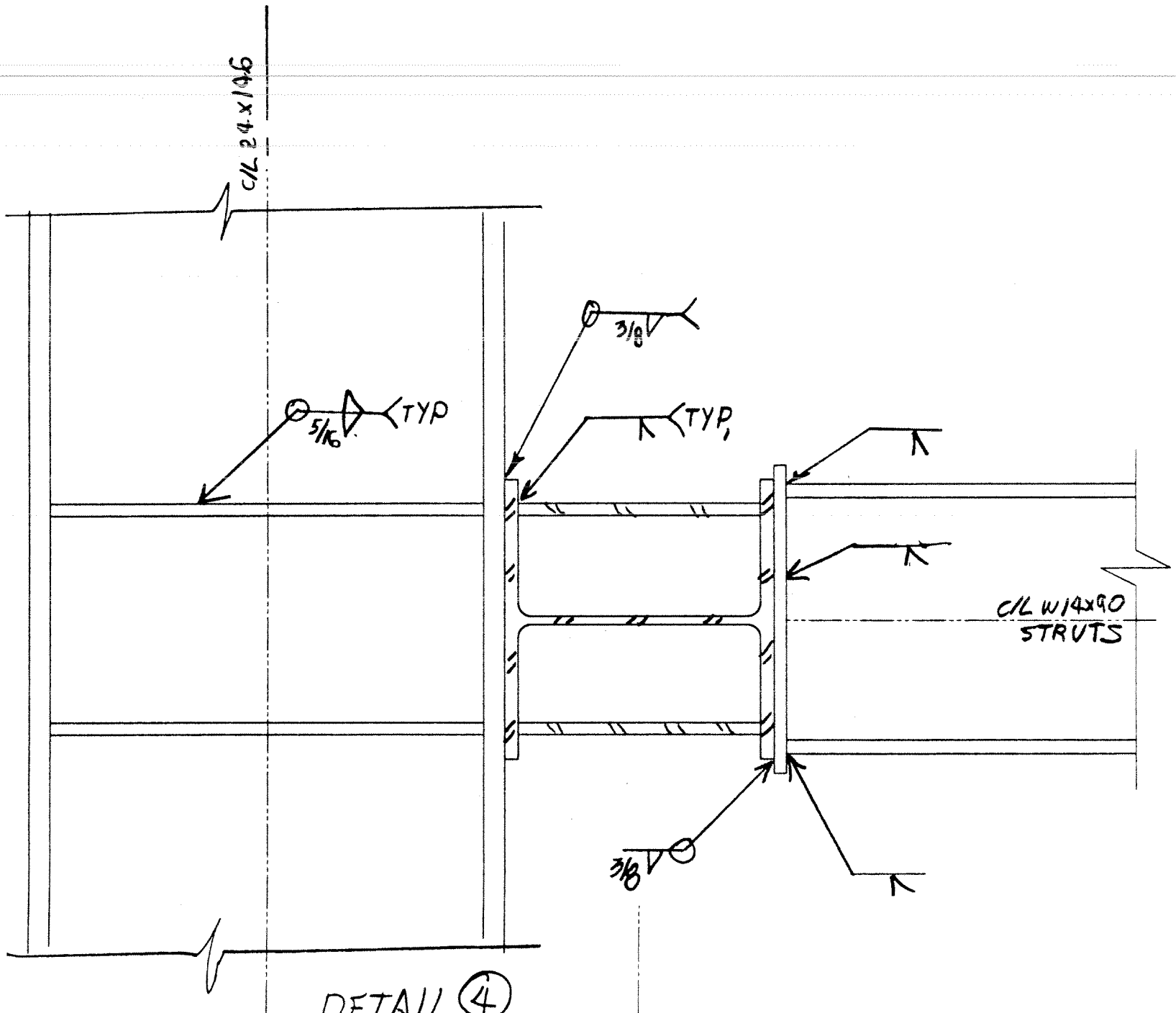


SKETCH 12



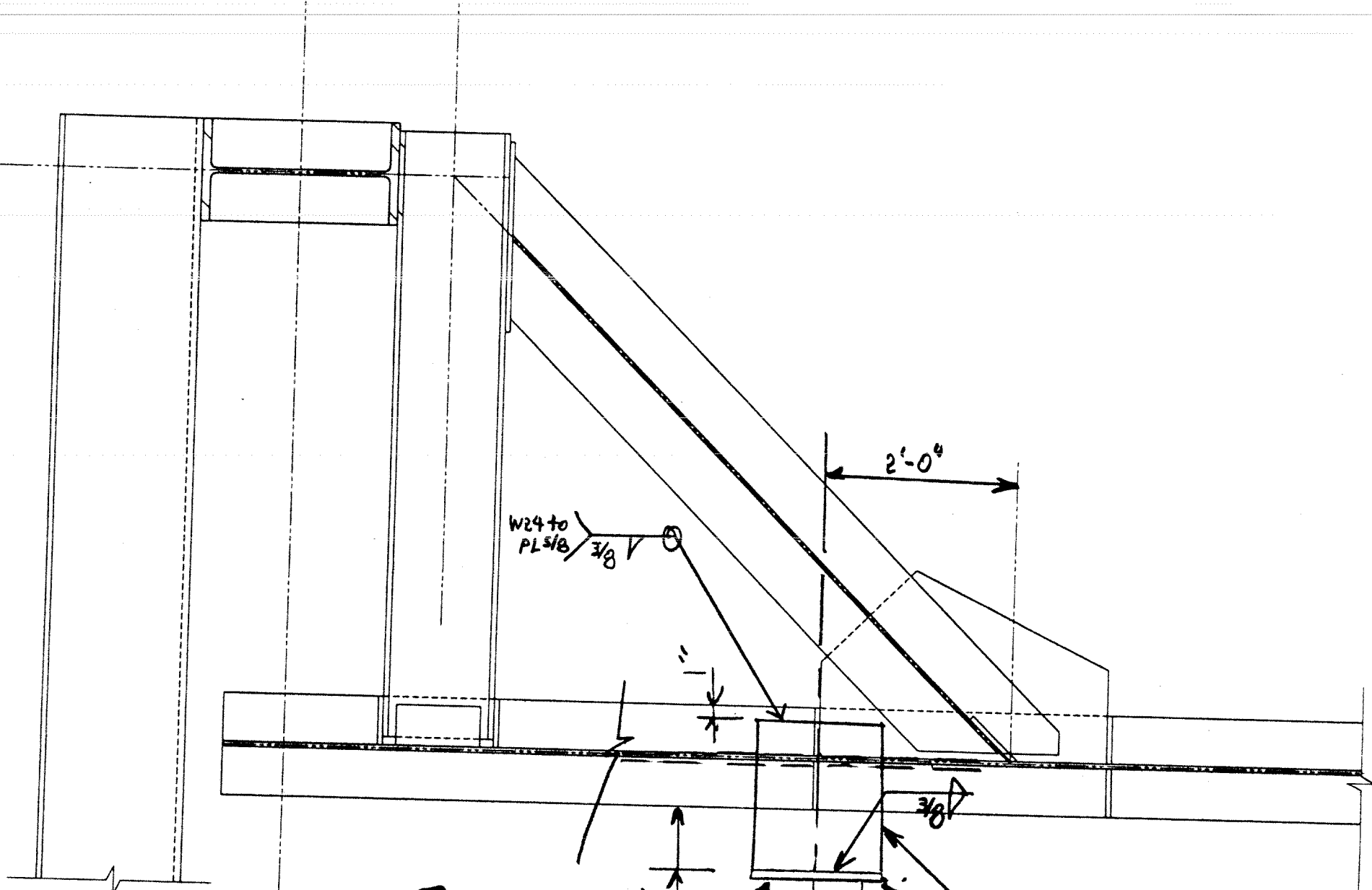
DETAIL (4)
SECTION (A)
(SIZES) NTS

Sketch # 13



DETAIL ④
SECTION (A)
(SIZES) NTS

Sketch 131



W24 to
PL 5/8
3/8

2'-0"

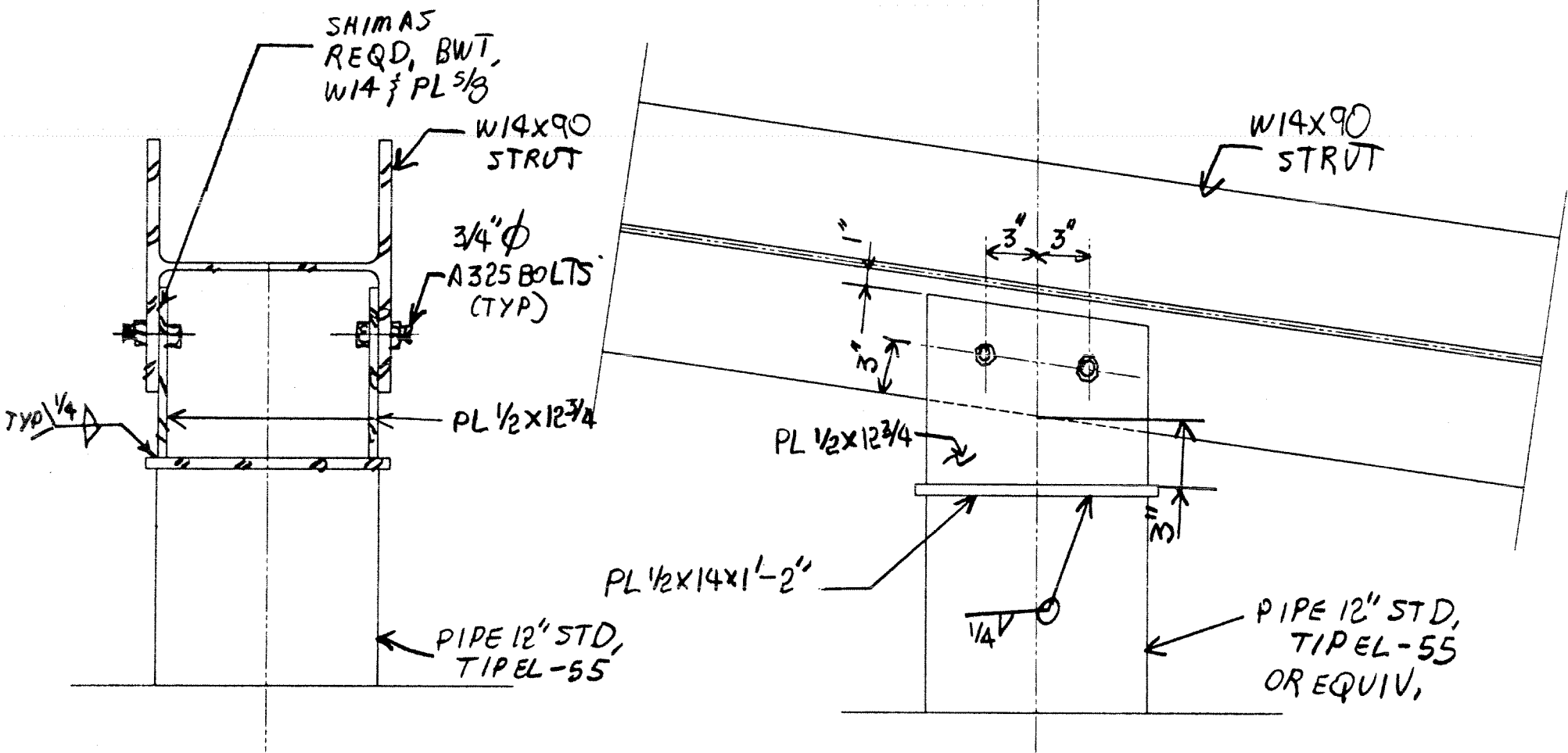
DETAIL ④
ELEVATION
(REQUIRED PIPE
SUPPORT) NTE

PIPE 12" STD,
TIP EL-55

PL 5/8 X
14 X 1'-2"

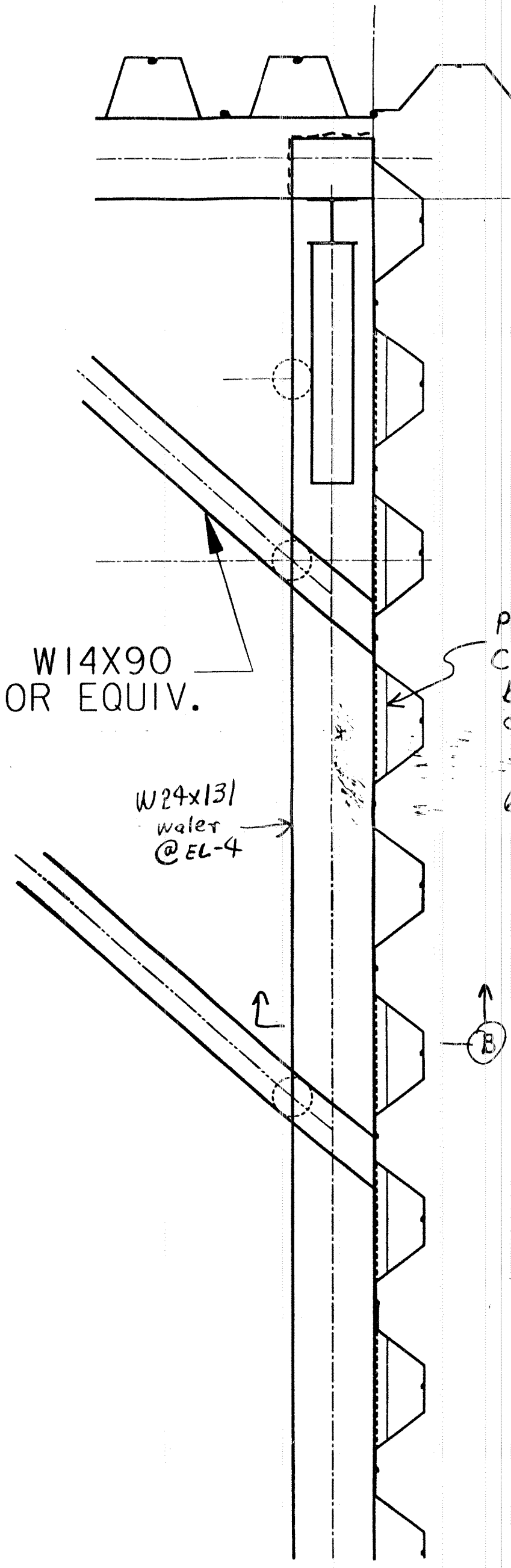
PL 5/8 X 14 X 1'-3"
(WELD TO OUTBOARD
FLANGE TO W24 WALL)

3/8
1/4
3/8



SKETCH
 15

DETAIL (5)
 (SIZES & WELDS
 NTS)



W14X90
OR EQUIV.

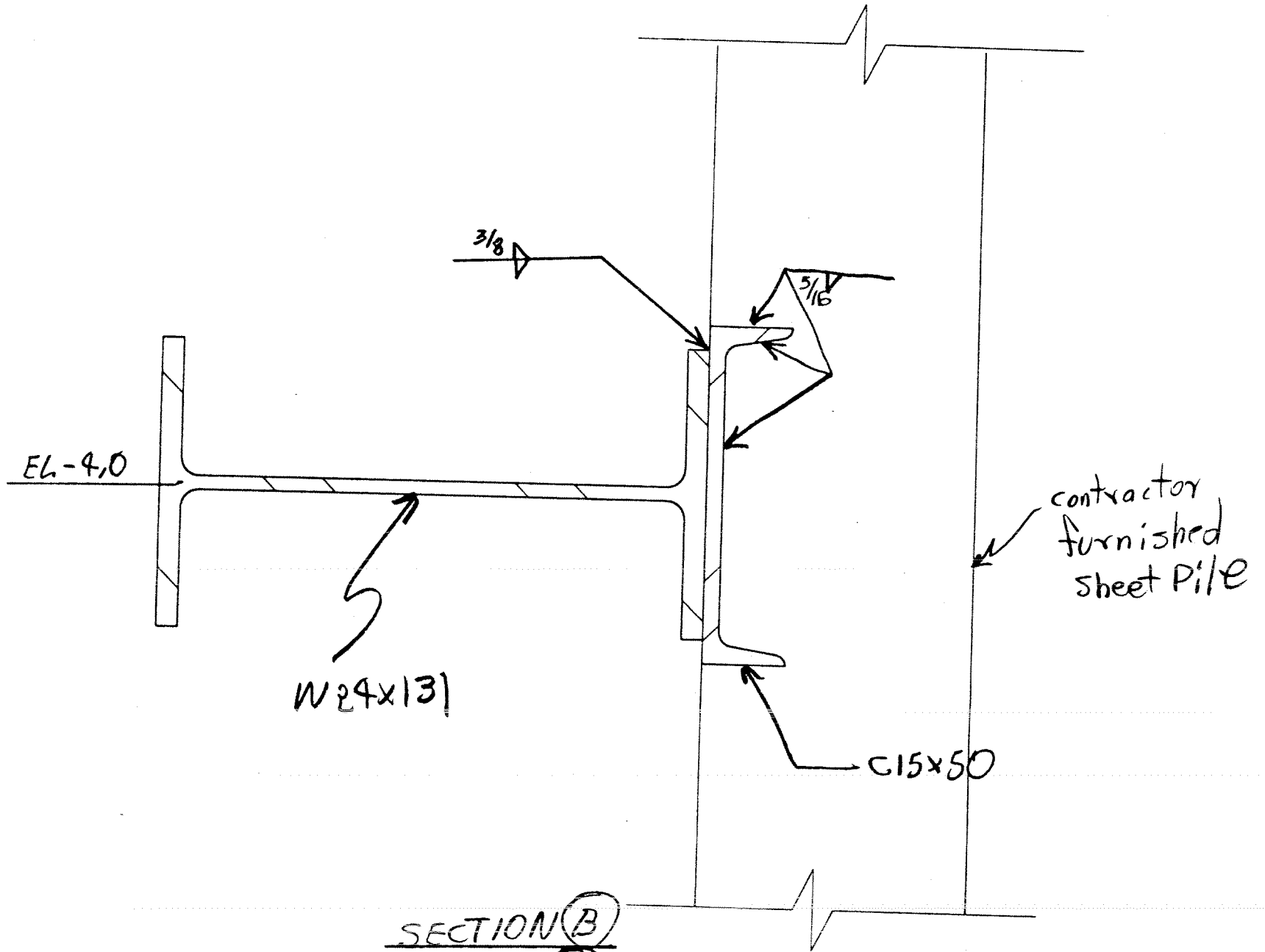
W24x131
waler
@ EL-4

Provide
C15x50 connection
bwt. W24x131 Waler
and Contractor
furnished sheet pile,
6 Locations as shown

DETAIL (6)
NTS

6-11-11

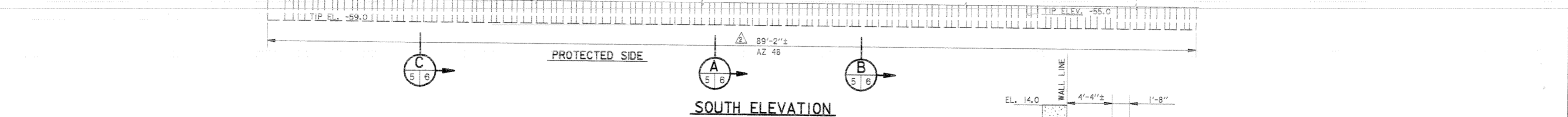
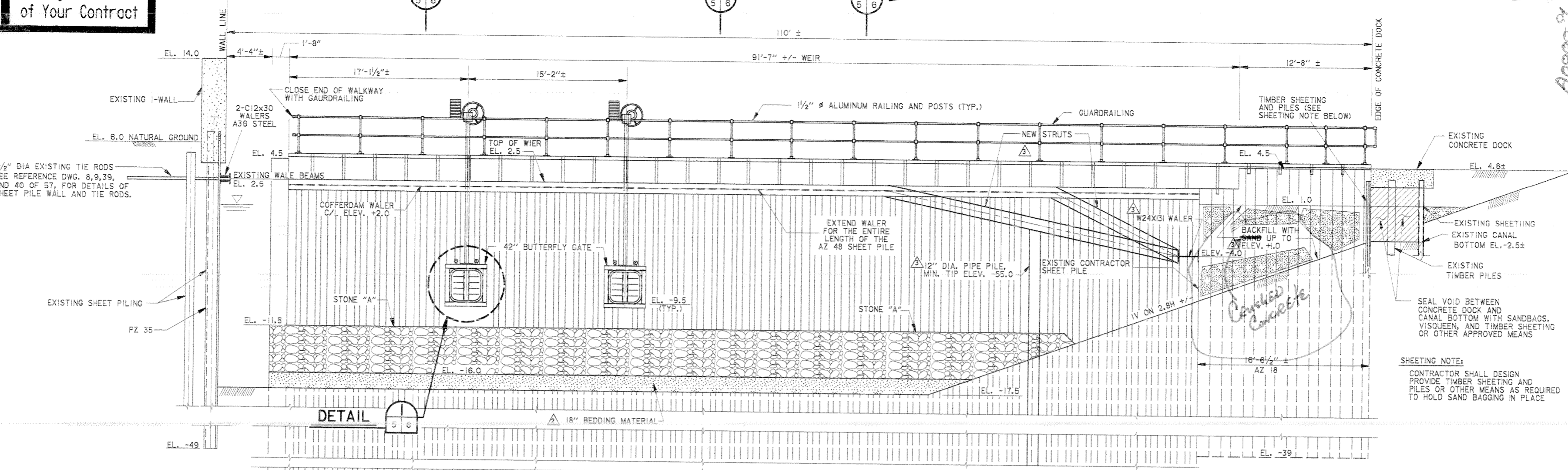
Sheet 17



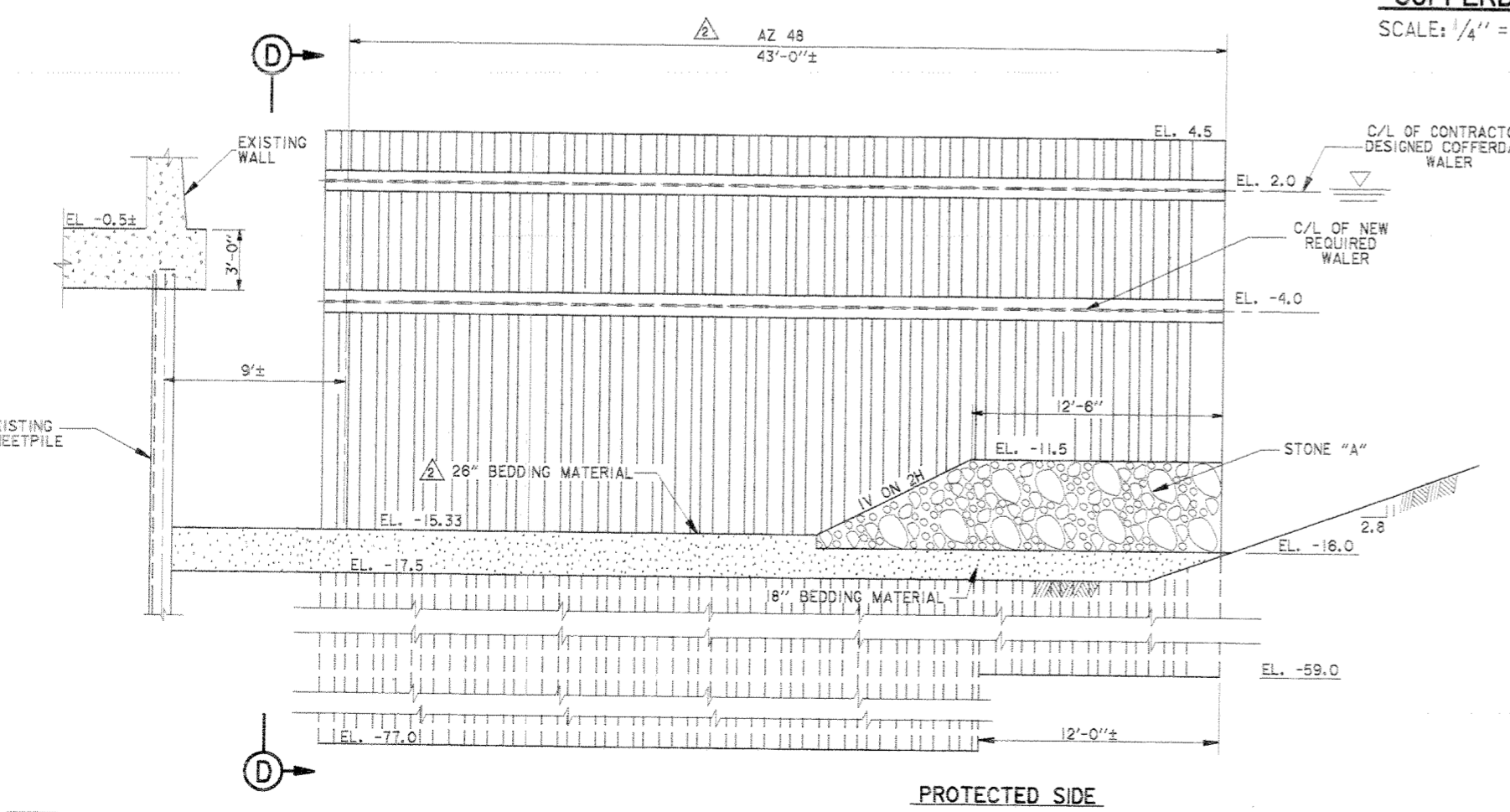
SECTION (B)
DETAIL (6)
NTS

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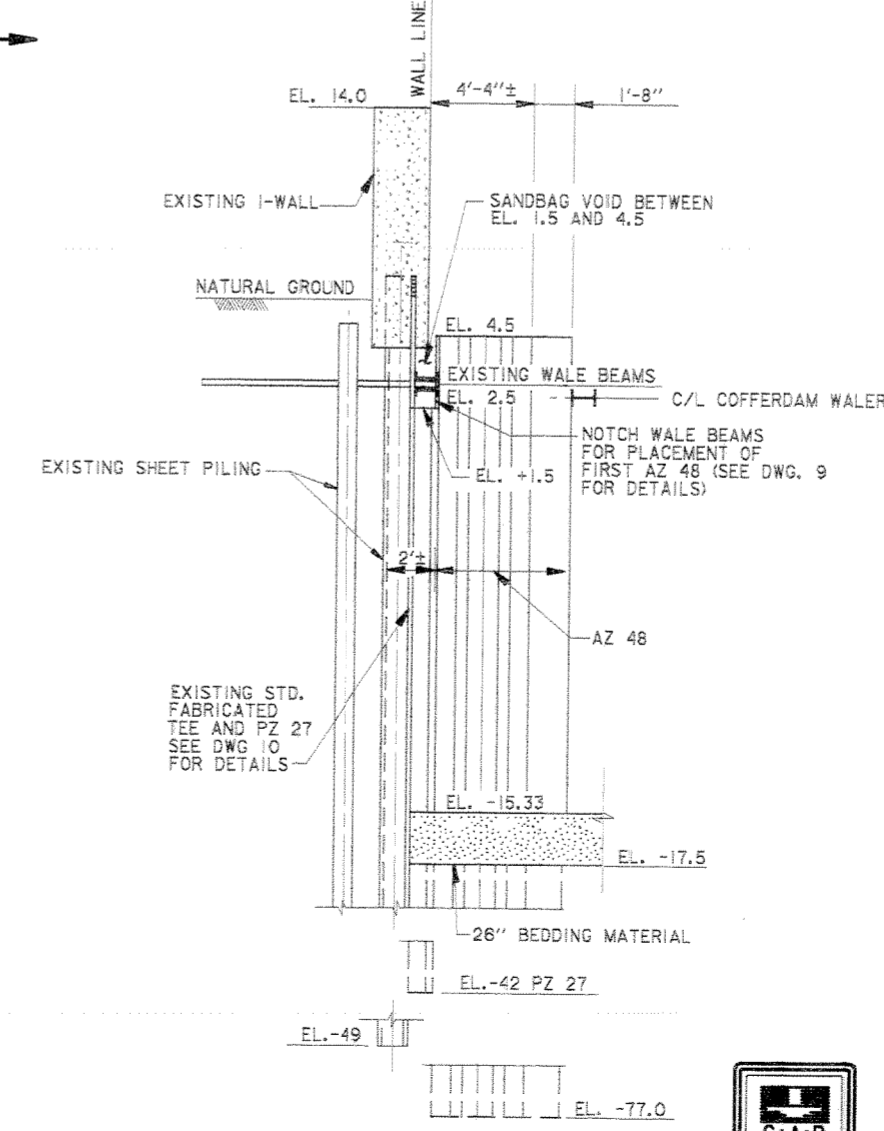
3/2" DIA EXISTING TIE RODS
SEE REFERENCE DWG. 8, 9, 39,
AND 40 OF 57, FOR DETAILS OF
SHEET PILE WALL AND TIE RODS.



SOUTH ELEVATION COFFERDAM
SCALE: 1/4" = 1'-0"

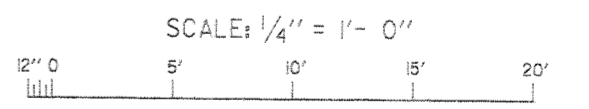


EAST ELEVATION COFFERDAM
SCALE: 1/4" = 1'-0"



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

- COFFERDAM STRUT AND BACKFILL NOTES:**
1. PROVIDE STRUTS AND WALERS AS SHOWN.
 2. BACKFILL WITH SAND TO THE LIMITS SHOWN. REMOVE WHEN COFFERDAM IS REMOVED.



SYMBOL	DESCRIPTION	DATE	APPROVED
△	ADDED WALER, STRUTS, SAND BACKFILL TO RIGHT SIDE OF COFFERDAM TO STABILIZE.	JULY 99	CAL
△	REVISED COFFERDAM, DELETED TREMIE SLAB, DELETED DRAINAGE MATERIAL, REVISED BEDDING MATERIAL	DEC 98	CAL
△	REVISED COFFERDAM NOTE, PVC PIPE, AMEND #1	1/23/98	CAL

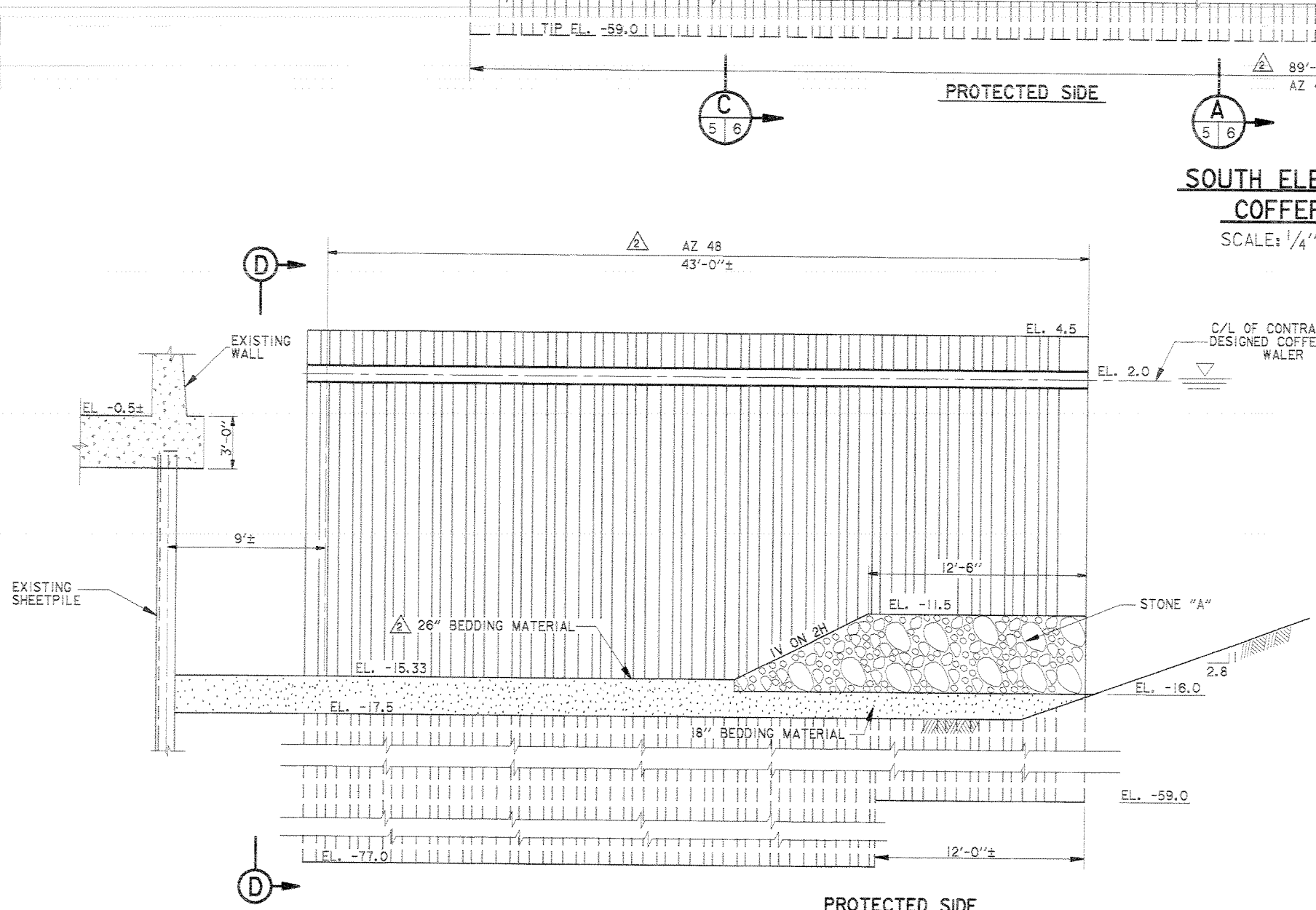
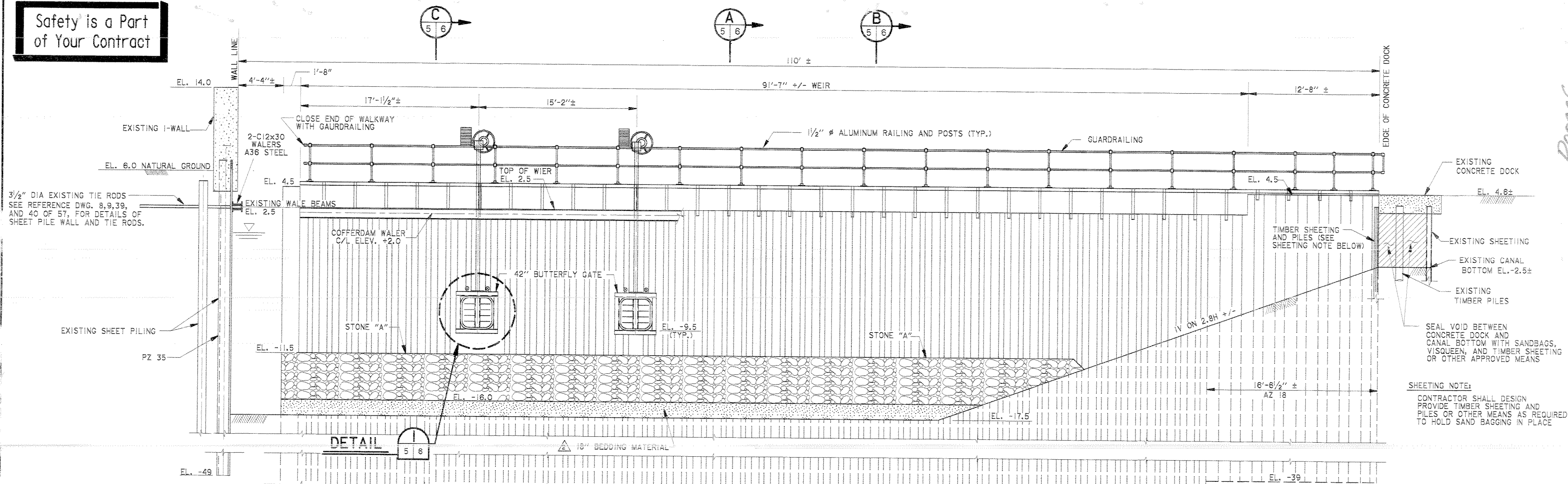
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA
COFFERDAM SECTIONS & BUTTERFLY GATES

DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 48	PLOT DATE: DEC. 15, 1998
DRAWN BY: C. BRANDSTETTER	CADD FILE: 44778c03.dgn	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 5 OF 46	

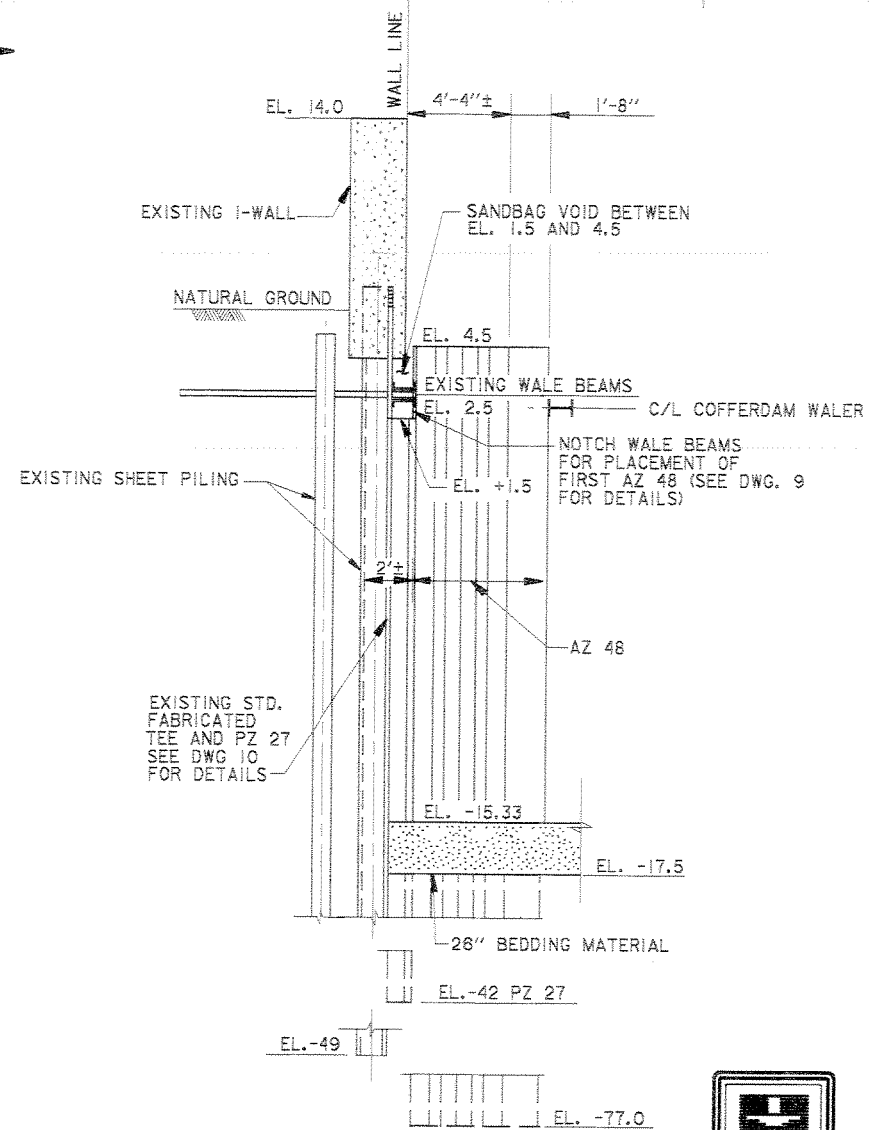


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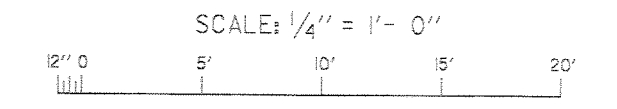


EAST ELEVATION COFFERDAM
SCALE: 1/4" = 1'-0"

SOUTH ELEVATION COFFERDAM
SCALE: 1/4" = 1'-0"



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



SYMBOL	DESCRIPTION	DATE	APPROVED
▲	REVISED COFFERDAM, DELETED TREMIE SLAB, DELETED DRAINAGE MATERIAL, REVISED BEDDING MATERIAL	DEC 98	CAL
▲	REVISED COFFERDAM NOTE, PVC PIPE, AMEND #1	1/23/98	CAL

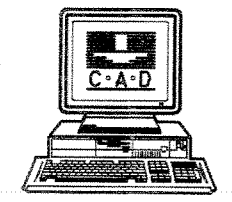
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.

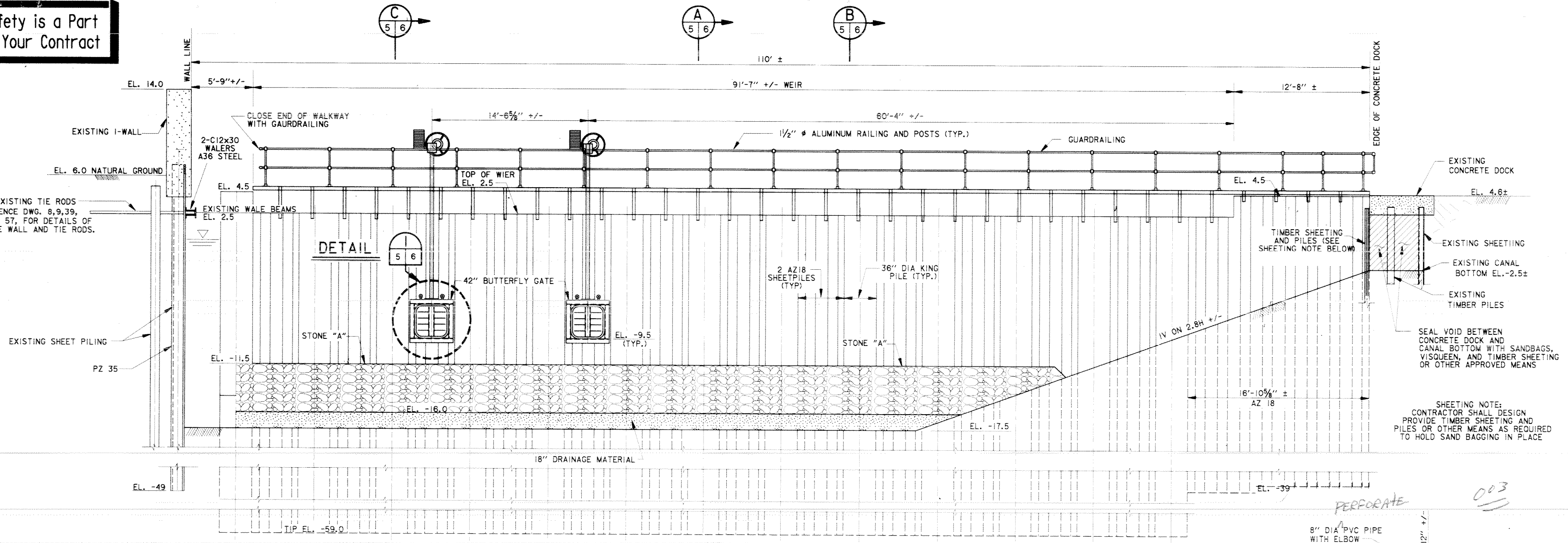
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

COFFERDAM SECTIONS & BUTTERFLY GATES

DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 48	PLOT DATE: DEC. 7, 1998
DRAWN BY: C. BRANDSTETTER	CADD FILE: 44778e03.dgn	FILE NO.	H-4-44778
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 5	OF 46

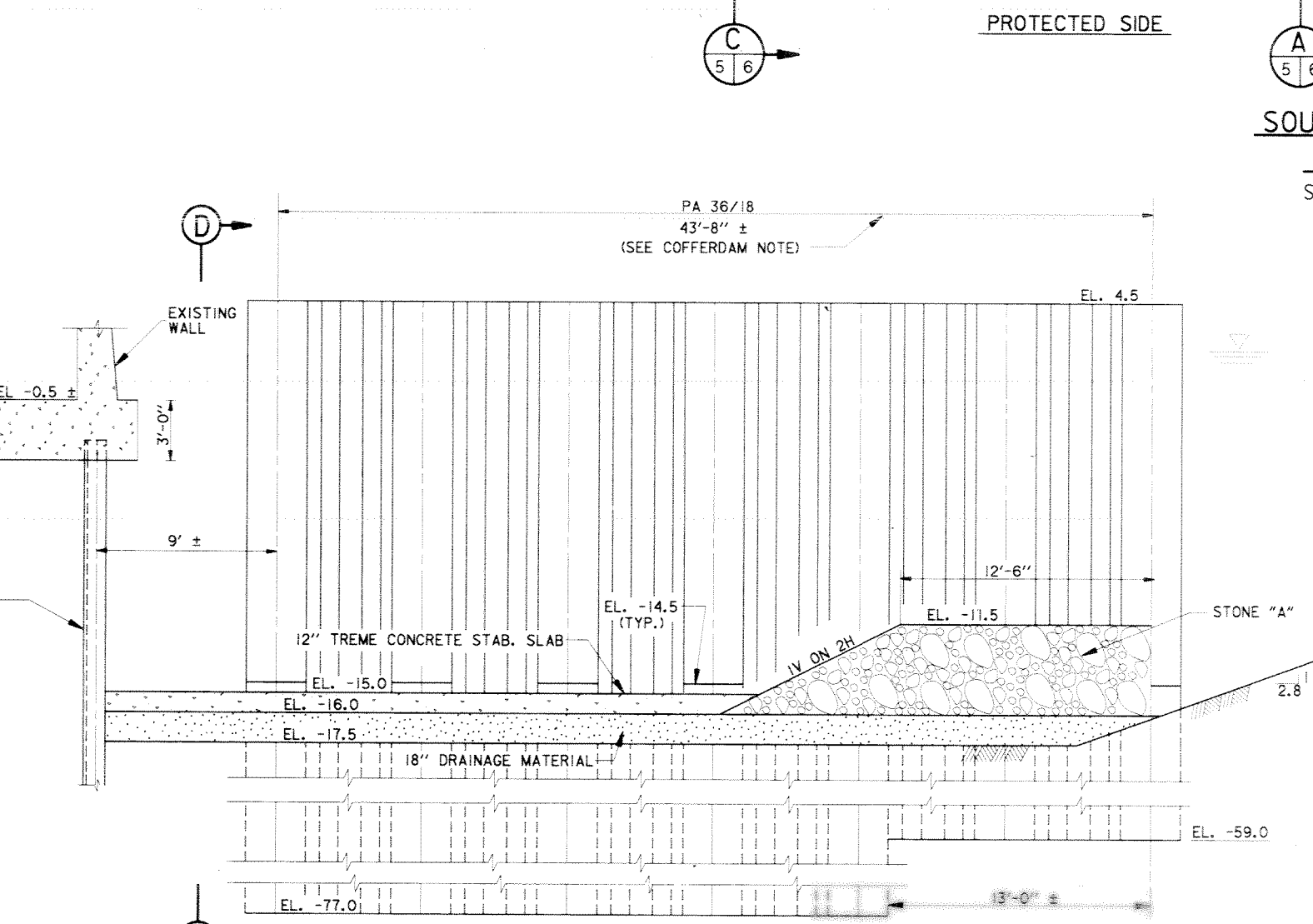


Safety is a Part of Your Contract

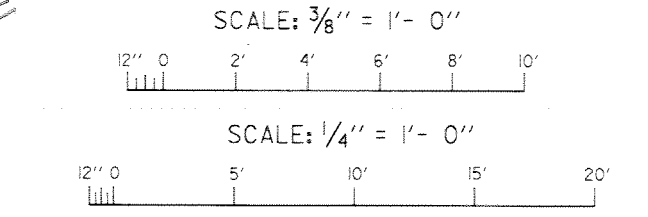


SHEETING NOTE:
CONTRACTOR SHALL DESIGN AND PROVIDE TIMBER SHEETING AND PILES OR OTHER MEANS AS REQUIRED TO HOLD SAND BAGGING IN PLACE

SOUTH ELEVATION COFFERDAM
SCALE: 1/4" = 1'-0"



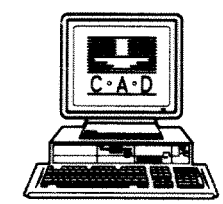
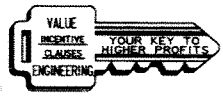
DETAIL PVC PIPE FOR PRESSURE RELIEF DURING DEWATERING
SCALE: 3/8" = 1'-0"



EAST ELEVATION COFFERDAM
SCALE: 1/4" = 1'-0"

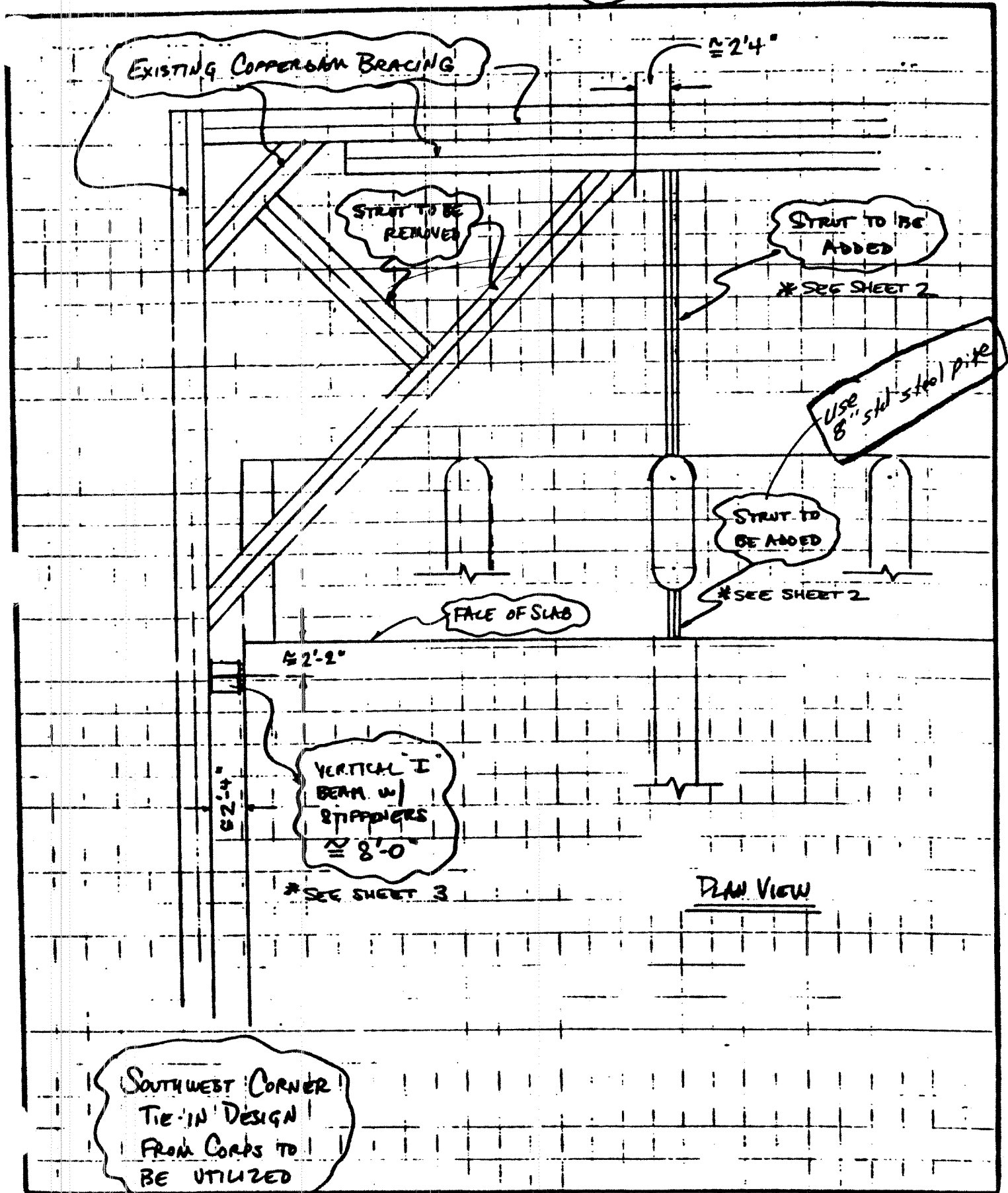
REMOVE 36" DIA. KING PILES OF EAST ELEVATION COFFERDAM ABOVE ELEV. -14.5. PORTION OF KING PILES BELOW ELEV. -14.5 SHALL REMAIN. ALL INTERMEDIATE AZ 18 SHEETING SHALL BE REMOVED. ALL 36" DIA. KING WITHIN THE 91'-7" +/- WEIR SECTION OF THE SOUTH ELEVATION COFFERDAM SHALL BE COMPLETELY REMOVED.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
COFFERDAM SECTIONS & BUTTERFLY GATES			
DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 48	PLOT DATE: DEC. 15, 1997
DRAWN BY: C. BRANDSTETTER	CADD FILE: 44778c03.dgn	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 5 OF 46	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			





(P2)



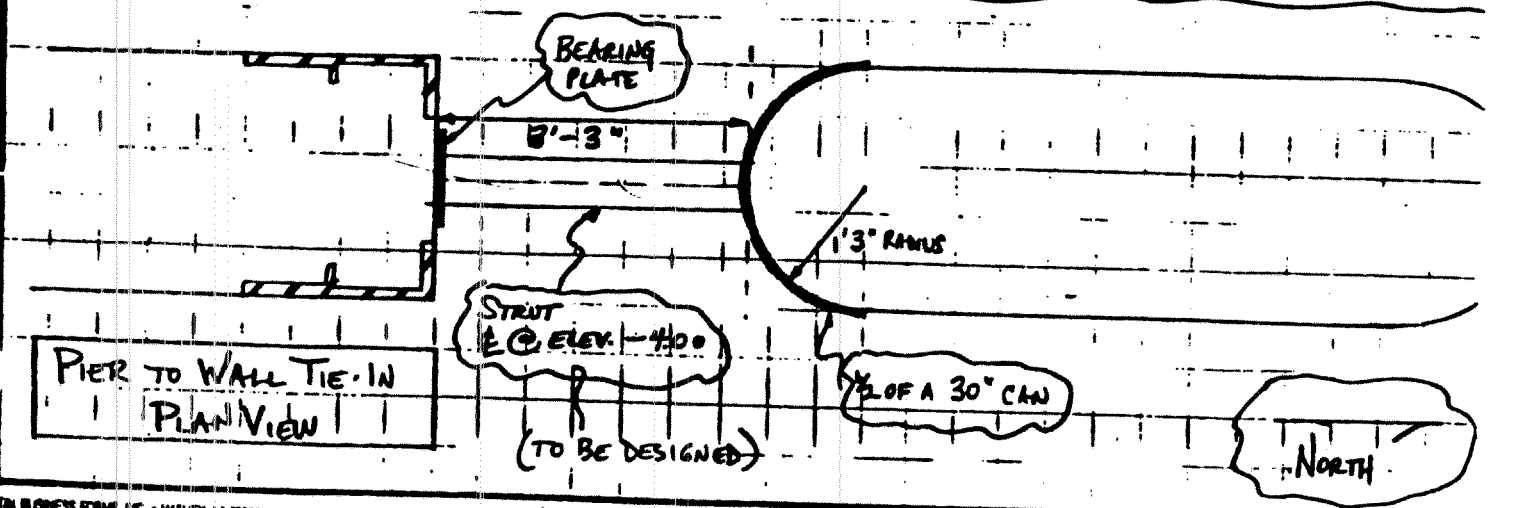
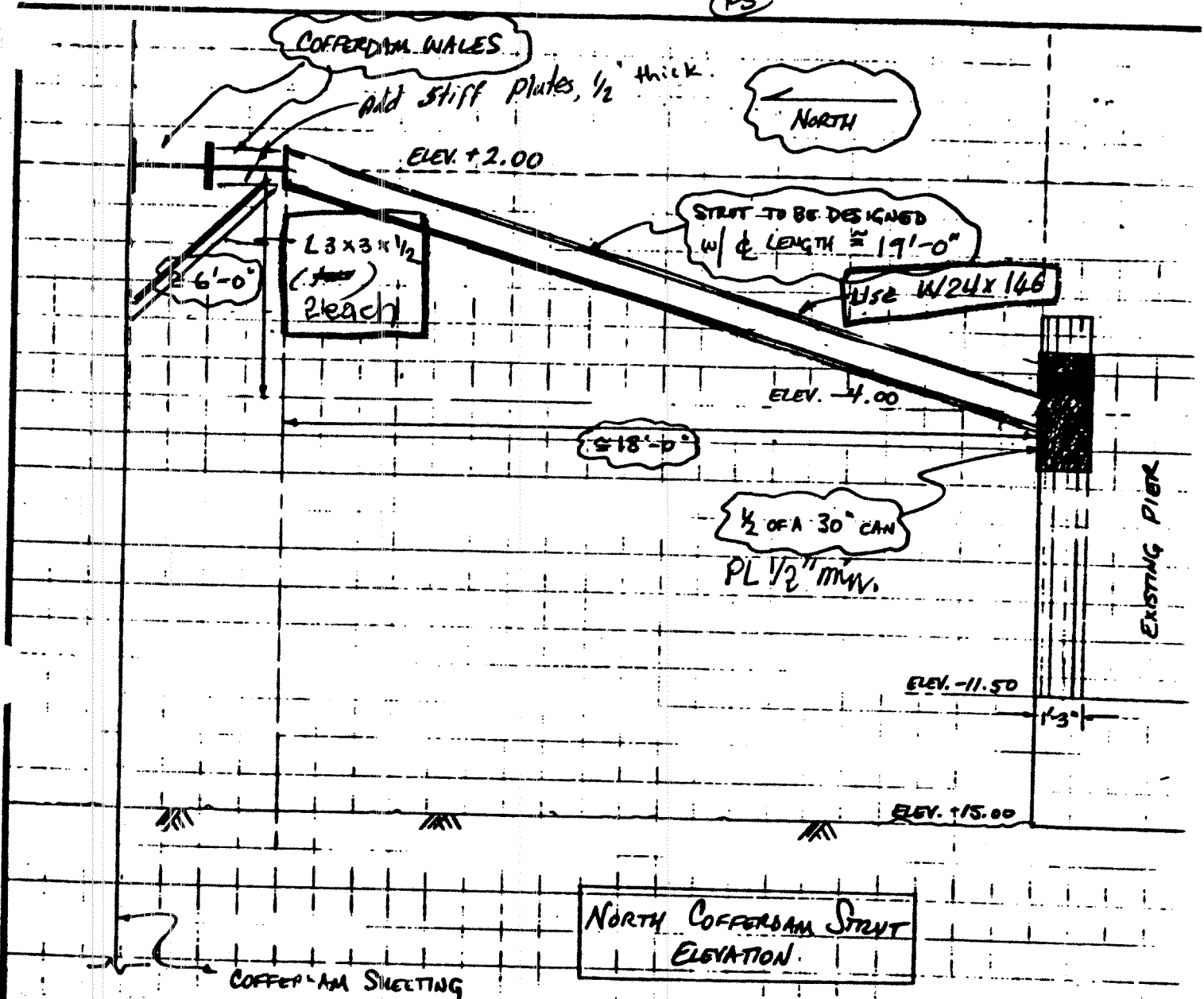


P.O. Box 53286
 NEW ORLEANS, LA 70163
 (504) 821-2400
 FAX: 821-0714

008 ORLEANS MARINA SLUICE GATE STRUCTURE
 COFFERDAM BRACING MODIFICATIONS

DATE 12-1-99 SHEET NO. 2 OF 3

(PS)



98C.0050 SKETCH 12/1099 B

P00011

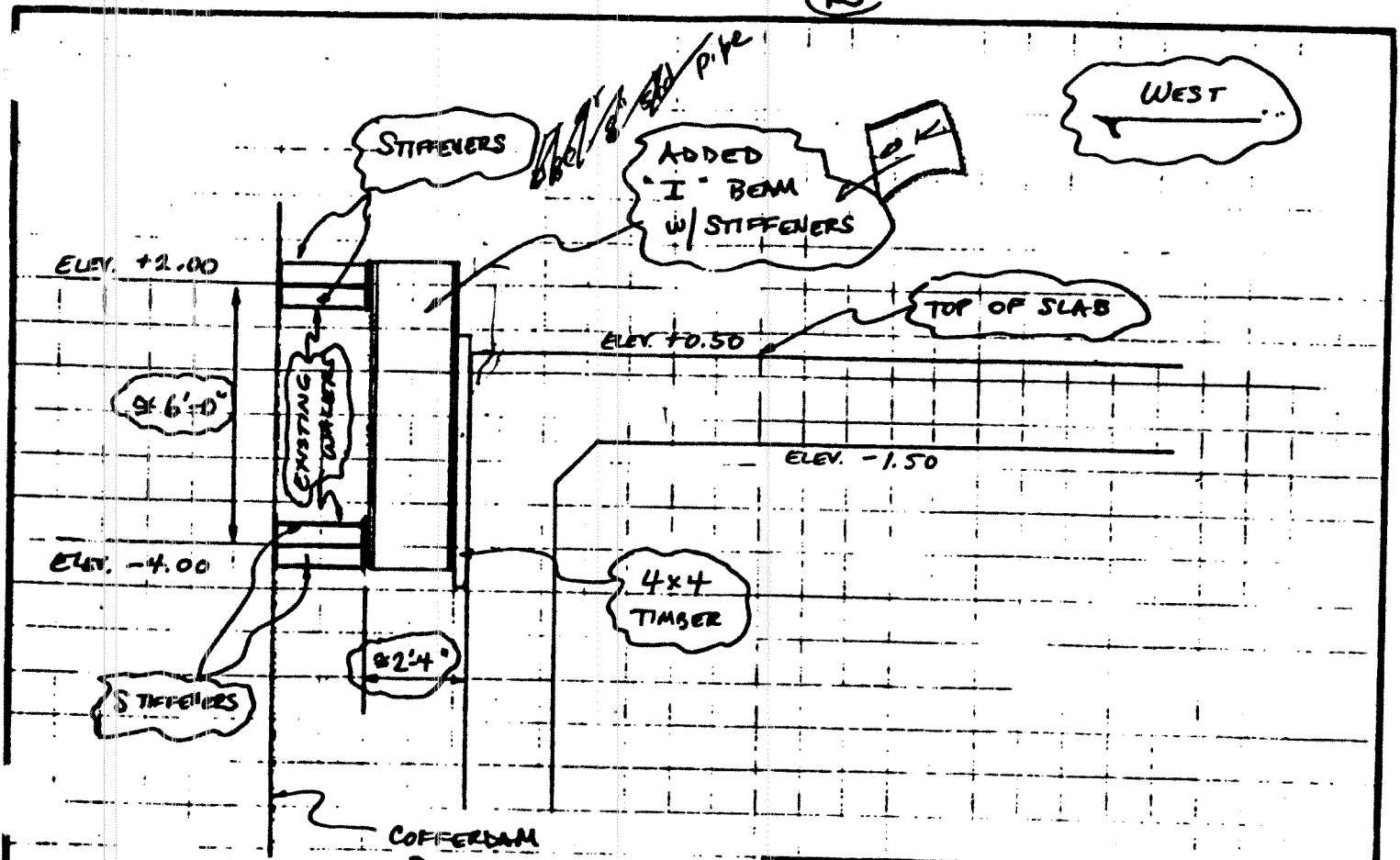


P.O. Box 53208
 NEW ORLEANS, LA 70153
 (504) 821-2400
 FAX 821-0714

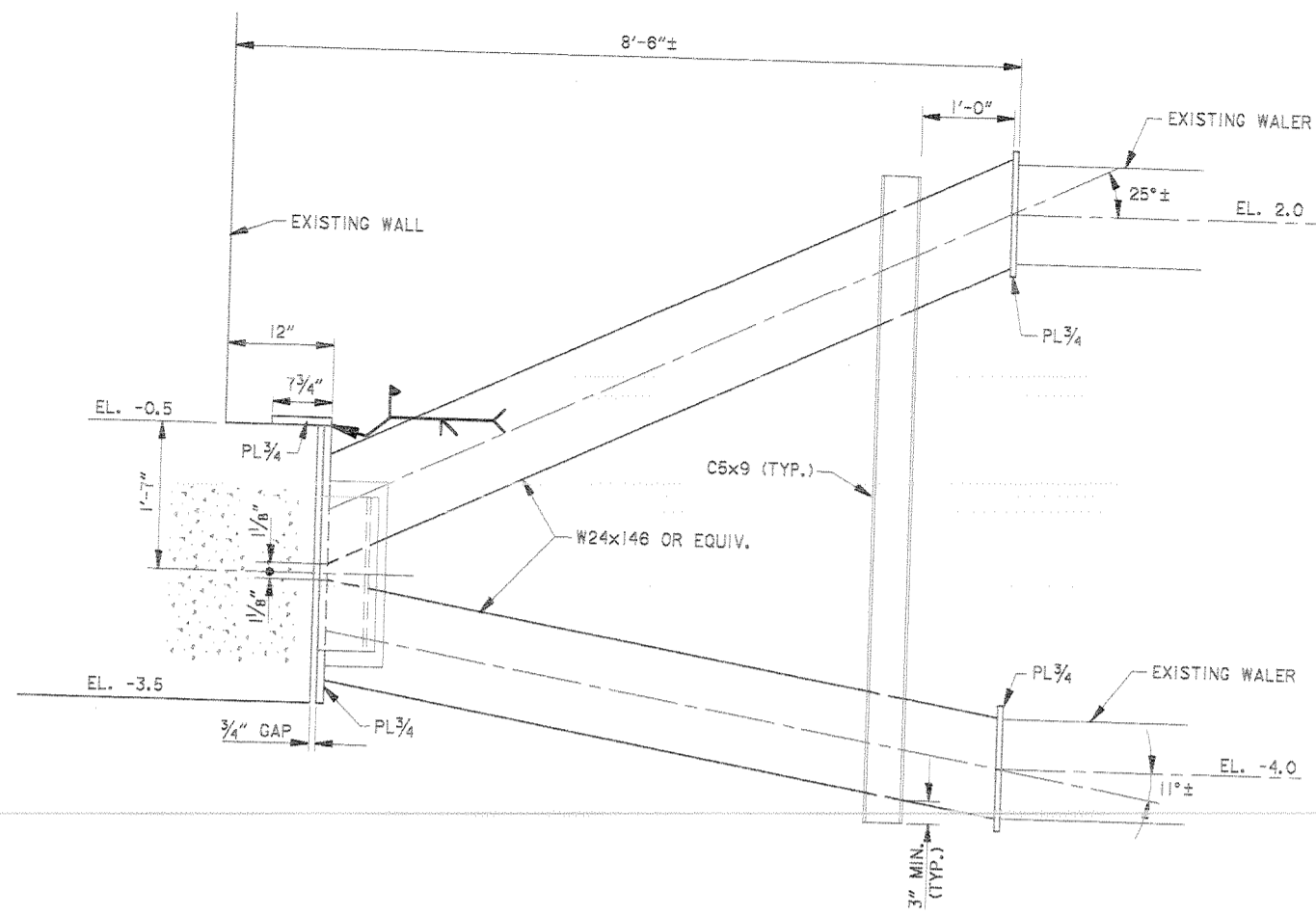
NEW ORLEANS MARINA SLUICE GATE STRUCTURE
 COFFERDAM BRACING MODIFICATIONS

DATE 12-1-99 SHEET NO. 3 OF 3

(RS)

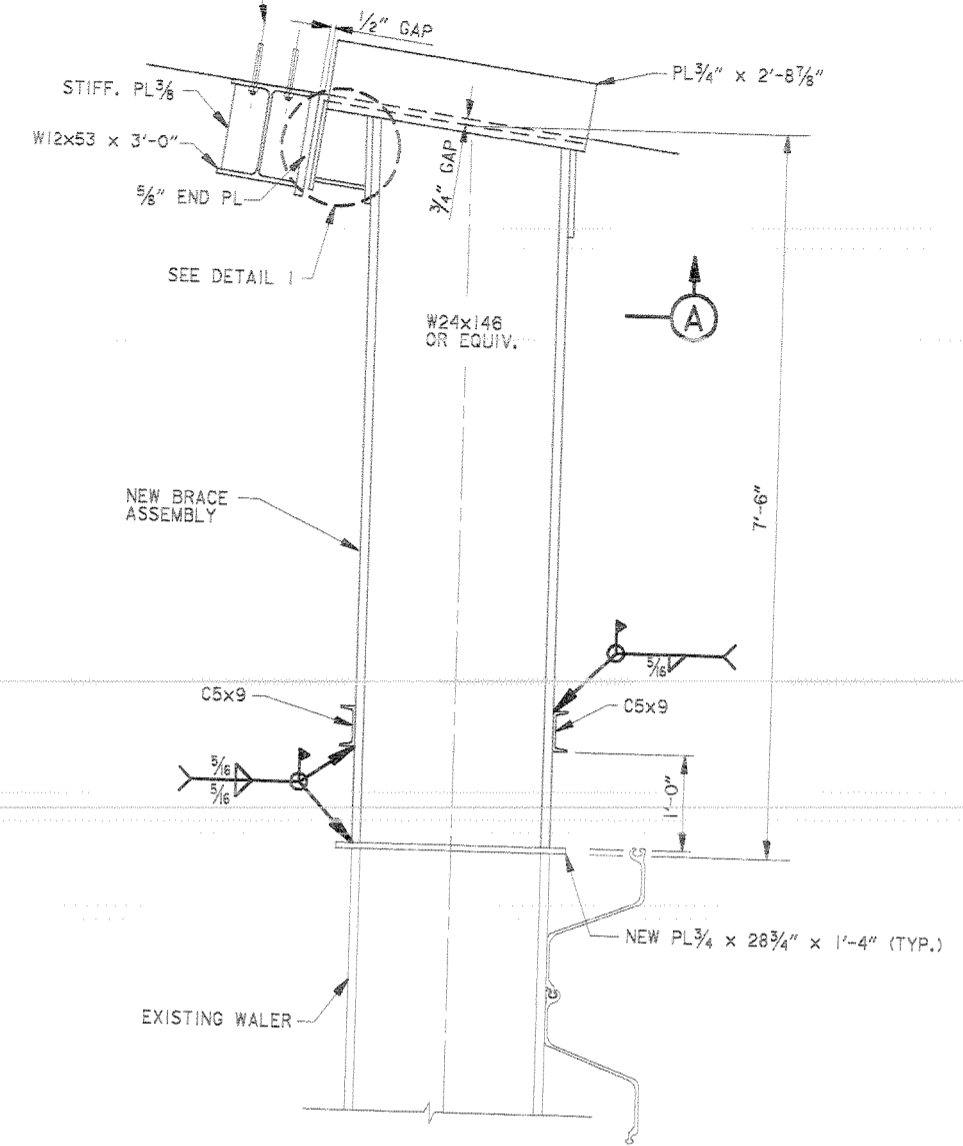


WEST COFFERDAM BEAM ADDITION
 ELEVATION



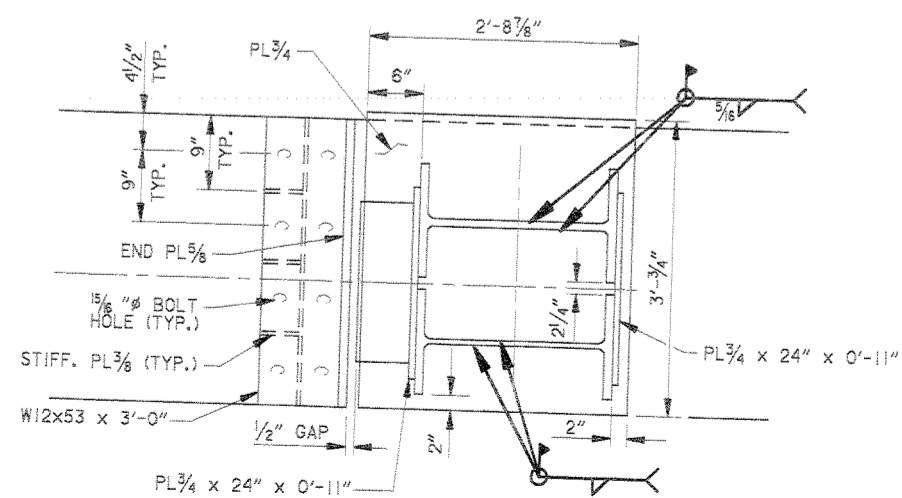
ELEVATION VIEW
SCALE: 1" = 1'-0"

7/8" HILTI ANCHOR BOLTS,
TYPE HAS, WITH 6 3/8" EMBEDMENT

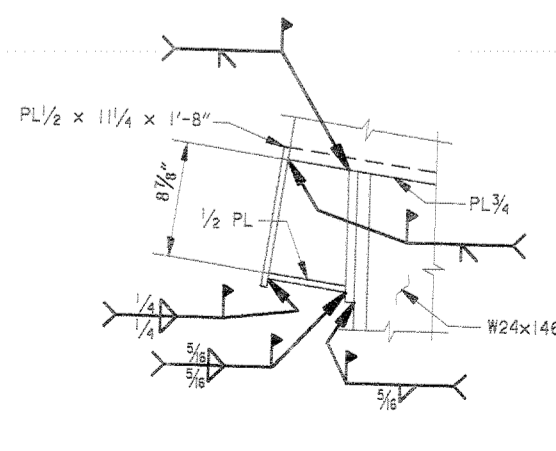


PLAN VIEW
SCALE: 1" = 1'-0"

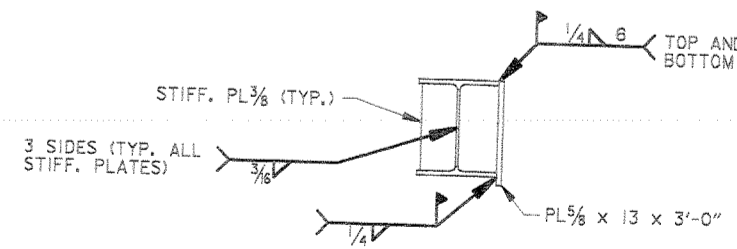
NOTE: ALL STEEL SHALL BE ASTM A36



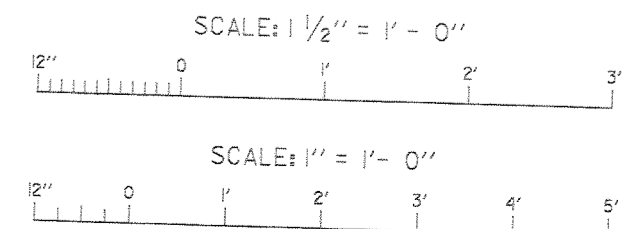
SECTION A
SCALE: 1" = 1'-0"



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



W12x53 DETAIL
SCALE: 1" = 1'-0"

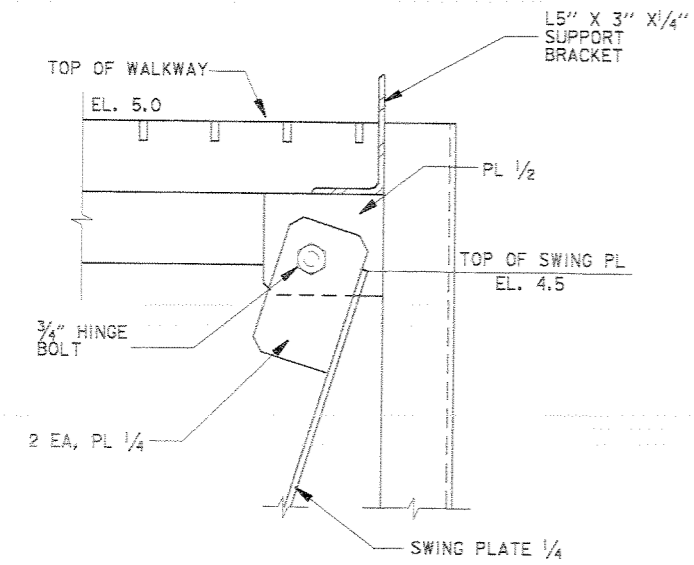


- NOTES:**
- SHIM GAPS AS REQUIRED. TAC WELD SHIMS TO NEW BRACE ASSEMBLY.
 - SHIMS SHALL BE PUT IN PLACE WHEN STAGES IN THE NEW BASIN CANAL ARE BELOW EL. 2.5 NGVD

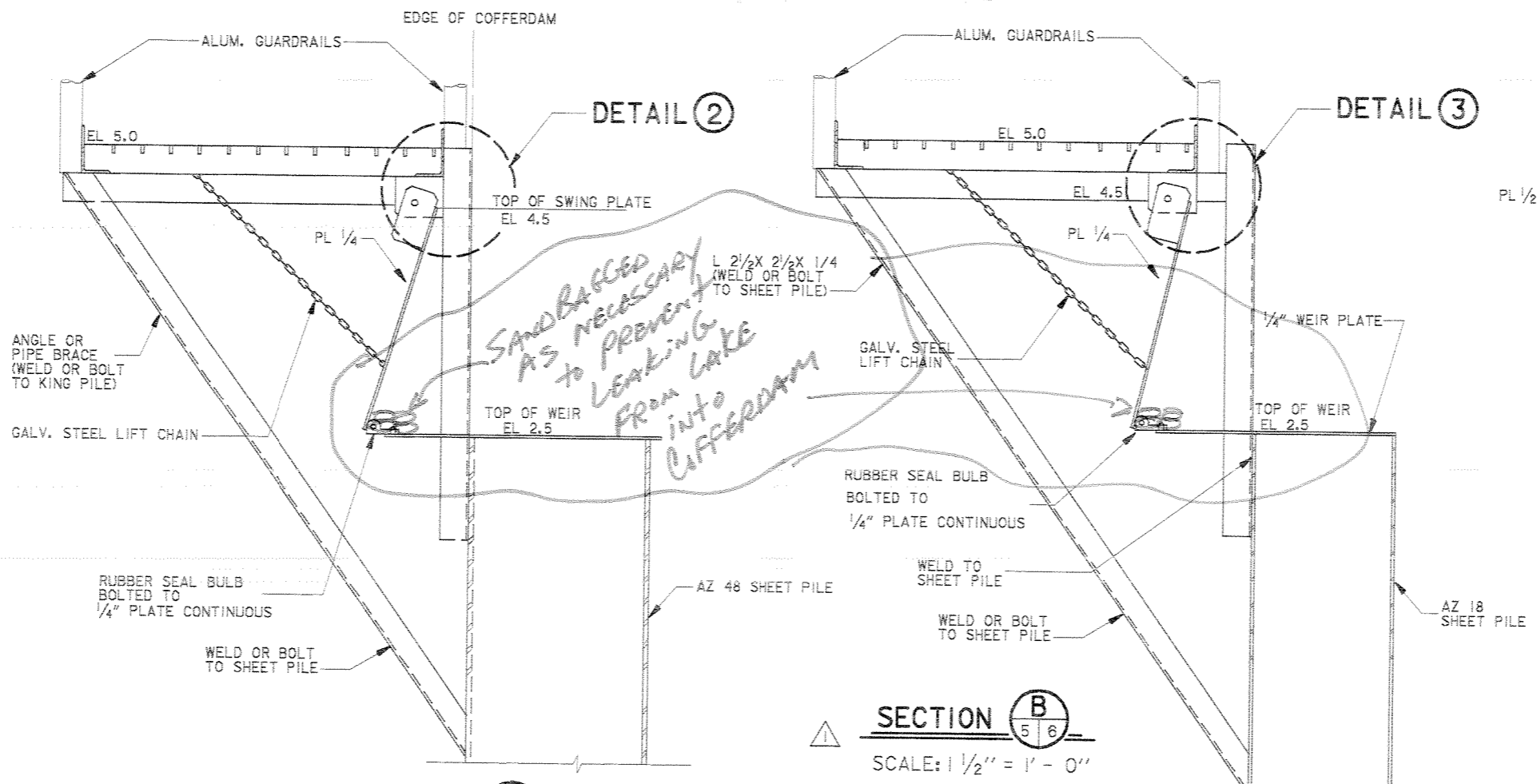
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS			
CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS MARINA PHASE V - SLUICE GATES			
ORLEANS PARISH, LOUISIANA			
TEMPORARY COFFERDAM BRACE ASSEMBLY			
DESIGNED BY: C. WAUGAMAN	DATE: OCT. 99	PLOT SCALE: 12	PLOT DATE: NOV. 1, 1999
DRAWN BY: C. WAUGAMAN	CHECKED BY: C. LABORDE	CADD FILE: TEMPBRAC.DGN	FILE NO. H-4-44778
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 5A OF 46	

Pocall

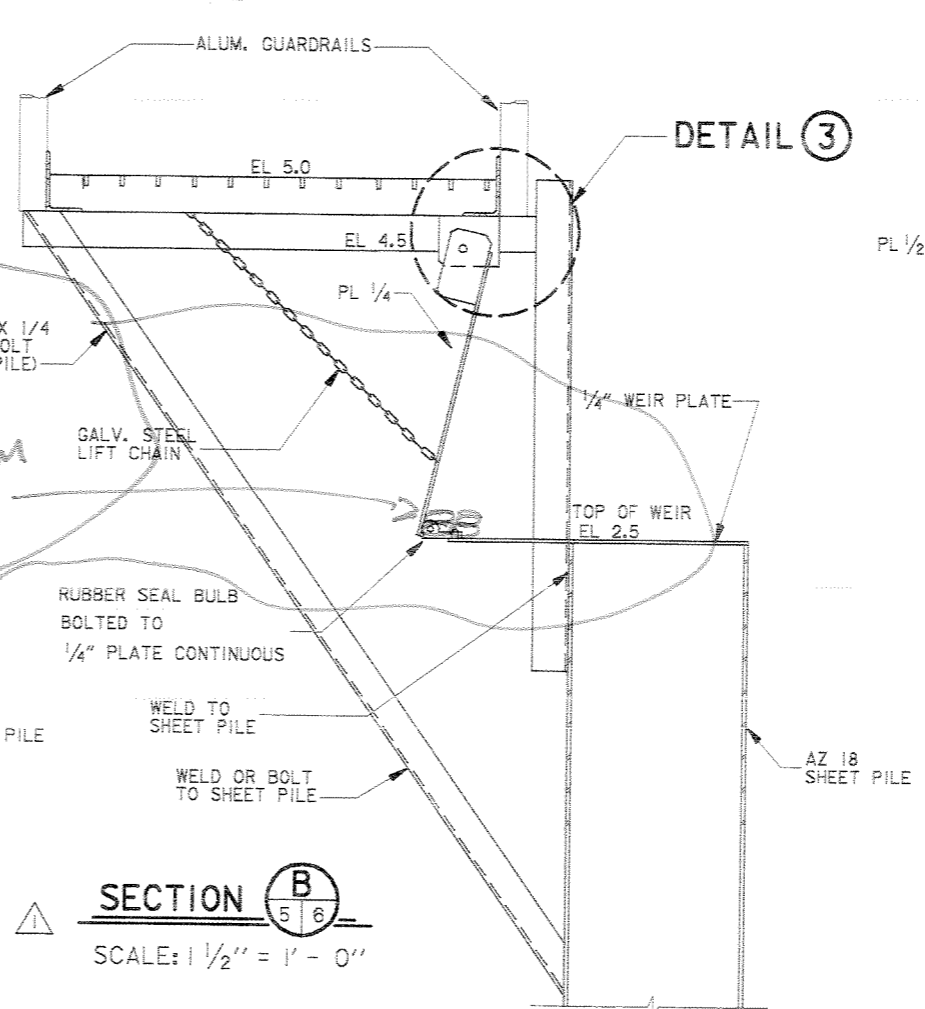
Safety is a Part of Your Contract



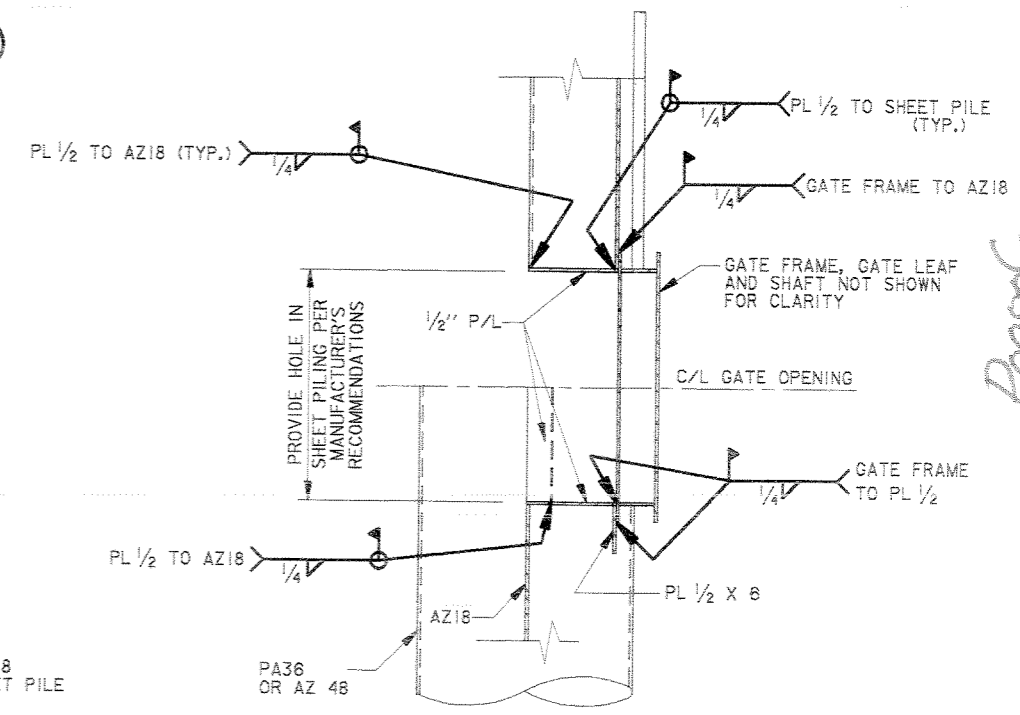
DETAIL 2
DETAIL 3 SIMILAR
SCALE: 3" = 1' - 0"



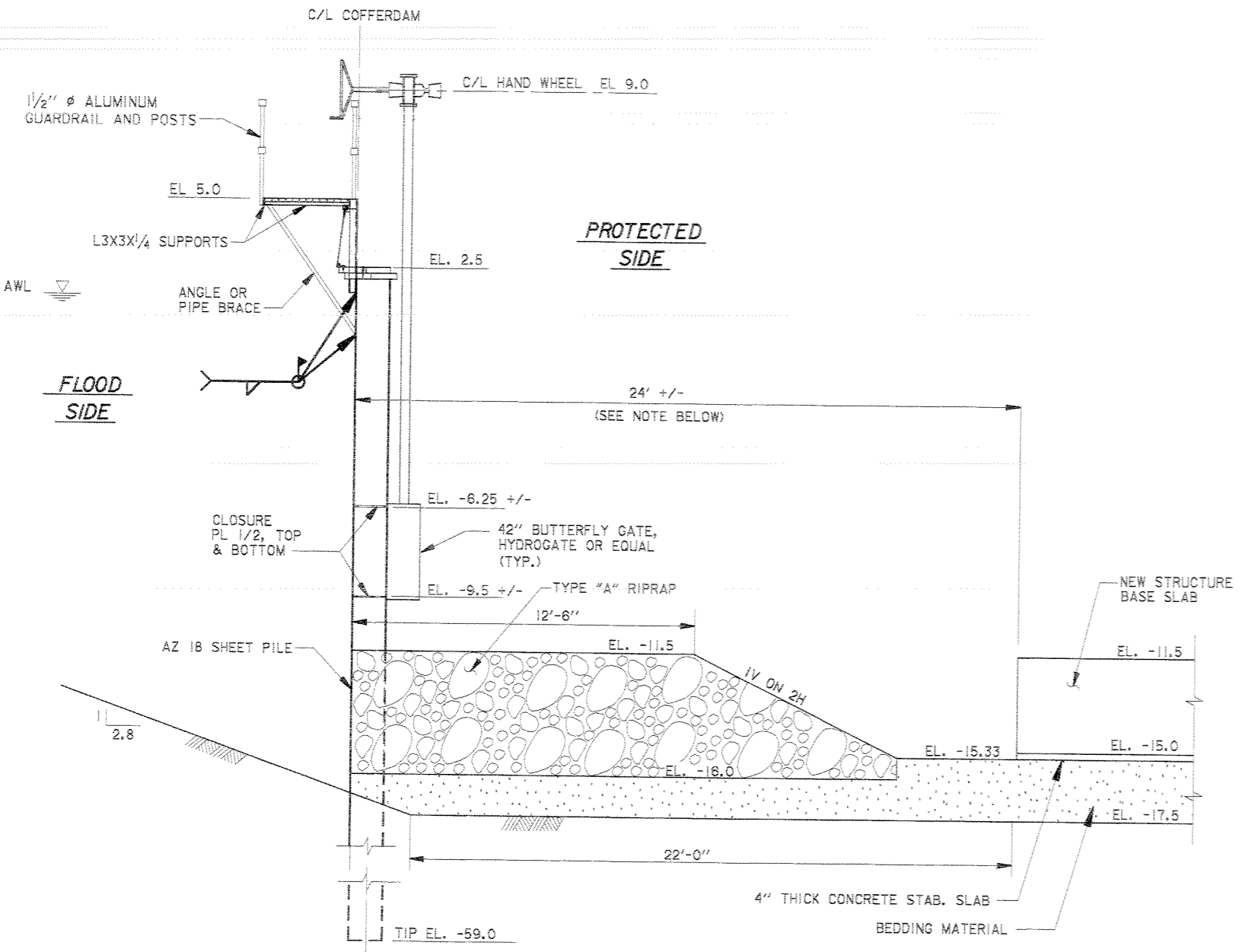
SECTION A
SCALE: 1 1/2" = 1' - 0"



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

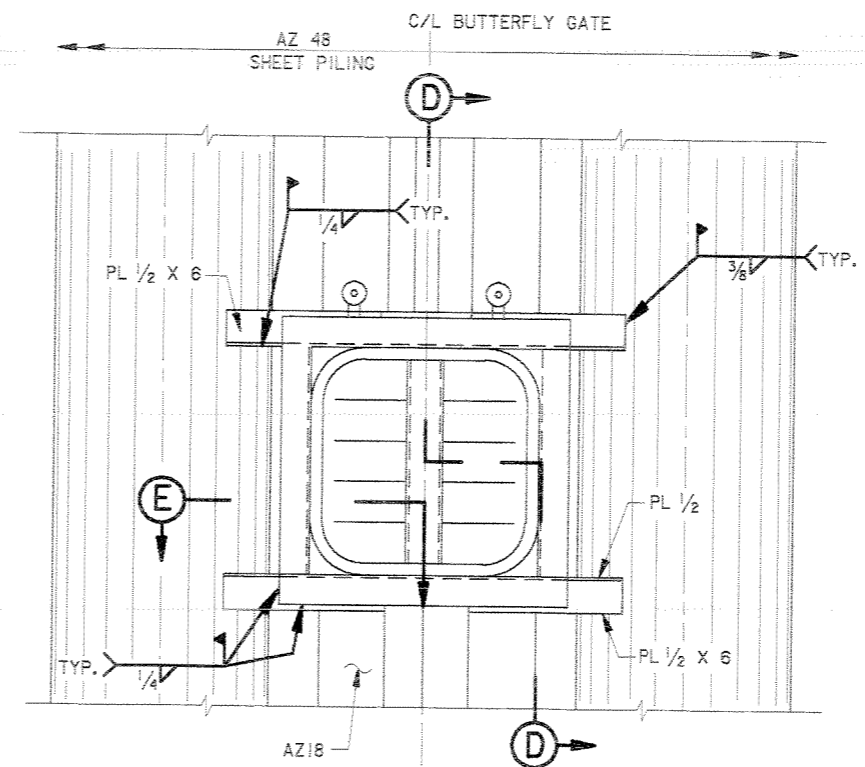


SECTION D
SCALE: 3/4" = 1' - 0"

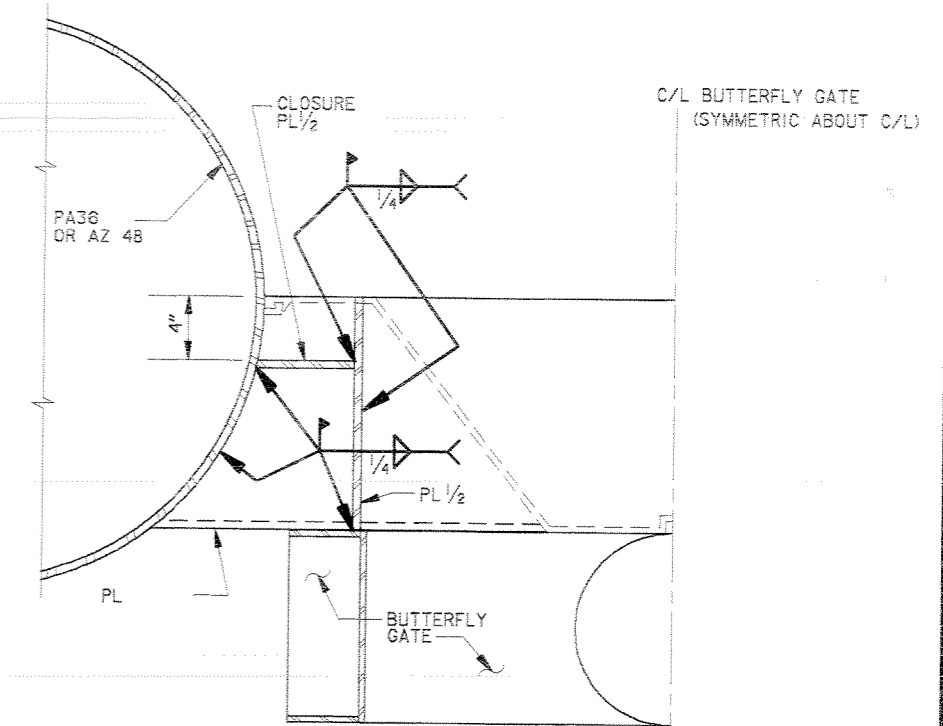


SECTION C
SCALE: 3/8" = 1' - 0"

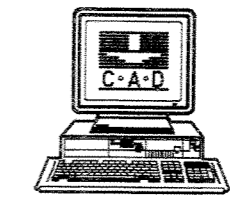
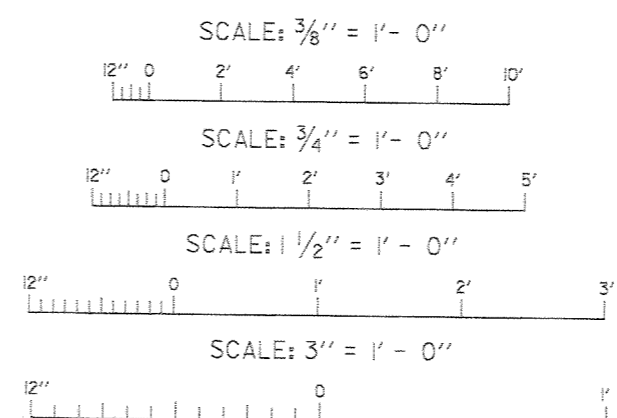
NOTE: DISTANCE WILL VARY AND IS DEPENDENT UPON EXACT LOCATION OF SHEETPILE TIE IN AT THE EXISTING WALL AT STATION 405+56 W/L +/-



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



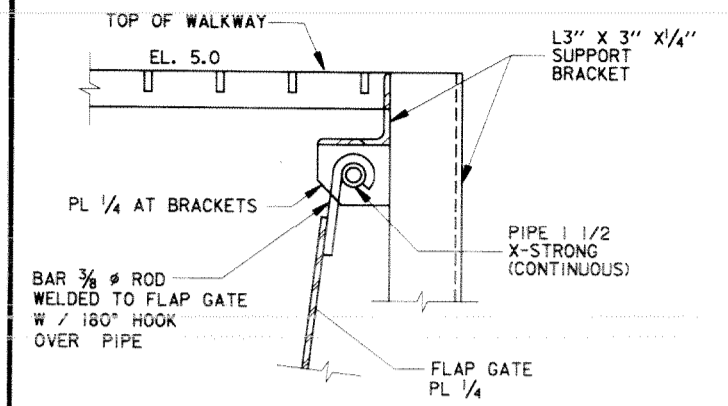
SECTION E
SCALE: 1 1/2" = 1' - 0"



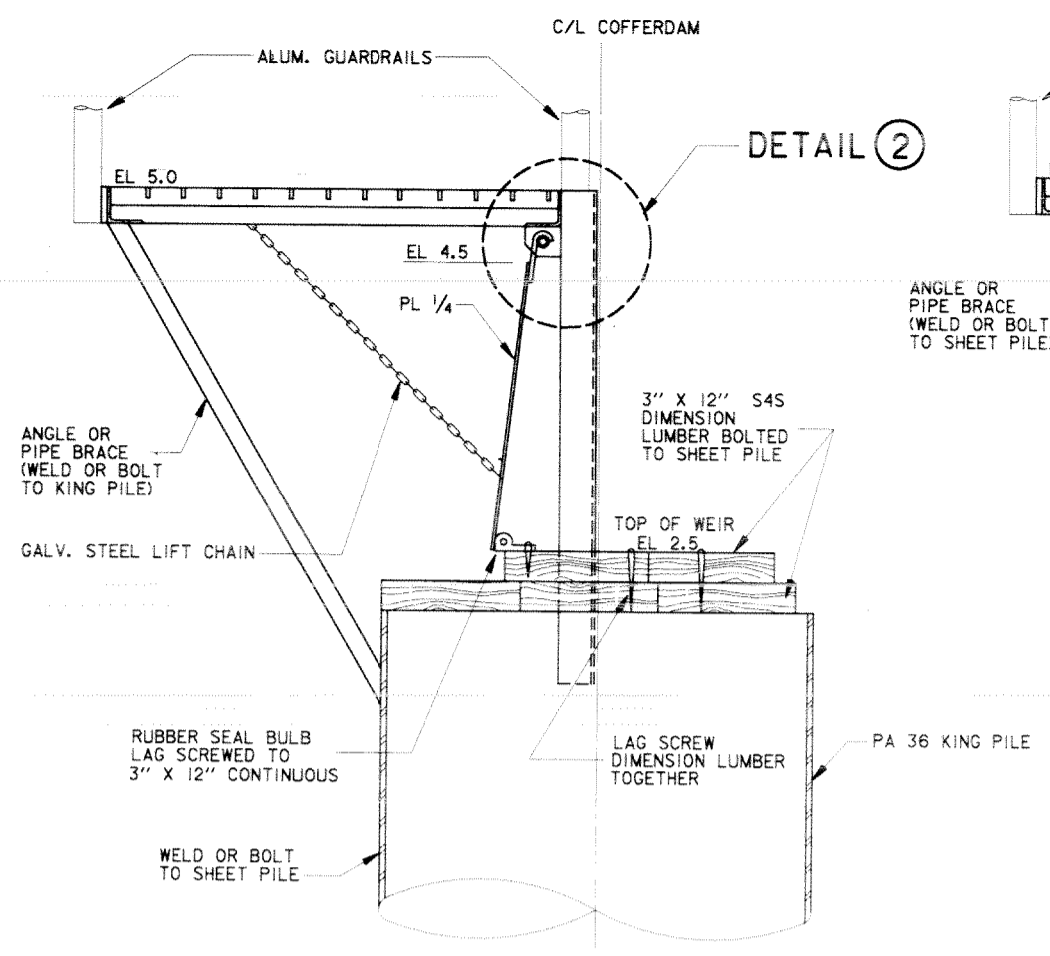
DELETED DRAINAGE MATERIAL AND TREMIE SLAB; ADDED BEDDING MATERIAL AND STAB. SLAB; REVISED WALKWAY DETAILS PER CONTRACTOR'S SUBMITTAL				DEC 98	CAL
SYMBOL	DESCRIPTION	DATE	APPROVED		
REVISIONS					
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA					
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.					
ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA					
COFFERDAM DETAILS					
DESIGNED BY: C. LABORDE	DATE: DEC. 97	PLOT SCALE: 48	PLOT DATE: DEC. 15, 1997		
DRAWN BY: V. COUVILLON	CADD FILE: 44778N02.DGN	FILE NO.		H-4-44778	
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DWG. 6 OF 46		



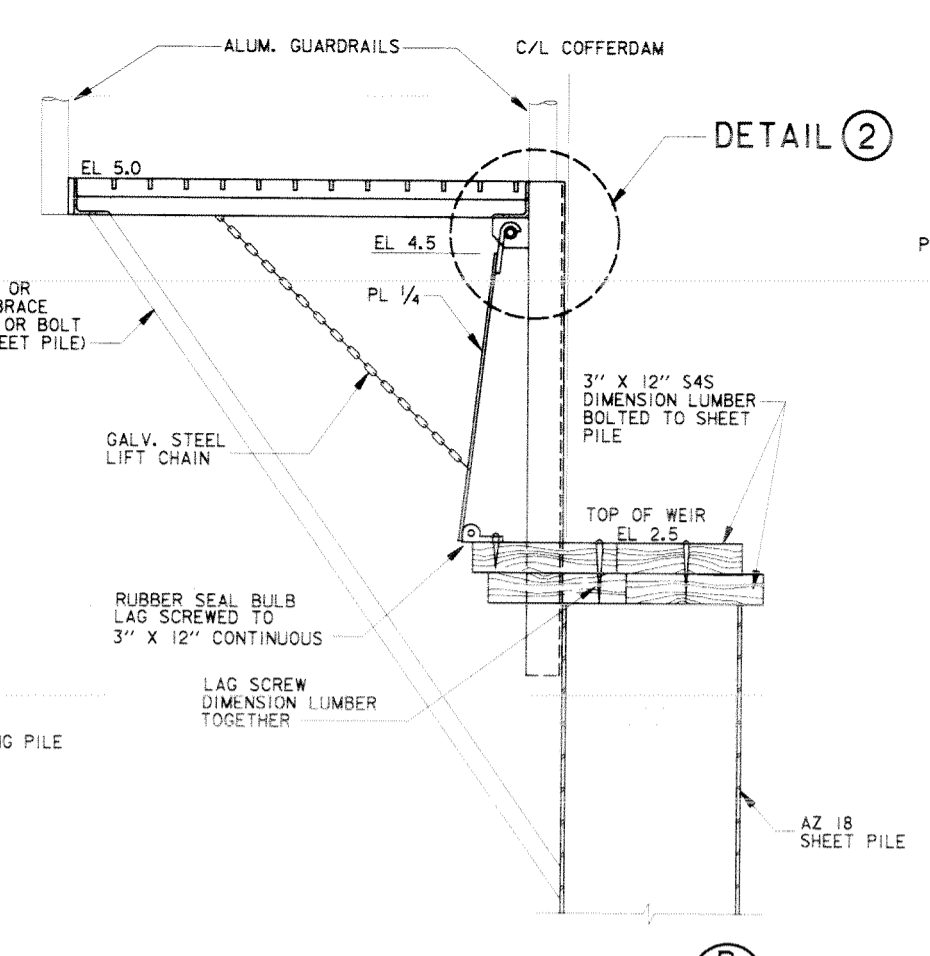
Safety is a Part of Your Contract



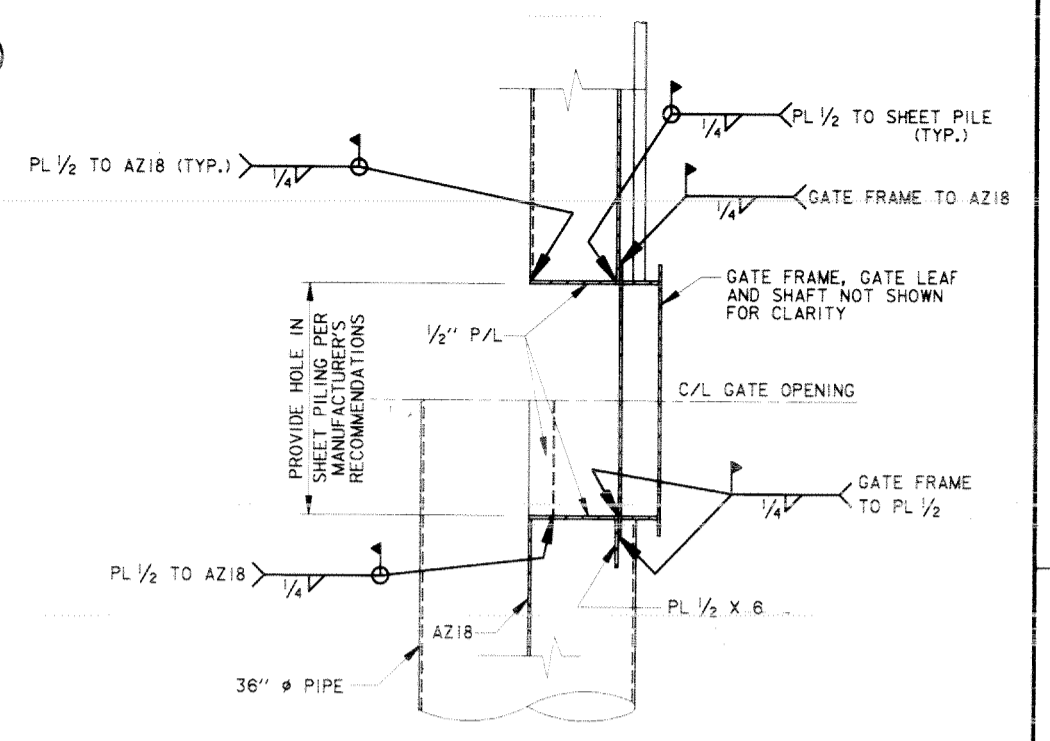
DETAIL 2
SCALE: 3" = 1' - 0"



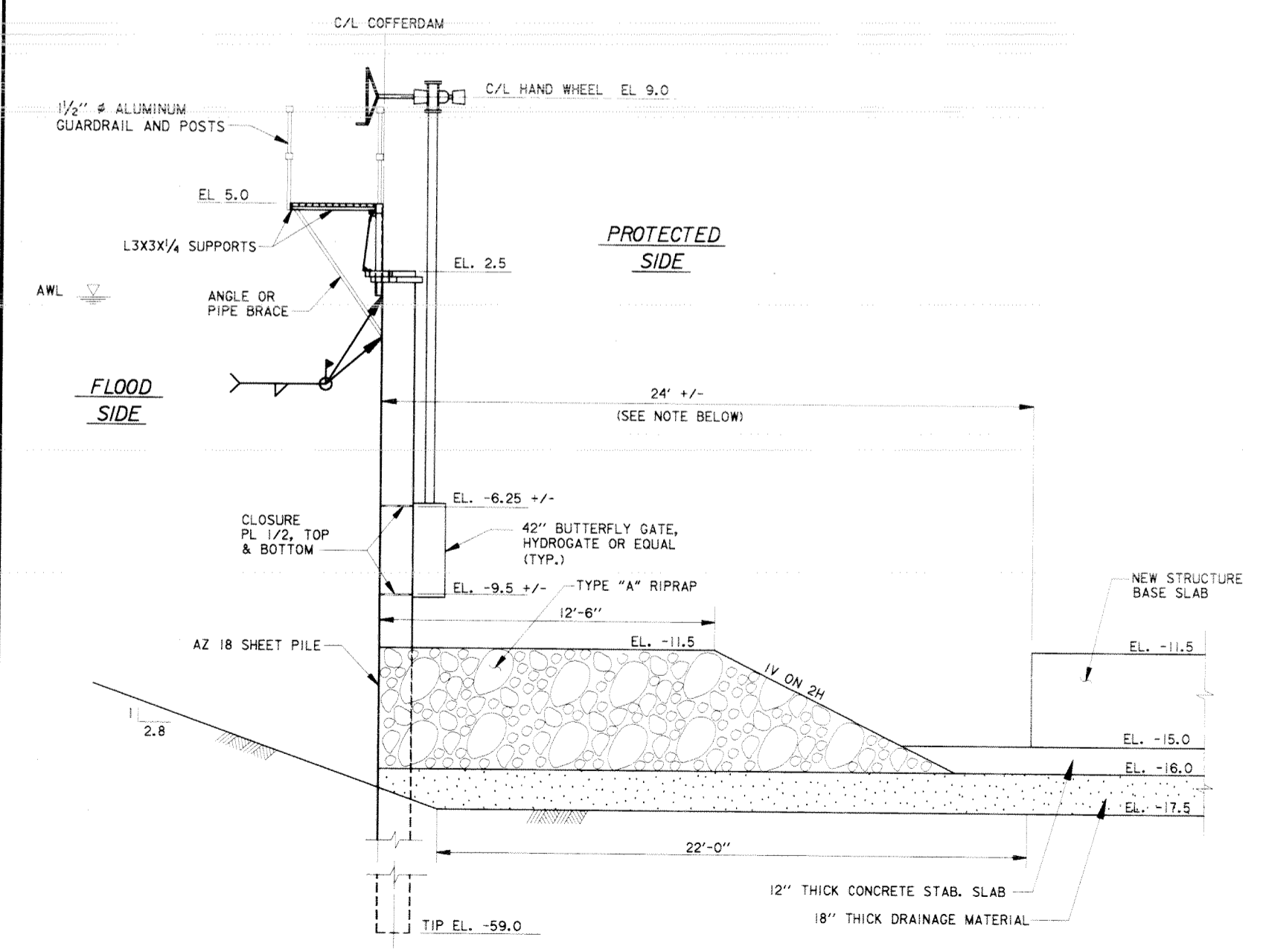
SECTION A
SCALE: 1 1/2" = 1' - 0"



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

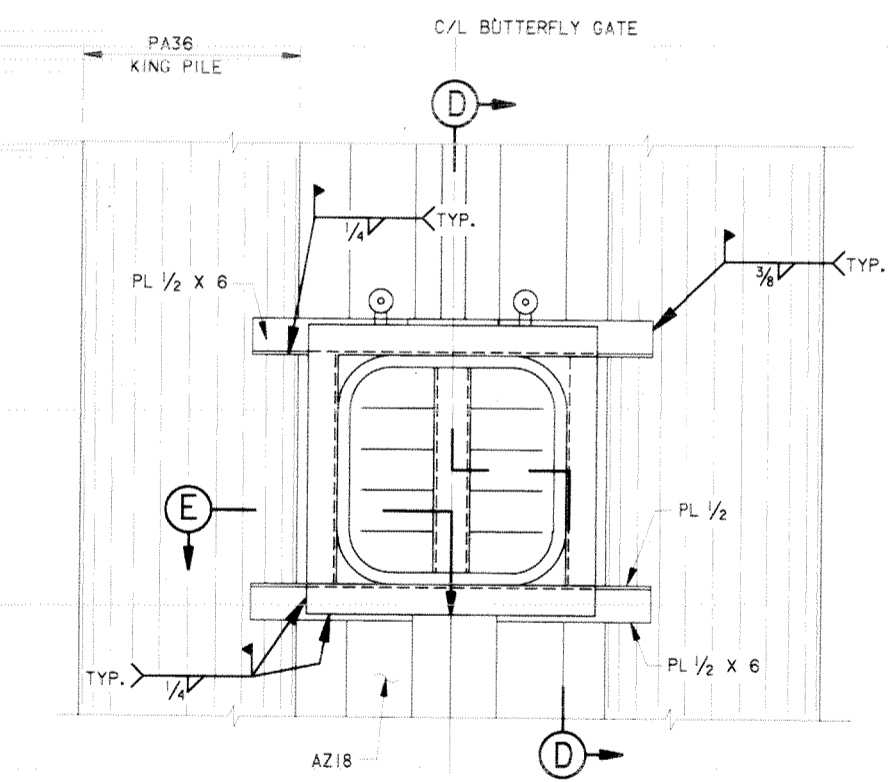


SECTION D
SCALE: 3/4" = 1' - 0"

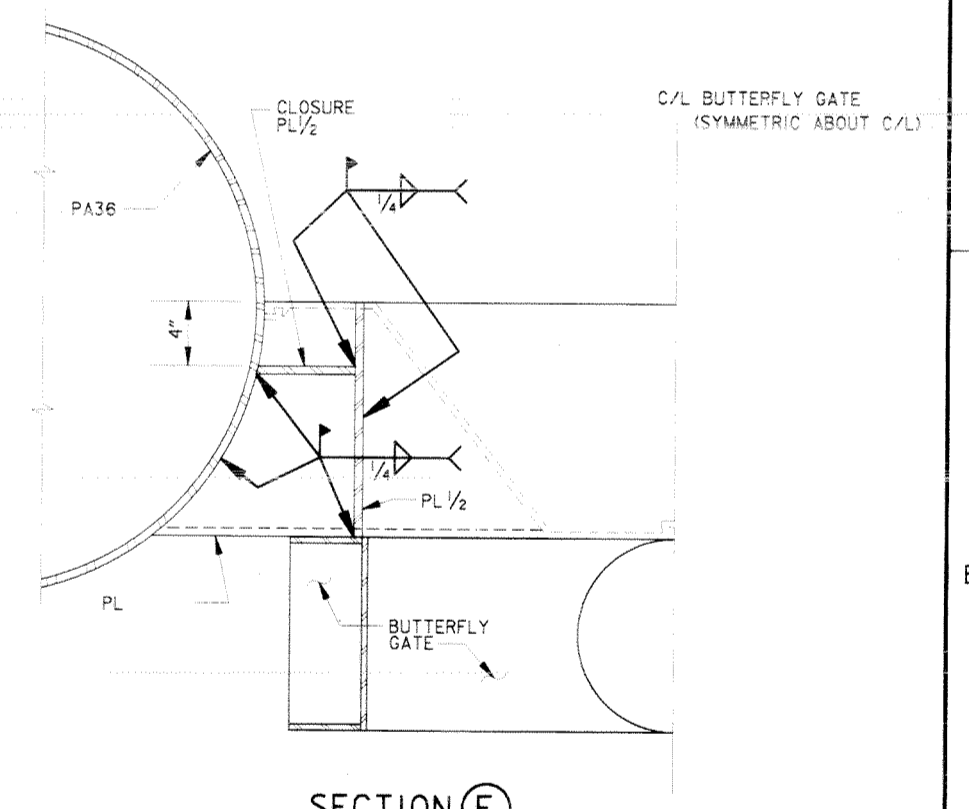


SECTION C
SCALE: 3/8" = 1' - 0"

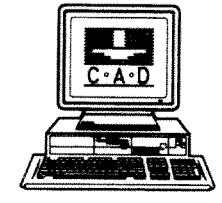
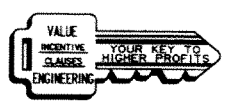
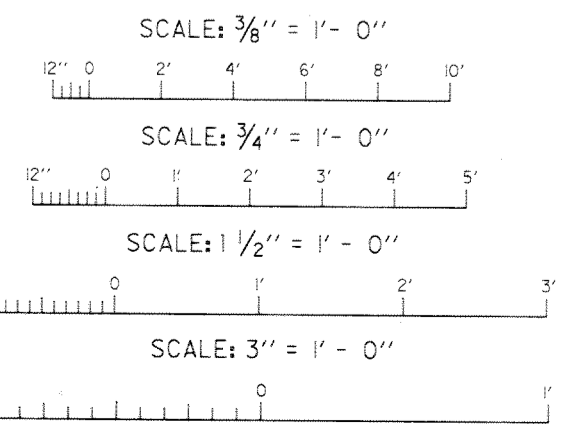
NOTE: DISTANCE WILL VARY AND IS DEPENDENT UPON EXACT LOCATION OF SHEETPILE TIE-IN AT THE EXISTING WALL AT STATION 405+56 W/L +/-



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



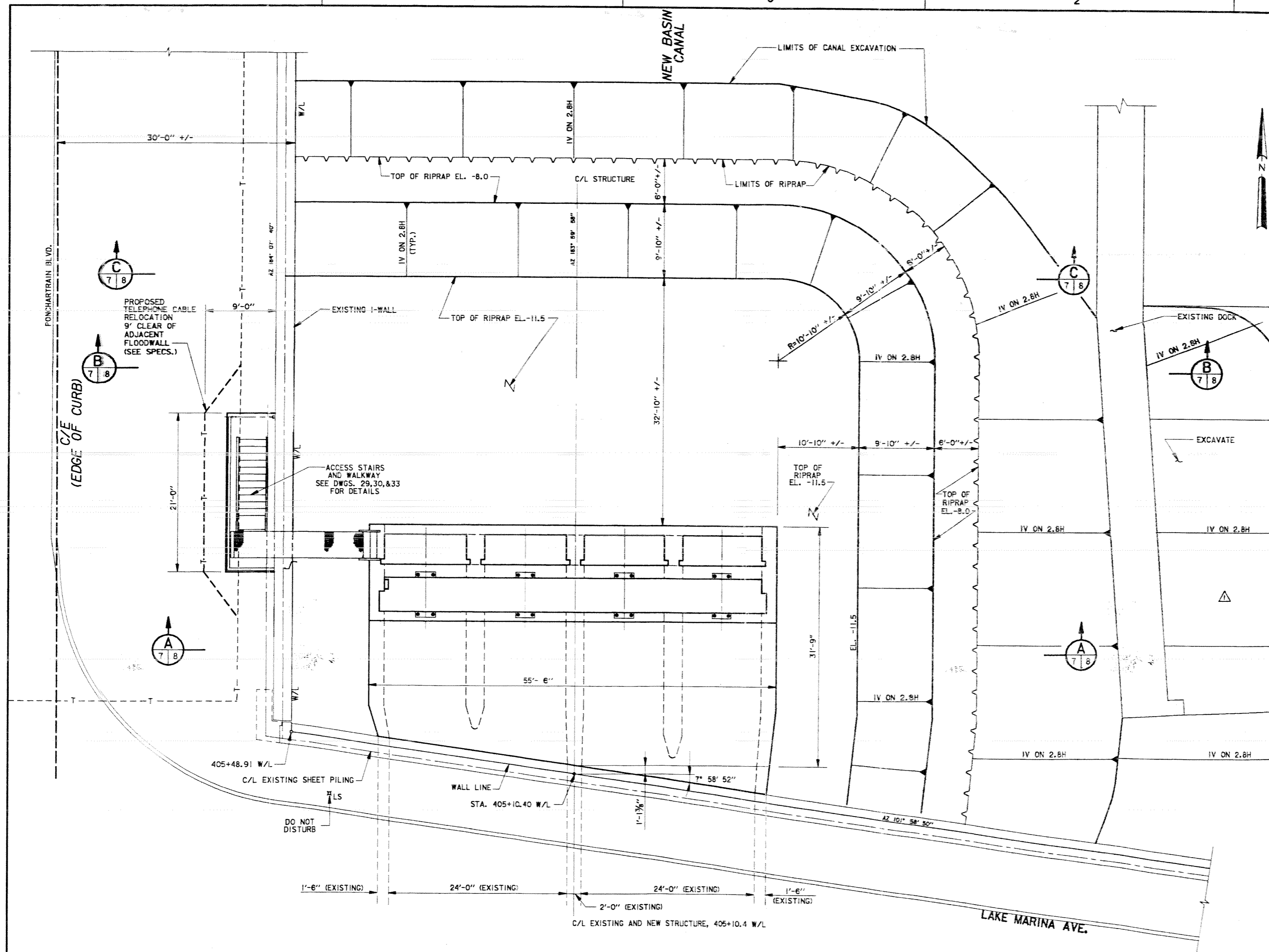
SECTION E
SCALE: 1 1/2" = 1' - 0"



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA COFFERDAM DETAILS			
DESIGNED BY: C. LABORDE	DATE: DEC. 97	PLOT SCALE: 48	PLOT DATE: DEC. 15, 1997
DRAWN BY: V. COUVILLON	CADD FILE: 44778N02.DGN	FILE NO.	H-4-44778
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DWG. 6 OF 46

Safety is a Part of Your Contract

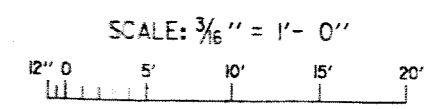
A00006



NOTE:
SEE DWGS. 38 THRU 44 FOR DETAILS
OF BURIED ELECTRICAL CONDUITS.

LEGEND

--- TELEPHONE LINE



SYMBOL	DESCRIPTION	DATE	APPROVED
△	TEMPORARY EXCAVATION AT BOAT DOCK	JUNE 99	CAL

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

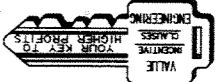
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

STRUCTURE PLAN

DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 64	PLOT DATE: NOV. 10, 1997
DRAWN BY: C.WALGANATH	CADD FILE: 4477B03.DGN		FILE NO. H-4-44778
CHECKED BY: C.LABORDE			
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001		DWG. 7 OF 46

SLUICE GATE STRUCTURE PLAN





SLUICE GATE STRUCTURE
PLAN

DESIGNED BY: CLABORDE
DRAWN BY: CLABORDE
CHECKED BY: CLABORDE
CADD FILE: 44778NO3.DGN
DATE: NOV. 97
FILE NO.: 64
PLOT DATE: NOV. 10, 1997
PLOT SCALE:
DWC: 7 OF 46
H-4-44778
DACW29-98-B-0001

DESIGN ENGINEER
CHARLES A. LABORDE P.E.
SOLICITATION NO.
NO. 29-98-B-0001

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA
LAKE PONCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

STRUCTURE PLAN

REVISIONS

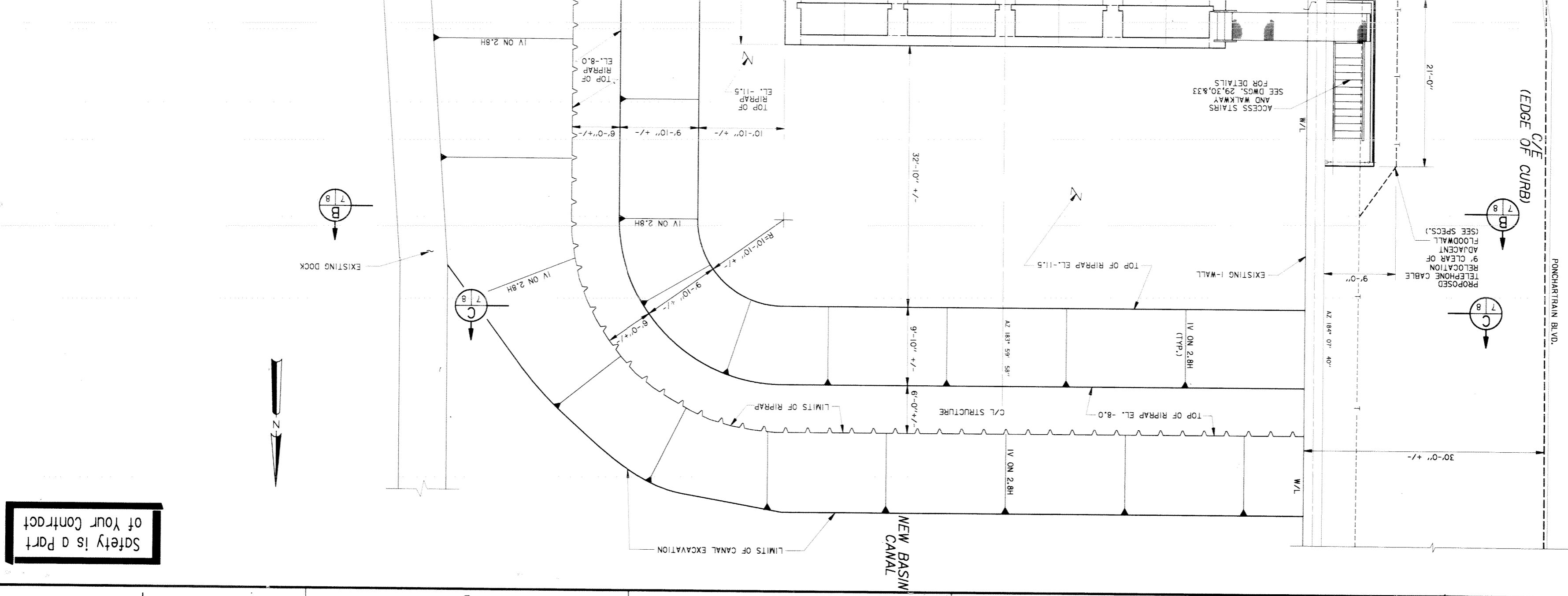
SYMBOL	DESCRIPTION	DATE	APPROVED

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

LEGEND

--- TELEPHONE LINE

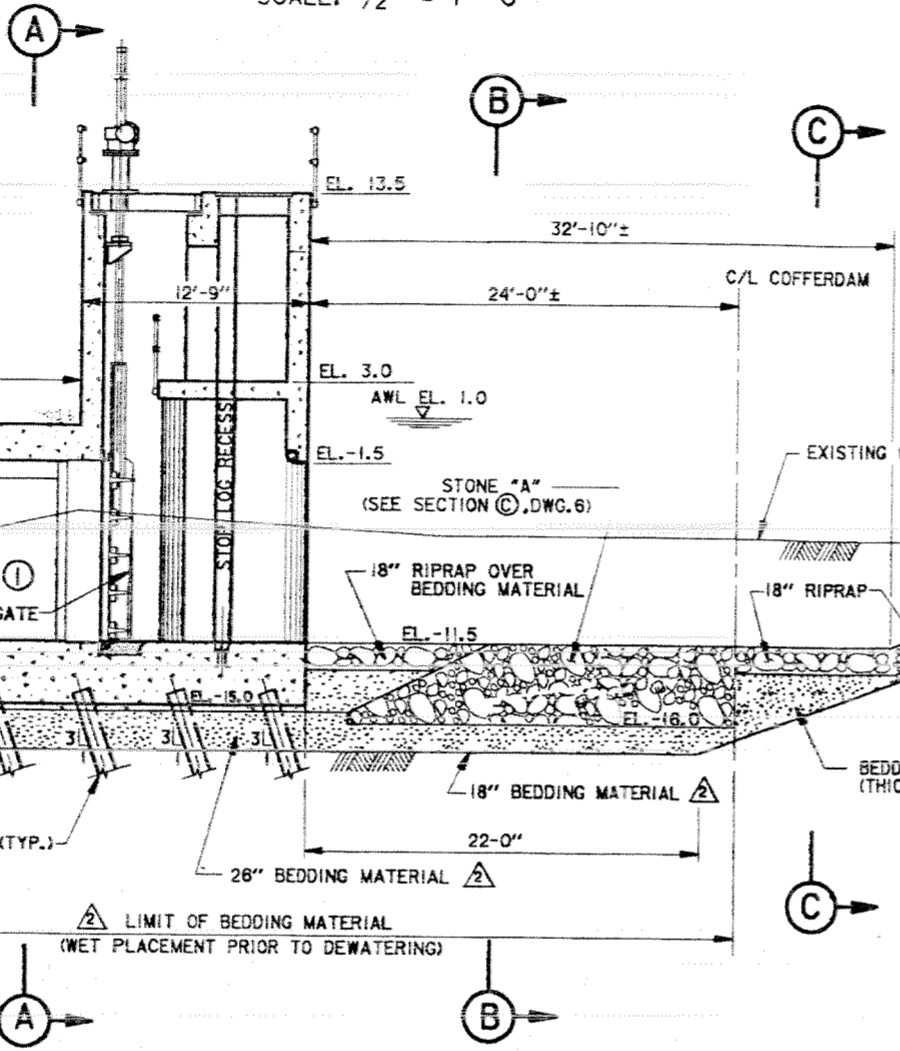
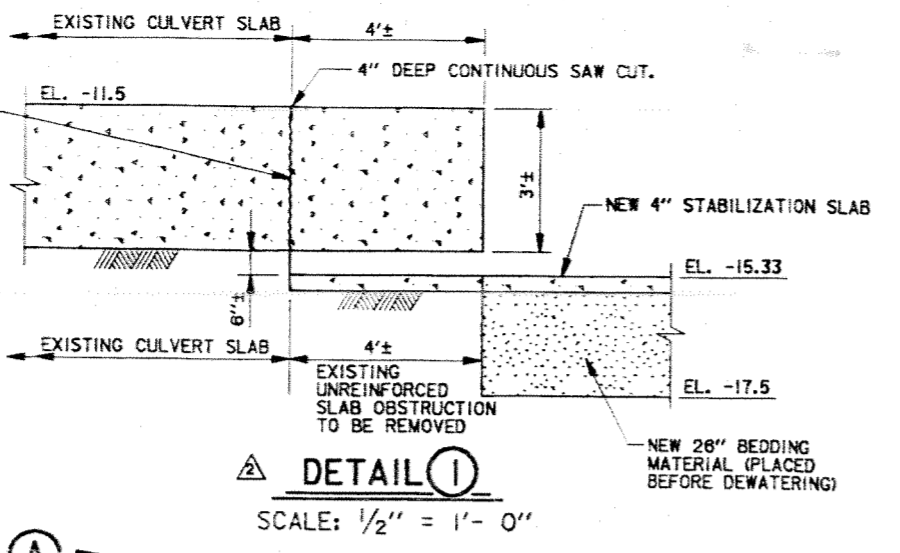
NOTE:
SEE DWGS. 38 THRU 44 FOR DETAILS
OF BURIED ELECTRICAL CONDUITS.



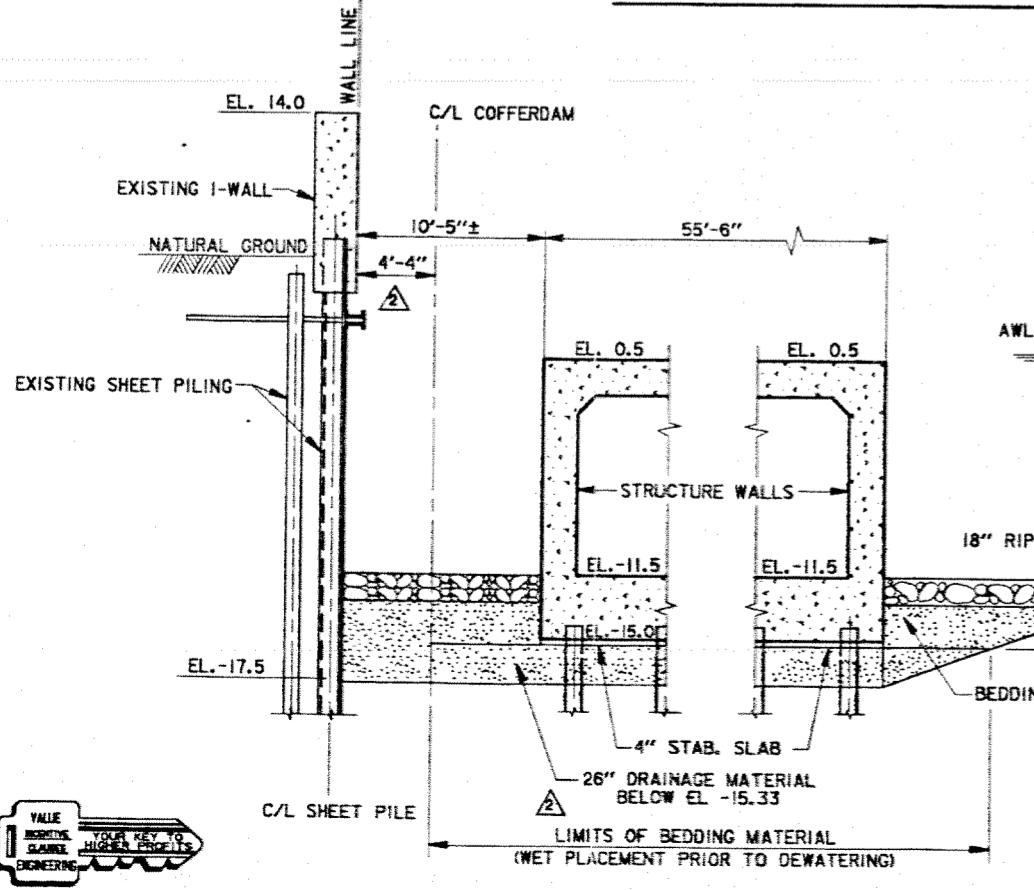
Safety is a Part
of Your Contract

Safety is a Part of Your Contract

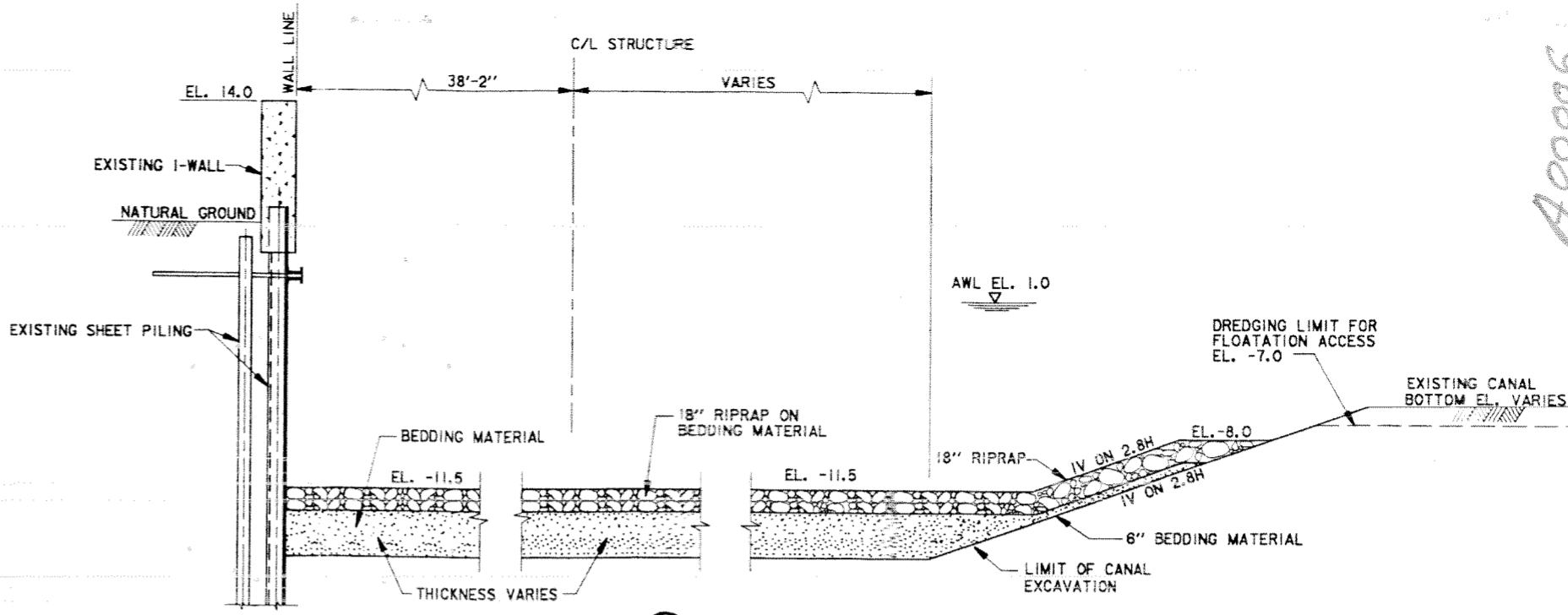
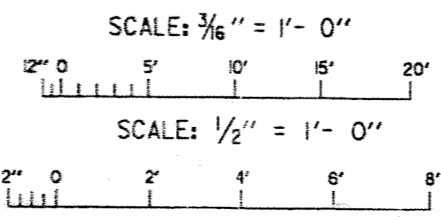
SEE SPECS FOR REQUIRED SURFACE PREPARATION UPON REMOVAL OF SLAB OBSTRUCTION.



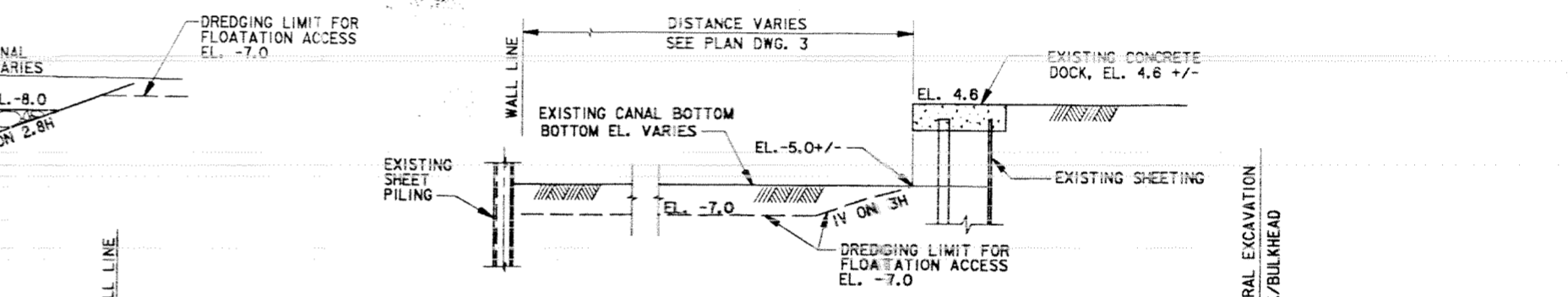
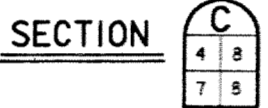
SECTION AT C/L OF STRUCTURE



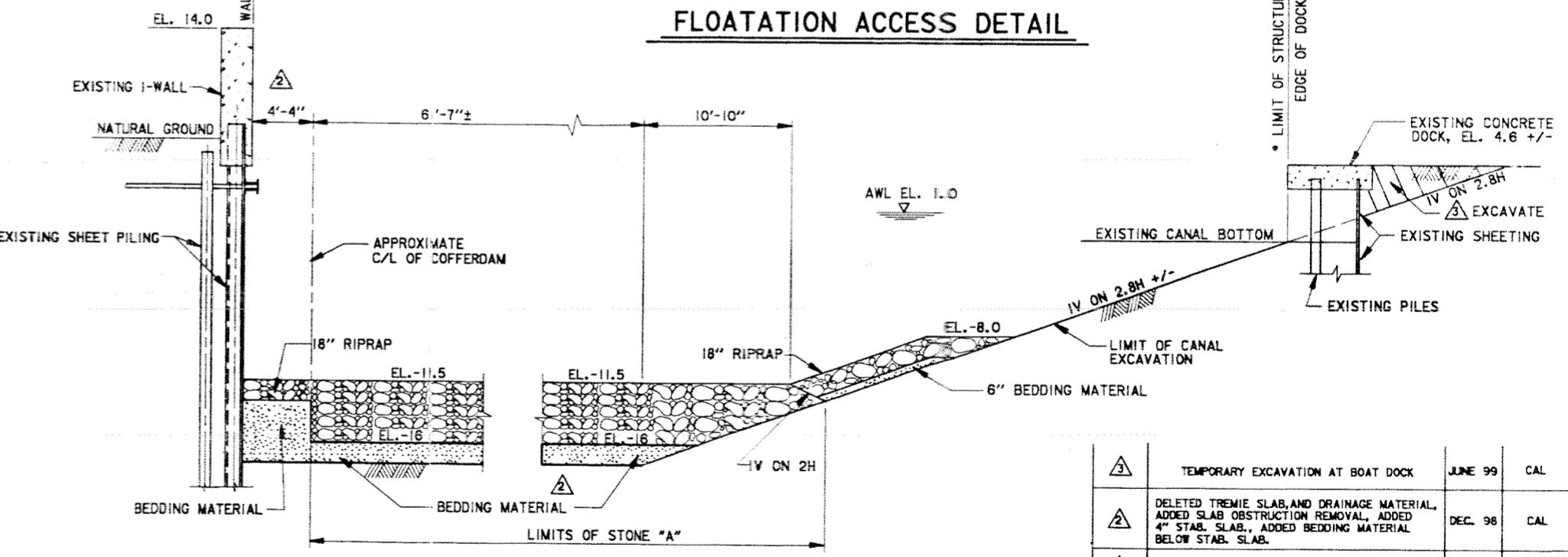
SECTION A



SECTION C



FLOATATION ACCESS DETAIL



SECTION B



SYMBOL	DESCRIPTION	DATE	APPROVED
△	TEMPORARY EXCAVATION AT BOAT DOCK	JUNE 99	CAL
△	DELETED TREMIE SLAB, AND DRAINAGE MATERIAL, ADDED SLAB OBSTRUCTION REMOVAL, ADDED 4" STAB. SLAB., ADDED BEDDING MATERIAL BELOW STAB. SLAB.	DEC. 98	CAL
△	REVISED DIMENSIONS IN SECTIONS A&B, AMEND #1	1/23/98	CAL

REVISIONS

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN
 NEW ORLEANS LAKEFRONT LEVEE
 WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
 ORLEANS PARISH, LOUISIANA

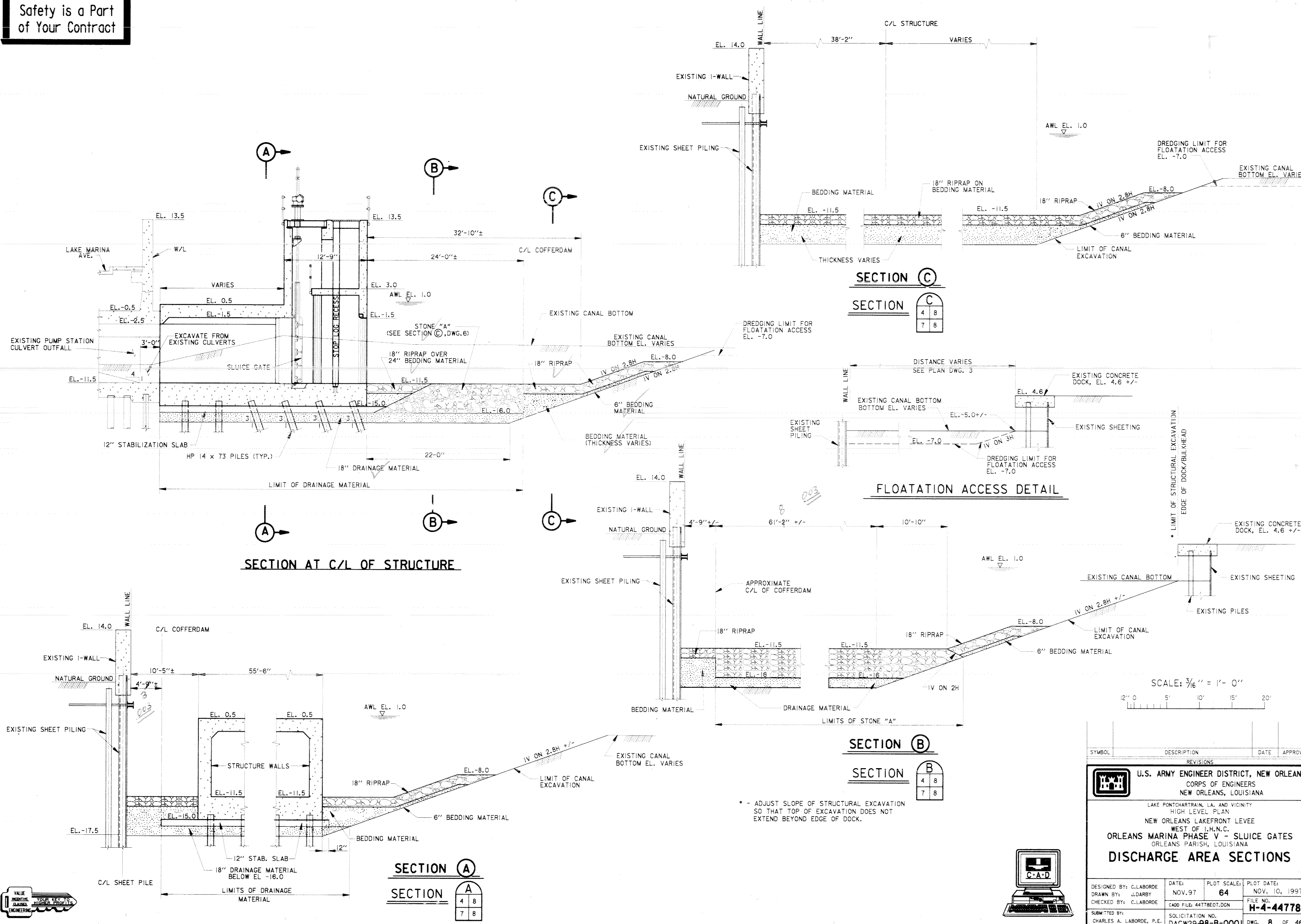
DISCHARGE AREA SECTIONS

DESIGNED BY: CLABORDE	DATE: NOV. 97	PLOT SCALE: 64	PLOT DATE: DEC. 15, 1998
DRAWN BY: LDARBY	CADD FILE: 44778E07.DGN	FILE NO. H-4-44778	
CHECKED BY: CLABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 8 OF 46	
SUBMITTED BY: CHAPES A. LABORDE, P.E. DESIGN ENGINEER			



A0006

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SECTION AT C/L OF STRUCTURE

SECTION C

SECTION C

SECTION C

FLOATATION ACCESS DETAIL

SECTION B

SECTION B

SECTION B

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

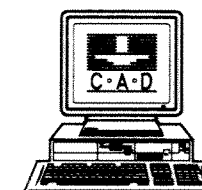
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN
 NEW ORLEANS LAKEFRONT LEVEE
 WEST OF I.H.N.C.
 ORLEANS MARINA PHASE V - SLUICE GATES
 ORLEANS PARISH, LOUISIANA

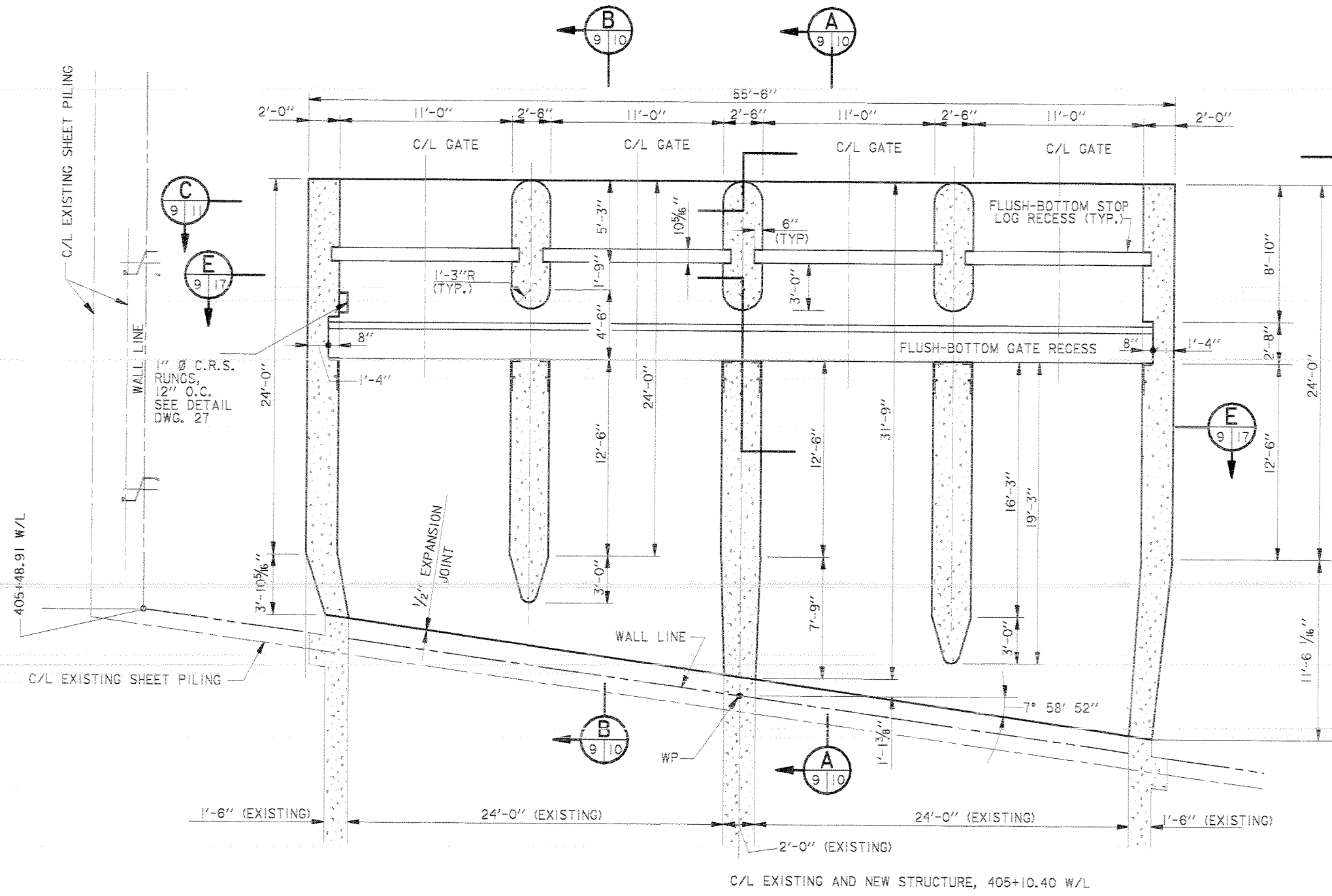
DISCHARGE AREA SECTIONS

DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 64	PLOT DATE: NOV. 10, 1997
DRAWN BY: J.DARBY	CADD FILE: 4477807.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 8 OF 46	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			

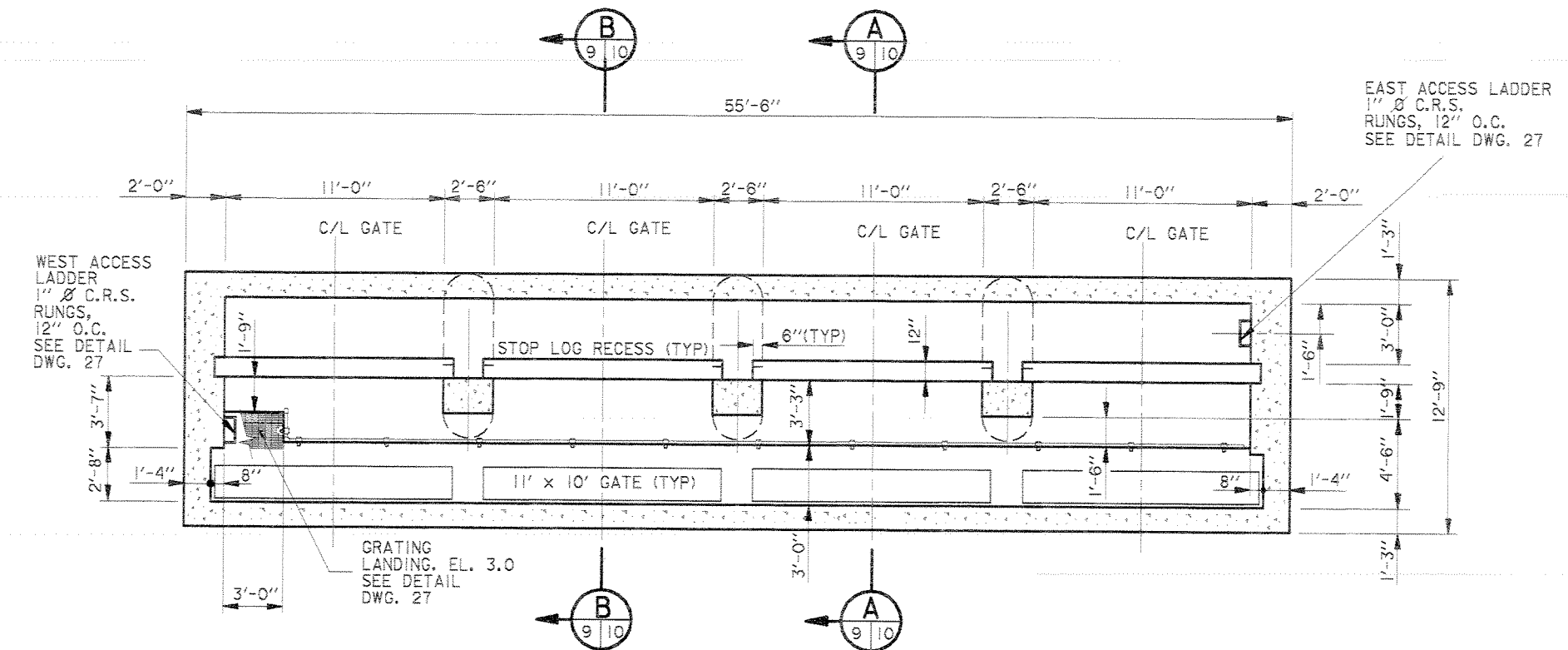


* - ADJUST SLOPE OF STRUCTURAL EXCAVATION SO THAT TOP OF EXCAVATION DOES NOT EXTEND BEYOND EDGE OF DOCK.

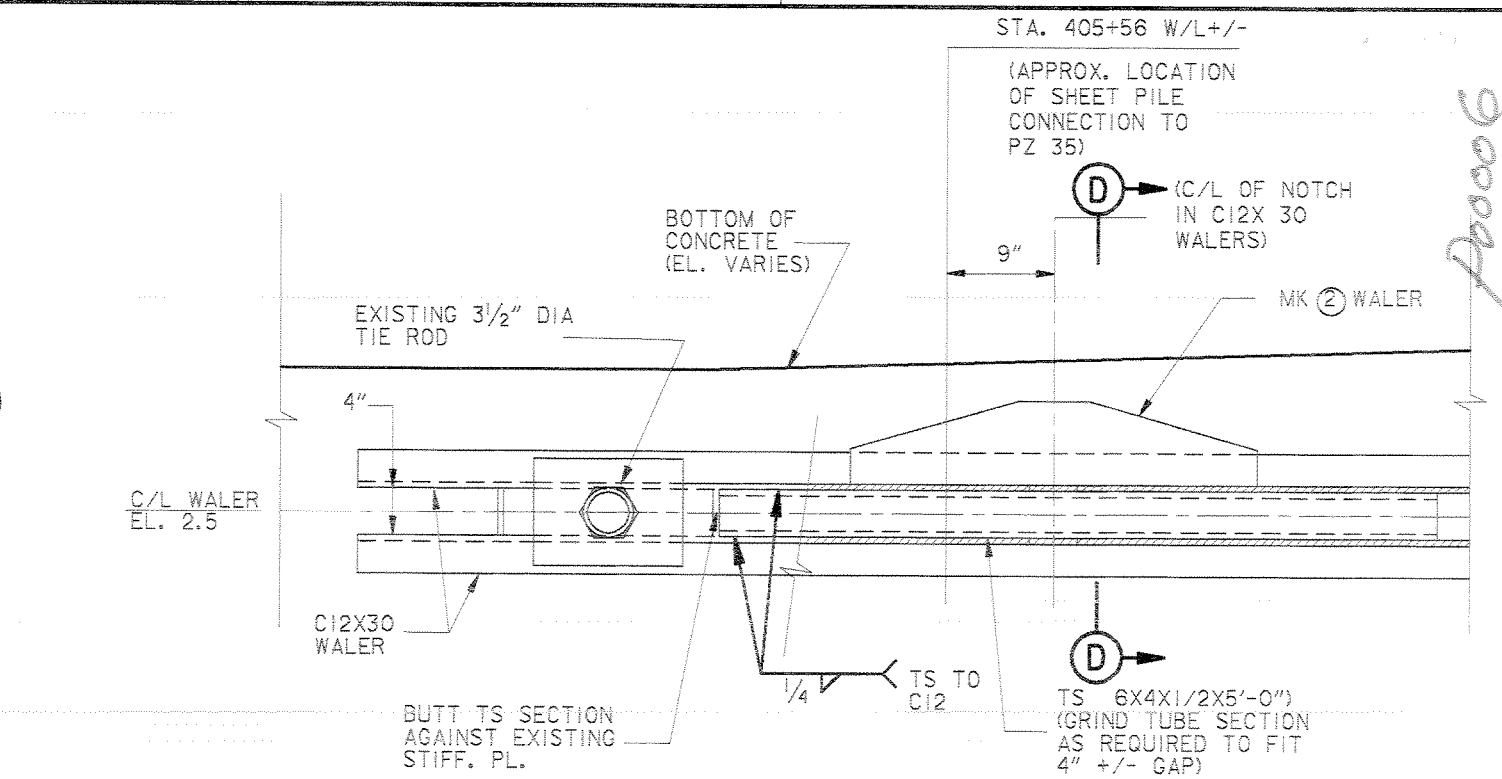
Safety is a Part of Your Contract



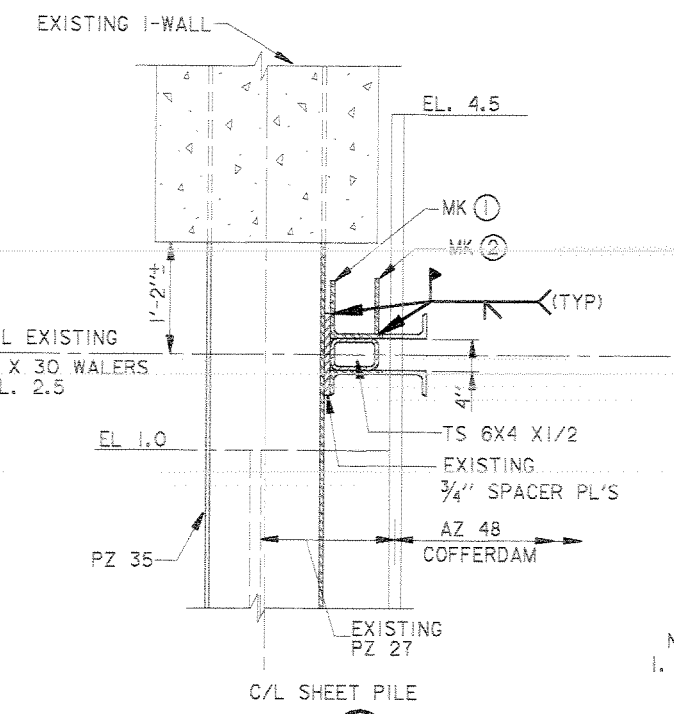
**SLUICE GATE STRUCTURE
PLAN AT ELEV. -11.0**
SCALE: 1/4" = 1' - 0"



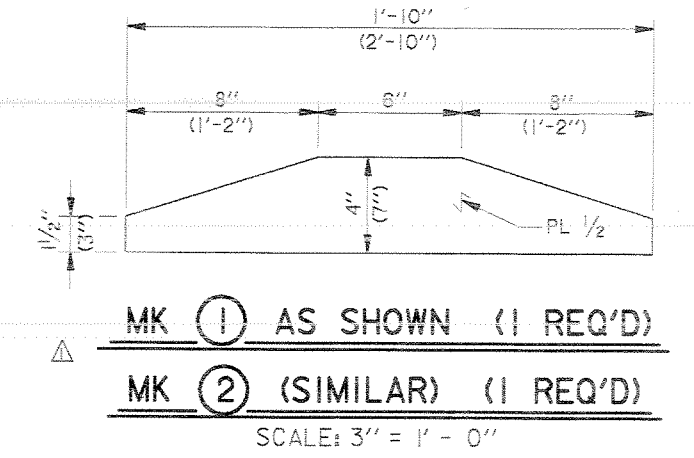
**SLUICE GATE STRUCTURE
PLAN AT EL. 8.0**
SCALE: 1/4" = 1' - 0"



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

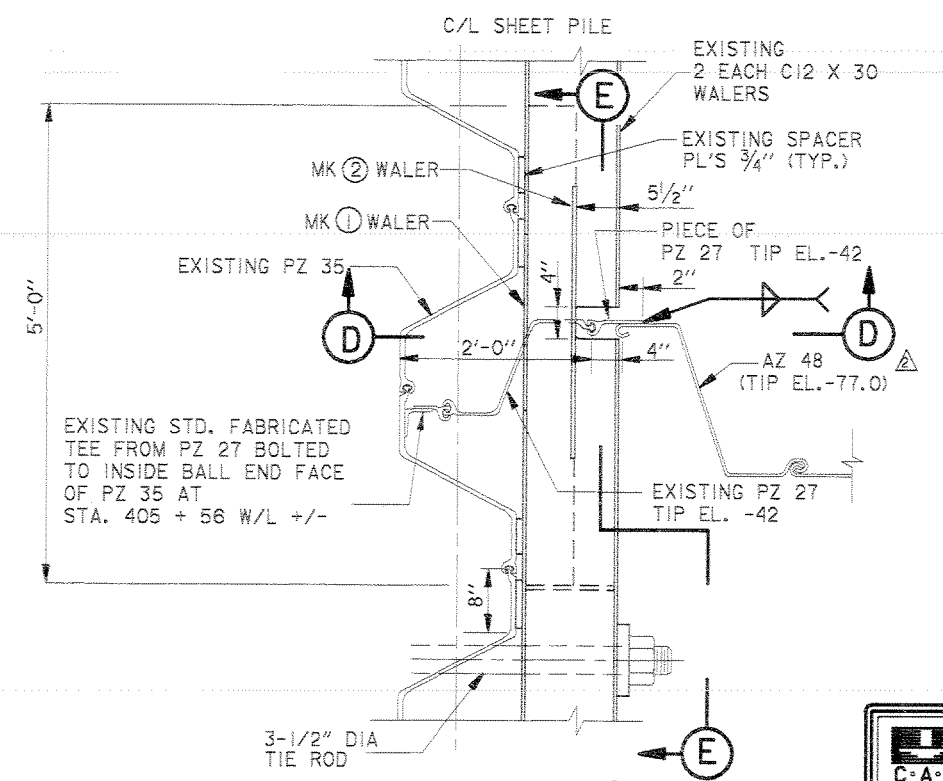


SECTION D
SCALE: 1" = 1' - 0"

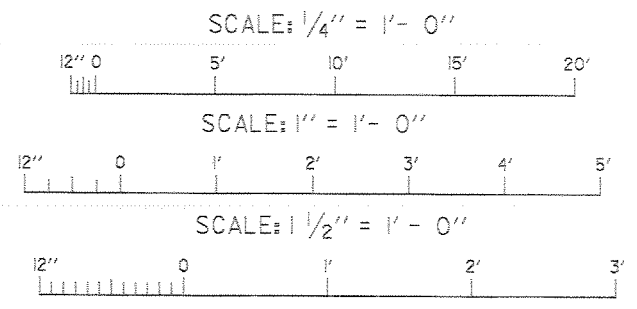


MK 1 AS SHOWN (1 REQ'D)
MK 2 (SIMILAR) (1 REQ'D)
SCALE: 3" = 1' - 0"

- NOTES:
- STEEL FOR MK 1 & MK 2 SHALL BE HIGH STRENGTH STEEL MEETING ASTM A 572, GRADE 50
 - GALVANIZE MK 1 & MK 2 AFTER FABRICATION.
 - CENTER MK 1 & MK 2 PLATES ABOUT THE NOTCH IN C12 X 30 WALERS.



DETAIL
SCALE: 1" = 1' - 0"



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED SHEET PILE IN DETAIL 1	DEC 98	CAL
△	REVISED MK 1 & MK 2, AMEND #1	1/23/98	CAL

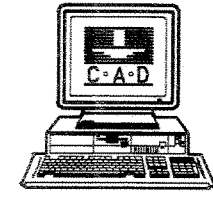
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.

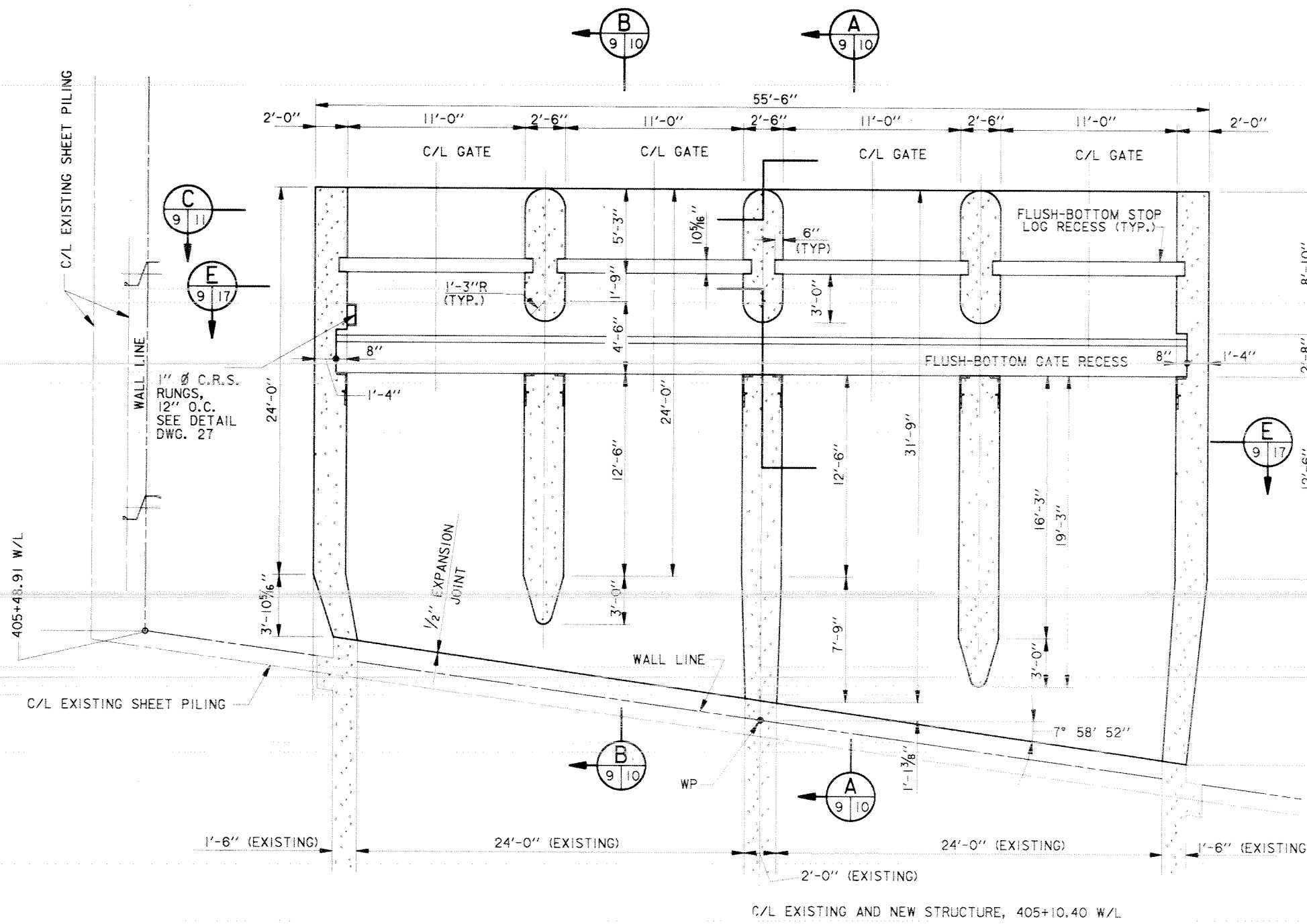
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

SLUICE GATE MASONRY SECTIONS (SHT 1 OF 2)

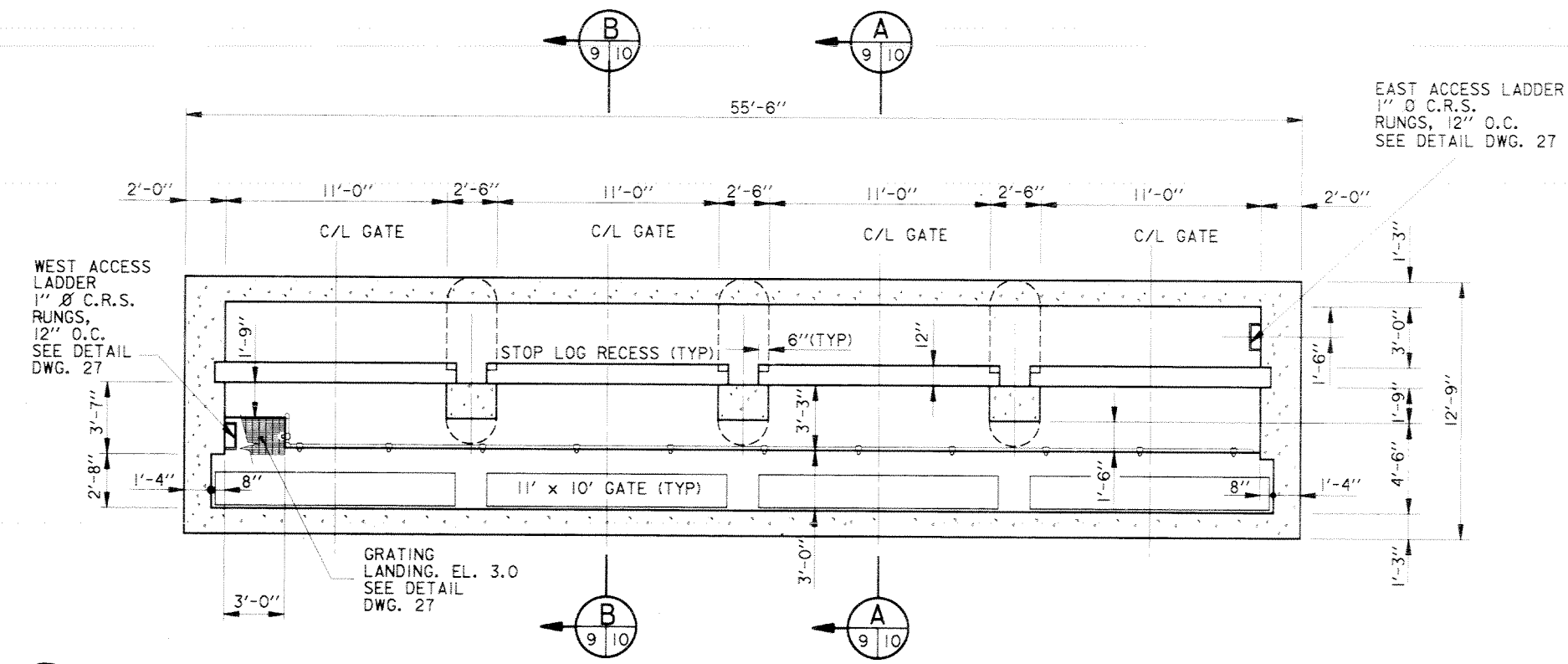
DESIGNED BY: P. SCHAEFER	DATE: NOV. 97	PLOT SCALE: 48	PLOT DATE: DEC. 7, 1998
DRAWN BY: MAGEE	CADD FILE: 44778P02.DGN		FILE NO. H-4-44778
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001		DWG. 9 OF 46



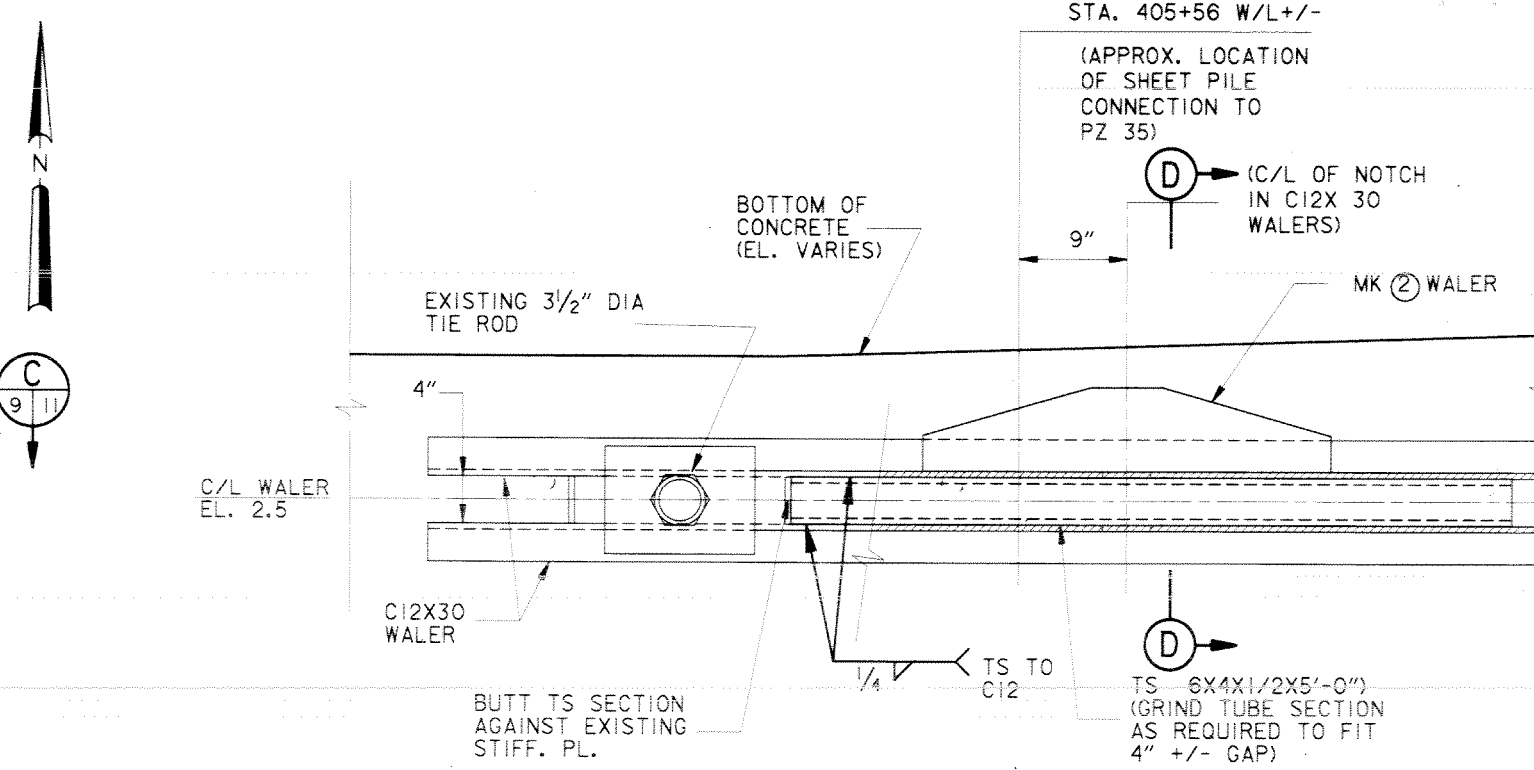
Safety is a Part of Your Contract



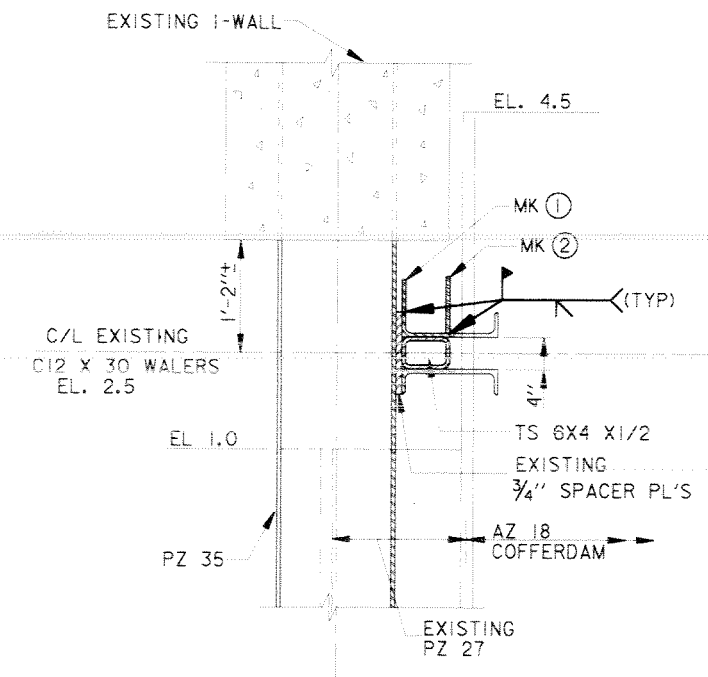
**SLUICE GATE STRUCTURE
PLAN AT ELEV. -11.0**
SCALE: 1/4" = 1' - 0"



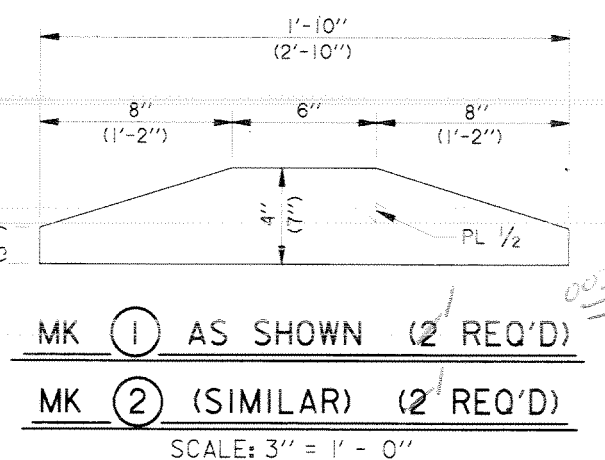
**SLUICE GATE STRUCTURE
PLAN AT ELEV. 8.0**
SCALE: 1/4" = 1' - 0"



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

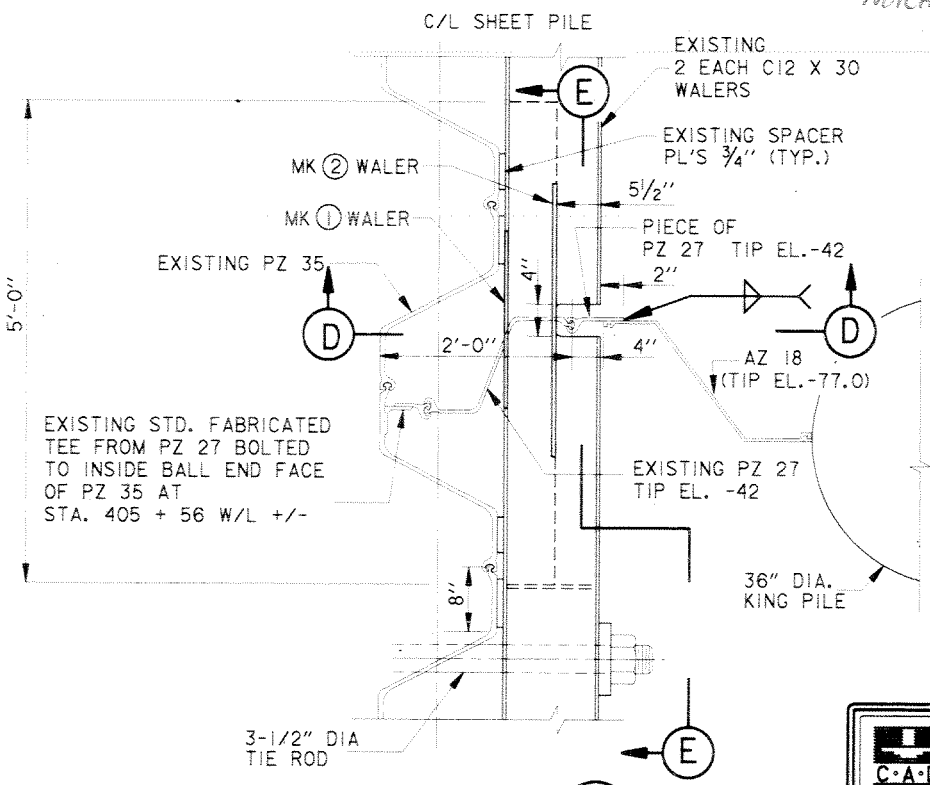


SECTION D
SCALE: 1" = 1' - 0"

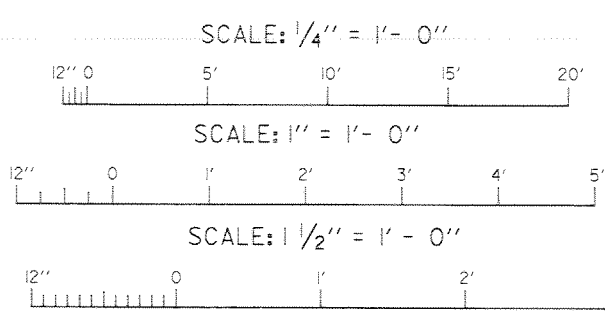


MK 1 AS SHOWN (2 REQ'D)
MK 2 (SIMILAR) (2 REQ'D)
SCALE: 3" = 1' - 0"

- NOTES:
1. STEEL FOR MK 1 & MK 2 SHALL BE HIGH STRENGTH STEEL MEETING ASTM A 572, GRADE 50
 2. GALVANIZE MK 1 & MK 2 AFTER FABRICATION.
 3. CENTER MK 1 & MK 2 PLATES ABOUT CENTER OF NOT CHIN C12 X 30 WALERS.

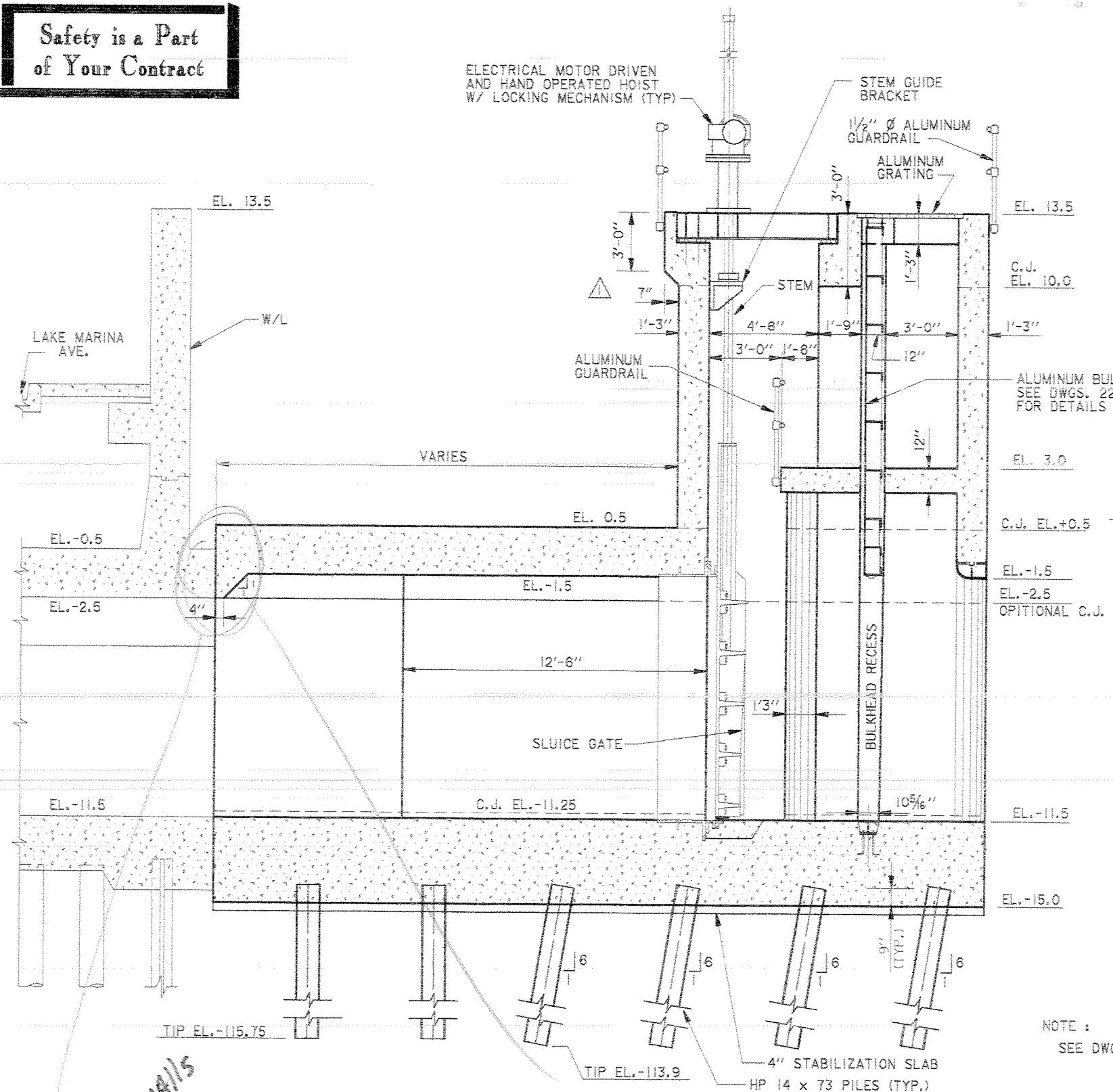


DETAIL
SCALE: 1" = 1' - 0"



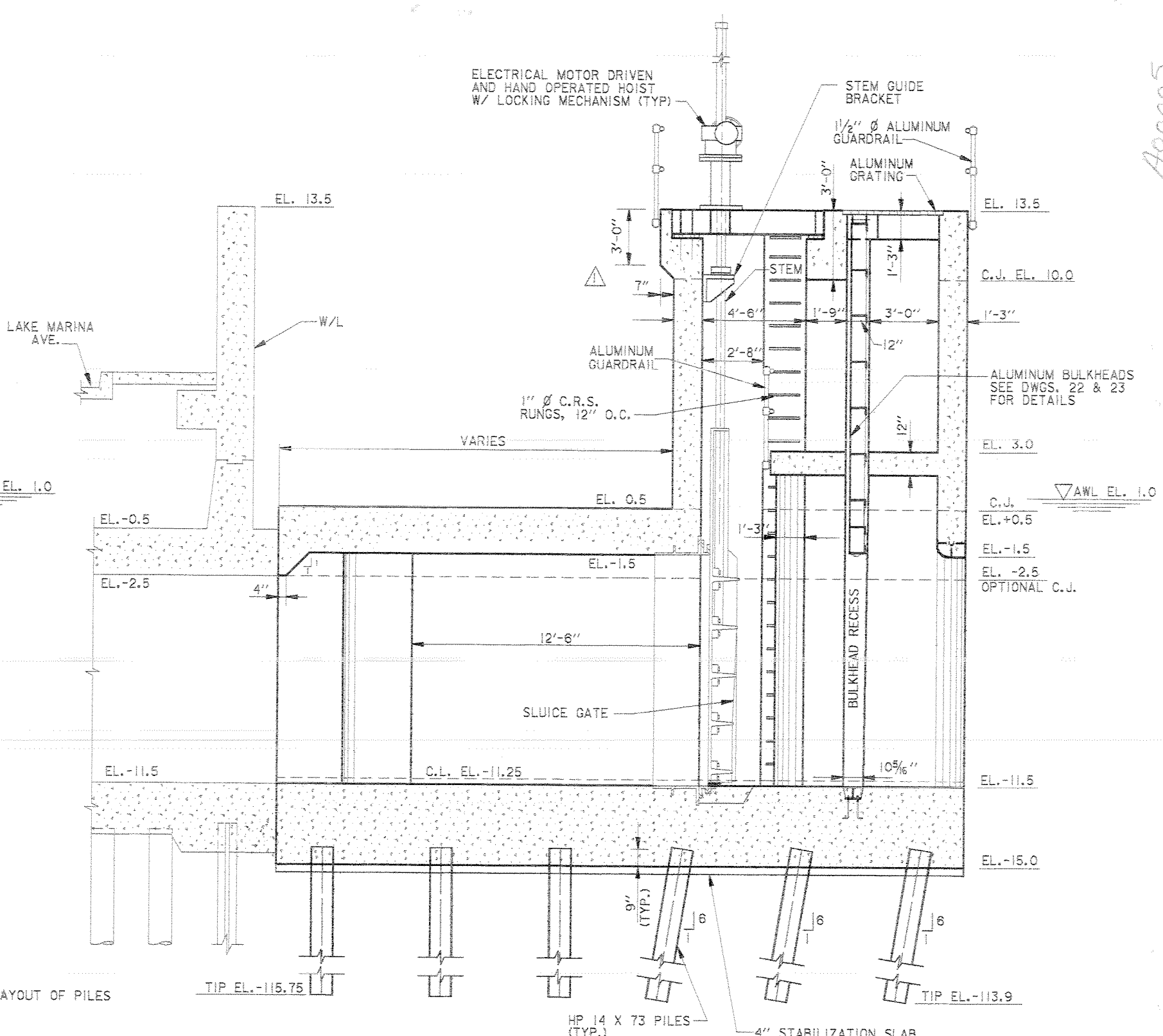
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS MARINE PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
SLUICE GATE MASONRY SECTIONS (SHT 1 OF 2)			
DESIGNED BY: P. SCHAEFER	DATE: NOV. 97	PLOT SCALE: 48	PLOT DATE: DEC. 11, 1997
DRAWN BY: MAGEE	CADD FILE: 44778P02.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 9 OF 46	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			

**Safety is a Part
of Your Contract**

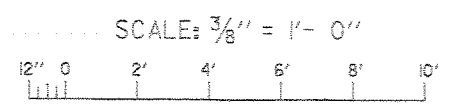


SECTIONS A
9/10

NOTE:
SEE DWG. 13 FOR LAYOUT OF PILES



SECTIONS B
9/10



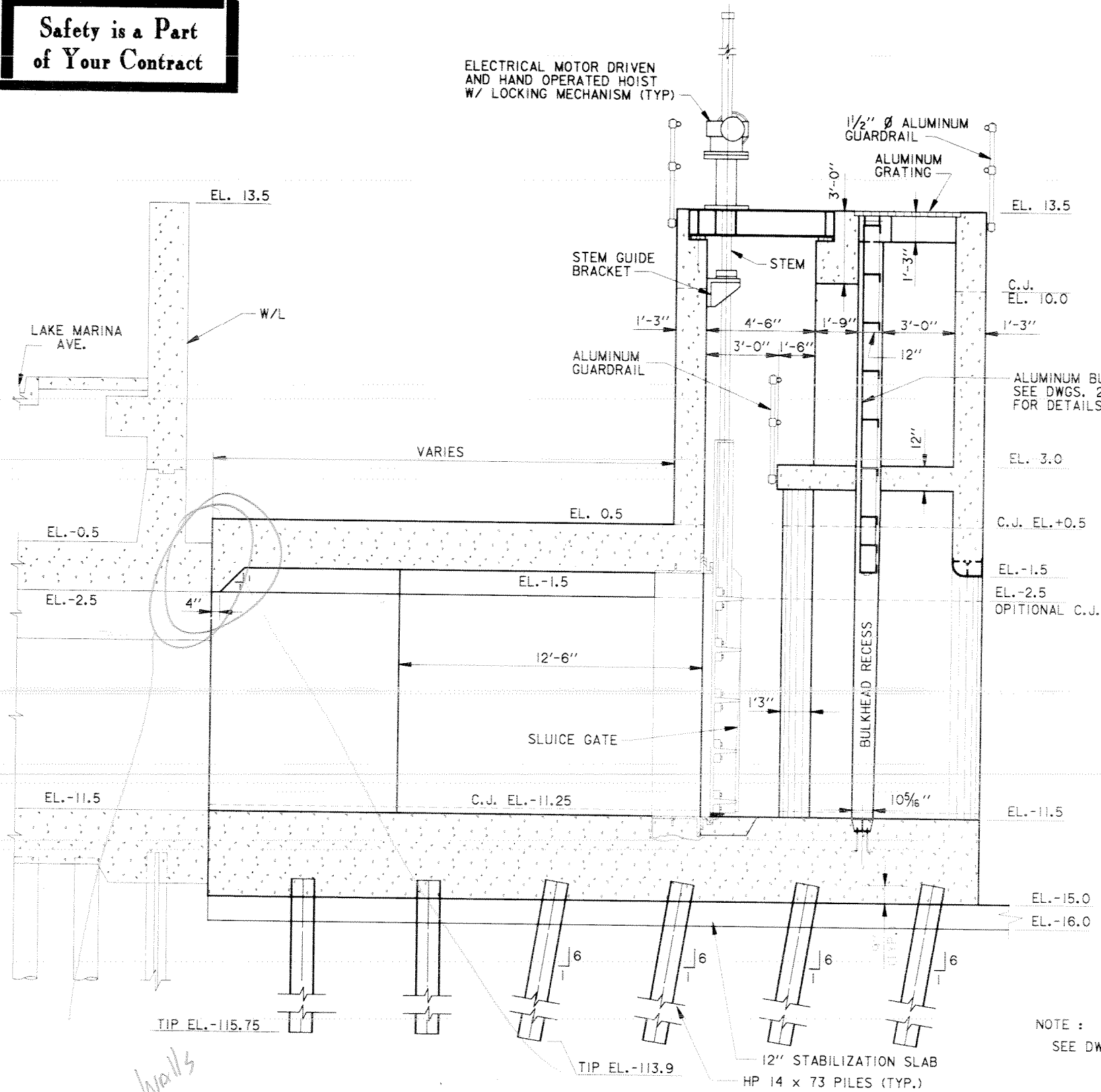
SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED HOIST BEAM & WALL GEOMETRY	2/1/99	CAL

REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA SLUICE GATE MASONRY SECTIONS (SHT. 2 OF 2)			
DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 32	PLOT DATE: FEB. 1, 1999
DRAWN BY: HOWAT	CADD FILE: 4477819.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 10 OF 46	

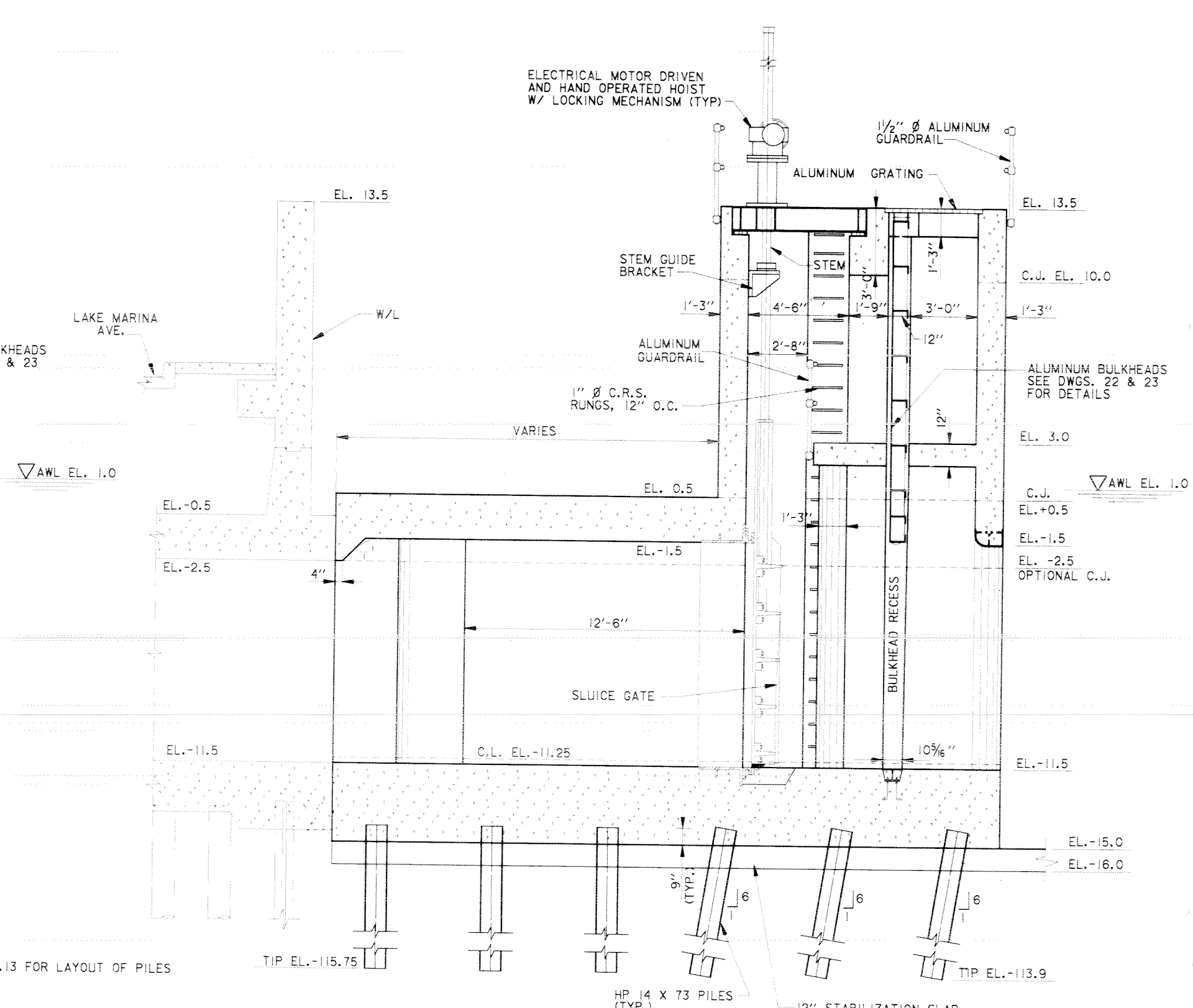
NEW WALLS

100005

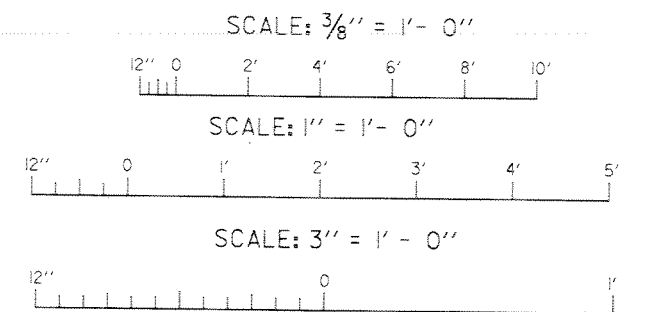
**Safety is a Part
of Your Contract**



SECTIONS A
9/10

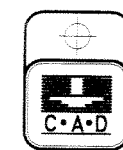


SECTIONS B
9/10



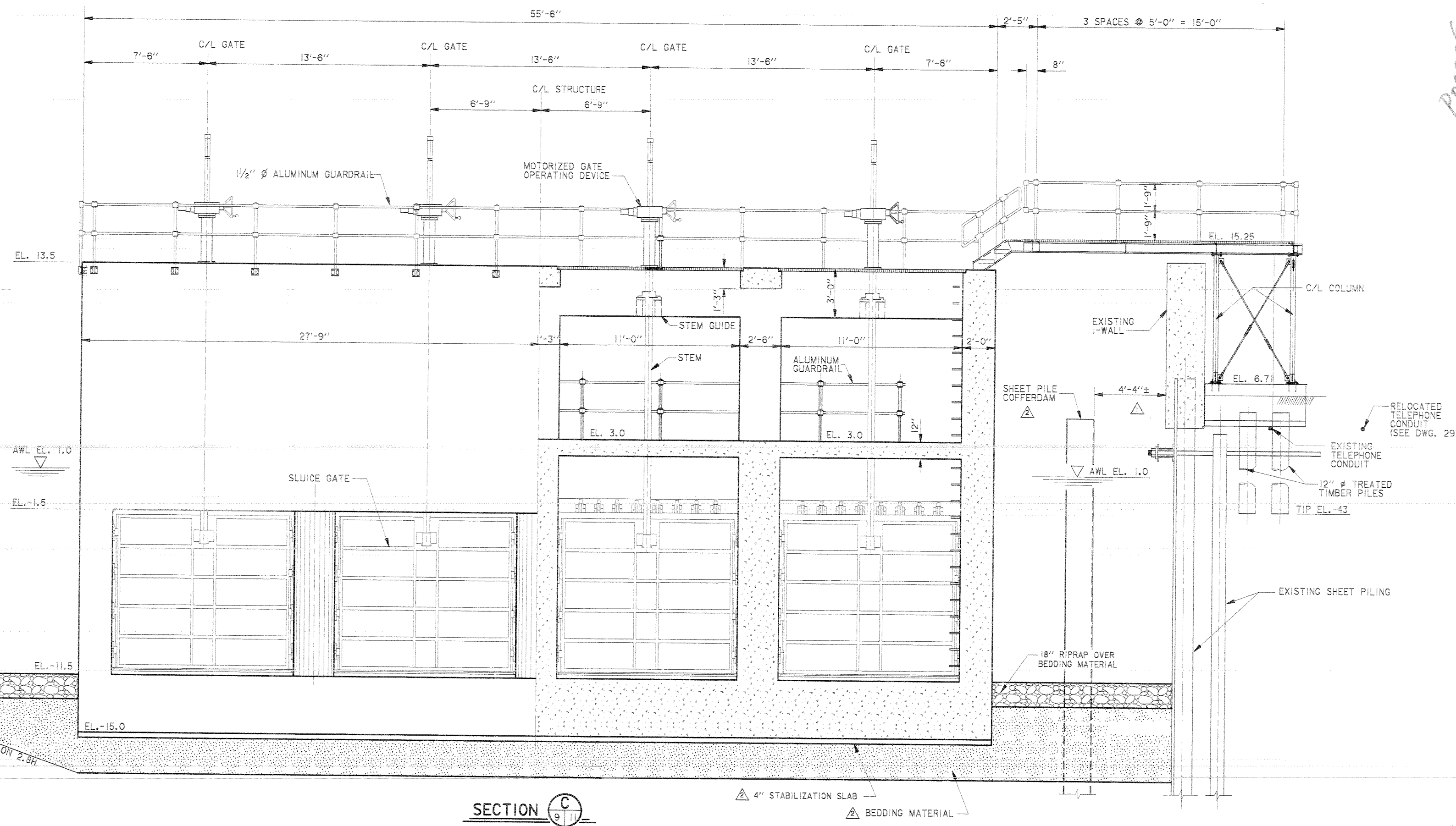
New Walls

AREA EXPOSED AFTER CONSTRUCTION

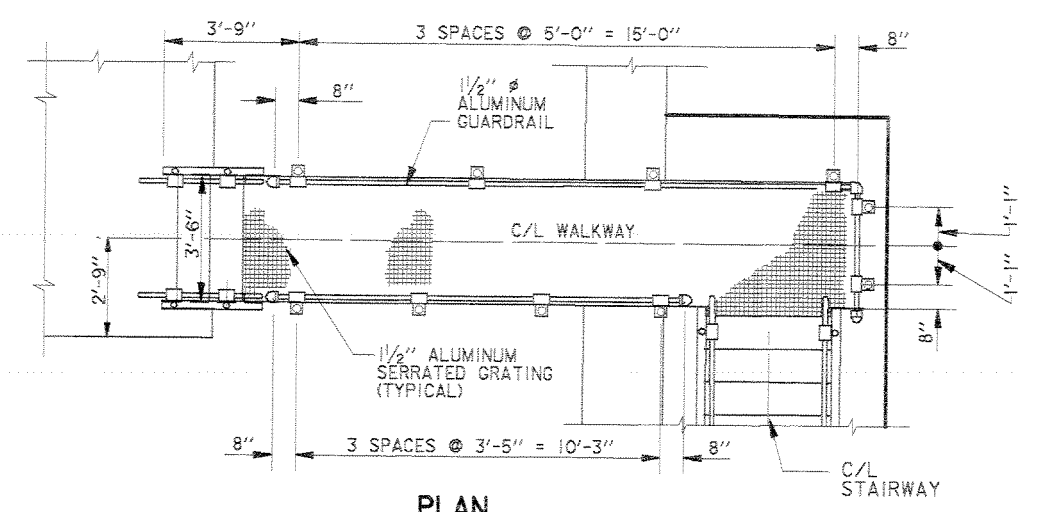


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA SLUICE GATE MASONRY SECTIONS (SHT. 2 OF 2)			
DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 32	PLOT DATE: NOV. 25, 1997
DRAWN BY: HOWAT	CADD FILE: 447788/9.DGN	FILE NO.	H-4-44778
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. NO.	DWG. 10 OF 46
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			

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SECTION C



PLAN
ACCESS WALKWAY GUARDRAILING

SCALE: 3/8" = 1'-0"
 12" 0 2' 4' 6' 8' 10'

SYMBOL	DESCRIPTION	DATE	APPROVED
△	DELETED TREMIE SLAB AND DRAINAGE MATERIAL ADDED 4" STAB. SLAB	12/98	CAL
△	CORRECTED DIMENSION, AMEND #1	1/23/98	CAL

REVISIONS

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

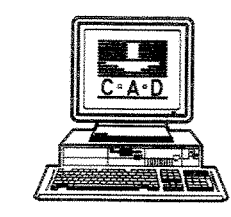
LAKE PONTCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN
 NEW ORLEANS LAKEFRONT LEVEE
 WEST OF I.H.N.C.

ORLEANS MARINA PHASE V - SLUICE GATES
 ORLEANS PARISH, LOUISIANA

SLUICE GATE
SECTION ELEVATION

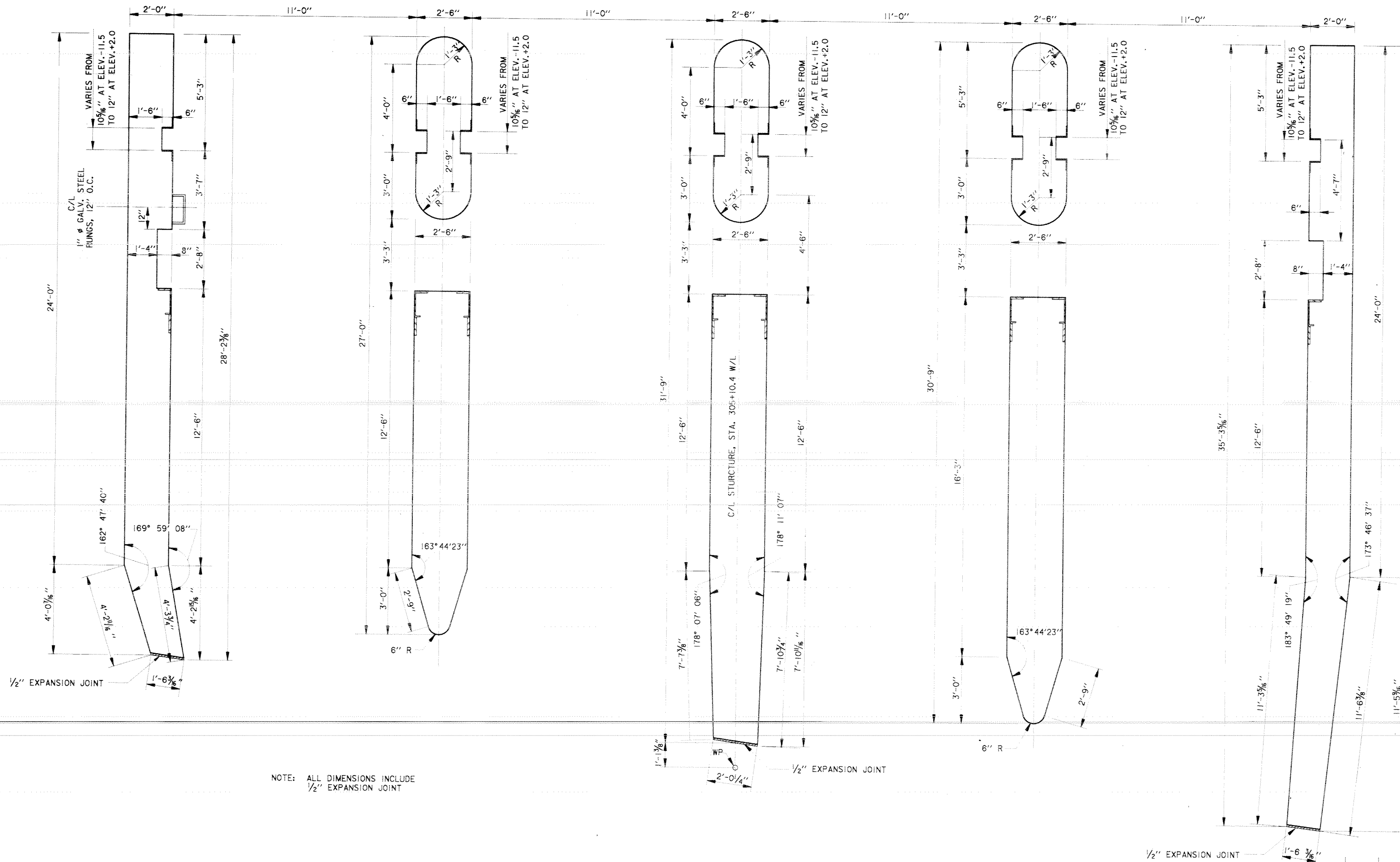
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 32	PLOT DATE: DEC. 1998
DRAWN BY: JCM	CADD FILE: 44778FO.DGN	FILE NO.	H-4-44778
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DESIGN ENGINEER

DWG. 11 OF 46



P00006

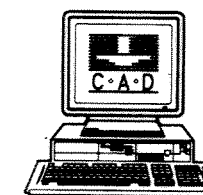
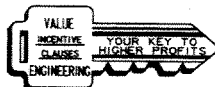
Safety is a Part of Your Contract



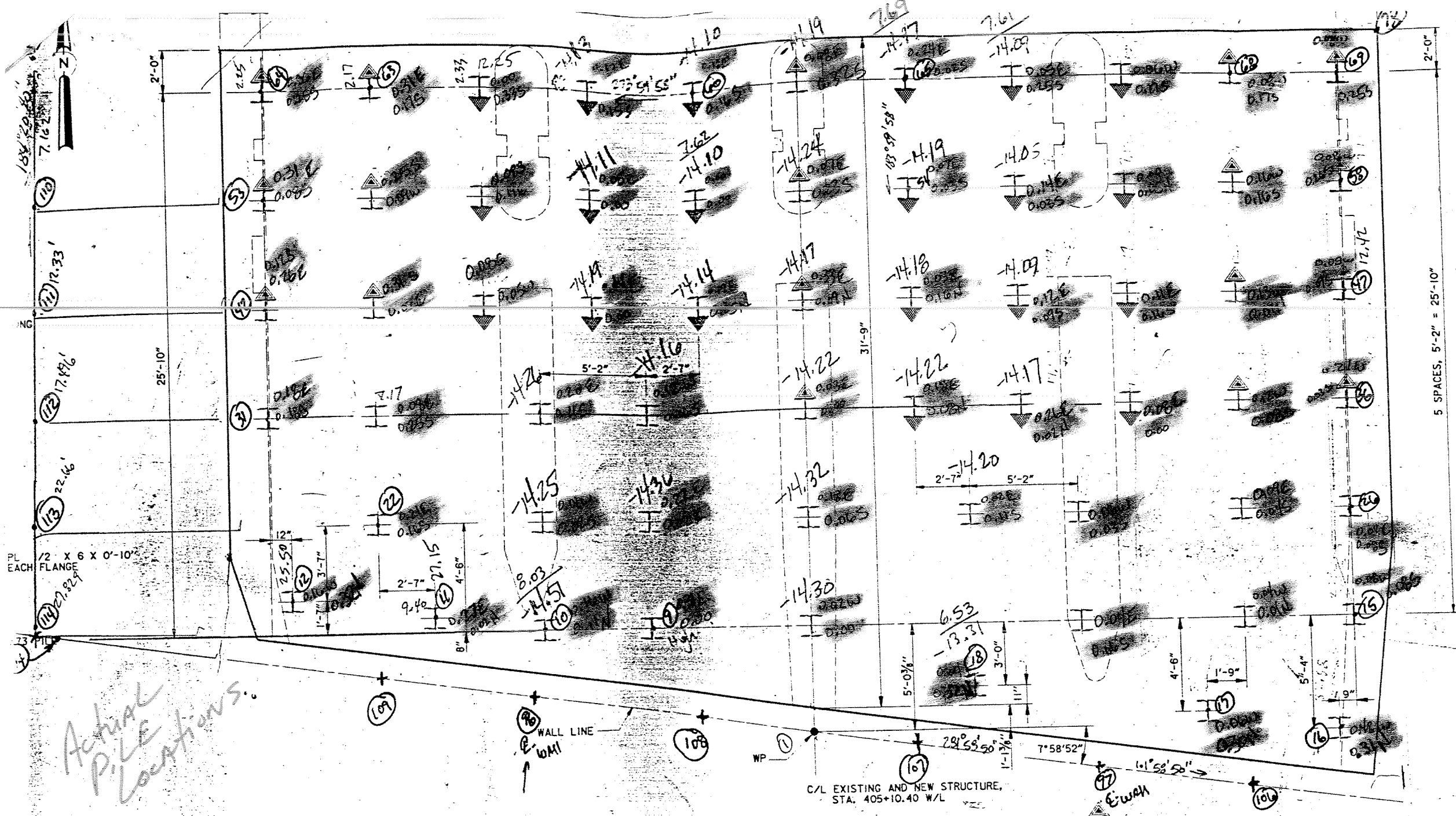
NOTE: ALL DIMENSIONS INCLUDE 1/2" EXPANSION JOINT

PLAN

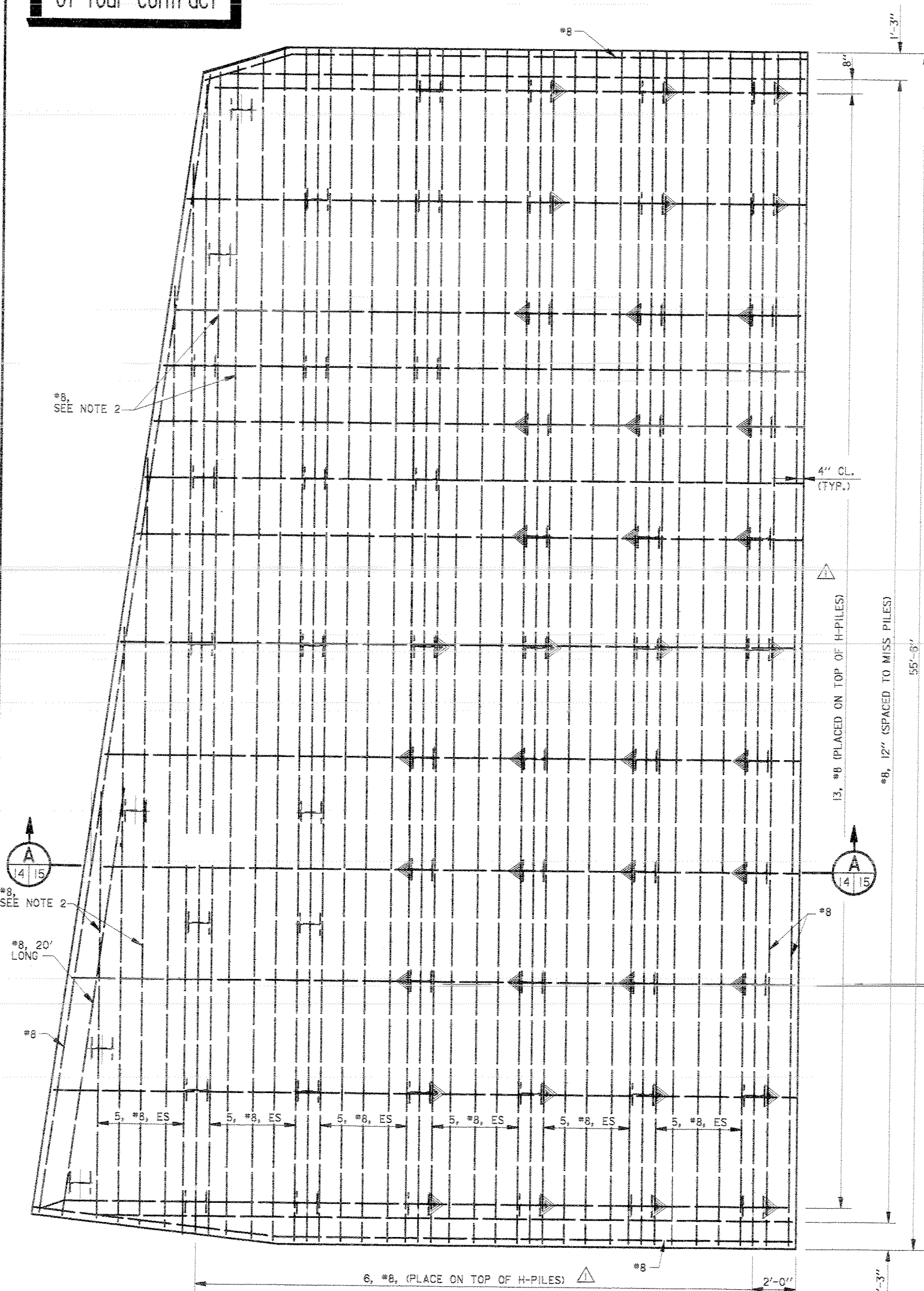
SCALE: 1/2" = 1' - 0"



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA SLUICE GATE WALL GEOMETRY			
DESIGNED BY: P. SCHAEFER	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: DEC. 15, 1997
DRAWN BY: V. COLVILLION	CADD FILE: 4477801.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-000	DWG. 12 OF 46

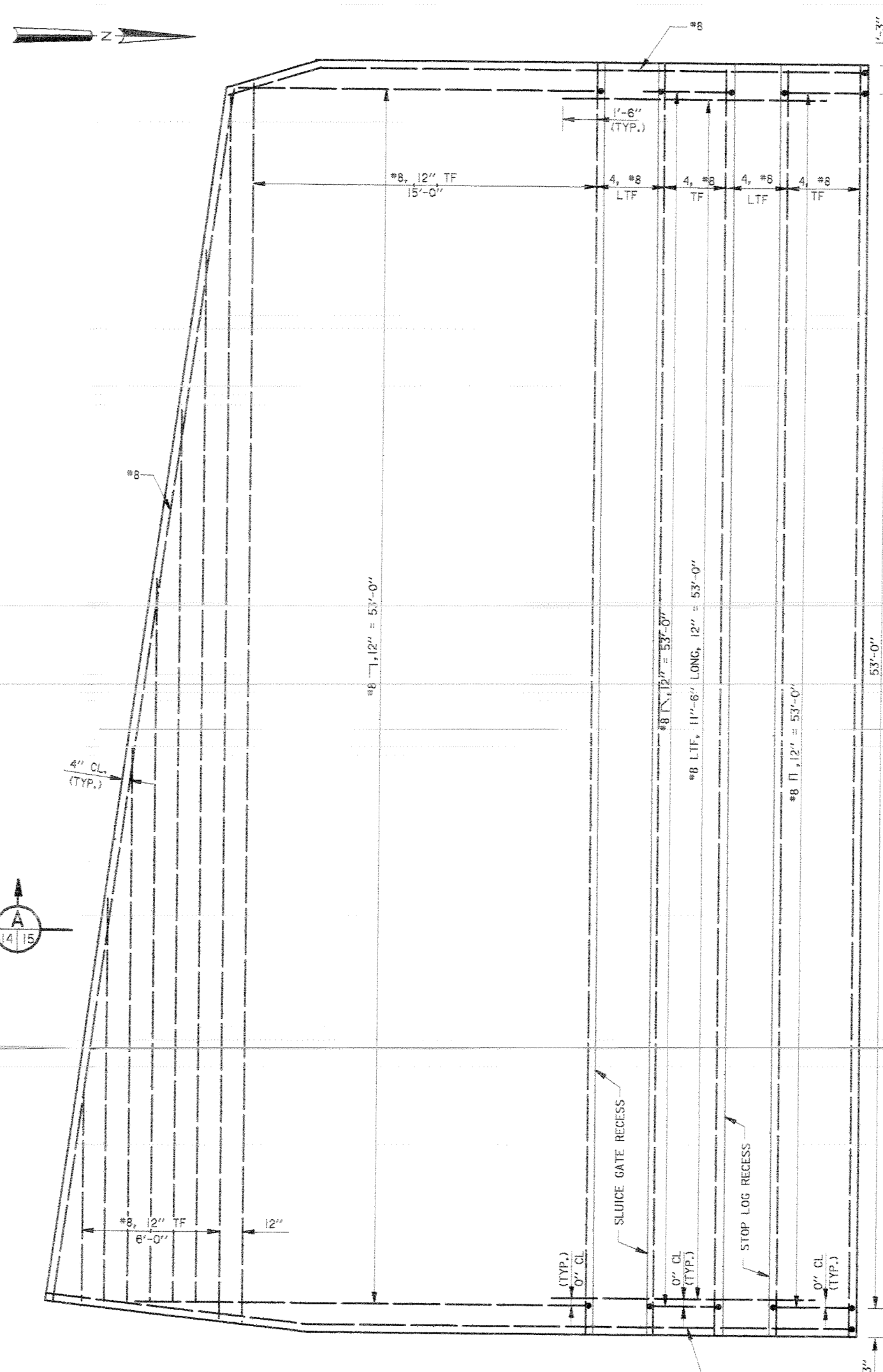


Safety is a Part of Your Contract

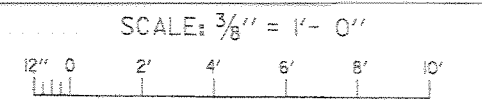


**BOTTOM FACE
PLAN REINFORCEMENT**

- NOTES:
- FOR PILE LAYOUT SEE DWG. 13
 - #8, CONTINUOUS THROUGH H-PILE WEB. BURN 2" Ø MAX HOLE IN WEB TO PASS REINFORCEMENT



**TOP FACE
PLAN REINFORCEMENT**
SCALE: 3/8" = 1'-0"



SYMBOL	DESCRIPTION	DATE	APPROVED
△	ADDED BARS TO TOP OF PILES	DEC 98	CAL

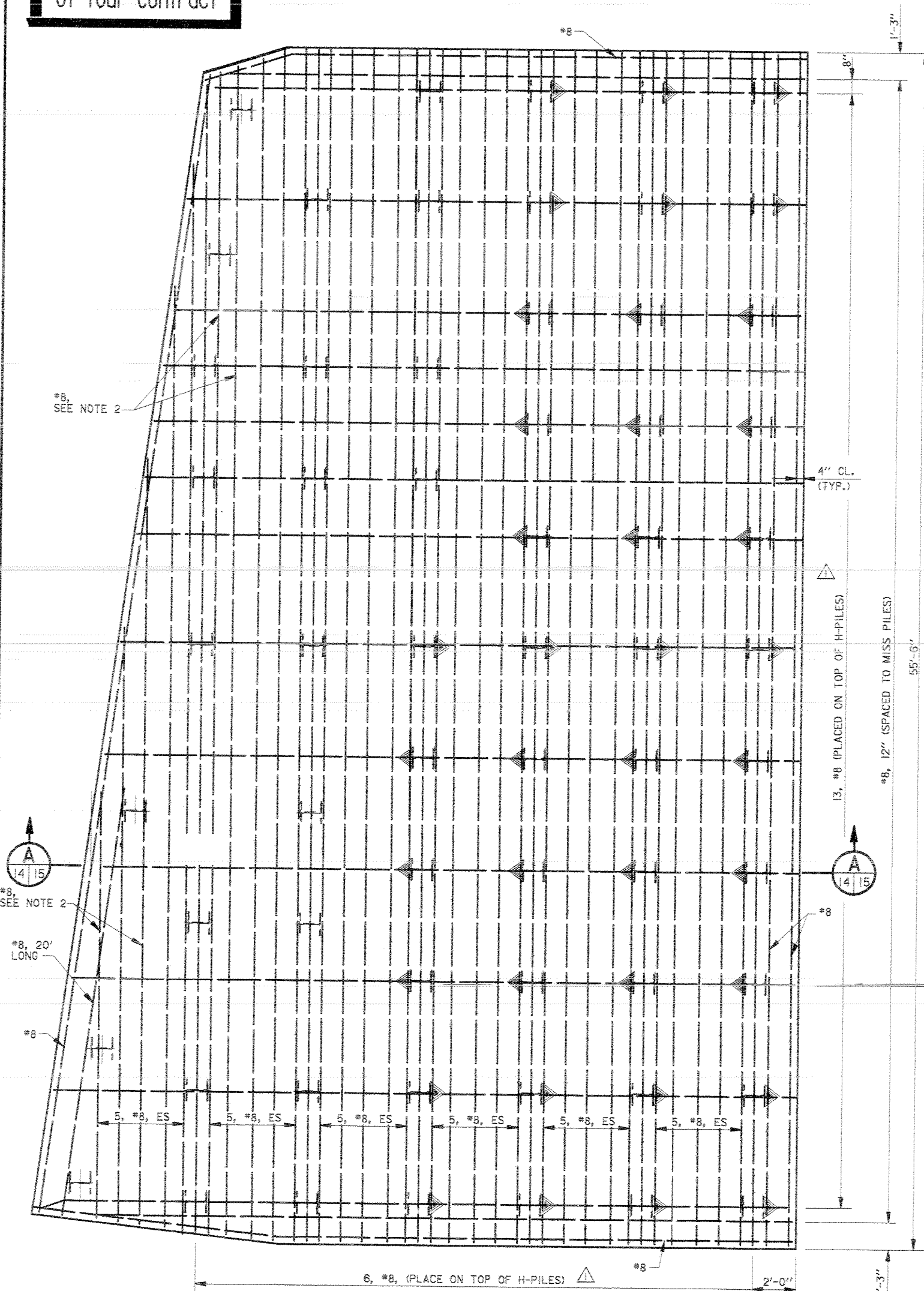
REVISIONS

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA
BASE SLAB REINFORCEMENT

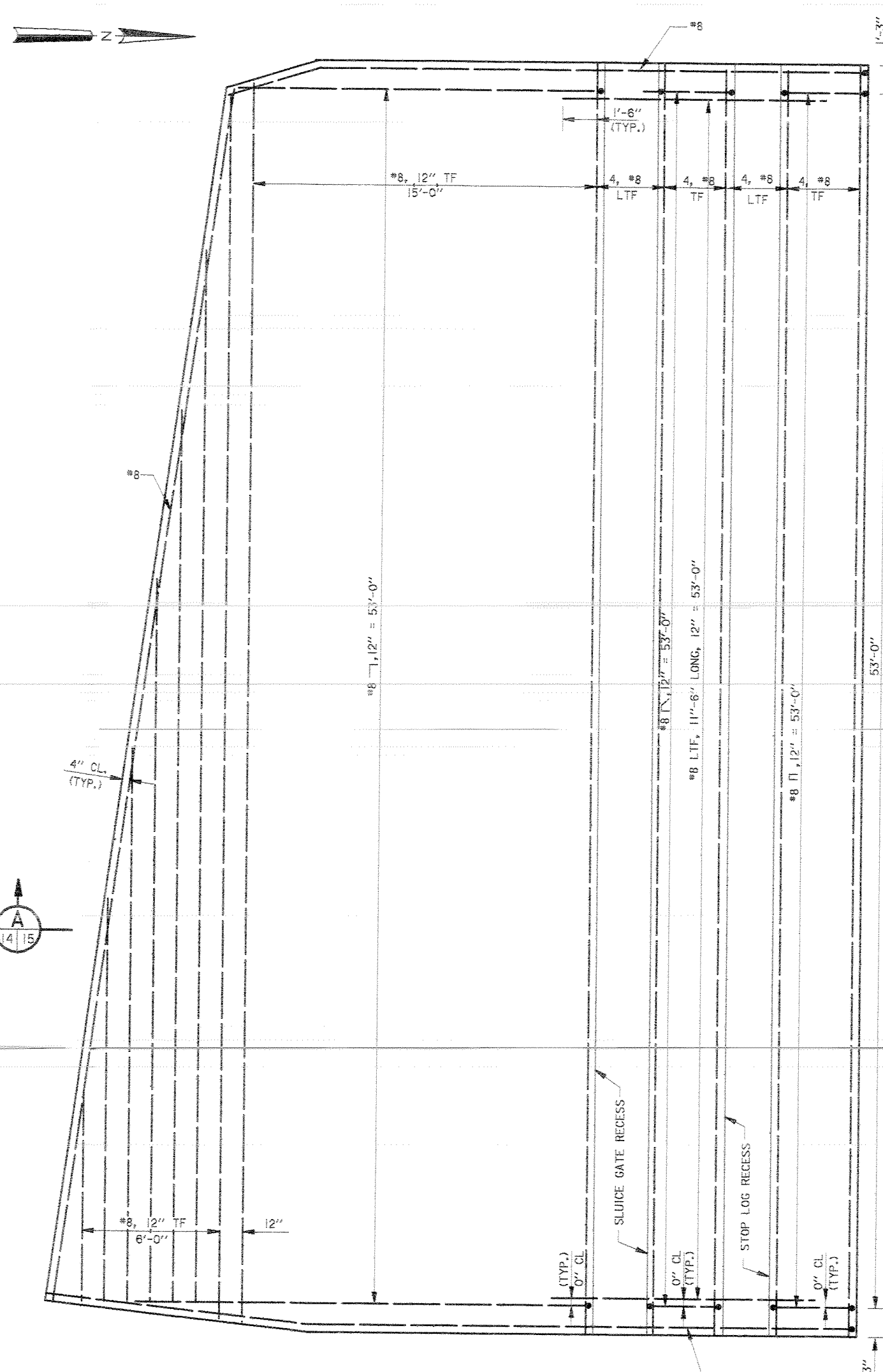
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 32	PLOT DATE: DEC. 18, 1998
DRAWN BY: L. MAGEE	CADD FILE: 44778001.DWG	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 14 OF 46	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			

Safety is a Part of Your Contract



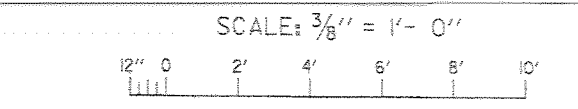
**BOTTOM FACE
PLAN REINFORCEMENT**

- NOTES:
- FOR PILE LAYOUT SEE DWG. 13
 - #8, CONTINUOUS THROUGH H-PILE WEB. BURN 2" Ø MAX HOLE IN WEB TO PASS REINFORCEMENT



**TOP FACE
PLAN REINFORCEMENT**

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



SYMBOL	DESCRIPTION	DATE	APPROVED
△	ADDED BARS TO TOP OF PILES	DEC 98	CAL

REVISIONS

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

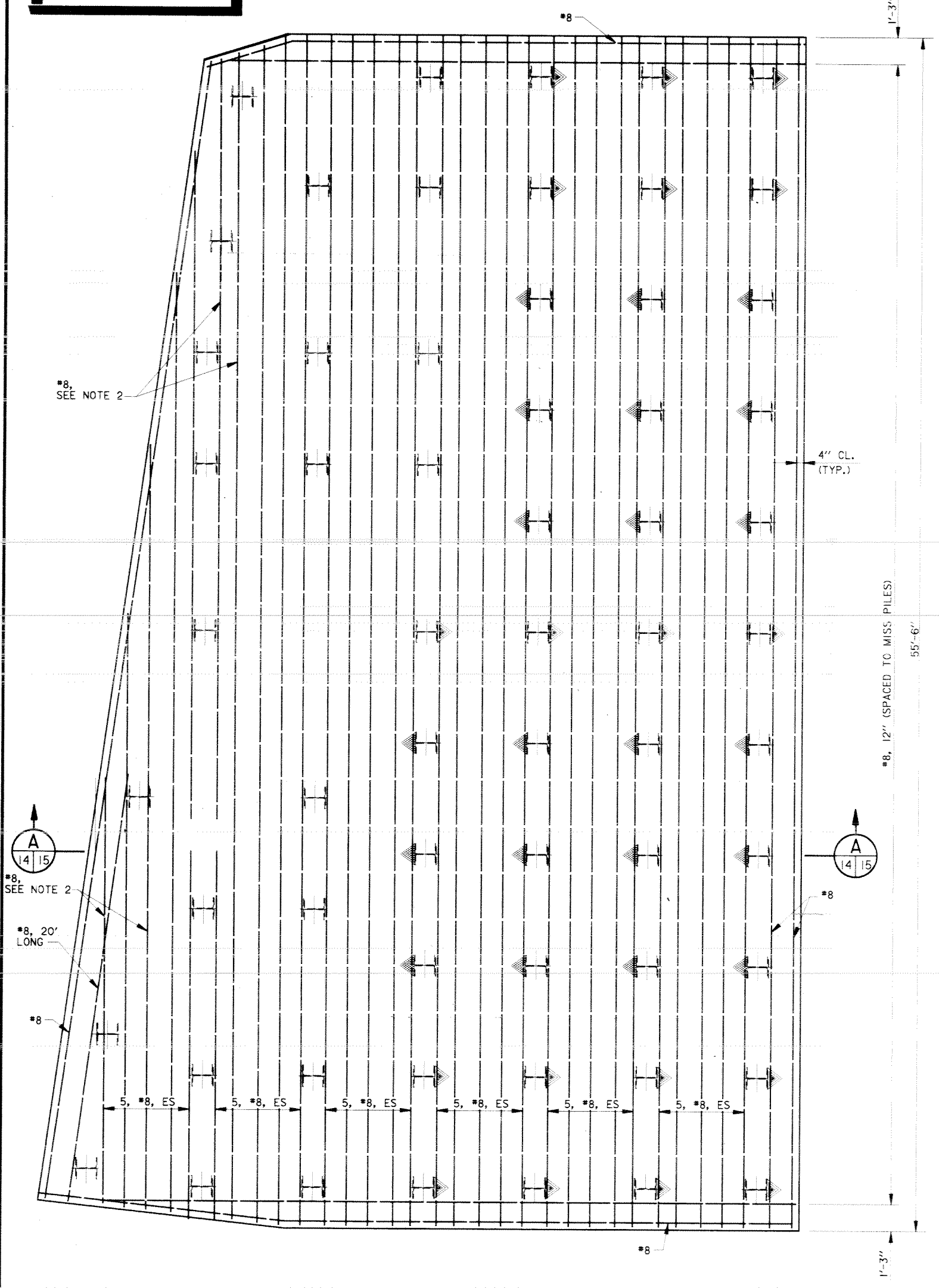
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.

ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

BASE SLAB REINFORCEMENT

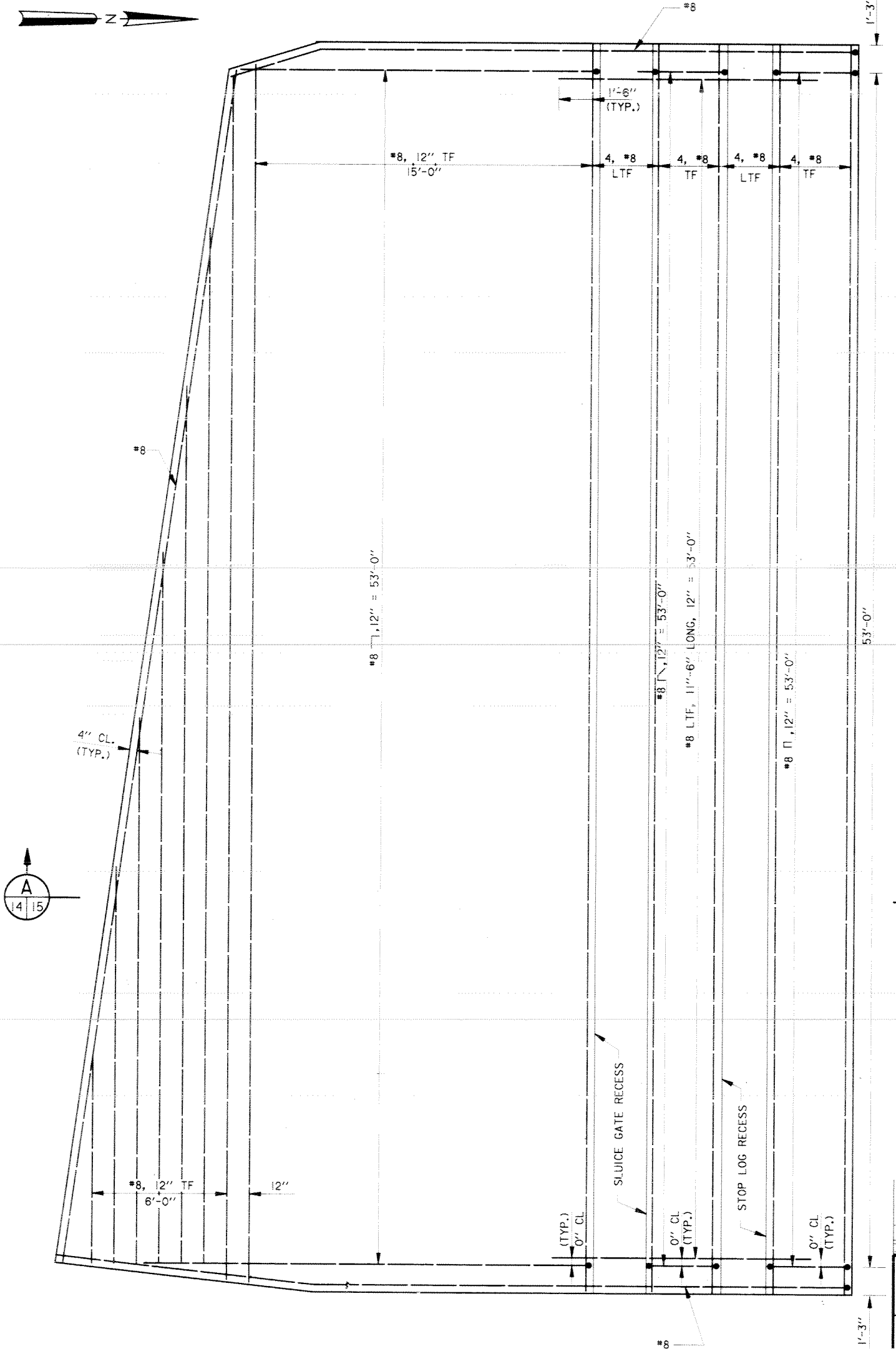
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 32	PLOT DATE: DEC. 18, 1998
DRAWN BY: L. MAGEE	CADD FILE: 44778001.DWG	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DWG. 14 OF 46

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of Your Contract

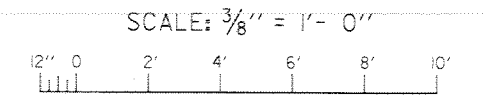


**BOTTOM FACE
PLAN REINFORCEMENT**

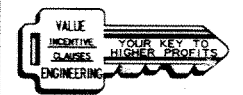
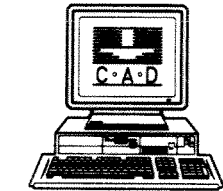
- NOTES:
- FOR PILE LAYOUT SEE DWG. 13
 - #8, CONTINUOUS THROUGH H-PILE WEB. BURN 2" Ø MAX HOLE IN WEB TO PASS REINFORCEMENT



**TOP FACE
PLAN REINFORCEMENT**
SCALE: 3/8" = 1'-0"

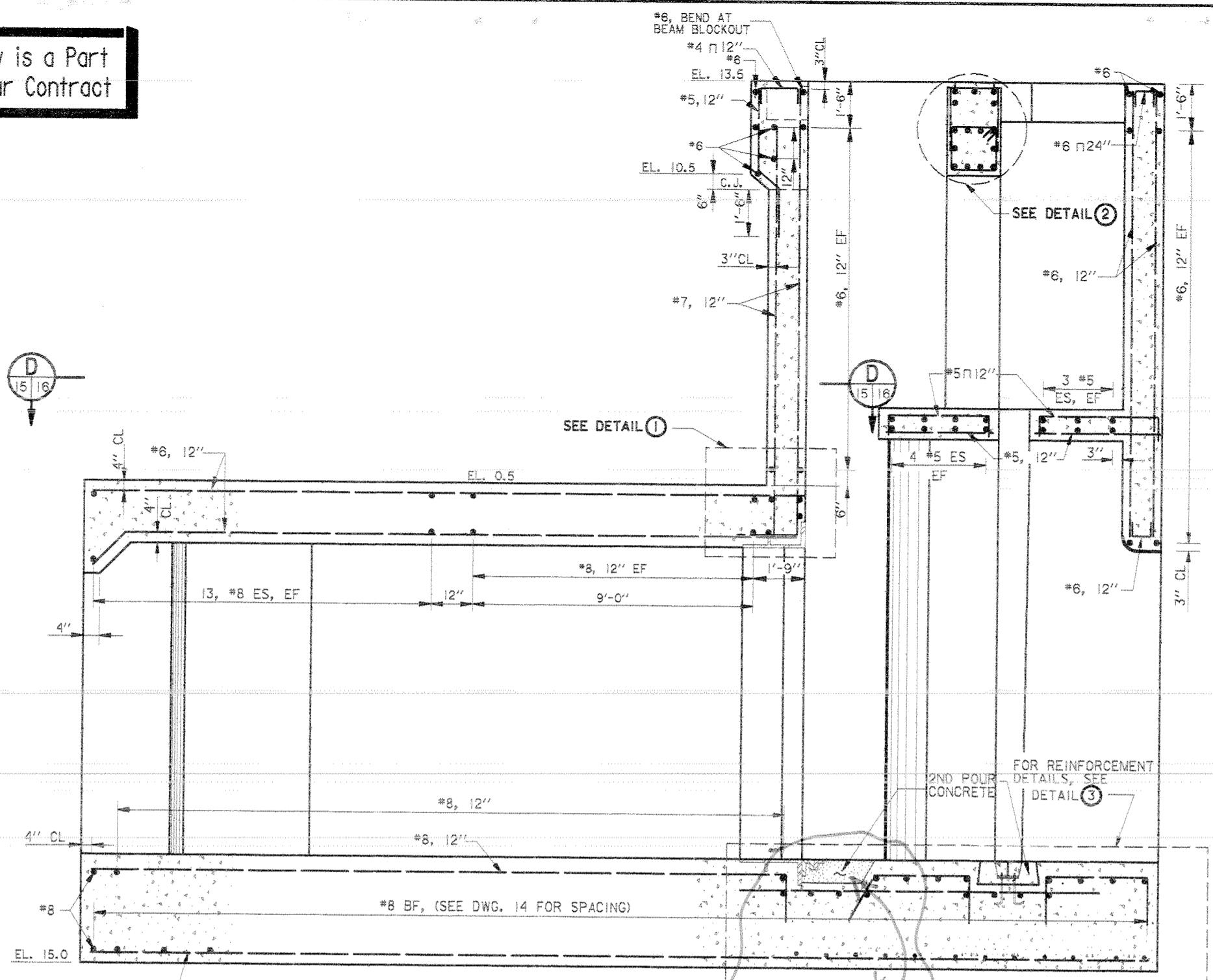


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA BASE SLAB REINFORCEMENT			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 32	PLOT DATE: NOV. 10, 1997
DRAWN BY: L. MAGEE	CADD FILE: 44778001.DWG	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DWG. 14 OF 46



Safety is a Part of Your Contract

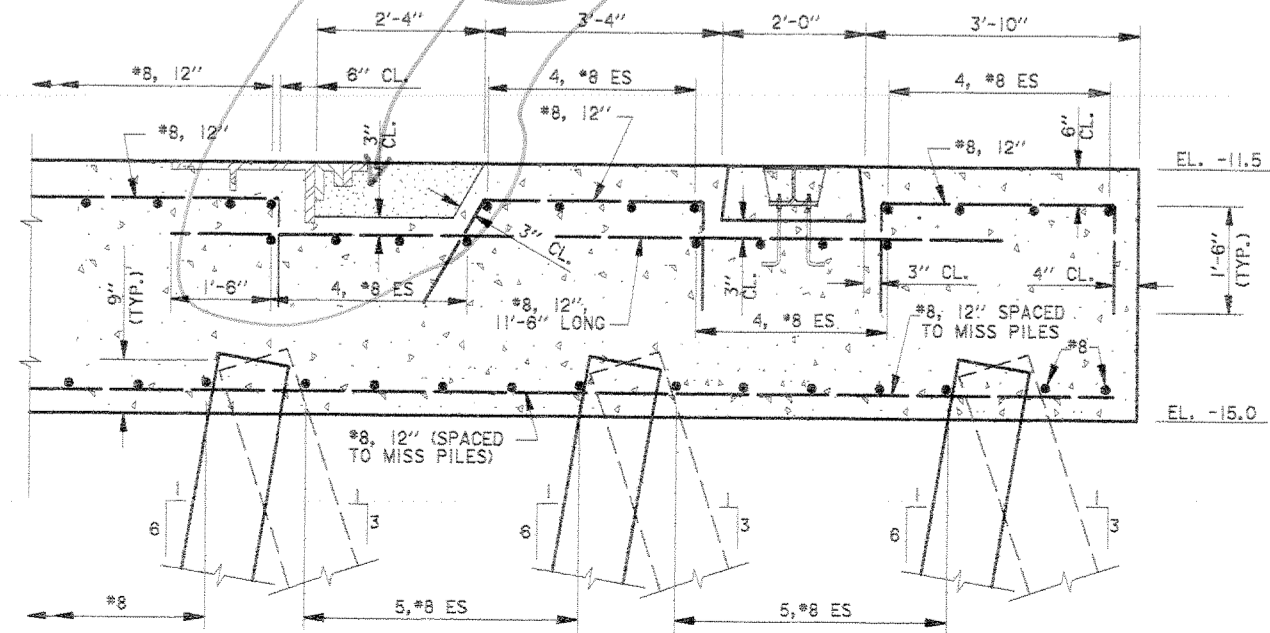
D
15 16



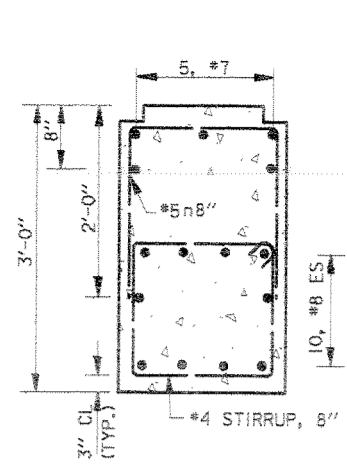
#8, 12" SPACED TO MISS PILES

SECTION A
14 15
19 15
SCALE: 1/2" = 1'-0"

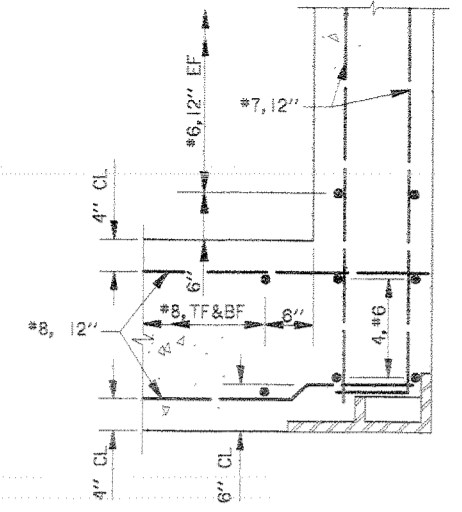
WALL THIMBLES SET & POURED IN TO BASE SLAB. NO BLOCKOUT USED.



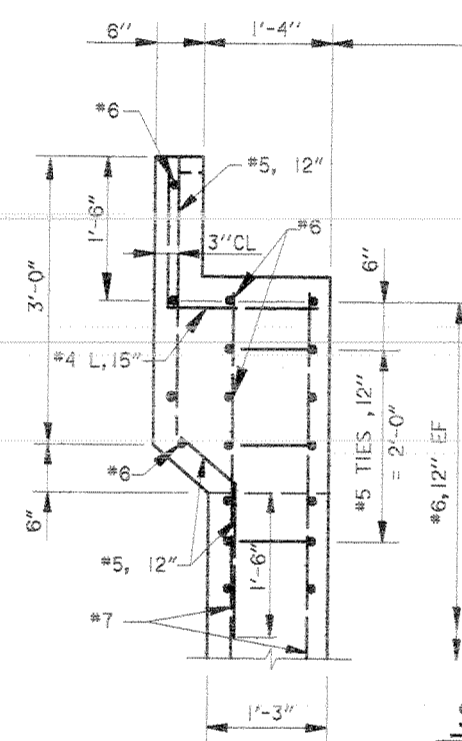
DETAIL 3
SCALE: 3/4" = 1'-0"



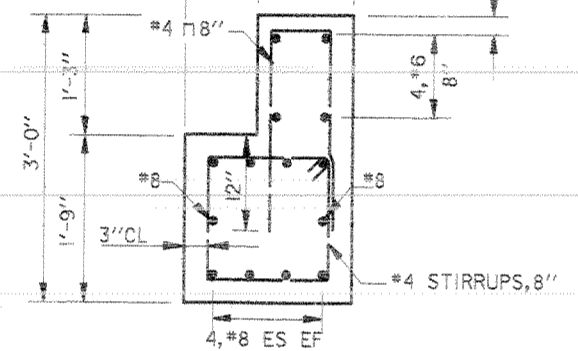
DETAIL 2
SCALE: 1" = 1'-0"



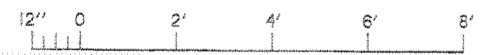
DETAIL 1
SCALE: 1" = 1'-0"



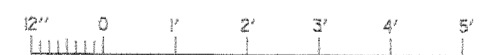
SECTION B
17 15
SCALE: 1" = 1'-0"



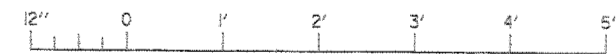
SCALE: 1/2" = 1'-0"



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



SCALE: 1" = 1'-0"



SYMBOL	DESCRIPTION	DATE	APPROVED
△	MODIFIED WALL GEOMETRY AND REINFORCEMENT IN CONJUNCTION WITH CHANGES TO HOIST BEAM.	2/1/99	CAL

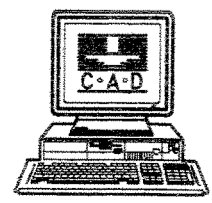
REVISIONS

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

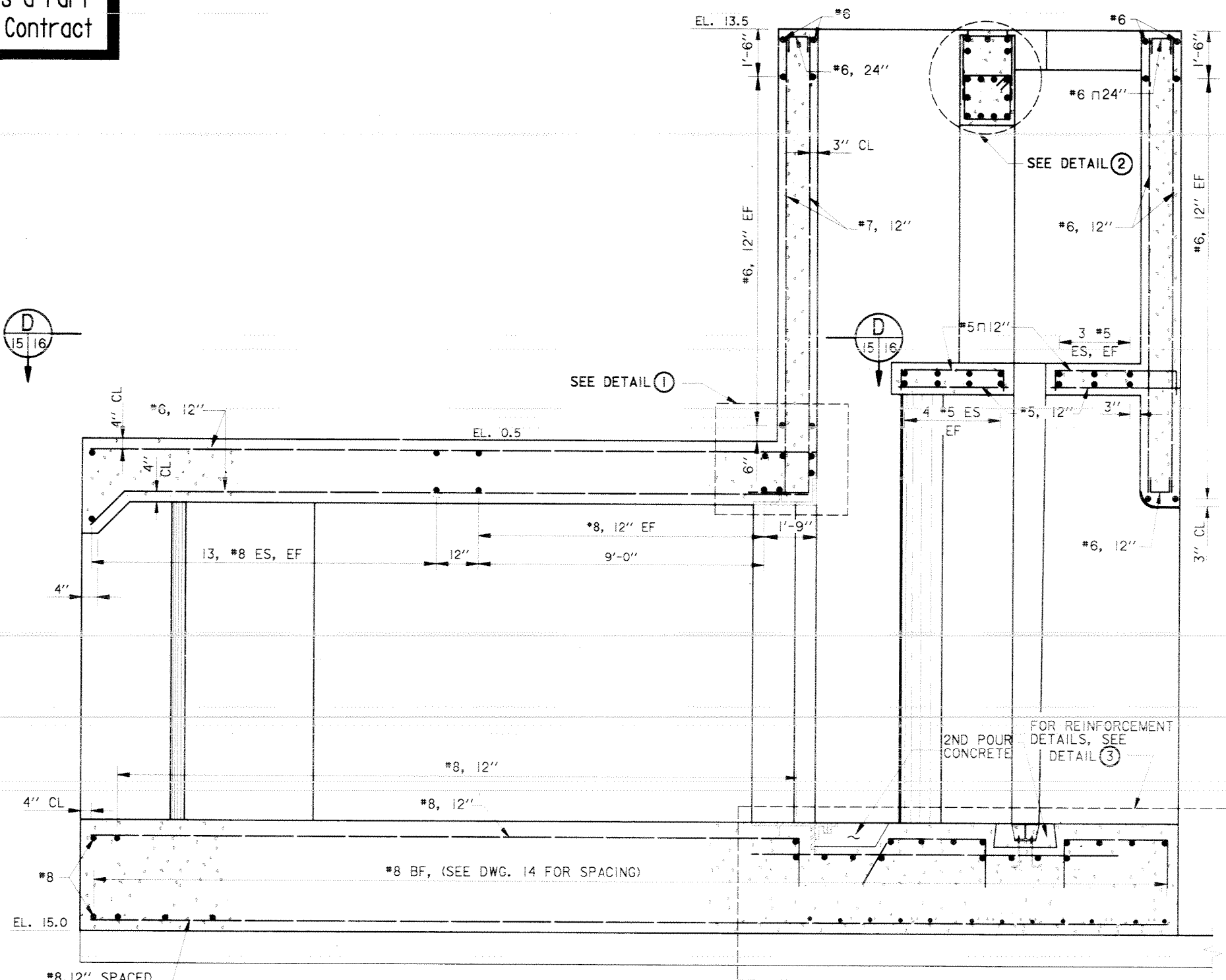
REINFORCEMENT SECTIONS
(SHT 1 OF 6)

DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 16	PLOT DATE: FEB. 1, 1998
DRAWN BY: J.C.M.	CADD FILE: 4477F08.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 15 OF 46	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			

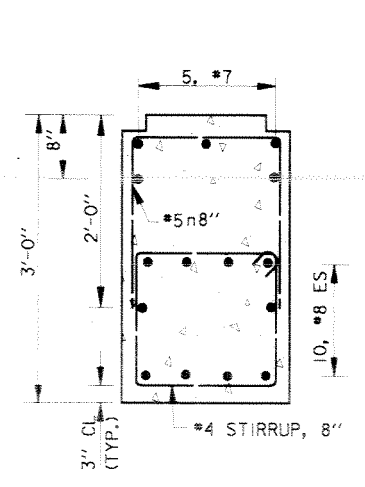


170008

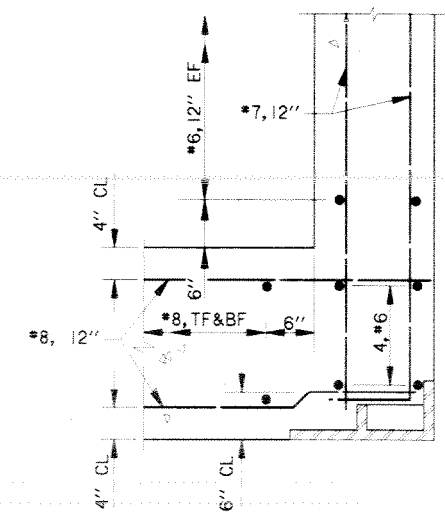
Safety is a Part of Your Contract



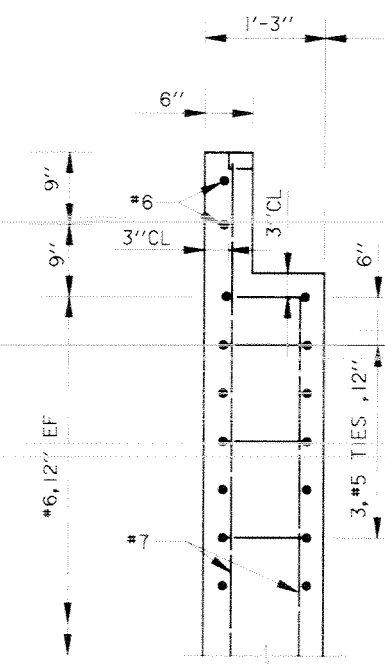
SECTION A
 SCALE: 1/2" = 1'-0"



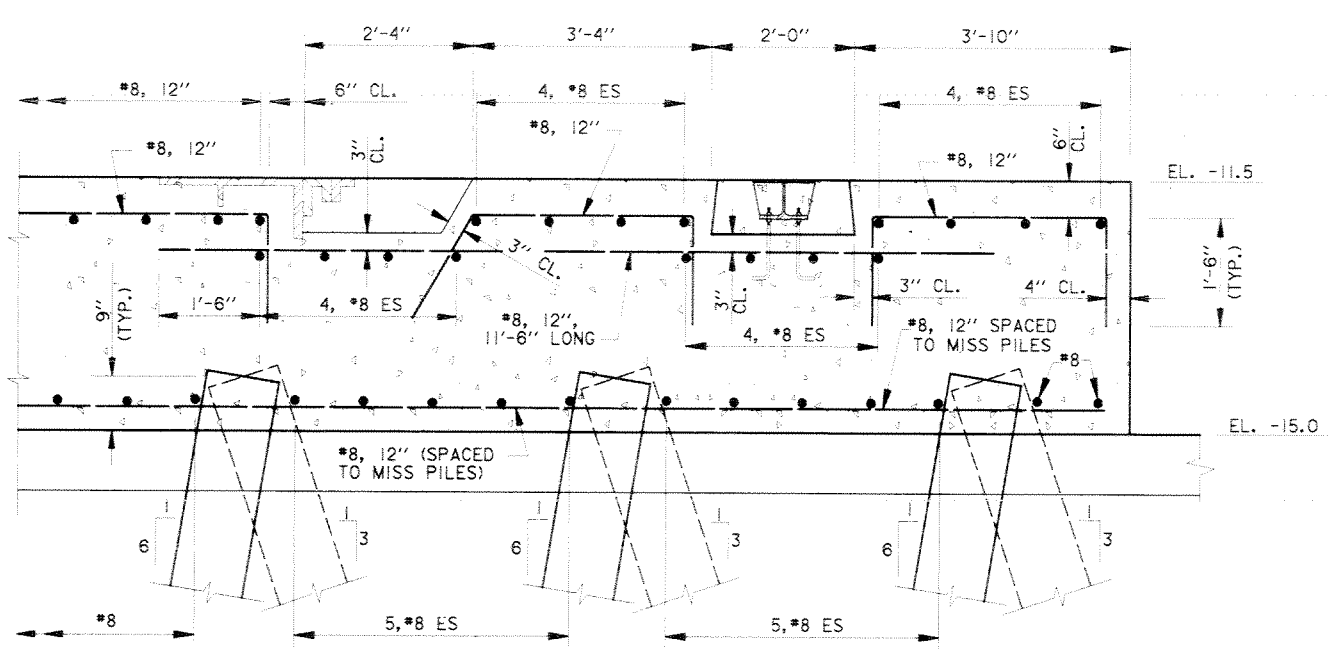
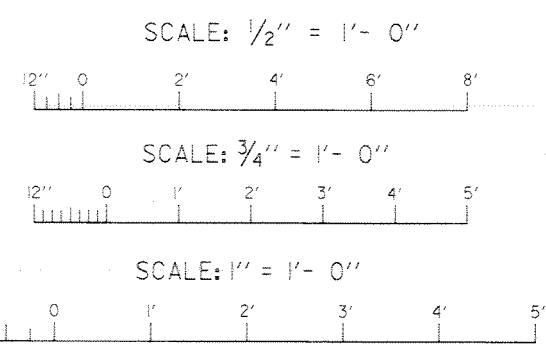
DETAIL 2
 SCALE: 1" = 1'-0"



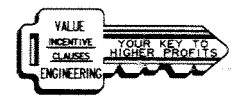
DETAIL 1
 SCALE: 1" = 1'-0"



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

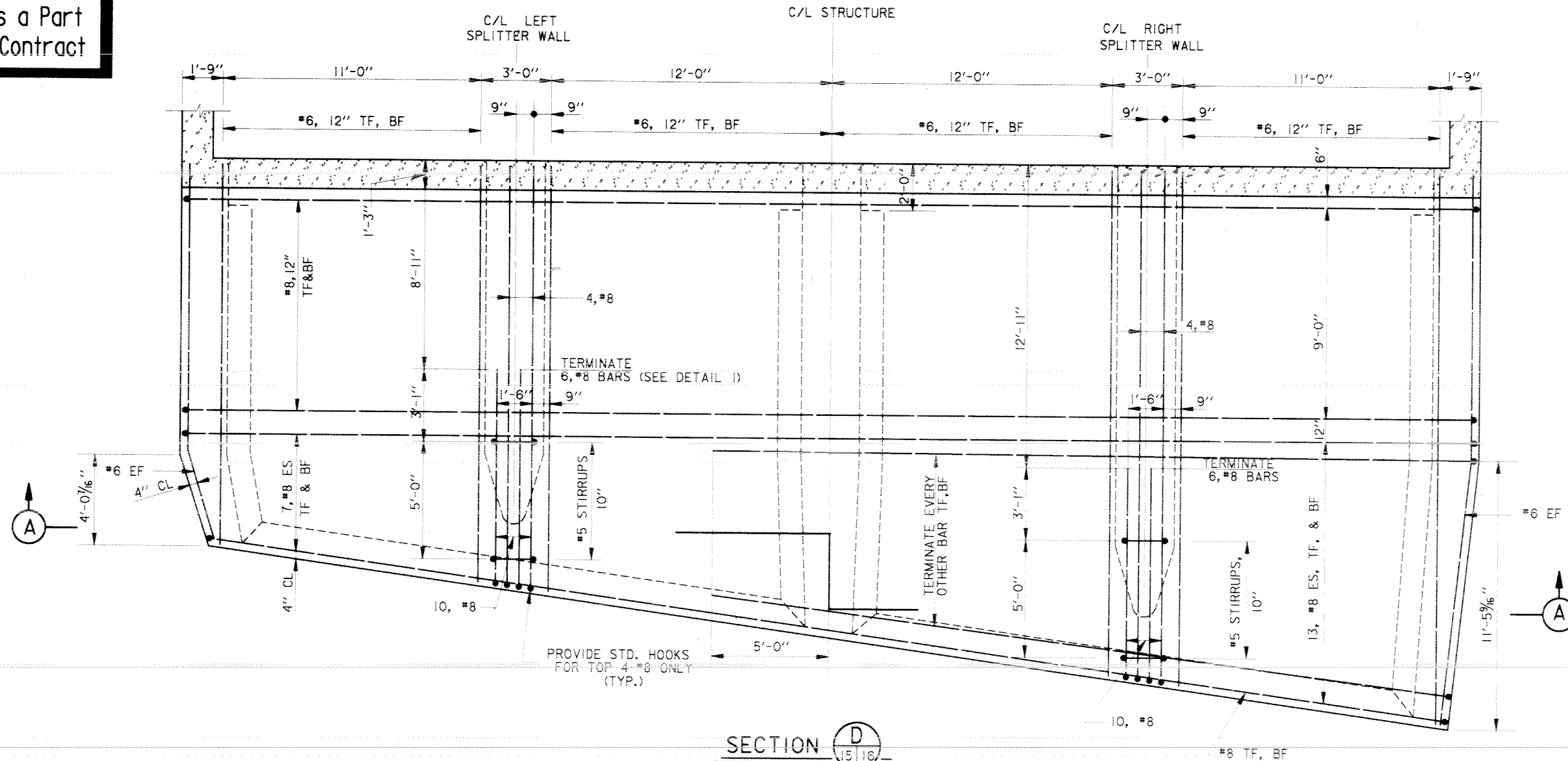


DETAIL 3
 SCALE: 3/4" = 1'-0"



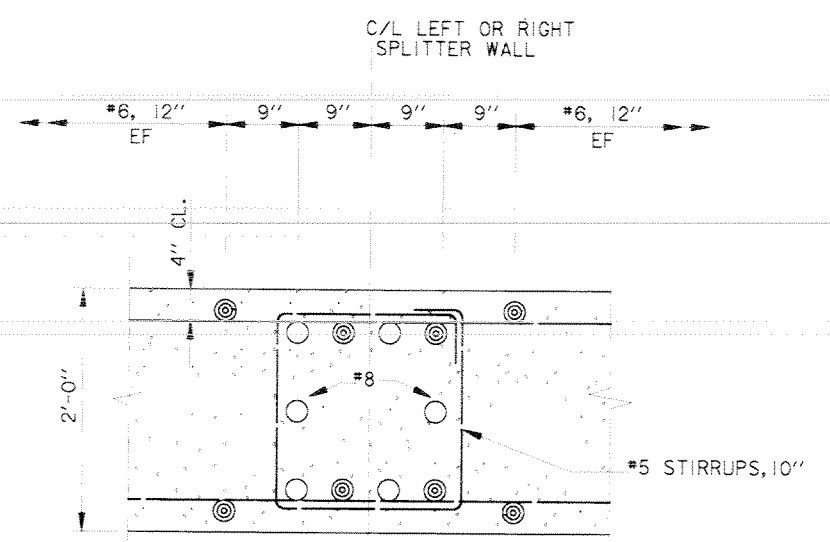
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA REINFORCEMENT SECTIONS (SHT 1 OF 6)			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 16	PLOT DATE: NOV. 10, 1997
DRAWN BY: J.C.M.	CADD FILE: 44778FOR.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 15 OF 46	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			

Safety is a Part of Your Contract



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

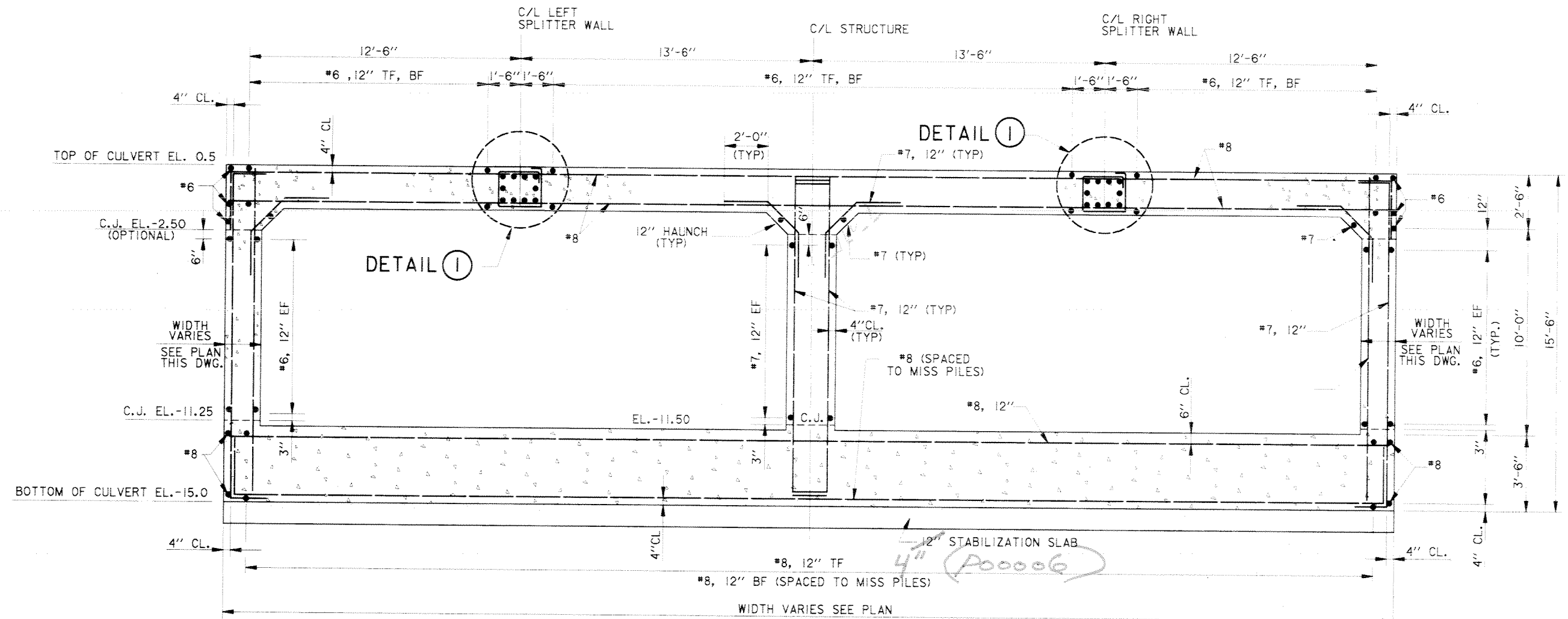
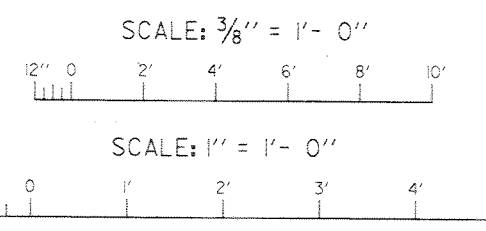
SLUICE GATE STRUCTURE



NOTE: BARS DENOTED AS "O" SHALL TERMINATE AS SHOWN IN PLAN SECTION **D**

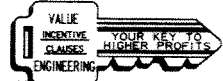
DETAIL **I**
SCALE: 1" = 1'-0"

TERMINATED BARS

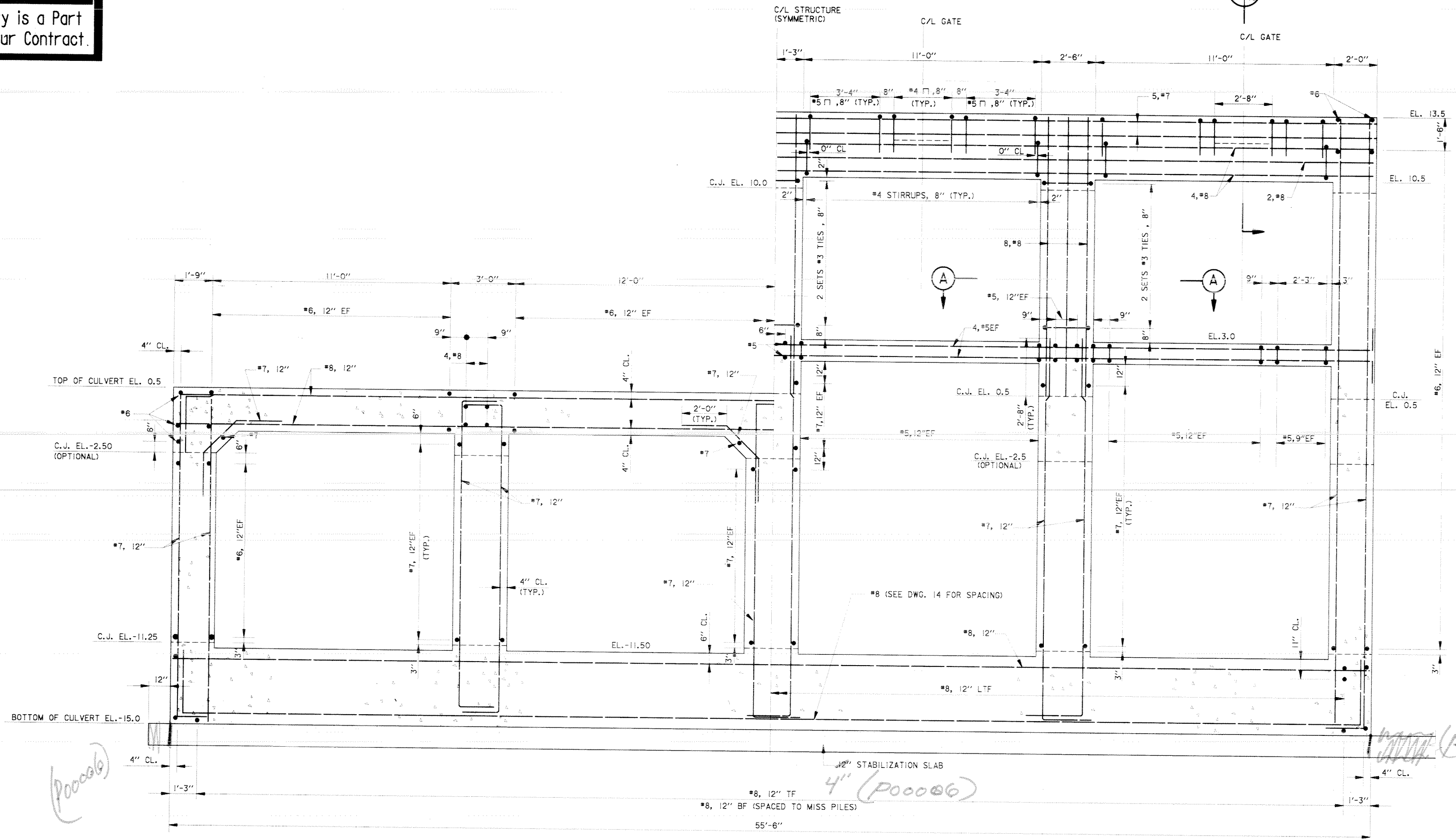


SECTION **A**
SCALE: 3/8" = 1'-0"

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
REINFORCEMENT SECTIONS (SHEET 2 OF 6)			
DESIGNED BY: P. SCHAEFER	DATE: NOV. 1997	PLOT SCALE: 32	PLOT DATE: NOV. 10, 1997
DRAWN BY: JCM	CHECKED BY: C. LABORDE	CADD FILE: 44778F04.DWG	FILE NO. H-4-44778
SUBMITTED BY:	SOLICITATION NO. DACW29-98-B-0001	DWG. 16 OF 46	

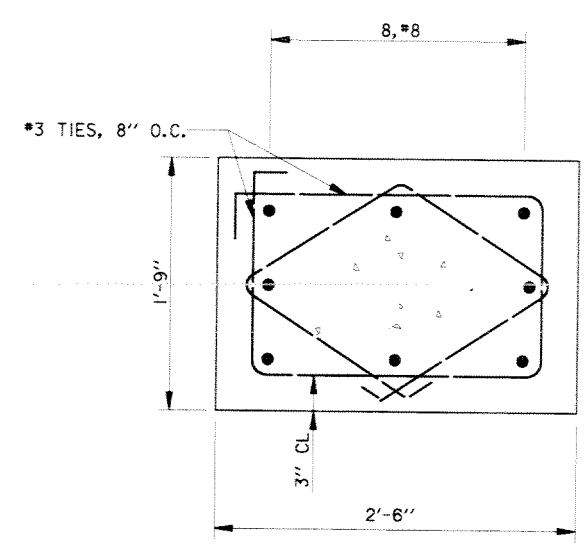


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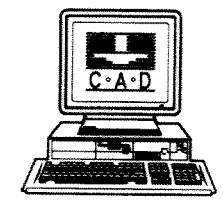
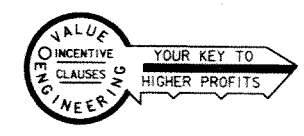
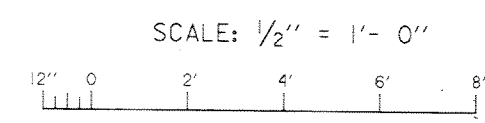
(P00006)


(P00006)



SECTION **A**
SCALE: 1/2" = 1'-0"

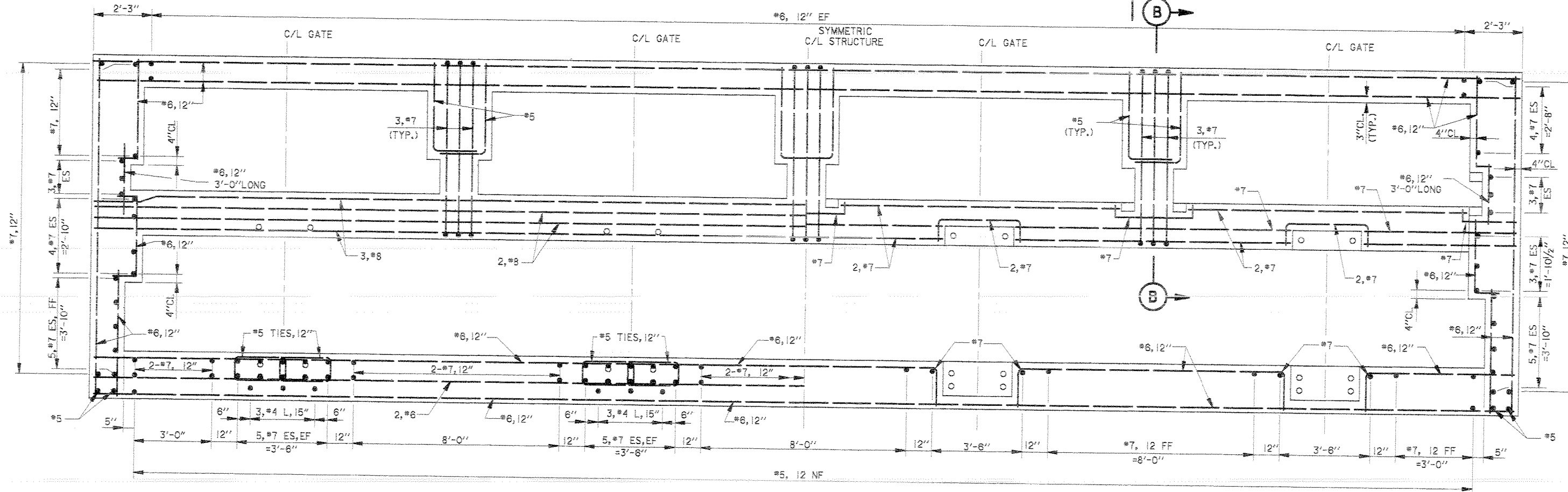
SECTION **E**
SCALE: 1/2" = 1'-0"



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
REINFORCEMENT SECTIONS (SHEET 3 OF 6)			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: J. DARBY	CADD FILE: 44778E1.DGN	FILE NO.	H-4-44778
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. NO.	17 OF 46
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			

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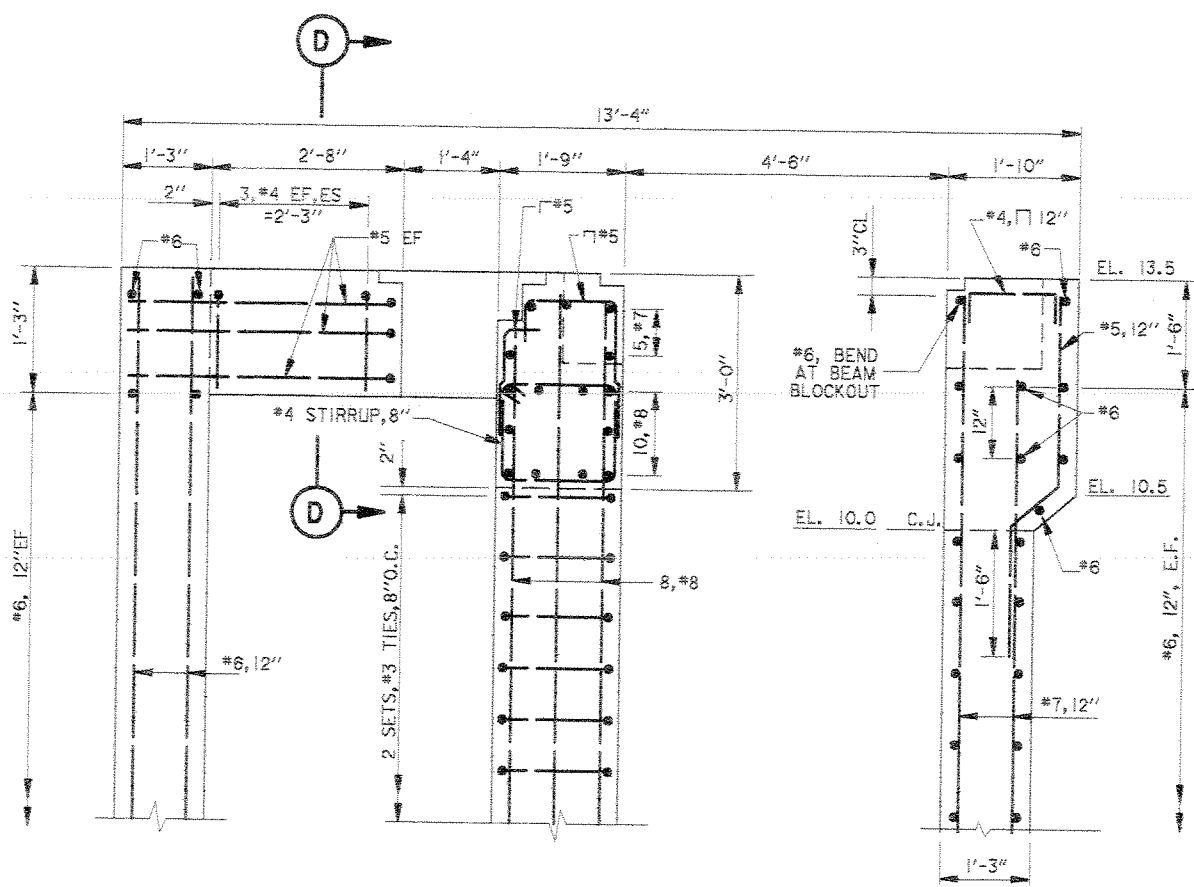
CANAL SIDE



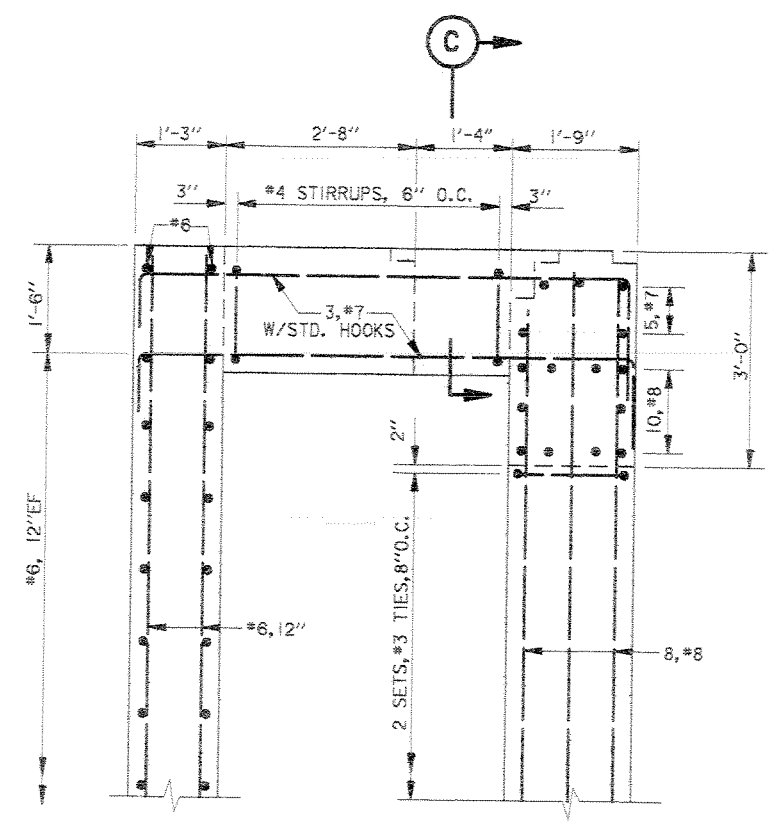
HALF PLAN
EL. 12.5

PUMP STATION
DISCHARGE CULVERT SIDE
SCALE: 1/2" = 1'-0"

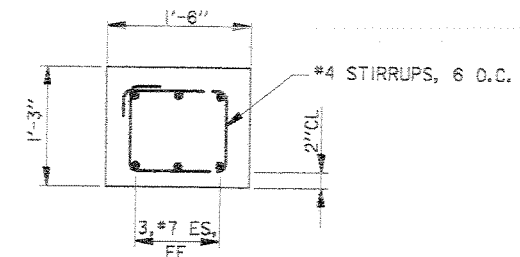
HALF PLAN
EL. 13.5



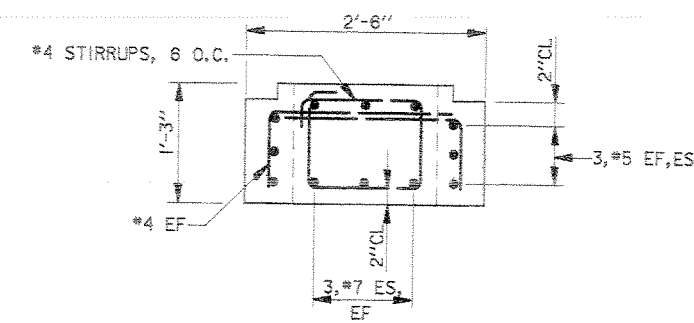
SECTION A
SCALE: 3/4" = 1'-0"



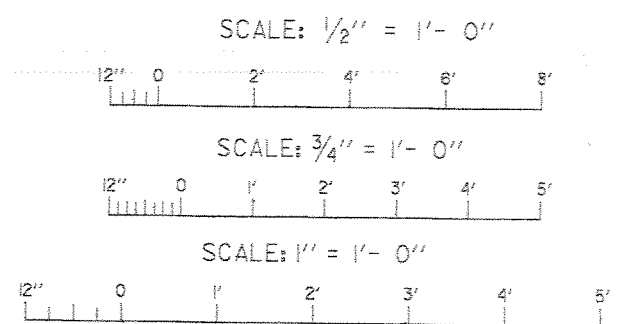
SECTION B
SCALE: 3/4" = 1'-0"



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



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



SYMBOL	DESCRIPTION	DATE	APPROVED
△	MODIFIED WALL GEOMETRY AND REINFORCEMENT IN CONJUNCTION WITH CHANGES TO HOIST BEAM.	2/1/99	CAL

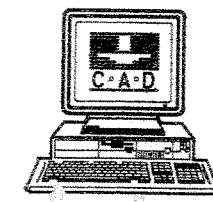
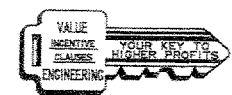
REVISIONS

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.N.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

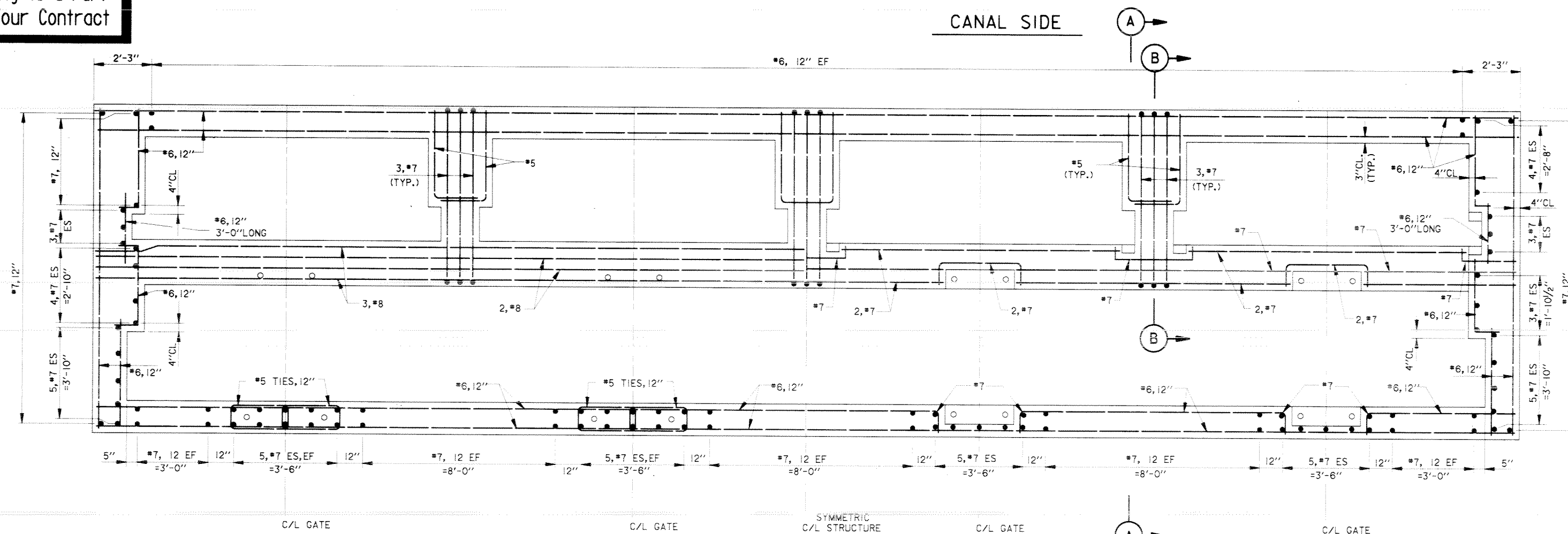
REINFORCEMENT SECTIONS
(SHEET 4 OF 6)

DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 24	PLOT DATE: FEB. 1, 1999
DRAWN BY: J. DARBY	CADD FILE: 4477808.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DWG. 18 OF 46



A00005

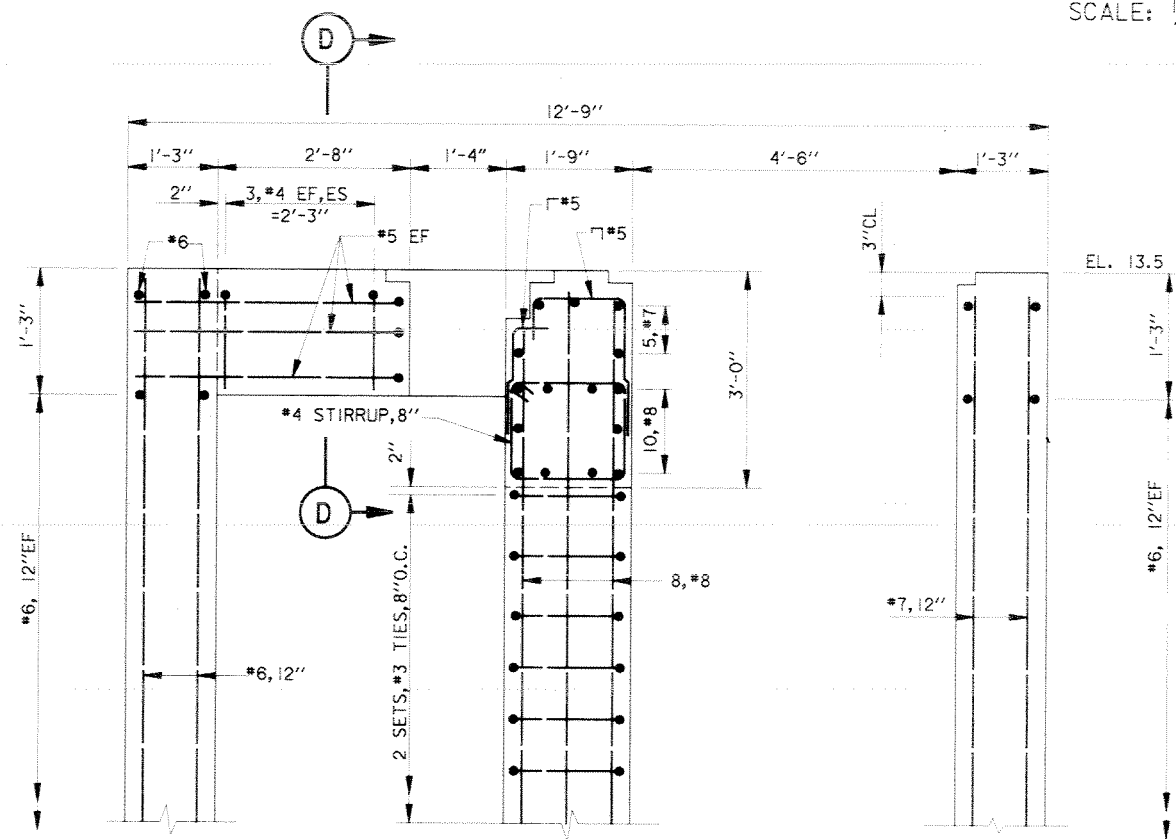
Safety is a Part of Your Contract



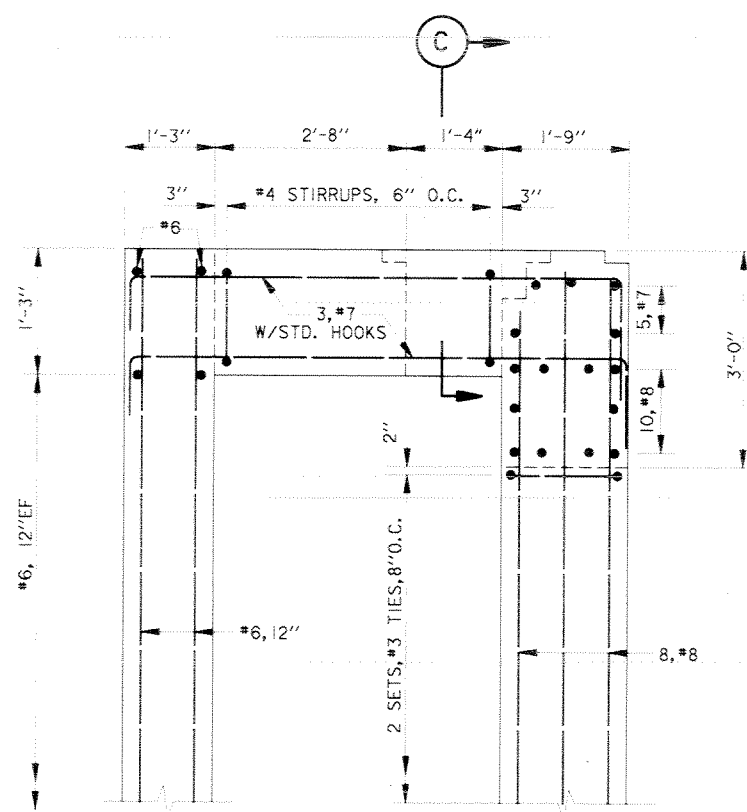
HALF PLAN
EL. 12.5

PUMP STATION
DISCHARGE CULVERT SIDE
SCALE: 1/2" = 1'-0"

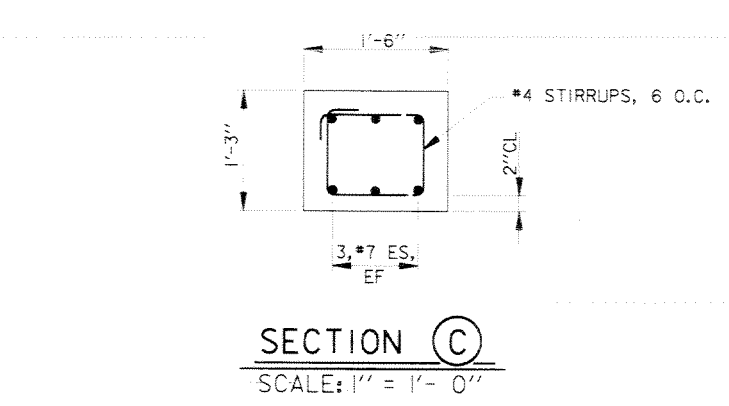
HALF PLAN
EL. 13.5



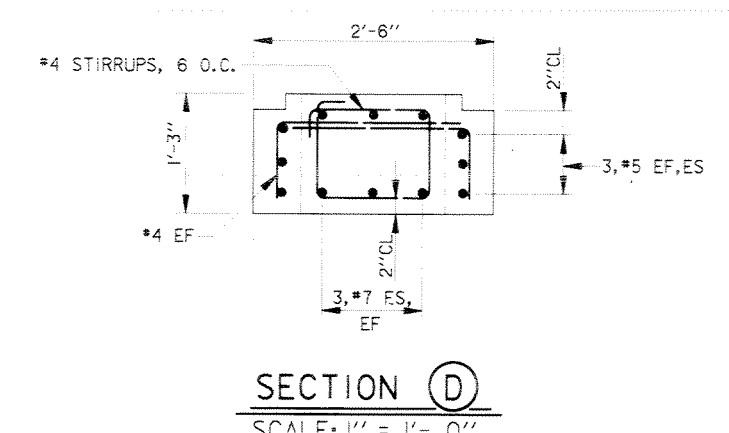
SECTION A
SCALE: 3/4" = 1'-0"



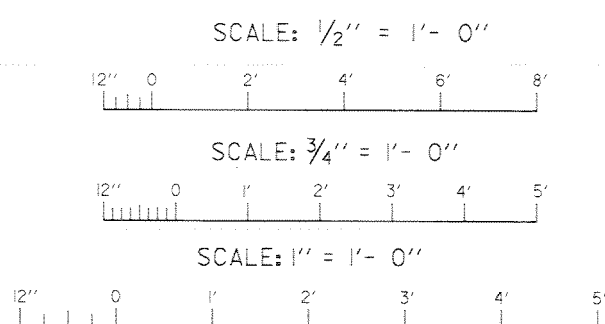
SECTION B
SCALE: 3/4" = 1'-0"




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



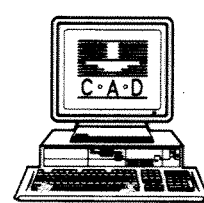
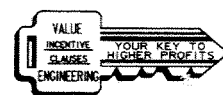
SECTION D
SCALE: 1" = 1'-0"



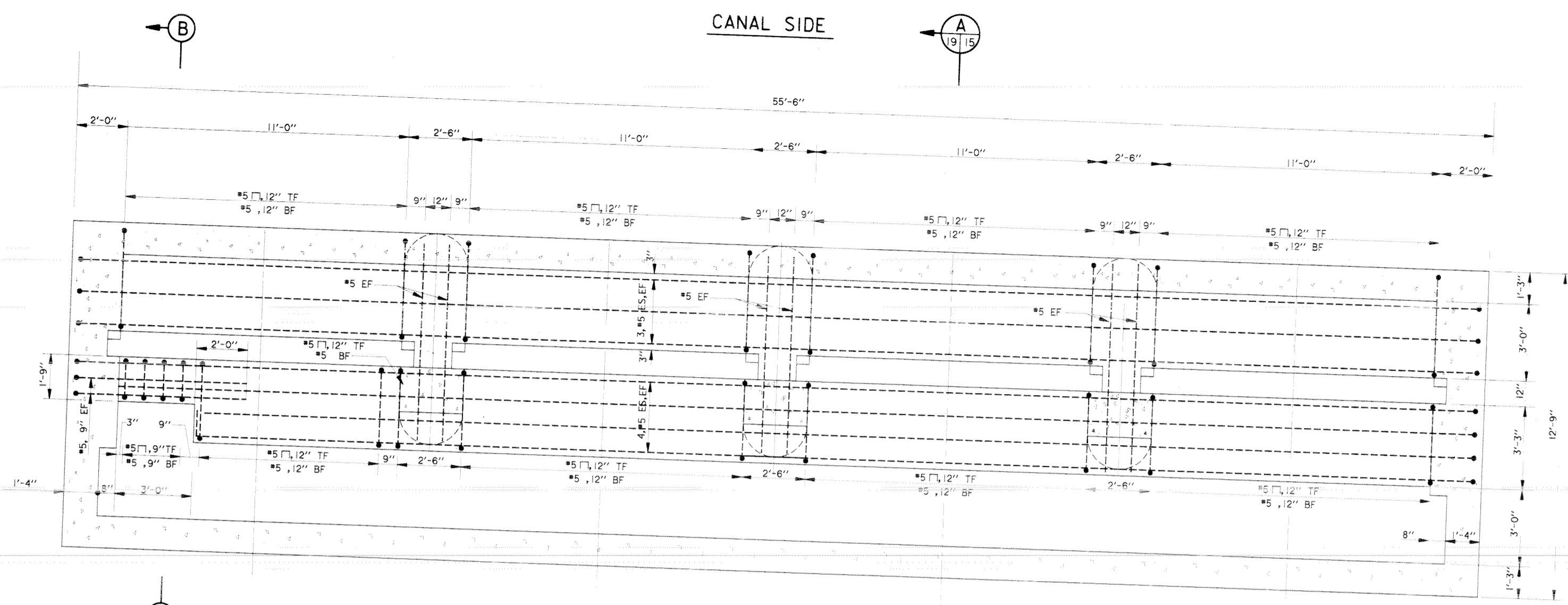
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			


U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
 CORPS OF ENGINEERS
 NEW ORLEANS, LOUISIANA
 LAKE PONCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN
 NEW ORLEANS LAKEFRONT LEVEE
 WEST OF I.H.N.C.
 ORLEANS MARINA PHASE V - SLUICE GATES
 ORLEANS PARISH, LOUISIANA
REINFORCEMENT SECTIONS
 (SHEET 4 OF 6)

DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: J. DARBY	CADD FILE: 44778E06.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 18 OF 46	

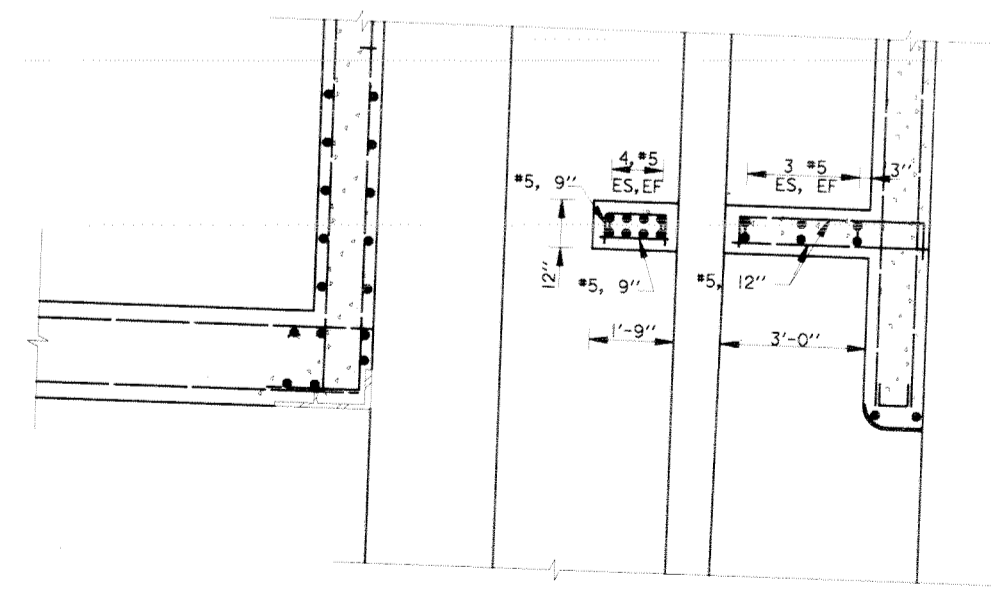


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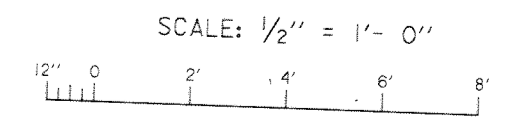
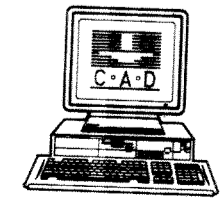
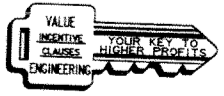



SLUICE GATE STRUCTURE
PLAN AT EL. 3.0

LAND SIDE

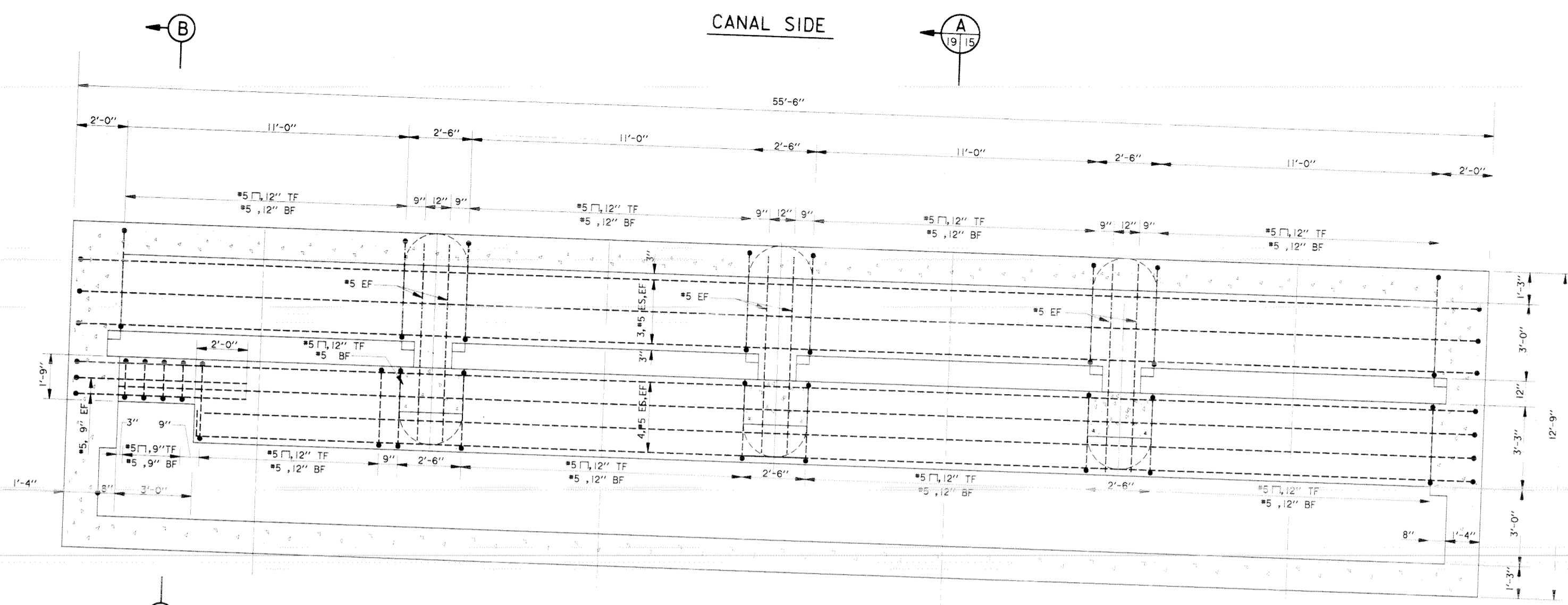


SECTION B
SCALE: 1/2" = 1'-0"

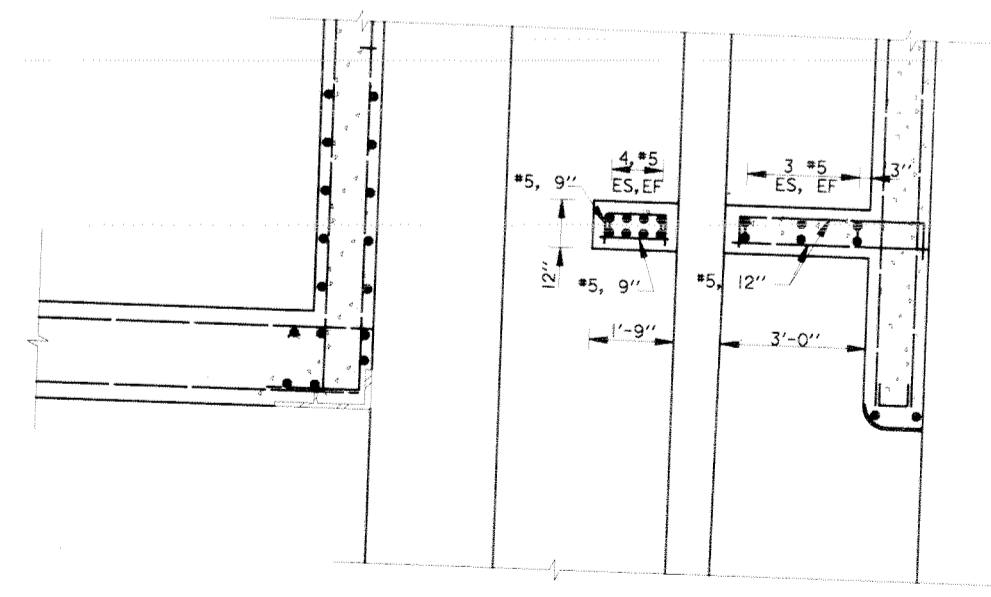


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
REINFORCEMENT SECTIONS			
(SHEET 5 OF 6)			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: C. BRANSTETTER	CHECKED BY: C. LABORDE	CADD FILE: 44778C14.DGN	FILE NO. H-4-44778
SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DESIGN ENGINEER	19 OF 46

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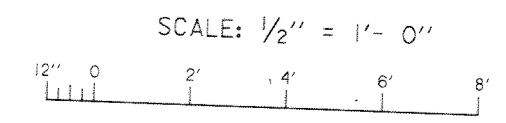
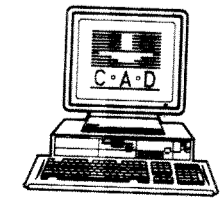
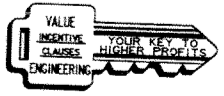



SLUICE GATE STRUCTURE
PLAN AT EL. 3.0



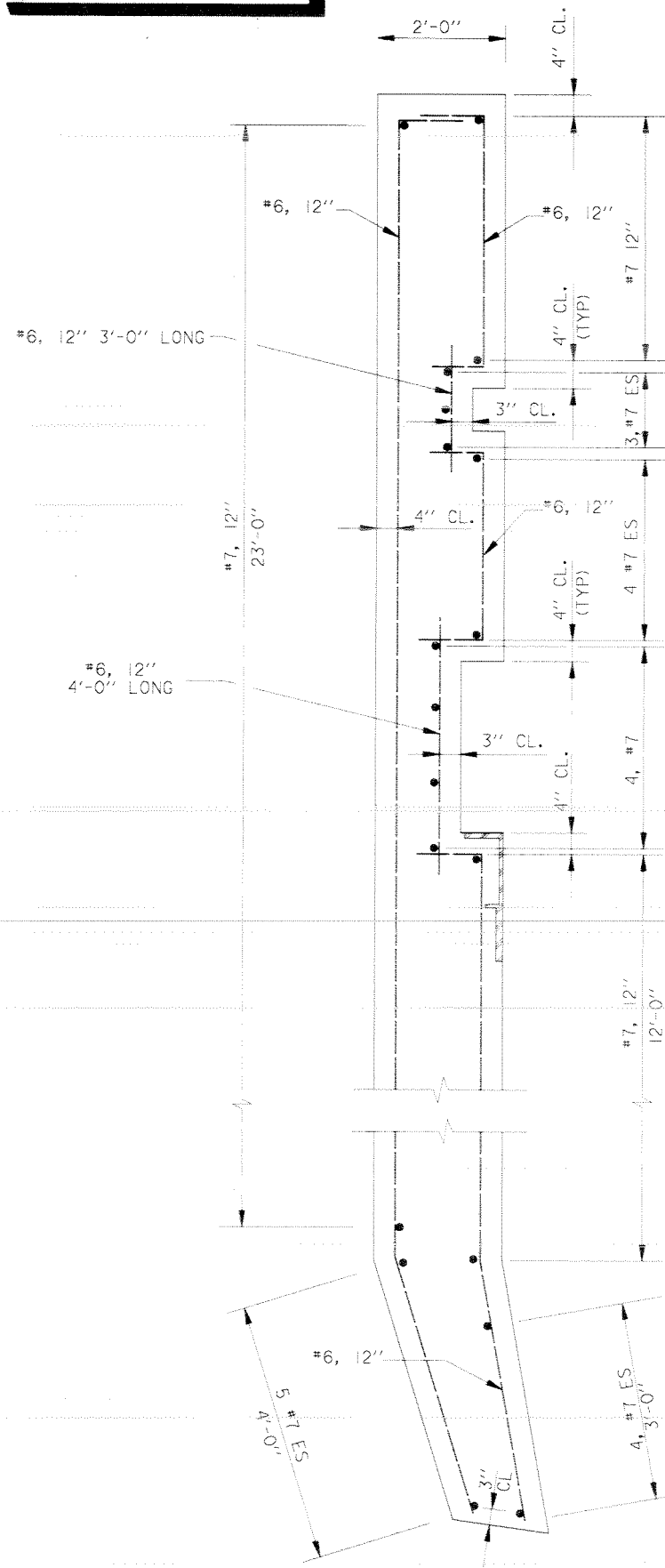
SECTION B
SCALE: 1/2" = 1'-0"

LAND SIDE

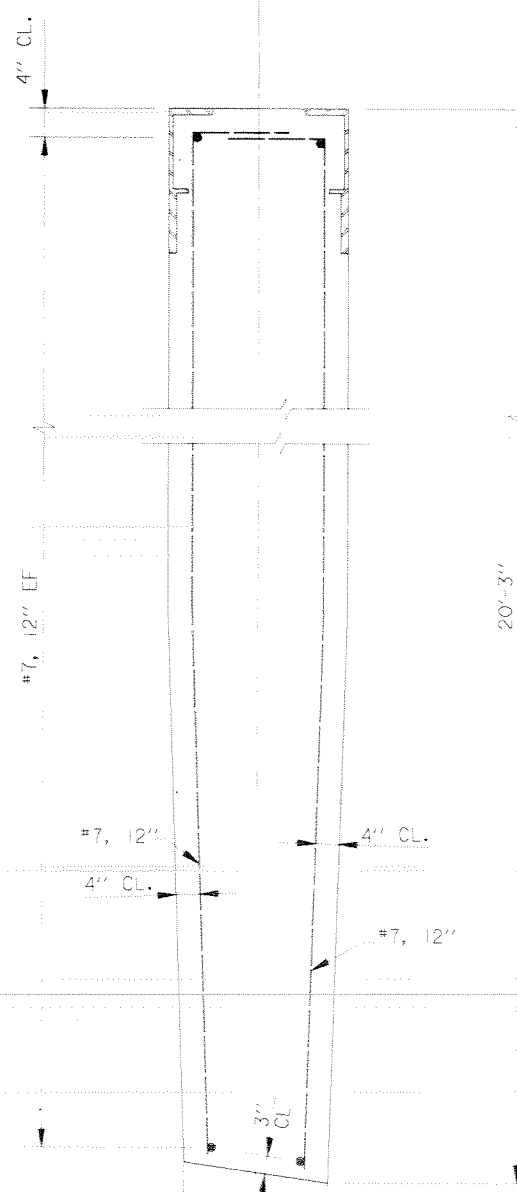


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
REINFORCEMENT SECTIONS			
(SHEET 5 OF 6)			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: C. BRANSTETTER	CHECKED BY: C. LABORDE	CADD FILE: 44778C14.DGN	FILE NO. H-4-44778
SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DESIGN ENGINEER	19 OF 46

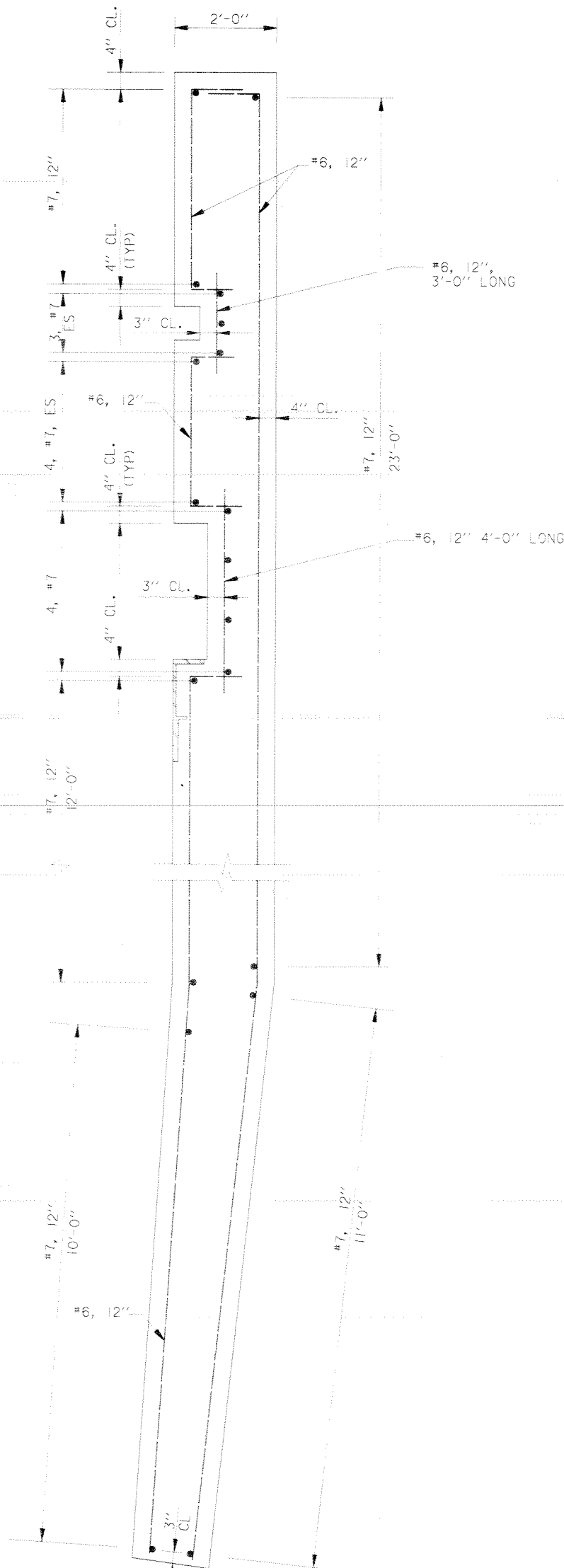
Safety is a Part of Your Contract



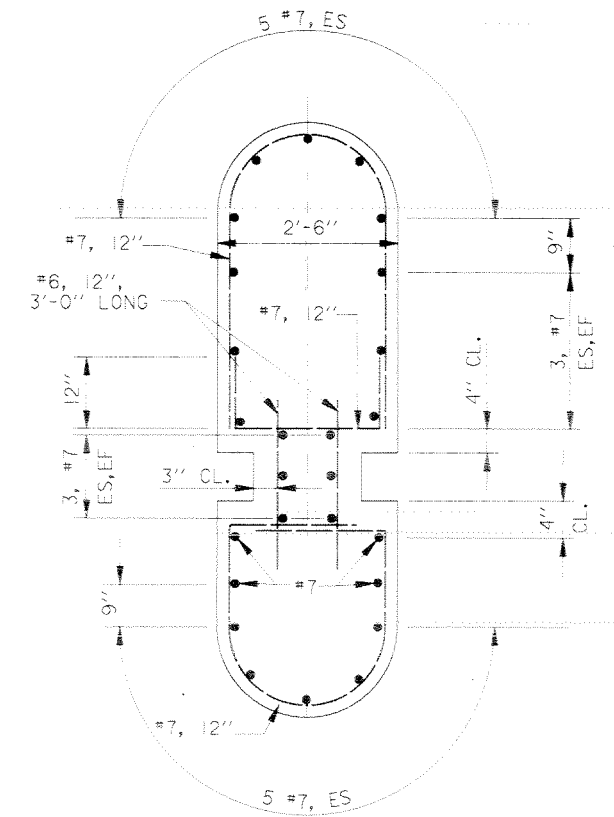
DETAIL 1
SCALE: 3/4" = 1'- 0"



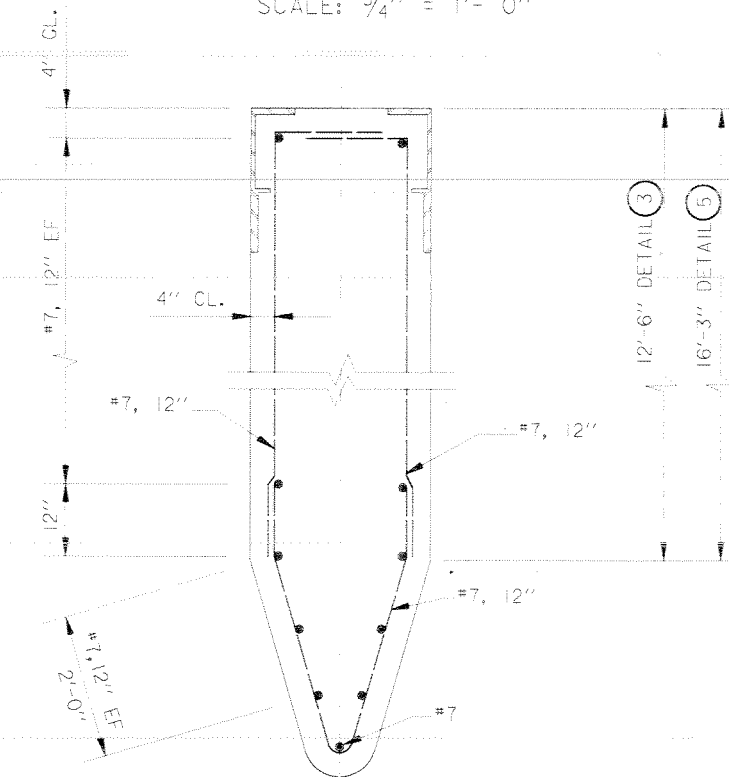
DETAIL 4
SCALE: 3/4" = 1'- 0"



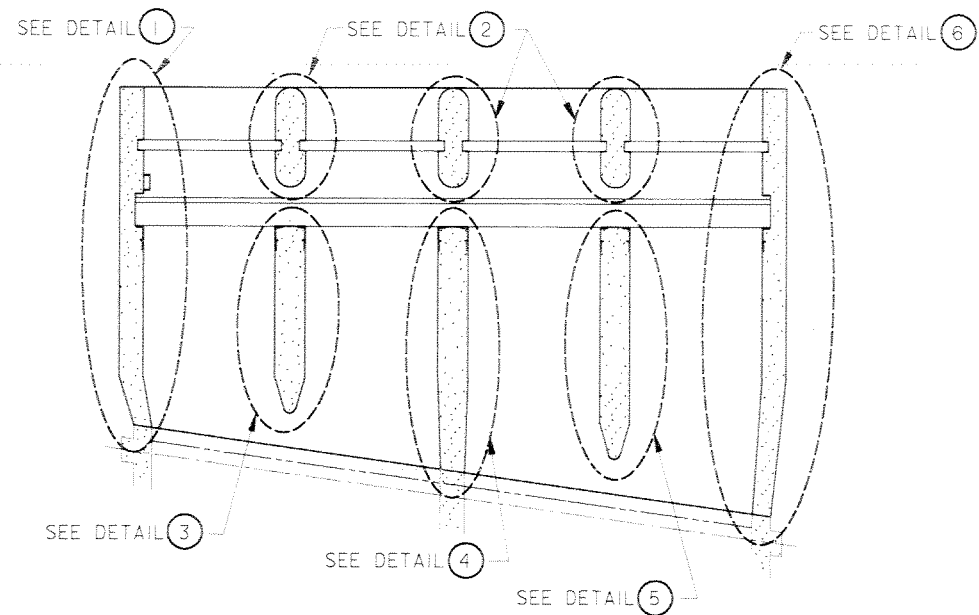
DETAIL 6
SCALE: 3/4" = 1'- 0"



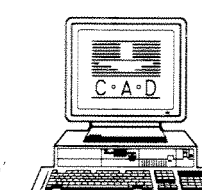
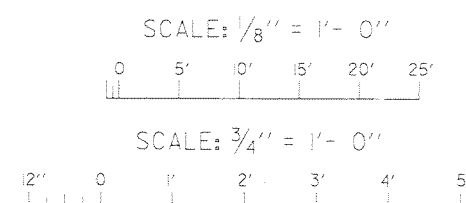
DETAIL 2
SCALE: 3/4" = 1'- 0"




DETAIL 3
DETAIL 5
SCALE: 3/4" = 1'- 0"

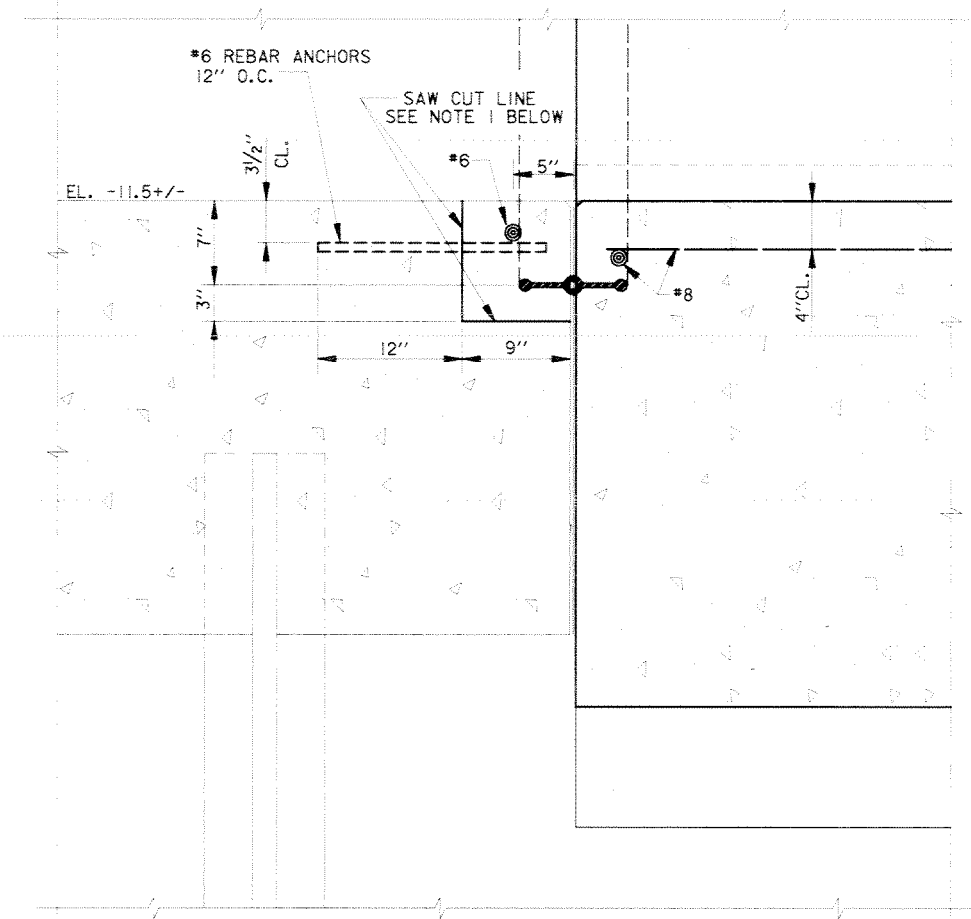
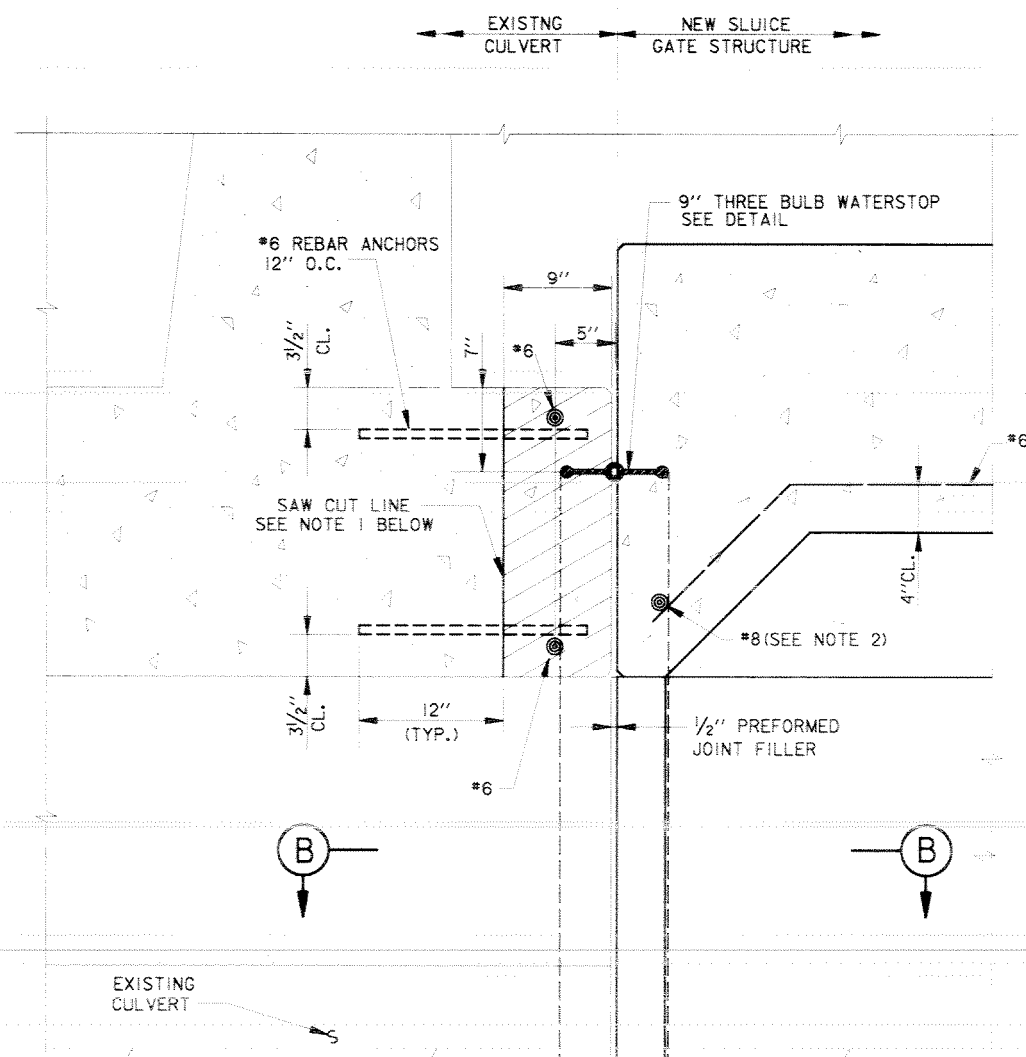


KEY PLAN
SCALE: 1/8" = 1'- 0"

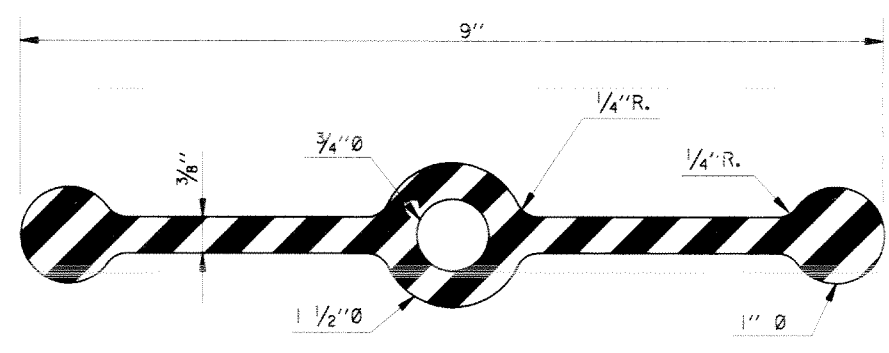


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
REINFORCEMENT SECTIONS			
(SHEET 6 OF 6)			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 1/8" = 1'- 0"	FILE NO. H-4-44778
DRAWN BY: JCM	CADD FILE: 44778F06.DGN	NOV. 10, 1997	
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DESIGN ENGINEER
			DWG. 20 OF 46

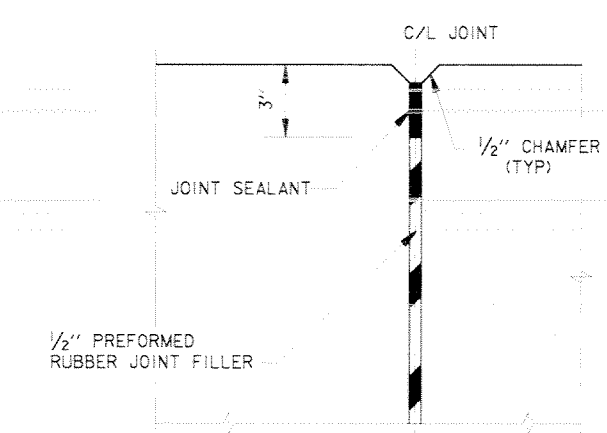
Safety is a Part of Your Contract



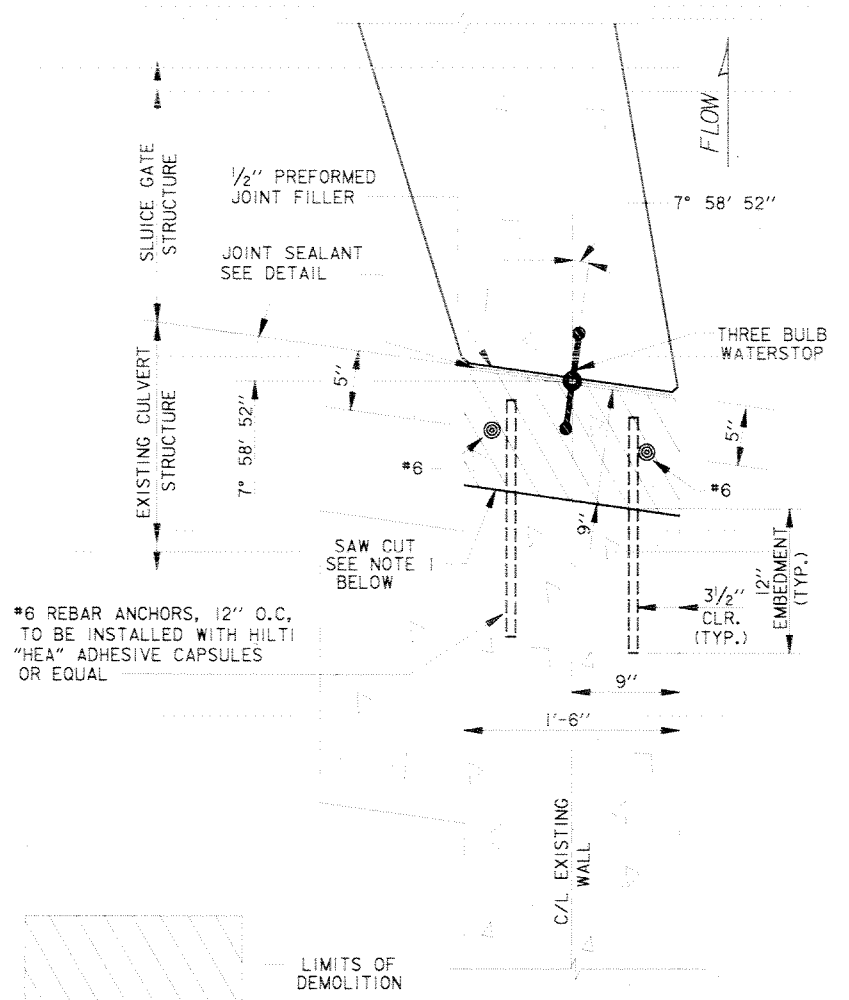
SECTION A
SCALE: 1/2" = 1'-0"



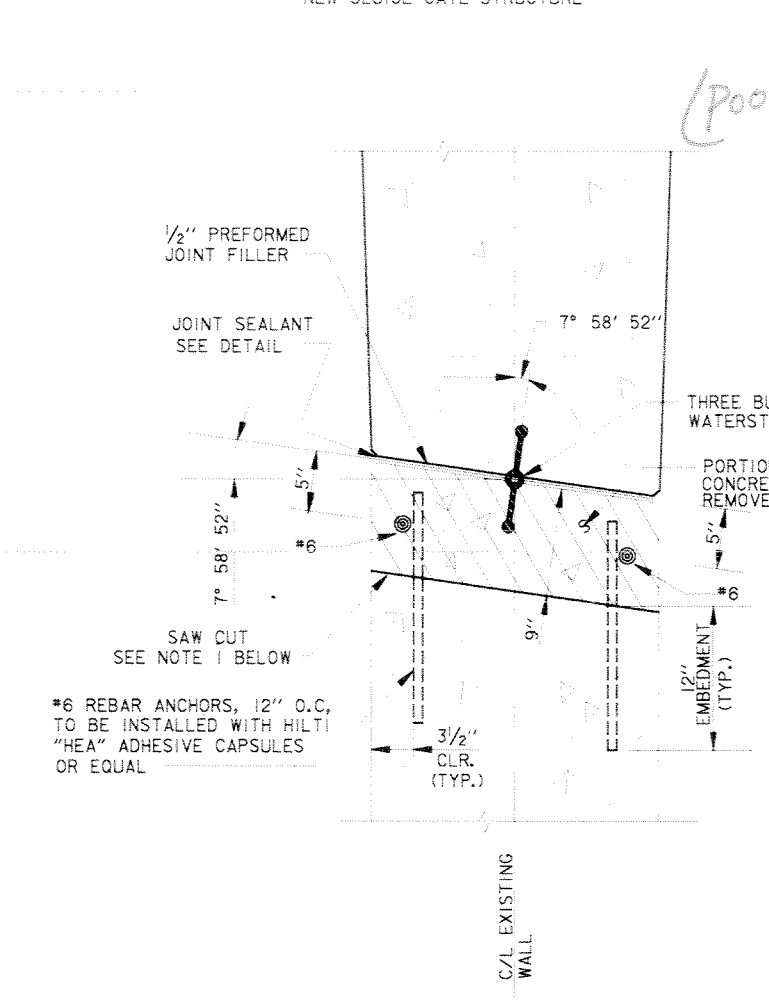
THREE BULB WATERSTOP DETAIL
SCALE: 12" = 1'-0"



TYPICAL JOINT SEALANT DETAIL
SCALE: 3" = 1'-0"

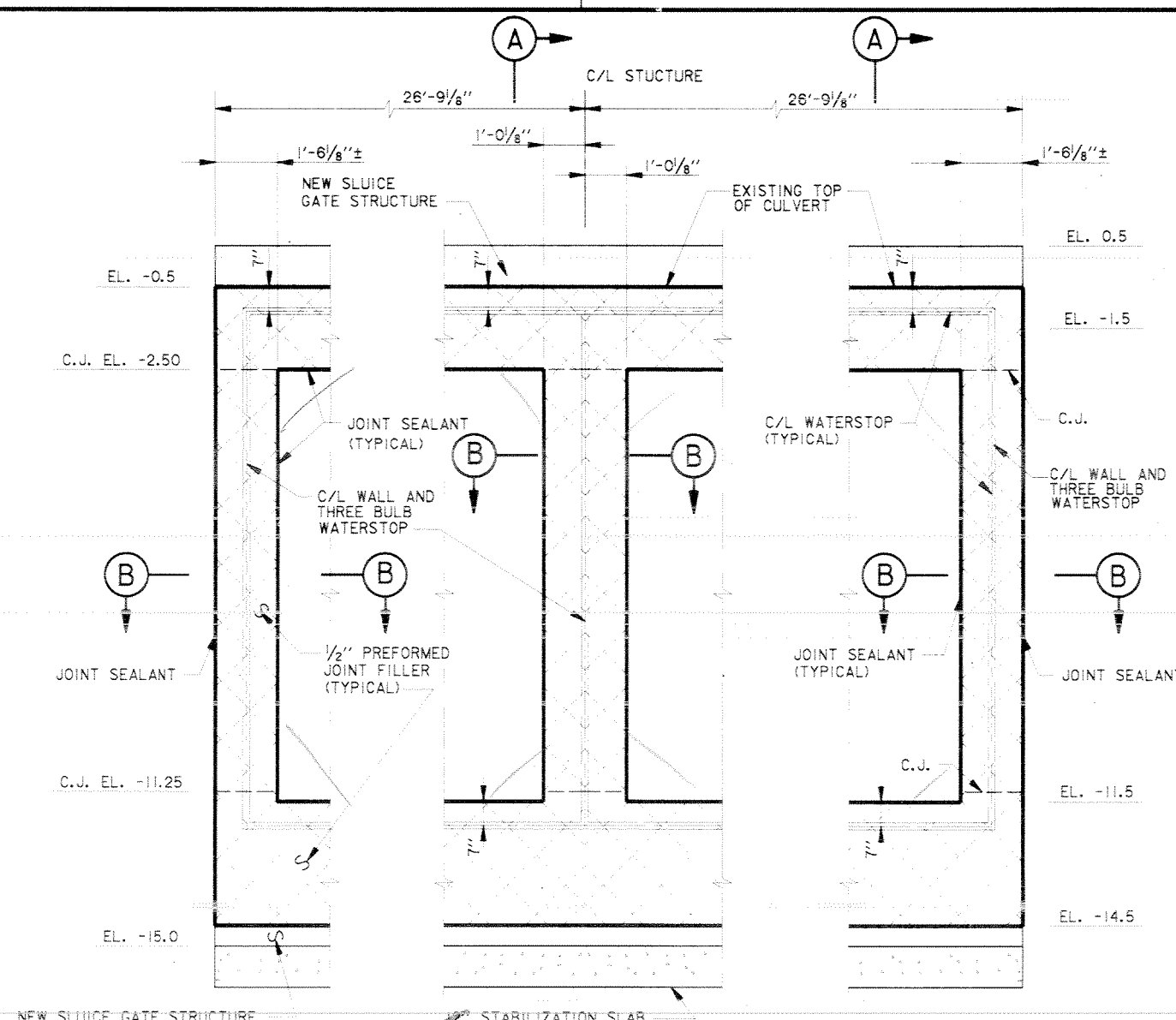


SECTION B
WEST EXTERIOR CULVERT WALL AS SHOWN
EAST EXTERIOR CULVERT WALL
OPPOSITE HAND AND SIMILAR
SCALE: 1/2" = 1'-0"

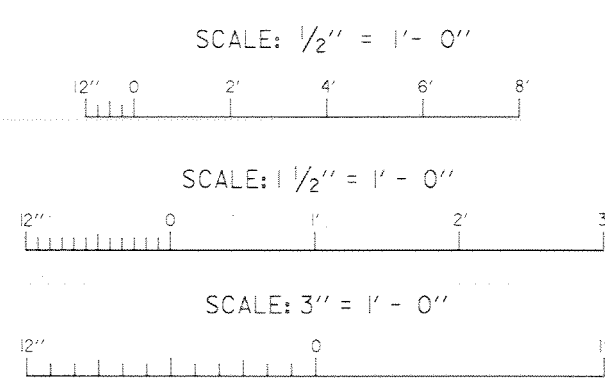


SECTION B
INTERIOR CULVERT WALL
SCALE: 1/2" = 1'-0"

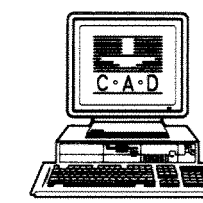
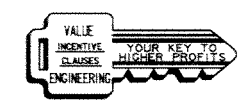
- NOTES:
1. SAW-CUT 25% TO 30% OF THICKNESS OF EXISTING WALL OR THRU EXISTING REINFORCING, EACH FACE, THEN SHEAR REMAINING PORTION OF EXISTING CONCRETE TO BE REMOVED.
 2. FIELD BEND REINFORCING TO CLEAR THREE BULB WATERSTOPS

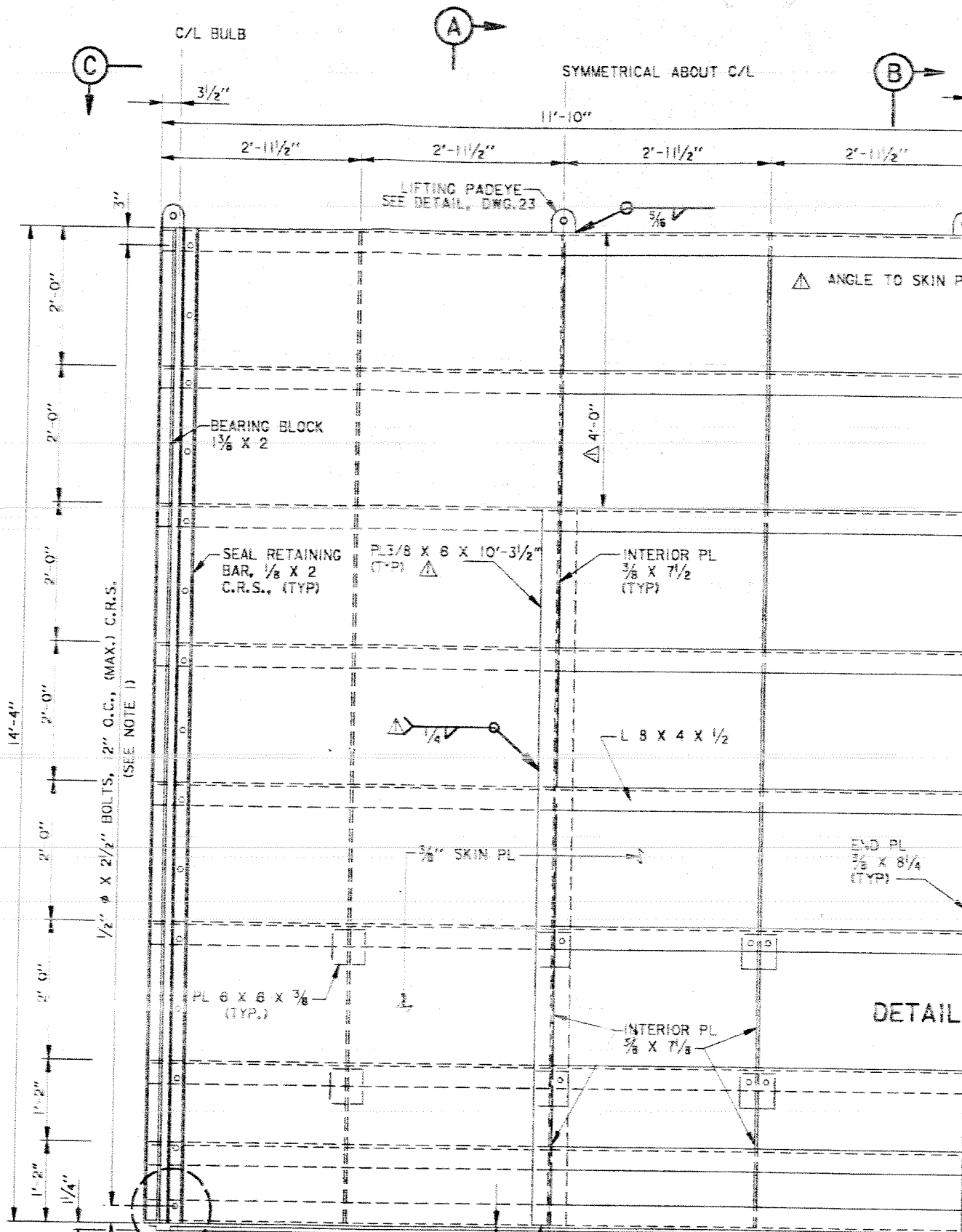


ELEVATION MONOLITH JOINT
SCALE: 1/2" = 1'-0"



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA MONOLITH JOINT DETAILS			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: DEC. 15, 1997
DRAWN BY: L. MAGEE	CADD FILE: 44778P01.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 21	OF 44
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			





BULKHEAD ELEVATION
SCALE: 1" = 1'-0"

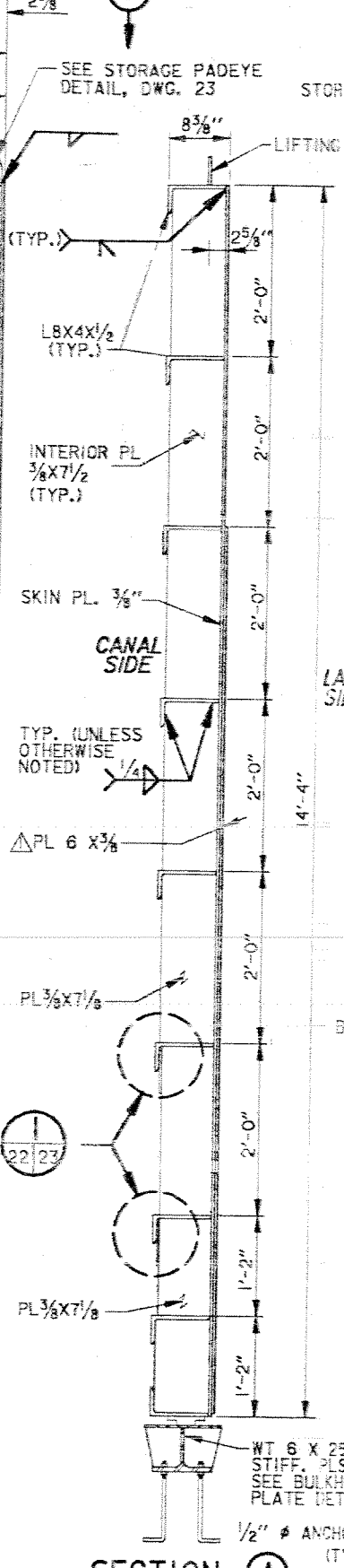
LAND SIDE HALF ELEVATION

CANAL SIDE HALF ELEVATION

5" X 1 1/4" FLAT BOTTOM SEAL SEE SEAL CORNER DETAIL THIS DWG.

TERMINATE PL 3/8 X 6 1/2" FROM BOTTOM OF SKIN PL 3/8"

NOTES:
1. ADJUST BOLT SPACING TO MISS L 8 X 4 X 1/2" WEBS
2. ONE BULKHEAD ASSEMBLY SHOWN, 4 EACH REQUIRED



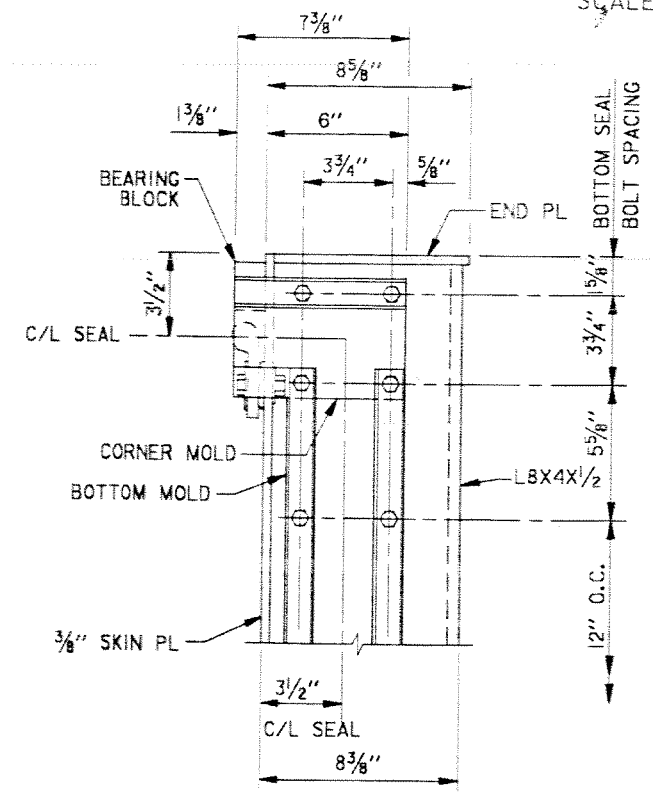
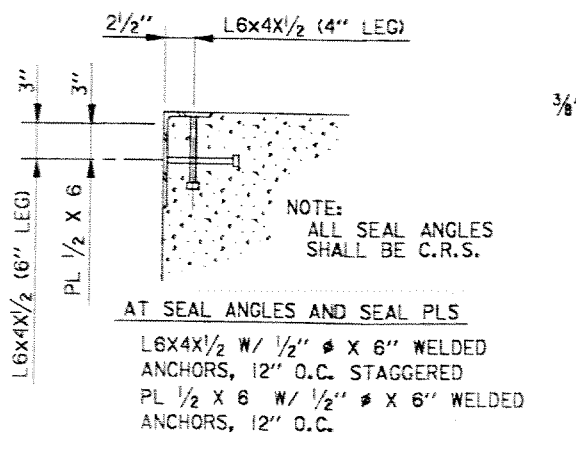
SECTION A
SCALE: 1" = 1'-0"

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

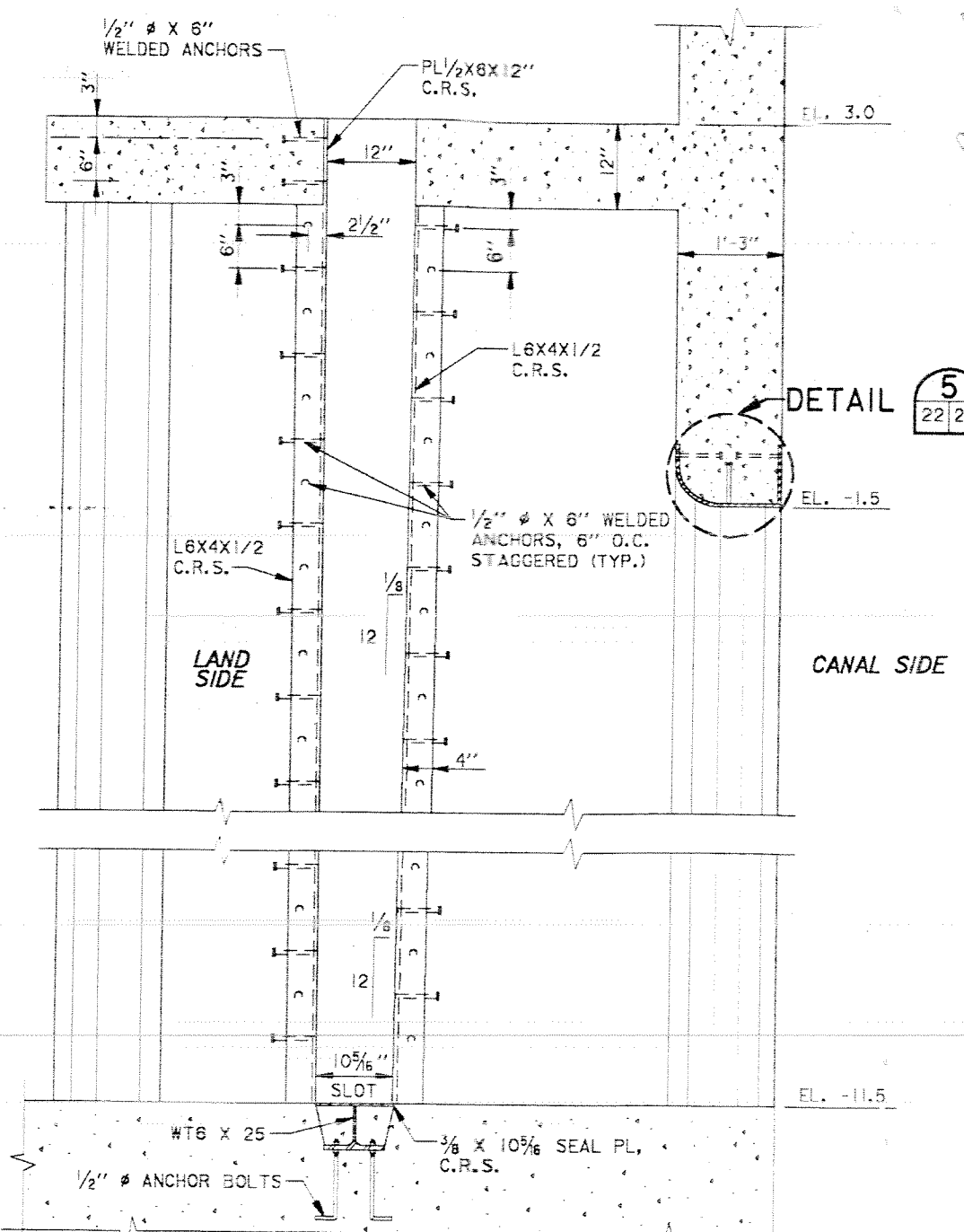
WT 6 X 25 WITH STIFF. PLUS SEE BULKHEAD SEAL PLATE DETAIL DWG. 23

1/2" # ANCHOR BOLTS (TYP.)

EL. -11.5 (TOP SEAL PLATED)

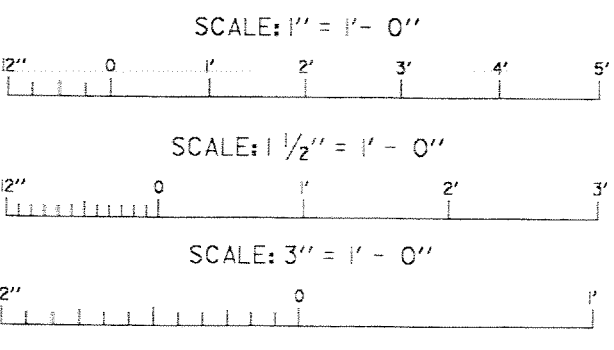


BOTTOM VIEW SEAL CORNER DETAIL
SCALE: 3" = 1'-0"

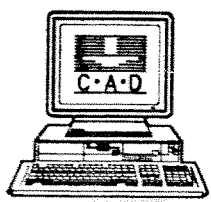


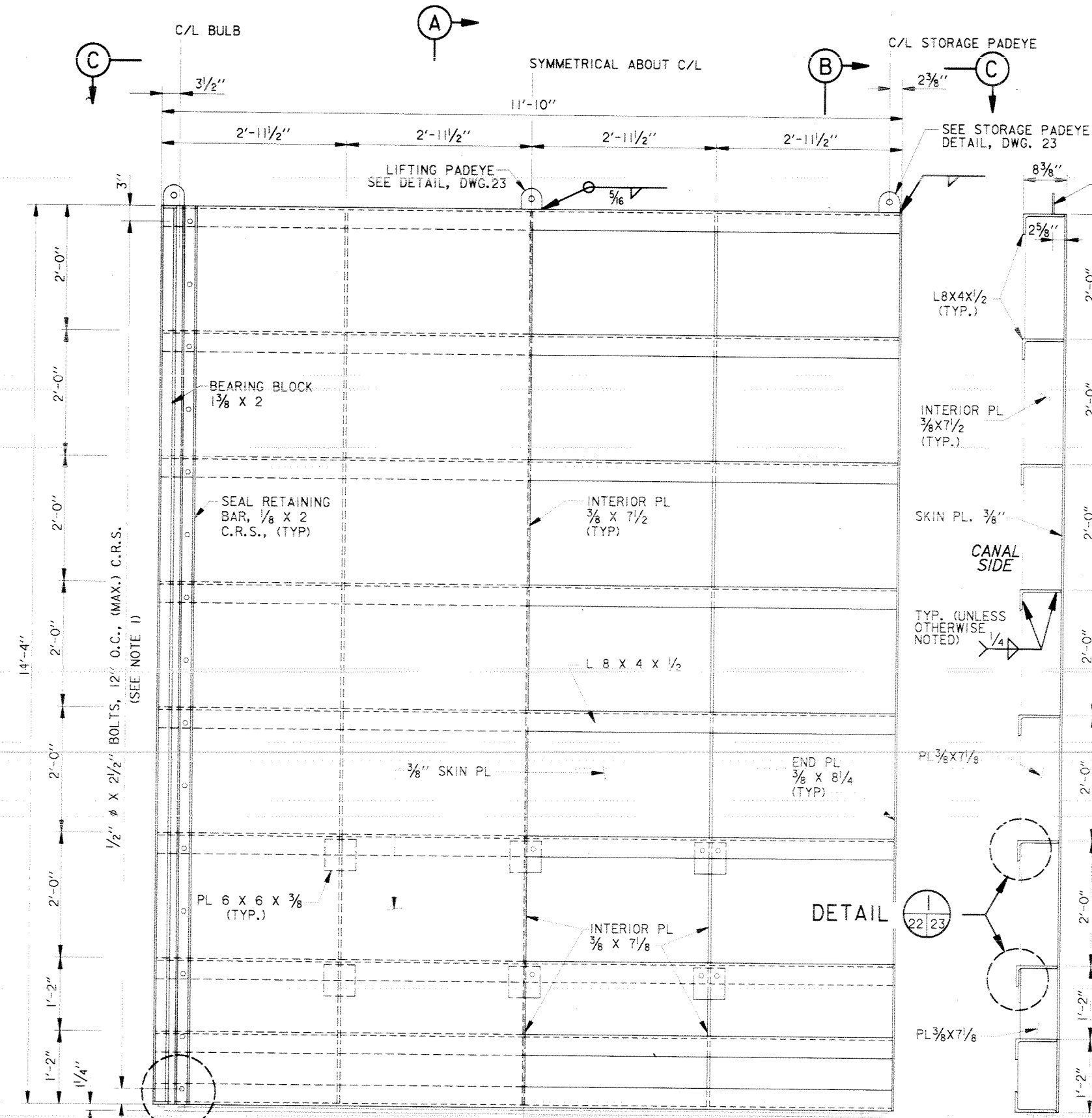
TYPICAL BULKHEAD SLOT
SCALE: 1" = 1'-0"

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SYMBOL	INCORPORATED COVER PL DESCRIPTION	FEB 2000 DATE	CAL APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONCHARTRAIN, LA AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA ALUMINUM BULKHEADS			
DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 12	PLOT DATE: FEB. 2, 2000
DRAWN BY: J.DARBY	CADD FILE: 4477805.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 22 OF 46	
SUBMITTED BY: CHARLES A. LABORDE P.E. DESIGN ENGINEER			

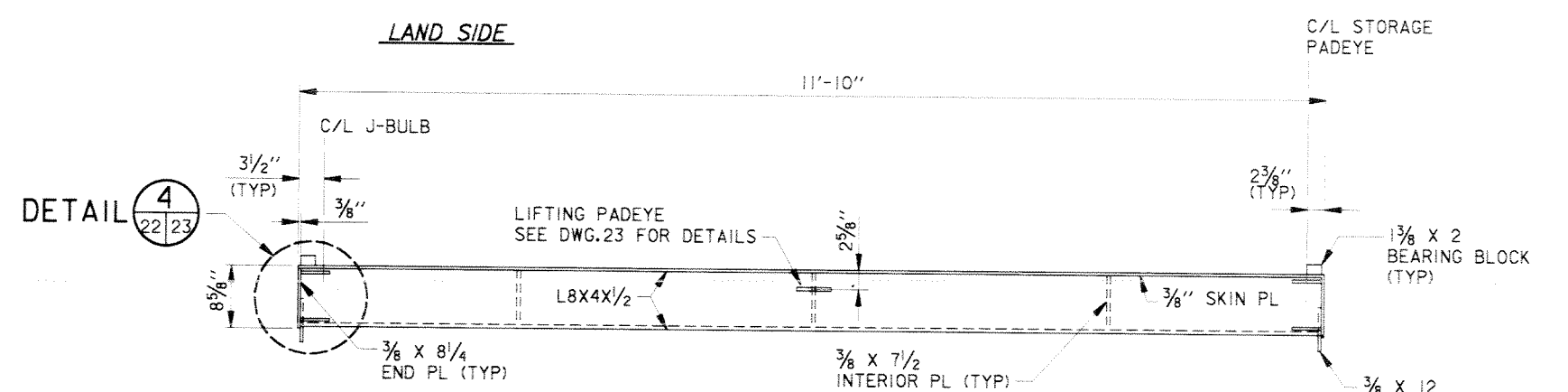




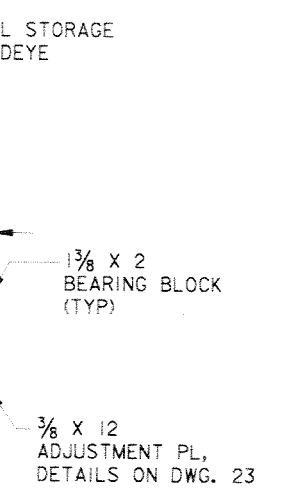
5" X 1/4" FLAT BOTTOM SEAL, SEE SEAL CORNER DETAIL THIS DWG.

BULKHEAD ELEVATION
SCALE: 1" = 1'-0"

NOTES:
1. ADJUST BOLT SPACING TO MISS L 8 X 4 X 1/2 WEBS
2. ONE BULKHEAD ASSEMBLY SHOWN, 4 EACH REQUIRED

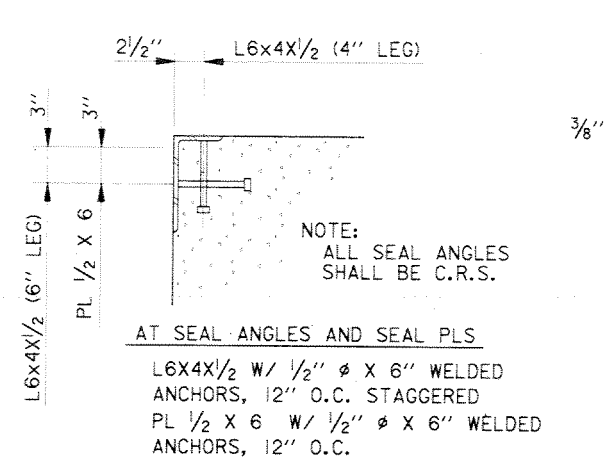


SECTION C
SCALE: 1" = 1'-0"

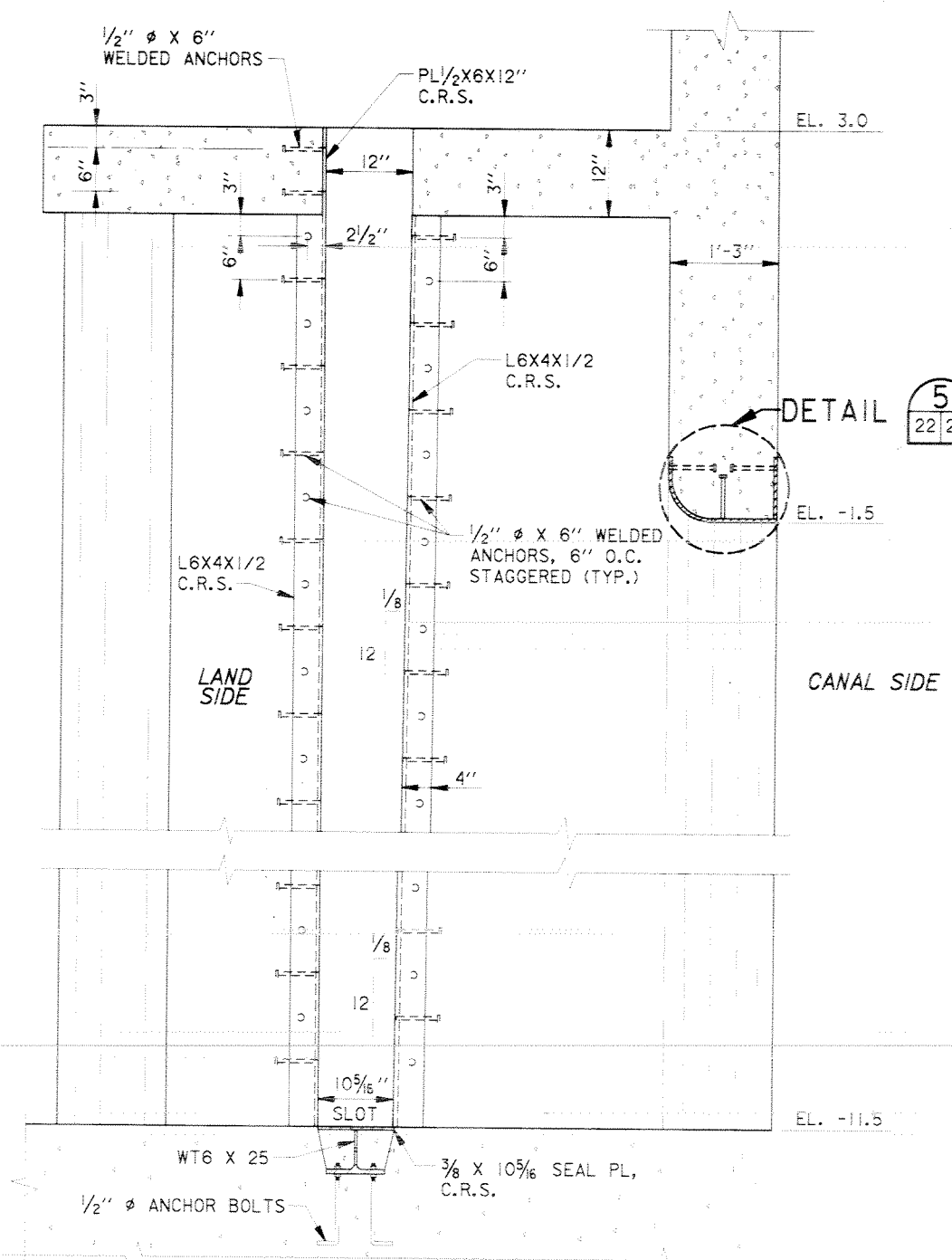


SECTION A
SCALE: 1" = 1'-0"

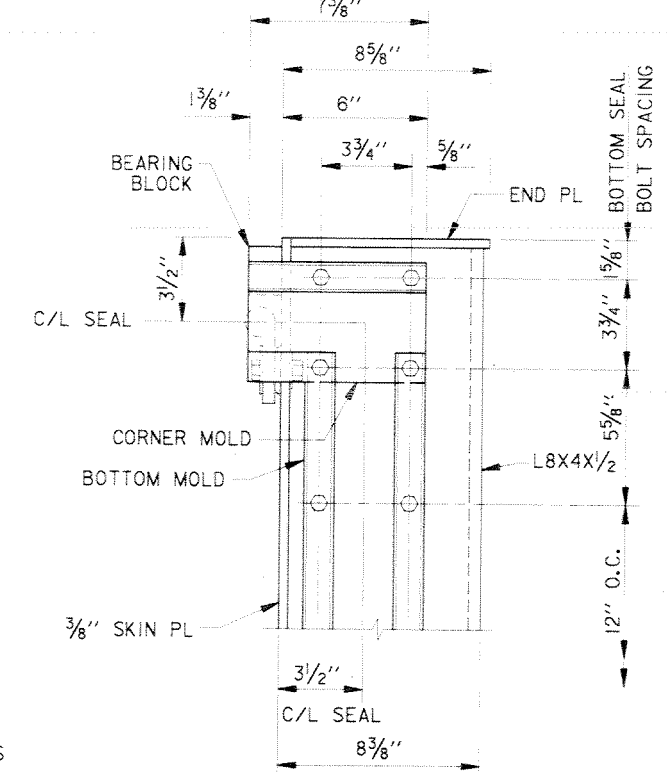
SECTION B
SCALE: 1" = 1'-0"



SEAL ANGLE AND PLATE DETAIL
SCALE: 1 1/2" = 1' - 0"

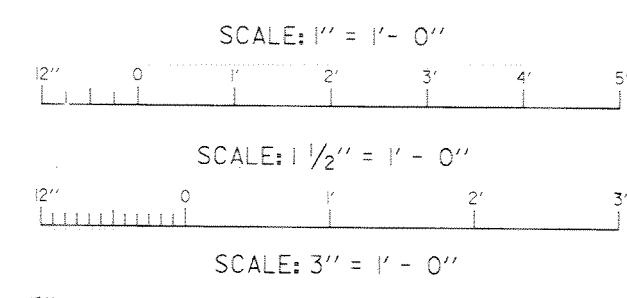


TYPICAL BULKHEAD SLOT
SCALE: 1" = 1'-0"



BOTTOM VIEW SEAL CORNER DETAIL
SCALE: 3" = 1' - 0"

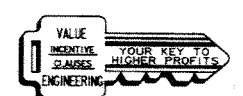
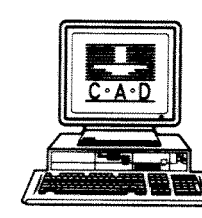
Safety is a Part of Your Contract



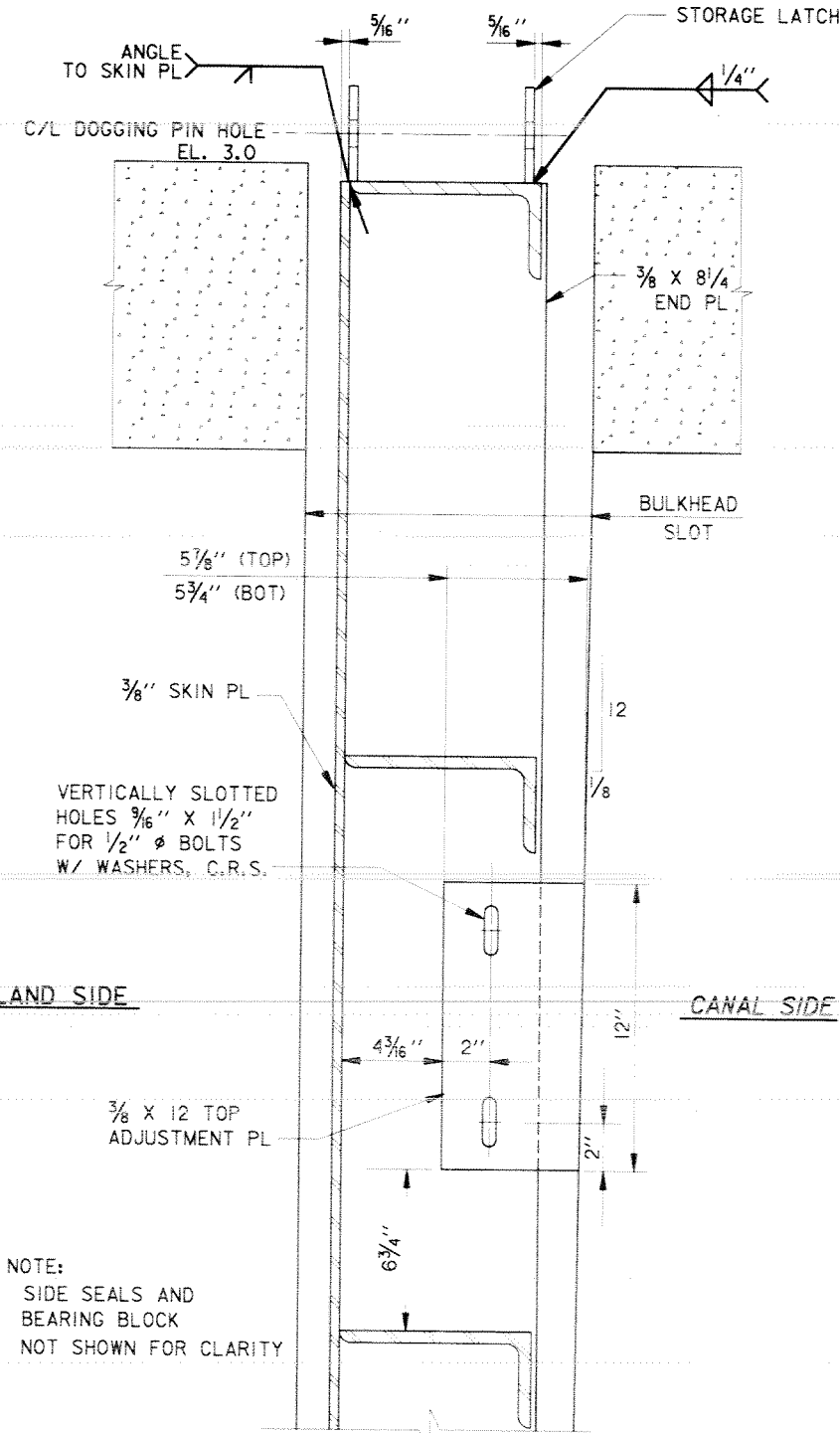
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA
ALUMINUM BULKHEADS

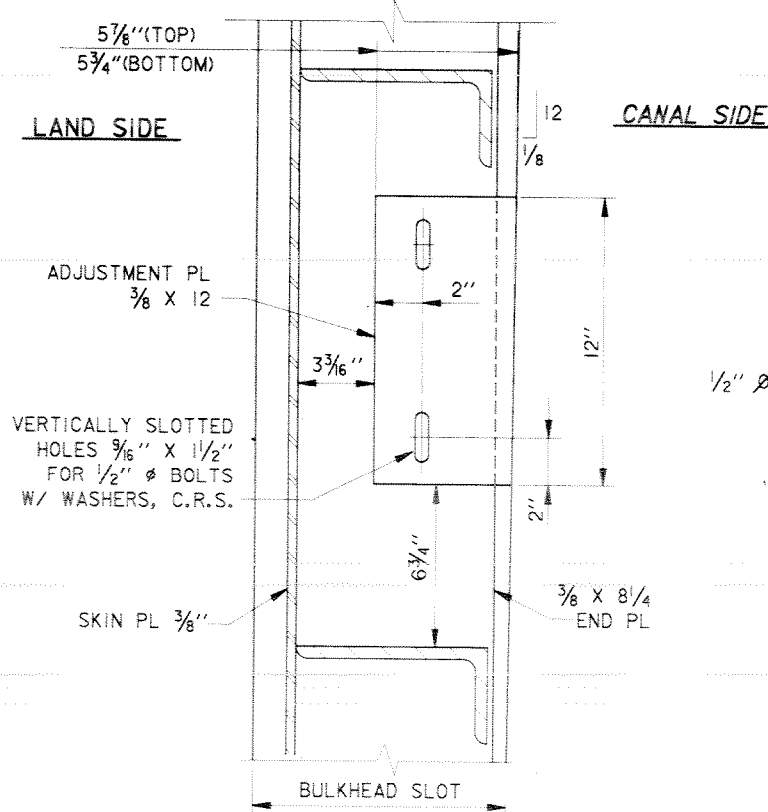
DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 12	PLOT DATE: DEC. 11, 1997
DRAWN BY: J.DARBY	CADD FILE: 44778E05.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 22 OF 16	
SUBMITTED BY: CHARLES A. LABORDE P.E. DESIGN ENGINEER			



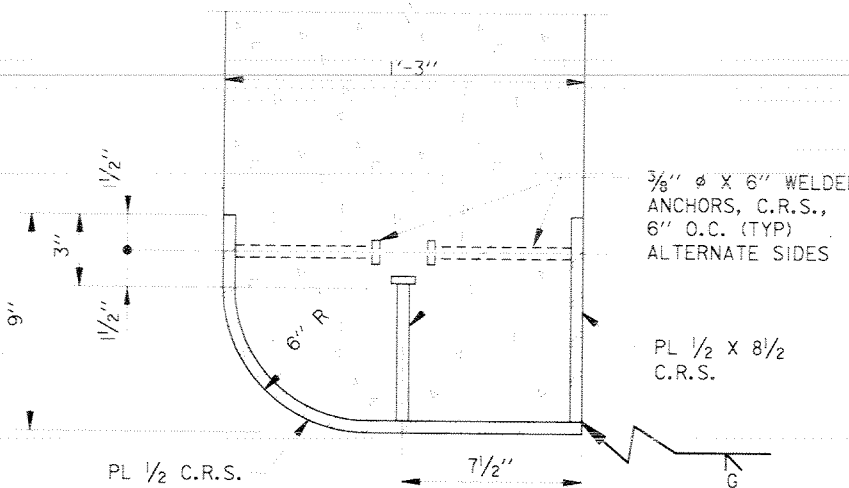
Safety is a Part of Your Contract



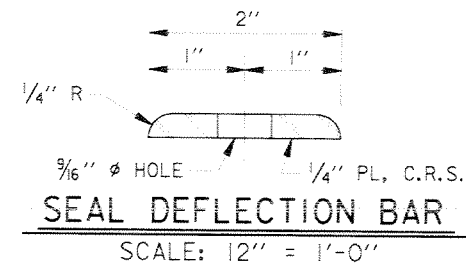
TOP ADJUSTMENT PLATE DETAIL
SCALE: 3" = 1'-0"



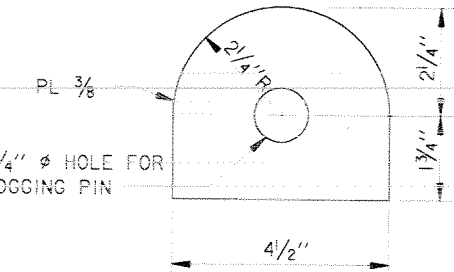
BOTTOM ADJUSTMENT PLATE DETAIL
SCALE: 3" = 1'-0"



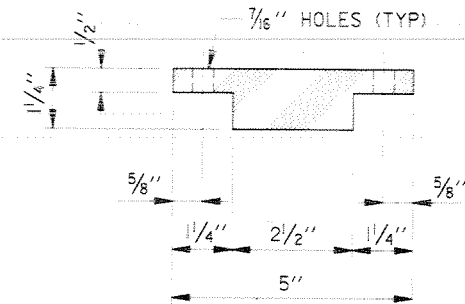
SEAL RETAINING BAR
SCALE: 12" = 1'-0"



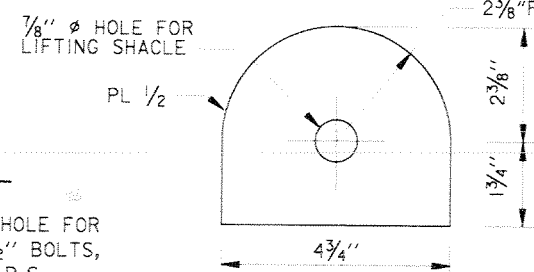
SEAL DEFLECTION BAR
SCALE: 12" = 1'-0"



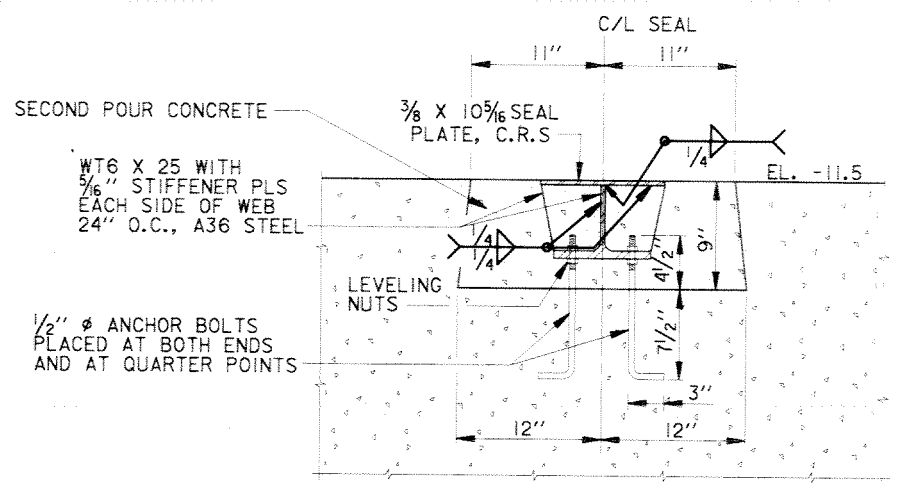
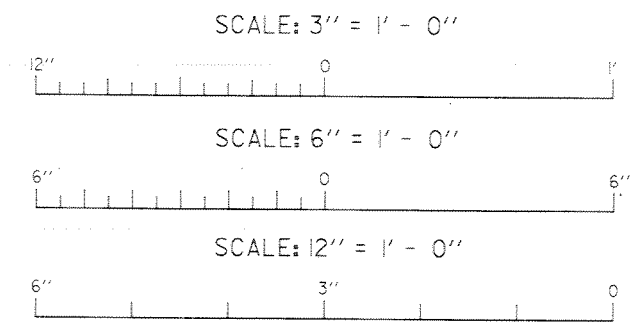
STORAGE PADEYE DETAIL
SCALE: 6" = 1'-0"



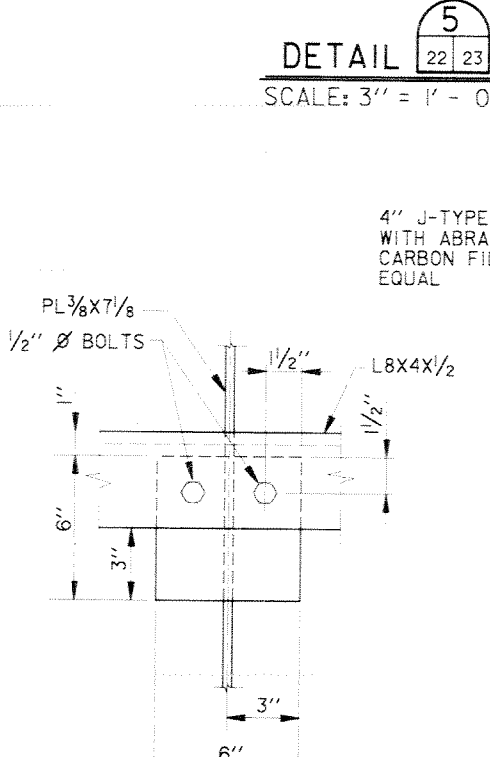
COMPRESSION SEAL MOLD DETAIL
SCALE: 6" = 1'-0"



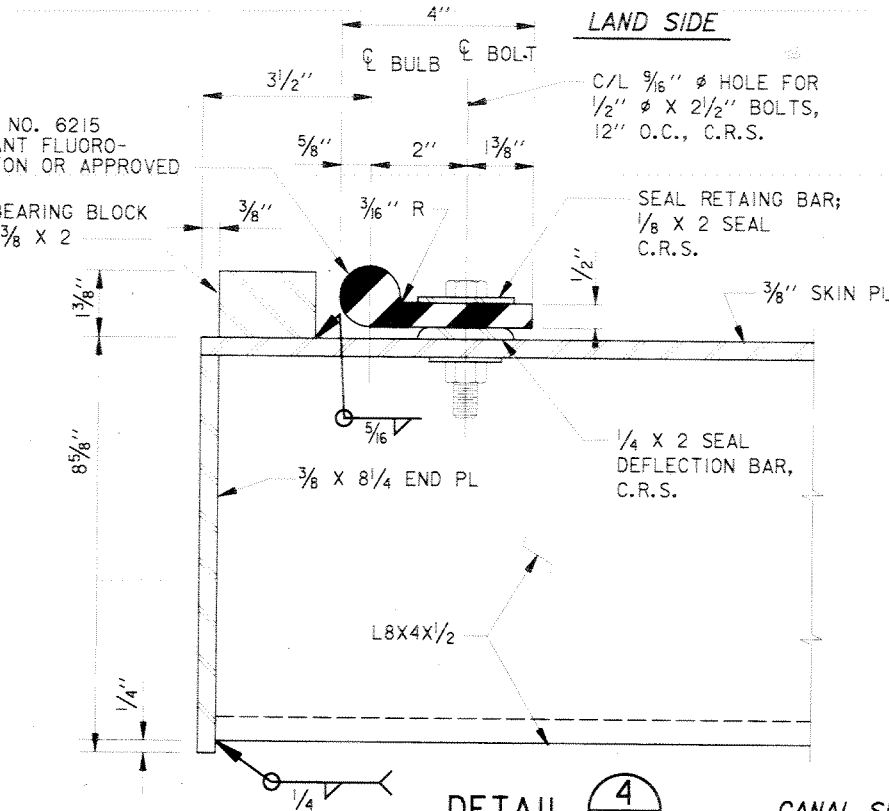
LIFTING PADEYE DETAIL
SCALE: 6" = 1'-0"



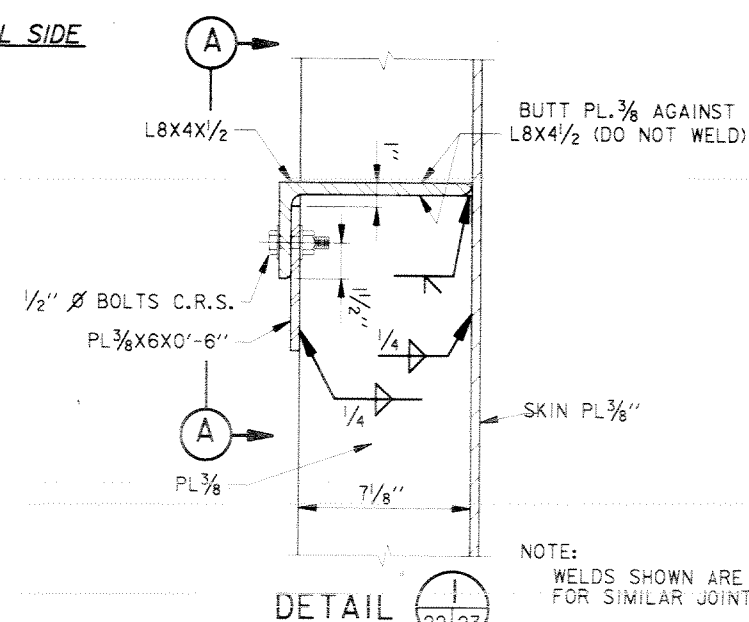
BULKHEAD SEAL PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



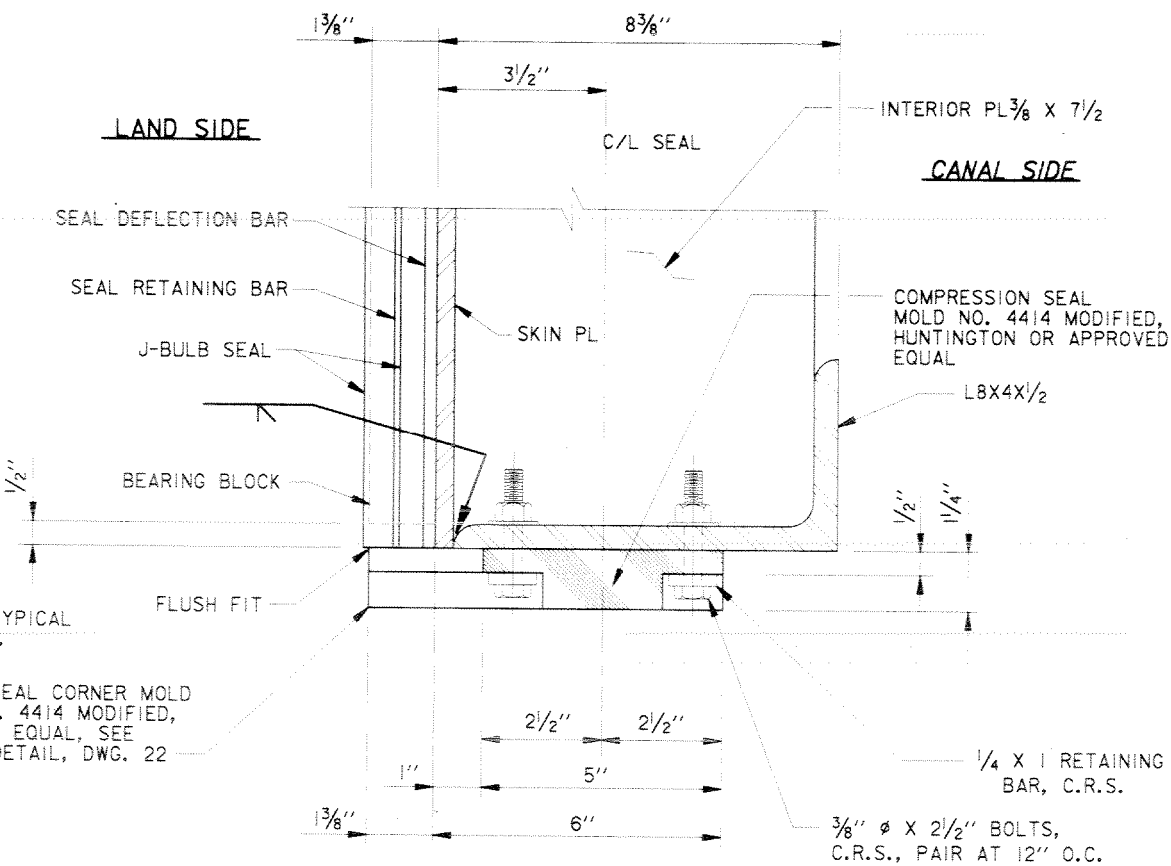
SECTION A
SCALE: 3" = 1'-0"



DETAIL
SCALE: 6" = 1'-0"



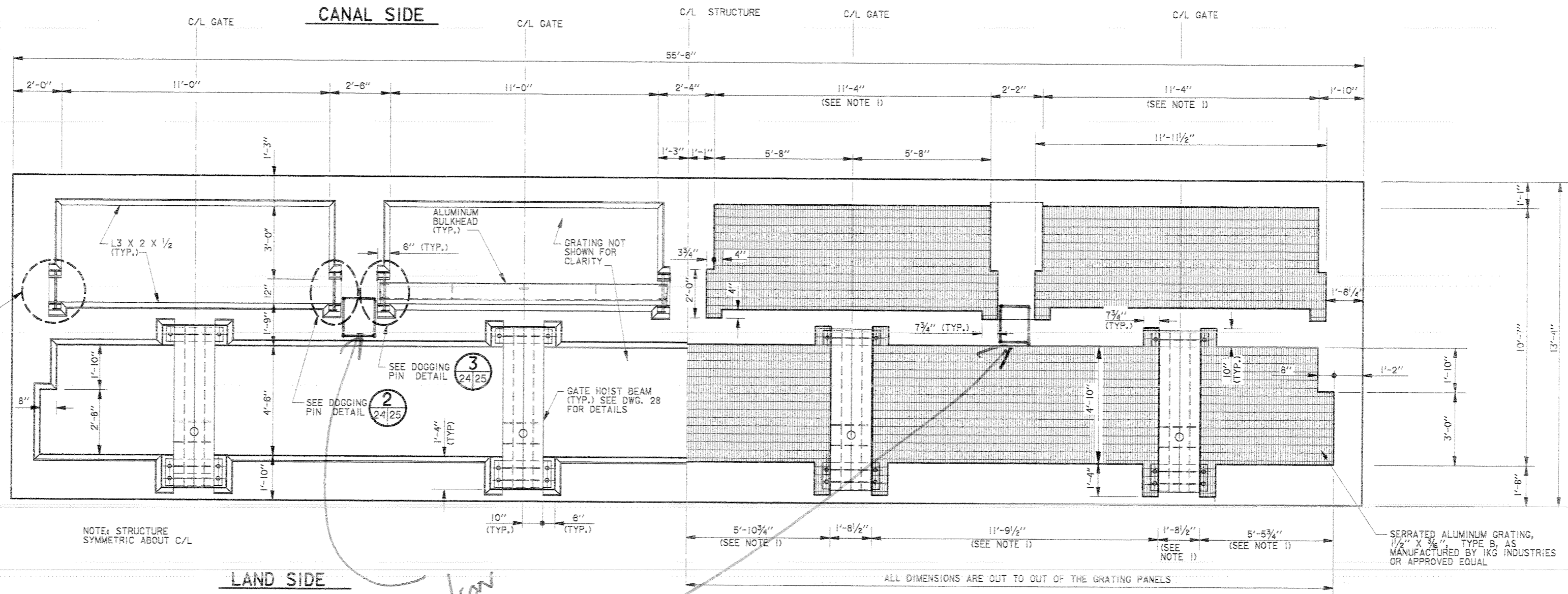
DETAIL
SCALE: 3" = 1'-0"



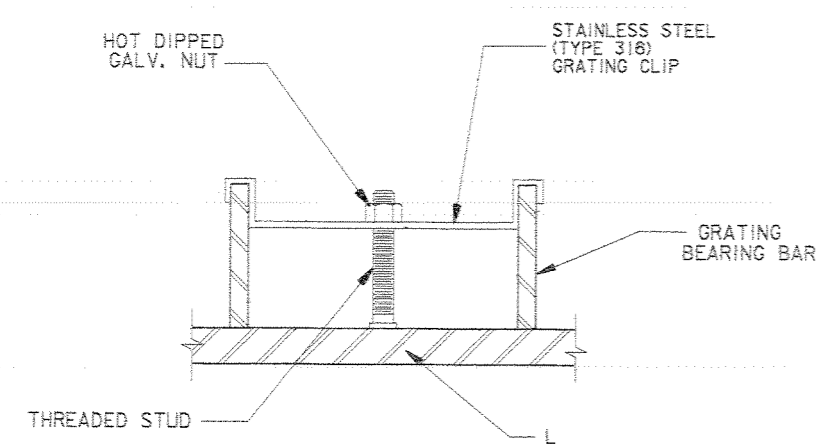
BULKHEAD BOTTOM SEAL DETAIL
SCALE: 6" = 1'-0"

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS			
CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS MARINA PHASE V - SLUICE GATES			
ORLEANS PARISH, LOUISIANA			
ALUMINUM BULKHEAD DETAILS			
DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 4	PLOT DATE: DEC. 15, 1997
DRAWN BY: J.DARBY	CADD FILE: 44778E4.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 23	OF 46
SUBMITTED BY: CHARLES A. LABORDE P.E. DESIGN ENGINEER			

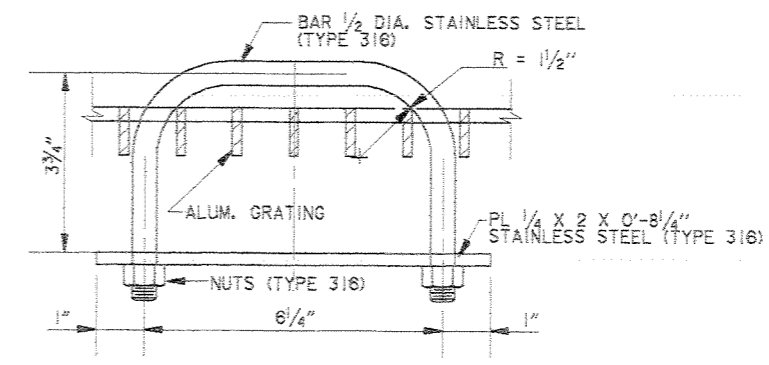
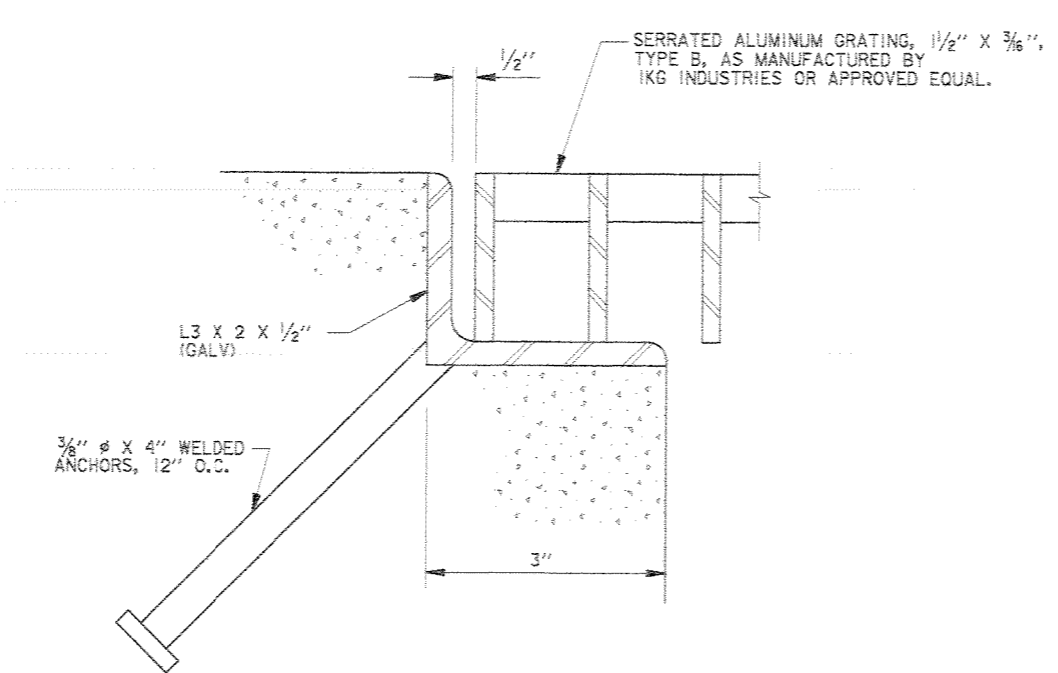
**Safety is a Part
of Your Contract**



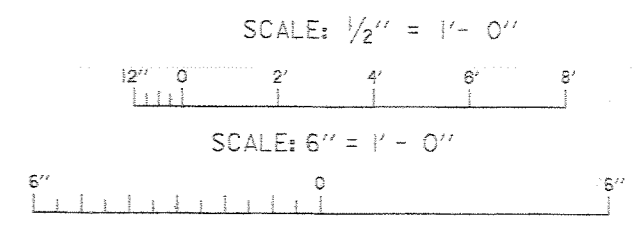
- NOTES:
1. PROVIDE SUFFICIENT NUMBER OF ALUMINUM GRATING PANELS WITHIN EACH OPENING SO THAT THE WEIGHT OF EACH PANEL IS LESS THAN OR EQUAL TO 85 LBS.
 2. AFTER FABRICATION, THE GRATING SUPPORT ASSEMBLY SHALL BE HOT DIP GALVANIZED PRIOR TO INSTALLATION.



NOTE: PROVIDE MINIMUM 4 CLIPS EACH PANEL.



NOTE: PROVIDE 2 LIFTING HANDLES FOR EACH GRATING PANEL. LOCATION OF THE LIFTING HANDLES SHALL BE APPROVED BY THE CONTRACTING OFFICER



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED GRATING TO MATCH CHANGES TO HOIST BEAM	2/1/99	CAL

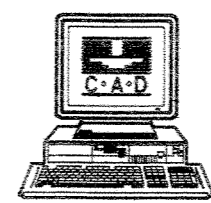
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.

ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

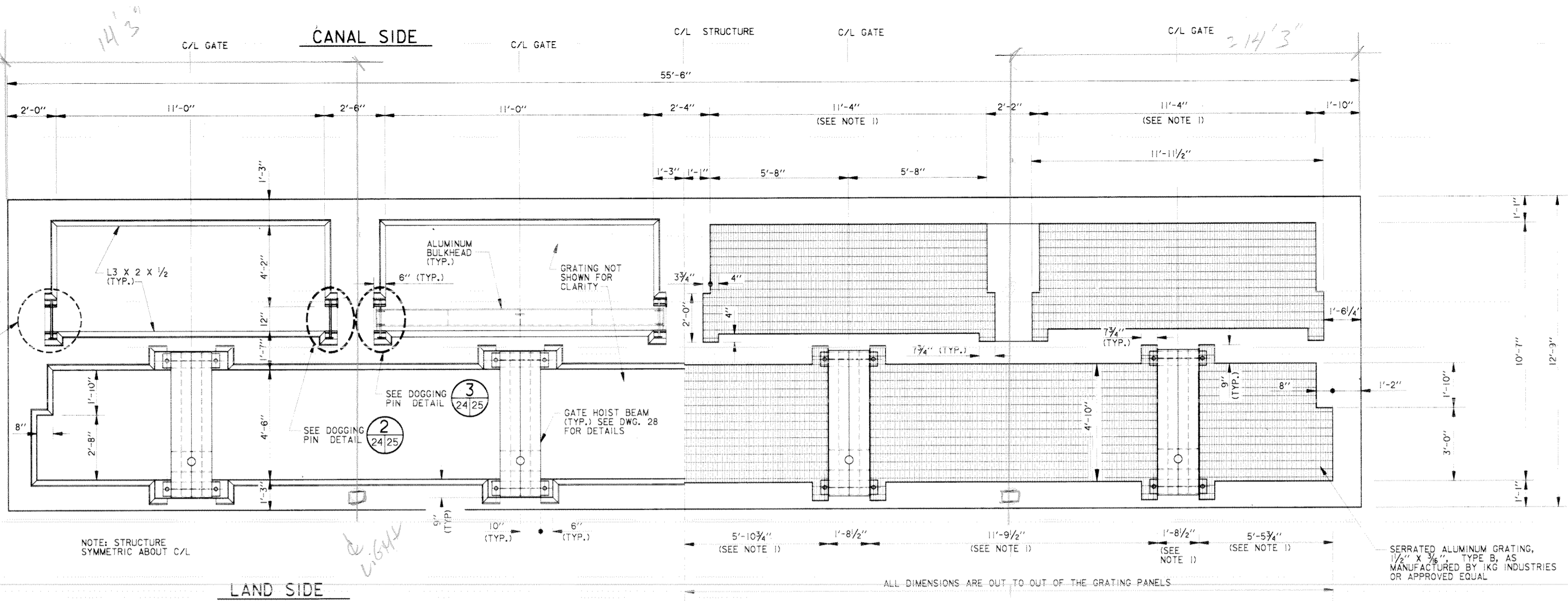
GRATING PLAN AND DETAILS

DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: FEB. 1, 1999
DRAWN BY: C. BRANSTETTER	CADD FILE: 44778U01.DGN	FILE NO.	H-4-44778
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 24	OF 46
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			



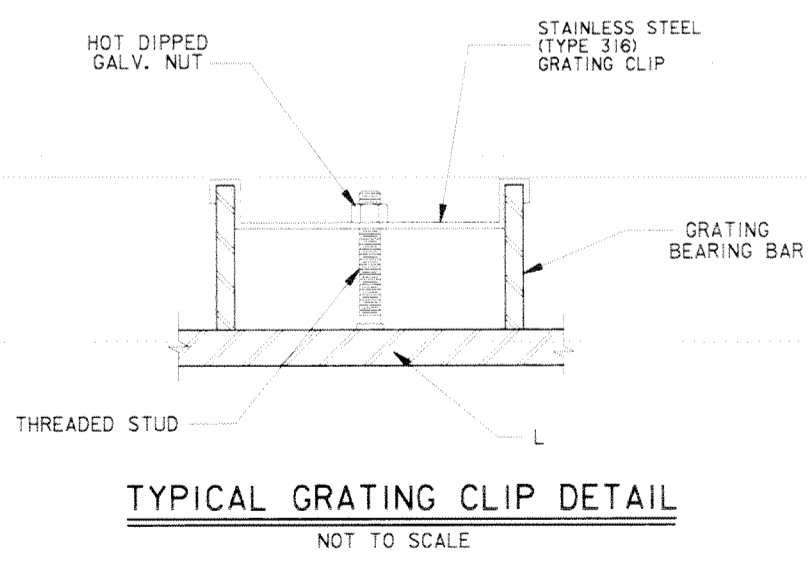
A00005

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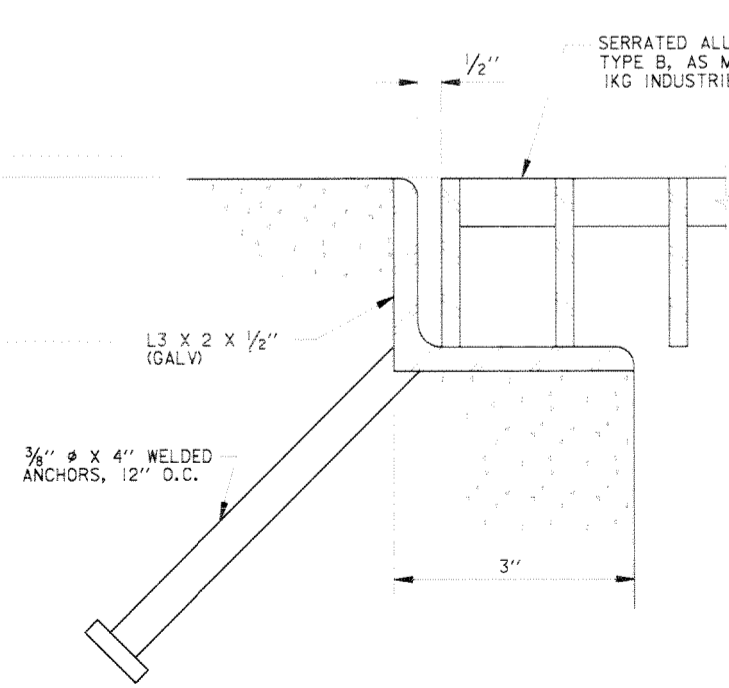
GRATING PLAN
SCALE: 1/2" = 1' - 0"

- NOTES:
1. PROVIDE SUFFICIENT NUMBER OF ALUMINUM GRATING PANELS WITHIN EACH OPENING SO THAT THE WEIGHT OF EACH PANEL IS LESS THAN OR EQUAL TO 65 LBS.
 2. AFTER FABRICATION, THE GRATING SUPPORT ASSEMBLY SHALL BE HOT DIP GALVANIZED PRIOR TO INSTALLATION.

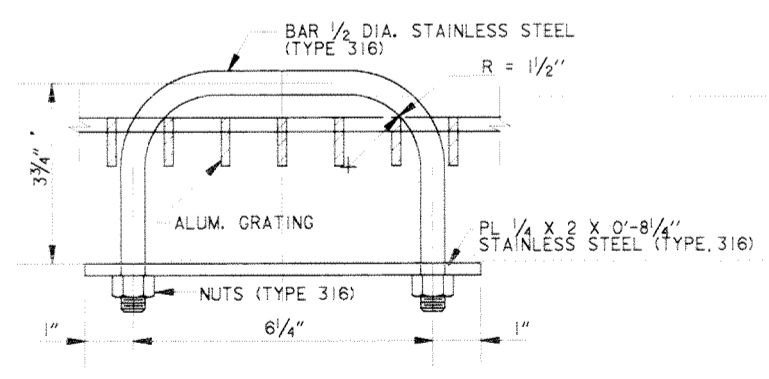


TYPICAL GRATING CLIP DETAIL
NOT TO SCALE

NOTE: PROVIDE MINIMUM 4 CLIPS EACH PANEL.

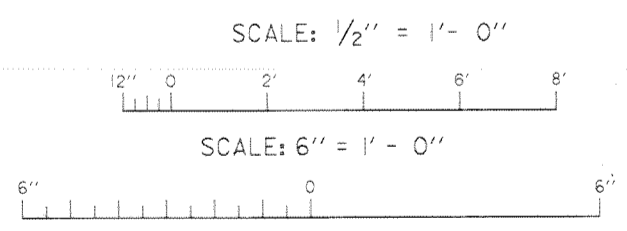


TYPICAL SUPPORT ANGLE ANCHORAGE
N. T. S.

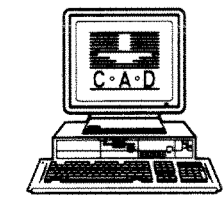


LIFTING HANDLE DETAIL
SCALE: 6" = 1' - 0"

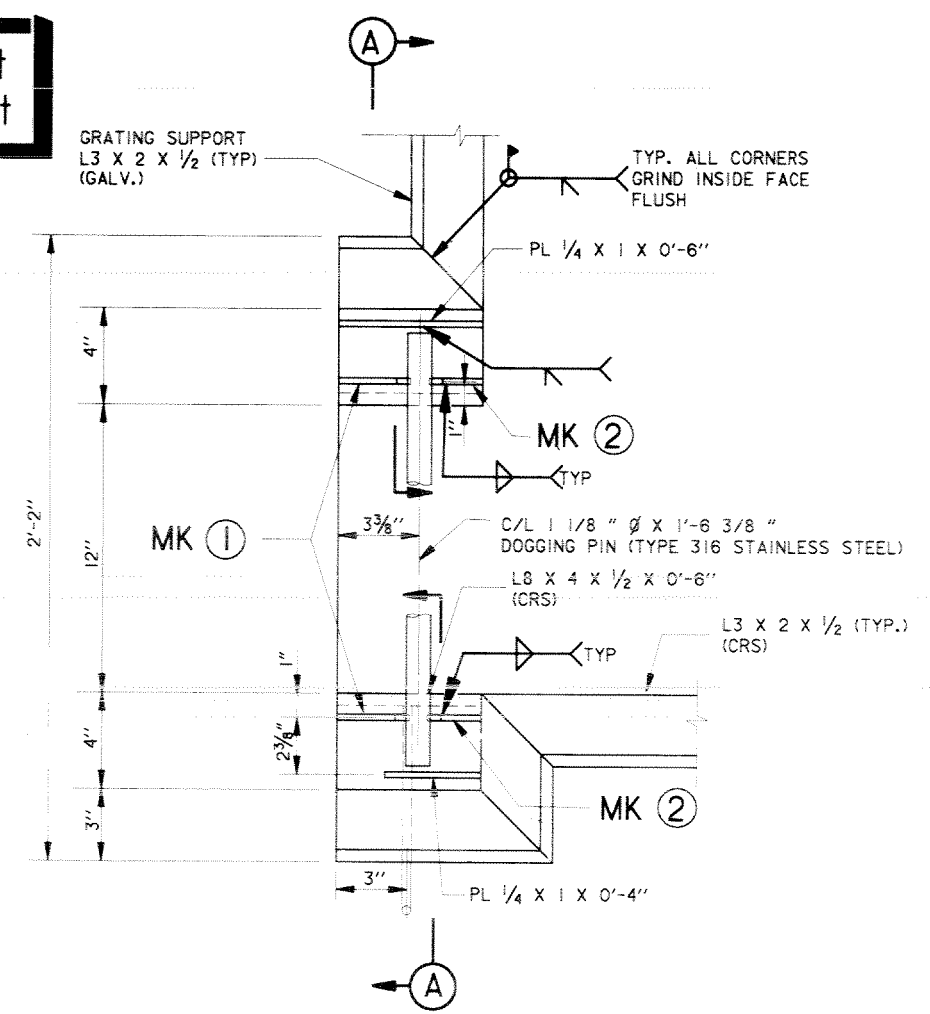
NOTE: PROVIDE 2 LIFTING HANDLES FOR EACH GRATING PANEL. LOCATION OF THE LIFTING HANDLES SHALL BE APPROVED BY THE CONTRACTING OFFICER



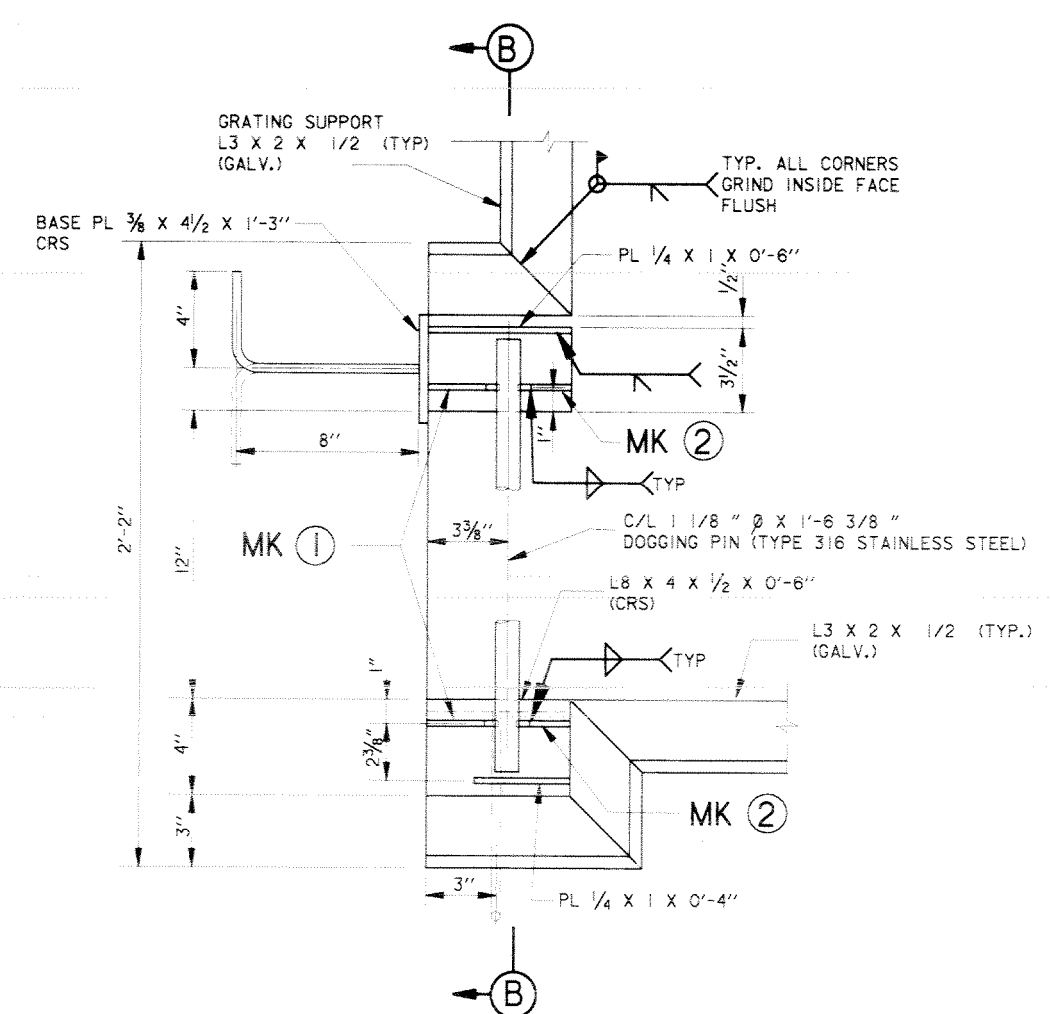
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA GRATING PLAN AND DETAILS			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: C. BRANSTETTER	CHECKED BY: C. LABORDE	CADD FILE: 44778U1.DGN	FILE NO. H-4-44778
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 24 OF 46	



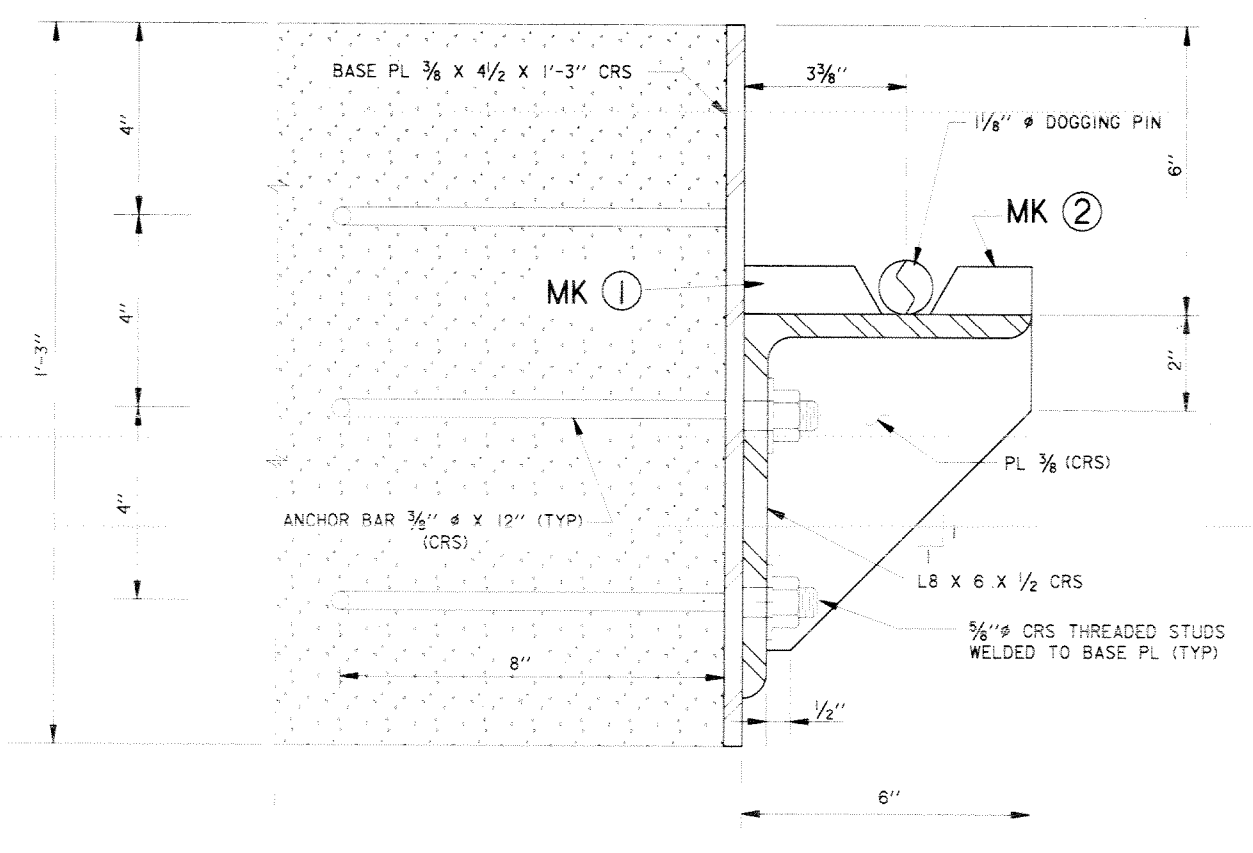
Safety is a Part of Your Contract



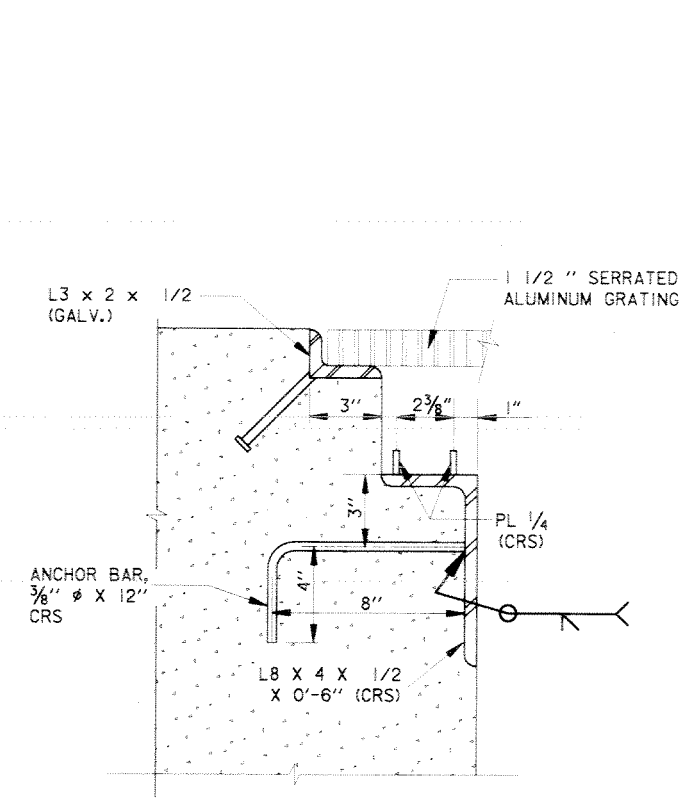
**DOGGIN PIN SUPPORT
DETAIL ① SHOWN**
SCALE: 3" = 1' - 0"



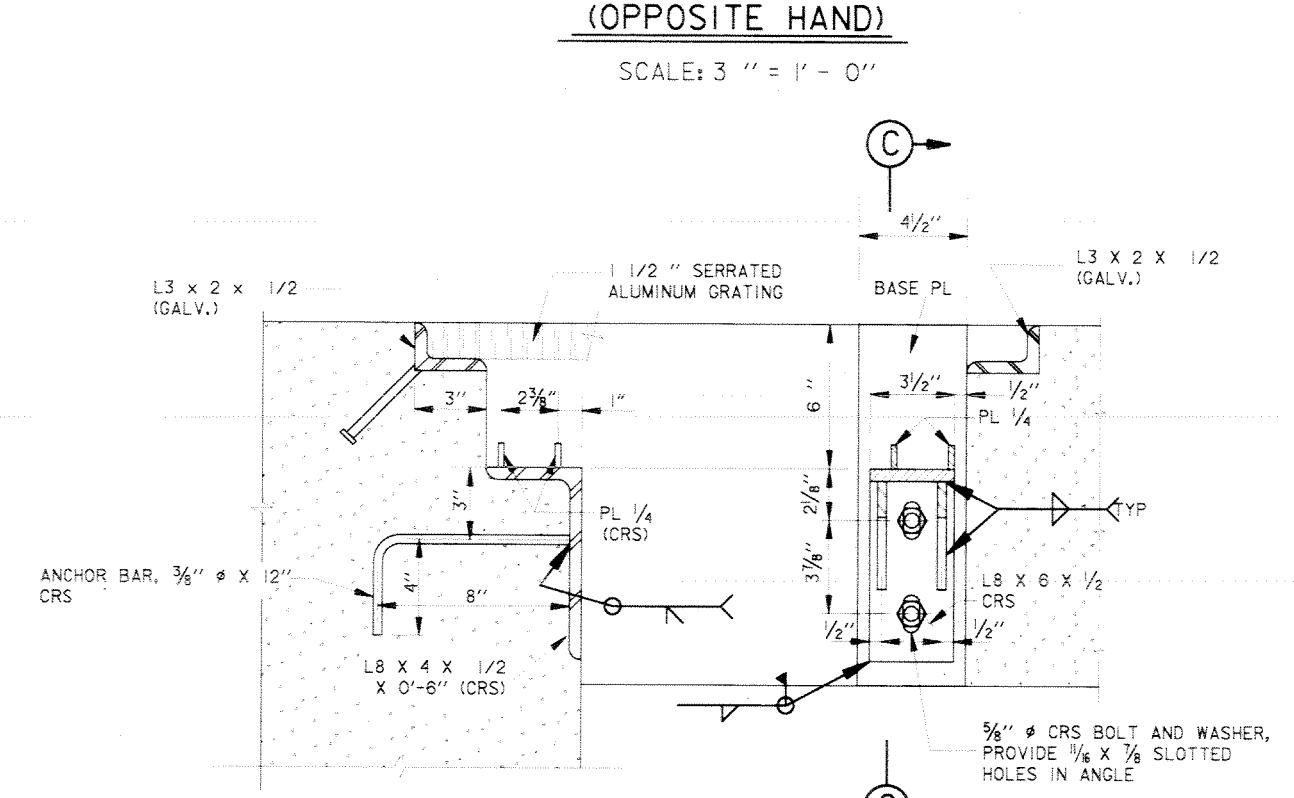
**DOGGIN PIN SUPPORT
DETAIL ② SHOWN
DETAIL ③ SIMILAR
(OPPOSITE HAND)**
SCALE: 3" = 1' - 0"



SECTION ③
SCALE: 6" = 1' - 0"

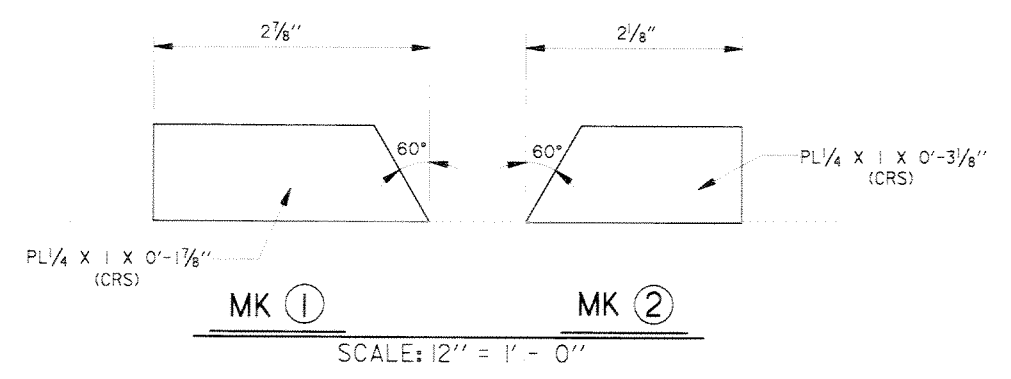


SECTION ①
SCALE: 3" = 1' - 0"



SECTION ②
SCALE: 3" = 1' - 0"

NOTE:
DOGGING PIN AND BULKHEAD
NOT SHOWN FOR CLARITY

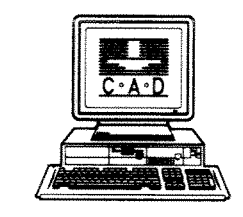



MK ① MK ②
SCALE: 12" = 1' - 0"

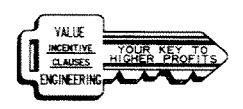
SCALE: 3" = 1' - 0"

SCALE: 6" = 1' - 0"

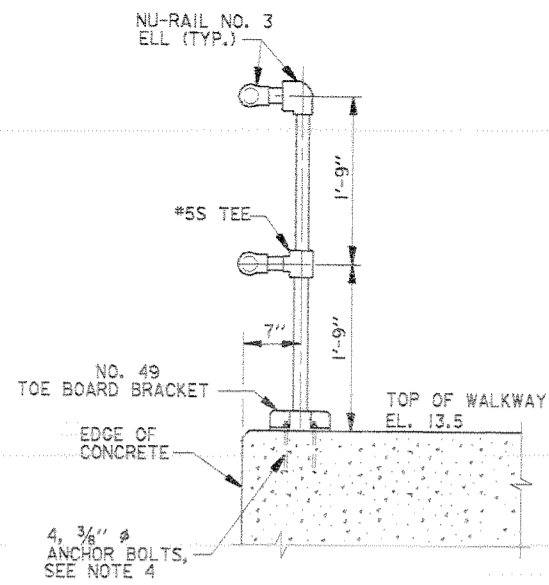
SCALE: 12" = 1' - 0"



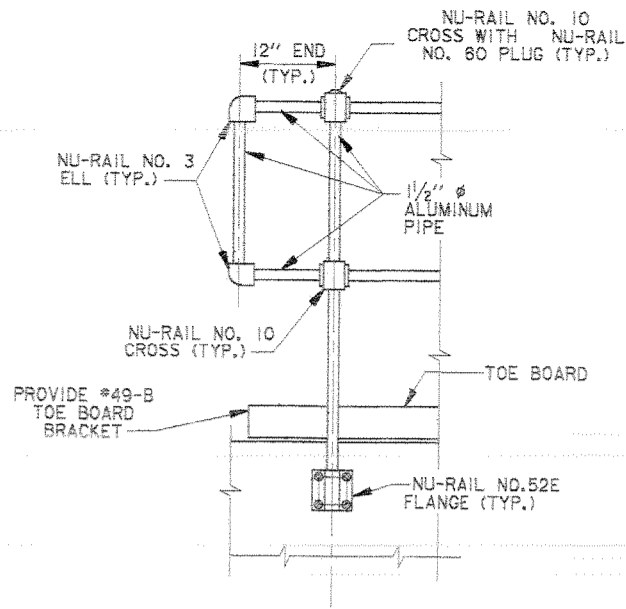
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA DOGGING PIN SUPPORT DETAILS			
DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 2	PLOT DATE: NOV. 10, 1997
DRAWN BY: V. COUVILLON	CADD FILE: 44778M04.DGN	FILE NO.	H-4-44778
CHECKED BY: C. LABORDE	SOLICITATION NO.	DWG. NO.	25 OF 46
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	DACW29-B-98-0001		



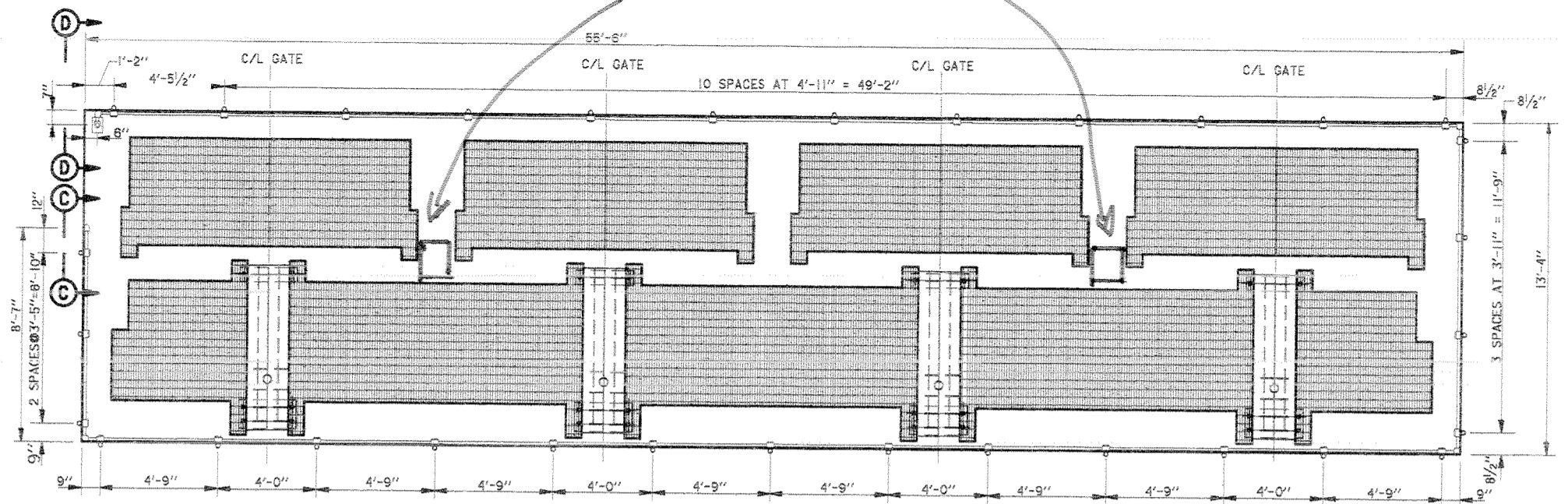
Safety is a Part of Your Contract



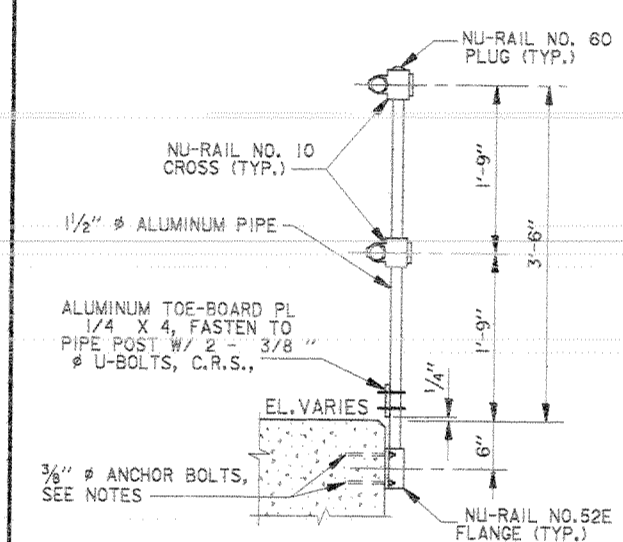
SECTION D
SCALE: 1" = 1'-0"



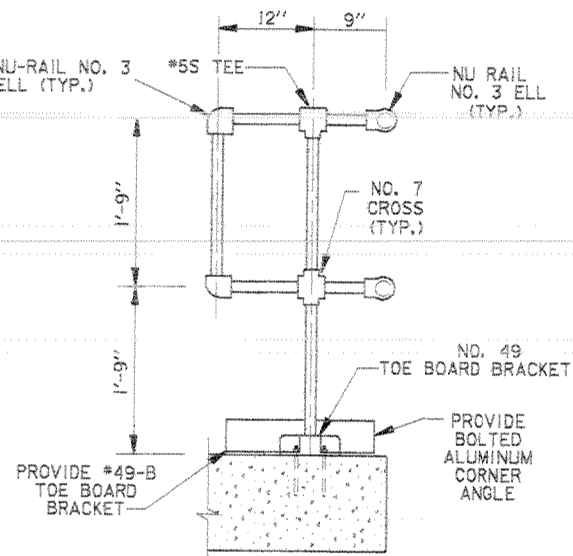
SECTION C
SCALE: 1" = 1'-0"



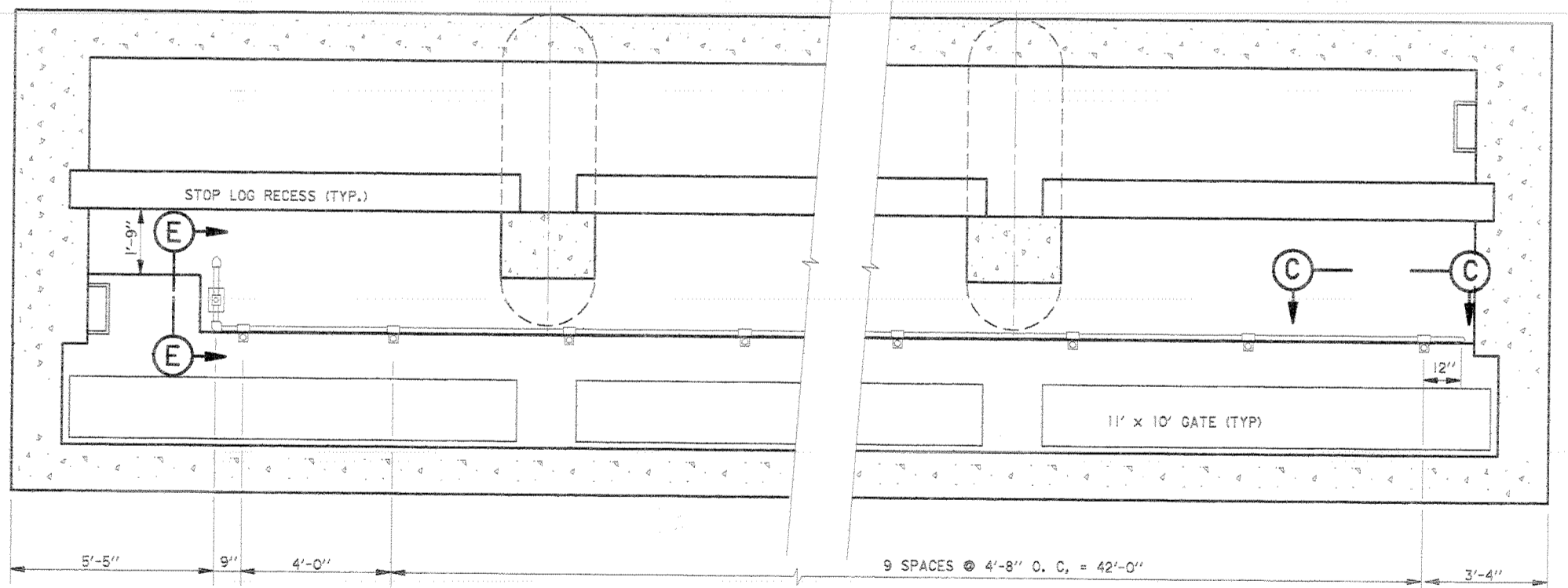
PLAN AT EL. 17.0
SCALE: 3/8" = 1'-0"



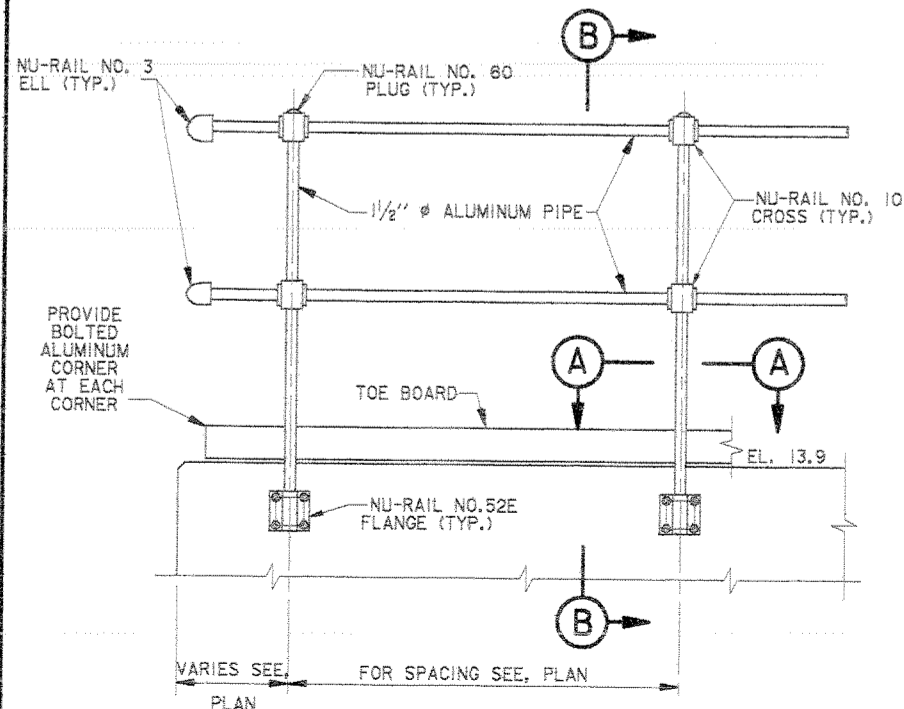
SECTION B
SCALE: 1" = 1'-0"



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



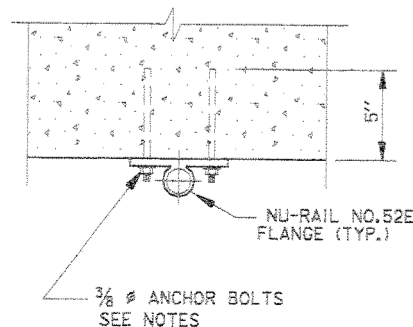
PLAN AT EL. 7.0
SCALE: 1/2" = 1'-0"



TYPICAL GUARDRAIL ELEVATION
SCALE: 1" = 1'-0"

GUARDRAIL NOTES

1. ALL GUARDRAIL FITTINGS SHALL BE ALUMINUM NU-RAIL SLIP-ON OFFSET FITTINGS AS MANUFACTURED BY THE HOLLANDER MFG. CO., CINCINNATI, OHIO OR APPROVED EQUAL.
2. ALL GUARDRAIL PIPE SHALL BE 1 1/2" ALUMINUM PIPE, SCHEDULE 40 FOR RAILS AND SCHEDULE 80 FOR POSTS. ALUMINUM SHALL BE ALLOY 6063-T6.
3. WHERE ALUMINUM IS EXPOSED TO CONCRETE, USE 2 COATS OF BITUMINOUS PAINT OR A NEOPRENE GASKET.
4. ANCHOR BOLTS SHALL BE HILTI, KWIK BOLT II, C.R.S., 3/8" WITH 5" MINIMUM EMBEDMENT, AS MFD. BY HILTI, TULSA, OKLAHOMA OR APPROVED EQUAL. PROVIDE C.R.S. LOCK WASHERS AND NUTS WITH ANCHOR BOLTS.
5. ALL BOLTS USED TO FASTEN GUARDRAIL TO STEEL STRINGERS, TOE-BOARDS TO TOE-BOARD BRACKETS, CONNECTING ANGLES AND TOE BOARDS TO GUARDRAIL POST SHALL BE 3/8" BOLTS W/ LOCK WASHERS AND NUTS, C.R.S..



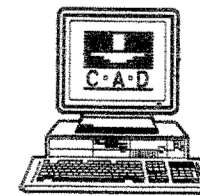
SECTION A
SCALE: 1 1/2" = 1'-0"

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

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

SCALE: 1" = 1'-0"

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



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED GUARDRAIL PLAN TO MATCH CHANGES TO HOIST BEAM	2/1/99	CAL

REVISIONS

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

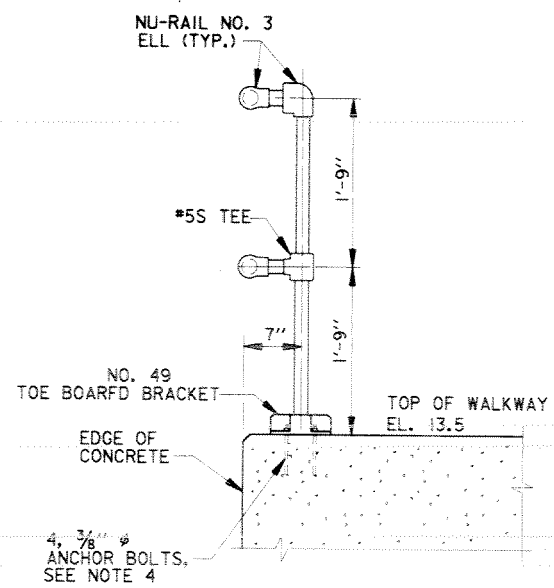
GUARDRAILS AND DETAILS

DESIGNED BY: C.LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: FEB. 1, 1999
DRAWN BY: J.DARBY	CADD FILE: 44778C06.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. IACW29-98-B-0001	DWG. 26 OF 46

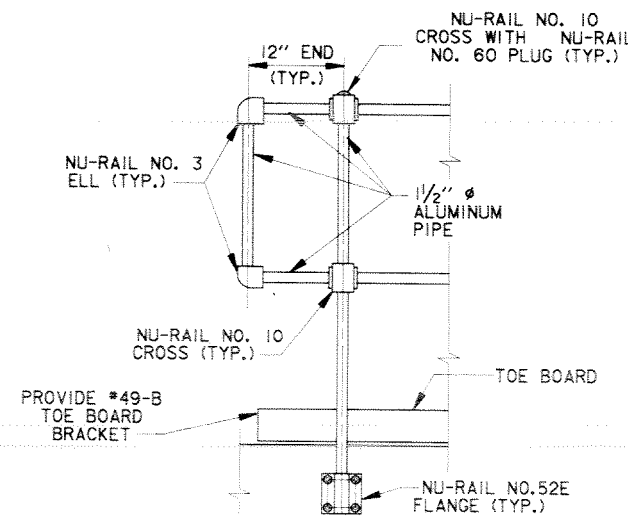


100005

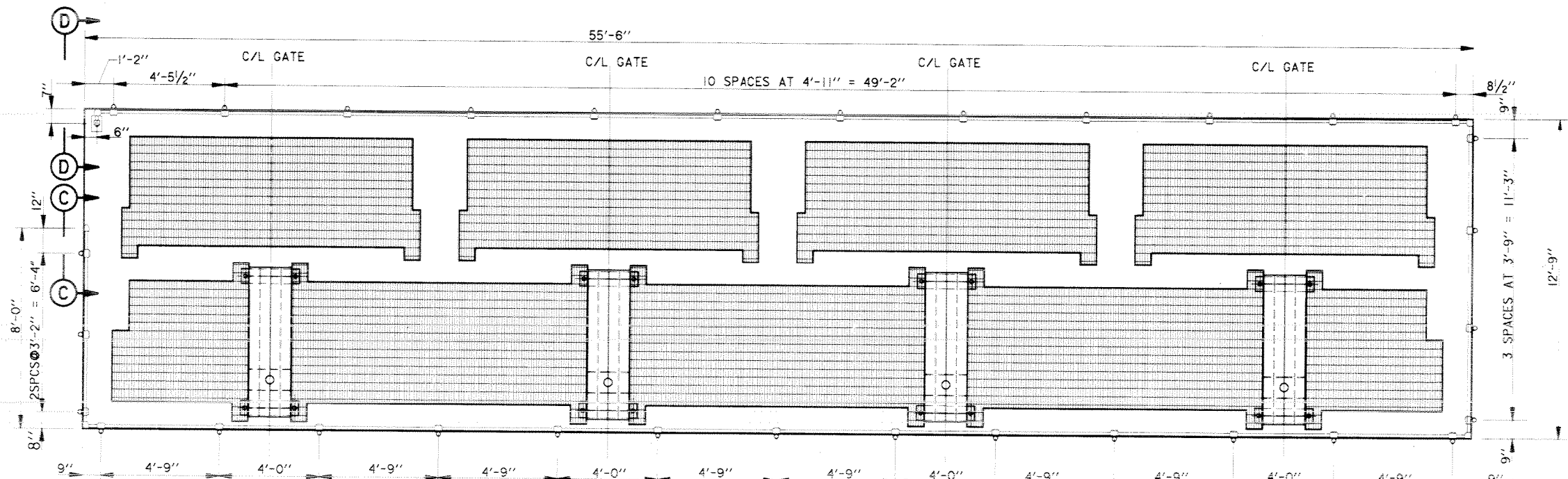
Safety is a Part of Your Contract



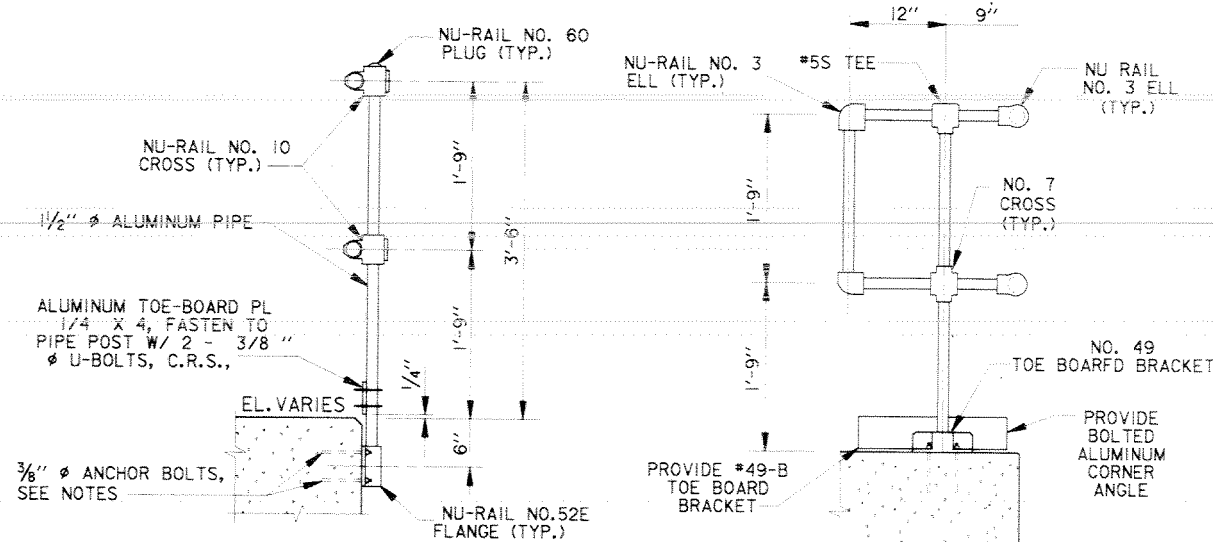
SECTION D
SCALE: 1" = 1'-0"



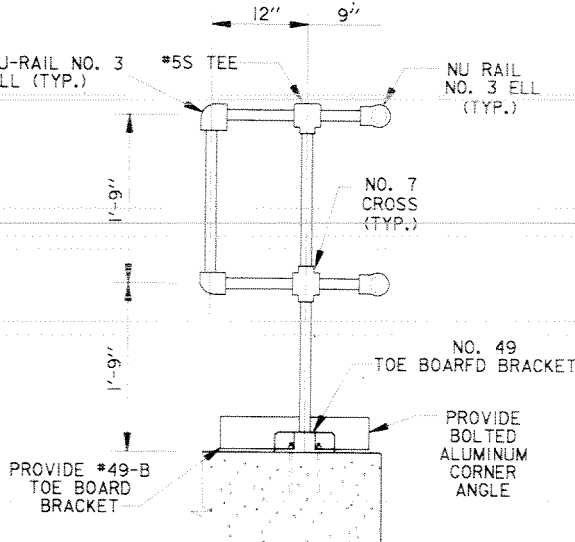
SECTION C
SCALE: 1" = 1'-0"



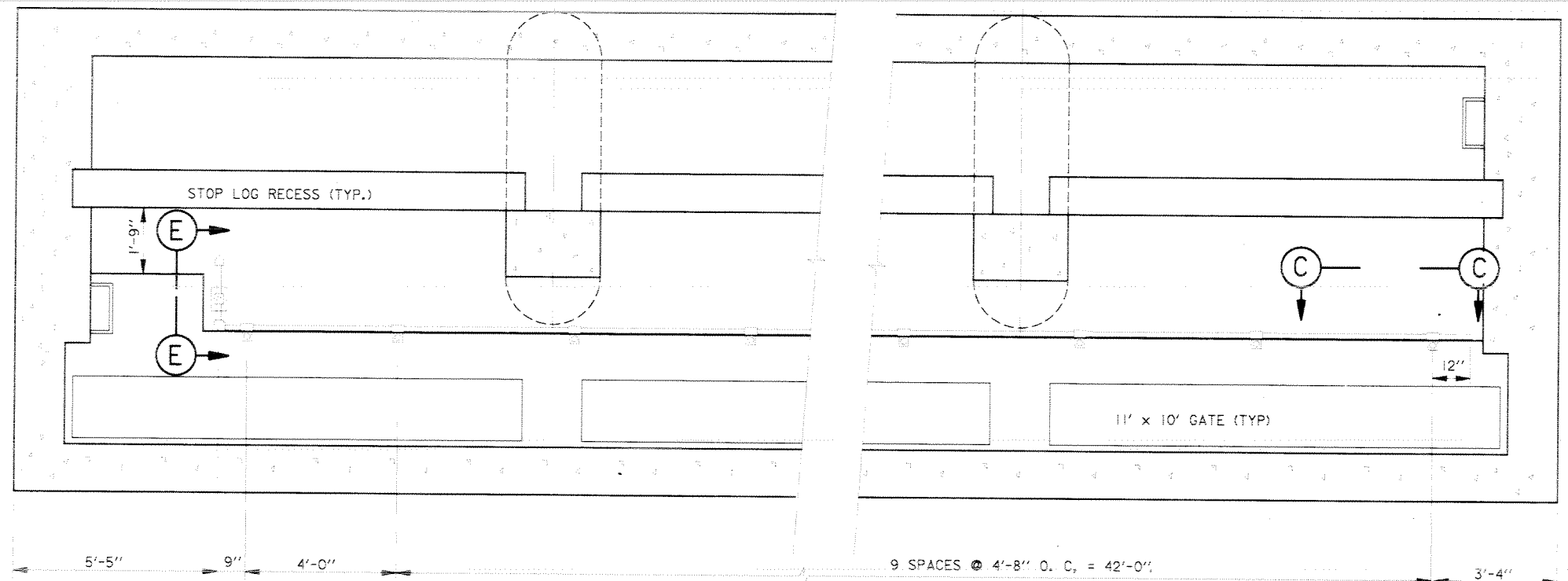
PLAN AT EL. 17.0
SCALE: 3/8" = 1'-0"



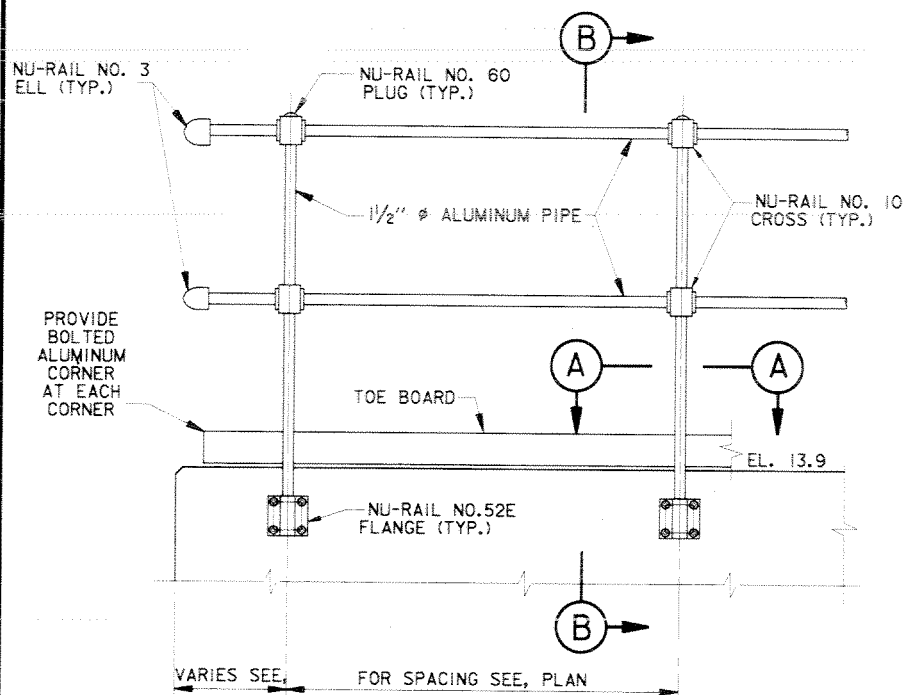
SECTION B
SCALE: 1" = 1'-0"



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



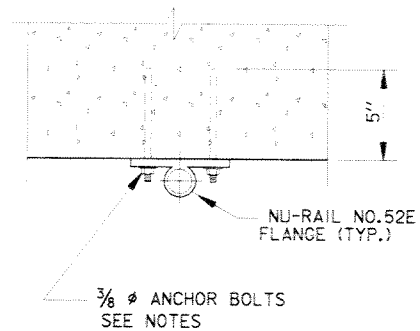
PLAN AT EL. 7.0
SCALE: 1/2" = 1'-0"



TYPICAL GUARDRAIL ELEVATION
SCALE: 1" = 1'-0"

GUARDRAIL NOTES

1. ALL GUARDRAIL FITTINGS SHALL BE ALUMINUM NU-RAIL SLIP-ON OFFSET FITTINGS AS MANUFACTURED BY THE HOLLANDER MFG. CO., CINCINNATI, OHIO OR APPROVED EQUAL.
2. ALL GUARDRAIL PIPE SHALL BE 1/2" ALUMINUM PIPE, SCHEDULE 40 FOR RAILS AND SCHEDULE 80 FOR POSTS. ALUMINUM SHALL BE ALLOY 6061-T6.
3. WHERE ALUMINUM IS EXPOSED TO CONCRETE, USE 2 COATS OF BITUMINOUS PAINT OR A NEOPRENE GASKET.
4. ANCHOR BOLTS SHALL BE HILTI, KWIK BOLT II, C.R.S., 3/8" WITH 5" MINIMUM EMBEDMENT, AS MFD. BY HILTI, TULSA, OKLAHOMA OR APPROVED EQUAL. PROVIDE C.R.S. LOCK WASHERS AND NUTS WITH ANCHOR BOLTS.
5. ALL BOLTS USED TO FASTEN GUARDRAIL TO STEEL STRINGERS, TOE-BOARDS TO TOE-BOARD BRACKETS, CONNECTING ANGLES AND TOE BOARDS TO GUARDRAIL POST SHALL BE 3/8" BOLTS W/ LOCK WASHERS AND NUTS, C.R.S..



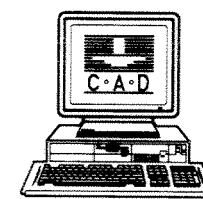
SECTION A
SCALE: 1 1/2" = 1'-0"

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

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

SCALE: 1" = 1'-0"

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



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

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

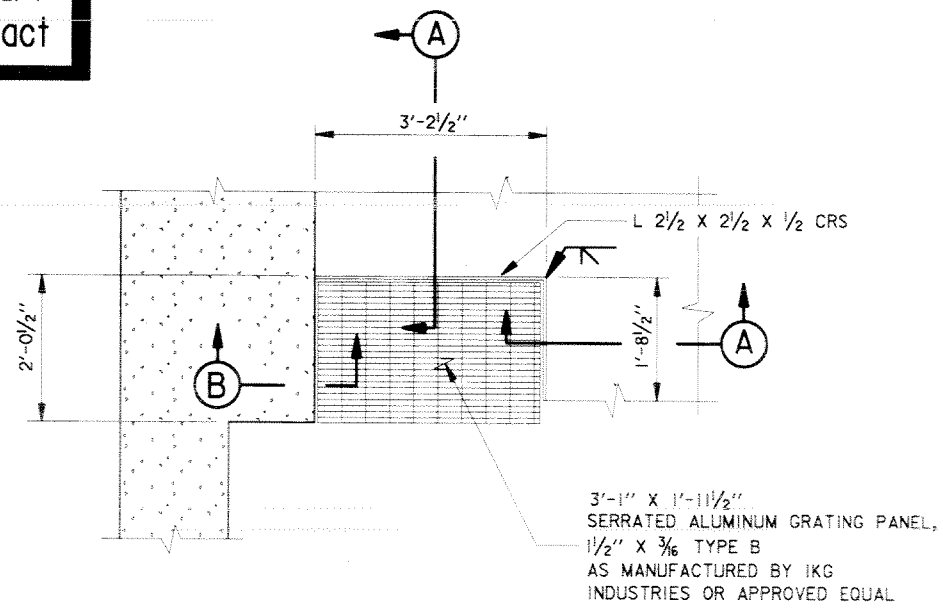
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

GUARDRAILS AND DETAILS

DESIGNED BY: C.LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: J.DARBY	CADD FILE: 447TRC06.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 26 OF 46	
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			



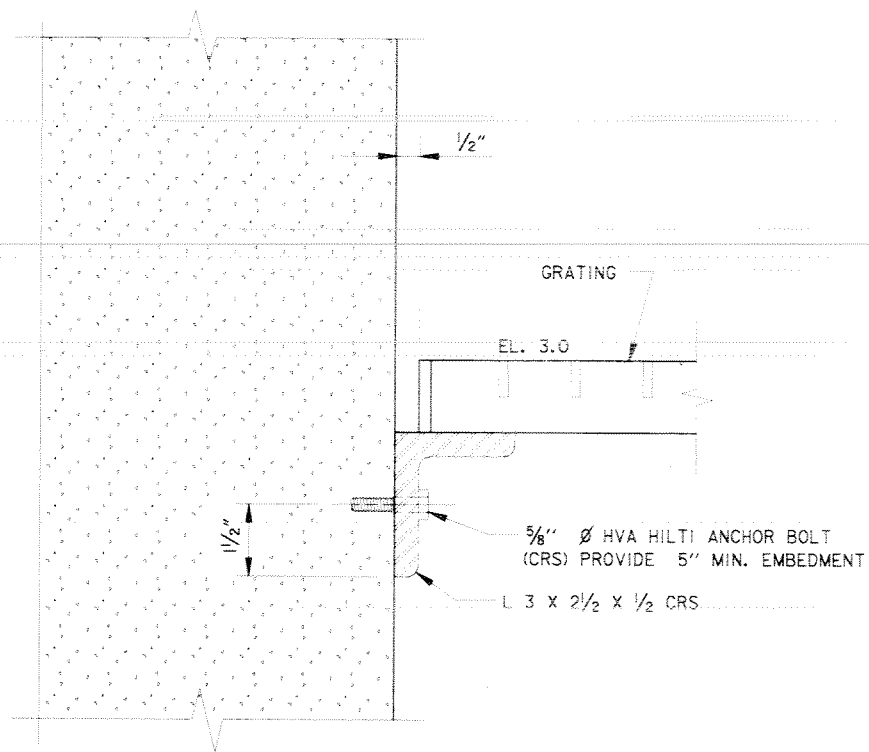
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GRATING LANDING DETAIL

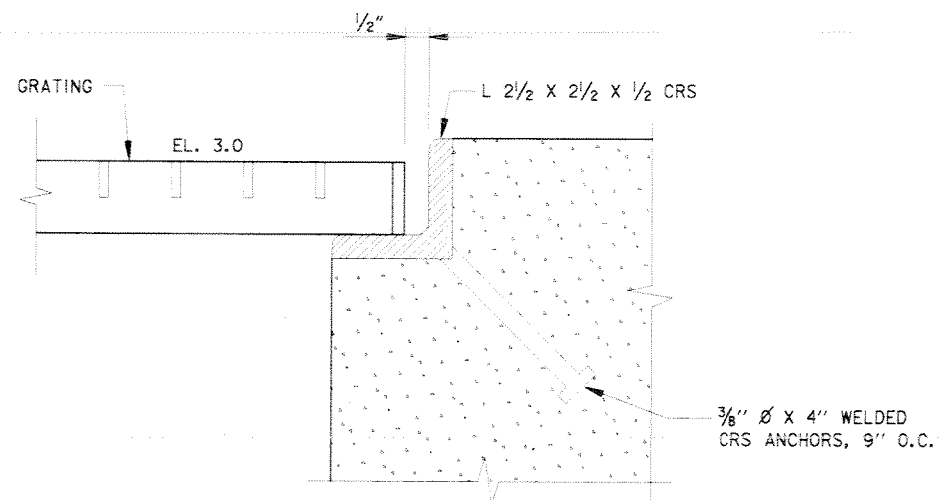
SCALE: 3/4" = 1' - 0"

NOTE:
PROVIDE 4 GRATING CLIPS SEE GRATING CLIP DETAIL ON DWG. 24.



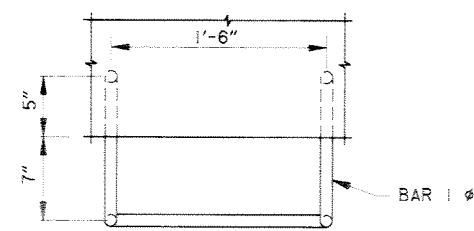
SECTION B

SCALE: 6" = 1' - 0"



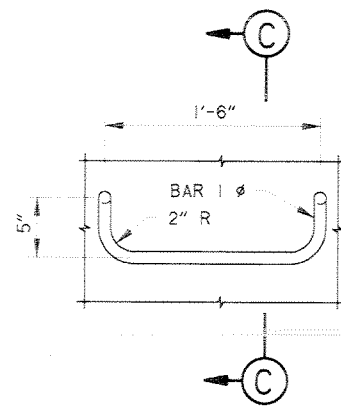
SECTION A

SCALE: 6" = 1' - 0"



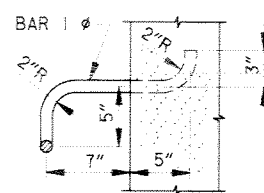
PLAN

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



ELEVATION

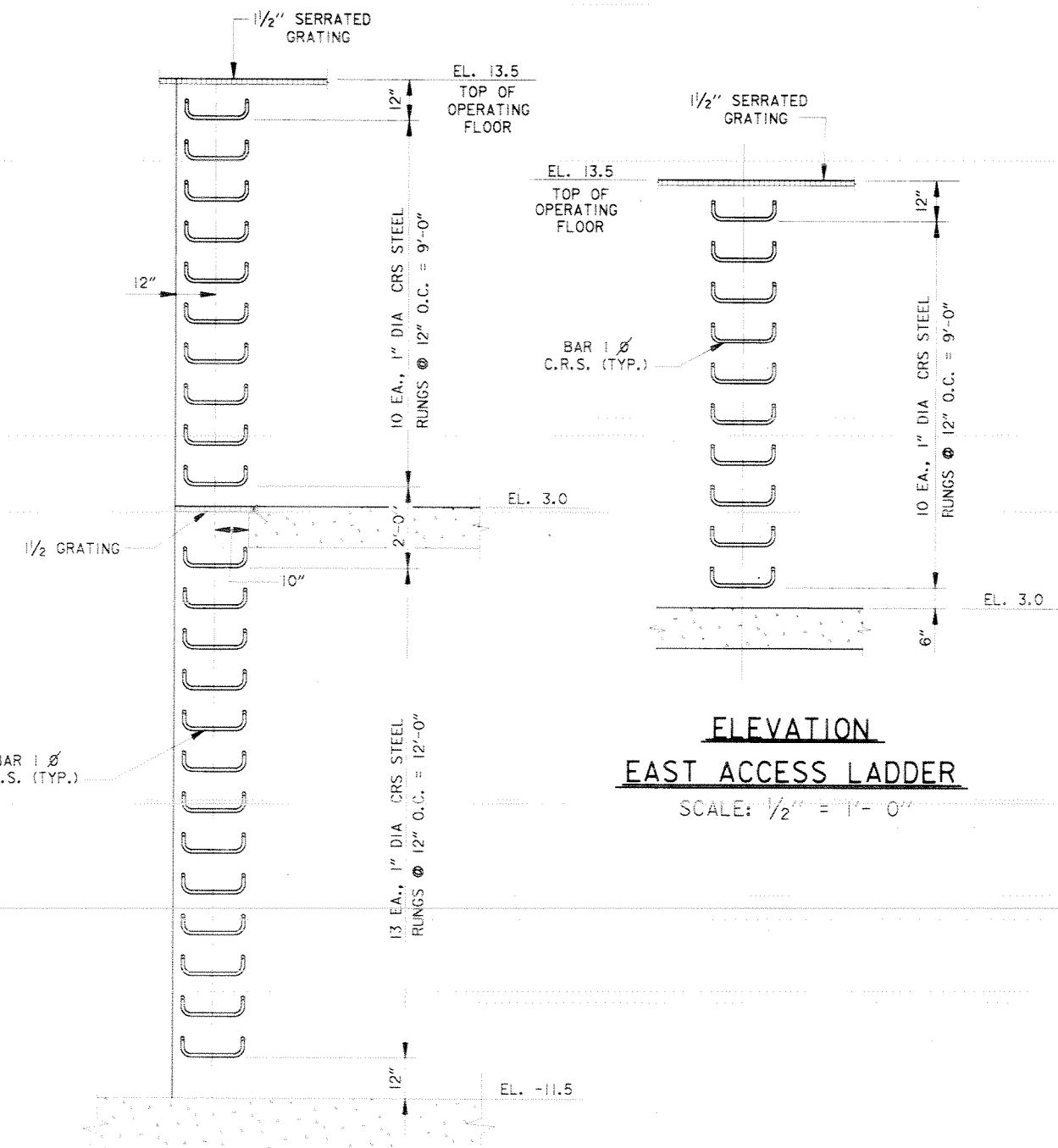
SCALE: 1/2" = 1' - 0"



SECTION C

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

ACCESS LADDER DETAILS

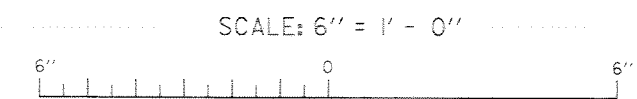
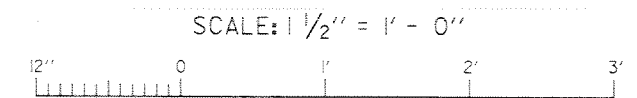
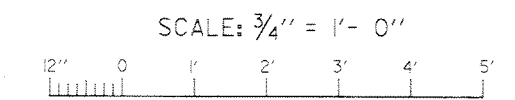
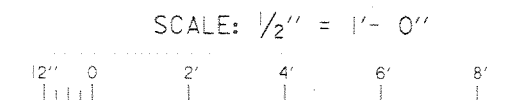


ELEVATION EAST ACCESS LADDER

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

ELEVATION WEST ACCESS LADDER

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



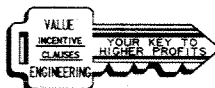
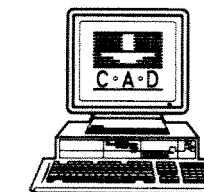
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

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

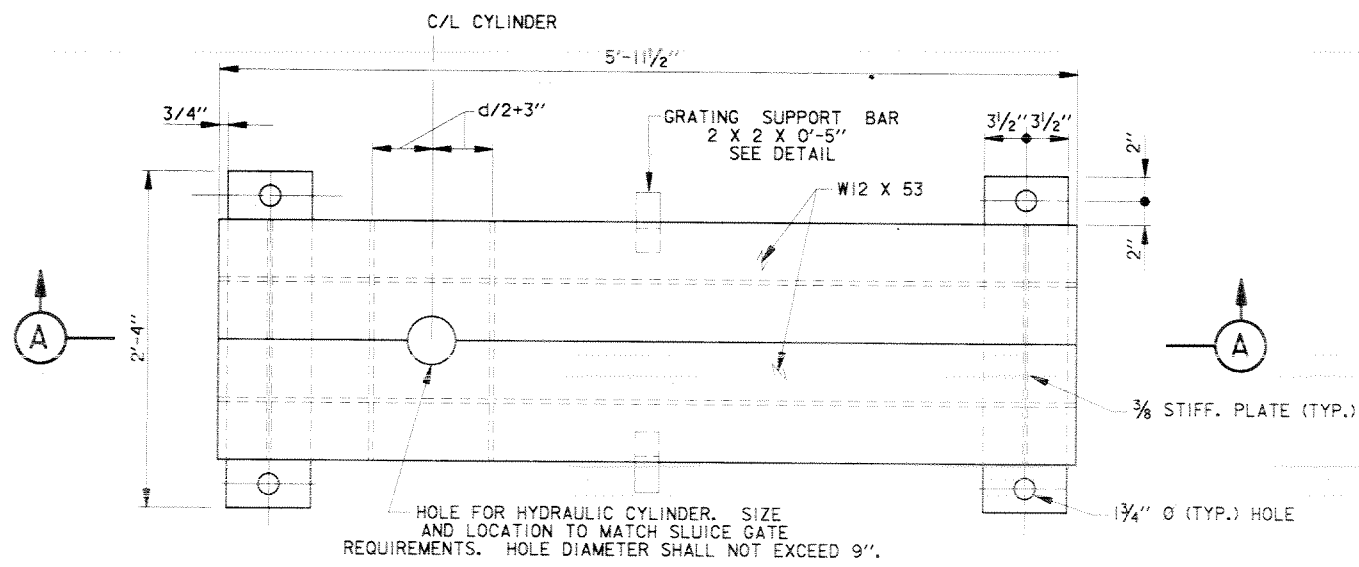
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
NEW MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

LADDERS AND DETAILS

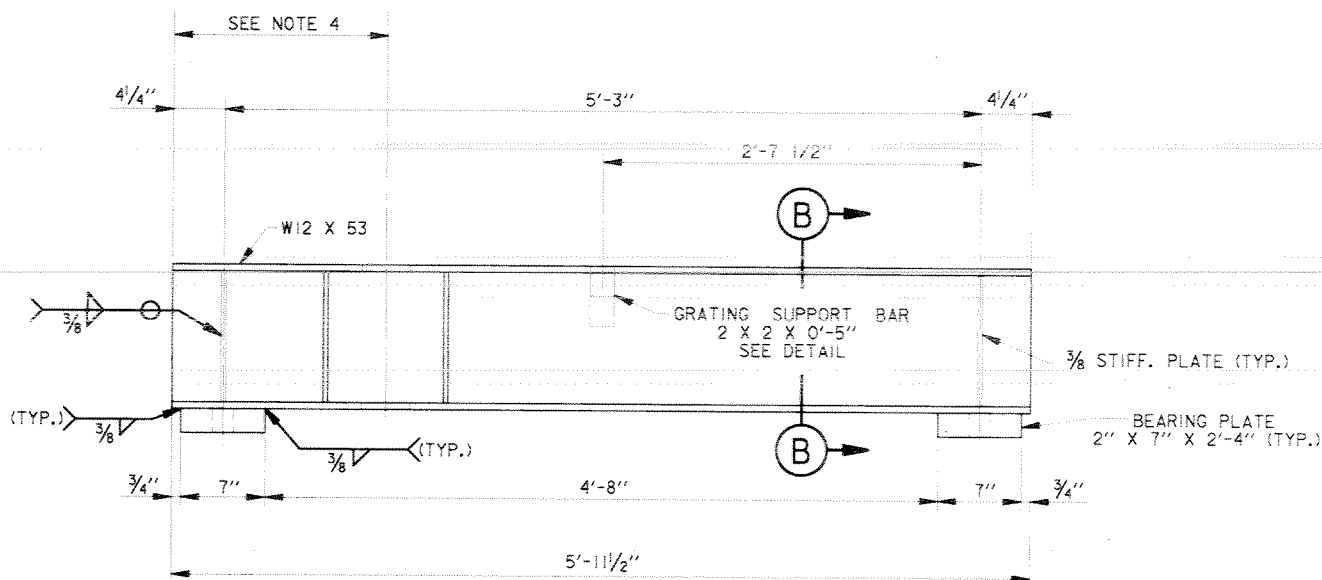
DESIGNED BY: C.LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: J.DARBY	CADD FILE: 44778E25.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 27	OF 46
SUBMITTED BY: CHARLES A. LABORDE P.E. DESIGN ENGINEER			



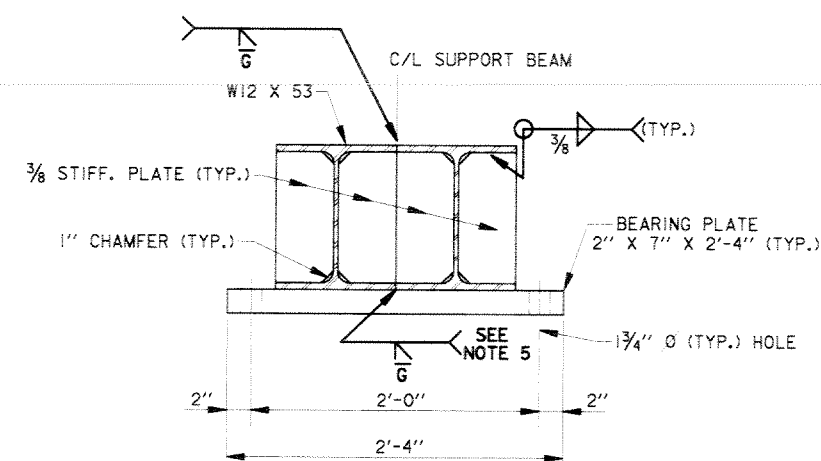
Safety is a Part of Your Contract



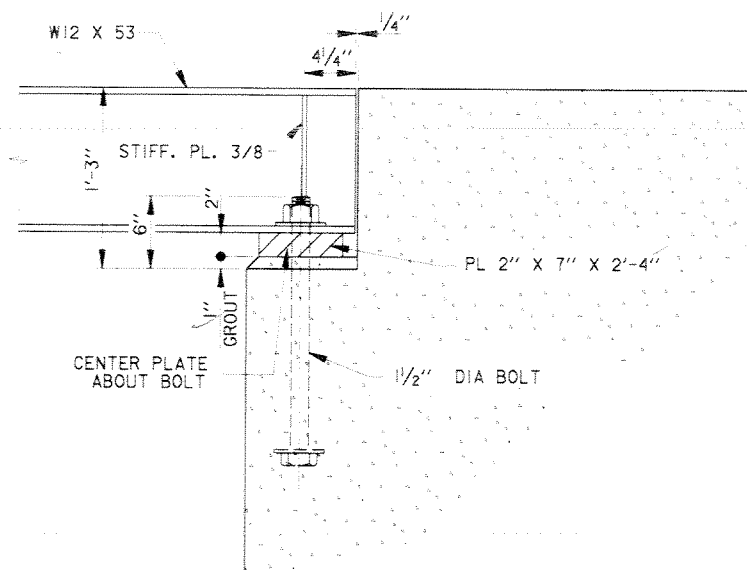
PLAN
SCALE: 1 1/2" = 1' - 0"



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



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



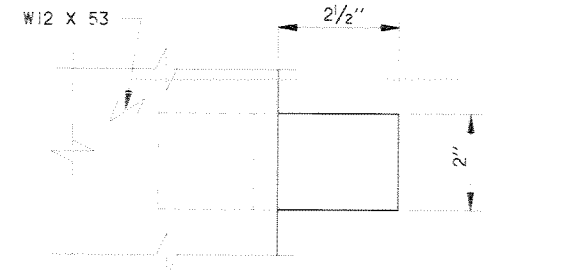
TYPICAL ANCHOR BOLT CONNECTION DETAILS
SCALE: 1 1/2" = 1' - 0"

HOIST BEAM NOTES:

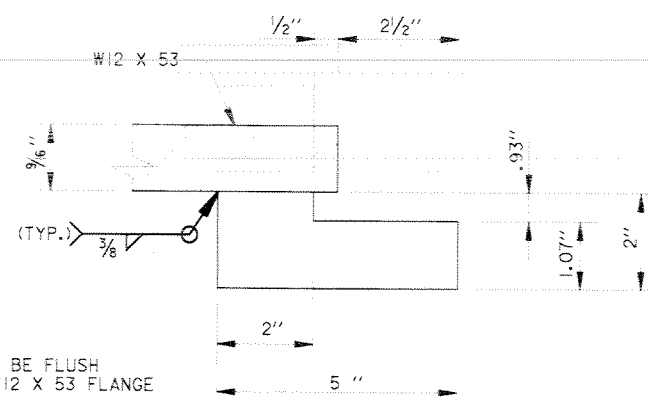
- 4 EACH GATE HOIST ASSEMBLIES REQUIRED. ONE GATE HOIST ASSEMBLY SHOWN.
- SUPPORT BEAM ASSEMBLY TO BE HOT DIPPED GALVANIZED AFTER FABRICATION BUT PRIOR TO INSTALLATION OF FLOORSTAND.
- AFTER INSTALLATION, TOP FLANGES OF SUPPORT BEAM TO BE COATED WITH 3M-11420-SCOTCH-BLAD-NON-SLIP-COATING OR APPROVED EQUAL.
- DISTANCE TO G CYLINDER TO BE DETERMINED BY SLUICE GATE MANUFACTURER, DISTANCE SHALL NOT EXCEED 1'-10"
- GRIND ONLY UNDER BEARING PLATES

Discontinued

Amend 0003
CONCRETE 1090 EPOXY ADHESIVE

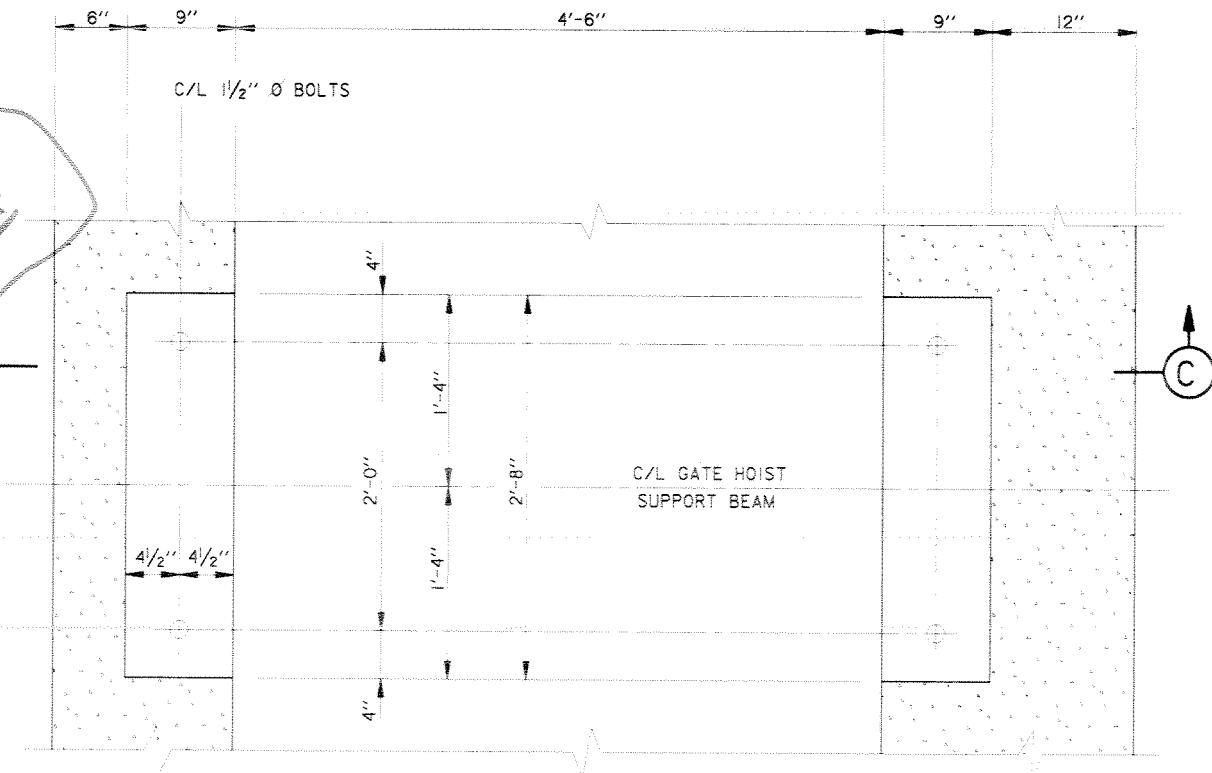


PLAN

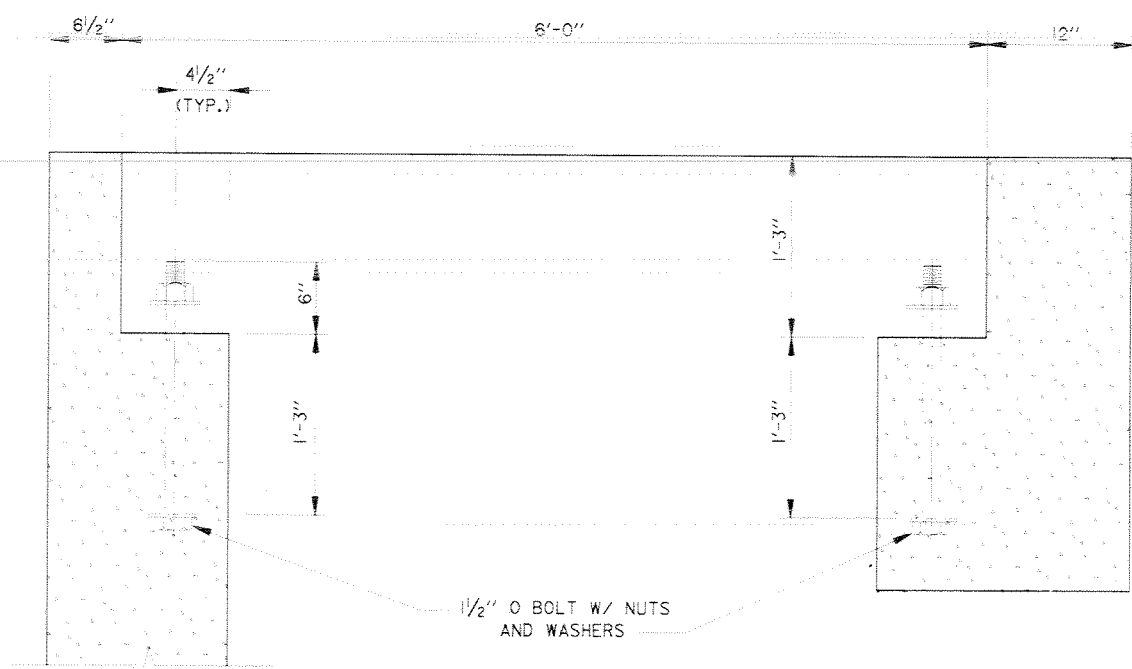


ELEVATION GRATING SUPPORT BAR DETAIL
SCALE: 6" = 1' - 0"

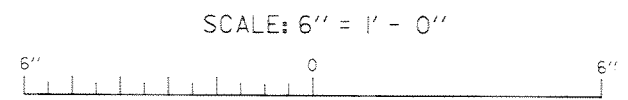
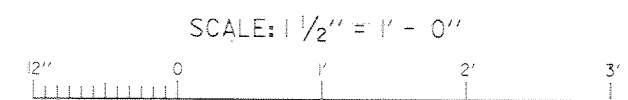
* GRATING SHALL BE FLUSH WITH TOP OF W12 X 53 FLANGE



TYPICAL ANCHOR BOLT
SCALE: 1 1/2" = 1' - 0"



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

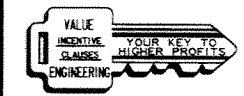
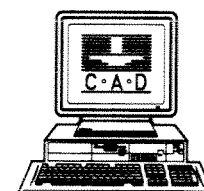


SYMBOL	DESCRIPTION	DATE	APPROVED
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REVISIONS
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA
GATE HOIST SUPPORT BEAM

DESIGNED BY: C.LABORDE	DATE: NOV. 1997	PLOT SCALE: 8	PLOT DATE: NOV. 10, 1997
DRAWN BY: J.DARBY	CADD FILE: 44778E02.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SOLICITATION NO. DACW29-98-B-000	DWG. 28	OF 46
SUBMITTED BY: CHARLES A. LABORDE, P.E., DESIGN ENGINEER			



15 May 2000

MEMORANDUM FOR CEMVN-ED-TF attn: Mr. Charles Laborde

SUBJECT: Lake Pontchartrain, Louisiana and Vicinity,
Hurricane Protection, Orleans Marina Phase V - Sluice
Gates; Contract No. DACW29-98-C-0050.

1. A Safety & Occupational Health Specialist inspected the subject stair wells, adjacent sluice gate and dock railing and provide the findings and recommendations or actions below to correct the deficiencies.

a. Finding: Loose ledgers (stringers) on both sides of Public accessible stair not secured properly. 29 CFR 1910.23(e)(3)(iv),

Action: Couplings be installed with non-swivel type bottom couplings. Additional couplings at joints to prevent movement.

b. Finding: Toe boards missing on platform. 29 CFR 1910.23©(1)

Action: Install toe boards.

c. Finding: Dock side railing mid rail and bottom rail needed.

Recommend: Additional mid rail and bottom rail be added for safety due to physical hazards of lower level cluttered dock area.

d. Finding: Midrail and bottom rail on platform needed.

Recommend: Additional mid rail and bottom rail be added for safety due to physical hazards if a person were to fall through rail.

e. Finding: Cotter pins not pig eared in lateral braces of stairs present a puncture hazard.

Recommend: Cotter pins in lateral braces of stairs be pig eared to reduce puncture hazard

f. Finding: Lateral braces can easily be moved

Recommend: Should be tack welded or wired to secure.

g. Finding: Locking device of sluice gate presents an extreme projection hazard at normal height and leg chin level.

Recommend: Shortening of bolt shank and locking in place to prevent theft.

h. Finding: Large nuts of sluice gate bottom hinge missing or loose.

Recommend: Installing and torque nuts as required.

2. POC is Mike Rosales, Safety & Occupational Health Specialist, ext. 1995.

GARY L. HAWKINS
Acting Chief of Safety,
Security & Occupational
Health

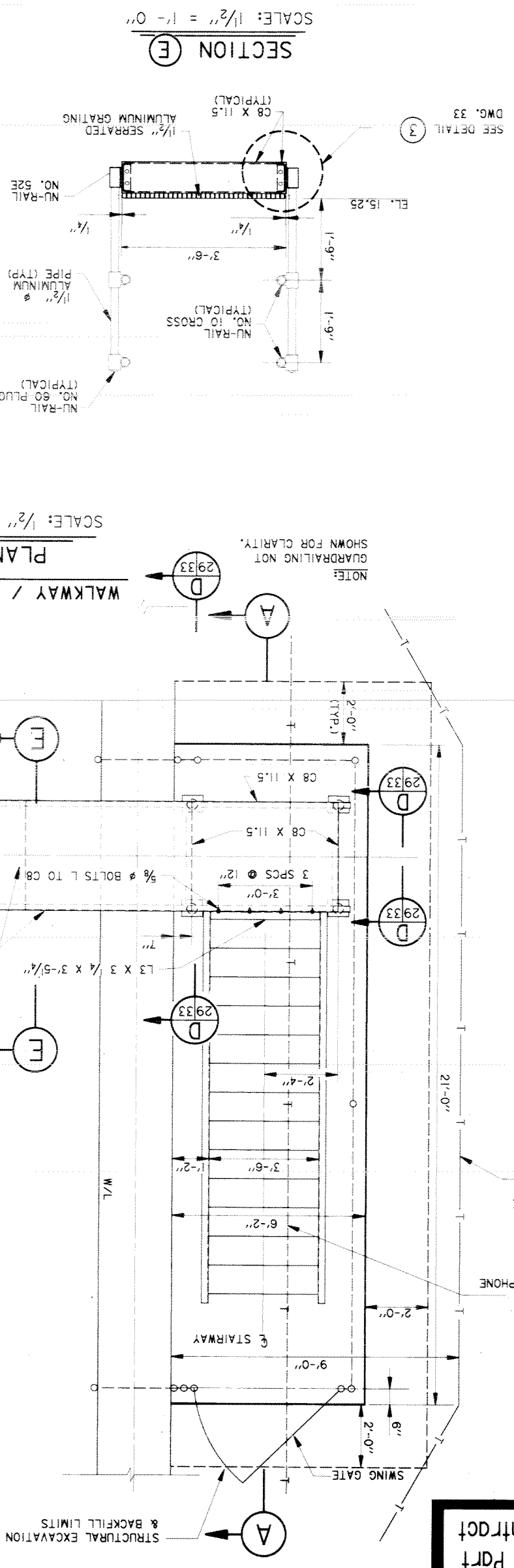
DISTRIBUTION:

CEMVN-ED-TF

CEMVN-CD-QM

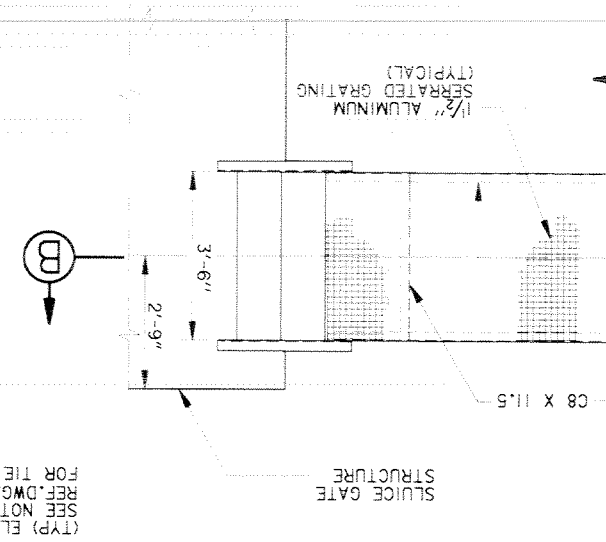


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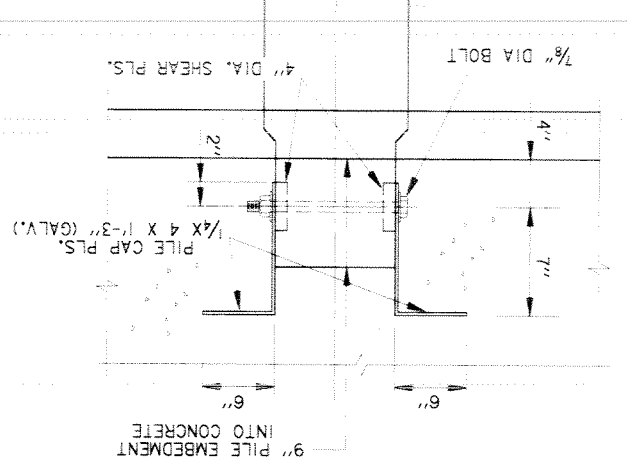
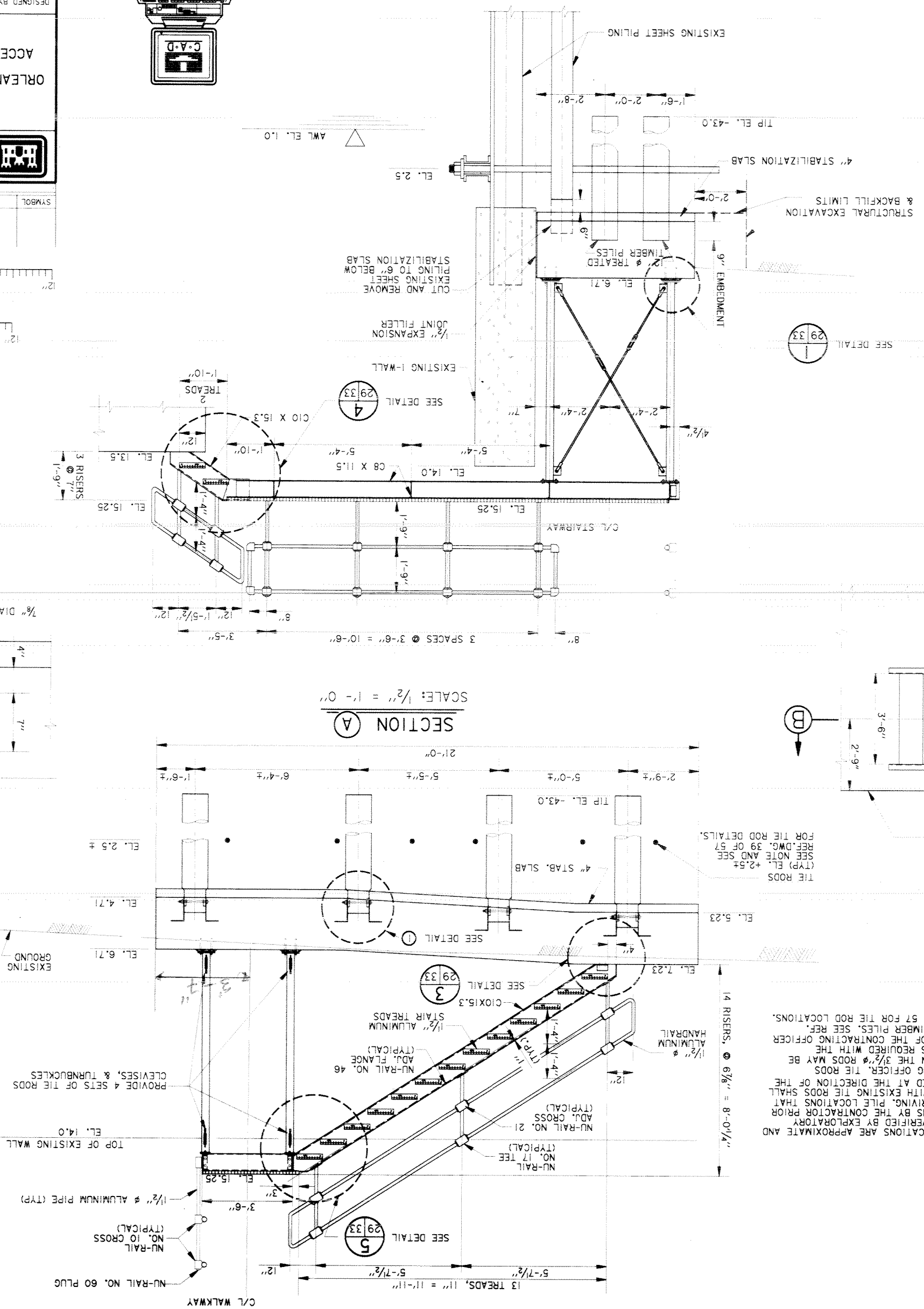
PLAN WALKWAY / STAIRWAY

SECTION E

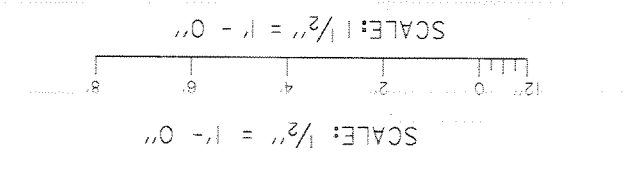


SECTION A

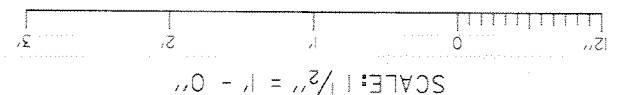
SECTION B



DETAIL 1

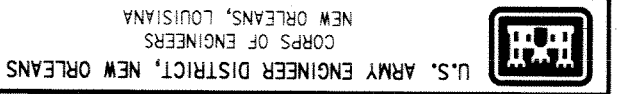


DETAIL 2



DETAIL 3

SYMBOL	DESCRIPTION	DATE	APPROVED



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

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA
ACCESS STAIRWAY - PLAN & ELEVATION
(SHEET 1 OF 2)

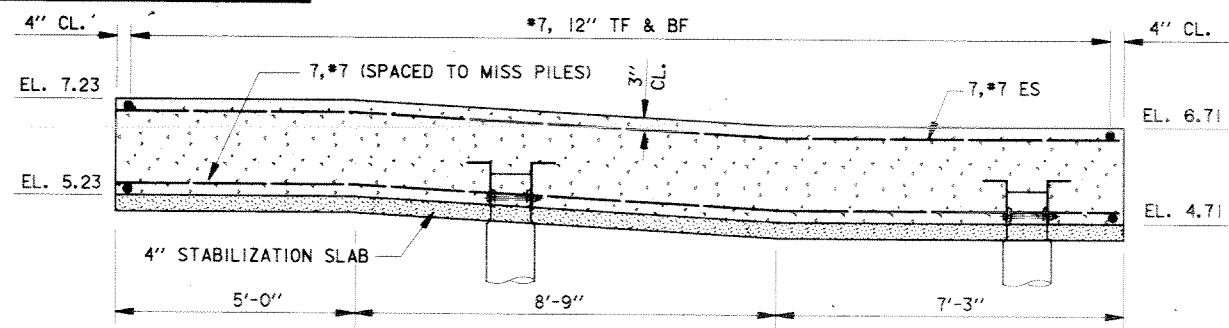
DESIGNED BY: C. LABOBE
CHECKED BY: L. MAGEE
DRAWN BY: C. LABOBE
DATE: NOV. 97
FILE NO.: H-4-44778
DWG. NO.: 29 OF 46

DESIGN ENGINEER
CHARLES A. LABOBE, P.E.
SOLUTION NO. DACW29-98-B-0001
PLOT SCALE: 1/8" = 1'-0"

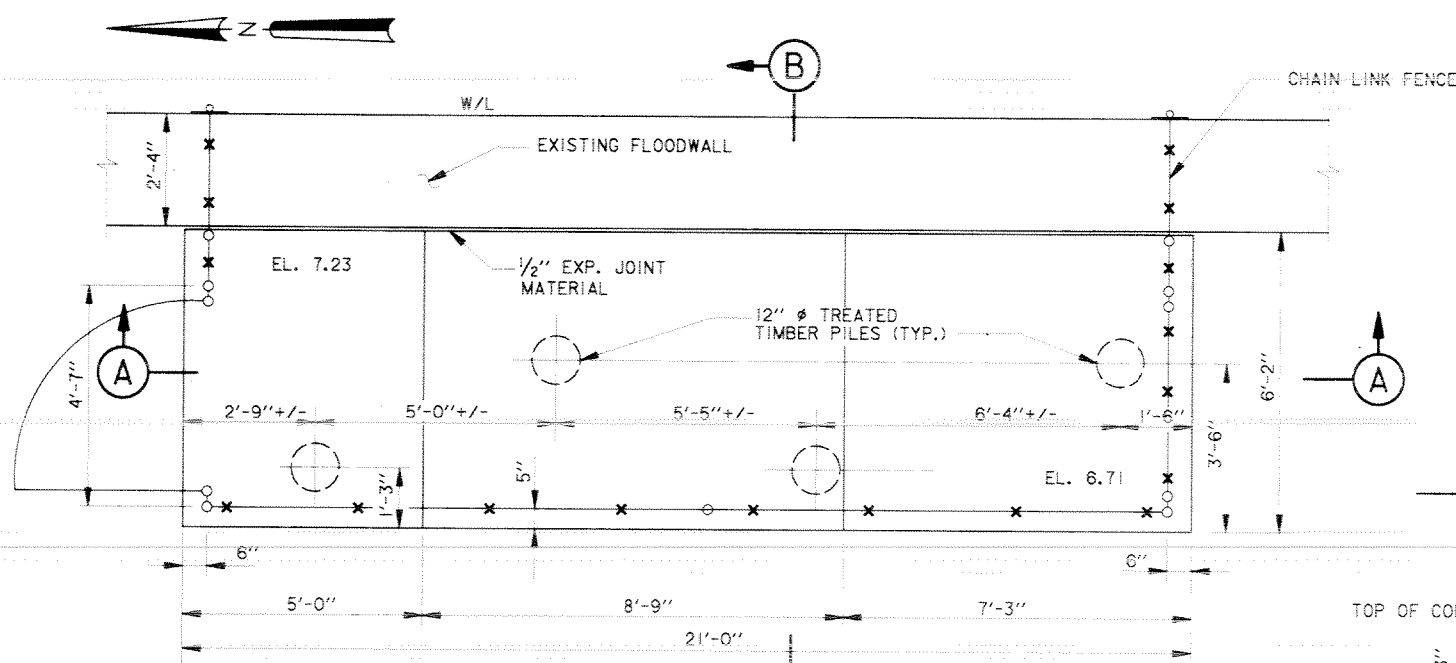
NOTE:
THE ROD LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY EXPLORATORY EXCAVATIONS BY THE CONTRACTOR PRIOR TO PILE DRIVING. PILE LOCATIONS THAT CONFLICT WITH EXISTING TIE RODS SHALL BE ADJUSTED AT THE DIRECTION OF THE CONTRACTING OFFICER. TIE RODS OTHER THAN THE 3/8" RODS MAY BE REMOVED AS REQUIRED WITH THE APPROVAL OF THE CONTRACTING OFFICER TO DRIVE TIMBER PILES. SEE REF. Dwg. 39 OF 57 FOR THE ROD LOCATIONS.

EXISTING BELL SOUTH BURIED TELEPHONE CABLE
RELOCATED BELL SOUTH BURIED TELEPHONE CABLE
19' CLEAR OF ADJACENT FLOODWALL SEE SPECS.)

Safety is a Part of Your Contract

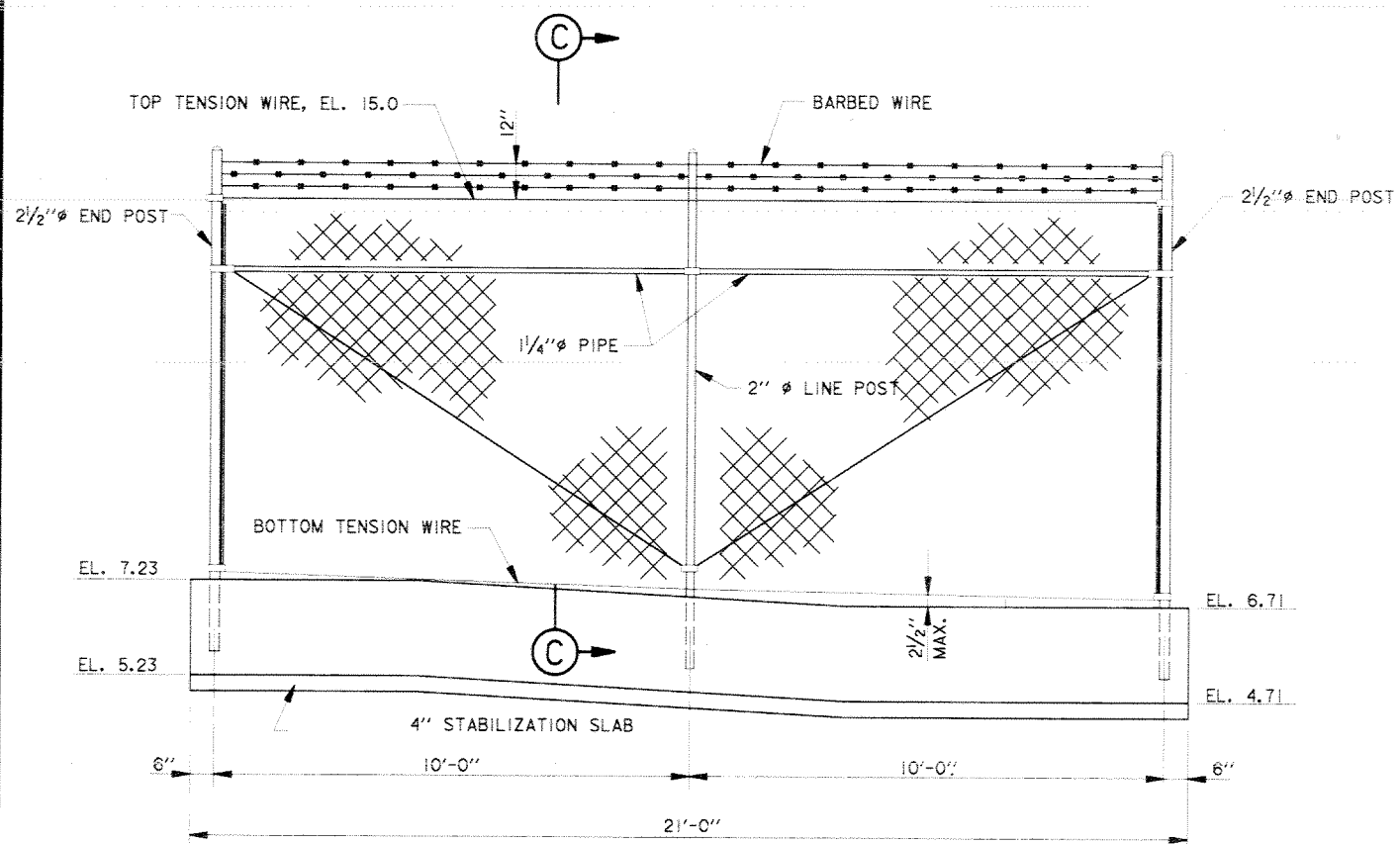


SECTION A
SCALE: 1/2" = 1'-0"

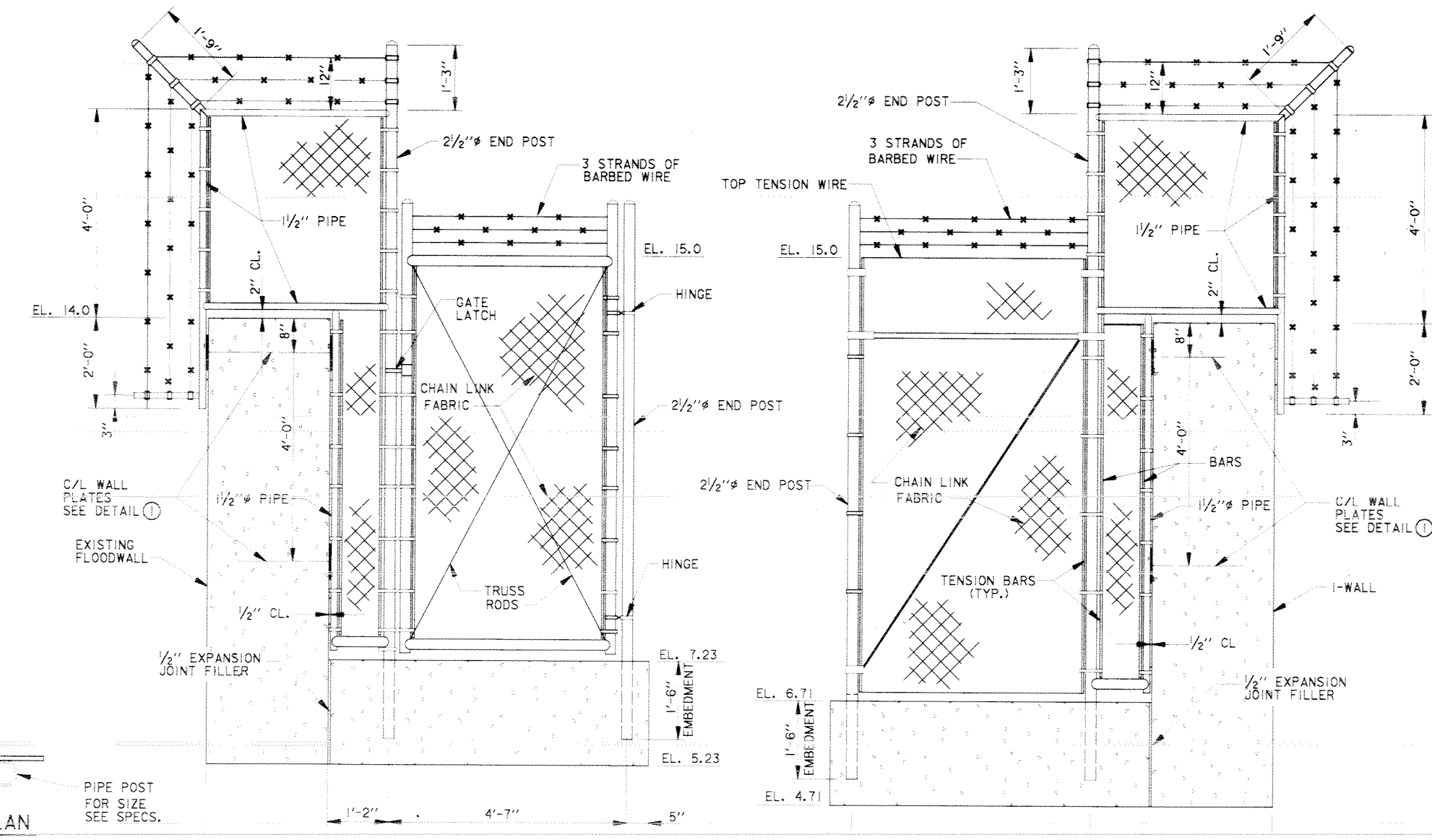


PLAN
ACCESS STAIRWAY SLAB
SCALE: 1/2" = 1'-0"

NOTE:
STAIRWAY NOT SHOWN FOR CLARITY,
SEE DWG. 29 FOR STAIRWAY DETAILS

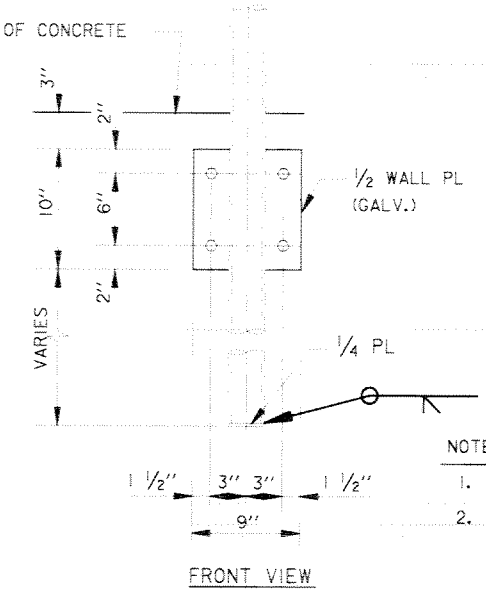


WEST ELEVATION
SCALE: 1/2" = 1'-0"



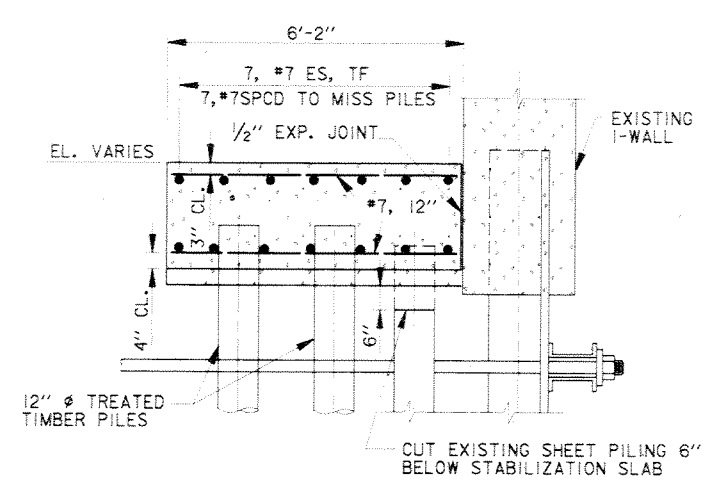
NORTH ELEVATION
SCALE: 3/4" = 1'-0"

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

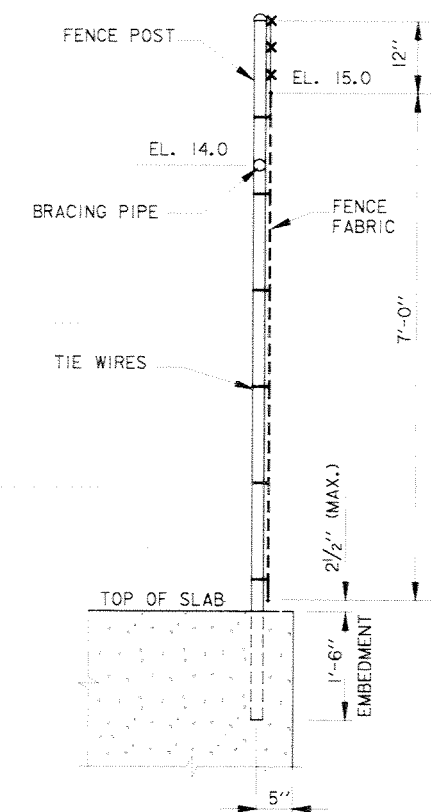


WALL PLATE DETAIL (I)
SCALE: 1/2" = 1'-0"

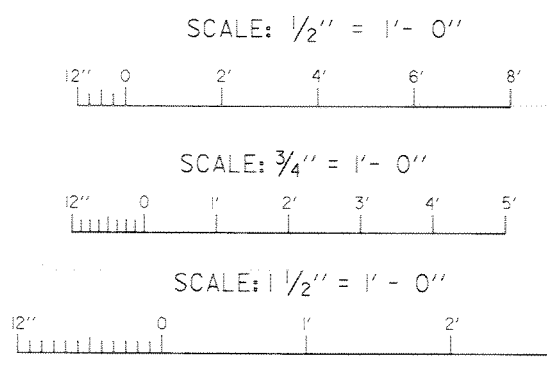
- NOTES:
1. ALL HOLES SHALL BE 7/8" Ø.
 2. ALL BOLTS FOR FASTENING FLANGES SHALL HILTI SUPER KWIK BOLTS, 3/4" Ø WITH 8" MIN. EMBEDMENT OR EQUAL.



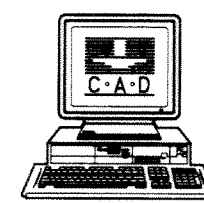
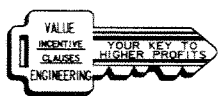
SECTION B
SCALE: 1/2" = 1'-0"



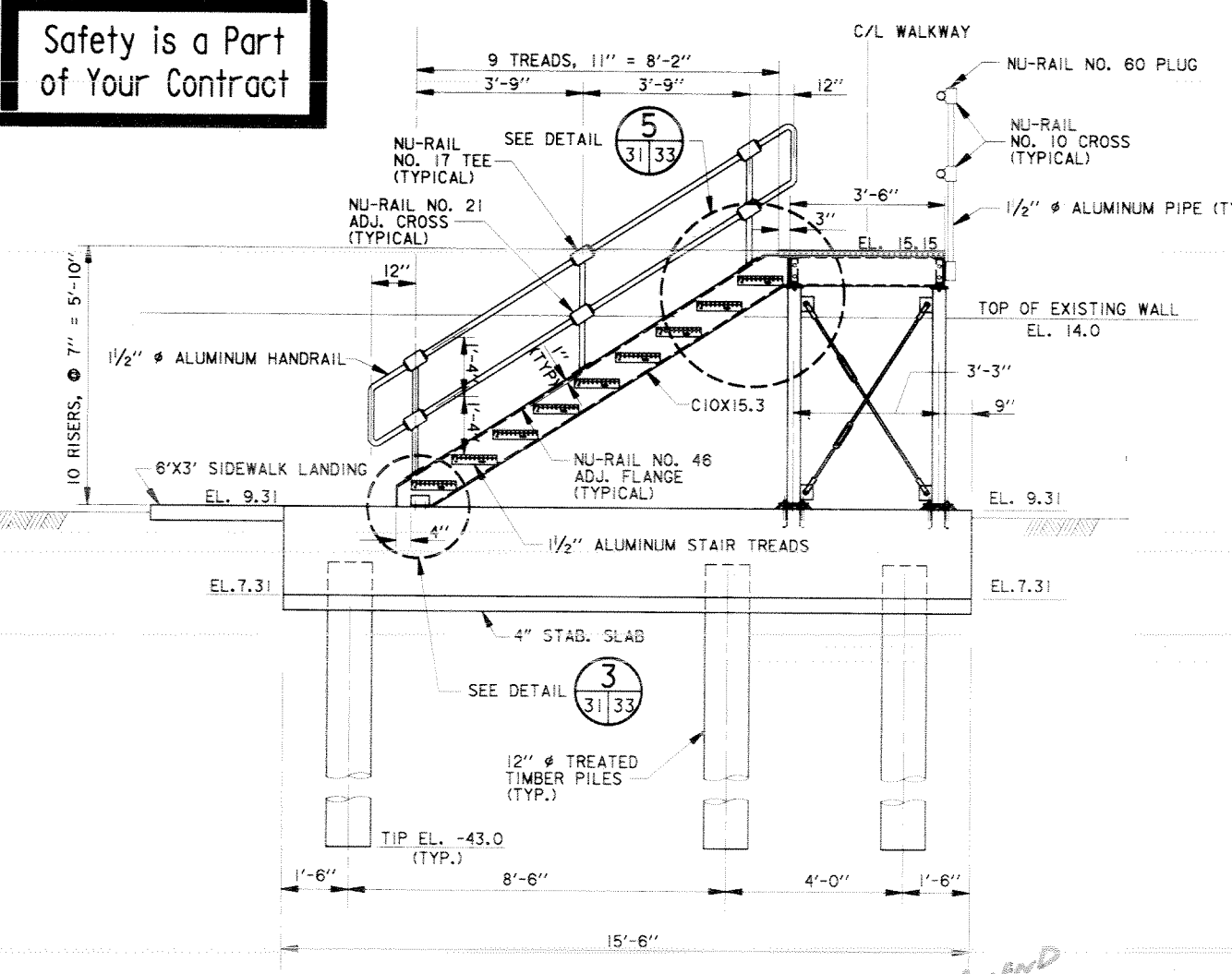
SECTION C
SCALE: 3/4" = 1'-0"



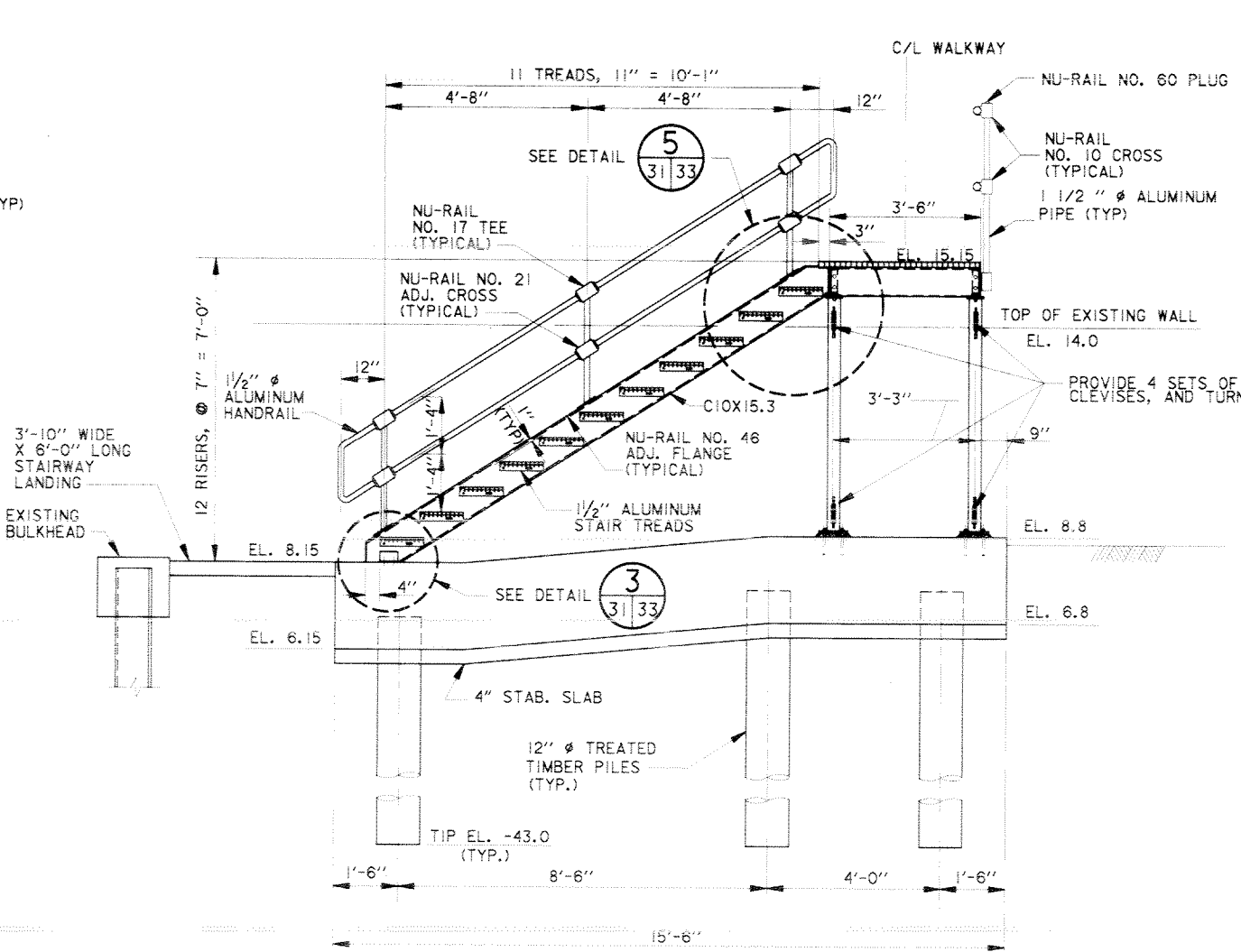
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS			
CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS MARINA PHASE V - SLUICE GATES			
ORLEANS PARISH, LOUISIANA			
ACCESS STAIRWAY - PLAN & ELEVATIONS			
(SHT. 2 OF 2)			
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: L. MAGEE	CADD FILE: 44778P04.DGN		FILE NO. H-4-44778
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001		DWG. 30 OF 46
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			



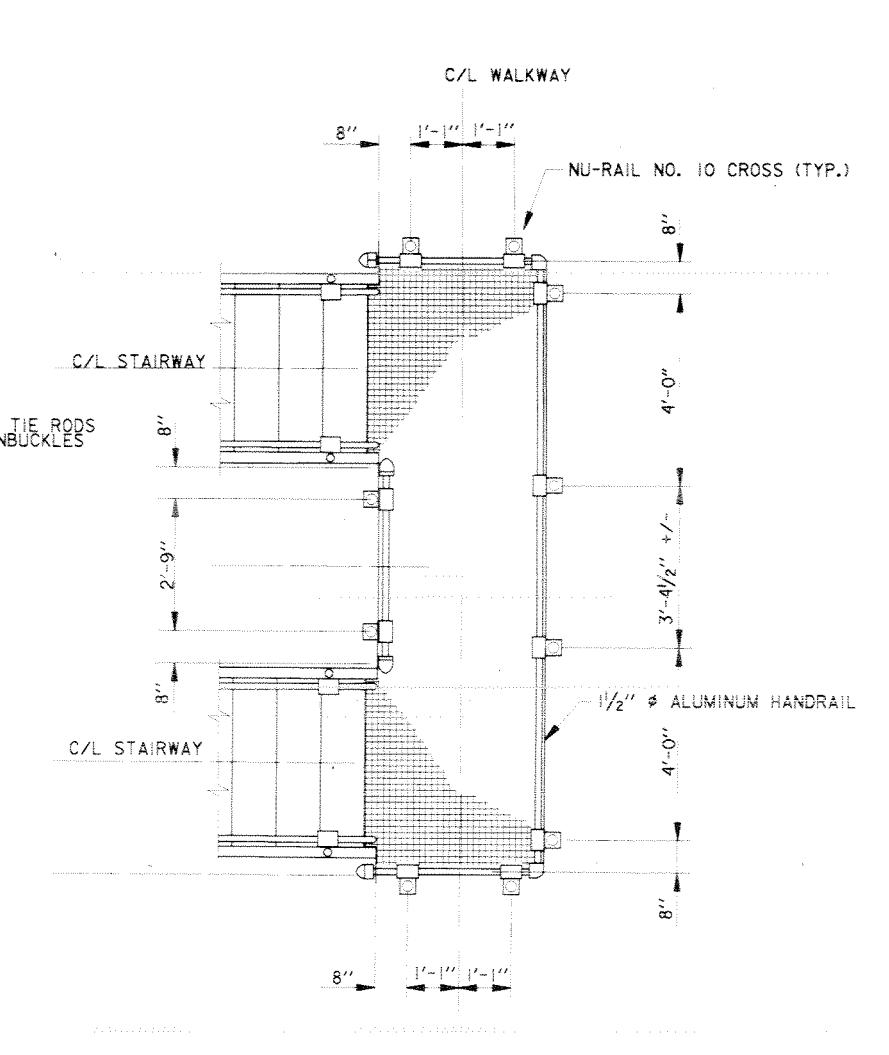
Safety is a Part of Your Contract



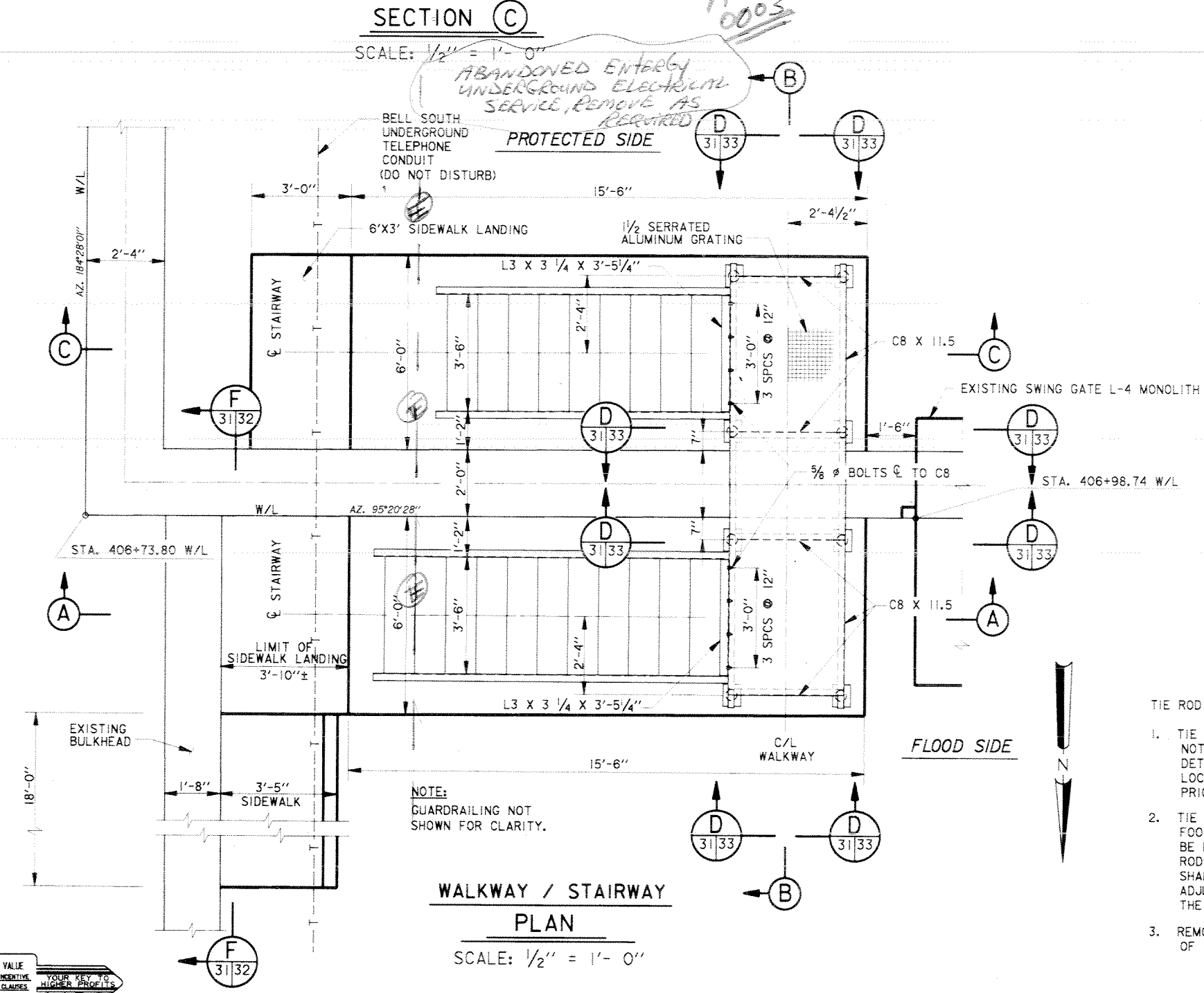
SECTION C
SCALE: 1/2" = 1'-0"



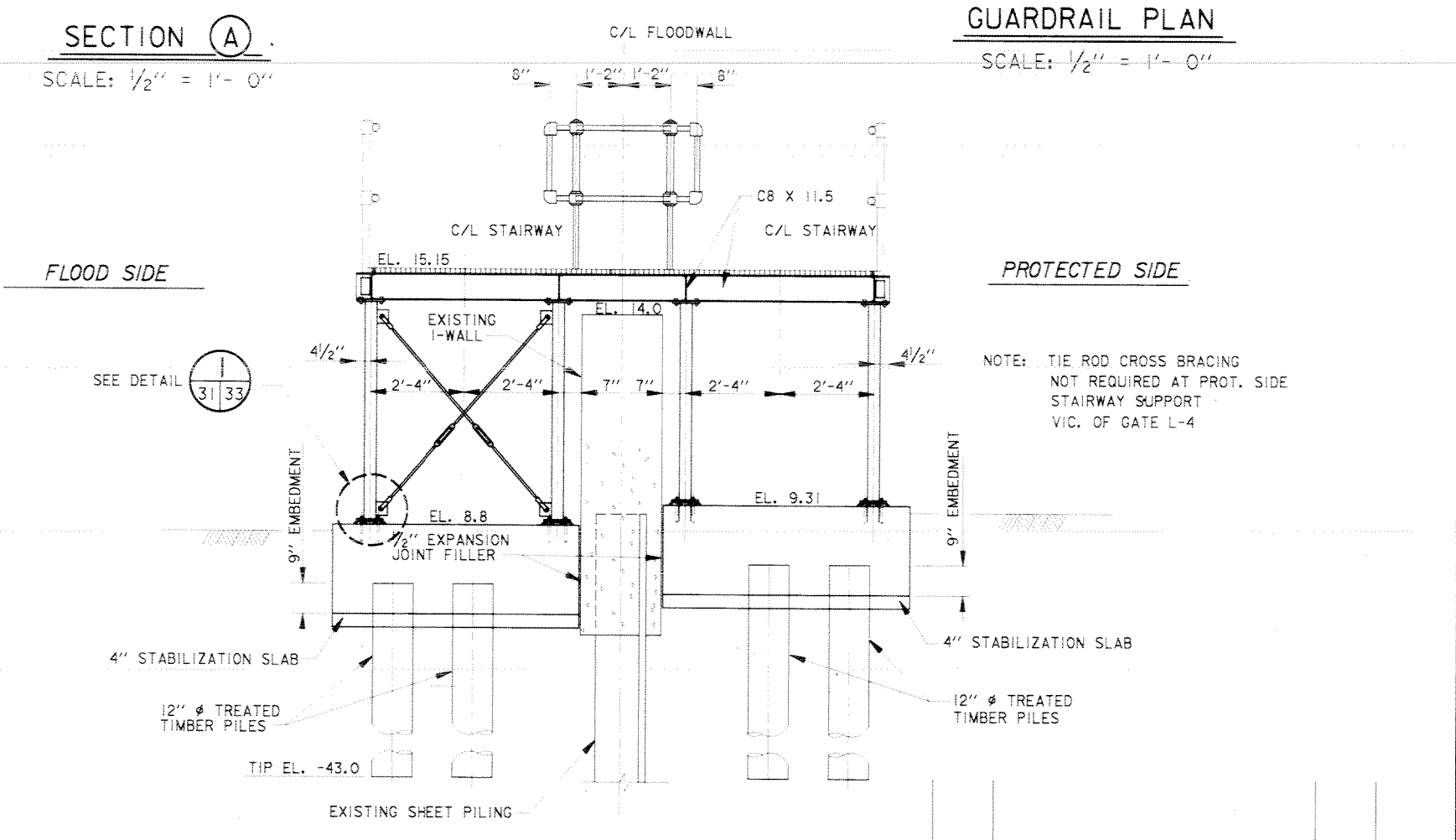
SECTION A
SCALE: 1/2" = 1'-0"



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



WALKWAY / STAIRWAY PLAN
SCALE: 1/2" = 1'-0"



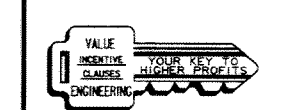
SECTION B
SCALE: 1/2" = 1'-0"

- TIE ROD NOTE:**
1. TIE RODS LOCATED BELOW THE STAIRWAY FOOTINGS ARE NOT SHOWN FOR CLARITY. SEE REF. DWG. 39 OR 57 FOR DETAILS. THE CONTRACTOR SHALL VERIFY THE TIE ROD LOCATIONS PRESENTED ON REFERENCE DWG. 39 OF 57 PRIOR TO PILE DRIVING.
 2. TIE RODS LOCATED BELOW THE PROTECTED SIDE STAIRWAY FOOTING; OTHER THAN THE 3 1/2 INCH DIA. TIE RODS, MAY BE REMOVED AS NECESSARY TO DRIVE TIMBER PILES. TIE RODS LOCATED BELOW THE FLOODSIDE STAIRWAY FOOTING SHALL NOT BE DISTURBED, AND PILE LOCATIONS SHALL BE ADJUSTED TO AVOID THEM SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER.
 3. REMOVAL OF ANY TIE RODS SHALL BE SUBJECT TO APPROVAL OF THE CONTRACTING OFFICER.

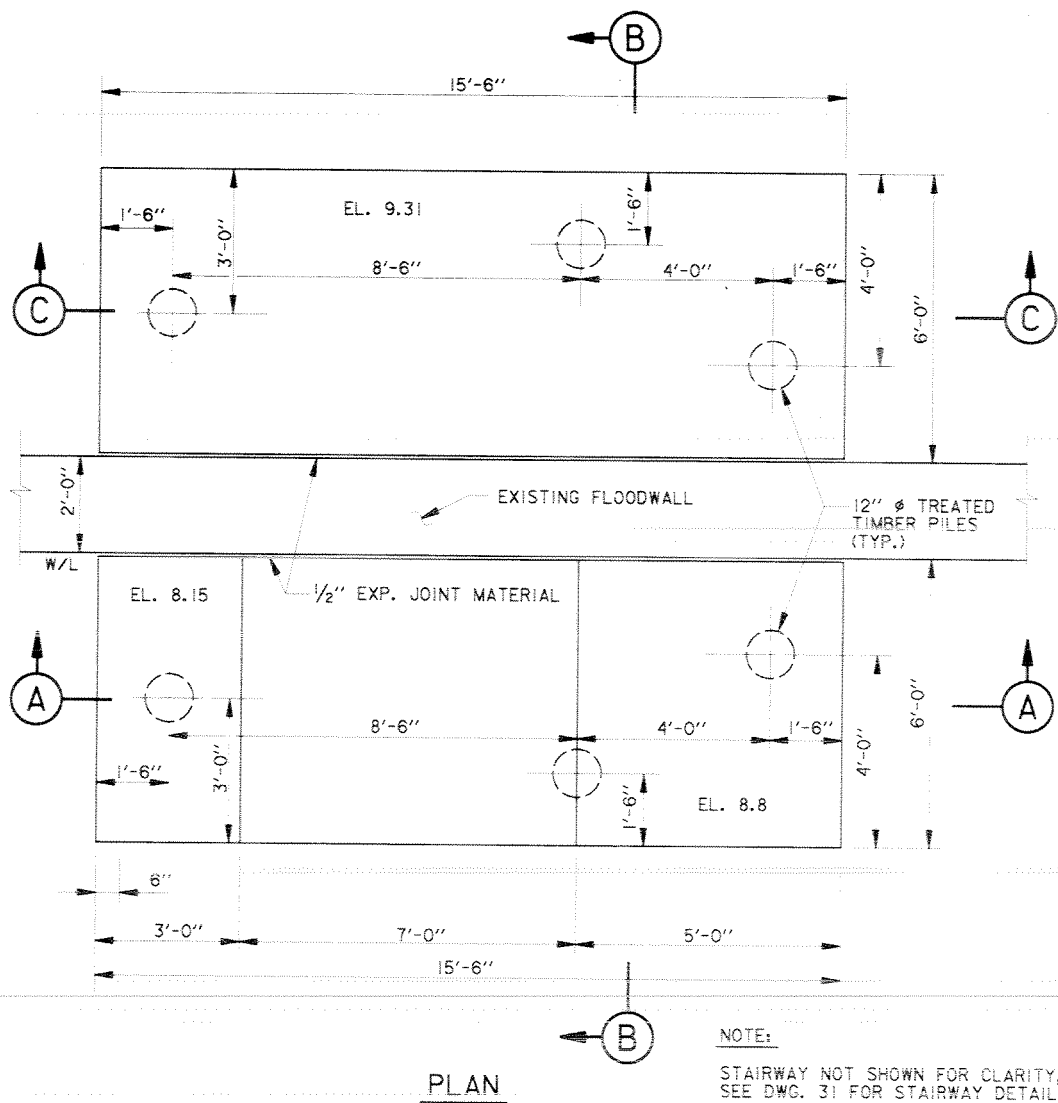
SCALE: 1/2" = 1'-0"

NOTE: TIE ROD CROSS BRACING NOT REQUIRED AT PROT. SIDE STAIRWAY SUPPORT VIC. OF GATE L-4

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA ACCESS STAIRWAY VICINITY OF GATE L-4 PLAN & ELEVATION (SHEET 1 OF 2)			
DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 24	PLOT DATE: NOV. 10, 1997
DRAWN BY: V. COUVILLON	CADD FILE: 4477806.DGN	FILE NO. H-4-44778	
CHECKED BY: C. LABORDE	SOLICITATION NO. DACW29-98-B-0001	DWG. 31	OF 46
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER			



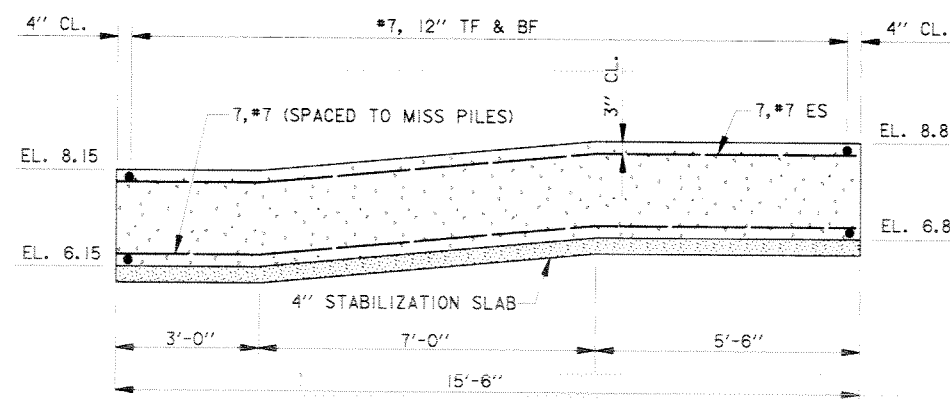
Safety is a Part of Your Contract



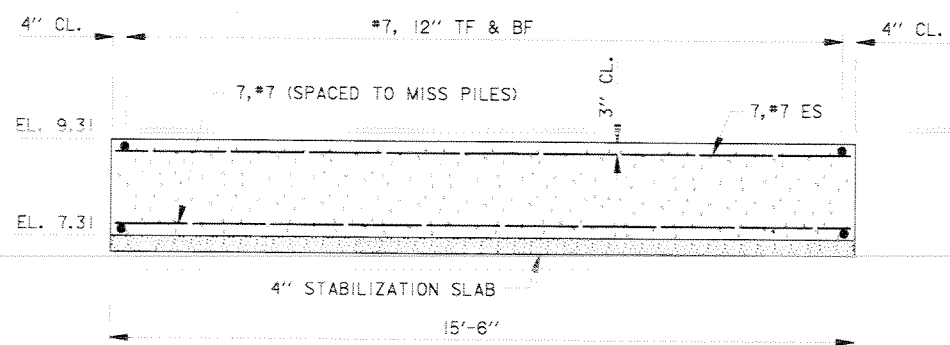
ACCESS STAIRWAY SLAB

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

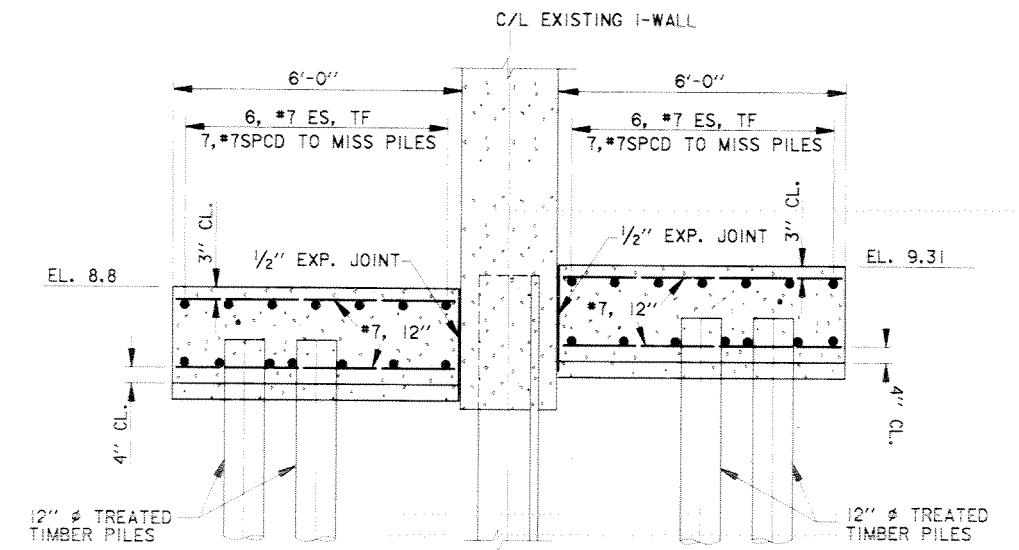
NOTE:
STAIRWAY NOT SHOWN FOR CLARITY,
SEE DWG. 31 FOR STAIRWAY DETAILS



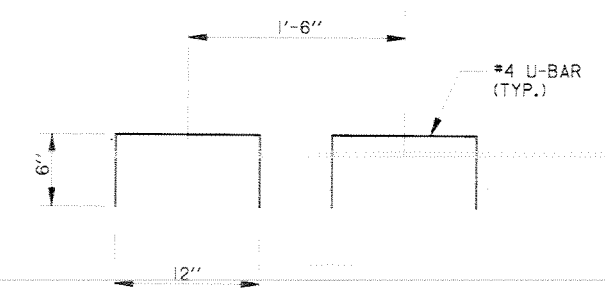
SECTION A
SCALE: 1/2" = 1'-0"



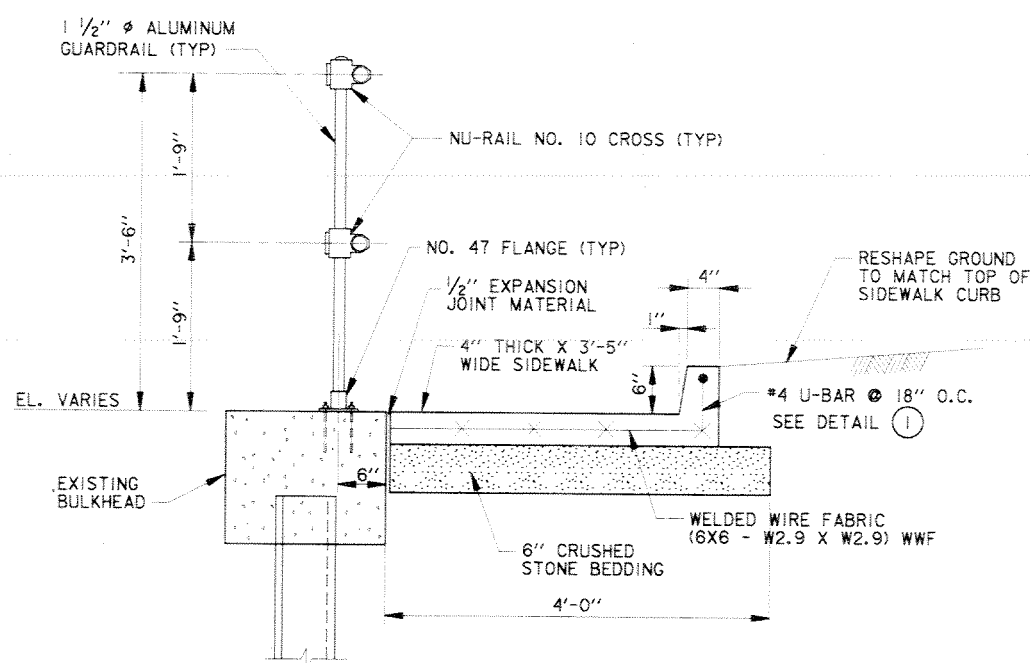
SECTION C
SCALE: 1/2" = 1'-0"



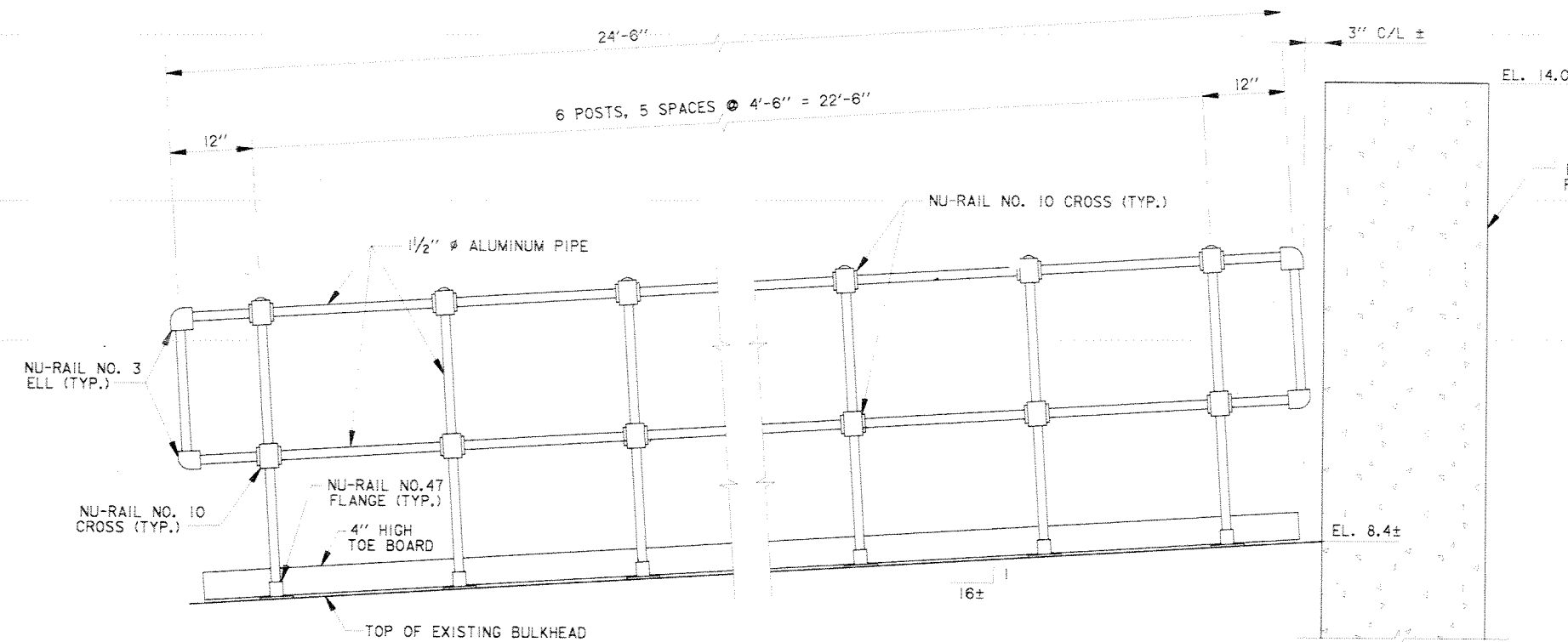
SECTION B
SCALE: 1/2" = 1'-0"



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

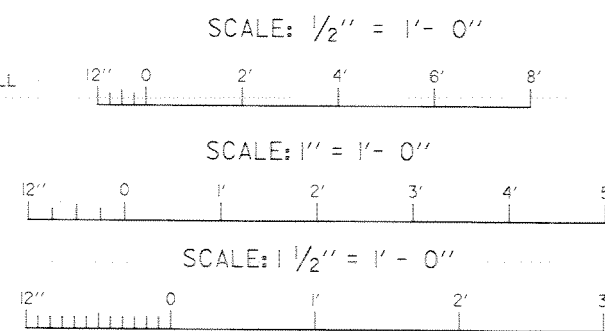


SECTION E
SCALE: 1" = 1'-0"



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

NOTES:
1. FOR GUARDRAIL NOTES SEE DWG. 26
2. FOR TOE BOARD DETAILS AND CONNECTIONS
SEE SECTION E DWG. 26.



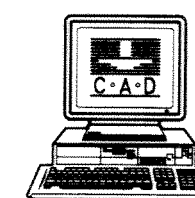
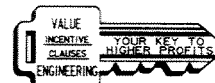
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

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

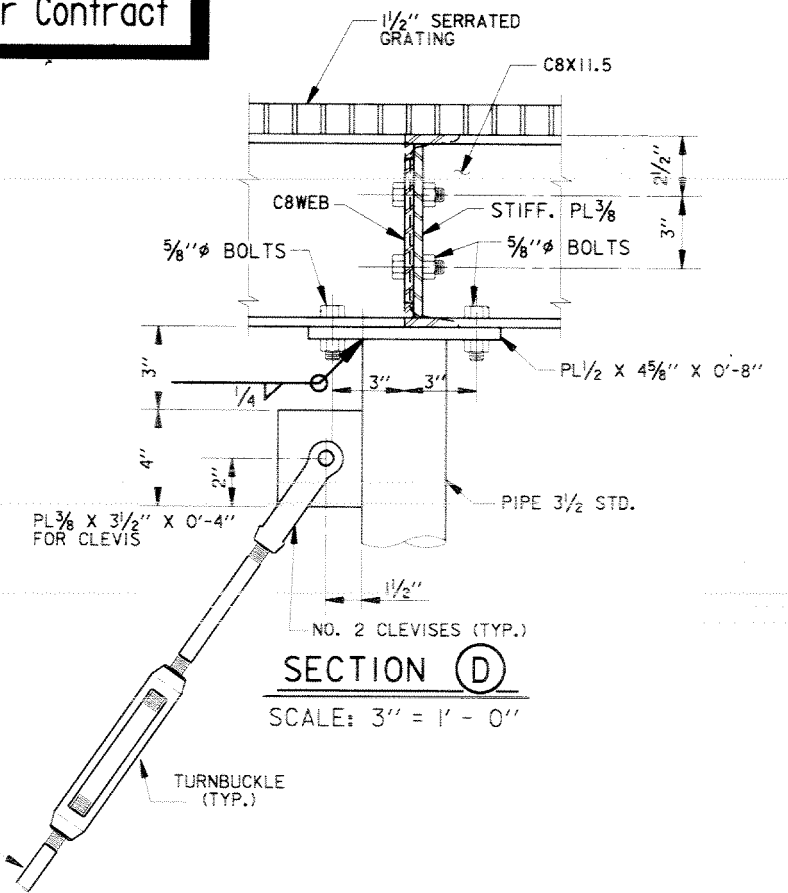
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.

ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA
ACCESS STAIRWAY VICINITY OF GATE L-4
PLAN & ELEVATIONS
(SHT. 2 OF 2)

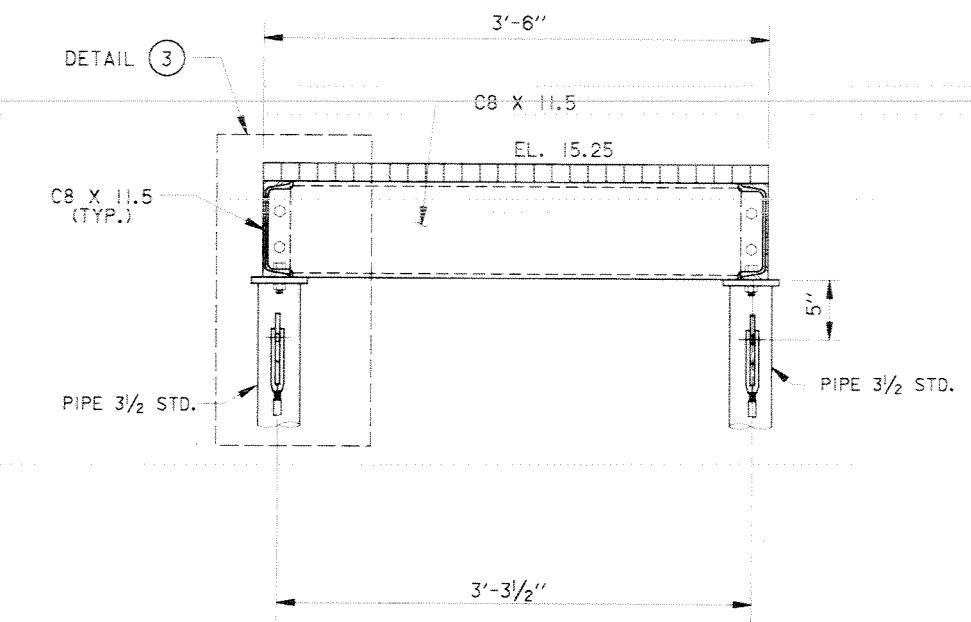
DESIGNED BY: C. LABORDE	DATE: NOV. 1997	PLOT SCALE: 24	PLOT DATE: NOV. 12, 1997
DRAWN BY: V. COUVILLON	CHECKED BY: C. LABORDE	CADD FILE: 44778N05.DGN	FILE NO. H-4-44778
SUBMITTED BY:	SOLICITATION NO. DACW29-98-B-0001	DWG. 32 OF 46	



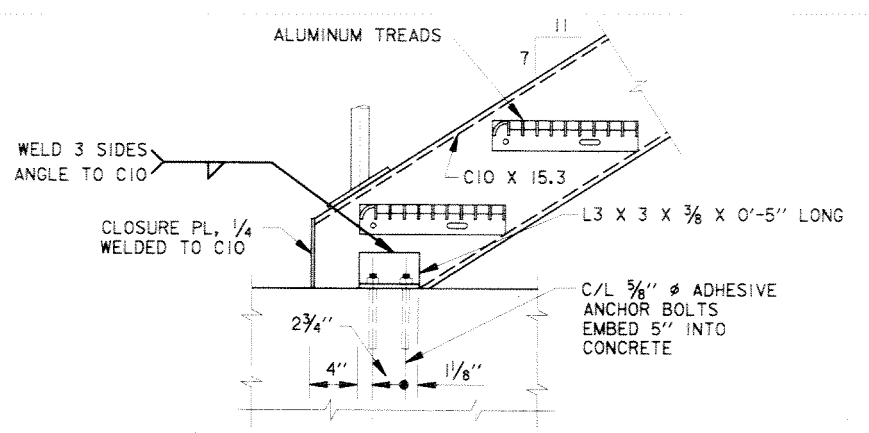
Safety is a Part of Your Contract



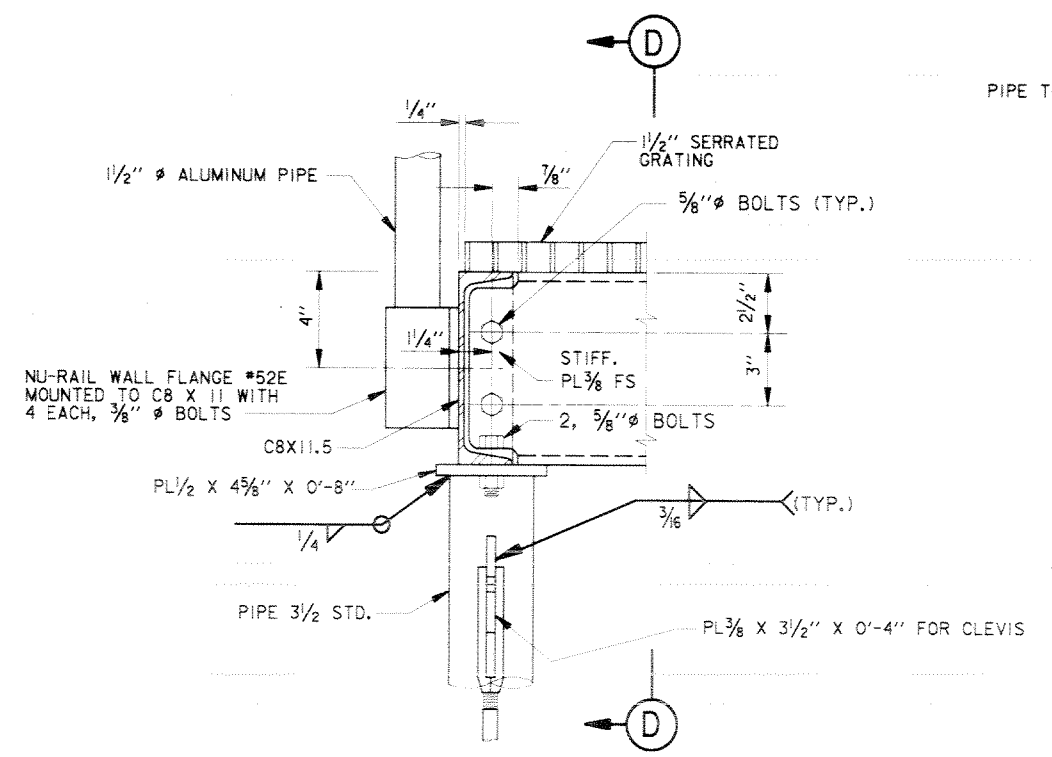
SECTION D
SCALE: 3" = 1' - 0"



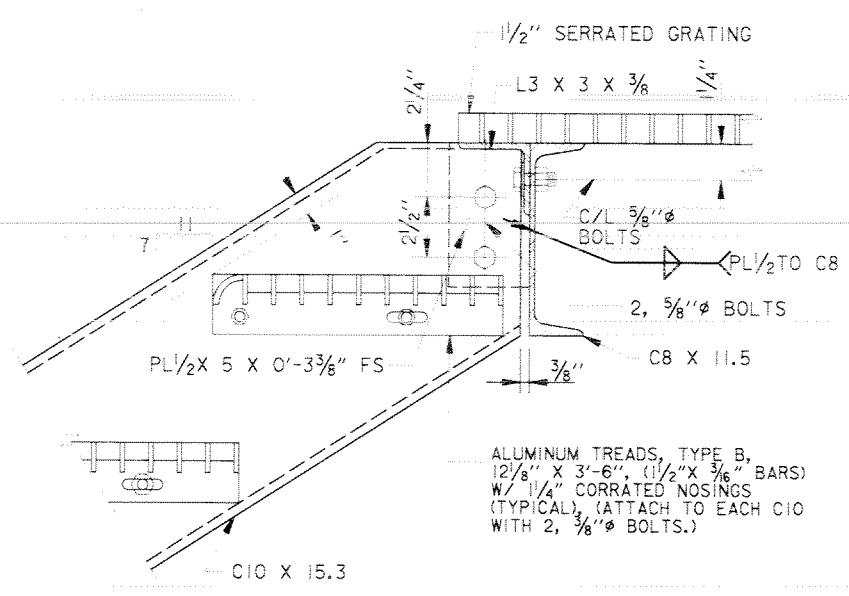
SECTION D
SCALE: 1 1/2" = 1' - 0"



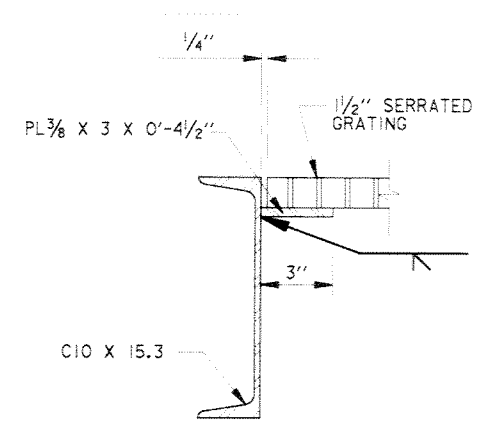
DETAIL 3
BOTTOM STAIR CONNECTION
SCALE: 1/2" = 1' - 0"



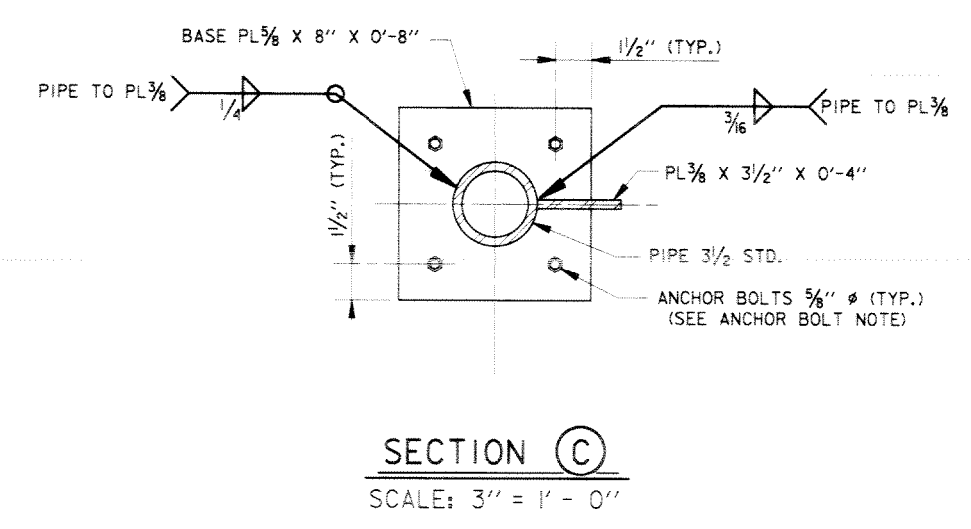
DETAIL 3
SCALE: 3" = 1' - 0"



DETAIL 5
TOP STAIR CONNECTION
SCALE: 3" = 1' - 0"

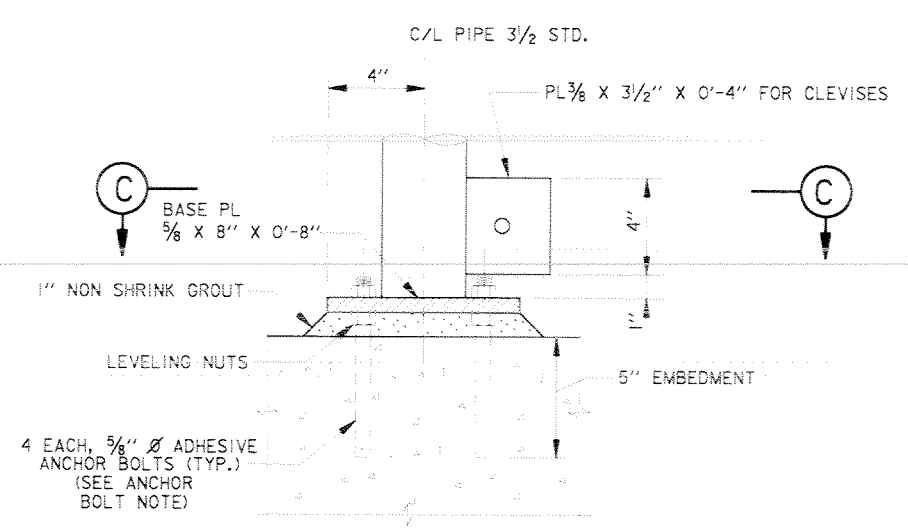


SECTION A
SCALE: 3" = 1' - 0"

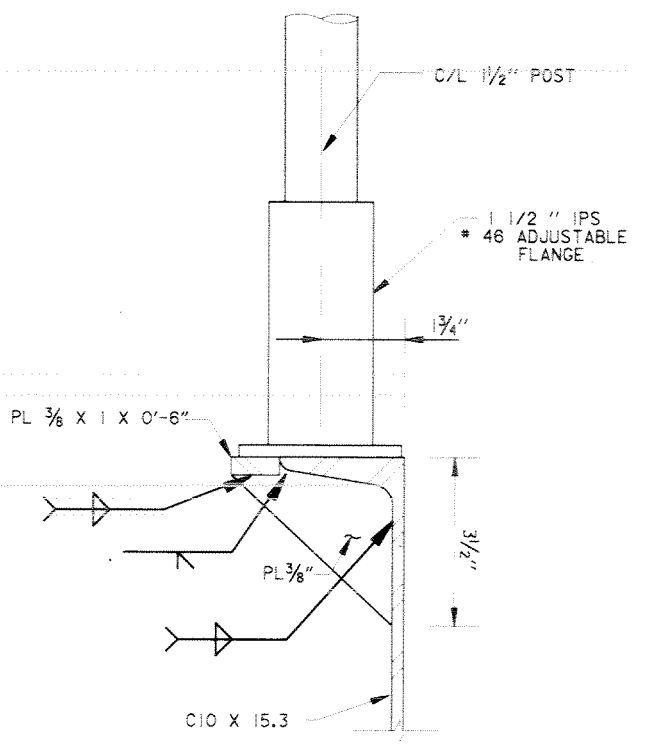


SECTION C
SCALE: 3" = 1' - 0"

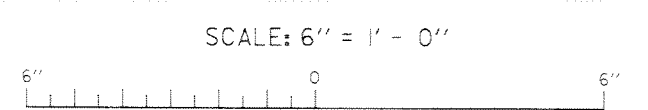
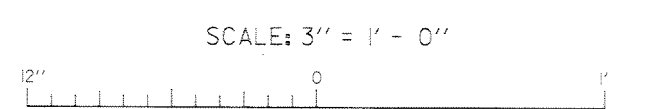
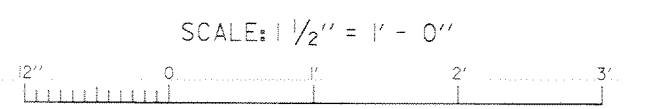
ANCHOR BOLT NOTE: ANCHOR BOLTS SHALL BE 5/8" X 5 HILTI "HVA" WITH SUPER "HAS" ROD OR EQUAL.



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



SECTION B
SCALE: 6" = 1' - 0"

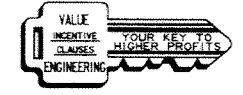


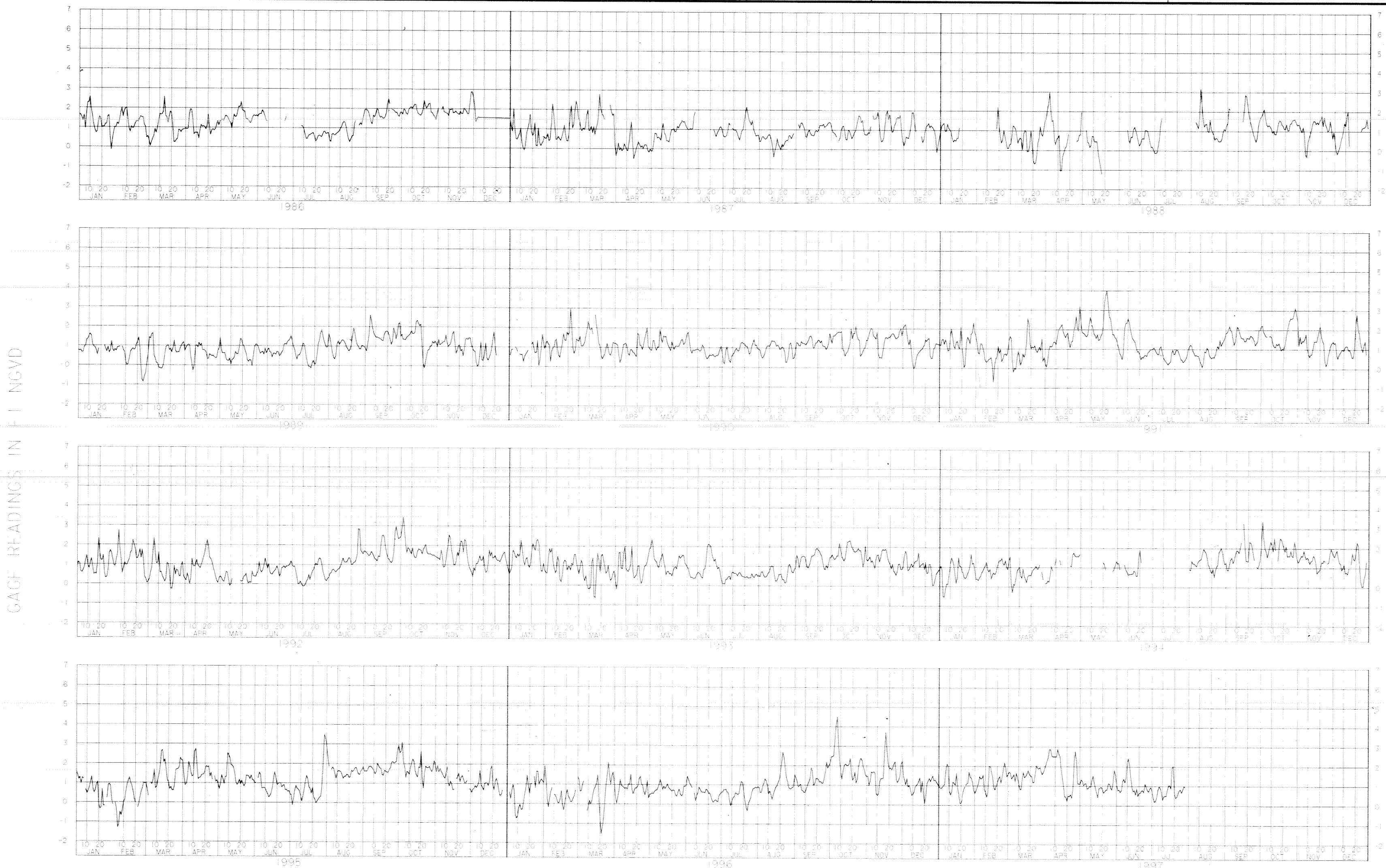
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

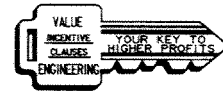
ACCESS STAIRWAY DETAILS

DESIGNED BY: C. LABORDE	DATE: NOV. 97	PLOT SCALE: 8	PLOT DATE: NOV. 12, 1997
DRAWN BY: L. MAGEE	CHECKED BY: C. LABORDE	CADD FILE: 4478P03.DGN	FILE NO. H-4-44778
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 33 OF 46	

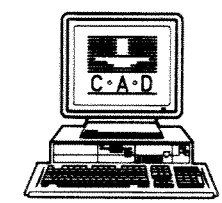




**Safety is a Part
of Your Contract**



LOCATION:
LAT. 30-01-18, LONG. 90-06-57. ON WEST END
OF MUNICIPAL YACHT BUILDING IN WEST END
HARBOR. (STA.8562506)



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

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

**STAGE HYDROGRAPH
LAKE PONTCHARTRAIN AT WEST END, LA.**

DESIGNED BY: P.SCHAEFER	DATE: 19 AUG 97	PLOT SCALE: 12	PLOT DATE: NOV. 12, 1997
DRAWN BY: P.SCHAEFER	CADD FILE: 4477823.DGN	FILE NO.	H-4-44778
CHECKED BY: C. LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 34 OF 46

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 More than half of coarse fraction is larger than No. 4 sieve size.	CLEAN GRAVEL (Little or No fines)	GW	GRAVEL, Well Graded, gravel-sand mixtures, little or no fines	
		GRAVEL (Little or No fines)	GP	GRAVEL, Poorly Graded, gravel-sand mixtures, little or no fines	
		GRAVEL WITH FINES (Appreciable Amount of Fines)	GM	SILTY GRAVEL, gravel-sand-silt mixtures	
		CLAYEY GRAVEL (Appreciable Amount of Fines)	GC	CLAYEY GRAVEL, gravel-sand-clay mixtures	
		CLEAN SAND (Little or No Fines)	SW	SAND, Well-Graded, gravelly sands	
	SANDS More than half of coarse fraction is larger than No. 4 sieve size.	SAND (Little or No Fines)	SP	SAND, Poorly-Graded, gravelly sands	
		SANDS WITH FINES (Appreciable Amount of Fines)	SM	SILTY SAND, sand-silt mixtures	
		CLAYEY SAND (Appreciable Amount of Fines)	SC	CLAYEY SAND, sand-clay mixtures	
		FINE - GRAINED SOILS More than half of material is smaller than No. 200 sieve size.	SILTS AND CLAYS (Liquid Limit < 50)	ML	SILT & very fine sand, silty or clayey fine sand or clayey silt with slight plasticity
				CL	LEAN CLAY, Sandy Clay, Silty Clay, of low to medium plasticity
OL	ORGANIC SILTS, and organic silty clays of low plasticity				
SILTS AND CLAYS (Liquid Limit > 50)	MH		SILT, fine sandy or silty soil with high plasticity		
	CH		FAT CLAY, inorganic clay of high plasticity		
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.

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	sif
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	Mo				Wood	Wd
					Oxidized	Ox

PLASTICITY CHART

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

NOTES:

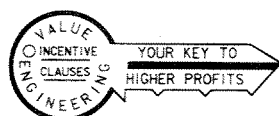
- FIGURES TO LEFT OF BORING UNDER COLUMN " W OR D₁₀"**
- Are natural water contents in percent dry weight
- When underlined denotes D₁₀ size in mm*
- FIGURES TO LEFT OF BORING UNDER COLUMNS " LL" AND " PL"**
- Are liquid and plastic limits, respectively
- SYMBOLS TO LEFT OF BORING**
- ▽ Ground-water 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.

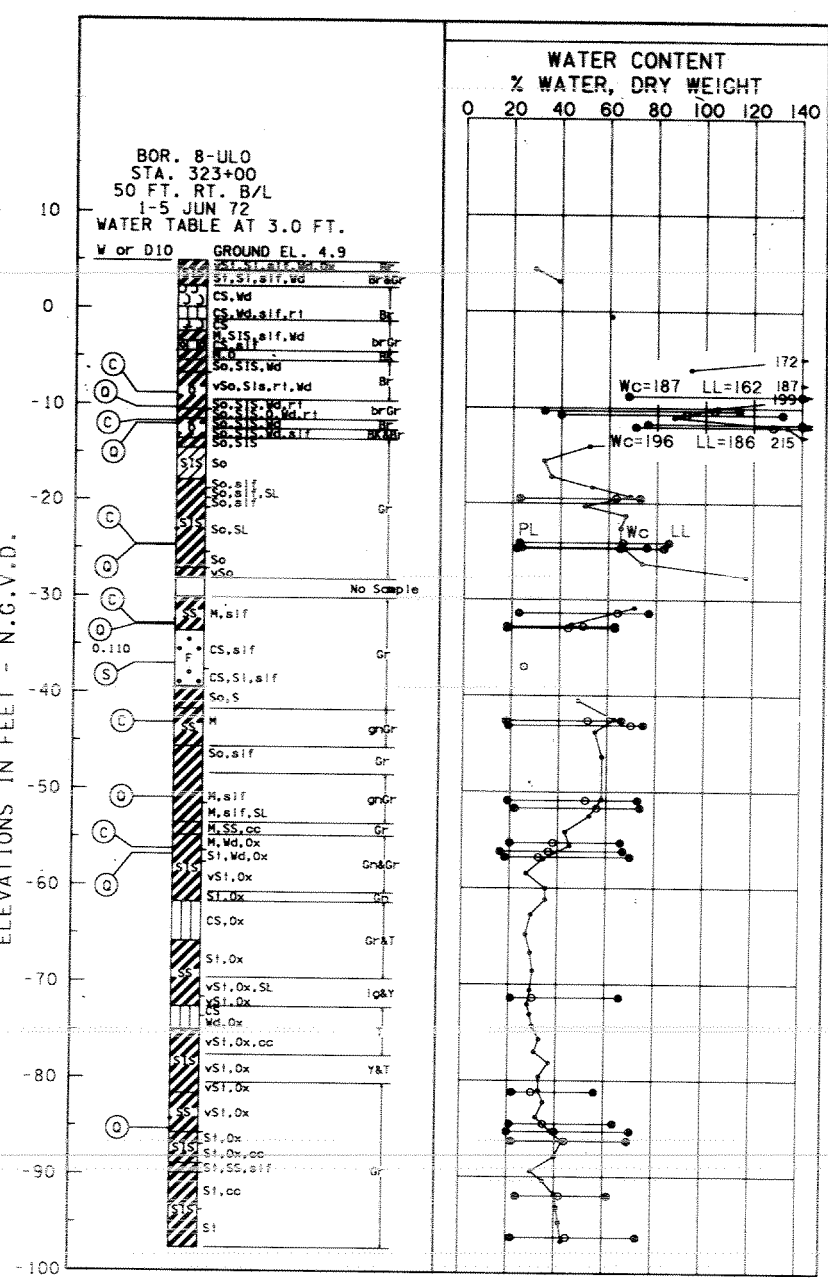
TYPICAL NOTES:

- 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.

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SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
SOIL BORING LEGEND			
DESIGNED BY: SCHAEFER	DATE: NOV 97	PLOT SCALE: 1	PLOT DATE: NOV. 12, 1997
DRAWN BY: J.DARBY	CHECKED BY: C. LABORDE	CADD FILE: 44778E16.DGN	FILE NO. H-4-44778
SUBMITTED BY: CHARLES A. LABORDE, P.E. DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 35 OF 46	





LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METairie, LA.

Name of Project: Orleans Marina Floodwall at New Basin Canal
New Orleans, Louisiana

For: Orleans Levee Board, New Orleans, Louisiana
Fromherz Engineers, Inc., Consulting Engineers, New Orleans, Louisiana

Boring No. B-1 Soil Technician: R. Elkins Date: 1 June 1984
Ground Elev. 8.0 (Est.) Datum: NGVD Gr. Water Depth: See Text

Sample No.	DEPTH (FEET)		CLASSIFICATION	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST (PSF)
	From	To					
1	2.0	2.5	0.0	3.0	7.5	Compact white shells & sand	
2	5.0	5.5	3.0	7.5	Miscellaneous fill (clay, sand, shells, glass, etc.)		
3*	7.5	9.0	7.5			Medium stiff dark gray clay w/sand pockets & shells	7 7
4	9.5	10.0		11.0		Ditto	
5	12.0	12.5	11.0	13.0		Medium dense gray clayey sand w/shell fragments	
6	13.0	14.5	13.0	15.5		Medium dense gray clayey sand w/wood & shells	9 13
7	15.5	17.0	15.5	18.0		Very soft gray clay w/wood & shells	0 2
8	18.5	19.0	18.0	20.0		Very soft black organic clay w/shells & roots	
9	23.5	24.0	20.0	25.0		Loose black & gray silty sand w/wood & humus layers	
10	28.5	29.0	25.0	30.0		Very soft gray sandy clay w/shell fragments & sand lenses	
11	33.5	34.0	30.0			Soft gray clay w/silt lenses	
12	38.5	39.0		40.0		Ditto	
13	43.5	44.0	40.0			Medium stiff gray clay w/shell fragments & sand lenses & pockets	
14	48.5	49.0		50.0		Ditto	
15	53.5	54.0	50.0			Medium stiff gray clay w/silt pockets & shells	
16	58.5	59.0		60.0		Medium stiff gray clay w/shell fragments	
17	63.5	64.0	60.0	65.0		Medium stiff gray clay	
18	68.5	69.0	65.0			Stiff greenish-gray & tan clay	
19	73.5	74.0		74.0		Stiff greenish-gray & tan clay w/silt lenses	
20	78.5	79.0	74.0	82.0		Medium stiff tan & gray clay w/many silt lenses	
21	83.5	84.0	82.0	85.0		Stiff tan & gray clay w/concretions	
22	88.5	89.0	85.0			Very stiff tan & gray fissured clay w/silt lenses	
23	93.5	94.0		95.0		Ditto	
24	98.5	99.0	95.0	100.0		Stiff gray clay w/silt lenses	

SUMMARY OF LABORATORY TEST RESULTS
WEST SIDE OF NEW BASIN CANAL
BORING B-1

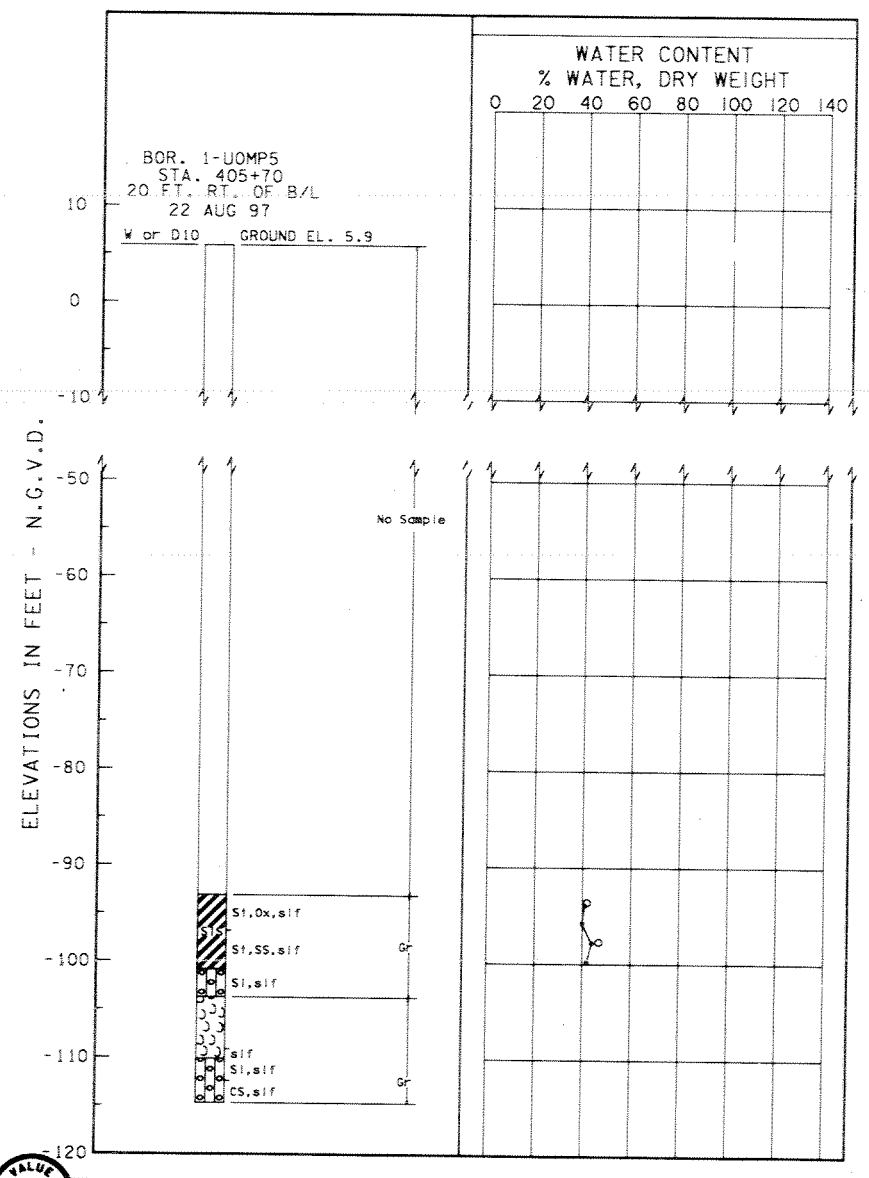
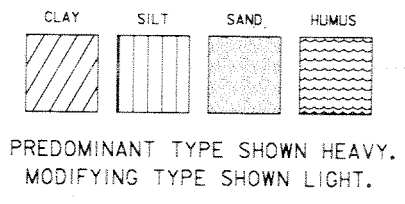
Sample No.	Depth In Feet	Classification	Water Content Percent		Density PCF		Unconfined Compressive Strength PSF
			Dry	Wet	Dry	Wet	
4	9.5	Medium stiff dark gray clay w/sand pockets & shells	31.9	---	---	---	---
5	12.0	Medium dense gray clayey sand w/shell fragments	32.1	88.4	116.8	1015*	---
8	18.5	Very soft black organic clay w/shells & roots	142.7	32.3	78.5	450	---
9	23.5	Loose black & gray silty sand w/humus layers	62.4	57.4	93.2	635*	---
10	28.5	Very soft gray sandy clay	35.9	81.8	111.1	450	---
11	33.5	Soft gray clay w/silt lenses	61.7	62.8	101.5	795	---
12	38.5	Ditto	62.1	62.6	101.5	825	---
13	43.5	Medium stiff gray clay w/sand lenses, pockets & shell fragments	42.9	76.4	109.2	1240	---
15	53.5	Medium stiff gray clay w/silt pockets & shells	51.3	69.0	104.4	1130	---
16	58.5	Medium stiff gray clay w/shell fragments	59.7	65.2	100.9	1215	---
17	63.5	Medium stiff gray clay	54.3	67.9	104.8	1665	---
18	68.5	Stiff greenish-gray & tan clay	27.8	95.4	121.8	2255	---
19	73.5	Stiff greenish-gray & tan clay w/silt lenses	29.3	93.9	121.4	3045	---
20	78.5	Medium stiff tan & gray clay w/many silt lenses	29.0	93.9	121.2	1780*	---
21	83.5	Stiff tan & gray clay with concretions	24.3	101.0	125.5	3765	---
22	88.5	Very stiff tan & gray fissured clay w/silt lenses	35.4	86.2	116.7	4705	---
23	93.5	Ditto	34.4	88.2	118.5	5790	---
24	98.5	Stiff gray clay	39.9	82.1	114.9	3915	---

*Unconsolidated Undrained Triaxial Compression Test - One Specimen; Confined at the approximate overburden pressure.

*Unconsolidated Undrained Triaxial Compression Test - One Specimen; Confined at the approximate overburden pressure.

- NOTES:
- STANDARD PENETRATION TEST
*NUMBER IN FIRST COLUMN INDICATES NUMBER OF BLOWS OF 140-LB HAMMER DROPPED 30 IN. REQUIRED TO SEAT 2-IN. O.D. SPLITSPOON SAMPLER 6 IN. NUMBER IN SECOND COLUMN INDICATES NUMBER OF BLOWS OF 140-LB. HAMMER DROPPED 30 IN. REQUIRED TO DRIVE 2-IN. O.D. SPLITSPOON SAMPLER 1 FT. AFTER SEATING 6 IN.
 - FOR SOIL BORINGS 8-ULO AND 1-UOMP5 SEE LEGEND DRAWING
 - FOR EUSTIS ENGINEERING BORINGS FURTHER INFORMATION IS AVAILABLE IN EUSTIS ENGINEERING APPENDICES DATED 12 DECEMBER 1984 GEOTECHNICAL INVESTIGATION ORLEANS MARINA FLOODWALL AT NEW BASIN CANAL OLB PROJECT NO. 2041-0217 NEW ORLEANS, LOUISIANA.
 - WHILE THESE LOGS OF BORINGS ARE CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LEGEND FOR BORINGS B-1 & B-2



LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METairie, LA.

Name of Project: Orleans Marina Floodwall at New Basin Canal
New Orleans, Louisiana

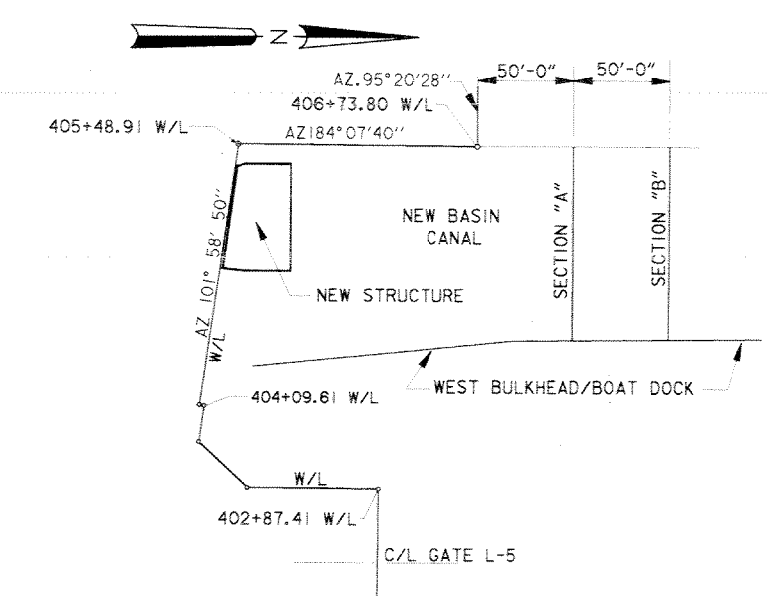
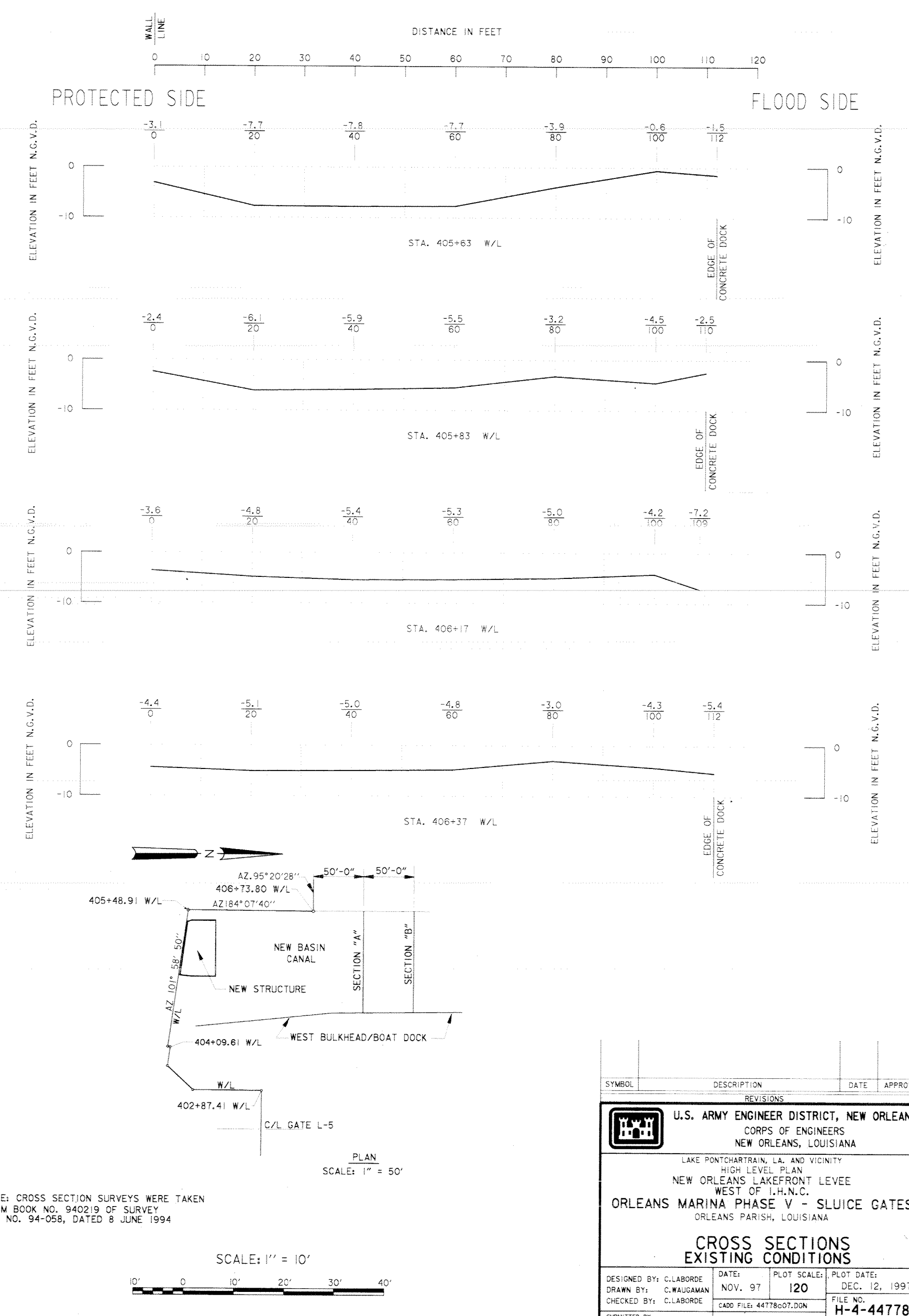
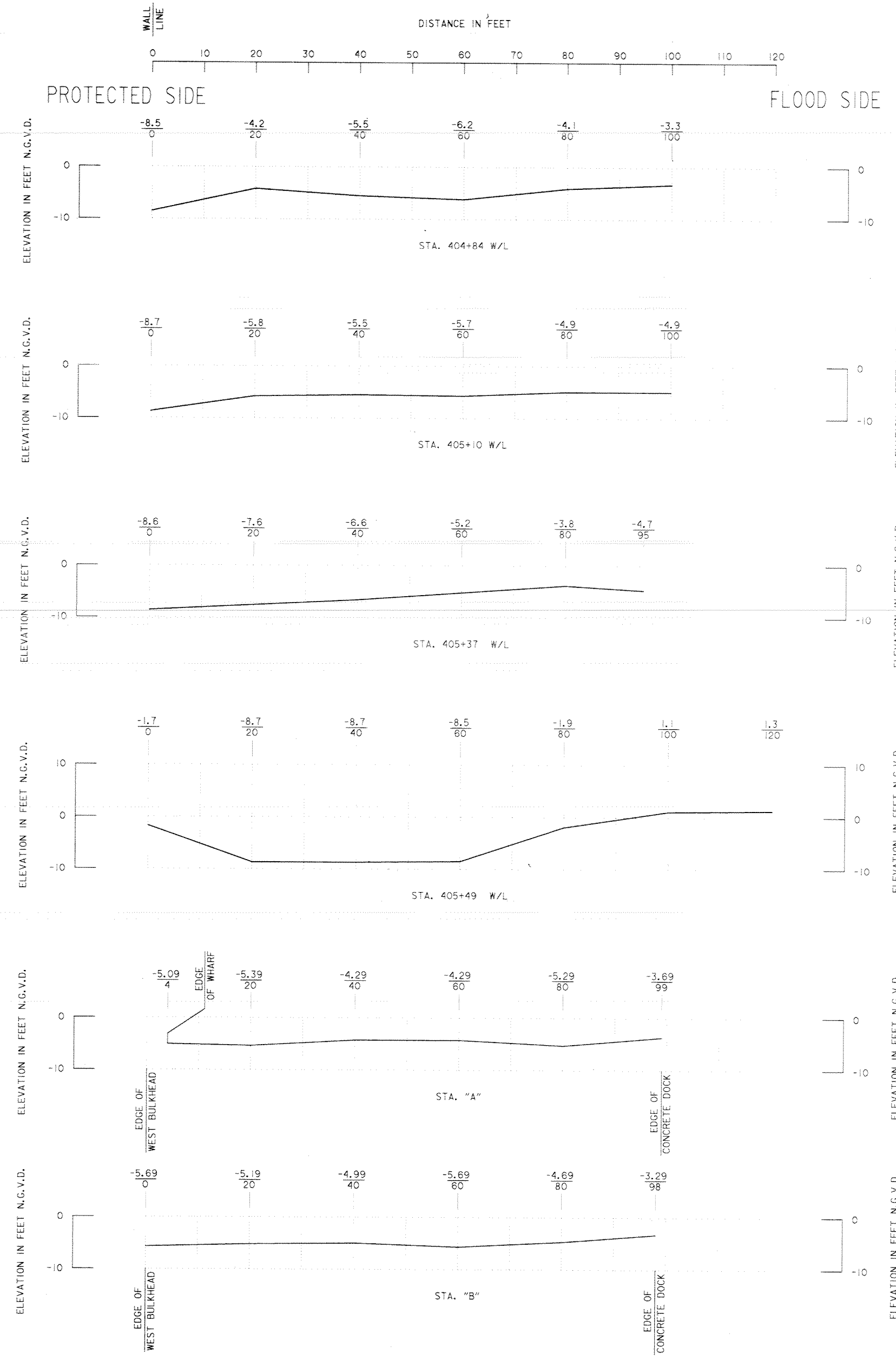
For: Orleans Levee Board, New Orleans, Louisiana
Fromherz Engineers, Inc., Consulting Engineers, New Orleans, Louisiana

Boring No. B-2 Soil Technician: A. J. Mayeux Date: 8 October 1984
Ground Elev. 3.5 (Est.) Datum: NGVD Gr. Water Depth: See Text

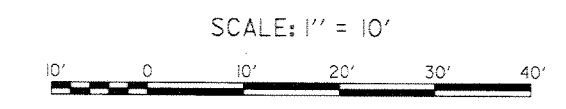
Sample No.	DEPTH (FEET)		CLASSIFICATION	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST (PSF)
	From	To					
1	0.5	2.0	0.0			Medium compact gray shells & sand	3 14
2	2.5	4.0		4.0		Ditto	11 11
3	8.0	8.5	4.0	10.0		Loose gray clayey sand w/shell fragments, roots & organic matter	
4	11.0	11.5	10.0	12.0		Soft gray silty clay w/wood & organic matter	
5	14.0	14.5	12.0	17.0		Extremely soft brown organic clay w/roots & silt pockets	
6	19.0	19.5	17.0	23.0		Very soft gray silty clay w/shell fragments	
7	24.0	24.5	23.0	26.0		Very soft gray clay w/silt lenses & shell fragments	
8	29.0	29.5	26.0			Soft gray clay w/silt lenses	
9	34.0	34.5		38.5		Ditto	
10	39.0	39.5	38.5	41.0		Soft gray clay w/sand pockets & shell fragments	
11	41.0	42.5	41.0	43.5		Loose gray sand w/shell fragments	2 9
12	43.5	45.0	43.5	46.0		Medium dense gray sand w/shell fragments	5 21
13	46.0	47.5	46.0	47.5		Loose gray shells & sand w/clay	1 4
14	48.5	50.0	47.5	51.5		Soft gray sandy clay w/shell fragments	1 4
15	54.0	54.5	51.5			Medium stiff gray clay w/sand pockets & shell fragments	
16	59.0	59.5		63.5		Medium stiff gray clay w/shell fragments	
17	64.0	64.5	63.5	67.5		Medium stiff dark gray clay w/organic matter & decayed wood	
18	69.0	69.5	67.5	72.0		Very stiff greenish-gray & tan silty clay	
19	74.0	74.5	72.0	76.5		Medium compact greenish-gray & tan clayey silt w/silty clay layers & trace of fine sand	
20	77.5	78.0	76.5	78.5		Very stiff tan & gray clay w/silt lenses	
21	78.5	80.0	78.5	81.5		Medium compact tan & gray sandy silt	5 18
22	83.5	85.0	81.5			Very stiff tan & gray clay w/silt lenses	5 16
23	89.5	90.0		92.0		Ditto	
24	94.0	94.5	92.0	96.0		Very stiff tan & gray clay	
25	99.0	99.5	96.0	100.0		Very stiff gray clay w/silt lenses & pockets	

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			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LA. SOIL BORINGS			
DESIGNED BY: VOJKOVICH	DATE: NOV.97	PLOT SCALE: 10	PLOT DATE: OCT.21,1997
DRAWN BY: WOODS	CADD FILE: fmonow.dgn	FILE NO. H-4-44778	
CHECKED BY: RICHARDSON	SUBMITTED BY: LARRY W. YORKE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DWG. 36 OF 46



NOTE: CROSS SECTION SURVEYS WERE TAKEN FROM BOOK NO. 940219 OF SURVEY JOB NO. 94-058, DATED 8 JUNE 1994

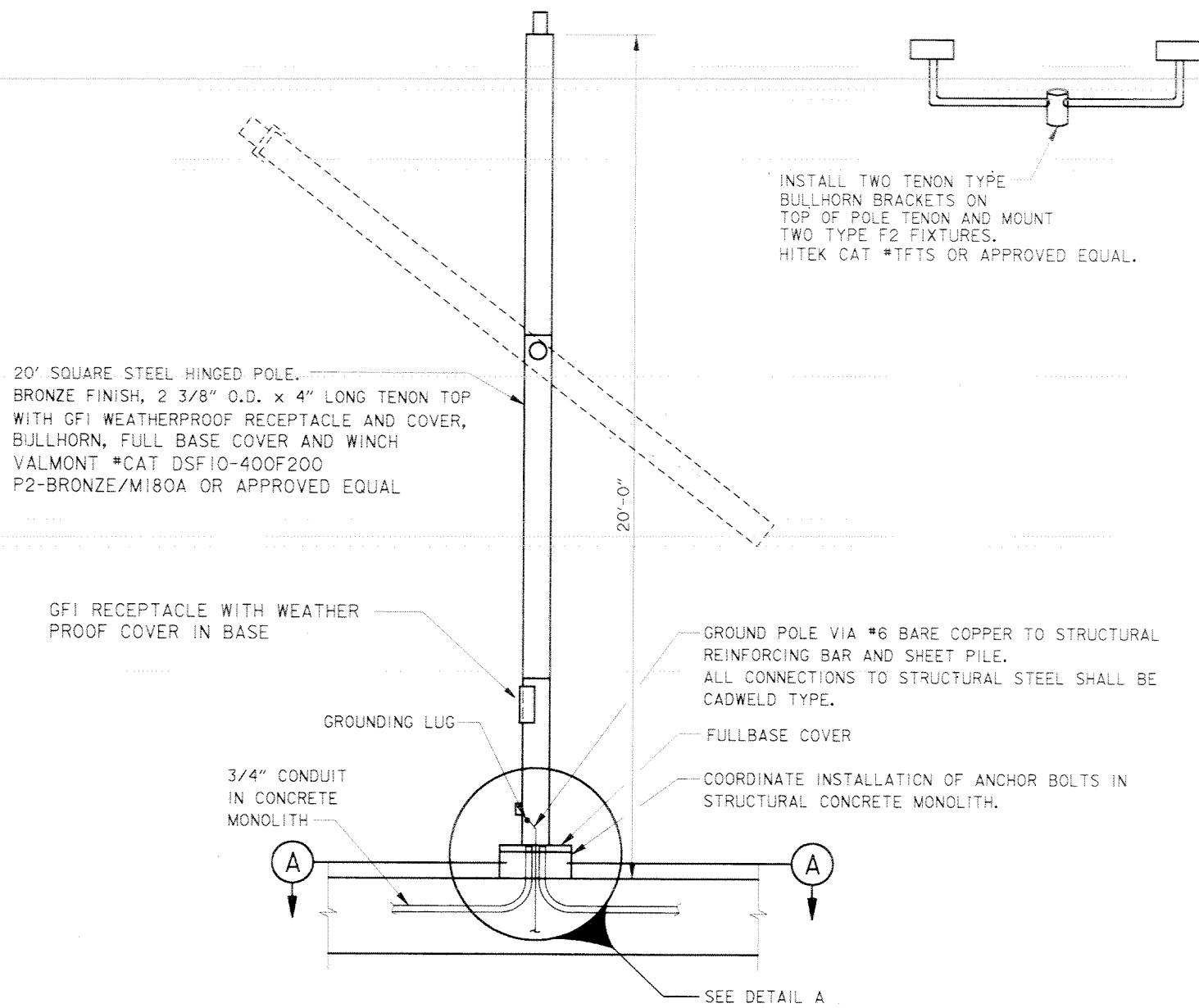


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
CROSS SECTIONS EXISTING CONDITIONS			
DESIGNED BY: C.LABORDE	DATE: NOV. 97	PLOT SCALE: 120	PLOT DATE: DEC. 12, 1997
DRAWN BY: C.WALIGAMAN	CADD FILE: 44778c07.DGN	FILE NO. H-4-44778	
CHECKED BY: C.LABORDE	SUBMITTED BY: CHARLES A. LABORDE, P.E.	SOLICITATION NO. DACW29-98-B-0001	DWG. 37 OF 46

**Safety is a Part
of Your Contract**

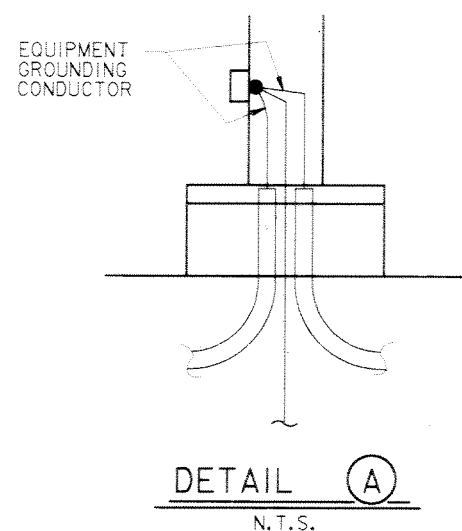
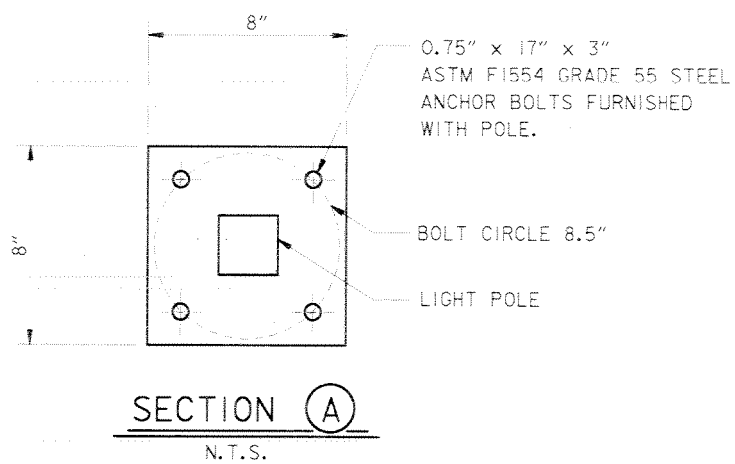
FIXTURE SCHEDULE

- F1 INCANDESCENT VAPORTITE, CAST ALUMINUM FIXTURE BODY, CLEAR TEMPERED GLASS GLOBE, CAST ALUMINUM GUARD, STANCHION MOUNT, UL WET LOCATION LISTED, 120 VOLT LAMP-150 WATT A-21, HUBBELL CAT #VS-150 OR APPROVED EQUAL.
- F2 HID FLOODLIGHT, 175 WATT, METAL HALIDE HIGH POWER FACTOR BALLAST, SLIPFITTER MOUNTING, MULTI TAP 120/208/240/277 VOLT BALLAST LAMP-175MH HUBBEL #PVL-0175H-118 WITH #PVL-PT TENON SLIPFITTER ATTACHEMENT



SYMBOL	DESCRIPTION
	HID OR INCANDESCENT LIGHT FIXTURE. SEE FIXTURE SCHEDULE.
	SINGLE-POLE TOGGLE SWITCH.
	DUPLEX OUTLET, 15 AMP, 125V., NEMA 5-15R.
	DUPLEX OUTLET WITH WEATHERPROOF COVER.
	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX OUTLET.
	GROUND CONNECTION.
	BRANCH CIRCUIT PANELBOARD.
	DISTRIBUTION PANELBOARD.
	DISCONNECT SWITCH. FUSED UNLESS OTHERWISE NOTED.
	MAGNETIC MOTOR STARTER. (SUPPLIED UNDER DIVISION 15000)
	COMBINATION STARTER/DISCONNECT SWITCH FUSED.
	TERMINAL CABINET
	HANDHOLE
	PUSH BUTTON
	SELECTOR SWITCH
	TORQUE SWITCH
	PULLBOX OR TROUGH
	MOTOR, THREE PHASE. NUMERAL DENOTES HORSEPOWER.
	CIRCUIT BREAKER DEVICE
	SWITCH DEVICE.

SYMBOL	DESCRIPTION
	FUSE.
	NORMALLY OPEN CONTACT.
	NORMALLY CLOSED CONTACT
	JUNCTION BOX
	EXTEND EXISTING CONDUIT WITH NEW CONDUIT
	WIRING (IN CONDUIT) CONCEALED UNDER FLOOR SLAB OR UNDERGROUND
	WIRING (IN CONDUIT) CONCEALED IN CEILING OR WALL
	WIRING (IN CONDUIT) RUN EXPOSED
	EXISTING
	EXISTING TO BE REMOVED
	CIRCUIT TURNED UP
	CIRCUIT TURNED DOWN
	OUTDOOR AERIAL CONDUCTORS.
	AMP
	VOLT
	WIRE
	POLE
	CONDUIT ("RSC" INDICATES RIGID STEEL CONDUIT)
	GROUND
	CIRCUIT BREAKER
	ABOVE FINISHED FLOOR
	GROUND FAULT INTERRUPTER
	NOTE REFERENCE
	HOMERUN TO PANELBOARD WITH NOMENCLATURE (LETTERS), CIRCUIT NUMBERS (NUMBERS), NUMBER OF PHASE AND NEUTRAL CONDUCTORS WHEN MORE THAN TWO (HASH MARKS), OPPOSITE SLANT DENOTES GROUND, NUMBER OF CIRCUITS (NUMBER OF ARROWS).



DESIGNED BY: B.P.C.	DATE: NOV. 1996	PLOT SCALE: 32	PLOT DATE: DEC. 17, 1997
DRAWN BY: C.G.H.	CADD FILE: 4477RE-1.DGN	FILE NO. H-4-44778	
CHECKED BY: S.P.C.	SOLICITATION NO. DACW29-98-B-0001	DWG. 38	OF 46

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

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

**SLUICE GATE - ELECTRICAL
LIGHT POLE DETAIL**

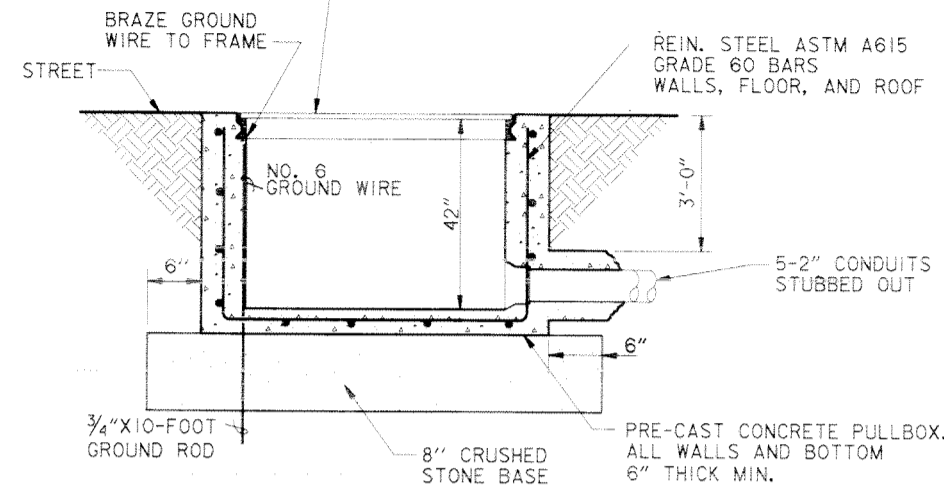


Safety is a Part of Your Contract

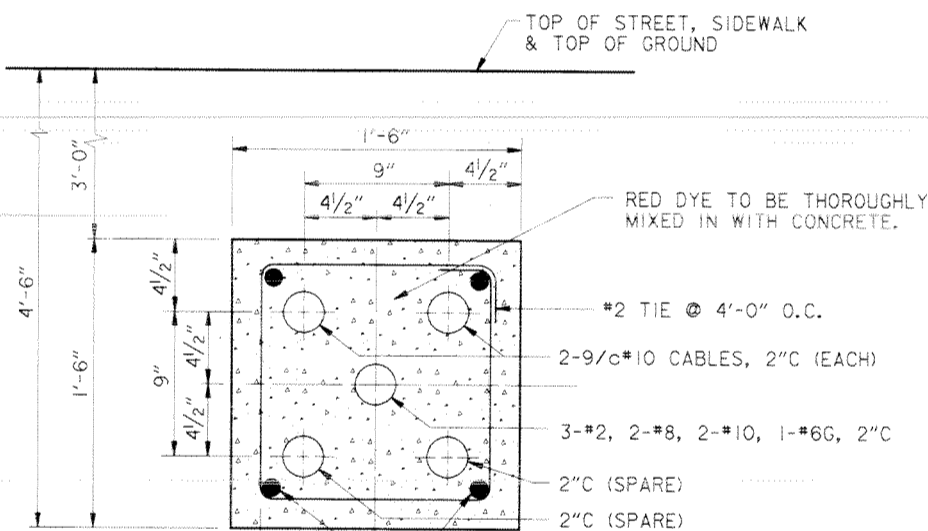
GALVANIZED CAST-IRON TRAFFIC-RATED BOX WITH CHECKERED COVER SECURED WITH STAINLESS STEEL SCREWS. 24" LONG X 24" WIDE X 5 1/2" HIGH O. Z. MANUFACTURING COMPANY STYLE #Y58E-2424 (TRAFFIC) OR EQUAL COVER. COVER SHALL BE CUSTOM LETTERED TO READ "S&WB POWER". EMBED IN CONCRETE PULLBOX AS SHOWN.

CONCRETE PULL BOX NOTES:

1. CONCRETE SHALL BE 4000PSI IN 28 DAYS.
2. PRECAST STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH ASTM C857 AND AASHTO WHERE APPLICABLE.
3. REINFORCING DESIGN SHALL MEET OR EXCEED AASHTO HS20-44 BRIDGE LOADING. PULLBOX DETAILS AND DESIGN SHALL BE SUBMITTED FOR APPROVAL.



CONCRETE PULLBOX
TRAFFIC RATED
NOT TO SCALE



SECTION D
UNDERGROUND DUCT BANK
NOT TO SCALE

GENERAL NOTES:

1. AT "AREA OF CONFLICT", EXISTING UTILITIES ARE KNOWN TO EXIST. THEIR EXACT LOCATION, SIZE AND DEPTHS MUST BE DETERMINED IN THE FIELD BY THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND AVOID THESE LINES. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGES CAUSED BY FAILURE TO COMPLY WITH THESE INSTRUCTIONS. THE CONTRACTOR SHALL INSTALL UNDERGROUND ELECTRICAL DUCT TO AVOID CONFLICTS WITH WATER AND DRAIN LINES AT NO ADDITIONAL COST TO THE GOVERNMENT.
2. FOR STREET WORK PERMITTING, CONTRACTOR IS TO CONTACT THE NEW ORLEANS DEPARTMENT OF PUBLIC WORKS 72 HOURS BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE SEWERAGE AND WATER BOARD (P.O.C. MR. GARY SARRAT (504) 865-0452) 72 HOURS PRIOR TO STARTING CONSTRUCTION.
3. THE P.O.C. FOR "RUSSEL'S MARINA GRILL" IS: MR. PAUL PETROU 8555 PONTCHARTRAIN BLVD. NEW ORLEANS, LA. 70124 504-282-9980
4. SEE SPECIFICATIONS FOR TRAFFIC CONTROL REQUIREMENTS DURING CONSTRUCTION OF UNDERGROUND DUCT BANK ACROSS LAKE MARINA AVE. AND ALONG PONTCHARTRAIN BLVD.
5. FOR MISCELLANEOUS DETAILS, SEE DWG. 44.

LEGEND:
☆ = AREA OF CONFLICT

TWO TELEPHONE LINES EXIST IN THIS AREA. A 2" LINE BURIED APPROXIMATELY 2' BELOW THE SURFACE AND A 4" LINE APPROXIMATELY 4' DEEP (ONE BELOW THE OTHER).

NEW TYPE "B" CONCRETE HANDICAP RAMP, FOR DETAILS, SEE DWG. 44.

TRAFFIC RATED PULL-BOX (SEE DETAIL). EXACT LOCATION DEPENDENT UPON LOCATION OF EXISTING TELEPHONE AND GAS LINES. LOCATION TO BE DETERMINED BY FIELD ENGINEER.

"WINDJAMMER" RESTAURANT/BREAKWATER BISTRO

2'-0" DIMENSION DETERMINED AT CONSTRUCTION JOINT OF PARKING LOT AND EXISTING STREET. (CURBING IS NOT WELL DEFINED AT MAJORITY OF OTHER LOCATIONS ALONG PROJECT.)

REPLACE ANY EXISTING CONCRETE IN STREET REMOVED DURING CONSTRUCTION WITH ASPHALT.

"WEST END CAFE" RESTAURANT

TRAFFIC RATED PULL-BOX (SEE DETAIL)

"MIDNIGHT STAR CAFE" RESTAURANT

NEW 24"x24"x6" NEMA 4 PULLBOX ATTACHED TO I-WALL 5'-0" FROM END OF WALL

NEW TYPE "A" CONCRETE HANDICAP RAMP, FOR DETAILS, SEE DWG. 44.

1'-6" WIDE EARTH FORM TRENCH EXCAVATION (TYP.) (SEE DETAIL, DWG. 44)

PROPT. LINE AND STATE RIGHT-OF-WAY

PONTCHARTRAIN BLVD.

NEW BASIN CANAL

EXISTING FLOODWALL (I-WALL)

TEMPORARY COFFERDAM

SLUICE GATES

STAIRWELL

SAW CUT EXIST. SIDEWALK (SEE DETAIL, DWG. 42)

SIDEWALK

RUSSEL'S MARINA GRILL

LaDOTD

THIS CATCH BASIN IS LOCATED ON THE AS-BUILT PLANS, BUT CANNOT BE LOCATED VISUALLY IN THE FIELD.

EXISTING GRATES TO BE REMOVED DURING CONSTRUCTION AND REPLACED UPON COMPLETION. COST TO BE INCLUDED IN DEMOLITION COSTS.

FOR DETAILS OF AREA, SEE DWG. 44

LIMITS OF SEWERAGE & WATER BOARD OF NEW ORLEANS SERVITUDE

LAKESHORE DR.

BASELINE

POINTS OF CONTACT

- ENERGY**
GAS:
MR. WAYNE BURETT
(504) 595-3584
- UNDERGROUND ELECTRICAL:**
MR. DAVE COO
(504) 595-3889
- BELL SOUTH**
TELEPHONE LINES:
MS. FREMEEA HARRIS
(504) 253-7318
- SEWERAGE & WATER BOARD OF NEW ORLEANS**
WATER, SEWERAGE & DRAINAGE:
MR. LARRY MCKAL
(504) 865-2264
- ELECTRICAL:**
MR. GARY SARRAT
(504) 865-0450
- CITY OF NEW ORLEANS, DEPARTMENT OF STREETS**
MR. WILLIAM SEWELL
MR. ELMER DARWIN
(504) 565-6844
- NETWORKS**
CITY STREET LIGHTS:
MR. EDWARD ARNOLD
(504) 565-6260

NOTE:

1. THE LOCATION OF THE UTILITIES CALLED OUT ON THIS DRAWING ARE BASED ON TWO SOURCES:
- SEWERAGE AND WATER BOARD MAPS AND AS-BUILT DRAWINGS OF THE PUMPING STATION.
- VISUAL OBSERVATION UPON SITE INSPECTIONS.
2. THE S&WB SERVITUDE IS BASED ON THE SEWERAGE AND WATER BOARD DWG. NO. D-3630 (DATE 4-17-61). THE LEGAL DESCRIPTION OF THIS SERVITUDE WAS ALSO USED.

SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED PULL BOX AND DUCT BANK DETAILS; CHANGED DUCT BANK LOCATION, AMEND #0003	1/23/98	CAL

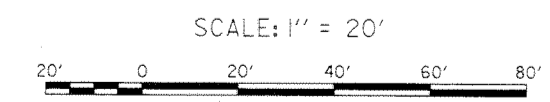
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

SLUICE GATE - ELECTRICAL
SITE PLAN

DESIGNED BY: C.G.H.	DATE: NOV. 1996	PLOT SCALE: 20'	PLOT DATE: MAR. 6, 1998
DRAWN BY: C.G.H.	CADD FILE: 44778E-2.DGN	FILE NO. H-4-44778	
CHECKED BY: S.P.C.	SUBMITTED BY: DAN BRADLEY DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 39 OF 46

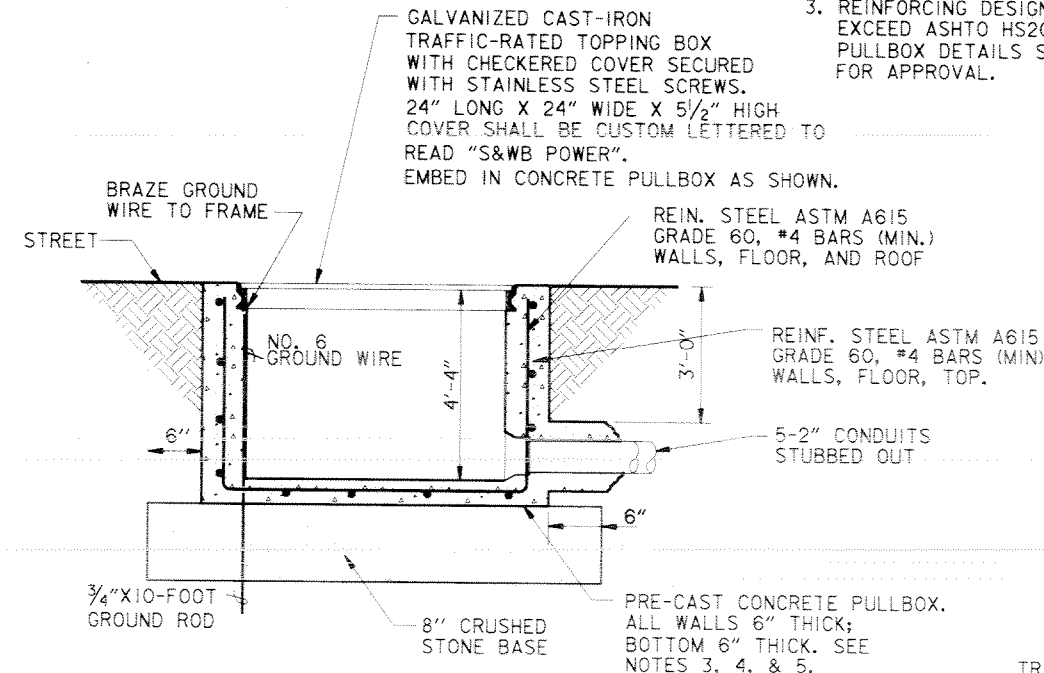
SCALE: 1"=20'



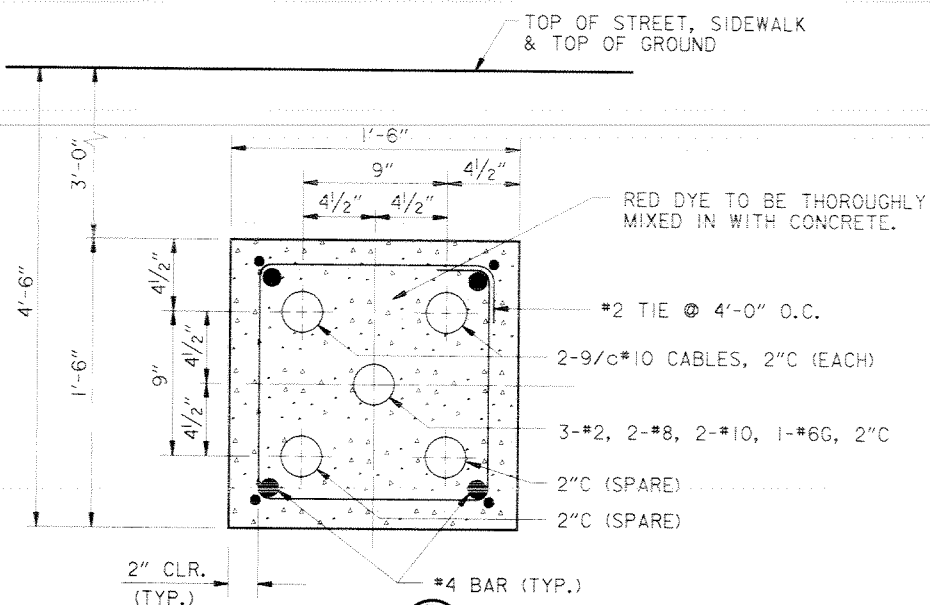
Safety is a Part of Your Contract

CONCRETE PULL BOX NOTES:

1. CONCRETE SHALL BE 4000PSI IN 28 DAYS.
2. PRECAST STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH ASTM C857 AND AASHTO WHERE APPLICABLE.
3. REINFORCING DESIGN SHALL MEET OR EXCEED ASHTO HS20-44 BRIDGE LOADING. PULLBOX DETAILS SHALL BE SUBMITTED FOR APPROVAL.



CONCRETE PULLBOX
TRAFFIC RATED
NOT TO SCALE



SECTION D
UNDERGROUND DUCT BANK
NOT TO SCALE

GENERAL NOTES:

1. AT "AREA OF CONFLICT", EXISTING UTILITIES ARE KNOWN TO EXIST. THEIR EXACT LOCATION, SIZE AND DEPTHS MUST BE DETERMINED IN THE FIELD BY THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND AVOID THESE LINES. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGES CAUSED BY FAILURE TO COMPLY WITH THESE INSTRUCTIONS. THE CONTRACTOR SHALL INSTALL UNDERGROUND ELECTRICAL DUCT TO AVOID CONFLICTS WITH WATER AND DRAIN LINES AT NO ADDITIONAL COST TO THE GOVERNMENT.
2. FOR STREET WORK PERMITTING, CONTRACTOR IS TO CONTACT THE NEW ORLEANS DEPARTMENT OF PUBLIC WORKS 72 HOURS BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE SEWERAGE AND WATER BOARD (P.O.C. MR. GARY SARRAT (504) 865-0452) 72 HOURS PRIOR TO STARTING CONSTRUCTION.
3. THE P.O.C. FOR "RUSSEL'S MARINA GRILL" IS: MR. PAUL PETROU, 8555 PONTCHARTRAIN BLVD., NEW ORLEANS, LA. 70124, 504-282-9980.
4. SEE SPECIFICATIONS FOR TRAFFIC CONTROL REQUIREMENTS DURING CONSTRUCTION OF UNDERGROUND DUCT BANK ACROSS LAKE MARINA AVE. AND ALONG PONTCHARTRAIN BLVD.
5. FOR MISCELLANEOUS DETAILS, SEE DWG. 44.

LEGEND:

★ = AREA OF CONFLICT

NEW 24"x24"x6" NEMA 4 PULLBOX ATTACHED TO I-WALL 5'-0" FROM END OF WALL

NEW TYPE "A" CONCRETE HANDICAP RAMP, FOR DETAILS, SEE DWG. 44.

TWO TELEPHONE LINES EXIST IN THIS AREA. A 2" LINE BURIED APPROXIMATELY 2' BELOW THE SURFACE AND A 4" LINE APPROXIMATELY 4' DEEP (ONE BELOW THE OTHER).

NEW TYPE "B" CONCRETE HANDICAP RAMP, FOR DETAILS, SEE DWG. 44.

TRAFFIC RATED PULL-BOX (SEE DETAIL). EXACT LOCATION DEPENDENT UPON LOCATION OF EXISTING TELEPHONE AND GAS LINES. LOCATION TO BE DETERMINED BY FIELD ENGINEER.

"WINDJAMMER" RESTAURANT/BREAKWATER BISTRO

1'-6" WIDE EARTH FORM TRENCH EXCAVATION (TYP.) (SEE DETAIL, DWG. 44)

2'-0" DIMENSION DETERMINED AT CONSTRUCTION JOINT OF PARKING LOT AND EXISTING STREET. (CURBING IS NOT WELL DEFINED AT MAJORITY OF OTHER LOCATIONS ALONG PROJECT.)

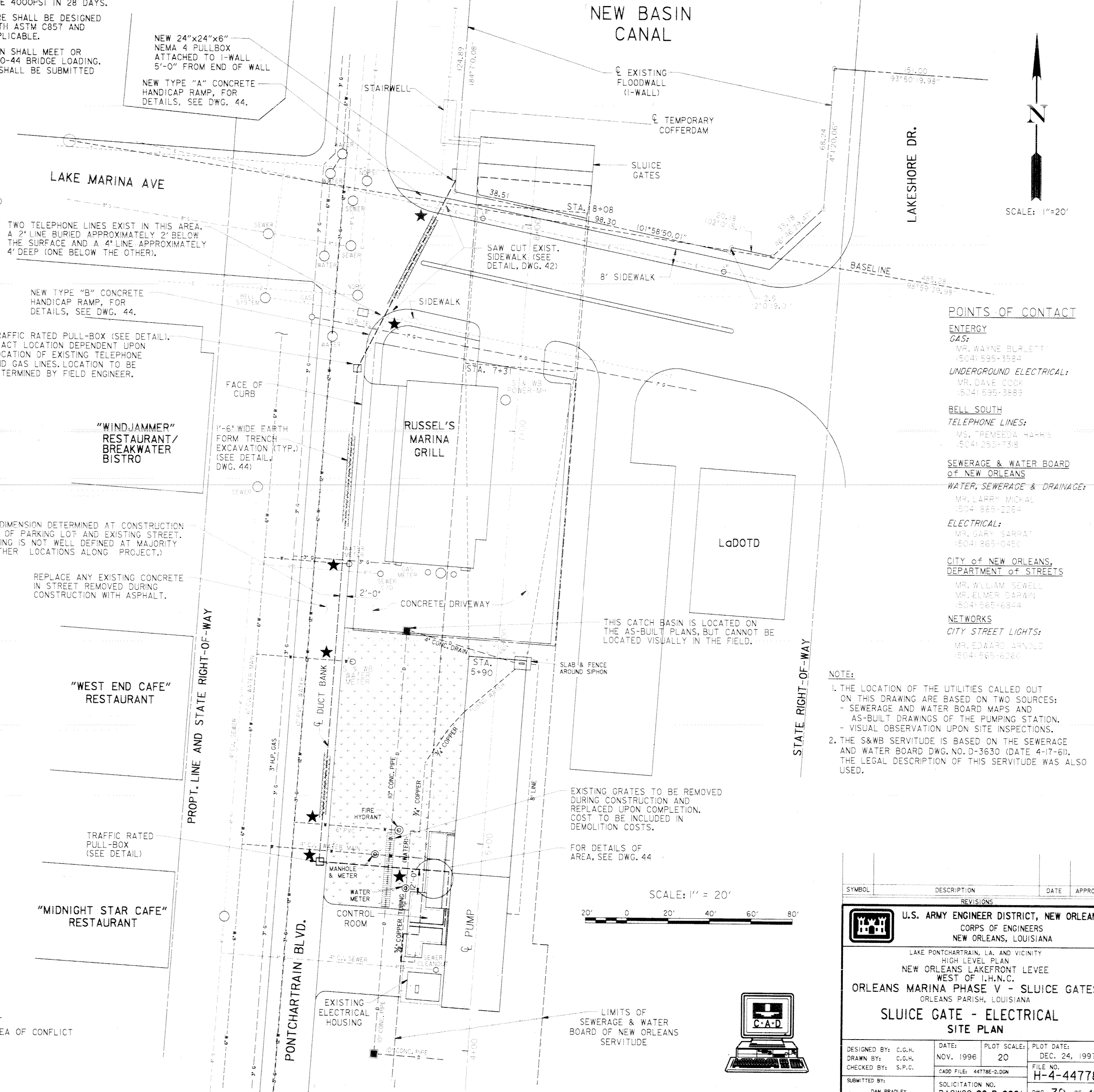
REPLACE ANY EXISTING CONCRETE IN STREET REMOVED DURING CONSTRUCTION WITH ASPHALT.

"WEST END CAFE" RESTAURANT

TRAFFIC RATED PULL-BOX (SEE DETAIL)

"MIDNIGHT STAR CAFE" RESTAURANT

NEW BASIN CANAL

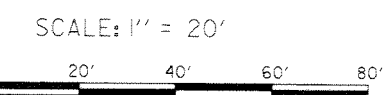


POINTS OF CONTACT

- ENERGY**
GAS:
MR. WAYNE BURLETT
(504) 595-3584
- UNDERGROUND ELECTRICAL:**
MR. DAVE COOK
(504) 595-3889
- BELL SOUTH**
TELEPHONE LINES:
MS. TRENEEDA HARRIS
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- SEWERAGE & WATER BOARD OF NEW ORLEANS**
WATER, SEWERAGE & DRAINAGE:
MR. LARRY MICHAEL
(504) 865-2264
- ELECTRICAL:**
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(504) 865-0450
- CITY OF NEW ORLEANS, DEPARTMENT OF STREETS**
MR. WILLIAM SEWELL
MR. ELMER DARRIN
(504) 565-6844
- NETWORKS**
CITY STREET LIGHTS:
MR. EDWARD ARNOLD
(504) 565-6260

NOTE:

1. THE LOCATION OF THE UTILITIES CALLED OUT ON THIS DRAWING ARE BASED ON TWO SOURCES:
- SEWERAGE AND WATER BOARD MAPS AND AS-BUILT DRAWINGS OF THE PUMPING STATION.
- VISUAL OBSERVATION UPON SITE INSPECTIONS.
2. THE S&WB SERVITUDE IS BASED ON THE SEWERAGE AND WATER BOARD DWG. NO. D-3630 (DATE 4-17-61). THE LEGAL DESCRIPTION OF THIS SERVITUDE WAS ALSO USED.

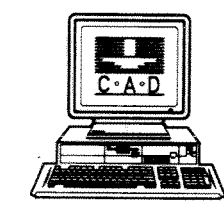


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

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

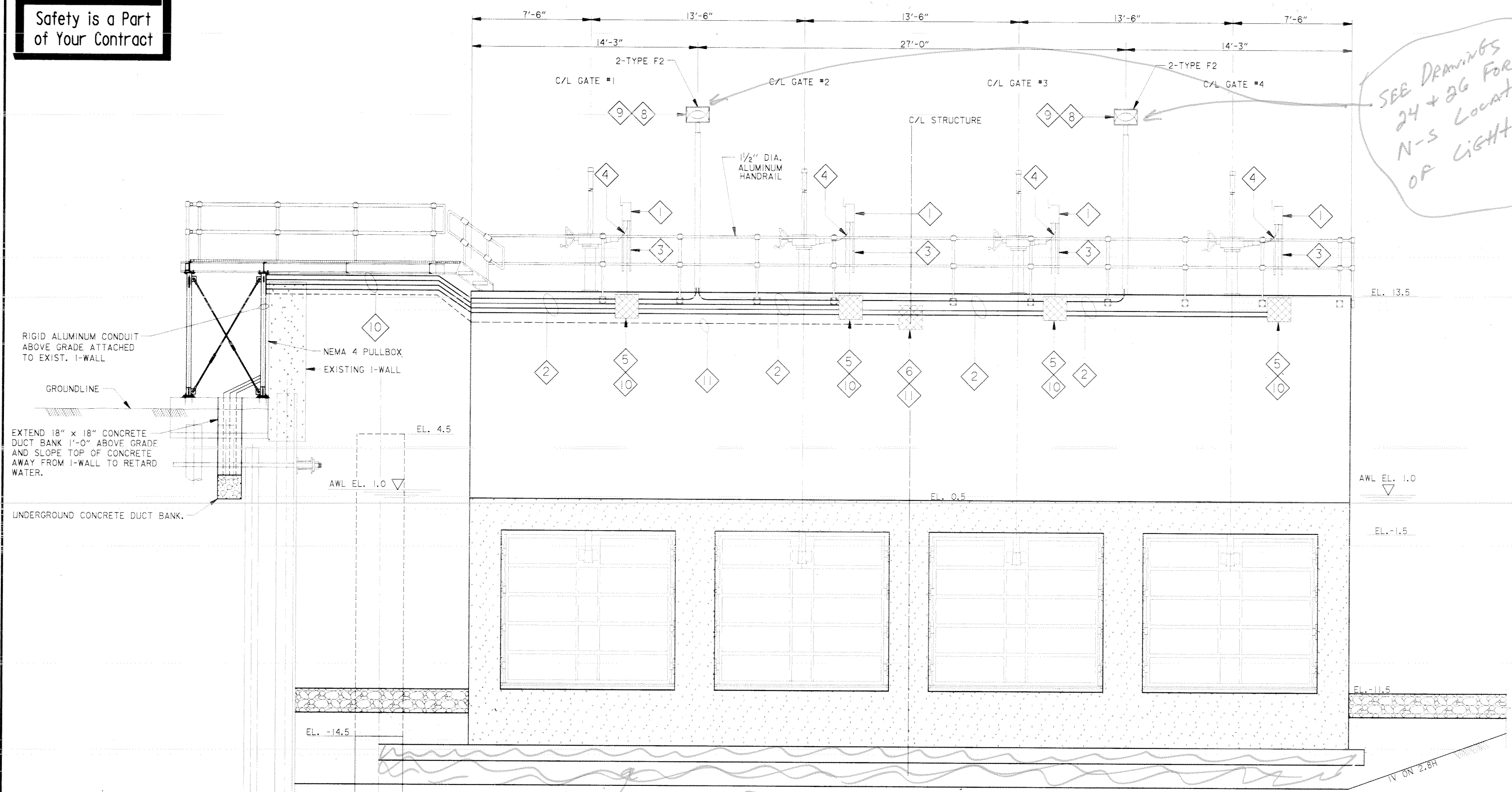
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUDGE GATES
ORLEANS PARISH, LOUISIANA
SLUDGE GATE - ELECTRICAL
SITE PLAN

DESIGNED BY: C.G.H.	DATE: NOV. 1996	PLOT SCALE: 20	PLOT DATE: DEC. 24, 1997
DRAWN BY: C.G.H.	CADD FILE: 44778E-2.DGN	FILE NO. H-4-44778	
CHECKED BY: S.P.C.	SOLICITATION NO. DACW29-98-B-0001	DWG. 39	OF 46
SUBMITTED BY: DAN BRADLEY, DESIGN ENGINEER			



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SEE DRAWINGS 24 + 26 FOR N-S LOCATION OF LIGHTS



RIGID ALUMINUM CONDUIT ABOVE GRADE ATTACHED TO EXIST. I-WALL

GROUNDLINE

EXTEND 18" x 18" CONCRETE DUCT BANK 1'-0" ABOVE GRADE AND SLOPE TOP OF CONCRETE AWAY FROM I-WALL TO RETARD WATER.

UNDERGROUND CONCRETE DUCT BANK.

NEMA 4 PULLBOX

EXISTING I-WALL

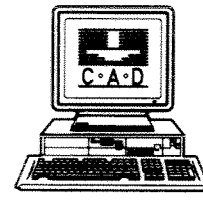
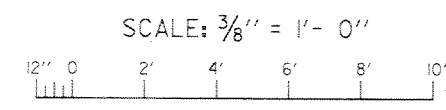
EL. 4.5

AWL EL. 1.0

SLUCE GATE ELEVATION
(DEWATERED SIDE LOOKING NORTH)

- DELETE (P00006)*
- SPECIFIC NOTES**
- ① 30 AMP 3 POLE 480 VOLT FUSED SWITCH NEMA 4, STAINLESS STEEL, MOUNTED ON UNISTRUT CHANNEL. (TYPICAL FOR ALL GATE MOTORS).
 - ② ROUTE POWER, LIGHTING, AND CONTROL CONDUITS EXPOSED ALONG PROTECTED (SOUTH) SIDE OF MONOLITH. ATTACH ALUMINUM UNISTRUT TO MONOLITH ISOLATED BY 1/8" NEOPRENE RUBBER AND STRAP CONDUITS TO ALUMINUM UNISTRUT.
 - ③ ALUMINUM UNISTRUT CHANNEL WELDED TO REAR OF HANDRAIL BAR.
 - ④ USE LIQUIDTIGHT FLEXIBLE CONDUIT BETWEEN FUSED SWITCH AND GATE CONTROLLER. ROUTE THROUGH WALL AND UNDER GRATING UP TO MOTOR.
 - ⑤ NEMA 4 FABRICATED ALUMINUM 24" x 24" x 6" PULLBOX WITH SCREW REMOVABLE AND GASKETED COVER MOUNTED TO CONCRETE ON SOUTH WALL WITH 1/8" NEOPRENE RUBBER GASKETS BETWEEN PULLBOX AND CONCRETE.
 - ⑥ NEMA 4 FABRICATED ALUMINUM 24" x 24" x 6" PULLBOX WITH SCREW REMOVABLE AND GASKETED COVER MOUNTED TO CONCRETE ON NORTH WALL WITH 1/8" NEOPRENE RUBBER GASKETS BETWEEN PULLBOX AND CONCRETE.
 - ⑦ ROUTE 3/4" LIGHTING CONDUIT IN CONCRETE SLAB OF MONOLITH TO LIGHT POLE. SEE LIGHT POLE DETAIL DWG. 38.
 - ⑧ NOTE, ONE FIXTURE SHALL BE AIMED SOUTH AND ONE FIXTURE AIMED NORTH. ADJUST AT NIGHT FOR BEST LIGHTING. SEE DWG. 38 FOR FIXTURE SCHEDULE. *AMEND 003*
 - ⑨ THESE LIGHT FIXTURES SHALL BE FED BY NEW 20 AMP, 2 POLE, C/B IN PANEL LP. SEE DWG. 42.
 - ⑩ MOUNT ALUMINUM UNISTRUT TO SOUTH WALL ISOLATED FROM CONCRETE WITH 1/8" NEOPRENE RUBBER, USE TO SUPPORT CONDUITS AND PULLBOXES.
 - ⑪ 2" SPARE CONDUIT RUN ALONG NORTH WALL FROM PULLBOX UNDER STAIRWELL TO A 24" x 24" x 6" PULLBOX MOUNTED TO NORTH WALL. MOUNT AS HIGH AS PRACTICAL ON WALL.

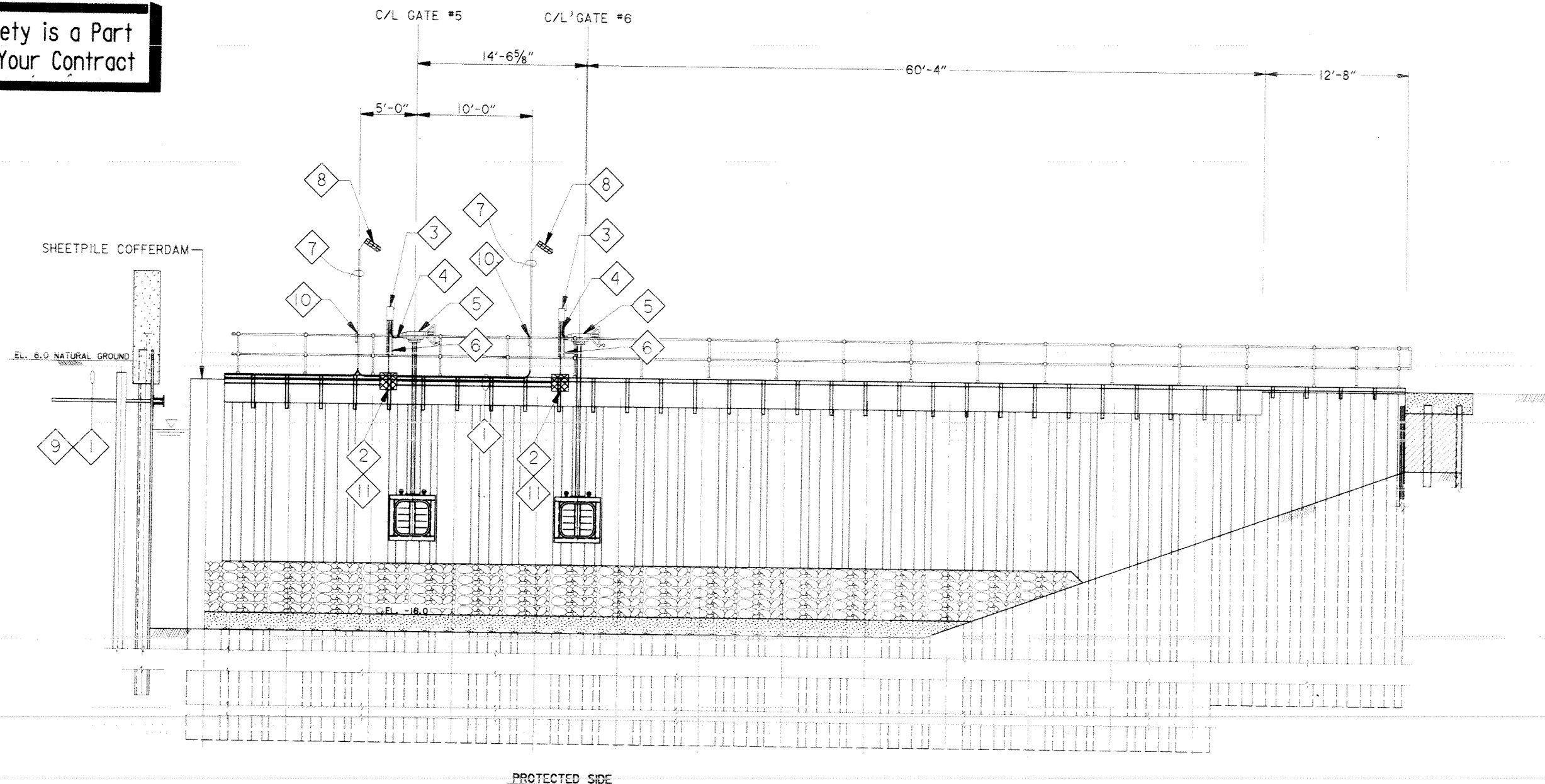
* SEE DRAWINGS 4 thru 8 FOR DETAILS OF REQUIRED *(P00006)* BEDDING + RIPRAP.



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUCE GATES ORLEANS PARISH, LOUISIANA SLUCE GATE - ELECTRICAL SECTIONAL ELEVATION			
DESIGNED BY: B.P.C.	DATE: NOV. 1996	PLOT SCALE: 32	PLOT DATE: DEC. 17, 1997
DRAWN BY: C.G.H.	CADD FILE: 44778E-3.DWG	FILE NO. H-4-44778	
CHECKED BY: S.P.C.	SOLICITATION NO. DACW29-98-B-0001	DWG. 40 OF 46	
SUBMITTED BY: DAN BRADLEY DESIGN ENGINEER			



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of Your Contract**

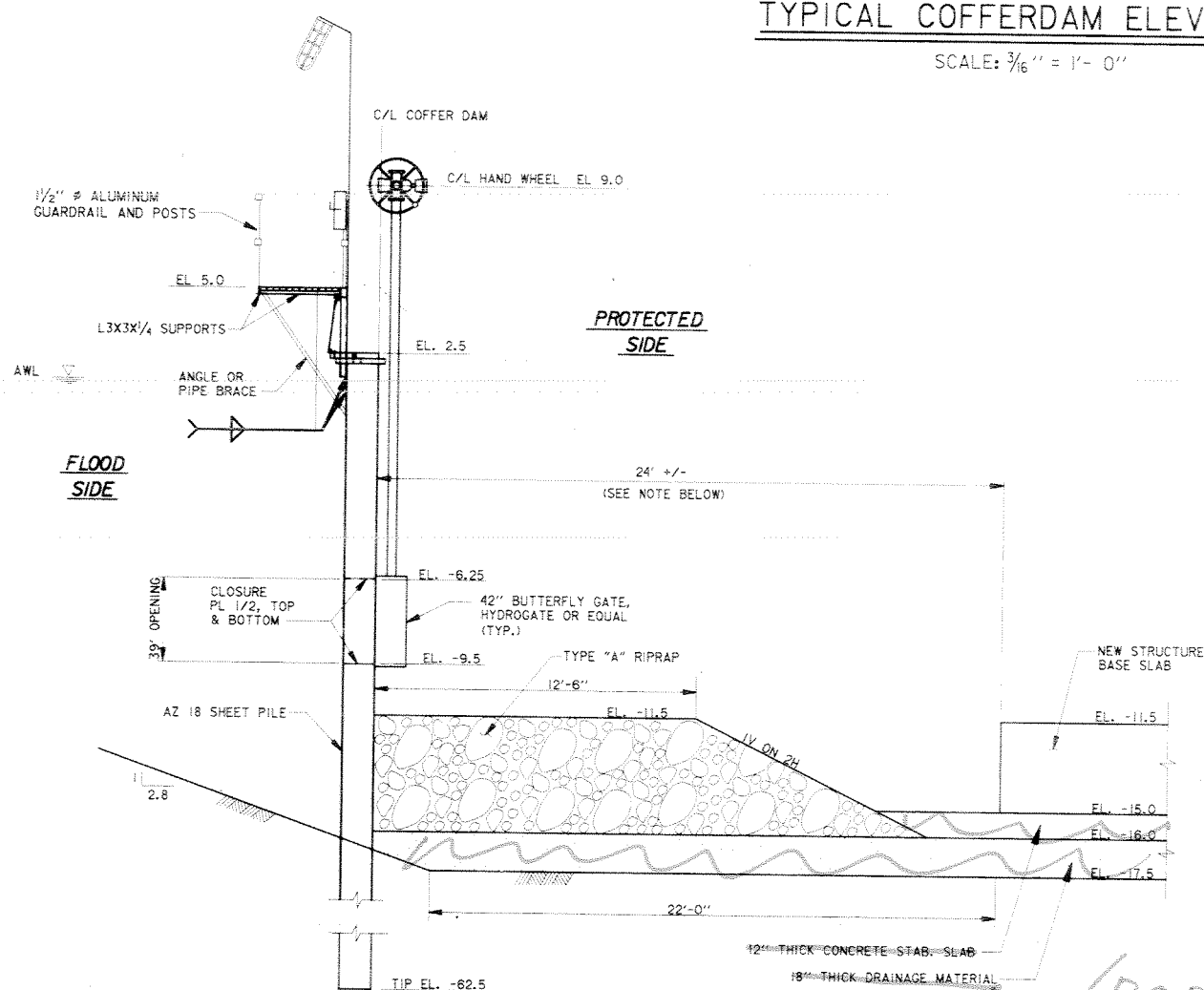


- SPECIFIC NOTES**
- ① ROUTE ONE 2" CONDUIT FOR POWER FOR GATE MOTORS, ONE 2" CONDUIT FOR GATE CONTROL AND ONE 3/4" CONDUIT FOR LIGHTING AND RECEPTACLES EXPOSED ALONG PROTECTED SIDE OF COFFERDAM TO UNDERGROUND DUCT BANK.
 - ② 18"x18"x6" NEMA 4 JUNCTION BOX USED TO TAP POWER FEEDER CONDUCTORS.
 - ③ 30 AMP 3 POLE 480 VOLT NEMA 4, FUSED SWITCH MOUNTED TO UNISTRUT SUPPORTS FOR GATE MOTOR.
 - ④ USE FLEXIBLE LIQUIDTIGHT CONDUIT BETWEEN FUSED SWITCH AND GATE MOTOR CONTROLLER. ROUTE CLEAR OF HANDWHEEL.
 - ⑤ BUTTERFLY GATE MOTOR CONTROLLER.
 - ⑥ ALUMINUM UNISTRUT CHANNEL WELDED TO REAR OF HANDRAIL BAR.
 - ⑦ 1/4" CONDUIT ATTACHED TO UPPER AND LOWER HANDRAIL USED TO SUPPORT 1/4" STANCHION MOUNT LIGHT FIXTURE.
 - ⑧ LIGHT FIXTURE TYPE FL, SEE FIXTURE SCHEDULE, DWG. 38 003
 - ⑨ WELD UNISTRUT SUPPORT TO TOP OF SHEET PILING TO SUPPORT CONDUITS.
 - ⑩ GFI WEATHER PROOF DUPLEX OUTLET IN CAST ALUMINUM WEATHER PROOF BOX INSTALLED ON 1/4" STANCHION (18" A.F.F.)
 - ⑪ WELD UNISTRUT TO BOTTOM OF WALKWAY AND WALKWAY SUPPORTS. USE TO SUPPORT CONDUITS AND PULLBOXES. CONDUITS AND PULLBOXES SHALL BE LOCATED SO AS NOT TO INTERFERE WITH THE OPERATION OF THE FLAP GATES, SEE DWG. 6.

- GENERAL NOTES:**
- 1. ALL DEVICES SPECIFIED IN SPECIFIC NOTES NO. ① THROUGH ⑪ INCLUDING PULL BOXES, WIRING, LIGHTING, DISCONNECTS AND CONDUITS ARE FOR USE ON TEMPORARY COFFERDAM ONLY AND SHALL NOT BE USED IN PERMANENT SLUICE GATE STRUCTURE.
 - 2. SEE DWGS 4 THRU 6 FOR DETAILS OF THE COFFERDAM SHEETING, WALKWAY, FLAP GATES, AND WEIR.

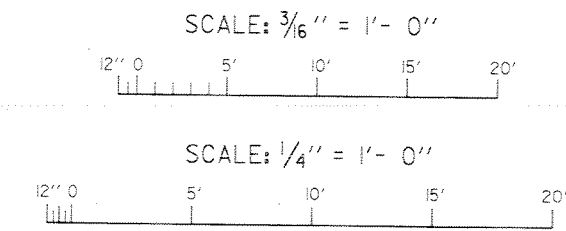
TYPICAL COFFERDAM ELEVATION

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



SECTION C

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



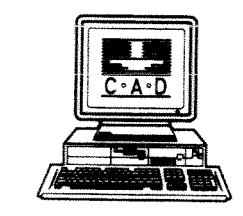
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			

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

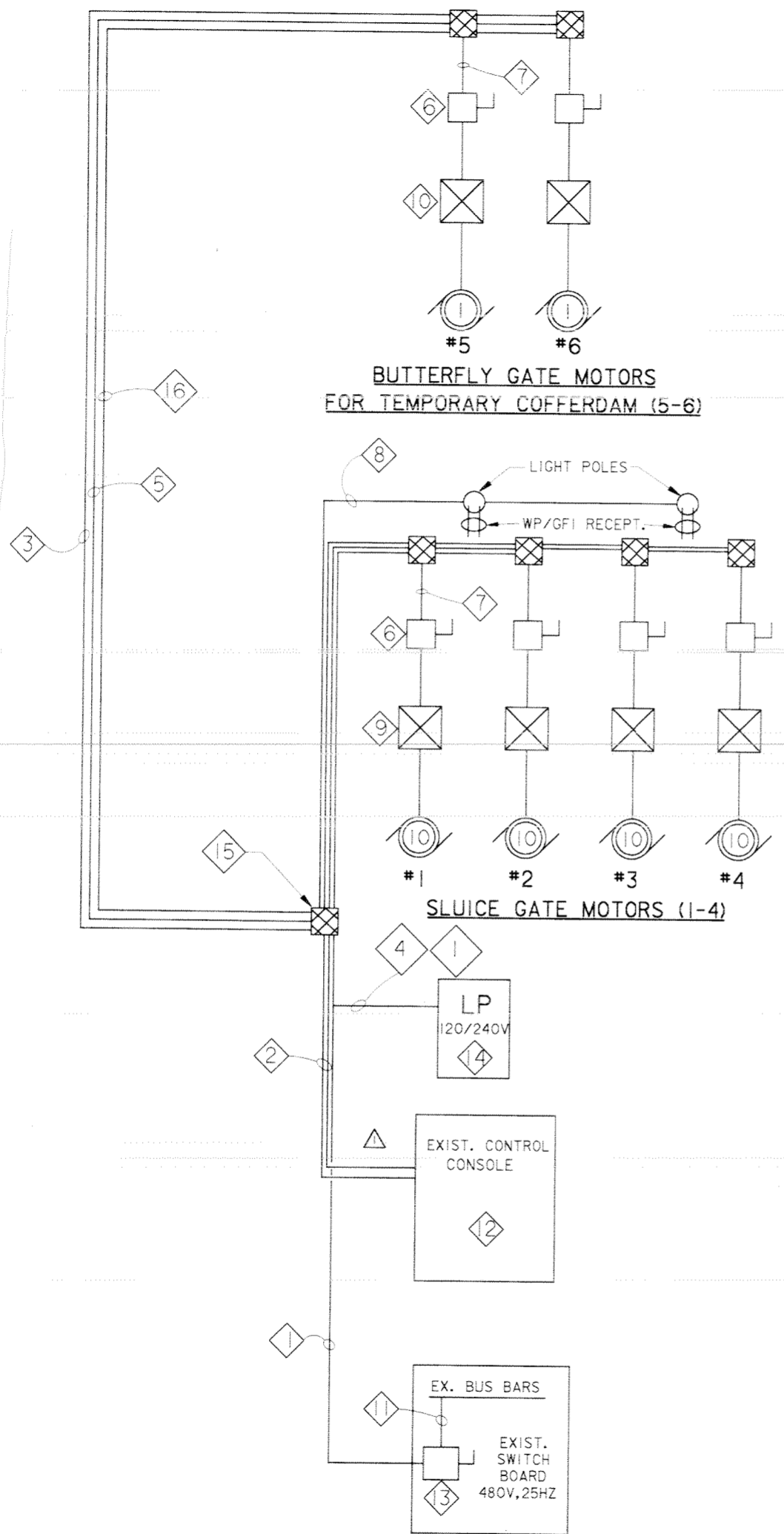
LAKE PONTCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN
 NEW ORLEANS LAKEFRONT LEVEE
 WEST OF I.H.N.C.
 ORLEANS MARINA PHASE V - SLUICE GATES
 ORLEANS PARISH, LOUISIANA

**SLUICE GATE - ELECTRICAL
 COFFERDAM ELEVATION/SECTION**

DESIGNED BY: B.P.C.	DATE: NOV. 1996	PLOT SCALE: 5.3333	PLOT DATE: DEC. 1, 1997
DRAWN BY: C.G.H.	CADD FILE: 44778E-4.DGN	FILE NO. H-4-44778	
CHECKED BY: B.P.C.	SUBMITTED BY: DAN BRADLEY	SOLICITATION NO. DACW29-98-B-0001	DWG. 41 OF 46



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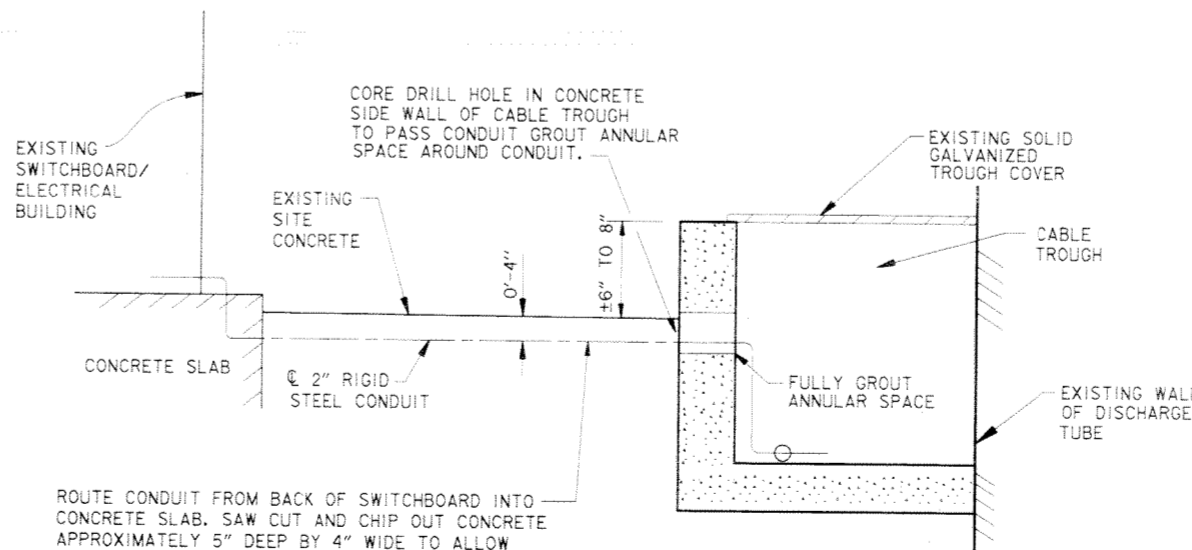


ELECTRICAL ONE LINE DIAGRAM

SPECIFIC NOTES :

1. FROM NEW 100 AMP FUSIBLE SWITCH IN SWITCHBOARD ROUTE 3 #2, 1 #6GD IN 2" CONDUIT. FROM PANEL LP, RUN LIGHTING AND RECEPTACLE WIRING OUT TO TROUGH IN 1" CONDUIT. USE 1" TEE IN TROUGH TO RUN LIGHTING & RECEPT. CIRCUITS IN 2" GATE POWER CONDUIT TO PULLBOX. SEE NOTE 15. SEE DWG. #41 FOR CONDUIT ROUTING.
2. FROM CONTROL CONSOLE #3 IN CONTROL HOUSE, ROUTE FOUR 9/C #10 TYPE TC CONTROL CABLES (HOUSTON WIRE AND CABLE No. D040100900 OR APPROVED EQUAL) IN CABLE TROUGH. TRANSITION TO TWO 2" CONDUITS EACH CONTAINING TWO CONTROL CABLES IN DUCT BANK. ROUTE ONE CONTROL CABLE TO EACH GATE CONTROLLER.
3. 3 #2, 1 #6GD IN 2" CONDUIT OUT TO BUTTERFLY GATE MOTORS.
4. ROUTE FROM NEW 20 AMP, 2 POLE, C/B IN 120/240V, EXIST. PANEL "LP" 2 #10, OUT TO LIGHTING POLES ON MONOLITH. ROUTE FROM 20 AMP, 1 POLE C/B IN PANEL LP 2 #8 (1 HOT AND 1 NEUTRAL) OUT TO MONOLITH AND COFFERDAM RECEPTACLES AND LIGHTS IN SAME 2" C WITH GATE MOTOR POWER. THE LIGHTS SHALL BE CONTROLLED THRU THE NEW CIRCUIT BREAKER. EXISTING PANEL IS A SQUARE D PANEL WITH 20 CIRCUITS AND NO SPARE BREAKERS. CREATE THREE NEW CIRCUITS (ONE FOR 20A, 1 POLE RECEPTACLE CIRCUIT AND TWO FOR 20A, 2 POLE LIGHTING CIRCUIT) BY REPLACING THREE EXISTING 20A, 1 POLE CIRCUIT BREAKERS WITH THREE NEW DUAL TANDEM 20A-20A (SQUARE D TYPE QOT) RE-CONNECT SIX EXISTING 20A CIRCUITS TO THREE NEW TANDEM BREAKERS TO CREATE THREE SPARE SPACES. REVISE PANEL DIRECTORY.
5. 3 #10, 1 #10GD IN 3/4" CONDUIT OUT TO LIGHTS AND RECEPTACLES AT COFFERDAM.
6. 60 AMP 3 POLE 480 VOLT NEMA 4 STAINLESS STEEL FUSED SWITCH (TYPICAL OF SLUICE AND BUTTERFLY GATES).
7. 3 #8, 1 #12GD FOR GATE POWER AND 9/C #14 TYPE TC CONTROL CABLE IN 1" RIGID ALUMINUM CONDUIT. TYPICAL FOR SLUICE GATES (1-4) AND BUTTERFLY GATES (5&6) MOTORS. FINAL CONNECTION TO MOTORS SHALL BE LIQUIDTIGHT CONDUIT.
8. CONDUIT FOR LIGHTS & RECEPTACLES SHALL BE ROUTED IN CONCRETE SLAB OF MONOLITH TO LIGHT POLES. 2 #8, 2 #10, 1 #10G, 1" C.
9. SLUICE GATE MOTOR CONTROLLER (TYPICAL FOR SLUICE GATES 1-4), (SEE SPECIFICATIONS).
10. BUTTERFLY GATE MOTOR CONTROLLER (TYPICAL FOR BUTTERFLY GATES 5 & 6), (SEE SPECIFICATIONS).
11. 3#2, 1#6 GND.
12. EXISTING CONTROL CONSOLE #3 LOCATED IN CONTROL ROOM (SEE DWGS. 39 & 44 FOR EXACT LOCATION). REFER TO DWG. 43 FOR NEW CONTROL EQUIPMENT (PUSHBUTTONS, PILOT LIGHTS, SELECTOR SWITCHES, AND TERMINAL BLOCKS ASSOCIATED WITH CONTROL CONSOLE. CONTRACTOR SHALL SUPPLY ALL NEW ELECTRICAL EQUIPMENT SHOWN ON DWG. 43 AND SHALL ARRANGE EQUIPMENT IN EXISTING CONSOLE AS SHOWN ON THE CONSOLE LAYOUT. SUBMIT CHECKOUT PLAN TO SEWERAGE AND WATER BOARD ENGINEER (MR. CLAYTON PERRET) FOR APPROVAL.
13. INSTALL NEW 100 AMP 3 POLE 480 VOLT NEMA 1 FUSIBLE SWITCH (FUSED AT 100 AMPS) INSIDE EXISTING 480 VOLT, 25 HZ SWITCHBOARD AND TAP FROM SWITCHBOARD BUS BARS. COORDINATE WITH SEWERAGE AND WATER BOARD REPRESENTATIVE MR. GARY SARRAT (504-865-0452).
14. INSTALL NEW 20 AMP, 2 POLE, C/B IN 120/240V, EXIST. PANEL "LP", SEE DWG. 44 FOR LOCATION. MATCH EXISTING CIRCUIT BREAKERS IN TYPE, MANUFACTURER AND AIC RATING.
15. NEMA 4 PULLBOX 24" x 24" x 6", LOCATED NEAR STAIRWELL ATTACHED TO "I-WALL", SEE DWG. 39 FOR LOCATION.
16. TWO 9/C #10 TYPE TC CONTROL CABLES (H.W.C. No. D040100900 OR APPROVED EQUAL) IN 2" C TO BUTTERFLY GATE CONTROLLERS. ROUTE ONE 9/C #10 TYPE CABLE TO EACH GATE CONTROLLER.

DELETE ALL REFERENCE to the local/remote switches (A00007) (A00007)



ROUTE CONDUIT FROM BACK OF SWITCHBOARD INTO CONCRETE SLAB, SAW CUT AND CHIP OUT CONCRETE APPROXIMATELY 5" DEEP BY 4" WIDE TO ALLOW CONDUIT TO RUN UNOBSTRUCTED TO THE CABLE TROUGH. FILL IN NOTCHED CONCRETE WITH NON SHRINK GROUT AFTER CONDUIT IS INSTALLED SO THAT SURFACE IS FLUSH AND SMOOTH.

ROUTING OF CONDUIT FROM SWITCHBOARD TO CABLE TROUGH

FOR PLAN LAYOUT, SEE DWG. 44 SCALE: N.T.S.



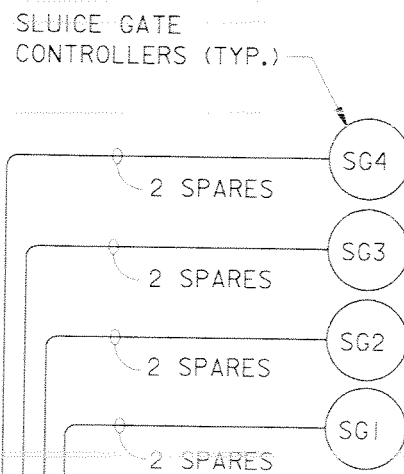
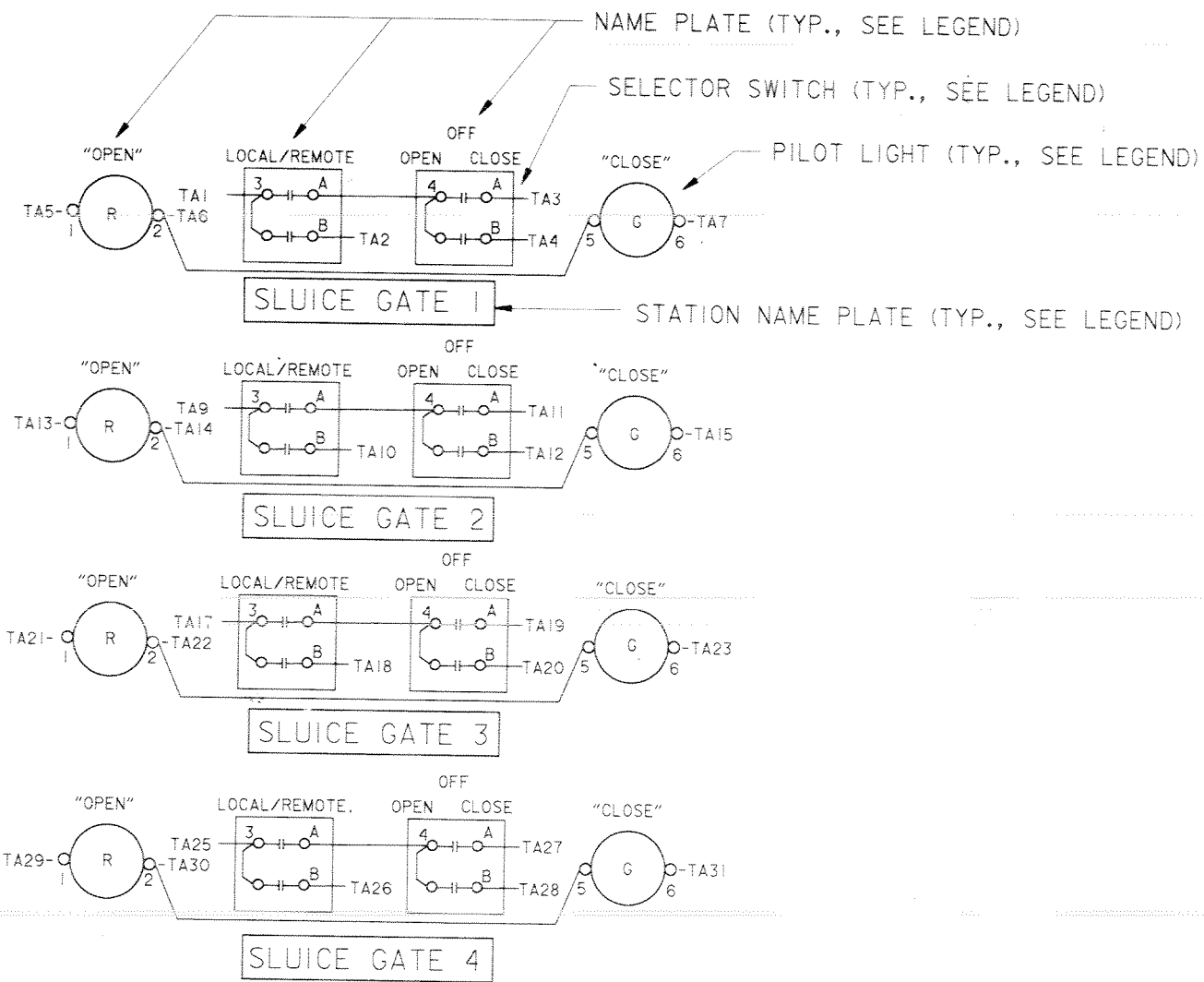
SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED NOTES AND ADDED CONDUIT DETAIL.	2/25/98	CAL
△	AMEND #0005		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA SLUICE GATE - ELECTRICAL ONE LINE DIAGRAM			
DESIGNED BY: B.P.C.	DATE: NOV. 1996	PLOT SCALE: 32	PLOT DATE: MAR. 6, 1998
DRAWN BY: C.G.H.	CADD FILE: 44786-5.DGN	FILE NO. H-4-44778	
CHECKED BY: B.P.C.	SUBMITTED BY: DAN BRADLEY DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 42 OF 46



AMEND 0003

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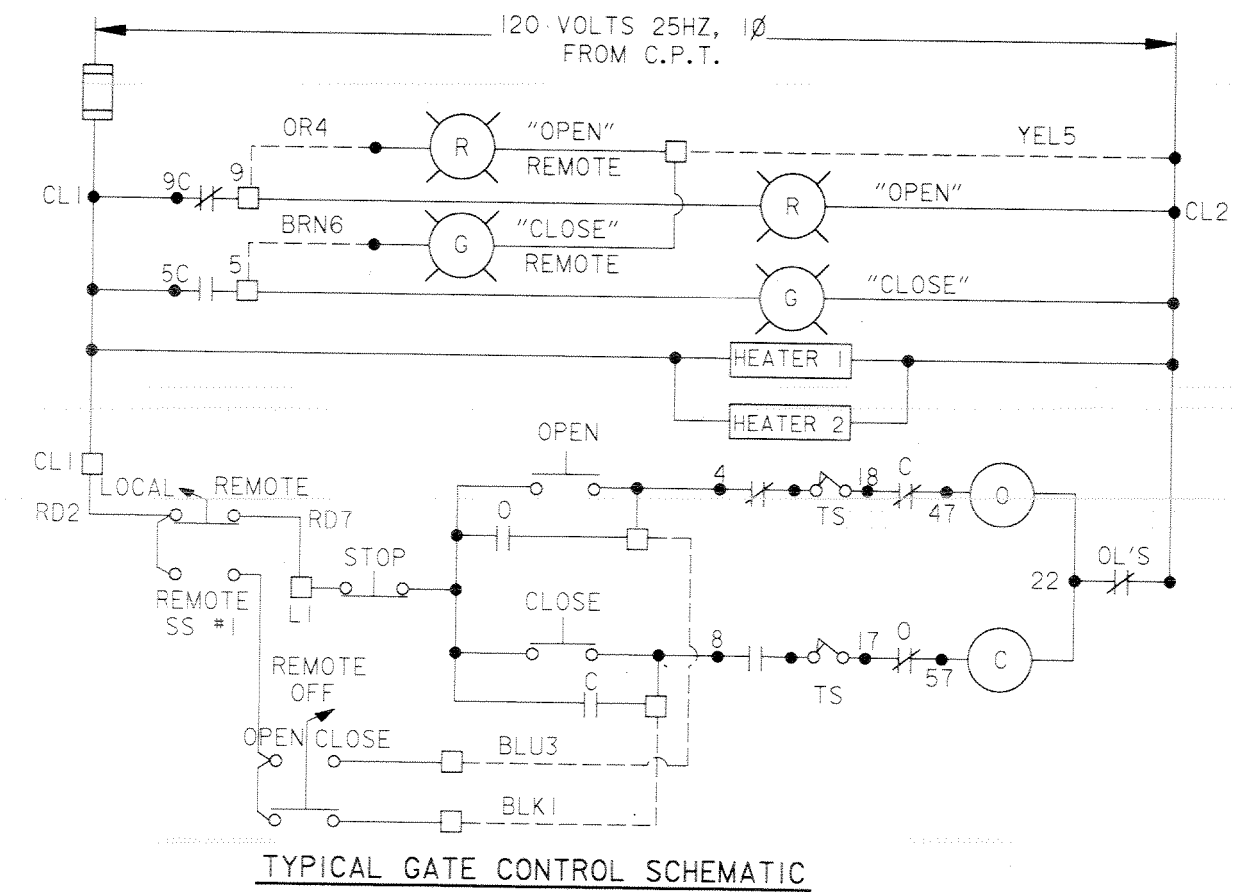


TA

RD2	1	CLI	A1-3
RD7	2	LI	A1-3B
BLU3	3	OPN	A1-4A
BLK1	4	CLS	A1-4B
OR4	5	OPL	A1-1
YEL5	6	COM	A1-2
BRN6	7	CPL	A1-6
RD2	8		
RD7	9	CLI	A2-3
RD7	10	LI	A2-3B
BLU3	11	OPN	A2-4A
BLK1	12	CLS	A2-4B
OR4	13	OPL	A2-1
YEL5	14	COM	A2-2
BRN6	15	CPL	A2-6
RD2	16		
RD2	17	CLI	A3-3
RD7	18	LI	A3-3B
BLU3	19	OPN	A3-4A
BLK1	20	CLS	A3-4B
OR4	21	OPL	A3-1
YEL5	22	COM	A3-2
BRN6	23	CPL	A3-6
RD2	24		
RD2	25	CLI	A4-3
RD7	26	LI	A4-3B
BLU3	27	OPN	A4-4A
BLK1	28	CLS	A4-4B
OR4	29	OPL	A4-1
YEL5	30	COM	A4-2
BRN6	31	CPL	A4-6
	32		
	33		
	34		
	35		
	36		

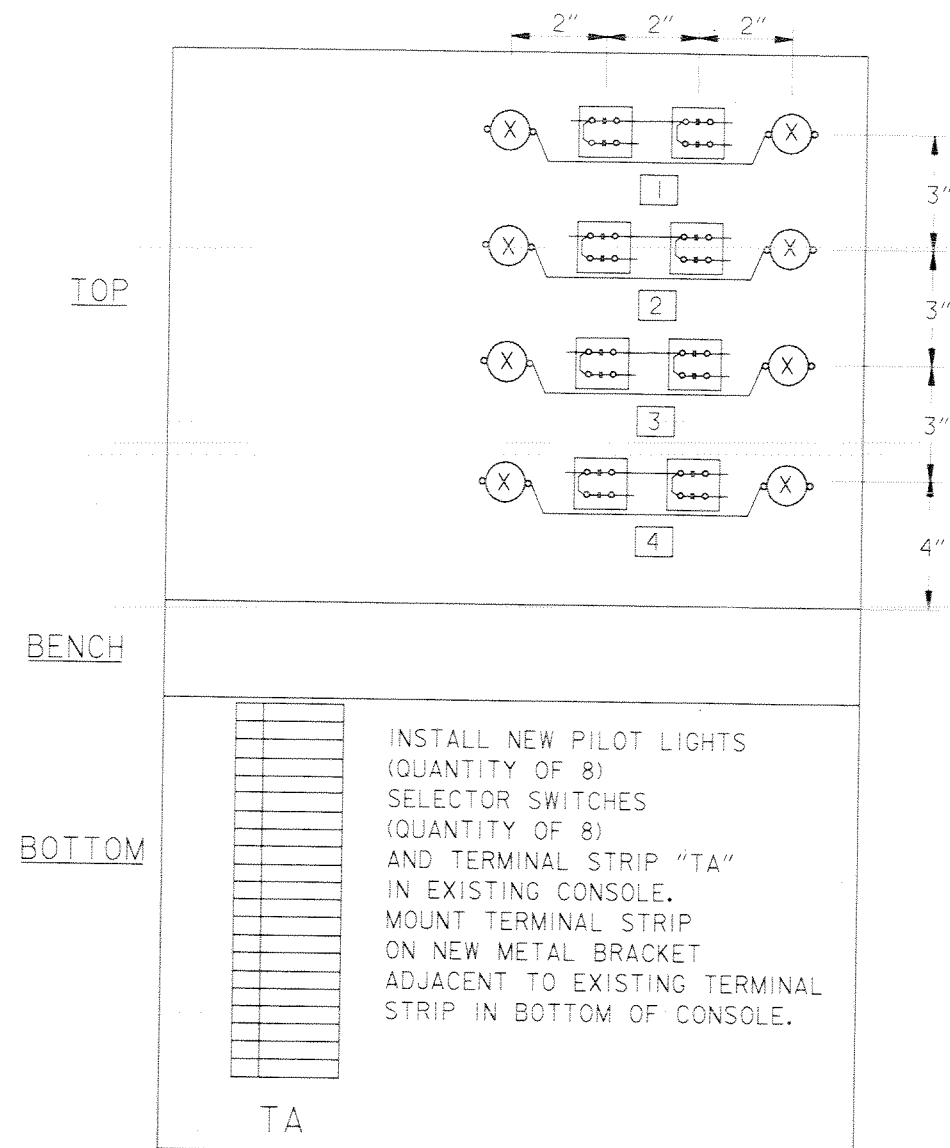
NEW 36 POSITION TERMINAL STRIP

TERMINAL STRIP CONNECTIONS



TYPICAL GATE CONTROL SCHEMATIC

CONSOLE GATE CONTROL WIRING DIAGRAM

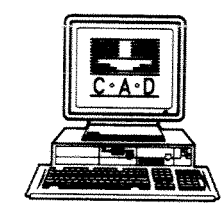


RIGHT SECTION (NO. 3) OF EXISTING CONTROL CONSOLE

LEGEND

- (X) PILOT INDICATING LIGHT - GENERAL ELECTRIC TYPE ET-16 WITH 1900 OHM RESISTOR AND ALLEN BRADLEY #800T-N515. TYPE "A" NAMEPLATE OR APPROVED EQUAL WITH BLACKENED CHARACTERS - ENGRAVED TO READ "OPEN" OR "CLOSED" AS REQUIRED. "X" INDICATES RED OR GREEN AS REQUIRED.
- [Symbol] TYPICAL SELECTOR SWITCH/PILOT LIGHT STATION NAMEPLATE. ENGRAVED PHENOLIC. 1" X 3" WITH BEVELED EDGES AND INSCRIPTION AS SHOWN IN CONSOLE GATE CONTROL WIRING DIAGRAM.
- [Symbol] SELECTOR SWITCHES AS FOLLOW:
 1. ALLEN BRADLEY #800T-HSA, 2 POSITION WITH 800T-X638 NAMEPLATE OR APPROVED EQUAL FOR "LOCAL/REMOTE" CONTROL.
 2. ALLEN BRADLEY #800T-J2A, 3 POSITION WITH 800T-X533 NAMEPLATE OR APPROVED EQUAL FOR "OPEN - OFF - CLOSE" CONTROL.

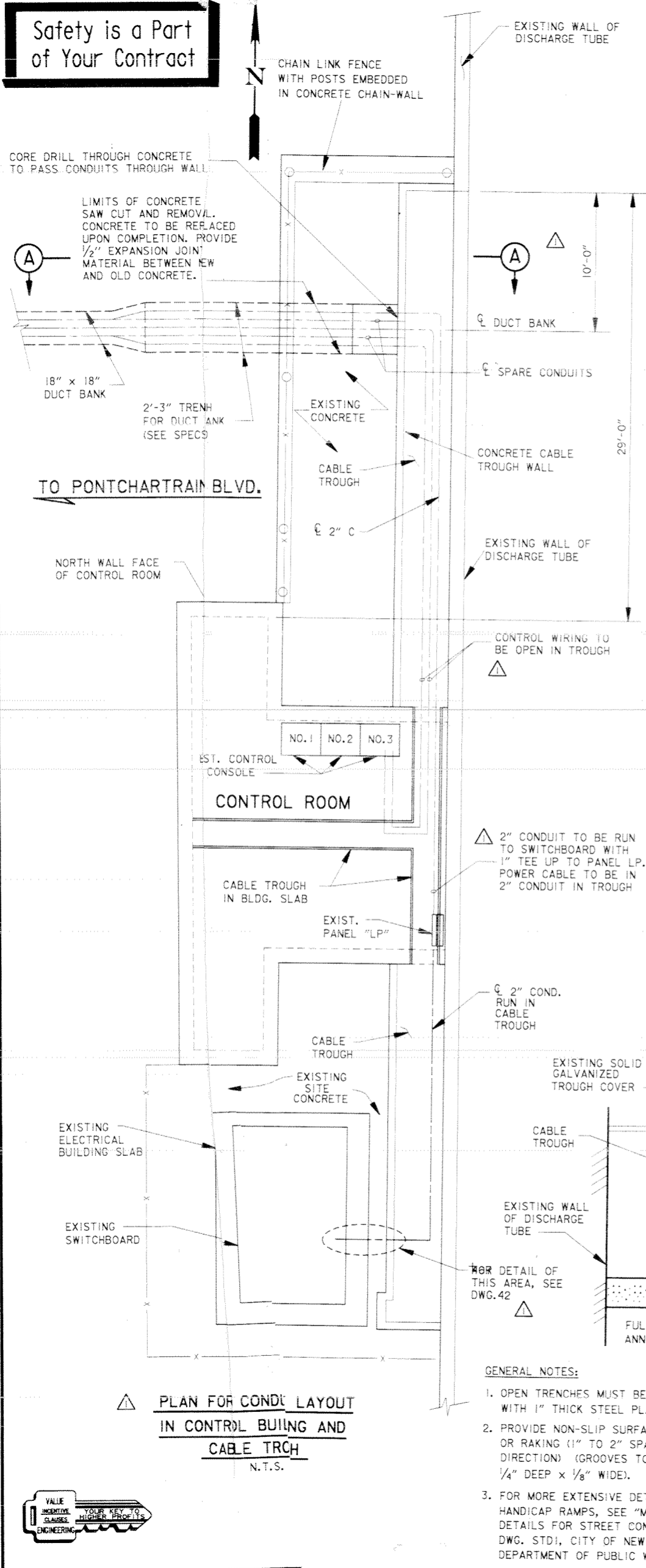
Delete All REFERENCES to the Local/Remote Switches (A00007)



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA SLUICE GATE - ELECTRICAL MISCELLANEOUS			
DESIGNED BY: B.P.C.	DATE: NOV. 1996	PLOT SCALE: 32	PLOT DATE: DEC. 17, 1997
DRAWN BY: C.G.H.	CADD FILE: 44778E-6.DGN	FILE NO. H-4-44778	
CHECKED BY: B.P.C.	SOLICITATION NO. DACW29-98-B-0001	DWG. 43 OF 46	
SUBMITTED BY: DAN BRADLEY DESIGN ENGINEER			

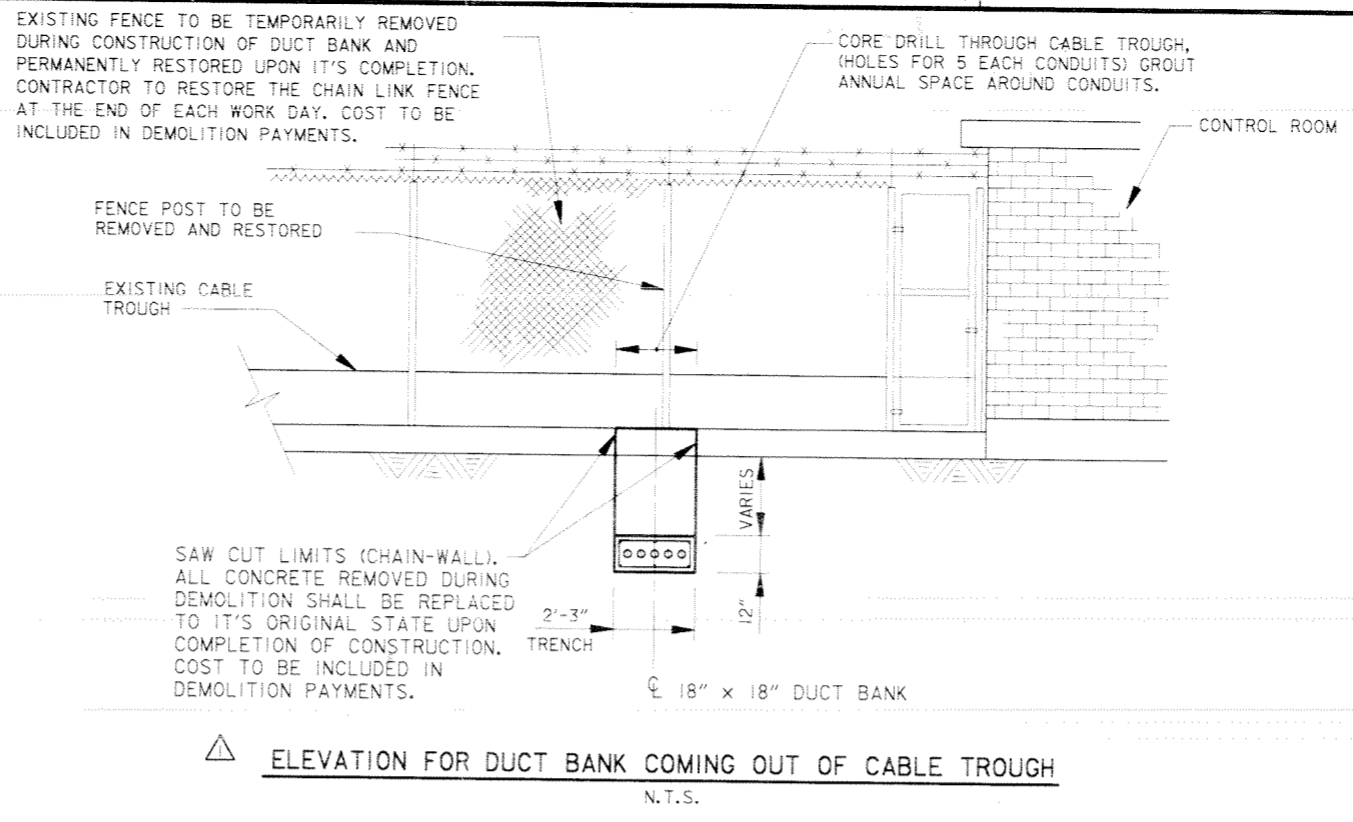


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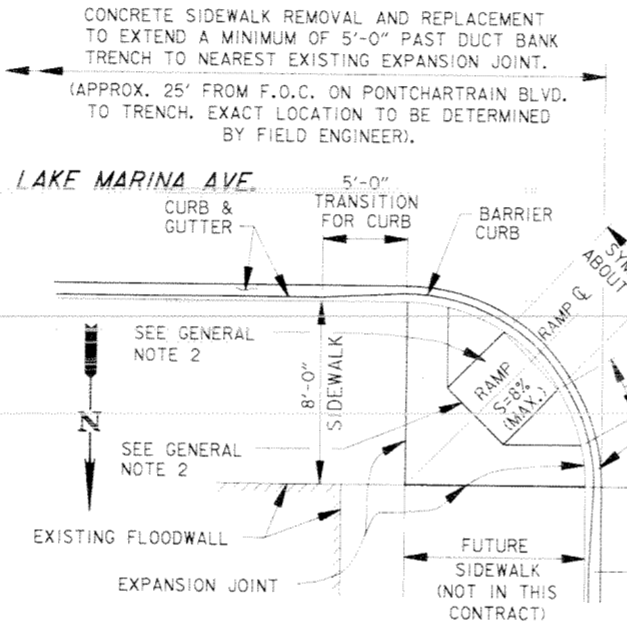


PLAN FOR CONDUIT LAYOUT IN CONTROL BUILDING AND CABLE TRENCH
N.T.S.

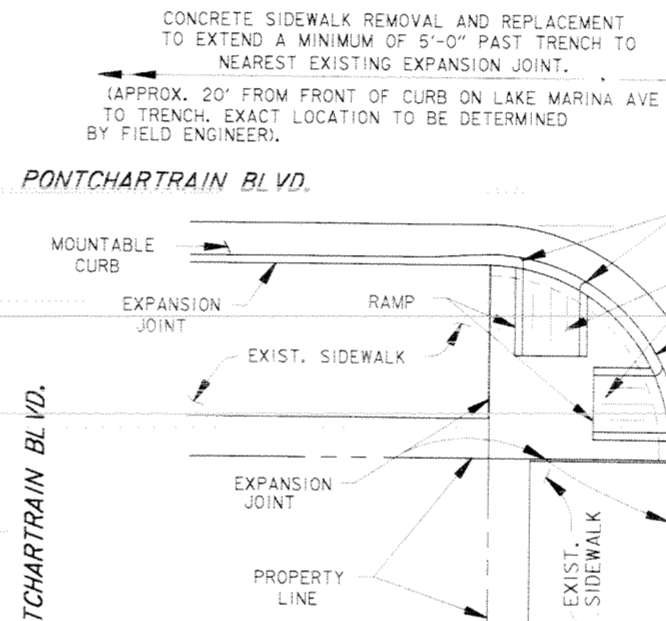
- GENERAL NOTES:**
1. OPEN TRENCHES MUST BE COVERED WITH 1" THICK STEEL PLATES WHENEVER
 2. PROVIDE NON-SLIP SURFACE BY TOOLING OR RAKING (1" TO 2" SPACING IN EACH DIRECTION) (GROOVES TO BE APPROX. 1/4" DEEP x 1/8" WIDE).
 3. FOR MORE EXTENSIVE DETAILS ON HANDICAP RAMP, SEE "MISCELLANEOUS DETAILS FOR STREET CONSTRUCTION", DWG. STD1, CITY OF NEW ORLEANS DEPARTMENT OF PUBLIC WORKS.



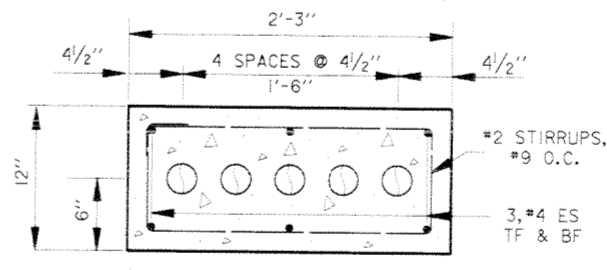
ELEVATION FOR DUCT BANK COMING OUT OF CABLE TROUGH
N.T.S.



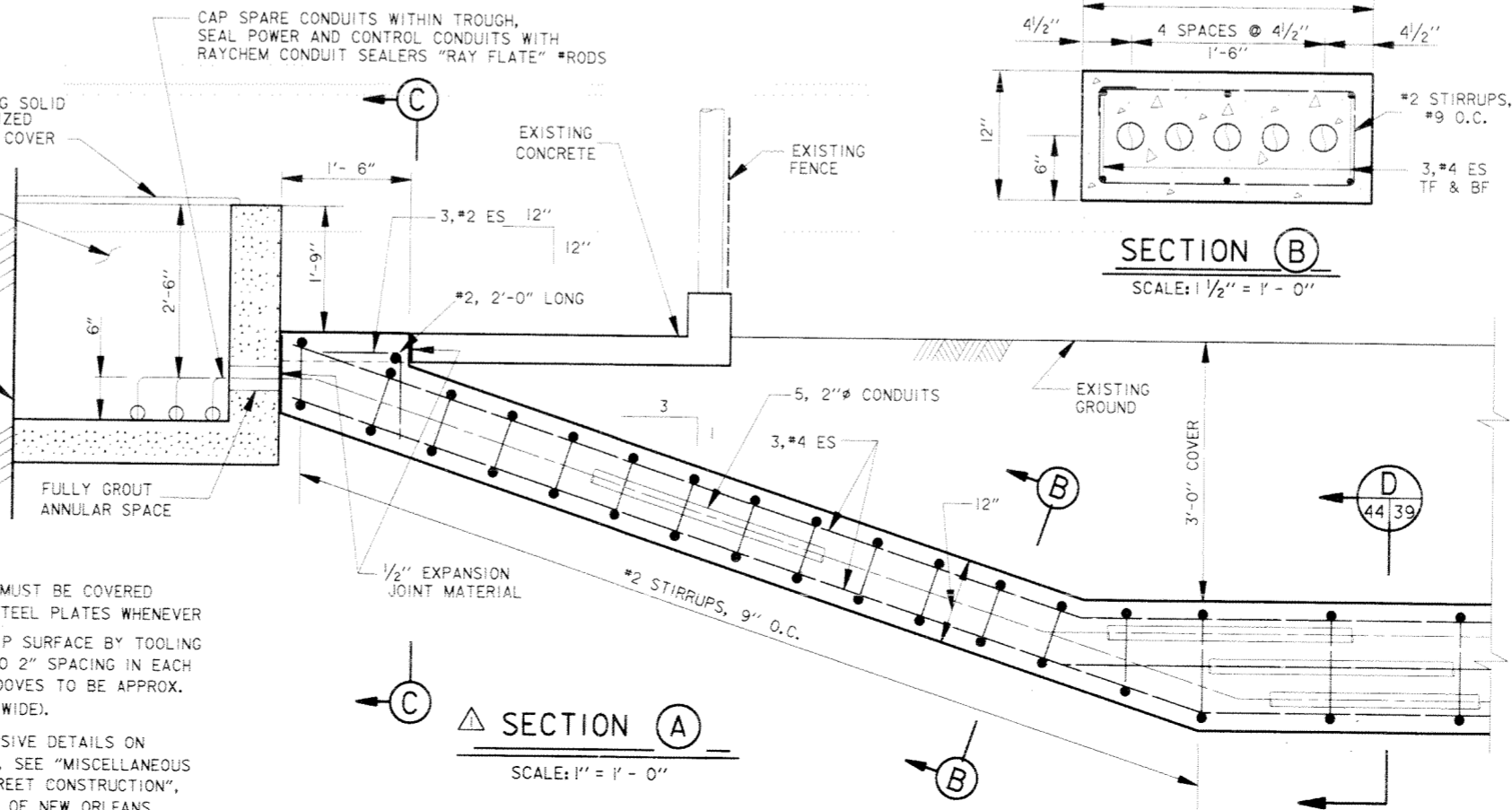
CONCRETE HANDICAPPED RAMP TYPE "A"
N.T.S.



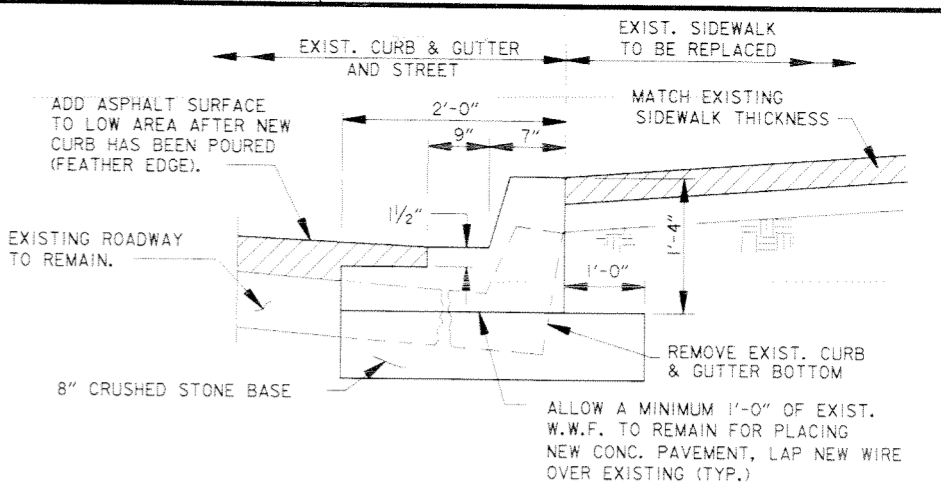
CONCRETE HANDICAPPED RAMP TYPE "B"
N.T.S.



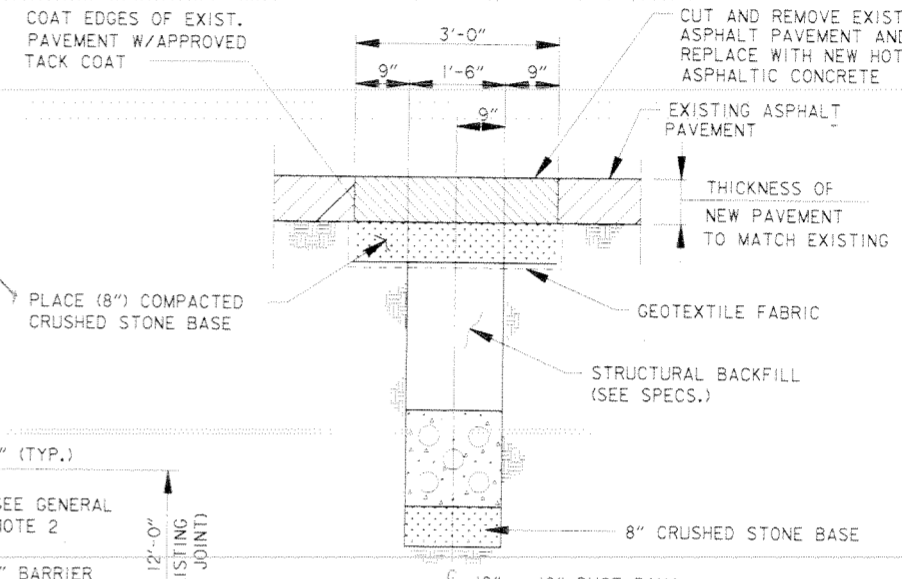
SECTION B
SCALE: 1/2" = 1' - 0"



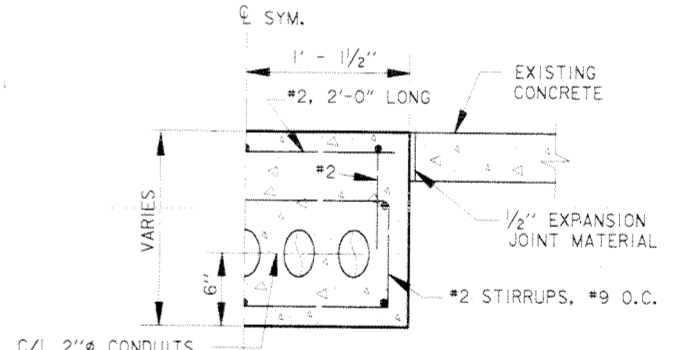
SECTION A
SCALE: 1" = 1' - 0"



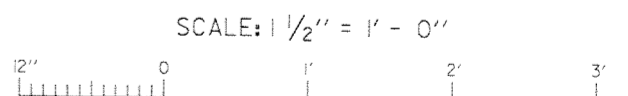
RECONSTRUCTION OF CURB AND GUTTERBOTTOM
BARRIER CURB
N.T.S.



ASPHALT PAVEMENT REPAIR
N.T.S.



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



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED CONDUIT LAYOUT PLAN, SEC. A & G AND DUCT BANK ELEV., AMND #0003	2/25/98	CAL

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

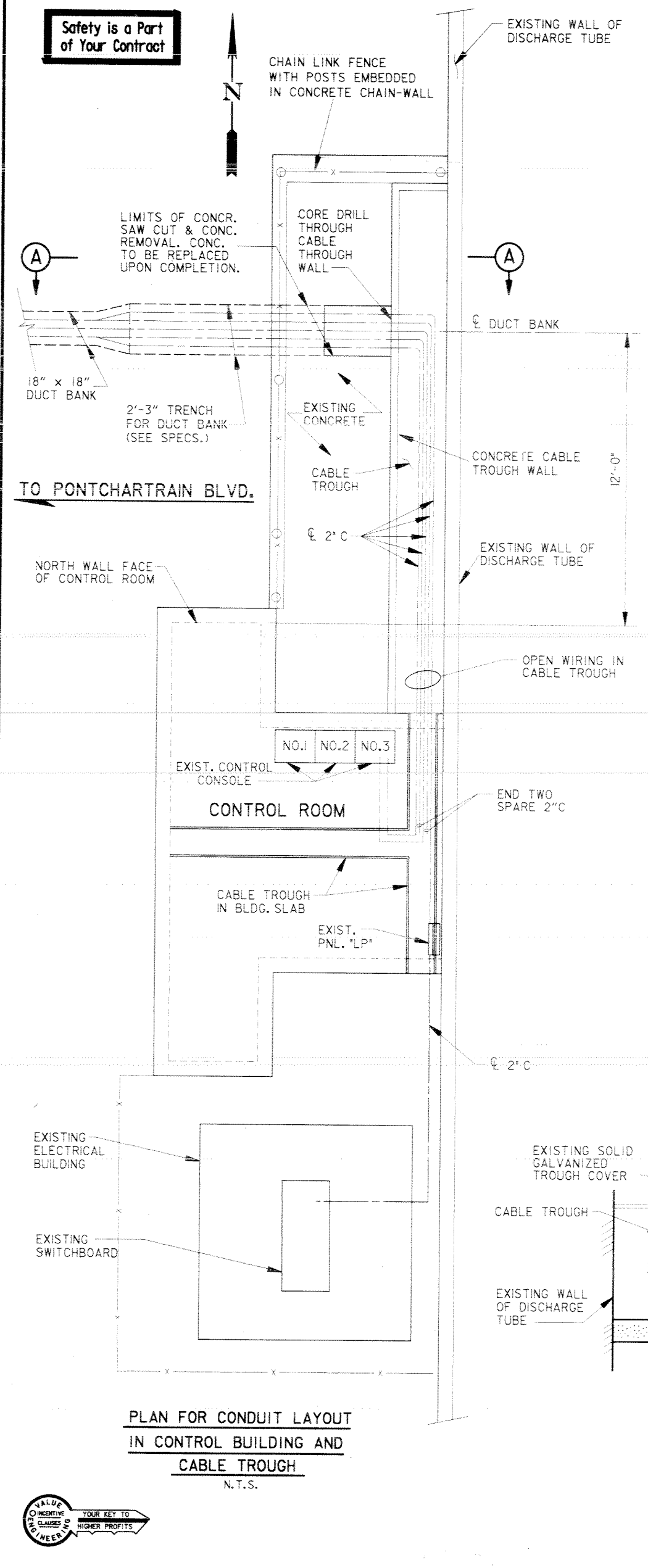
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUICE GATES
ORLEANS PARISH, LOUISIANA

SLUICE GATE - ELECTRICAL MISCELLANEOUS

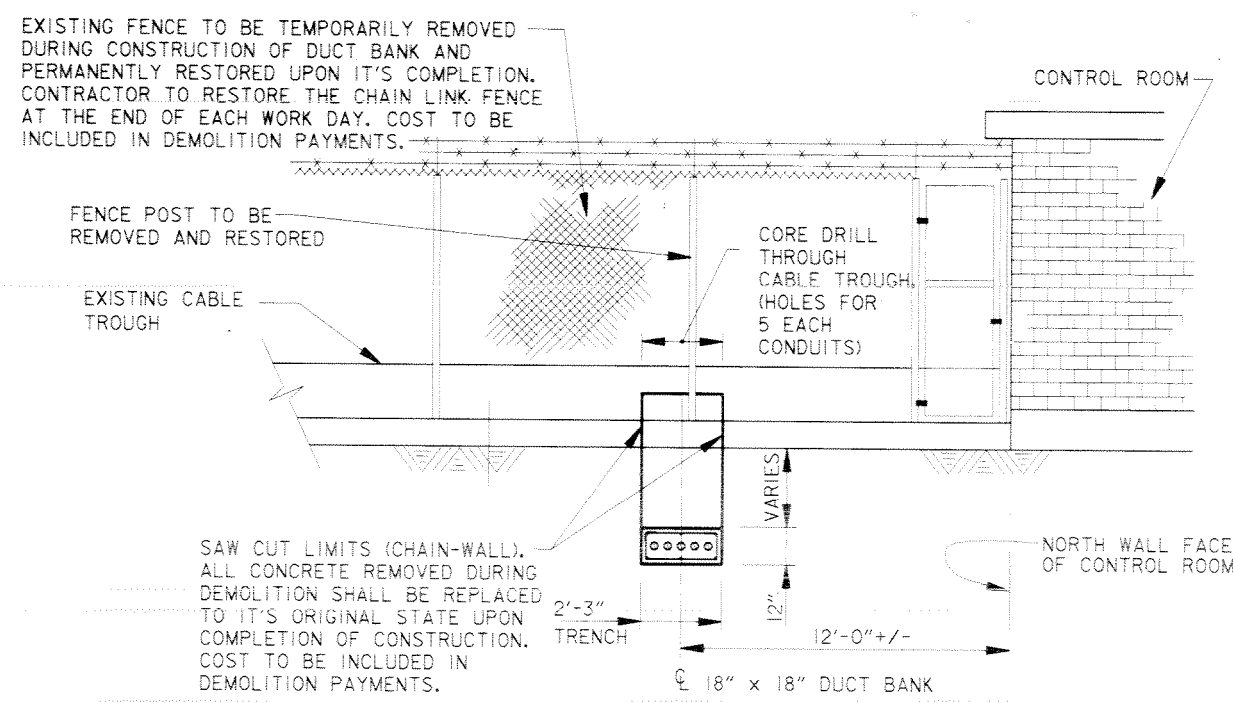
DESIGNED BY: B.P.C.	DATE: NOV. 1996	PLOT SCALE: 32	PLOT DATE: MAR. 6, 1998
DRAWN BY: C.G.H.	CADD FILE: 44778E-7.DGN	FILE NO. H-4-44778	
CHECKED BY: B.P.C.	SUBMITTED BY: DAN BRADLEY, DESIGN ENGINEER	SOLICITATION NO. DACW29-98-B-0001	DWG. 44 OF 46



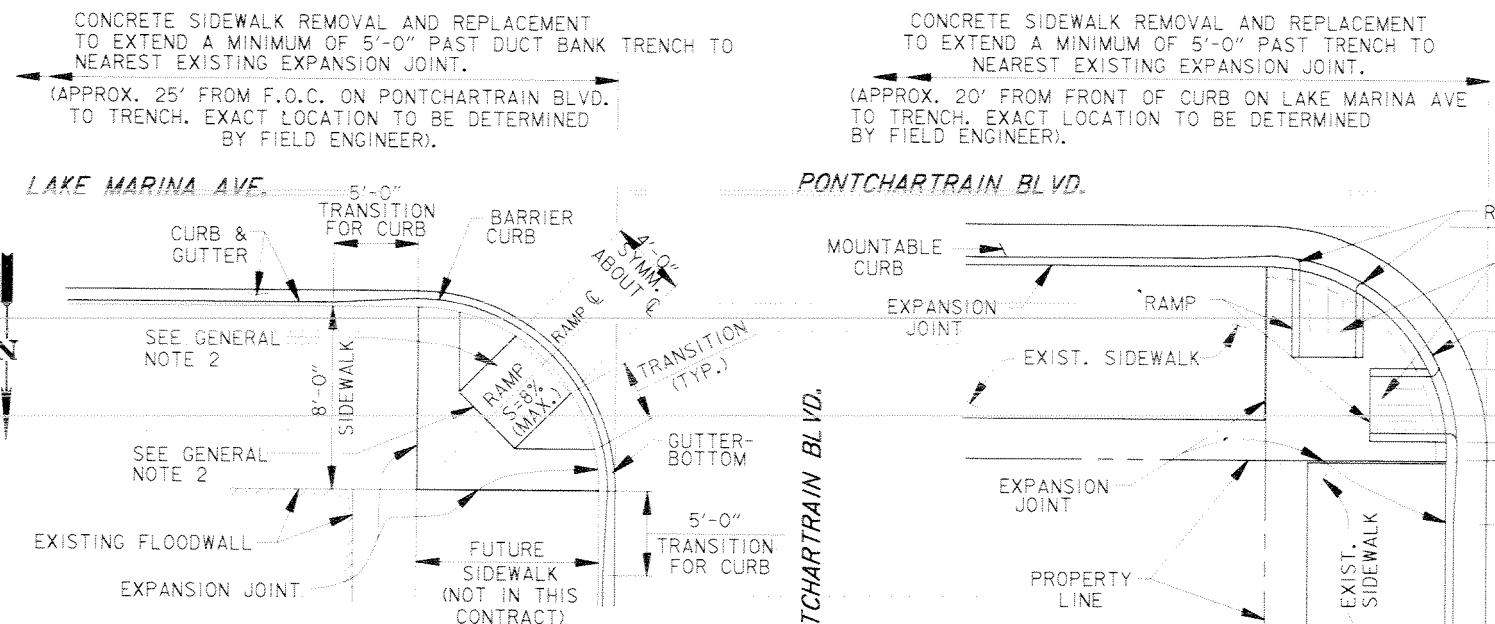
Safety is a Part of Your Contract



PLAN FOR CONDUIT LAYOUT IN CONTROL BUILDING AND CABLE TROUGH
N.T.S.

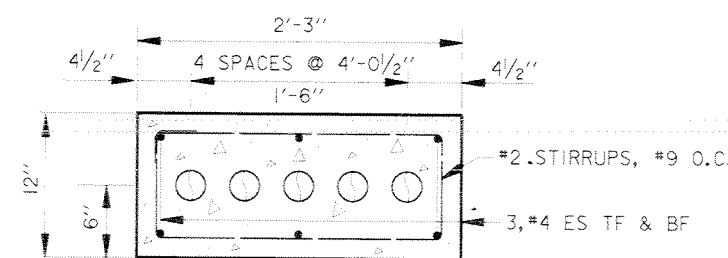


ELEVATION FOR DUCT BANK COMING OUT OF CABLE TROUGH
N.T.S.

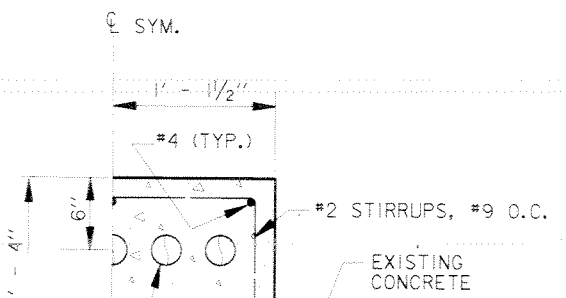


CONCRETE HANDICAPPED RAMP TYPE "A"
N.T.S.

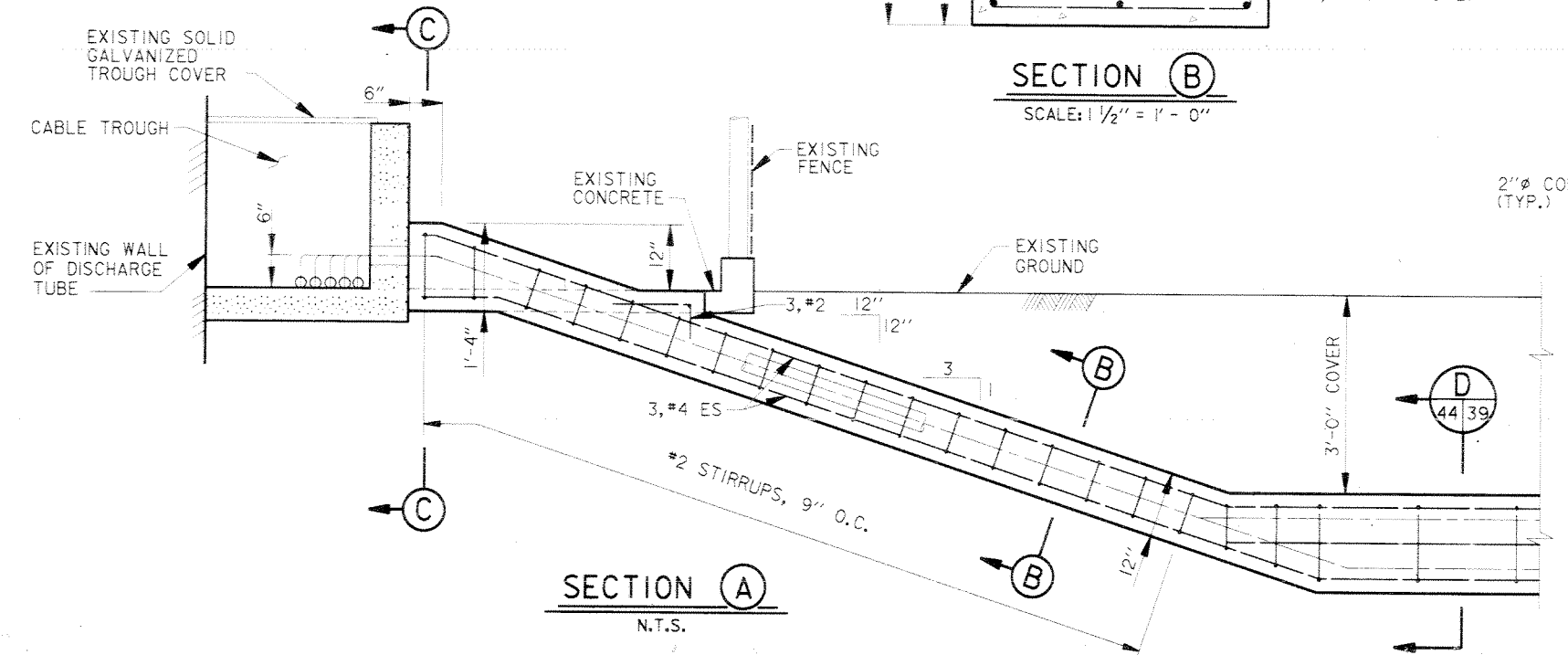
CONCRETE HANDICAP RAMP TYPE "B"
N.T.S.



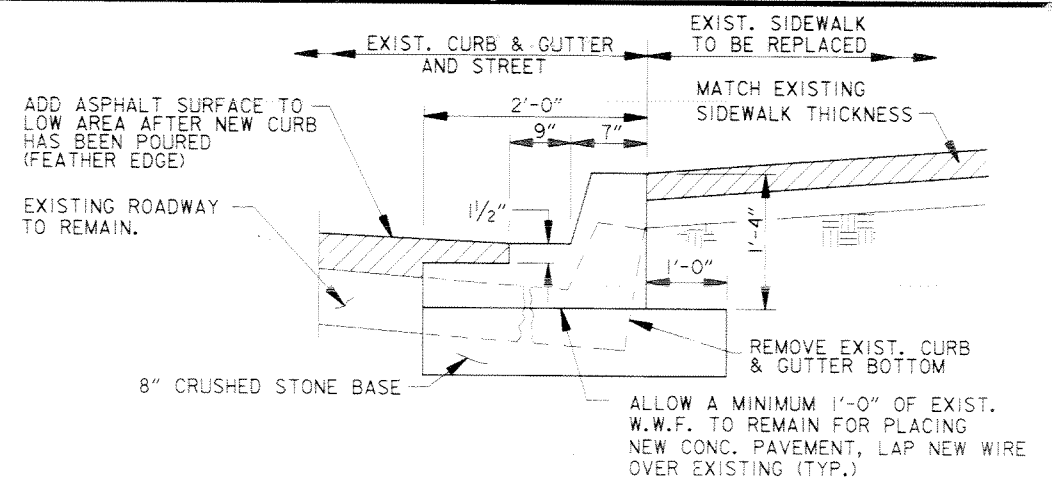
SECTION B
SCALE: 1/2" = 1' - 0"



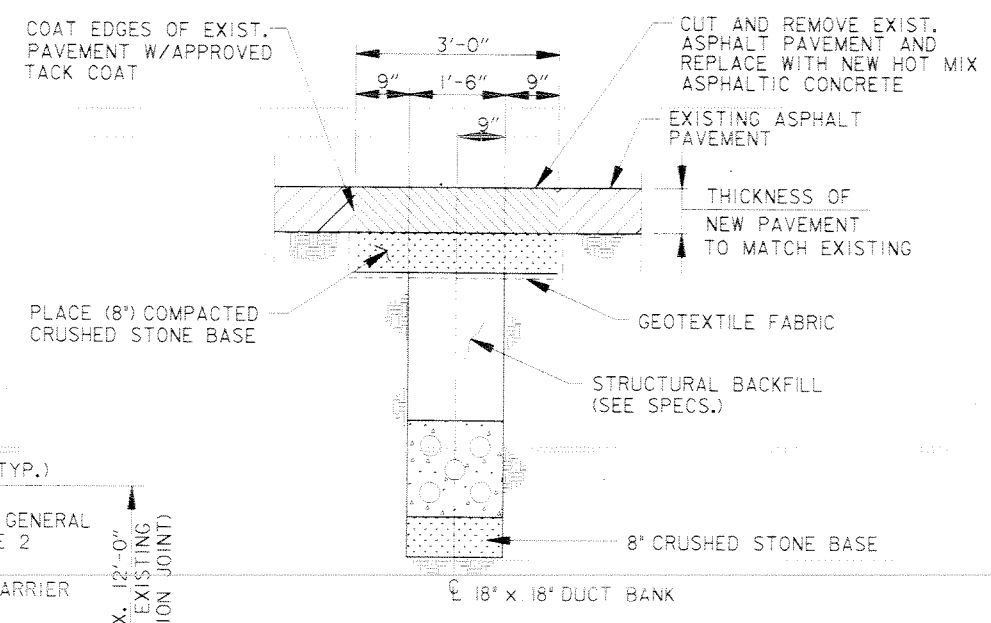
SECTION C
SCALE: 1/2" = 1' - 0"



SECTION A
N.T.S.

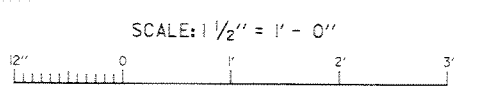


RECONSTRUCTION OF CURB AND GUTTERBOTTOM
BARRIER CURB
N.T.S.

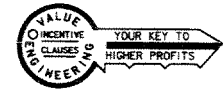
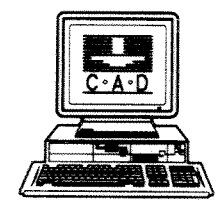


ASPHALT PAVEMENT REPAIR
N.T.S.

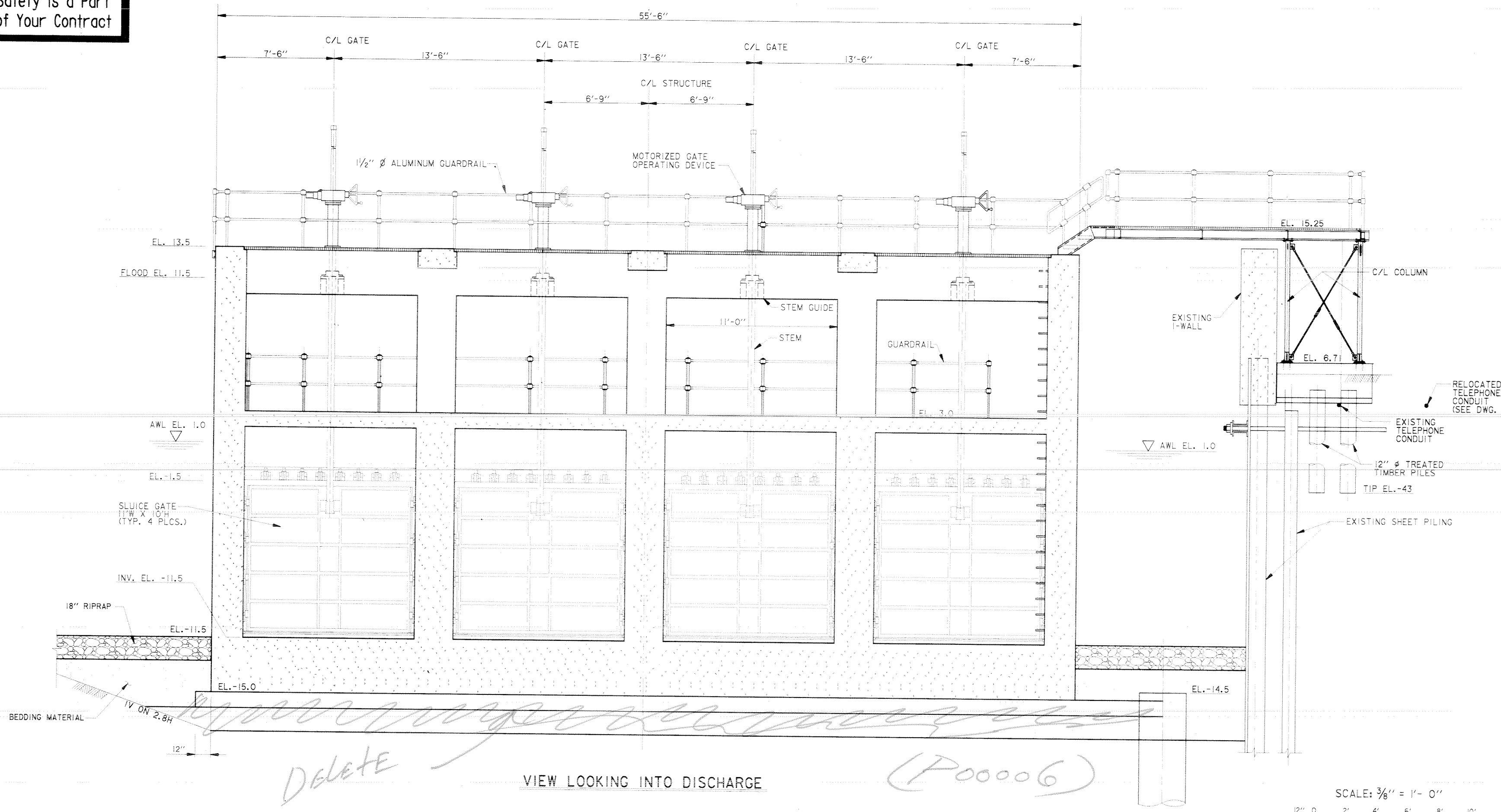
- GENERAL NOTES:**
1. OPEN TRENCHES MUST BE COVERED WITH 1" THICK STEEL PLATES WHENEVER
 2. PROVIDE NON-SLIP SURFACE BY TOOLING OR RAKING (1" TO 2" SPACING IN EACH DIRECTION) (GROOVES TO BE APPROX. 1/4" DEEP x 1/8" WIDE).
 3. FOR MORE EXTENSIVE DETAILS ON HANDICAP RAMPS, SEE "MISCELLANEOUS DETAILS FOR STREET CONSTRUCTION", DWG. STD1, CITY OF NEW ORLEANS DEPARTMENT OF PUBLIC WORKS.



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA			
SLUICE GATE - ELECTRICAL MISCELLANEOUS			
DESIGNED BY: B.P.C.	DATE: NOV. 1996	PLOT SCALE: 32	PLOT DATE: DEC. 23, 1997
DRAWN BY: C.G.H.	CADD FILE: 44778E-7.DGN	FILE NO. H-4-44778	
CHECKED BY: B.P.C.	SOLICITATION NO. DACW29-98-B-0001	DWG. 44	OF 46
SUBMITTED BY: DAN BRADLEY DESIGN ENGINEER			



**Safety is a Part
of Your Contract**



DELETE VIEW LOOKING INTO DISCHARGE (P00006)

GATE	QTY.	OPERATOR	MOTOR	STEM RPM	STEM FACTOR	START TORQUE (FT.-LBS.)	RUN TORQUE (FT.-LBS.)	STALL TORQUE (FT.-LBS.)	STALL THRUST (LBS.)	FULL LOAD AMPS	LOCKED ROTOR AMPS
11'W X 10'H	4	LIMITORQUE L120-420 (OR APPROVED EQUAL)	1Q HP 460V, 3PH, 25 Hz	24	.034	1600	800	5200	152,900	27	96

SYMBOL DESCRIPTION DATE APPROVED

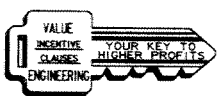
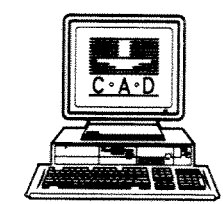
REVISIONS

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

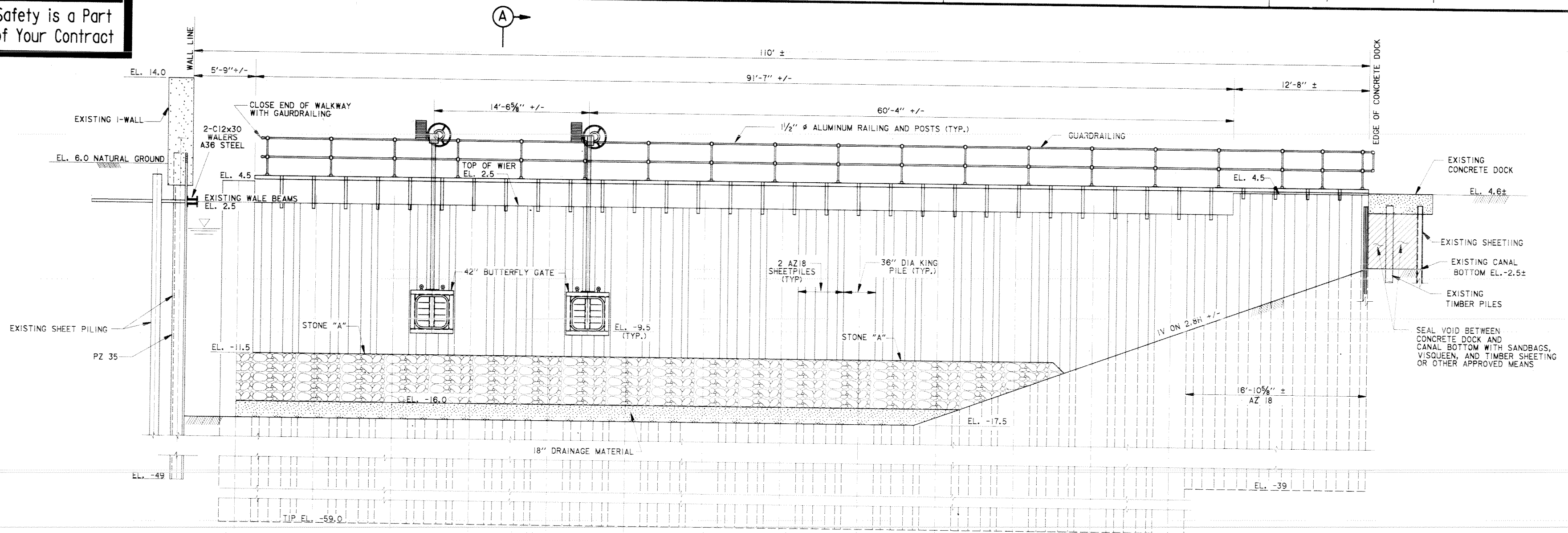
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS MARINA PHASE V - SLUCE GATES
ORLEANS PARISH, LOUISIANA

**SLUCE GATES
OPERATOR DETAILS**

DESIGNED BY: M. SANCHEZ DATE: X PLOT SCALE: 32 PLOT DATE: DEC. 17, 1997
 DRAWN BY: G. WEIDENBACHER
 CHECKED BY: M. SANCHEZ CADD FILE: 44778M2.DGN FILE NO. H-4-44778
 SUBMITTED BY: MIKE SANCHEZ, P.E. SOLICITATION NO. DACW29-98-B-0001 DWG. 45 OF 46
 DESIGN ENGINEER



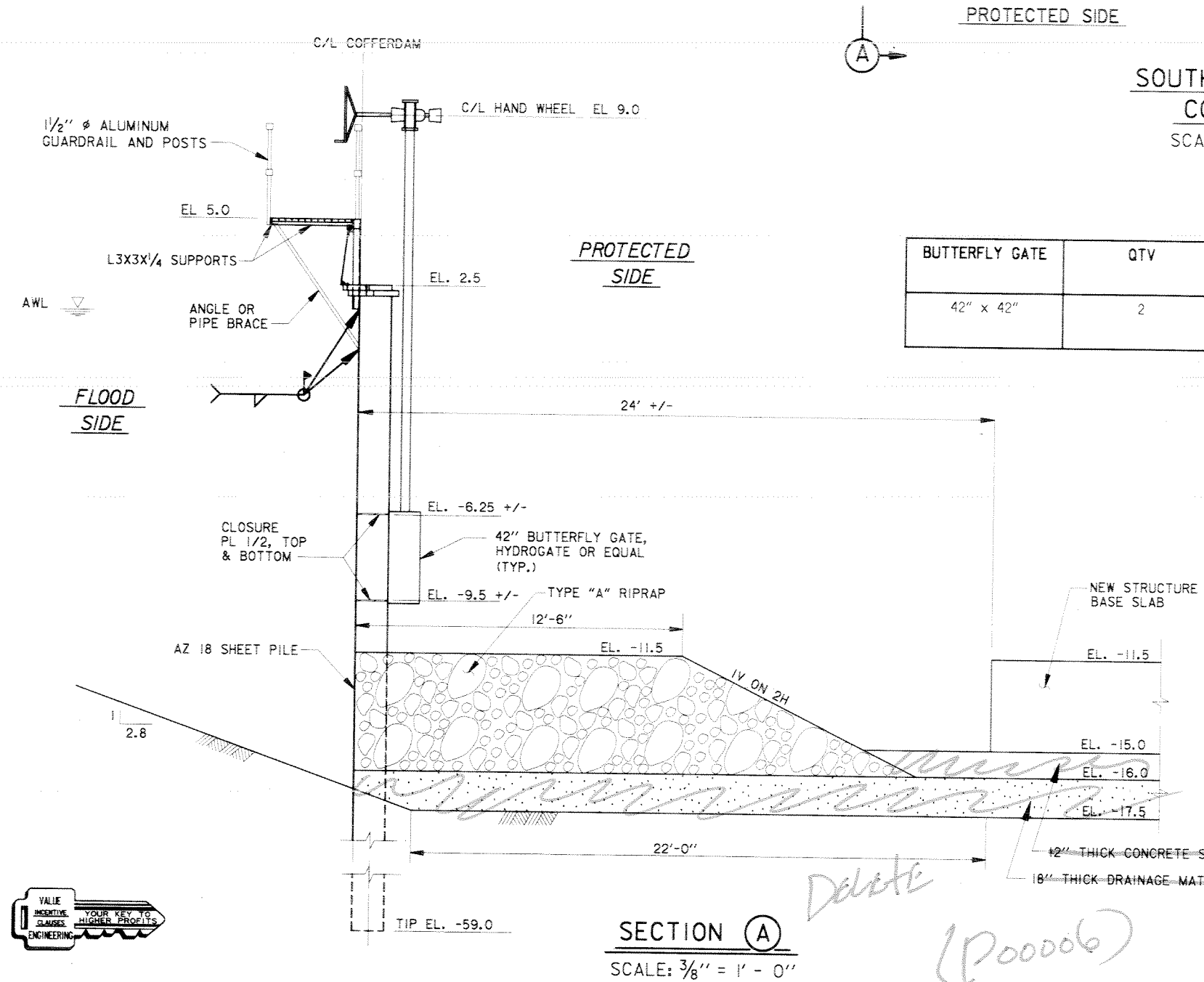
Safety is a Part of Your Contract



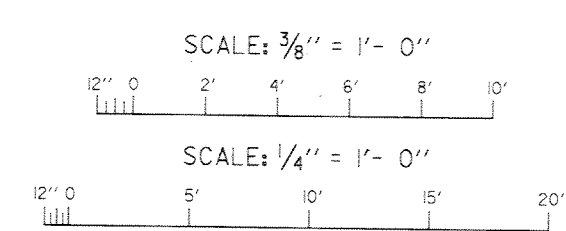
SOUTH ELEVATION COFFERDAM
SCALE: 1/4" = 1' - 0"

Remove 60Hz OPERATOR

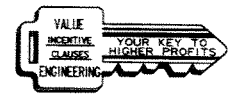
BUTTERFLY GATE	QTV	OPERATOR	MOTOR	OPERATING TIME	START TORQUE (FT-LBS)	RUN TORQUE (FT-LBS)	STALL TORQUE (FT-LBS)	FULL LOAD AMPS	LOCKED ROTOR AMPS
42" x 42"	2	LIMITORQUE L-120-10/WTRA-72 4,64:1 SGA OR EQUAL	0.43 HP, 460 V, 3 PH 25 H3	90 SEC	6,336	1,131	12,446	2.5	16



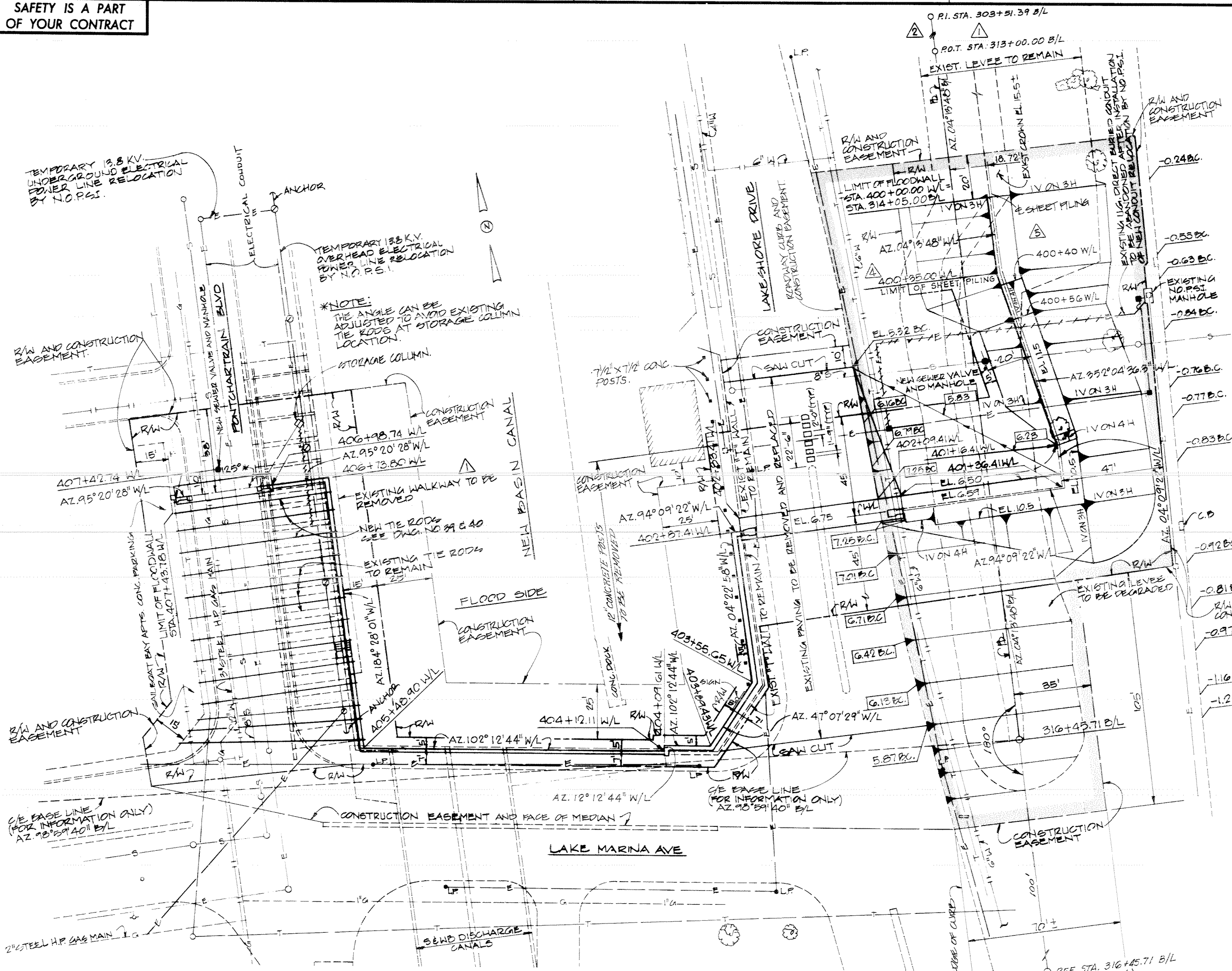
SECTION A
SCALE: 3/8" = 1' - 0"



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS MARINA PHASE V - SLUICE GATES ORLEANS PARISH, LOUISIANA COFFERDAM BUTTERFLY GATES OPERATOR DETAILS			
DESIGNED BY: M. SANCHEZ	DATE: DEC 97	PLOT SCALE: 48	PLOT DATE: DEC. 17, 1997
DRAWN BY: B. DALENHAUER	CADD FILE: 44778N07.dgn	FILE NO.	H-4-44778
CHECKED BY: M. SANCHEZ	SOLICITATION NO. DACW29-98-B-0001	DWG. 46	OF 46



SAFETY IS A PART OF YOUR CONTRACT



- LEGEND:**
- 5.92 EXISTING GRADE
 - 7.25 FINISHED GRADE
 - B.C. BACK OF CURB
 - W/L WALL LINE
 - B/L BASE LINE
 - L.P. LIGHT POLE (O.L.B OWNED, to be removed by owner)
 - T- TELEPHONE CABLE
 - G- GAS LINE
 - W- WATER LINE
 - S- SEWER LINE
 - E- ELECTRICAL CONDUIT
 - MANHOLE (EXISTING)
 - NEW SEWER VALVE & MH.
 - NEW ELECTRICAL JUNCTION BOX BY N.O.P.S.I.
 - TEMPORARY POWER POLE BY N.O.P.S.I.
 - R/W RIGHT OF WAY
 - 1/2"x1/2" CONCRETE POSTS
 - ELECTRIC SIGN (TO BE REMOVED BY OWNERS.)
 - AREA OF FERTILIZING & SEED
- Electrical Conduits to be abandoned

THIS PLAN ACCOMPANIES MODIFICATION P00013 TO CONTRACT NUMBER DACW29-88-C-0091

- NOTES**
1. FOR PROFILES, SEE DWGS. 4 AND 5.
 2. FOR GENERAL NOTES, SEE DWG. 1.
 3. FOR PAVING PLAN SEE DWG. 28.
 4. FOR WALL FINISH DETAILS, SEE DWGS. 51 AND 55.
 5. FOR NEW TREES TYPE AND PLANTING LOCATION, SEE DWG. 28.

REVISION	DATE	DESCRIPTION	BY
△	7 APR 89	REVISED LEVEL SHAPING BETWEEN STA. 400+00 W/L AND STA. 400+56 W/L; MOD. #13	MSD
△	12 JAN 89	REVISED LIMIT OF SHEET PILING; MOD. #9	MSD
△	6-17-88	REVISED W/L ALIGNMENT; MOD. #2	MSD
△	5-13-88	MOVED R.I. STA. 303+51.39 B/L AND P.O.T. STA. 313+00 B/L FROM LEVEL CROWN LINE TO BASE LINE; MOD. #2	MSD
△	2-22-88	REVISED EXISTING WALKWAY NOTE AND NOTE NO. 4 & ADDED B/L STATIONS; AMEND. #3	MSD

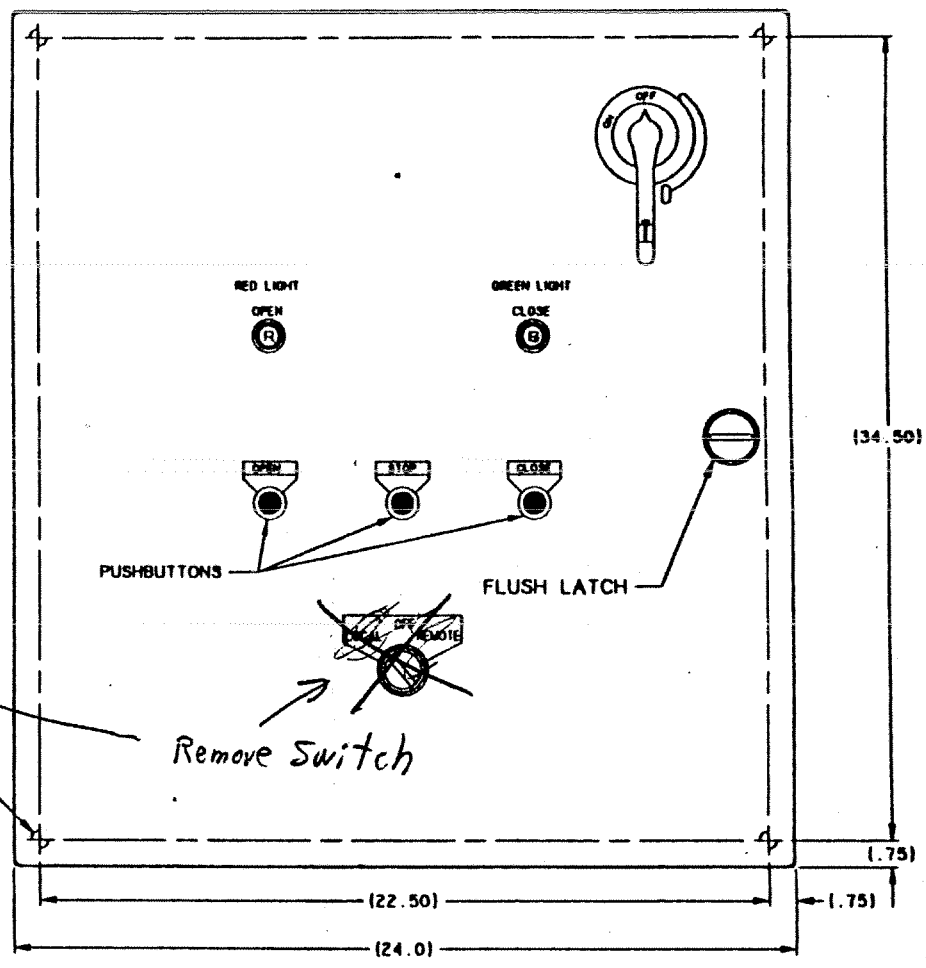
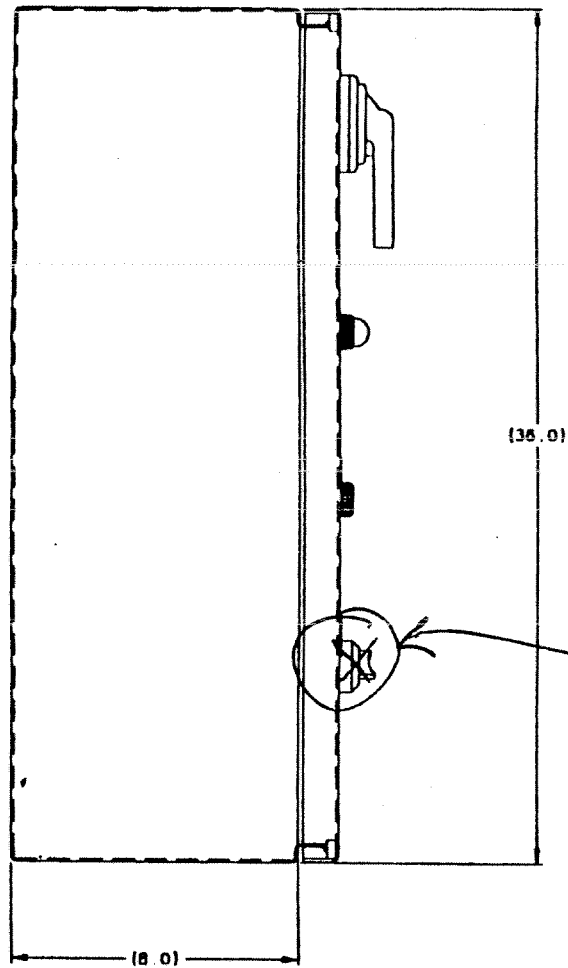
FROMHERZ ENGINEERS INC. U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
 NEW ORLEANS, LA. CORPS OF ENGINEERS
 ARCHITECT - ENGINEER NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
 HIGH LEVEL PLAN
 NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.
 ORLEANS MARINA FLOODWALL EXTENSION
 ORLEANS PARISH, LOUISIANA
PLAN OF FLOODWALL

DESIGNED	DRAWN	CHECKED	DATE	SCALE	FILE NO.
N.F.H.	S.P.	N.F.H.	DEC, 1987	AS SHOWN	H-4-30204
REVISION	DATE	DESCRIPTION			
			DACW29-88-B-0024	DWG. 03	of 57



150004



.50 DIA
4 PLACES

HOFFMAN CONTROL BOX
36x24x8 (CSD36248)

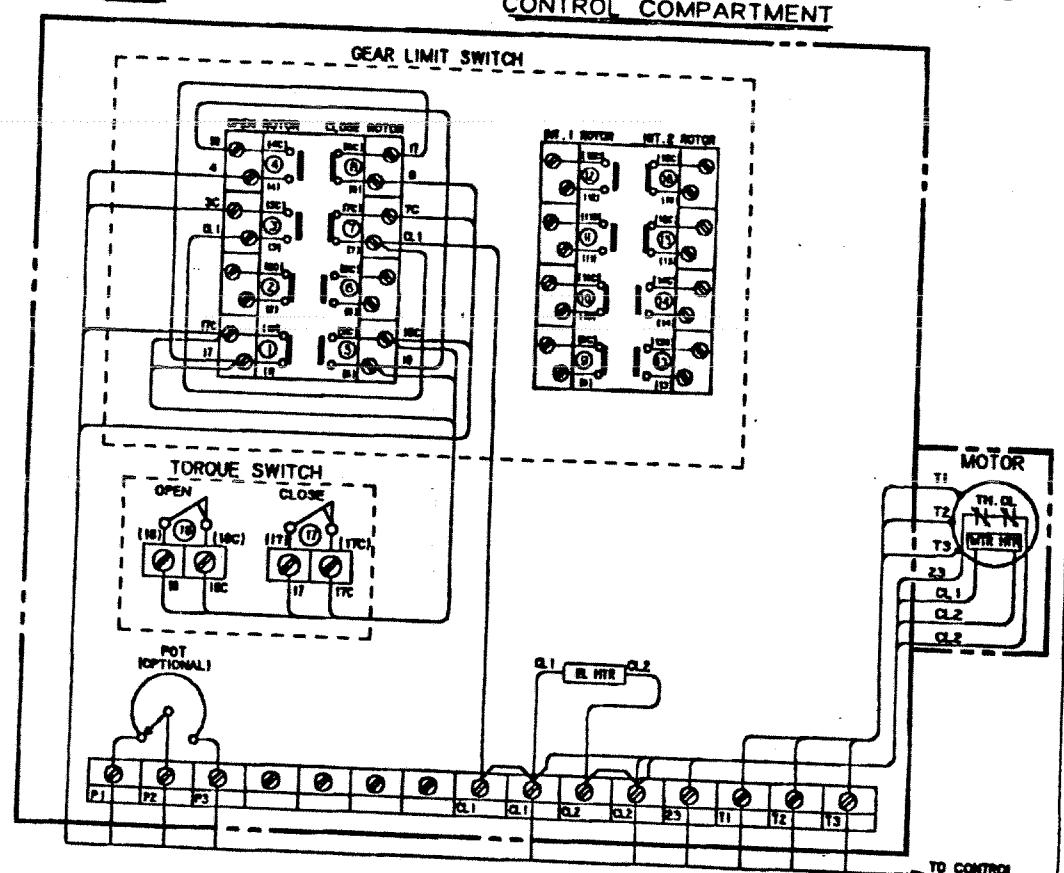
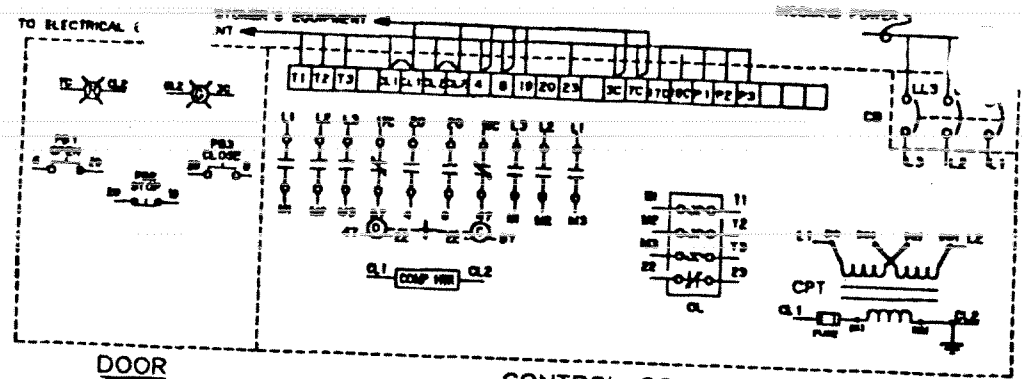
			DRAWN DATE	LIMITORQUE CORPORATION			
			JCD 10/23/88	TITLE			
			CHECKED DATE	CONTROL ENCLOSURE			
			JD				
NO.	DESCRIPTION	DATE	APPROVED DATE	1ST ORDER NO.	DRAWING NO.	REV	SHEET
	REVISION		KEH 10/23/88	274712	02-487-0293-2		1 of 1

L-781 REV-A 4/26/93

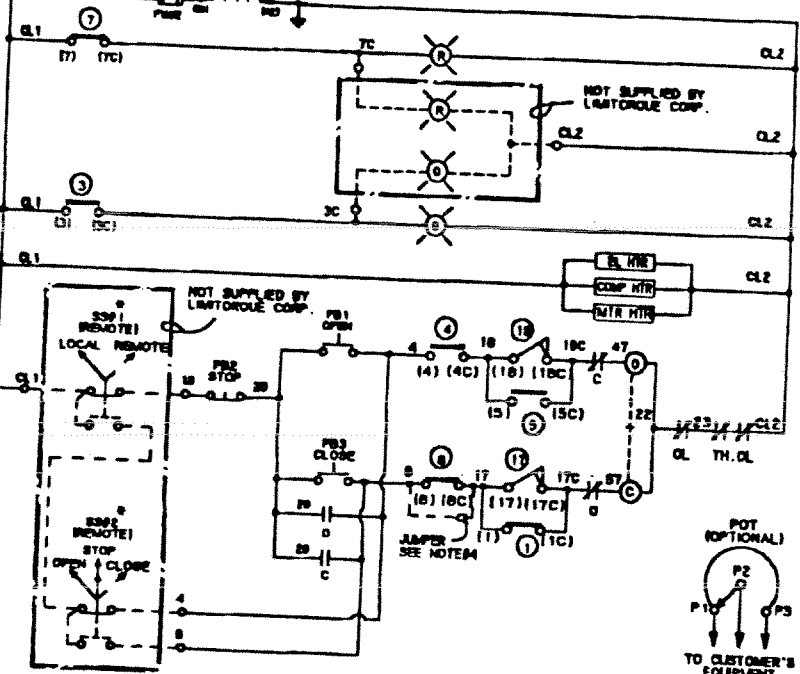
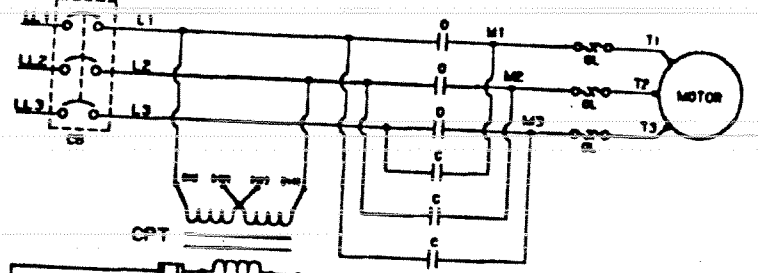
MOD 1

MARCH 26, 1999

ENC 3



ELECTRICAL COMPARTMENT



VALVE SHOWN IN FULL OPEN POSITION

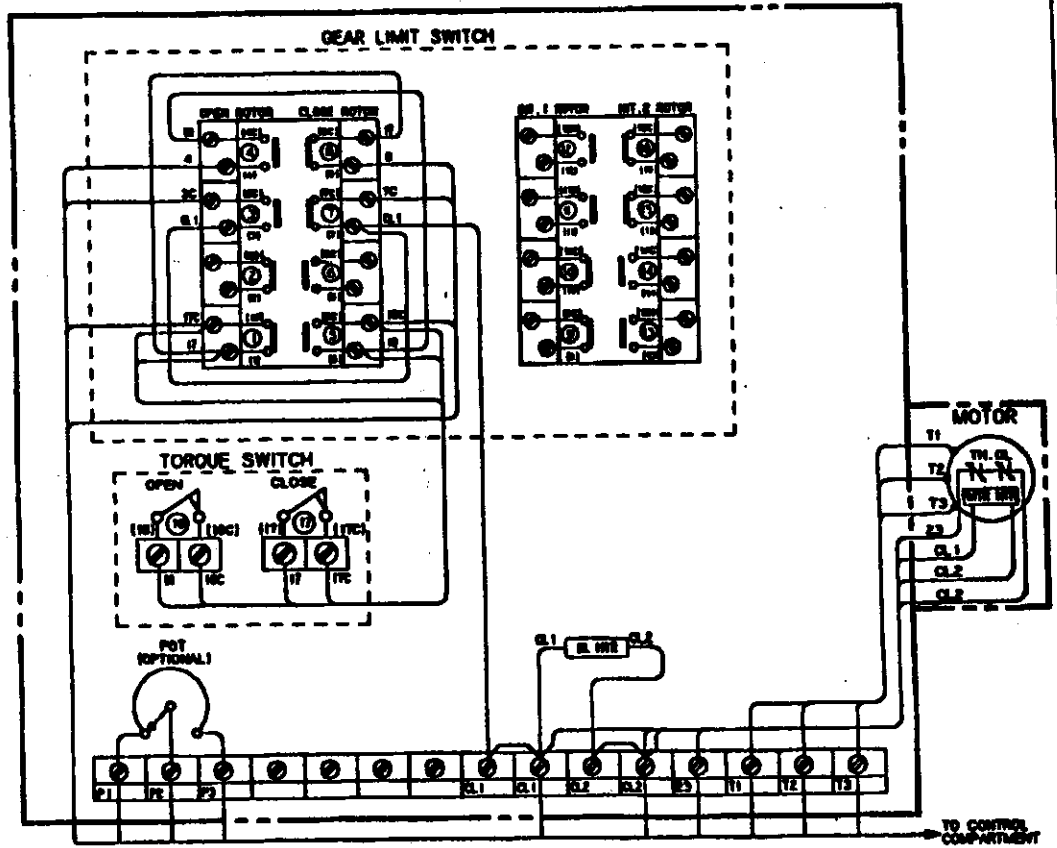
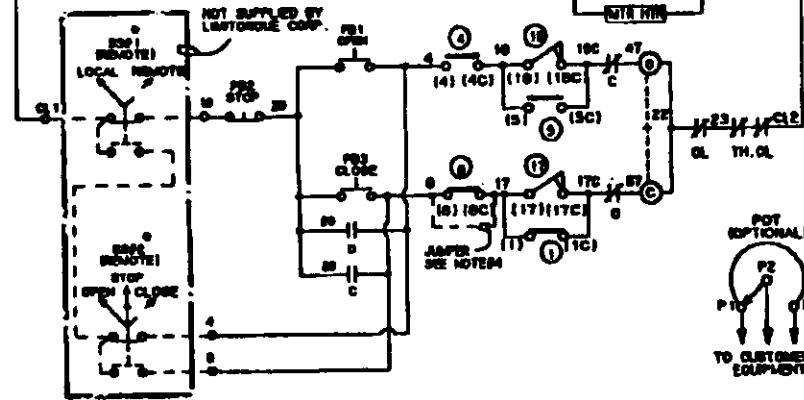
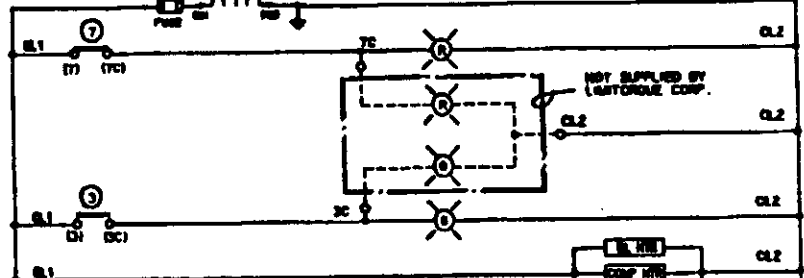
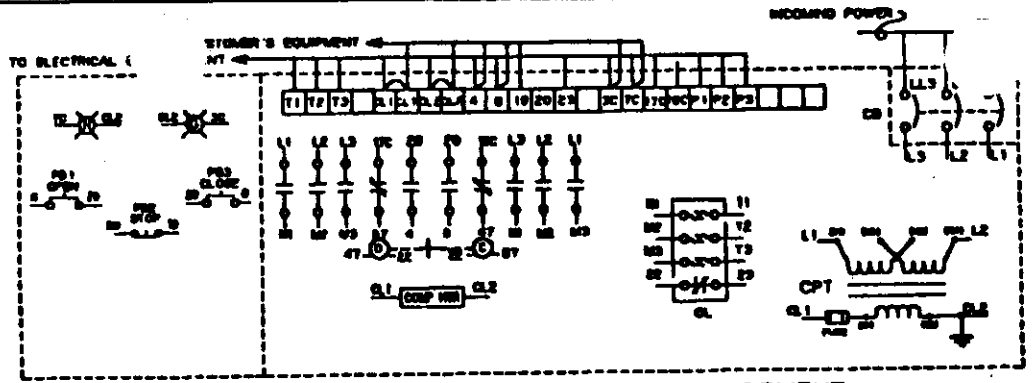
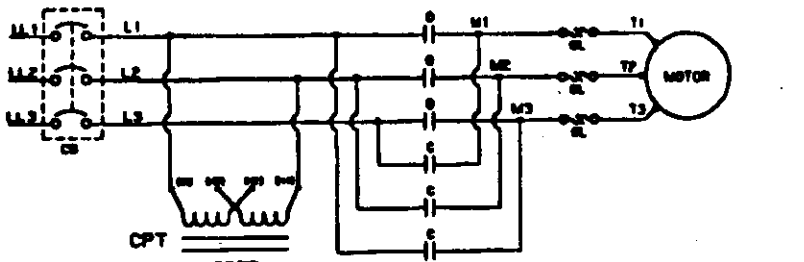
ROTOR	LIMIT SWITCH CONTACT DEVELOPMENT		FUNCTION
	FULLY OPEN	FULLY CLOSED	
1	1	1	BY-PASS CIR.
2	2	2	SPARE
3	3	3	IND LIGHT
4	4	4	OPEN LIMIT
5	5	5	BY-PASS CIR.
6	6	6	SPARE
7	7	7	IND LIGHT
8	8	8	CLOSE LIMIT
9	9	9	SPARE
10	10	10	SPARE
11	11	11	SPARE
12	12	12	SPARE
13	13	13	SPARE
14	14	14	SPARE
15	15	15	SPARE
16	16	16	SPARE

- NOTES**
1. --- OPEN CONTACT
 2. --- CLOSE CONTACT
 3. ROTORS INT. 1 & INT. 2 CAN BE SET AT VALVE POSITION FULL OPEN, FULL CLOSED OR ANY POSITION IN BETWEEN AS INDICATED BY POINT A AND B.
 4. ADD JUMPER ON L599 BETWEEN TERMINALS (8) & (8C) FOR TORQUE SEATING VALVES
- LEGEND**
- O-OPEN CONTACT
 - C-CLOSE CONTACT
 - SP-SPARE
 - OP-OPENING COIL
 - CL-CLOSING COIL
 - MC-MECHANICAL INTERLOCK
 - RL-RED INDICATING LIGHT
 - GL-GREEN INDICATING LIGHT
 - SS-SELECTOR SWITCH
 - PB1-OPEN PUSHBUTTON
 - PB2-STOP PUSHBUTTON
 - PB3-CLOSE PUSHBUTTON
 - MTR-HTR-MOTOR HEATER
 - EL-HTR-ELECTRICAL COMPARTMENT HEATER
 - TH.O.L-THERMAL OVERLOAD CONTACTS
 - POT-SLIDING TRANSMITTER (OPTIONAL, SEE CERTIFICATION SHEET IF SUPPLIED)
 - CB-CIRCUIT BREAKER
 - OL-OVERLOAD RELAY

- (1) CLOSING TORQUE SWITCH INTERRUPTS CONTROL CIRCUIT IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE
- (2) OPENING TORQUE SWITCH INTERRUPTS CONTROL CIRCUIT IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE

NO.	DESCRIPTION	DATE	BY	CHKD	DATE	REV	DATE
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MOD 2 MARCH 26, 1999



VALVE SHOWN IN FULL OPEN POSITION

ROTOR	LIMIT SWITCH CONTACT DEVELOPMENT	VALVE POSITION		FUNCTION
		FULLY OPEN	FULLY CLOSED	
OPEN	1	---	---	BY-PASS CB
	2	---	---	SPARE
	3	---	---	END LIGHT
CLOSE	4	---	---	OPEN LIMIT
	5	---	---	BY-PASS CB
	6	---	---	SPARE
WT. 1	7	---	---	END LIGHT
	8	---	---	CLOSE LIMIT
	9	---	---	SPARE
WT. 2	10	---	---	SPARE
	11	---	---	SPARE
	12	---	---	SPARE

- NOTES**
1. --- OPEN CONTACT
 2. --- CLOSE CONTACT
 3. ROTORS WT. 1 & WT. 2 CAN BE SET AT VALVE POSITION FULL OPEN, FULL CLOSED OR ANY POSITION IN BETWEEN AS INDICATED BY POINT A AND B.
 4. ADD JAMPER ON LONG BETWEEN TERMINALS (8) & (10C) FOR TORQUE SEATING VALVES

- LEGEND**
- 1- OPEN CONTACT
 - 2- CLOSE CONTACT
 - 3- OPENING COIL
 - 4- CLOSING COIL
 - 5- MECHANICAL INTERLOCK
 - 6- RED INDICATING LIGHT
 - 7- GREEN INDICATING LIGHT
 - 8- SELECTOR SWITCH
 - 9-1- OPEN PUSHBUTTON
 - 9-2- STOP PUSHBUTTON
 - 9-3- CLOSE PUSHBUTTON
 - 10-1-1- MOTOR HEATER
 - 10-1-2- ELECTRICAL COMPARTMENT HEATER
 - 11- OL- THERMAL OVERLOAD CONTACTS
 - 12- POT- 3-LEWHE TRANSMITTER (OPTIONAL, SEE CERTIFICATION SHEET IF SUPPLIED)
 - 13- CIRCUIT BREAKER
 - 14- OVERLOAD RELAY

- ⓐ CLOSING TORQUE SWITCH INTERRUPTS CONTROL CIRCUIT IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE
- ⓑ OPENING TORQUE SWITCH INTERRUPTS CONTROL CIRCUIT IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE

LIMITORQUE CORPORATION	
WIRING DIAGRAM	
NO. 16-477-3746-3	REV. 1/1

MOD 2 MARCH 26, 1999