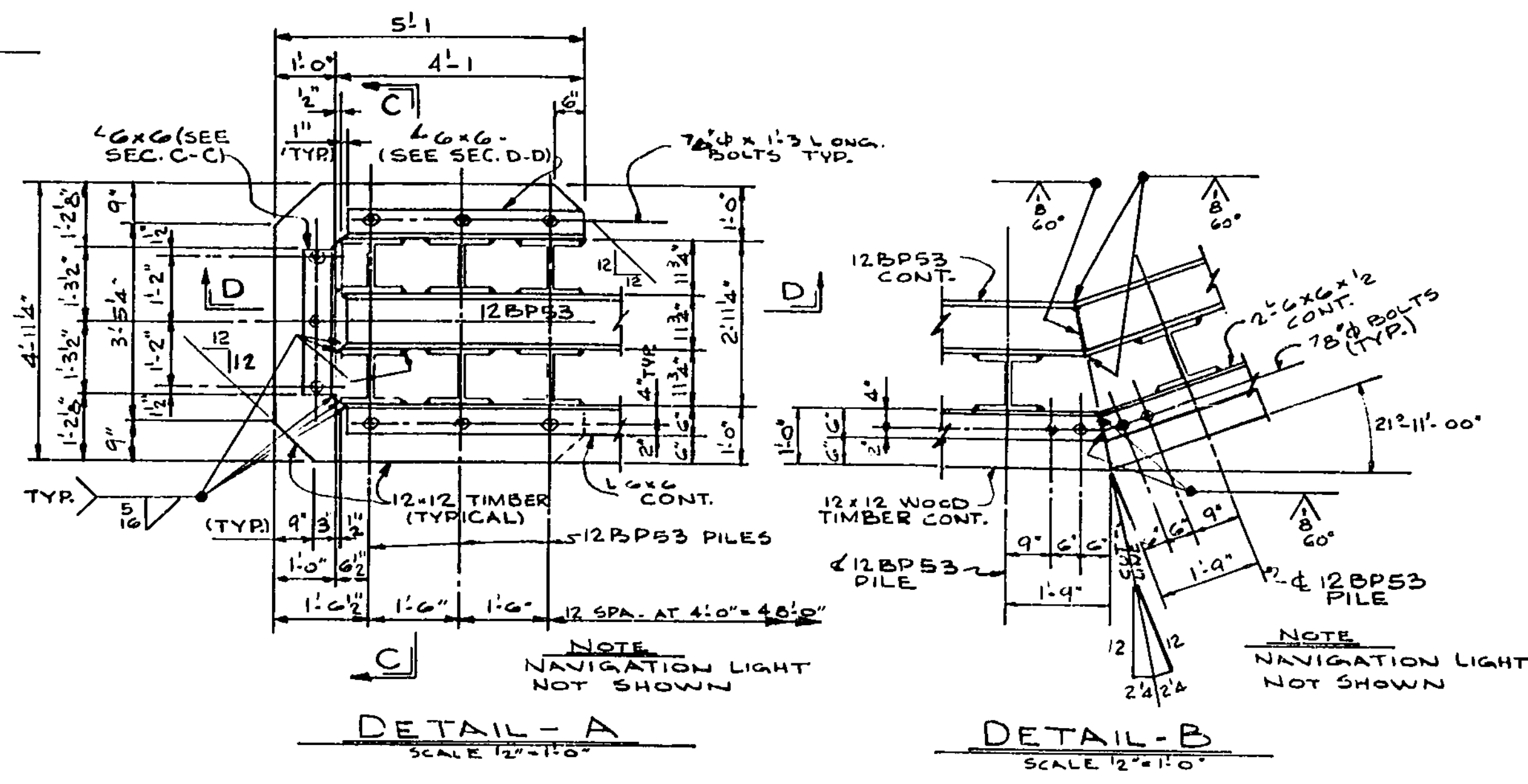


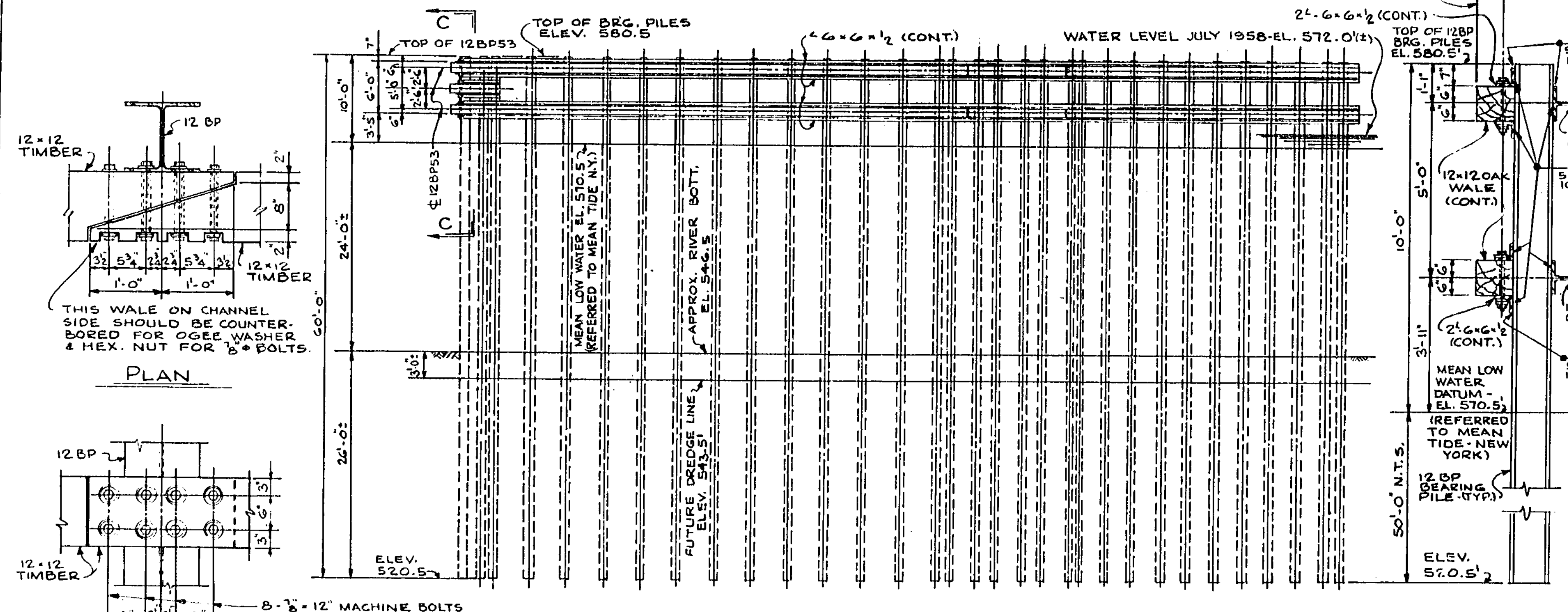
NOTE:  
ALL PILES AND FRAMING MEMBERS TO BE 12BP53 (ALL WELDED CONSTRUCTION) (25 MINIMUM WELD)

PLAN OF EAST FENDERING  
SCALE: 1/2" = 1'-0"



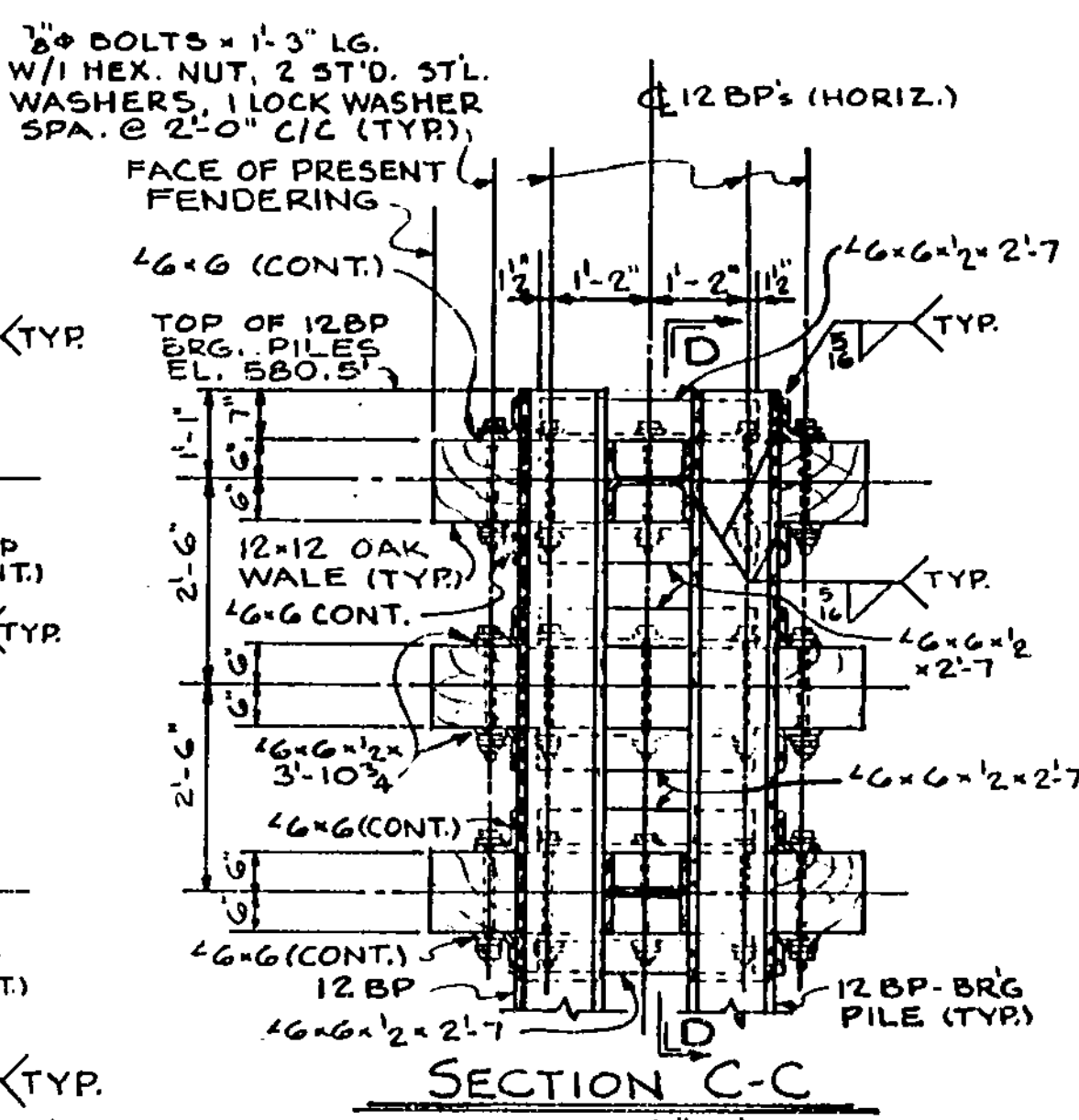
DETAIL-A  
SCALE: 1/2" = 1'-0"

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

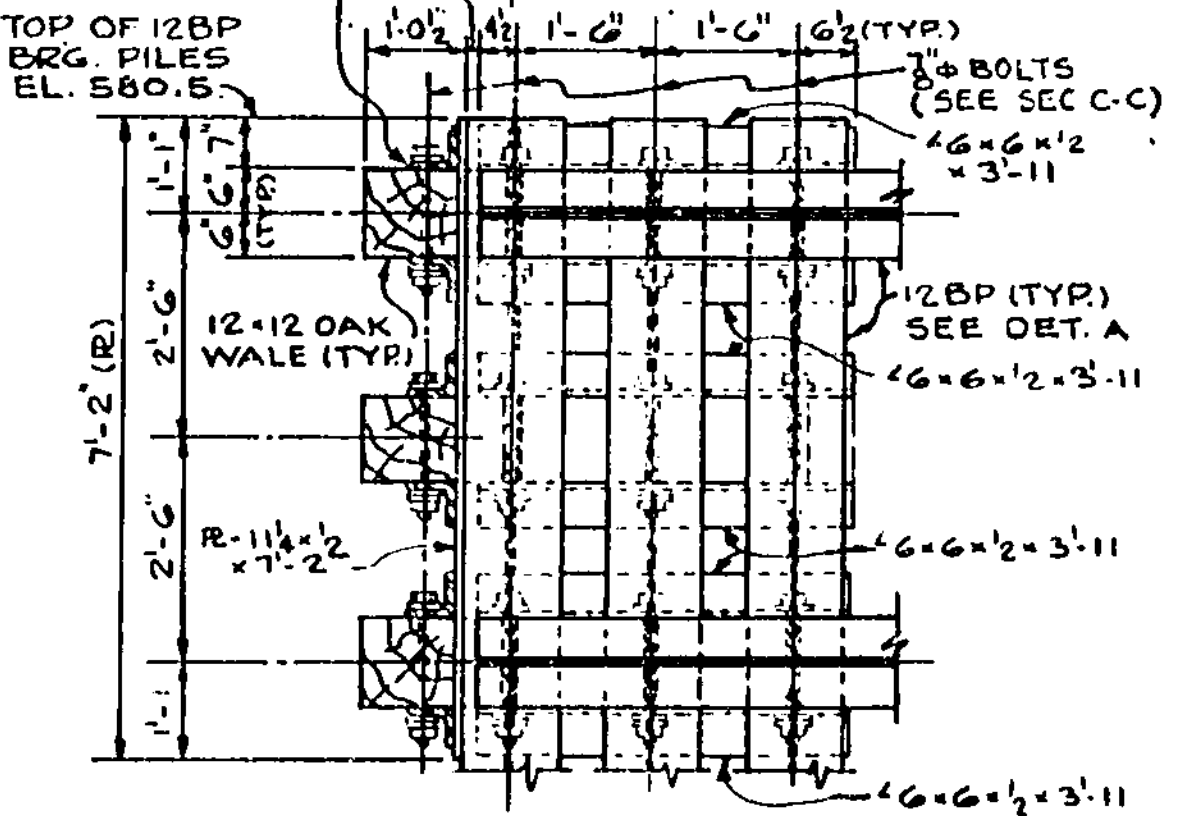


ELEVATION  
SCALE: 1/2" = 1'-0"

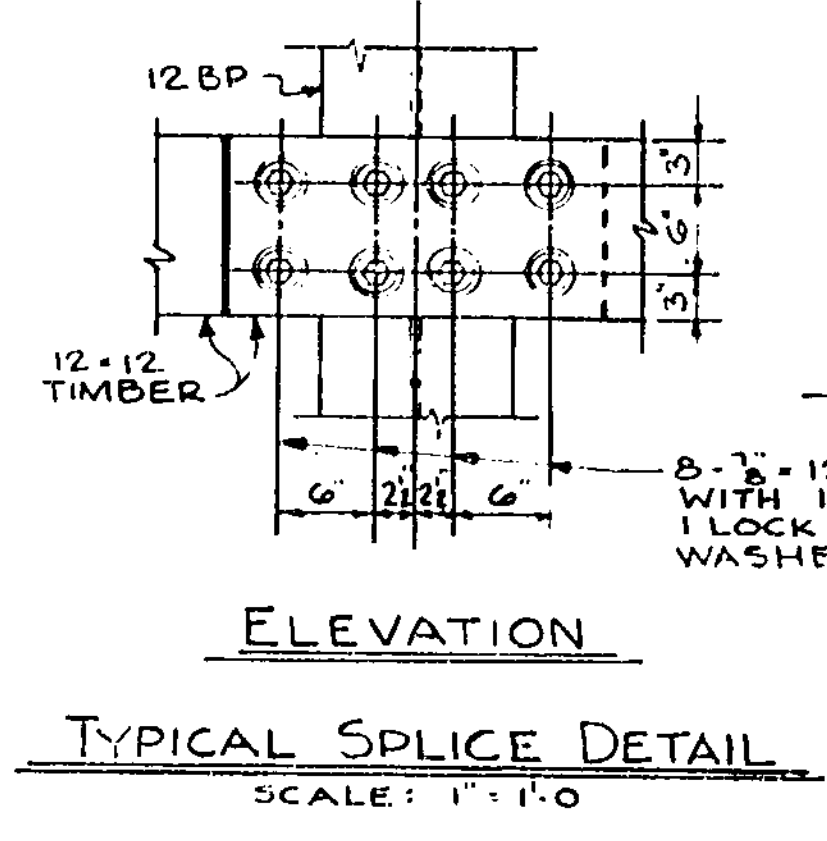
SECTION B-B  
SCALE: 1/2" = 1'-0"



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



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



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

**GENERAL NOTES:**

ITEM SPECIAL - STEEL SHEET PILING - DOLPHINS.

ITEM SPECIAL - STEEL W PILES 12BP53.

ITEM 3-7 & SPECIAL - MISCELLANEOUS STRUCTURAL STEEL - INCLUDING BOLTS, NUTS & WASHERS.

**FIELD PAINTING** - ALL MATERIALS EMBRACED IN THE ABOVE ITEMS SHALL BE GIVEN TWO COATS OF PAINT AT THE TIME OF INSTALLATION. H-PILES SHALL BE PAINTED FROM THE TOP DOWN TO A POINT WHICH WILL NOT BE LESS THAN TWO FEET BELOW LOW WATER DATUM ELEVATION 570.5' IN THE FINISHED FENDERINGS. THE PAINT TO BE USED IN COATING ALL COMPONENTS IN EACH ITEM SHALL BE A HEAVY DUTY COAL TAR PAINT, COLD APPLIED, CONFORMING WITH THE SPECIFICATIONS FOR KOPPERS CO., INC. BITUMASTIC NO. 50 OR APPROVED EQUAL. BEFORE THE APPLICATION OF THE PAINT, THE PILING SURFACES SHALL BE REASONABLY CLEAN, FREE OF LOOSE RUST, LOOSE MILL SCALE, AND ALL DIRT AND DEBRIS. ANY AREAS WHERE THE PAINT HAS BEEN DAMAGED SHALL BE REPAINTED WITH TWO COATS OF THE SAME PAINT AS ABOVE SPECIFIED.

ITEM 3-13 AND SPECIAL - TIMBER WALES AND FENDERS. THE MATERIAL USED IN THIS ITEM SHALL BE 1900 # RED OAK. ALL TIMBER SHALL BE CROSOATED. THE AMOUNT OF PRESERVATIVE RETAINED SHALL BE 10 LBS PER CU. FT. OF TIMBER. THE PRESERVATIVE SHALL BE GRADE 1 CROSOOTE OIL. THE TREATED TIMBER, THE PRESERVATIVE, AND THE PRESERVATIVE TREATMENT SHALL BE IN ACCORDANCE WITH THE CURRENT SPECIFICATION OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS. ALL CUTTING, FRAMING, AND BORING OF TREATED TIMBERS SHALL BE DONE BEFORE TREATMENT INsofar AS IS PRACTICABLE. ALL CUTS IN CROSOATED TIMBERS SHALL BE COVERED WITH TWO APPLICATIONS OF A MIXTURE OF 60% CROSOOTE OIL AND 40% ROOFING PITCH OR BRUSH COATED WITH TWO APPLICATIONS OF HOT CROSOOTE OIL AND COVERED WITH HOT ROOFING PITCH. DRILLED HOLES TO BE 1/16" UNDERSIZE AND BOLTS DRIVEN HOME. HOLES TO BE SWABBED WITH HOT CROSOOTE OIL PRIOR TO PLACING OF BOLTS.

ONE PRIME COAT (FIELD) BITUMASTIC MILL UNDERCOAT SHALL BE APPLIED ON ALL STEEL WALES AND PLATE AND ANGLE WALE CONNECTIONS.

ALL BEARING PILES SHALL BE FURNISHED FULL LENGTH.

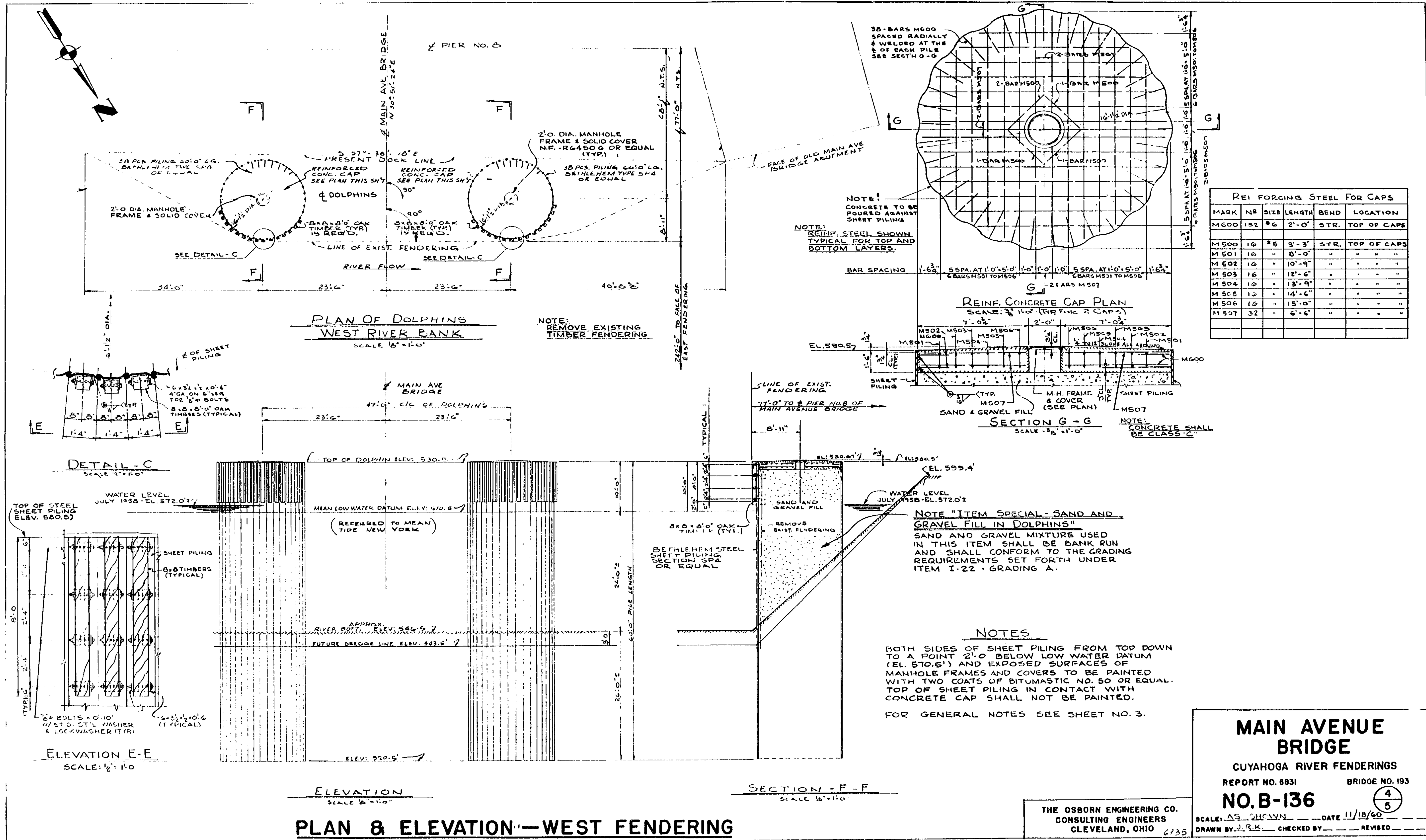
ALL WELDING TO CONFORM TO A.W.S. STANDARDS.

**MAIN AVENUE BRIDGE**  
CUYAHOGA RIVER FENDERINGS  
REPORT NO. 6831 BRIDGE NO. 193  
**NO. B-136**

SCALE: AS SHOWN DATE 11/18/50  
DRAWN BY J.R.K. & R.S. CHECKED BY S.H. REVISED

THE OSBORN ENGINEERING CO.  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**PLAN & ELEVATION - EAST FENDERING**



**PLAN OF DOLPHINS  
WEST RIVER BANK**  
SCALE 1/8" = 1'-0"

**REINFORCING CONCRETE CAP PLAN**  
SCALE: 1/4" = 1'-0" (FOR PILES 2 CAPS)

**DETAIL - C**  
SCALE 1/2" = 1'-0"

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

**ELEVATION**  
SCALE 1/2" = 1'-0"

**SECTION - F-F**  
SCALE 1/2" = 1'-0"

**PLAN & ELEVATION - WEST FENDERING**

| REINFORCING STEEL FOR CAPS |     |      |        |      |             |
|----------------------------|-----|------|--------|------|-------------|
| MARK                       | NR  | SIZE | LENGTH | BEND | LOCATION    |
| M600                       | 152 | #6   | 2'-0"  | STR. | TOP OF CAPS |
| M500                       | 16  | #5   | 3'-3"  | STR. | TOP OF CAPS |
| M501                       | 16  | "    | 8'-0"  | "    | "           |
| M502                       | 16  | "    | 10'-9" | "    | "           |
| M503                       | 16  | "    | 12'-6" | "    | "           |
| M504                       | 16  | "    | 13'-9" | "    | "           |
| M505                       | 12  | "    | 14'-6" | "    | "           |
| M506                       | 12  | "    | 15'-0" | "    | "           |
| M507                       | 32  | "    | 6'-6"  | "    | "           |

**NOTE "ITEM SPECIAL - SAND AND GRAVEL FILL IN DOLPHINS"**  
SAND AND GRAVEL MIXTURE USED IN THIS ITEM SHALL BE BANK RUN AND SHALL CONFORM TO THE GRADING REQUIREMENTS SET FORTH UNDER ITEM I-22 - GRADING A.

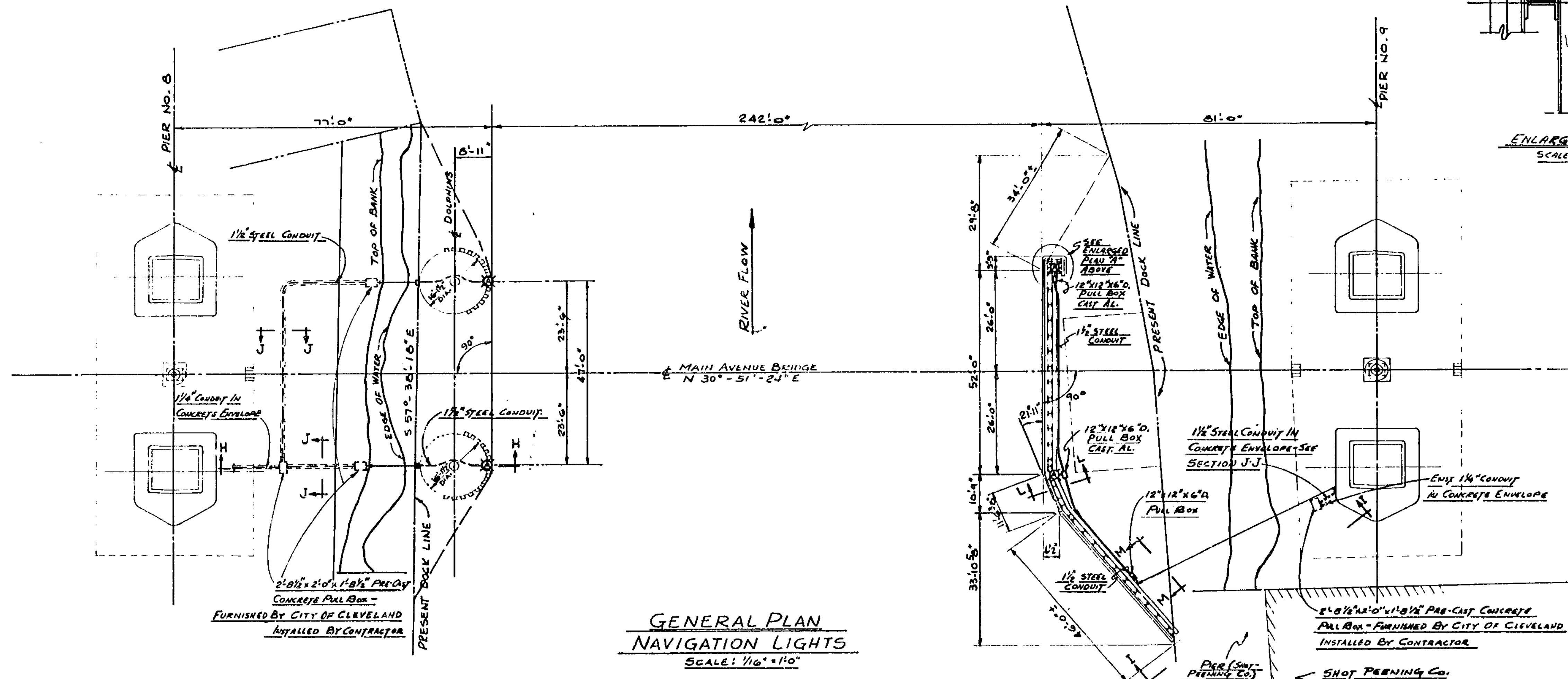
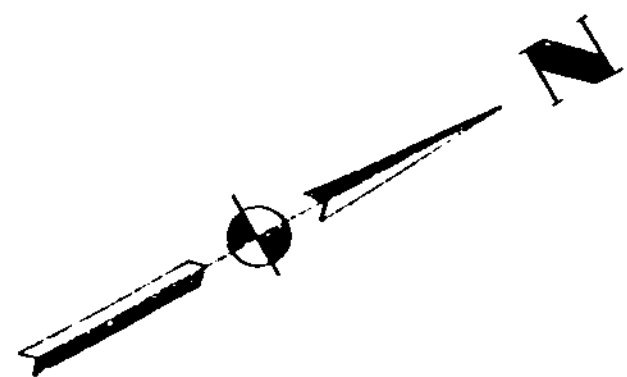
**NOTES**  
BOTH SIDES OF SHEET PILING FROM TOP DOWN TO A POINT 2'-0" BELOW LOW WATER DATUM (EL. 570.6') AND EXPOSED SURFACES OF MANHOLE FRAMES AND COVERS TO BE PAINTED WITH TWO COATS OF BITUMASTIC NO. 50 OR EQUAL. TOP OF SHEET PILING IN CONTACT WITH CONCRETE CAP SHALL NOT BE PAINTED.  
FOR GENERAL NOTES SEE SHEET NO. 3.

**MAIN AVENUE  
BRIDGE**  
CUYAHOGA RIVER FENDERINGS  
REPORT NO. 6831 BRIDGE NO. 193  
**NO. B-136**

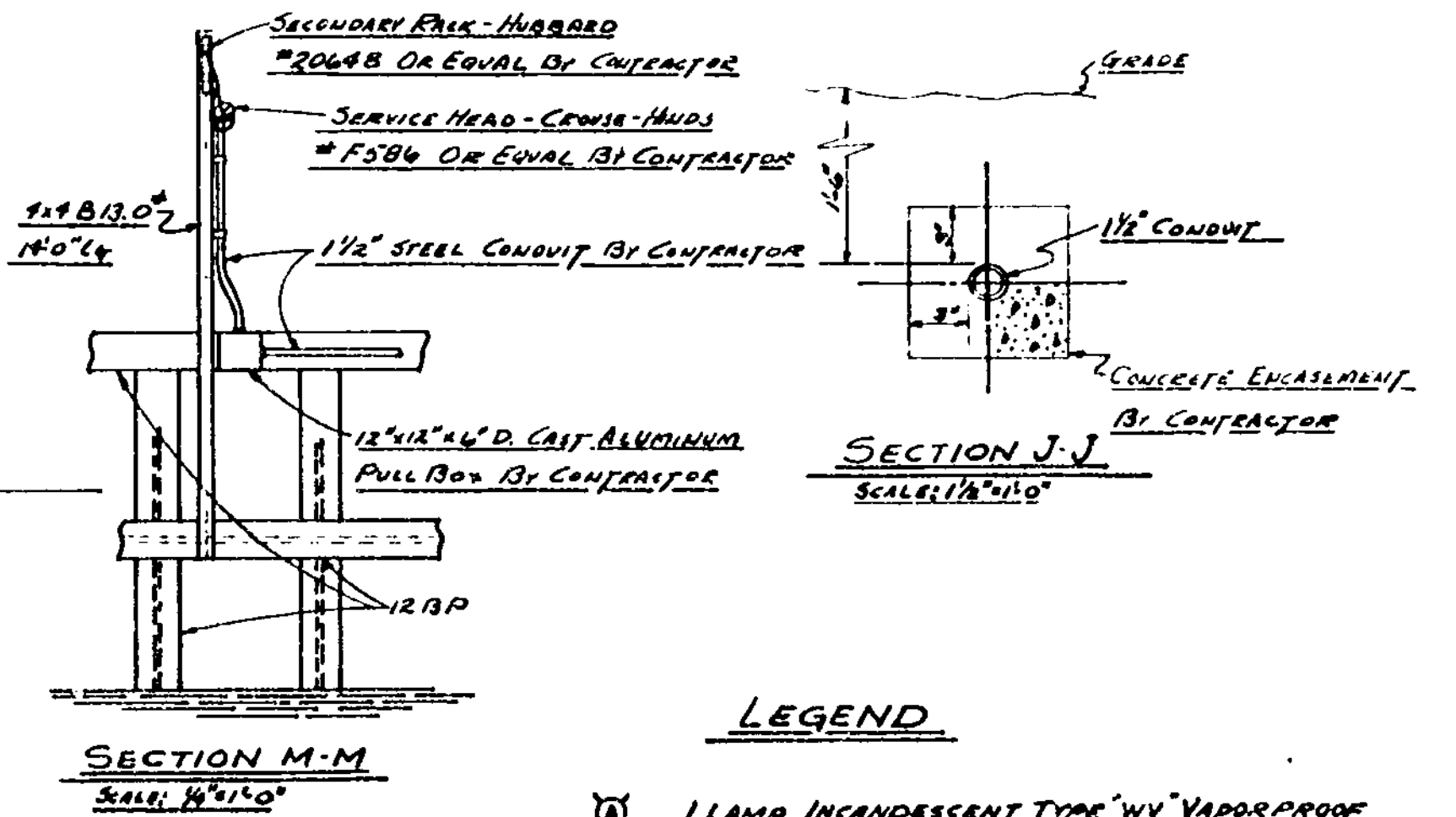
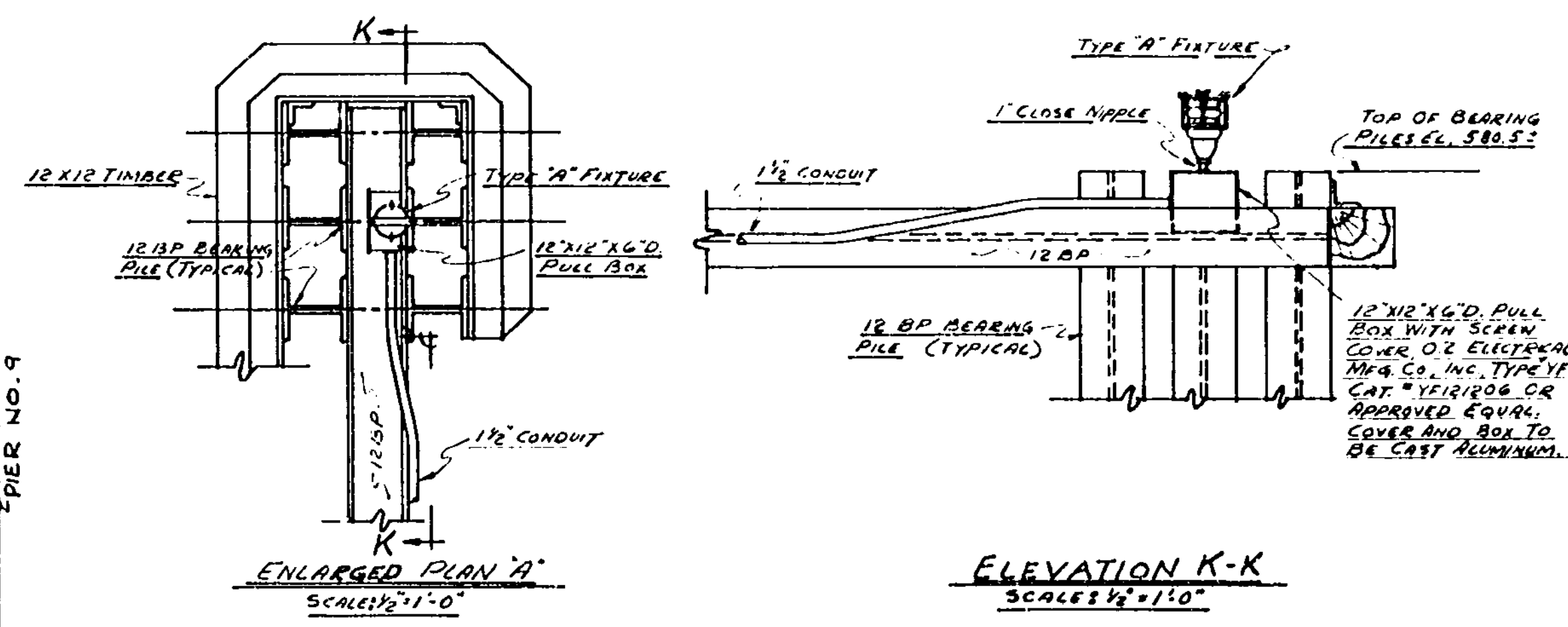
THE OSBORN ENGINEERING CO.  
CONSULTING ENGINEERS  
CLEVELAND, OHIO 6735

SCALE: AS SHOWN DATE 11/18/60  
DRAWN BY J.R.K. CHECKED BY \_\_\_\_\_ REVISED \_\_\_\_\_

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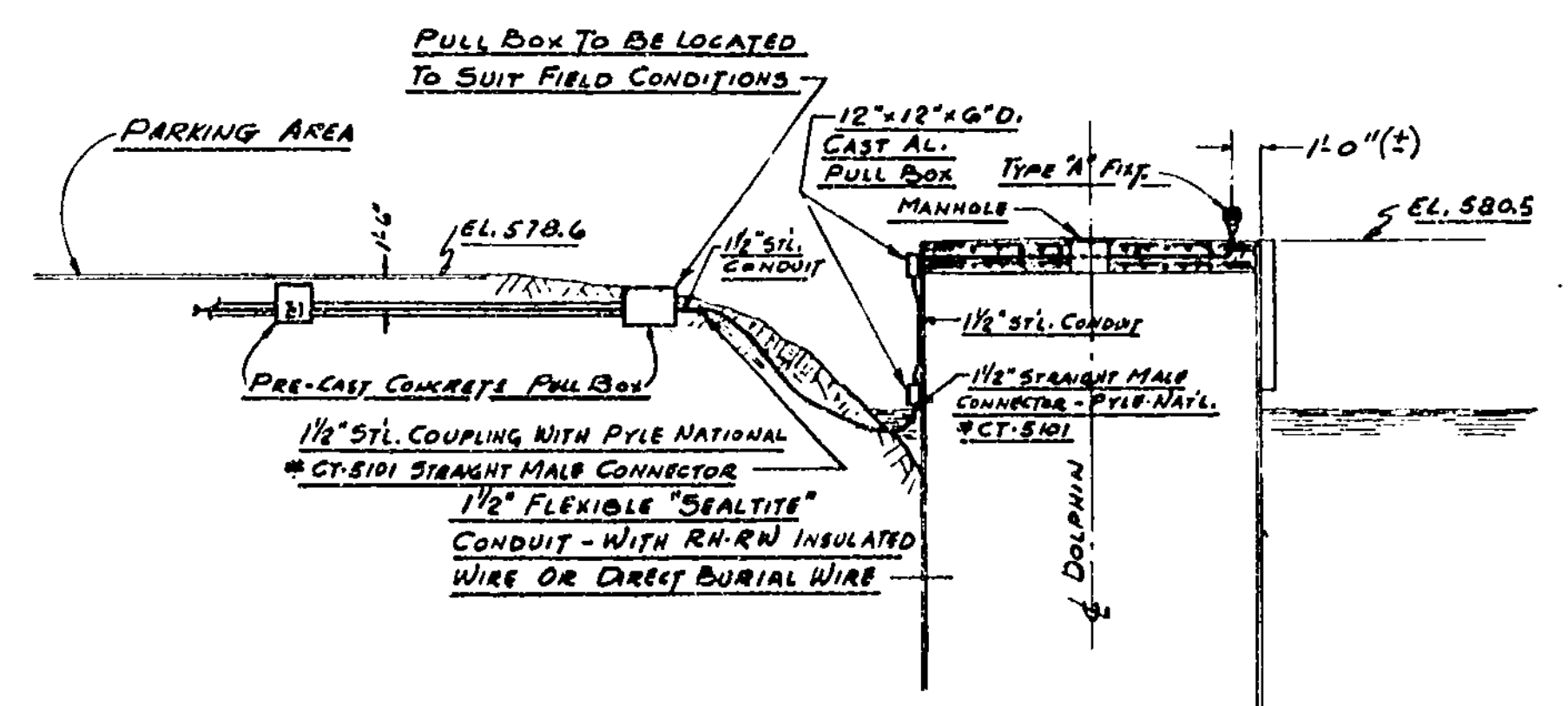


**GENERAL PLAN  
NAVIGATION LIGHTS**  
SCALE: 1/4" = 1'-0"

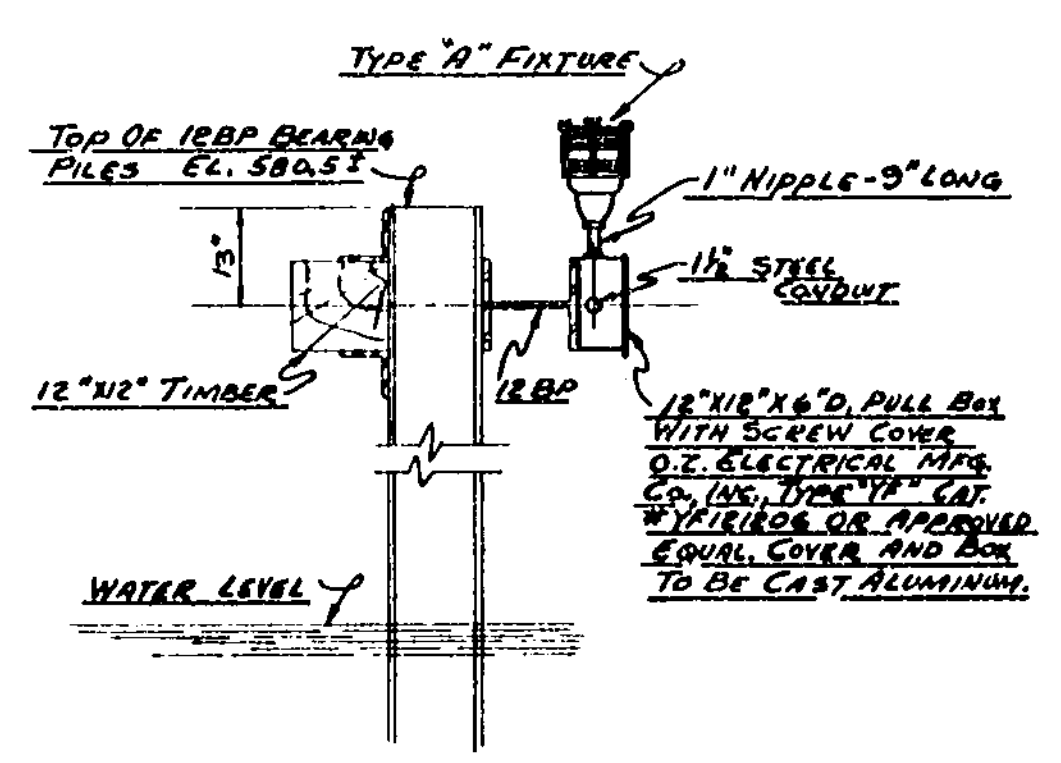


**LEGEND**

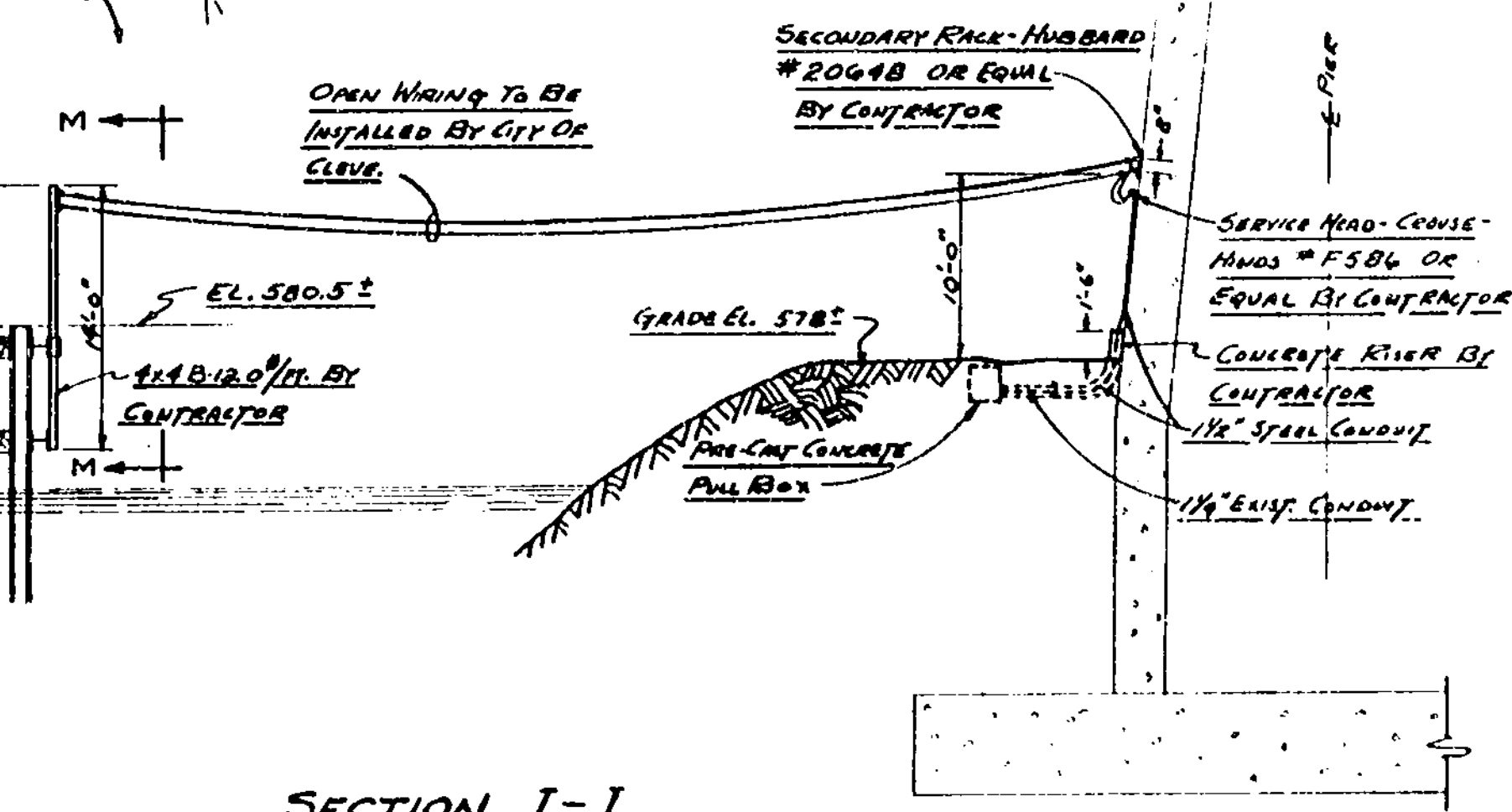
☐ 1 LAMP INCANDESCENT TYPE 'WV' VAPOR-PROOF FIXTURE WITH 1" HUB AND 6" RED FRESNEL LENS CROUSE-HINDS CAT. NO. WV375.



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



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



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

- NOTE:**
1. ALL WIRING TO BE INSTALLED BY CITY OF CLEVELAND.
  2. CONCRETE UNDERGROUND PULL BOXES TO BE FURNISHED BY CITY OF CLEVELAND, BUT ARE TO BE INSTALLED BY CONTRACTOR.
  3. CONTRACTOR TO REMOVE EXISTING CONDUIT & FIXTURES ON EXISTING FENDERING.
  4. CONTRACTOR SHALL SUBMIT TO THE COUNTY ENGINEER FOR APPROVAL, A PROPOSED METHOD FOR SUPPORTING AND FASTENING ALL REQUIRED CONDUIT AND PULL BOXES TO THE FENDERING FRAMEWORK.

**ELECTRICAL EQUIPMENT - FOR NAVIGATION LIGHTS**

THE OSBORN ENGINEERING CO.  
CONSULTING ENGINEERS  
CLEVELAND, OHIO 6935

**MAIN AVENUE BRIDGE**  
CUYAHOGA RIVER FENDERINGS  
REPORT NO. 6831 BRIDGE NO. 193  
**NO. B-136**  
SCALE: AS NOTED DATE: 11/18/60  
DRAWN BY: S.J.K. CHECKED BY: J.P. REVISOR: 5/5