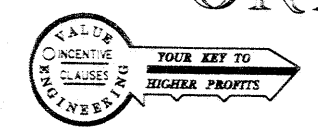


LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY  
**CHALMETTE AREA PLAN**  
**HURRICANE PROTECTION**  
**LEVEE CLOSURES**  
 (STA.366+00 CL TO STA.1007+91 CL)  
 ORLEANS AND ST. BERNARD PARISHES, LA.

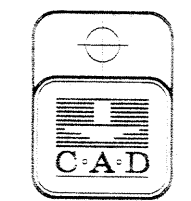
| INDEX TO DRAWINGS |   | TABULATION OF BENCH MARK  |  |
|-------------------|---|---|--|
| DWGS.             | DESCRIPTION   | LOCATION & DESCRIPTION  |  |
| 1.                | LOCATION MAP, VICINITY MAP AND INDEX TO DRAWINGS        | *TED (1974) EL.7.405 (NGVD)   |  |
| 2.                | PLAN AND PROFILE- STA.366+00C/L TO STA.467+00C/L        | MARK IS TOP OF A 1 1/2" GALV. CAP SET ON A 1 1/2" PIPE DRIVEN TO A DEPTH OF 105 FT. ENCASED IN A 3" GALV. PIPE.   |  |
| 3.                | PLAN AND PROFILE- STA.467+00C/L TO STA.600+00C/L        |   |  |
| 4.                | PLAN AND PROFILE- STA.600+00C/L TO STA.730+00C/L        |   |  |
| 5.                | PLAN AND PROFILE- STA.730+00C/L TO STA.870+00C/L        | MARK IS LOCATED 105 FT. EAST OF BAYOU DUPRE; 282 FT. SOUTH OF STRUCTURE, ON THE EAST BANK OF BAYOU DUPRE CANAL.   |  |
| 6.                | PLAN AND PROFILE- STA.870+00C/L TO STA.1007+91C/L       | MARK IS PROTECTED BY 3-1/2" GALV. PIPE PAINTED YELLOW.  |  |
| 7A.               | PROFILE AND DETAILS- VICINITY OF BAYOU BIENVENUE        |   |  |
| 7B.               | SECTION- DUPRE CONTROL STRUCTURE MAINT. DOCK            | BB-3 EL.5.62 (NGVD)   |  |
| 7C.               | LOC. PLAN & EXIST. GRND. ELEV.- DUPRE CTRL. STRUC. DOCK | MARK IS TOP OF A 1 1/2" GALVANIZED PIPE SET TO A DEPTH OF 105' ENCASED IN A 3" GALV. PIPE MARK IS LOCATED 154' N.W. OF BAYOU BIENVENUE CANAL 297' N.W. OF STRUC. P.B.M. IS PROTECTED BY 3-1/2" GUARD PIPE PAINTED YELLOW. |  |
| 8.                | TYPICAL WALL SECTIONS                                   |   |  |
| 9.                | TYPICAL WALL SECTIONS                                   |   |  |
| 10.               | LEVEE DESIGN SECTION                                    | NOTE:<br>DRAWINGS IN THIS FOLIO HAVE BEEN REDUCED ONE HALF THE ORIGINAL SCALE   |  |
| 11.               | PLAN- BORROW AREA LOCATIONS                             |   |  |
| 12.               | SHEET PILE DETAILS                                      |   |  |
| 13.               | PIPELINE DETAILS  |   |  |
| 14.               | STAGE HYDROGRAPHS                                       |   |  |
| 15.               | SOIL BORING LOGS  |   |  |
| 16.               | BORROW AREA BORINGS                                     |   |  |
| 17.               | SOIL BORING LEGEND                                      |   |  |

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

|  |  |               |                    |
|--|--|---------------|--------------------|
| SUBMITTED:<br><i>David A. Matthews</i><br>CHIEF, DESIGN BRANCH | LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+91 CL.)<br>ORLEANS AND ST. BERNARD PARISHES |               |                    |
| APPROVED:<br><i>W. B. Smith</i><br>CHIEF ENGINEERING DIVISION  | <b>LOCATION MAP, VICINITY MAP<br/>AND INDEX TO DRAWINGS</b>  |               |                    |
| APPROVED:<br><i>Colonel C. E. District Engineer</i>            |  |               |                    |
| DESIGNED: WRIGHT/HOWAT   | DATE: MAY '92  | PLOT SCALE: 1 | FILE NO. H-8-30920 |
| DRAWN: WRIGHT/MATTHEWS   | FILE: 3092001R.DGN   |               |                    |
| CHECKED: LEE/TOMERO  | SPRC NO. DACW29-92-8-0061  |               | DWG. 1 OF 17       |



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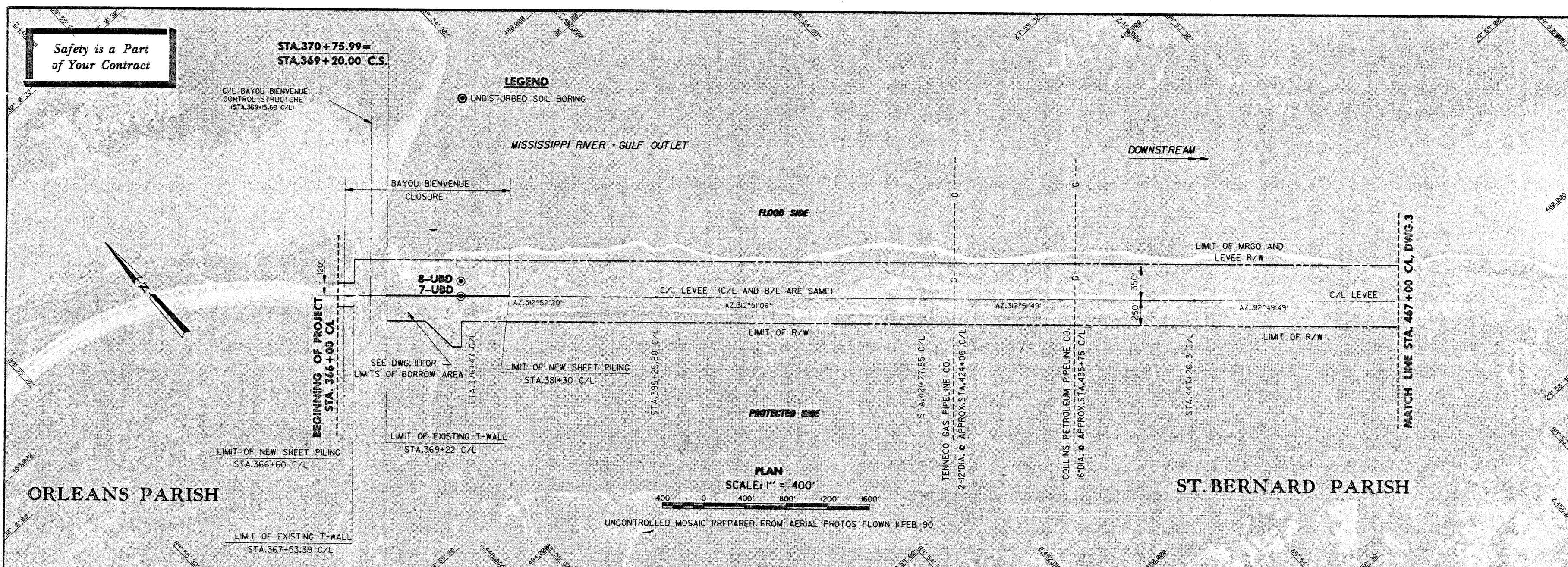
STA.370+75.99=  
STA.369+20.00 C.S.

**LEGEND**

⊙ UNDISTURBED SOIL BORING

MISSISSIPPI RIVER - GULF OUTLET

DOWNSTREAM

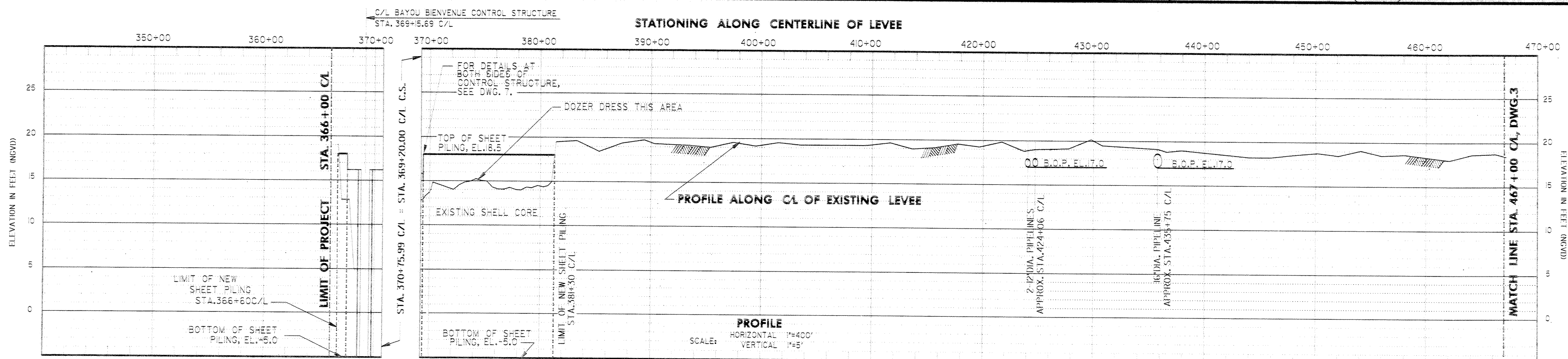


ORLEANS PARISH

ST. BERNARD PARISH

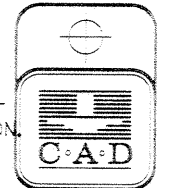
**PLAN**  
SCALE: 1" = 400'

UNCONTROLLED MOSAIC PREPARED FROM AERIAL PHOTOS FLOWN 11 FEB 90



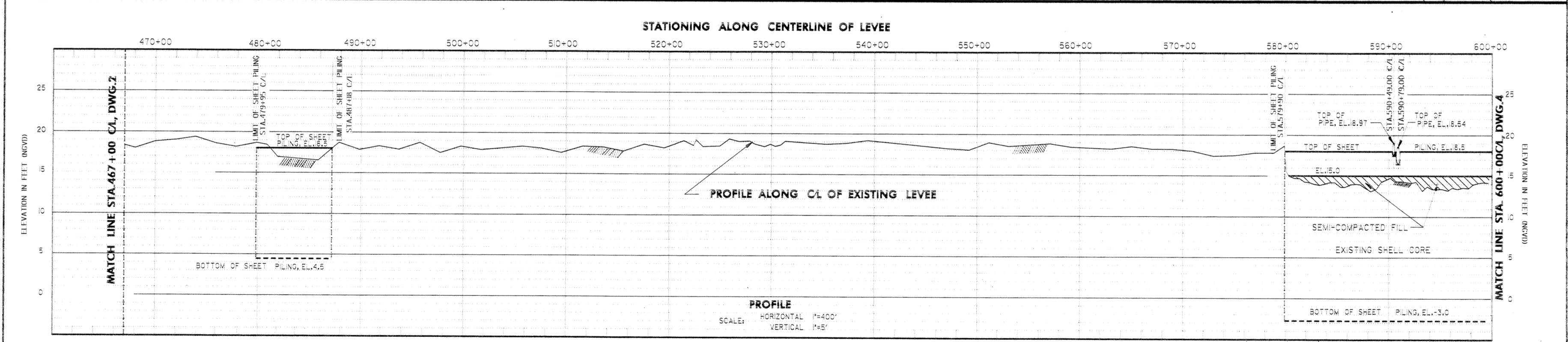
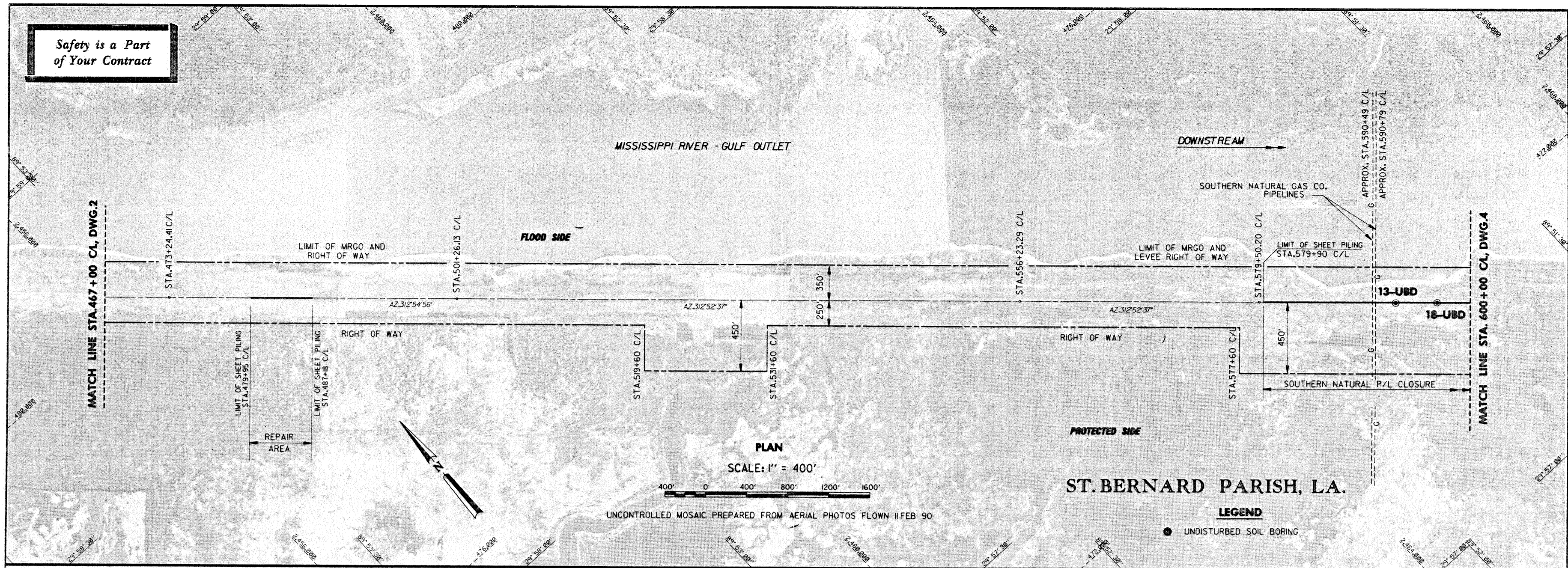
**GENERAL NOTES:**

1. ALL AZIMUTHS ARE TURNED IN A CLOCKWISE DIRECTION FROM 0 (DUE SOUTH).
2. AERIAL PHOTOGRAPHS WERE FLOWN ON 11 FEB '90 AND ARE UNCONTROLLED MOSAIC.
3. UNLESS OTHERWISE NOTED, ALL ELEVATIONS ARE EXPRESSED IN FEET AND REFER TO NATIONAL GEODETIC VERTICAL DATUM (N.V.G.D.).
4. ALL STATIONS SHOWN ON DRAWINGS REFER TO CENTERLINE STATIONS UNLESS OTHERWISE DESIGNATED.
5. FOR LOCATION AND DESCRIPTION OF BENCH MARKS, SEE DWG. 1.
6. FOR TYPICAL CROSS SECTIONS, SEE DWGS. 8 THRU 11.
7. DIMENSIONS AND/OR ELEVATIONS MARKED THUS (N.T.S.) ARE SHOWN NOT TO SCALE.
8. ALL THE R/W AND BORROW AREA LIMITS ARE PARALLEL TO OR PERPENDICULAR WITH THE LEVEE C/L, UNLESS OTHERWISE INDICATED.
9. SEPARATE ATTACHMENT DRAWINGS SHOWING EXISTING GRADES ARE AVAILABLE TO THE CONTRACTOR UPON REQUEST.
10. SETTLEMENT GAGE DETAIL IS SHOWN ON DWG. 10.
11. GROUND ELEVATIONS AT LEVEE CLOSURES WERE TAKEN FROM FIELD SURVEY JOB 90-125.
12. AT TIE-INS WITH FULL LEVEE EARTH SECTIONS, THE SHEETPILE SHOULD BE LEFT 1-FOOT ABOVE THE EXISTING GROUND OR EL. 18.5 WHICHEVER IS HIGHER. USE THE SAME LENGTH OF SHEETPILE AND ALLOW THE TIP TO COME UP WHEN THE TOP ELEVATION FALLS ABOVE EL. 18.5.
13. DIMENSIONS AND/OR ELEVATIONS MARKED (+/-) ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN THE FIELD.
14. THE CONTRACTOR'S PLAN AND SEQUENCE OF BORROW EXCAVATION AND STOCKPILING MATERIAL SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO ANY EXCAVATION.
15. ALL EXISTING PIPELINES CROSSING LEVEE CROWN SHALL NOT BE RELOCATED OR DISTURBED.
16. VEHICLE ACCESS ALONG LEVEE CROWN, EXCEPT AT PIPELINE CROSSINGS AND BAYOUS BIENVENUE AND DUPRE.



| REVISION   | DATE     | DESCRIPTION  | BY               |
|--|----------|--------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA<br>LAKE PONCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA.<br><b>PLAN AND PROFILE</b><br><b>STA. 366+00 CL TO STA. 467+00 CL</b> |          |              |                  |
| DESIGNED:  | W.R.G.T. | DATE:        | MAY '92          |
| DRAWN:   | MATTHEWS | PLOT SCALE:  | 4800             |
| CHECKED:   | LEE      | DESIGN FILE: | 30920F02.DGN     |
| SUBMITTED:   |          | SPEC. NO.:   | DACW29 92-B-0061 |
|  |          | FILE NO.:    | H-8-30920        |
|  |          | DWG.:        | 2 OF 17          |

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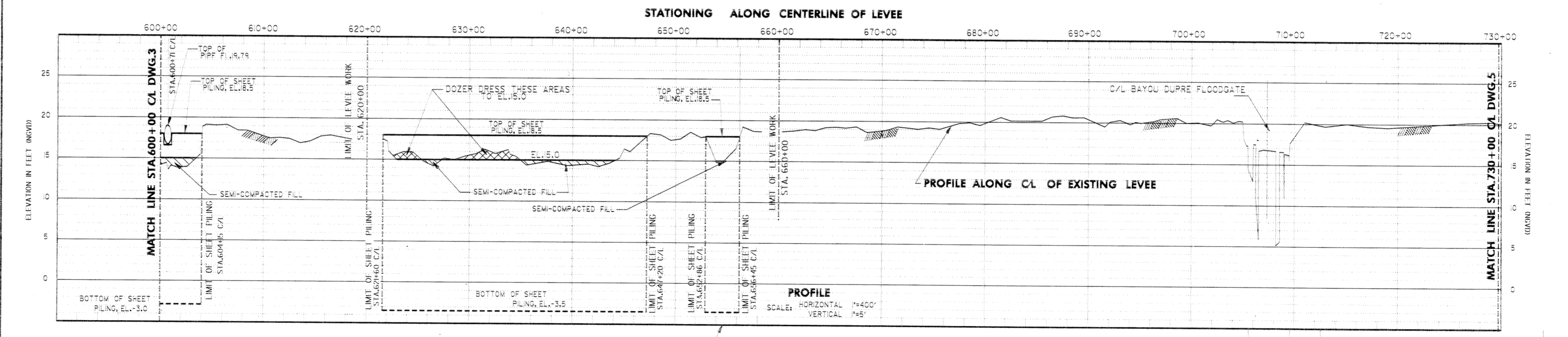
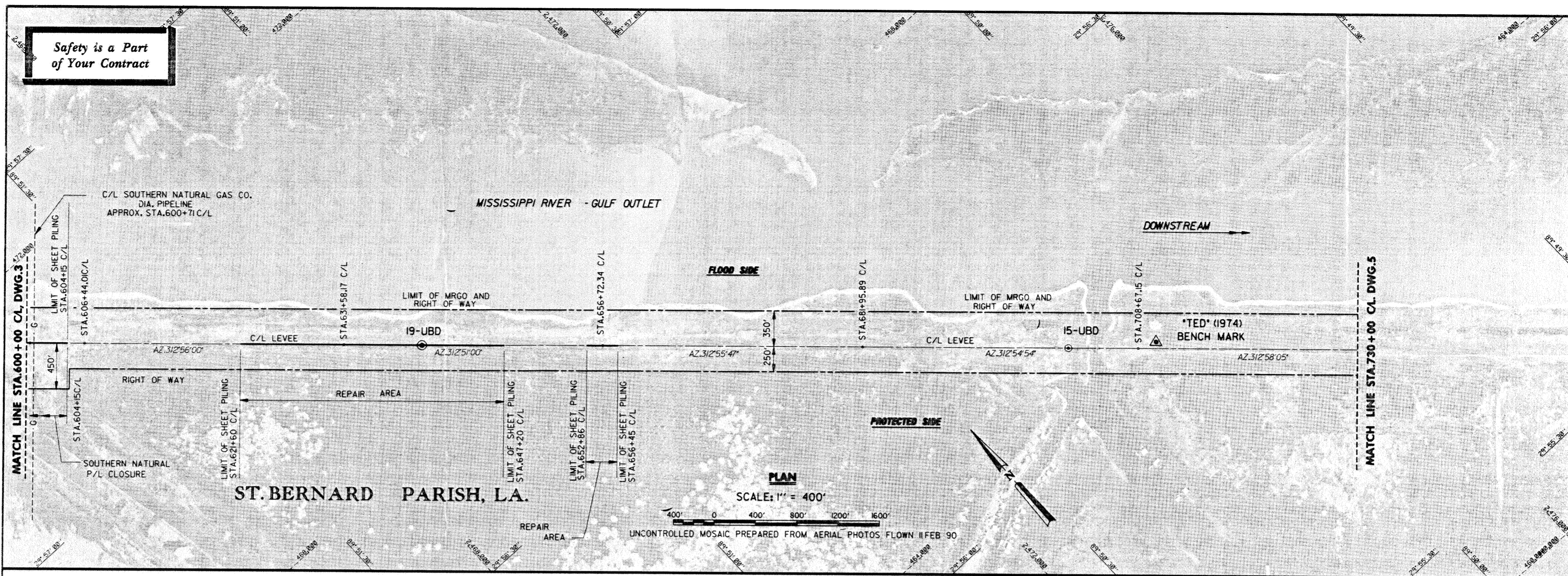


- NOTES:
1. FOR GENERAL NOTES, SEE DWG. 2.
  2. SOIL BORING LOGS ARE SHOWN ON DWG. 15.
  3. C/L PROFILE WAS EXTRACTED FROM LEVEE SURVEY JOB 91-012.
  4. FOR DETAILS OF BORROW AREA LIMITS, SEE DWG. 11.

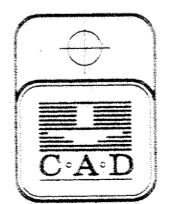
| REVISION  | DATE     | DESCRIPTION  | BY               |
|---|----------|--------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA<br><br>LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA.<br><br><b>PLAN AND PROFILE</b><br><b>STA. 467+00 CL TO STA. 600+00 CL</b> |          |              |                  |
| DESIGNED:   | ARCHT    | DATE:        | MAY '92          |
| DRAWN:  | MATTHEWS | SCALE:       | 4800             |
| CHECKED:  | LEE      | DESIGN FILE: | 30820F03.DGN     |
| SUBMITTED:  |          | SPEC. NO.:   | DACW29-92-B-0061 |
|   |          | FILE NO.:    | H-8-30920        |
|   |          | DWG.:        | 3 OF 17          |



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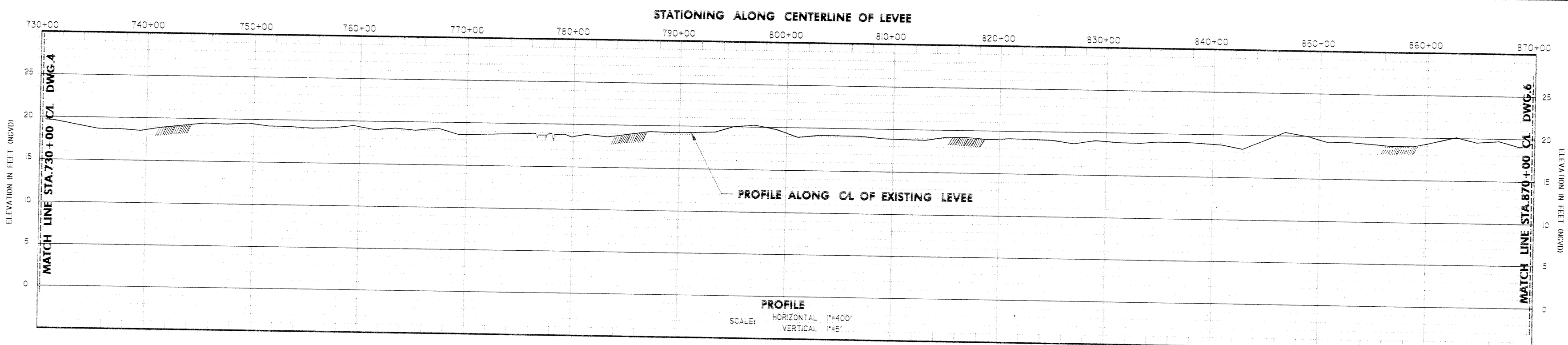
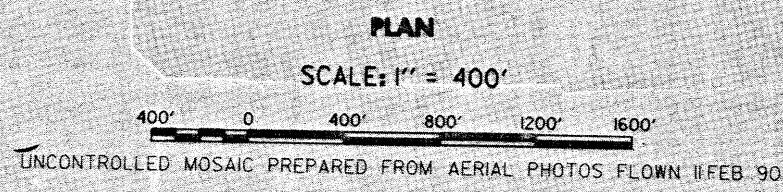
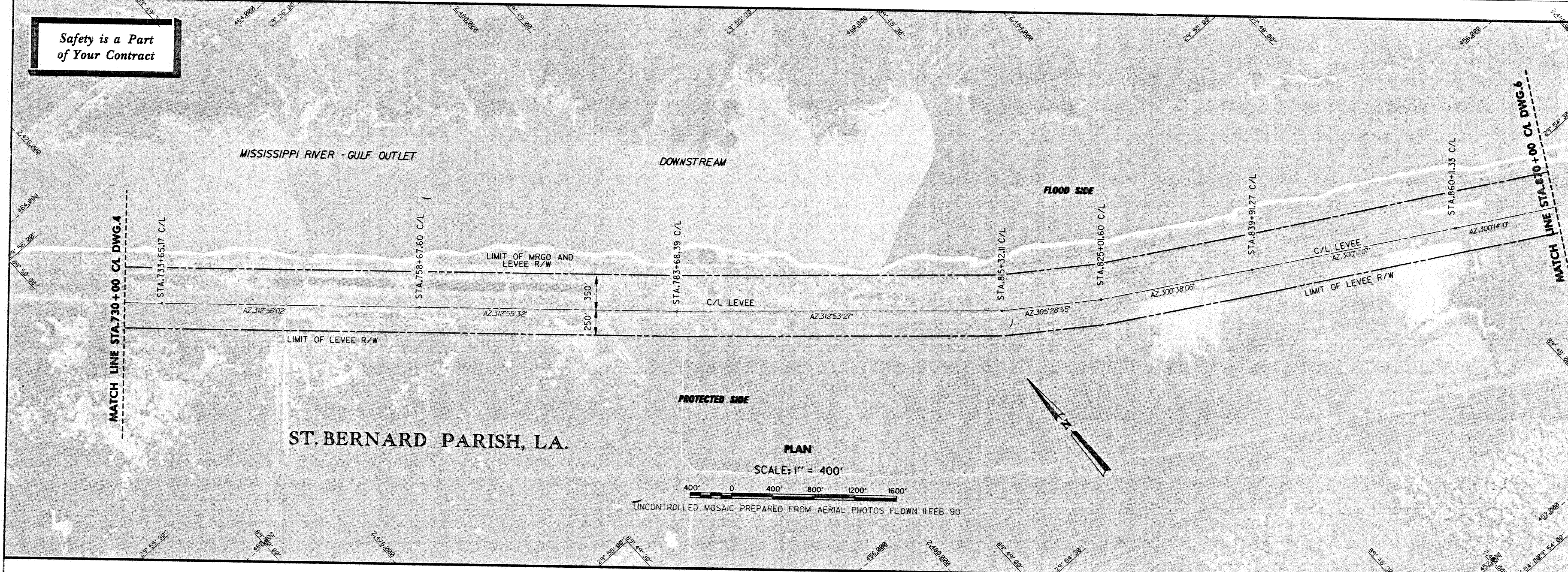


- NOTES:
1. FOR GENERAL NOTES, SEE DWG. 2.
  2. FOR LIMITS OF AVAILABLE BORROW AREA, SEE DWG. 11.
  3. SOUTHERN NATURAL P/L CLOSURE WORK AREA IS ALSO SHOWN ON DWG. 13.
  4. SOIL BORING LOGS ARE SHOWN ON DWG. 15.
  5. C/L PROFILE WAS EXTRACTED FROM LEVEE SURVEY JOB 90-125.



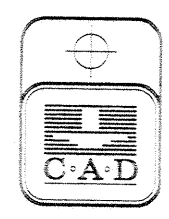
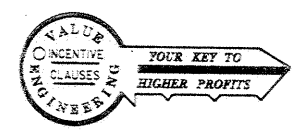
| REVISION   | DATE                       | DESCRIPTION      | BY               |
|--|----------------------------|------------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA   |                            |                  |                  |
| LAKE PONCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 C/L TO STA. 1007+91 C/L)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA. |                            |                  |                  |
| <b>PLAN AND PROFILE</b><br><b>STA. 600+00 C/L TO STA. 730+00 C/L</b>   |                            |                  |                  |
| DESIGNED: WRIGHT   | DATE: MAY '92              | PLOT SCALE: 4800 | FILE NO.         |
| DRAWN: MATTHEWS  | DESIGN FILE: 30920F04.DGN  |                  | <b>H-8-30920</b> |
| CHECKED: LEE   | SPEC. NO. DACW29-92-B-0061 |                  | DWG. 4 OF 17     |

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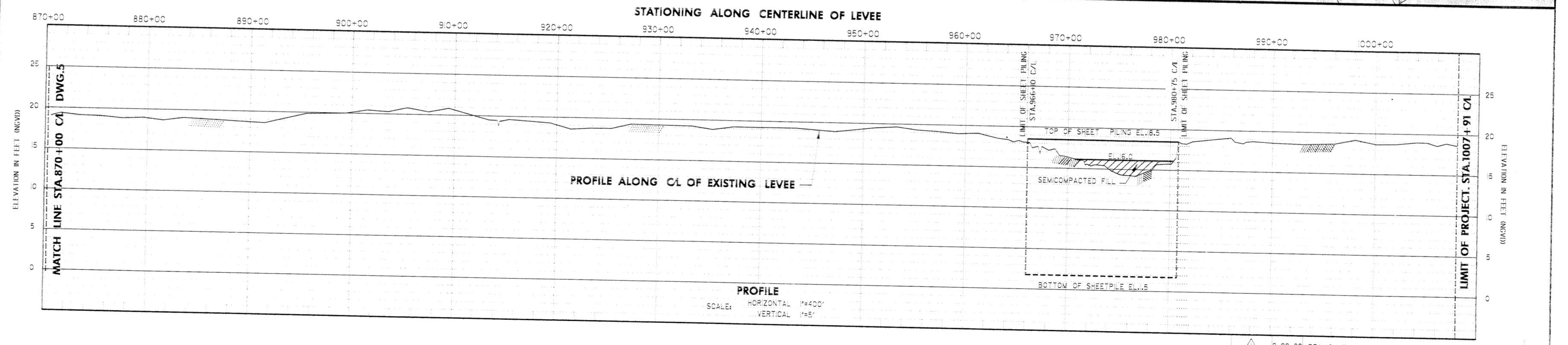
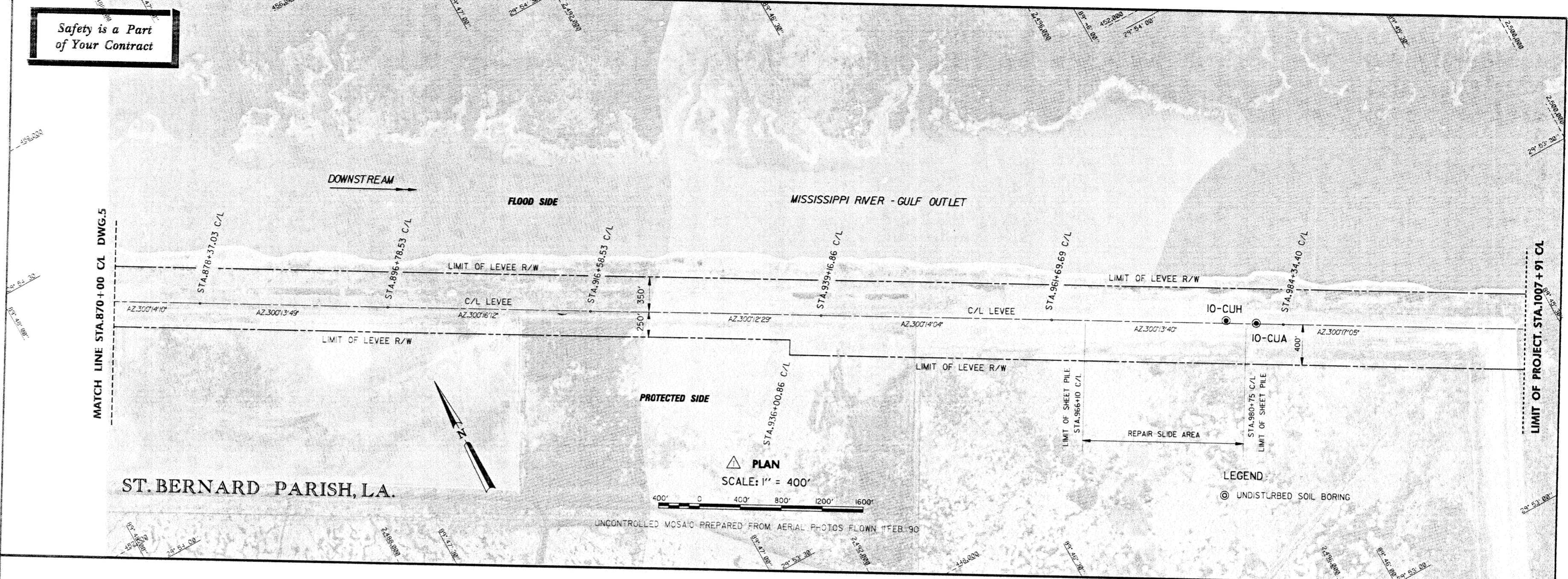
**PROFILE**  
SCALE: HORIZONTAL 1"=400'  
VERTICAL 1"=5'

- NOTES:
1. FOR GENERAL NOTES, SEE DWG. 2.
  2. NO WORK SITES ARE LOCATED WITHIN THESE STATIONS.
  3. C/L PROFILE WAS EXTRACTED FROM LEVEE SURVEY JOB 90-125.



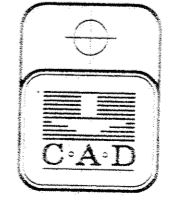
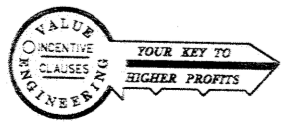
| REVISION  | DATE                       | DESCRIPTION               | BY               |
|---|----------------------------|---------------------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA  |                            |                           |                  |
| LAKE FORTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+81 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA. |                            |                           |                  |
| <b>PLAN AND PROFILE</b><br><b>STA. 730+00 CL TO STA. 870+00 CL</b>  |                            |                           |                  |
| DESIGNED: WRIGHT  | DATE: MAY '92              | PLOT SCALE: 4800          | FILE NO.         |
| DRAWN: MATTHEWS   | CHECKED: LEE               | DESIGN FILE: 33920P05.DGN | <b>H-8-30920</b> |
| SUBMITTED: <i>[Signature]</i>   | SPEC. NO. DACW28-92-B-0061 | DWG. 5                    | OF 17            |

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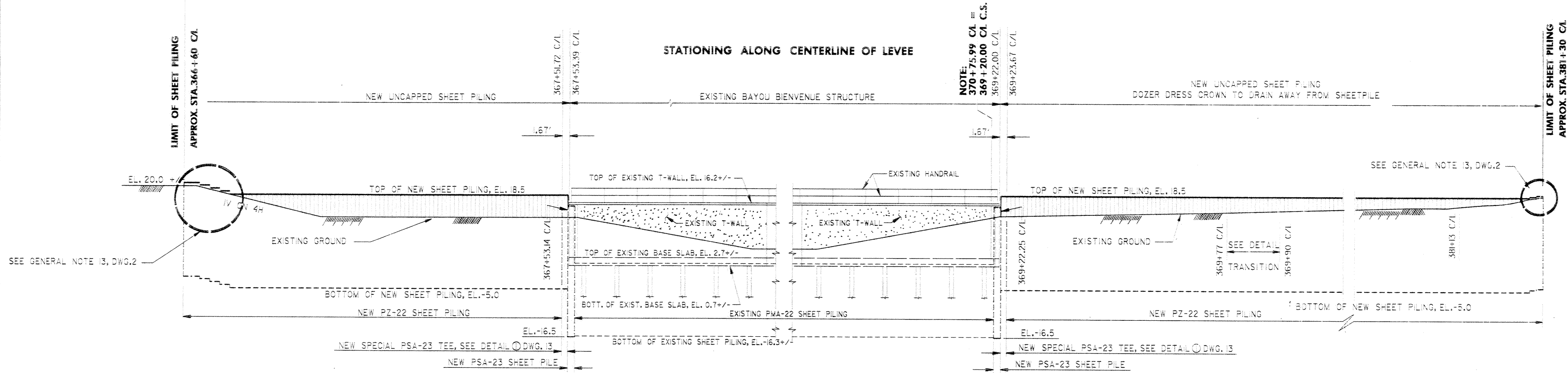
- NOTES:
1. FOR GENERAL NOTES, SEE DWG. 2.
  2. C/L PROFILE WAS EXTRACTED FROM LEVEE SURVEY JOB 91-012.
  3. FOR LIMITS OF BORROW AREA, SEE DWG. 11.

**THIS PLAN ACCOMPANIES MODIFICATION 0000 TO CONTRACT NUMBER DACW29-8 -C-0**



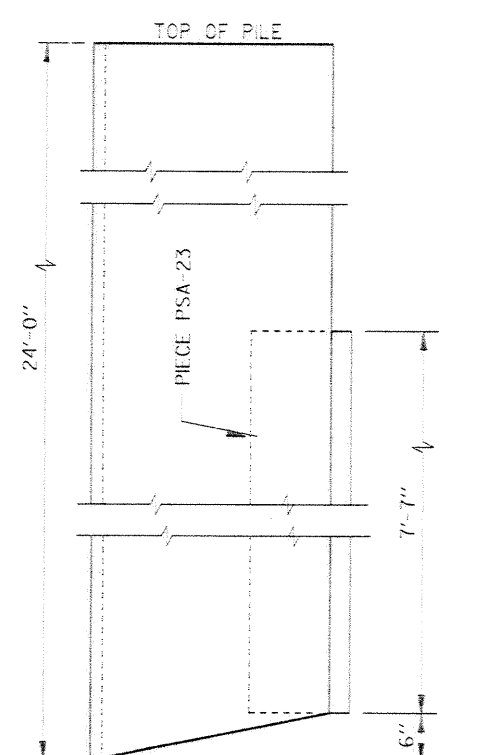
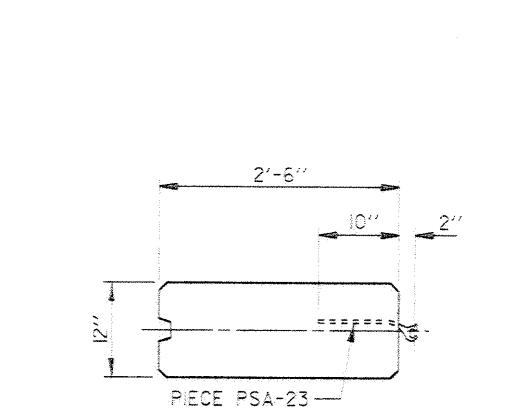
|   |                           |                           |                  |
|---|---------------------------|---------------------------|------------------|
| REVISION  | DATE                      | DESCRIPTION               | BY               |
| 1   | 9-22-92                   | REALIGN PLAN PHOTO        | T.W.W.           |
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA  |                           |                           |                  |
| LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 866+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA. |                           |                           |                  |
| <b>PLAN AND PROFILE</b><br><b>STA. 870+00 CL TO STA. 1007+91 CL</b>   |                           |                           |                  |
| DESIGNED: WRIGHT  | DATE: APR. 92             | PLOT SCALE: 400:1         | FILE NO.         |
| DRAWN: MATTHEWS   | CHECKED: LEE              | DESIGN FILE: 33920F08.DGN | <b>H-8-30920</b> |
| SUBMITTED: <i>Matthews</i>  | SPEC. NO. <b>DACW29-X</b> | DWG. 6 OF 17              |                  |

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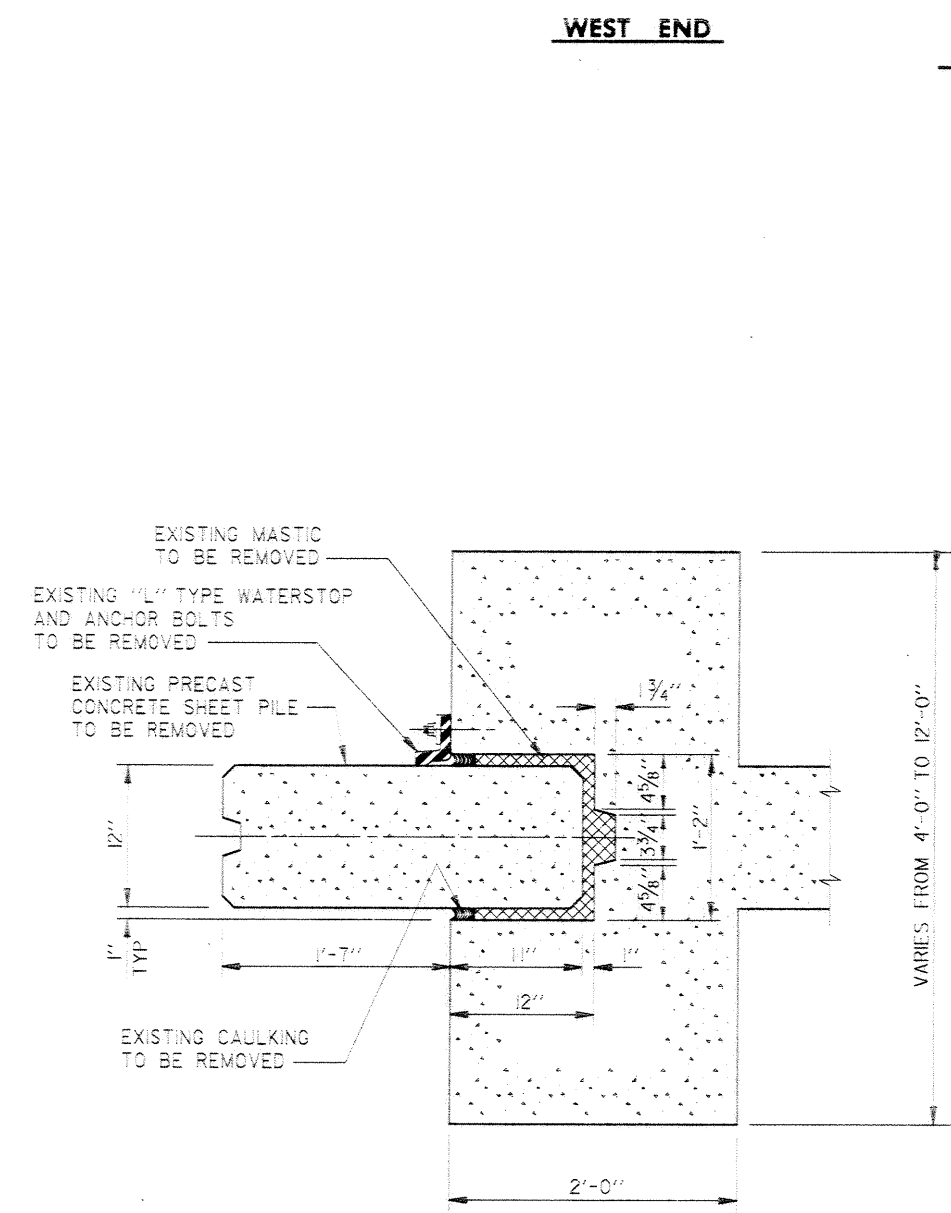


STATIONING ALONG CENTERLINE OF LEVEE

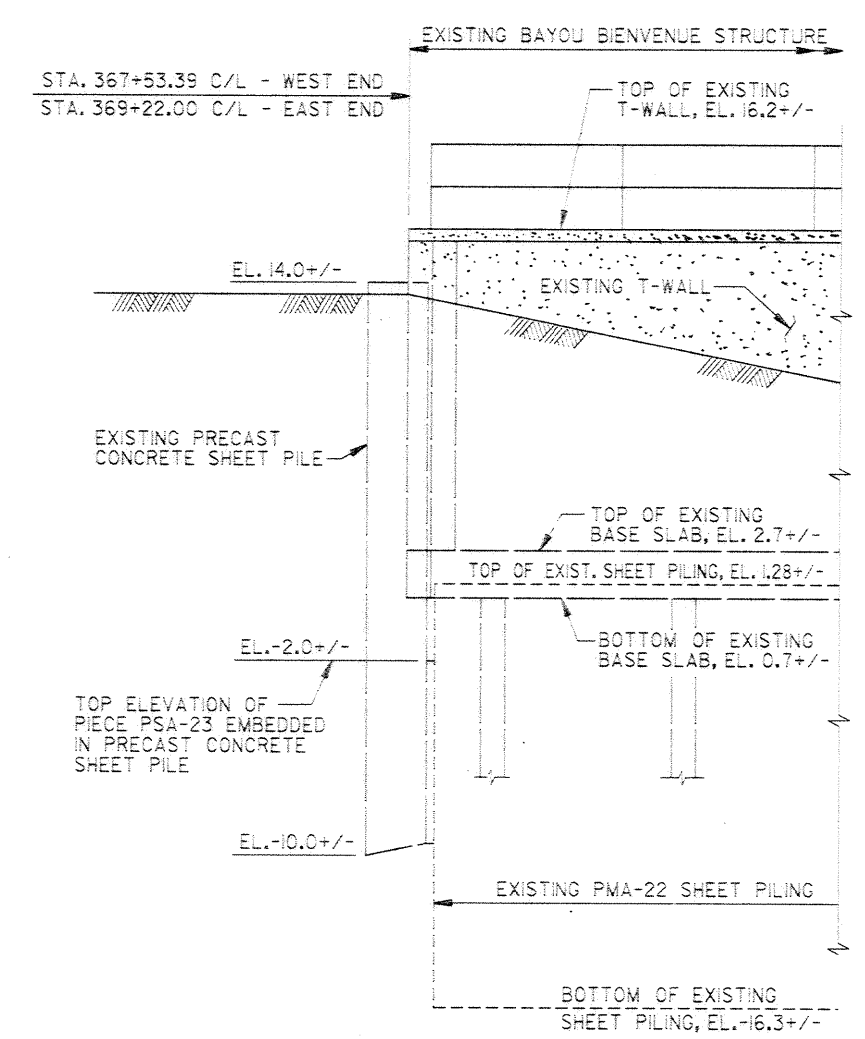
**PROTECTED SIDE ELEVATION PROFILE**  
SCALE: 1" = 10'



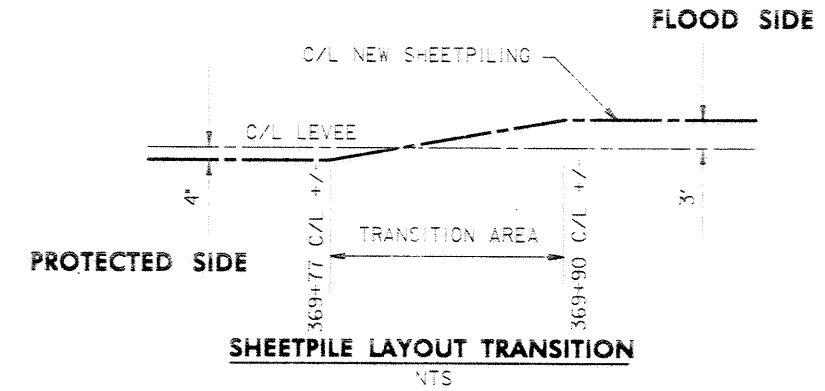
**EXISTING PRECAST CONCRETE SHEET PILE DETAIL**  
SCALE: 1" = 1'-0"



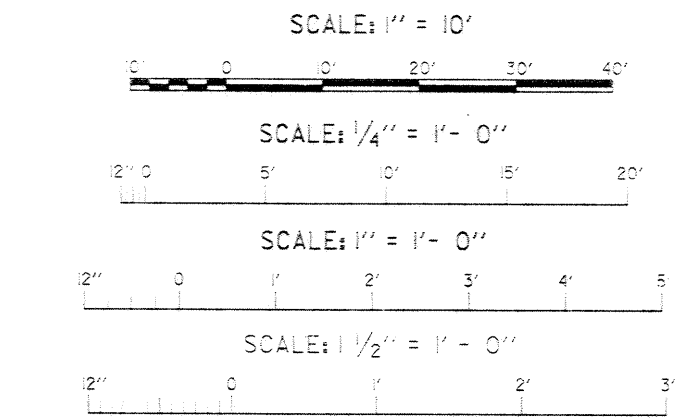
**PLAN SECTION**  
VICINITY STA. 367+53.39 CL - SHOWN  
VICINITY STA. 369+22.00 CL - OPPOSITE HAND  
**EXISTING T-WALL END BULKHEAD DETAIL**  
SCALE: 1 1/2" = 1'-0"



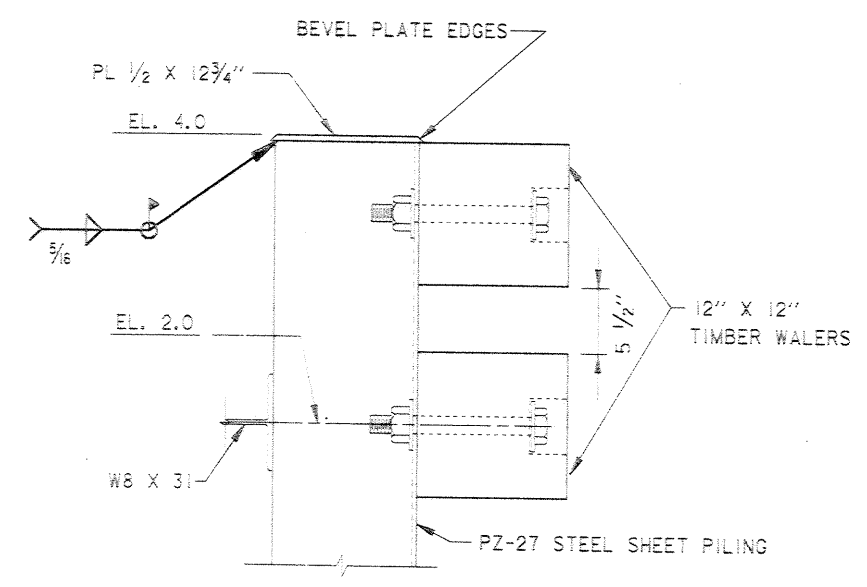
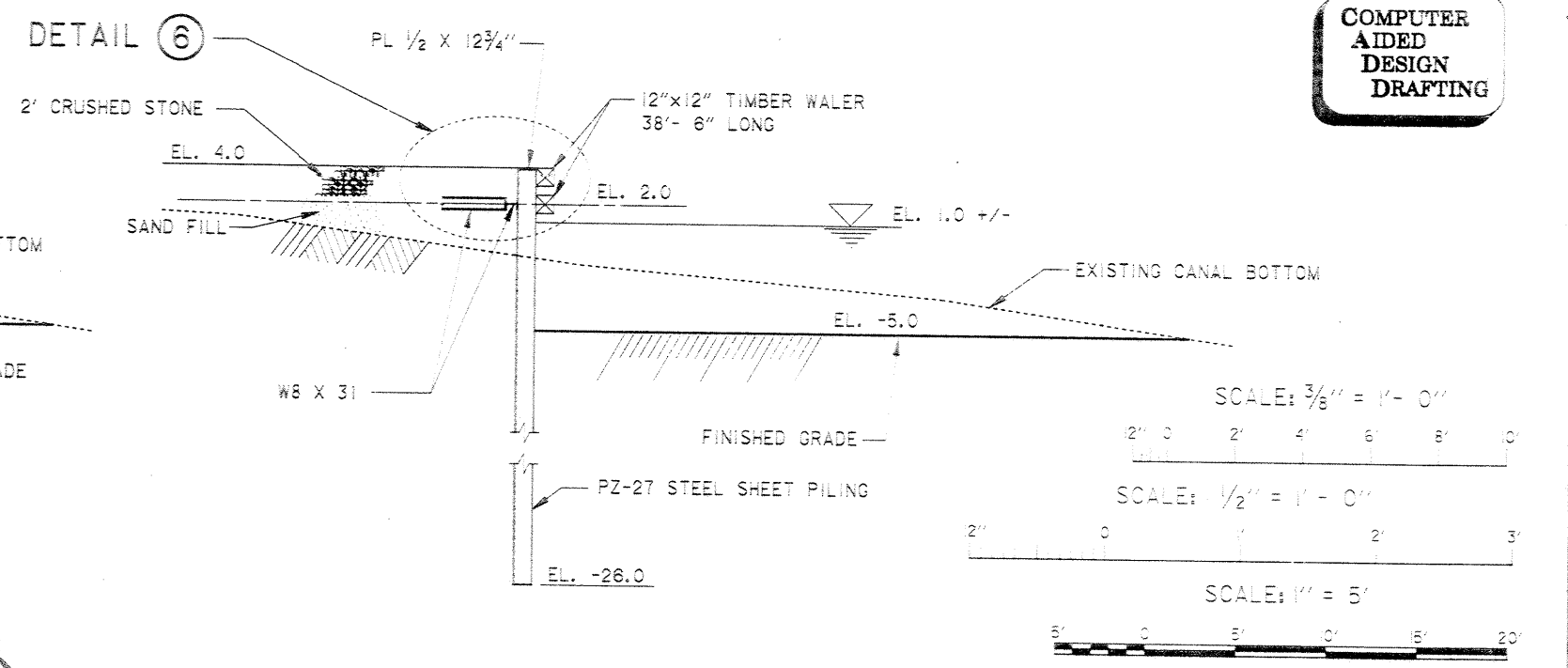
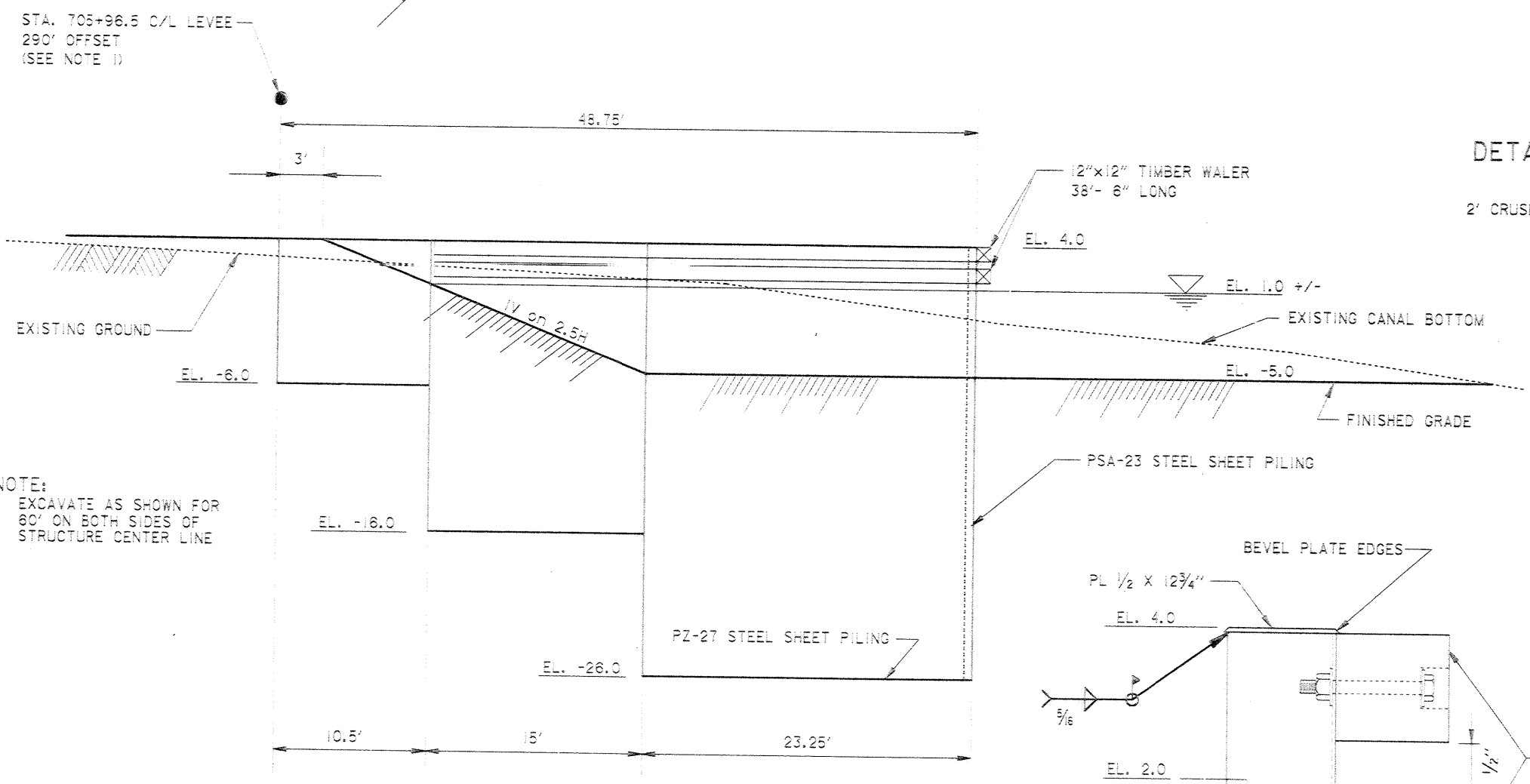
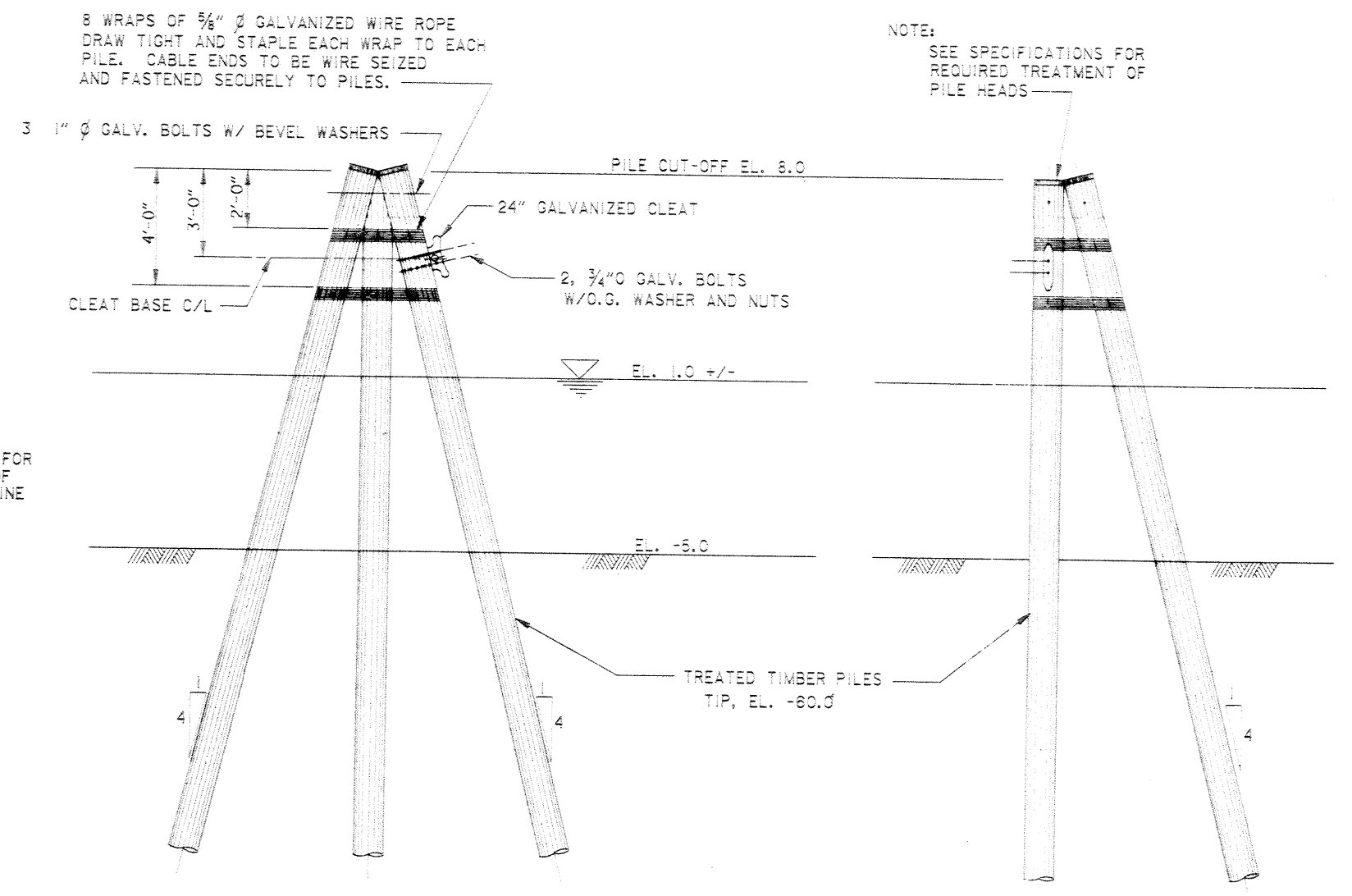
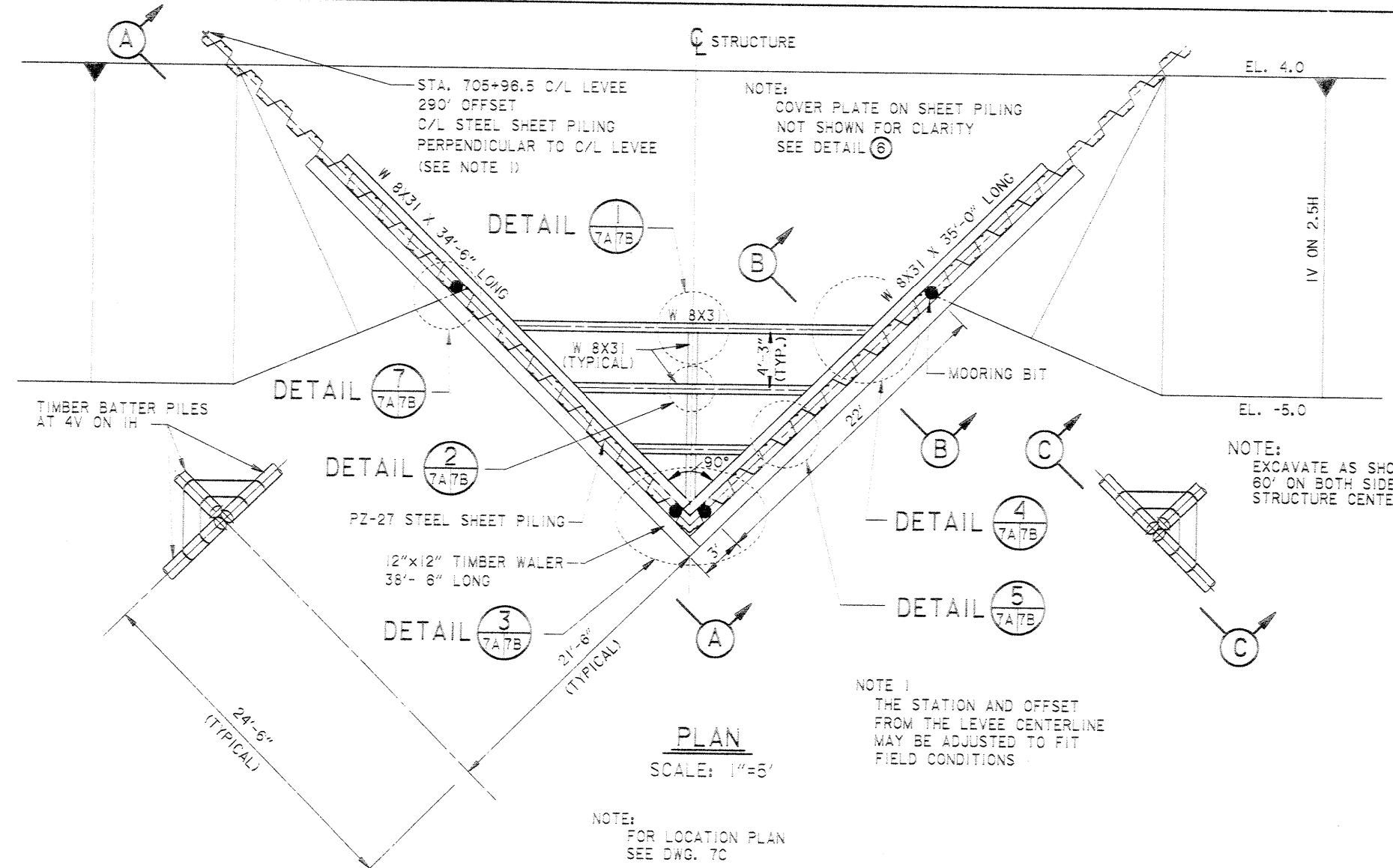
**ELEVATION OF EXISTING T-WALL END BULKHEAD**  
VICINITY STA. 367+53.39 CL - SHOWN  
VICINITY STA. 369+22.00 CL - OPPOSITE HAND  
SCALE: 1/4" = 1'-0"



**SHEETPILE LAYOUT TRANSITION**  
NTS



| REVISION   | DATE    | DESCRIPTION  | BY               |
|--|---------|--------------|------------------|
| <p align="center"><b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS<br/>CORPS OF ENGINEERS<br/>NEW ORLEANS, LOUISIANA</b></p> <p align="center">CHALMETTE AREA PLAN<br/>HURRICANE PROTECTION LEVEE CLOSURES<br/>(STA. 366+00 CL TO STA. 1007+91 CL)<br/>ORLEANS PARISH AND ST. BERNARD PARISH, LA.</p> <p align="center"><b>PROFILE AND DETAILS<br/>VICINITY OF BAYOU BIENVENUE STRUCTURE</b></p> |         |              |                  |
| DESIGNED:  | WRIGHT  | DATE:        | MAY '92          |
| DRAWN:   | H.WAT   | PLOT SCALE:  | 10:1             |
| CHECKED:   | ROU, RO | DESIGN FILE: | 30920F08.DGN     |
| SUBMITTED:   |         | SPR. NO.:    | DAOW28-92-B-0061 |
|  |         | FILE NO.:    | H-8-30920        |
|  |         | DWG.         | 7 OF 17          |



- NOTES:
1. FOR GENERAL NOTES, SEE DWG. 2.
  2. ALL STEEL SHEET PILING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A890.
  3. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH COAL TAR EPOXY.
  4. ALL STEEL SHEET PILING SHALL BE PAINTED WITH COAL TAR EPOXY FROM THE TOP TO A POINT 3' BELOW FINISHED GRADE.

NOTE:  
STRUCTURE IS SYMMETRICAL ABOUT CENTER LINE



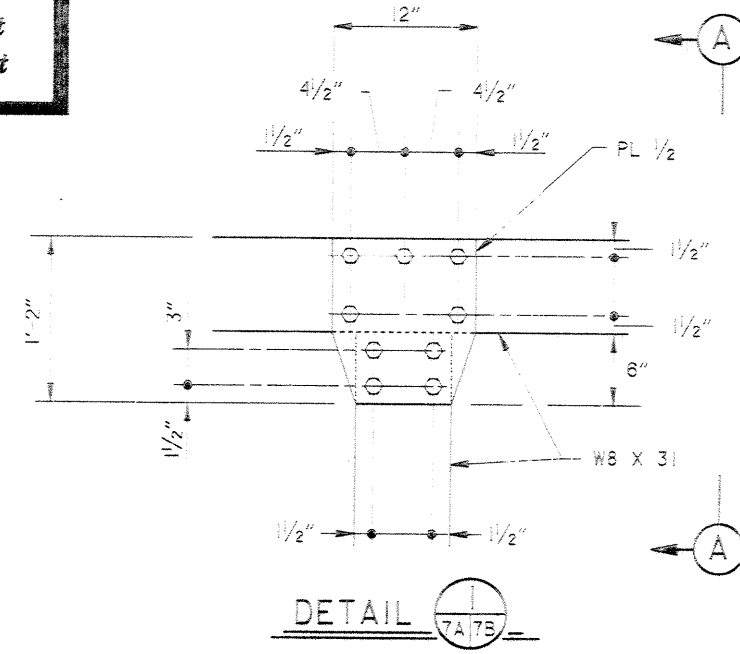
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COMPUTER  
AIDED  
DESIGN  
DRAWING

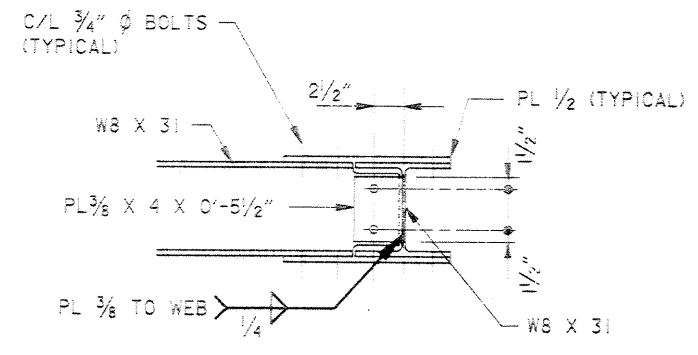
| REVISION   | DATE   | DESCRIPTION  | BY               |
|--|--------|--------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA<br><br>LAKE PONCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA.<br><b>PLAN AND SECTION</b><br><b>DUPRE CONTROL STRUCTURE MAINTENANCE DOCK</b> |        |              |                  |
| DESIGNED:  | ROWER  | DATE:        | MAY '92          |
| DRAWN:   | ROWER  | PLOT SCALE:  | 60               |
| CHECKED:   | ROW-10 | DESIGN FILE: | 30320POLDGN      |
| SUBMITTED:   |        | SPEC. NO.:   | DACW28-92-B-0061 |
|  |        | FILE NO.:    | H-8-30920        |
|  |        | DWG.:        | 7A OF 17         |



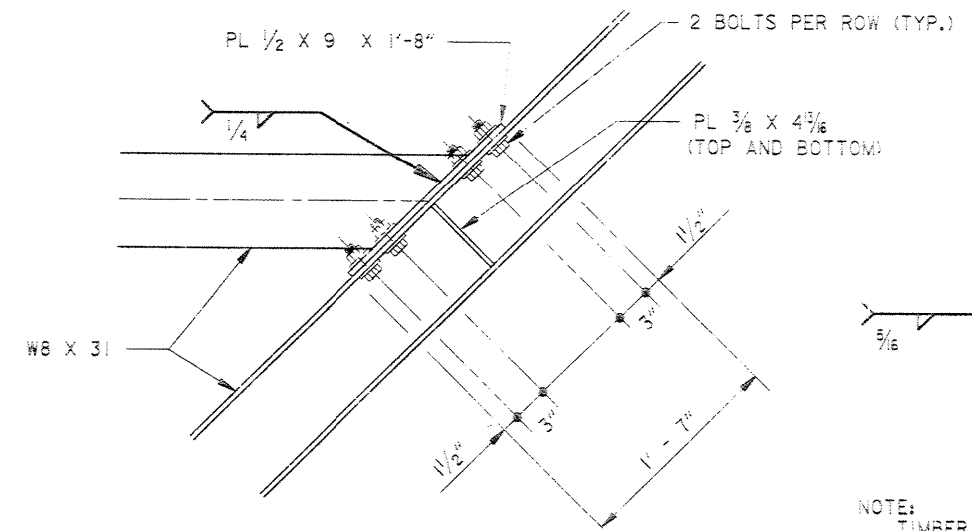
**Safety is a Part of Your Contract**



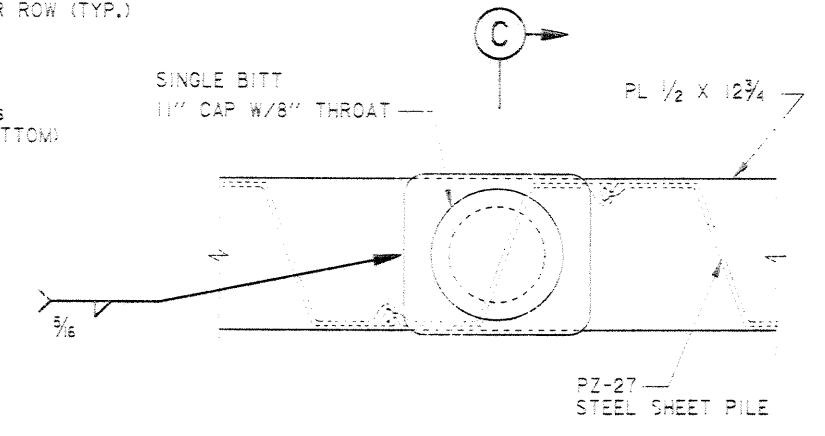
**DETAIL 1**  
7A17B



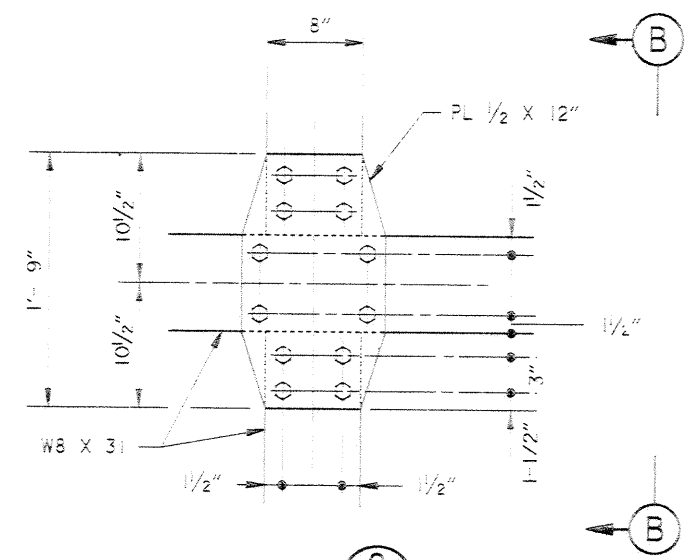
**SECTION A**



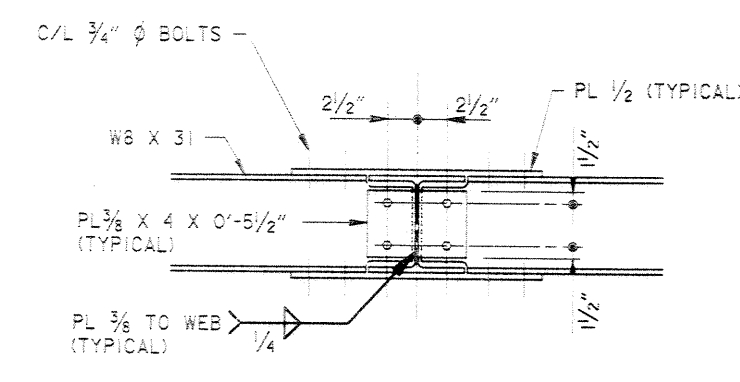
**DETAIL 4**  
7A17B



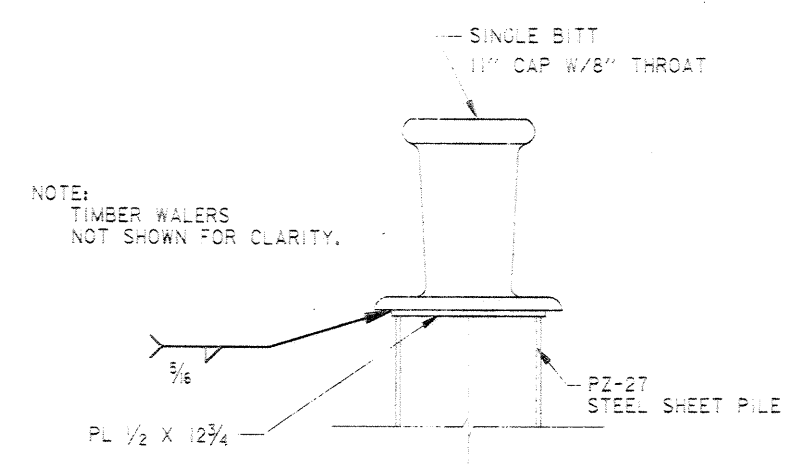
**DETAIL 7**  
7A17B



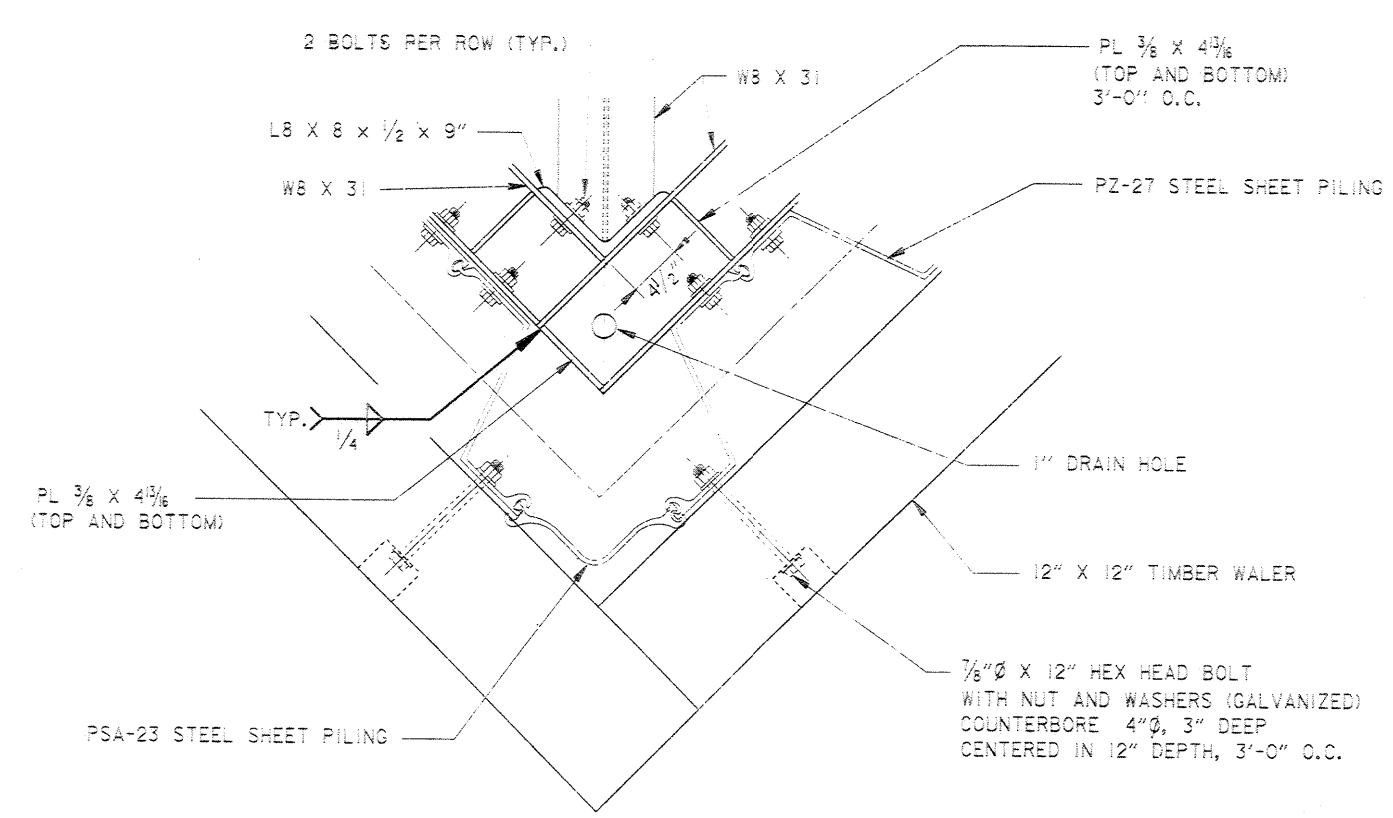
**DETAIL 2**  
7A17B



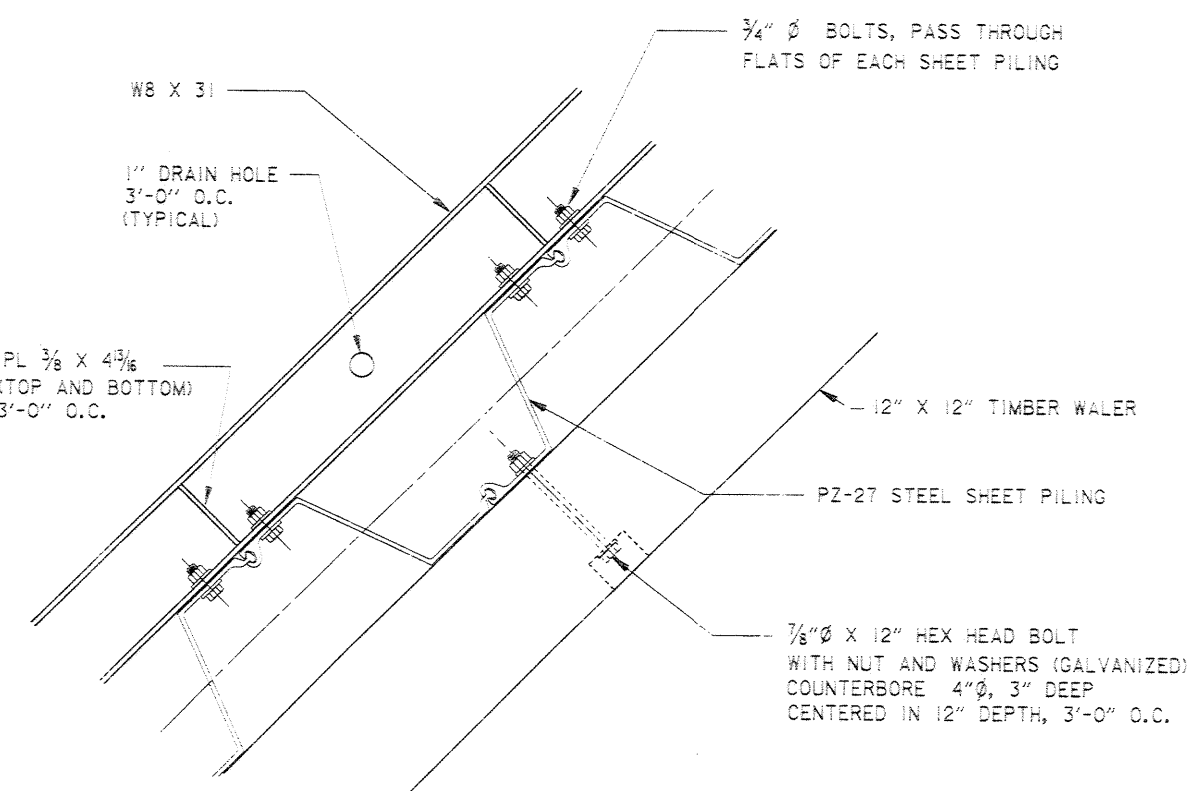
**SECTION B**



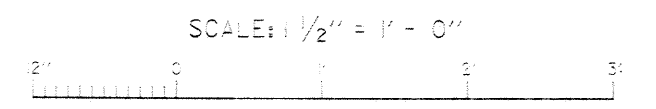
**SECTION C**



**DETAIL 3**  
7A17B



**DETAIL 5**  
7A17B



NOTE:  
COVER PLATE ON SHEET PILING  
NOT SHOWN FOR CLARITY.

- NOTES:
1. FOR GENERAL NOTES, SEE DWG. 2.
  2. UNLESS NOTED OTHERWISE, ALL BOLTS SHALL BE 3/4" Ø WITH WASHERS (GALVANIZED).
  3. ALL STEEL SHEET PILING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A690.
  4. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH COAL TAR EPOXY.
  5. ALL STEEL SHEET PILING SHALL BE PAINTED WITH COAL TAR EPOXY FROM THE TOP TO A POINT 3" BELOW FINISHED GRADE.

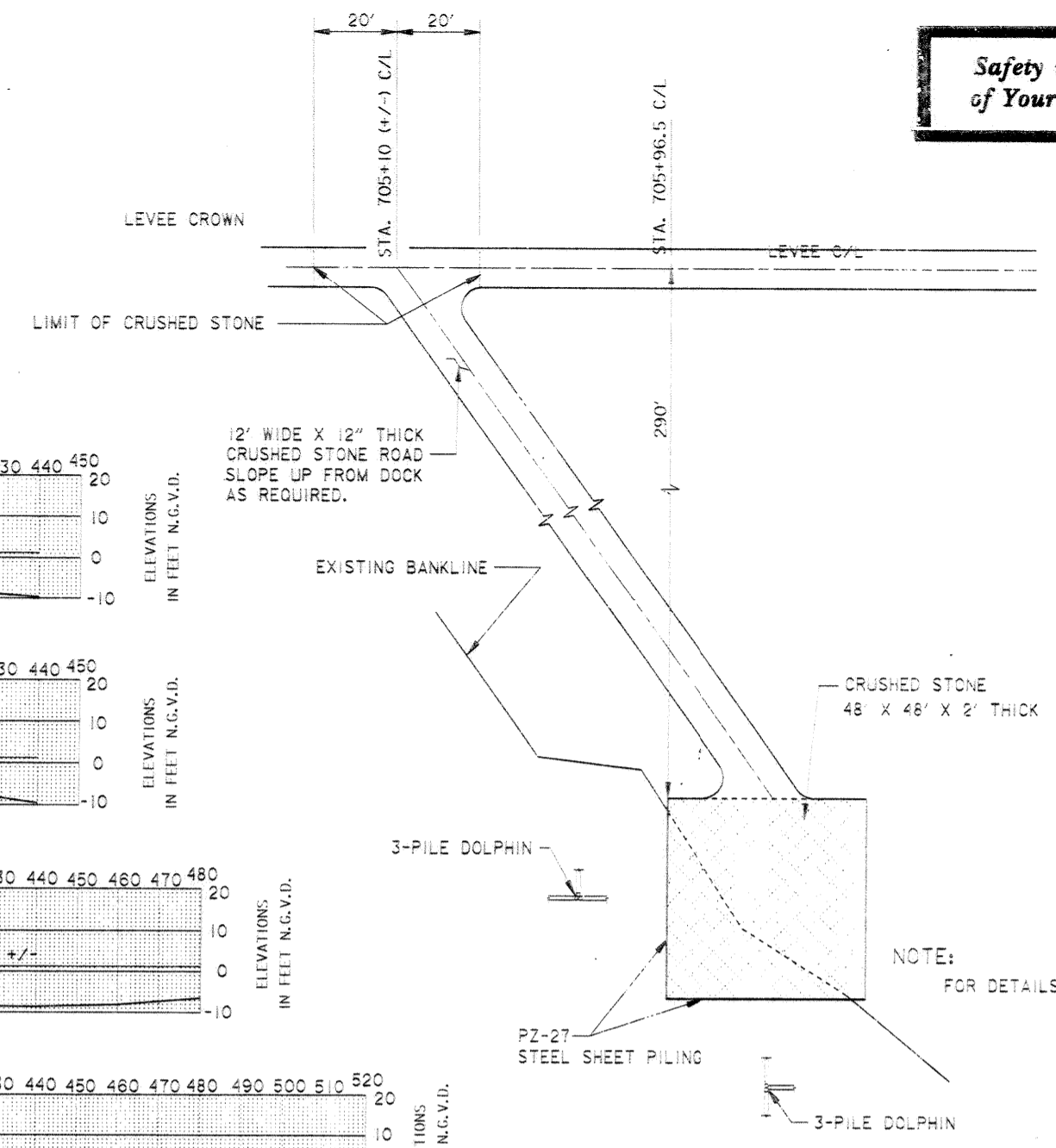
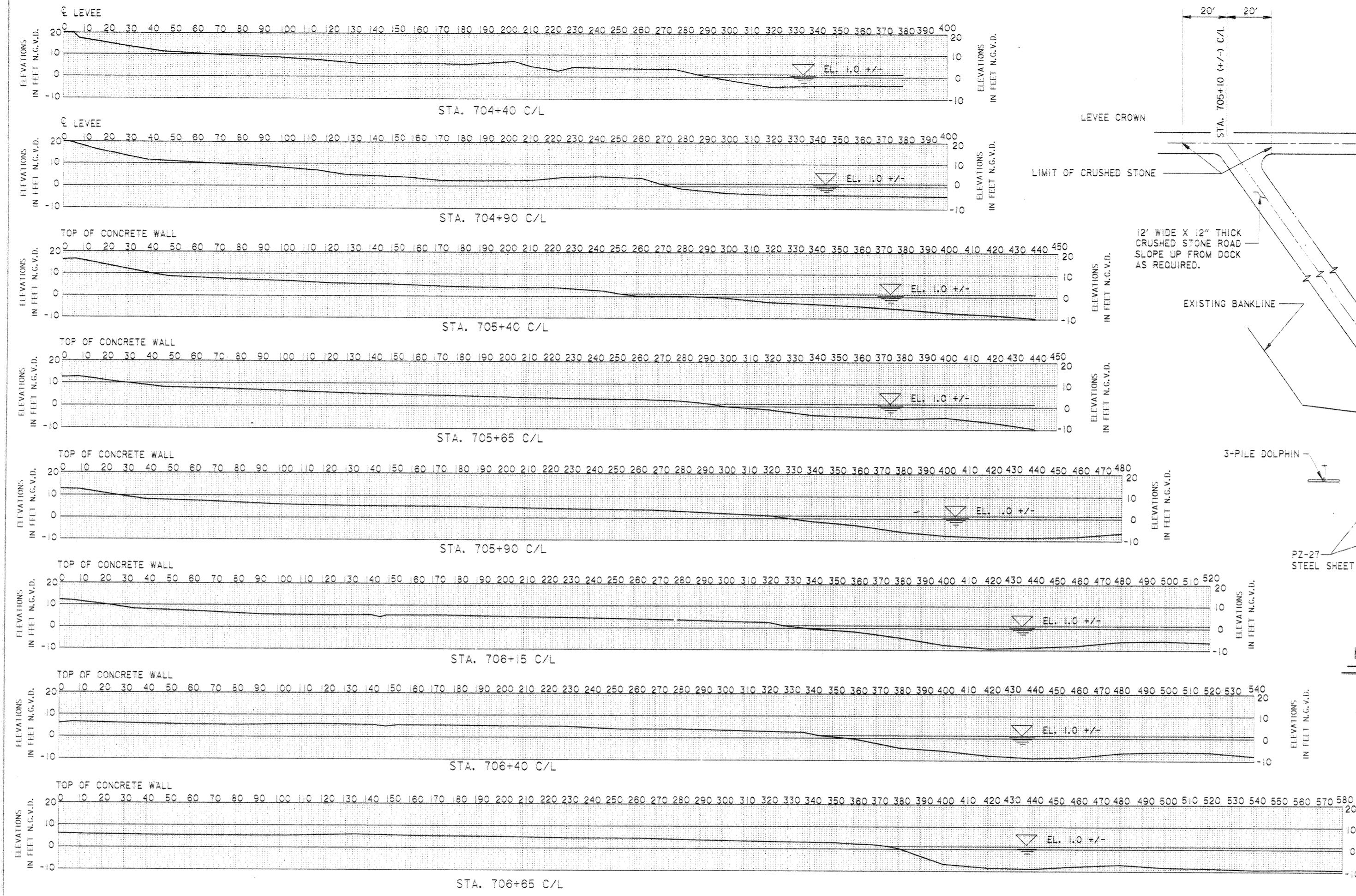
NOTE:  
COVER PLATE ON SHEET PILING  
NOT SHOWN FOR CLARITY.

**COMPUTER AIDED DESIGN DRAFTING**



| REVISION  | DATE  | DESCRIPTION                | BY                 |
|---|-------|----------------------------|--------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA<br><br>LAKE PONCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA 366+00 CL TO STA 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA.<br><b>SECTIONS</b><br><b>DUPRE CONTROL STRUCTURE MAINTAINANCE DOCK</b> |       |                            |                    |
| DESIGNED:   | ROWER | DATE: MAY '92              | FILE NO. H-8-30920 |
| DRAWN:  | ROWER | PLOT SCALE: 8              |                    |
| CHECKED:  | ROWER | DESIGN FILE: 30822P02.DGN  |                    |
| SUBMITTED:  |       | SPEC. NO. DACW29-92-B-0061 | DWG. 7B OF 17      |

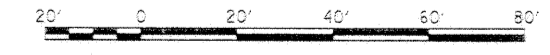
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of Your Contract**



**MAINTENANCE DOCK  
LOCATION PLAN**

**EXISTING GROUND CROSS SECTIONS**

SCALE: 1" = 20'



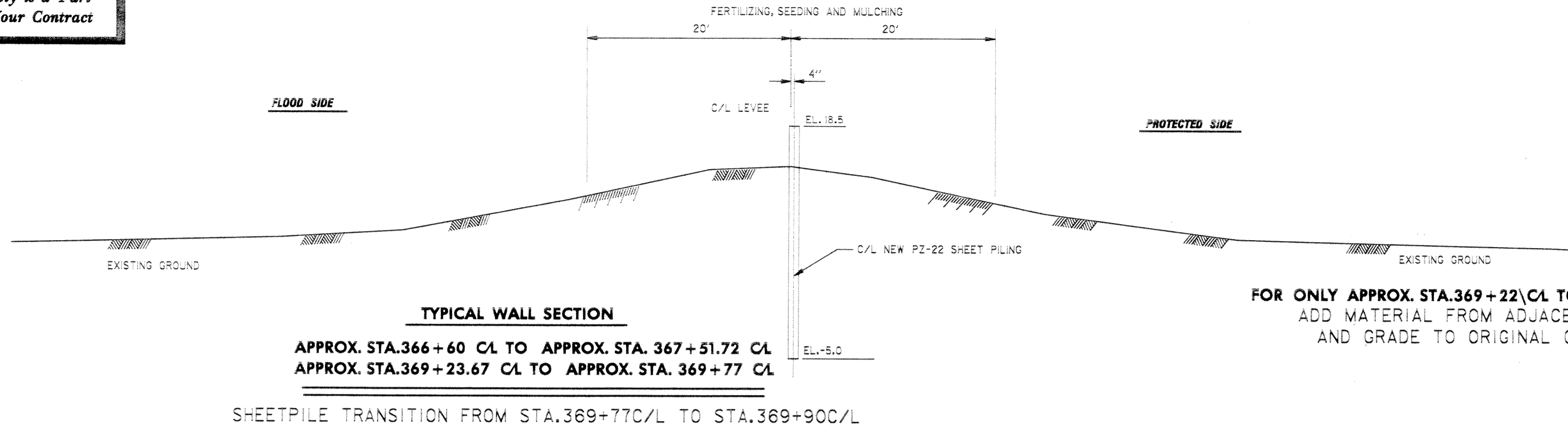
- NOTES:**
1. ALL ELEVATIONS REFER TO FEET N.G.V.D.
  2. ALL CROSS-SECTIONS ARE PERPENDICULAR TO LEVEE CENTERLINE.
  3. CROSS-SECTIONS TAKEN DURING APRIL 1992.
  4. FOR GENERAL NOTES, SEE DWG. 2.
  5. ALL STEEL SHEET PILING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A690.
  6. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH COAL TAR EPOXY.
  7. ALL STEEL SHEET PILING SHALL BE PAINTED WITH COAL TAR EPOXY FROM THE TOP TO A POINT 3' BELOW FINISHED GRADE.

**COMPUTER  
AIDED  
DESIGN  
DRAFTING**

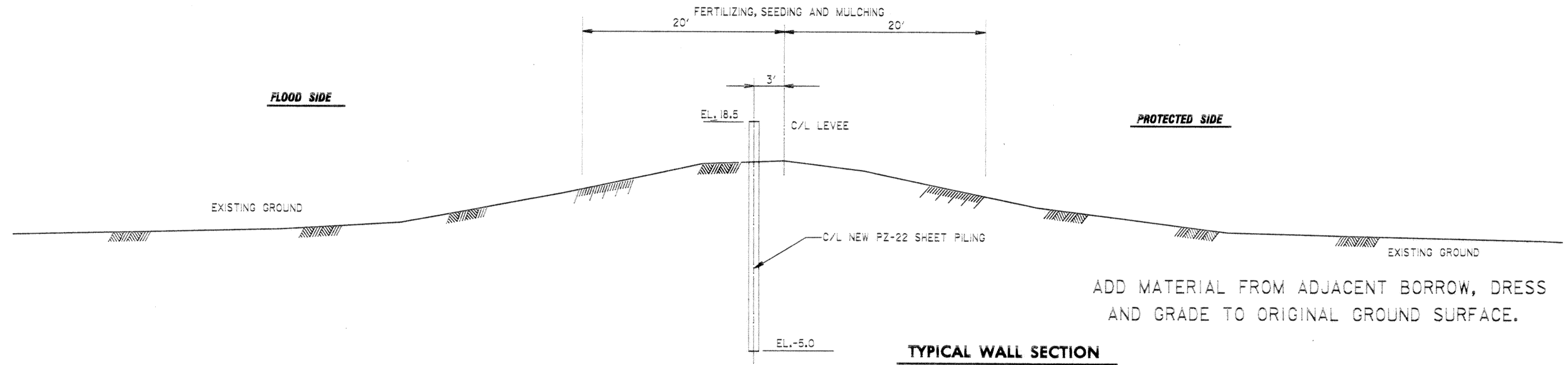


| REVISION   | DATE             | DESCRIPTION  | BY               |
|--|------------------|--------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS<br/>CORPS OF ENGINEERS<br/>NEW ORLEANS, LOUISIANA</b>   |                  |              |                  |
| <small>LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br/>CHALMETTE AREA PLAN</small><br><b>HURRICANE PROTECTION LEVEE CLOSURES<br/>(STA. 966+00 CL TO STA. 1007+91 CL)<br/>ORLEANS PARISH AND ST. BERNARD PARISH, LA.</b> |                  |              |                  |
| <b>LOCATION PLAN AND EXISTING GROUND ELEVATIONS<br/>DUPRE CONTROL STRUCTURE MAINTENANCE DOCK</b>   |                  |              |                  |
| DESIGNED:  | J. ROMERO        | DATE:        | MAY '92          |
| DRAWN:   | J. ROMERO        | PLOT SCALE:  | 240              |
| CHECKED:   | J. ROMERO        | DESIGN FILE: | 3082DPO3.DGN     |
| FILE NO.:  | <b>H-8-30920</b> |              |                  |
| SUBMITTED:   | J. Rom           | SPEC. NO.:   | DACW29-92-B-0061 |
|  |                  | DWG. 7C      | OF 17            |

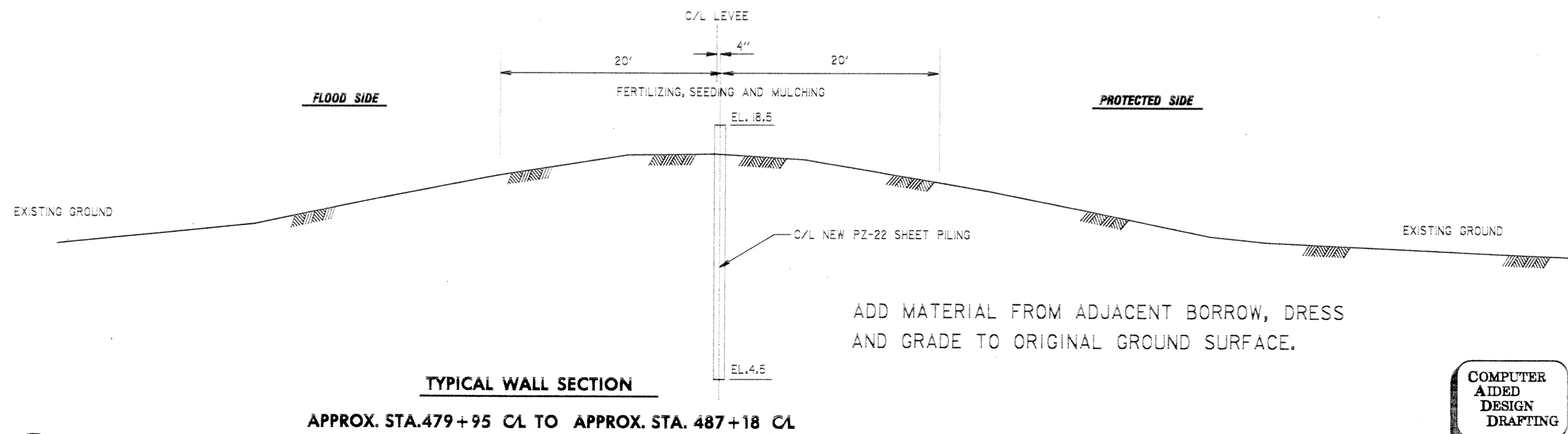
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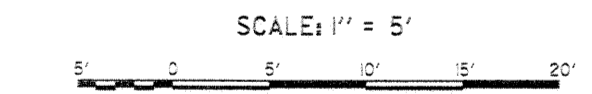
FOR ONLY APPROX. STA. 369+22 CL TO APPROX. STA. 381+30 CL  
ADD MATERIAL FROM ADJACENT BORROW, DRESS  
AND GRADE TO ORIGINAL GROUND SURFACE.



ADD MATERIAL FROM ADJACENT BORROW, DRESS  
AND GRADE TO ORIGINAL GROUND SURFACE.



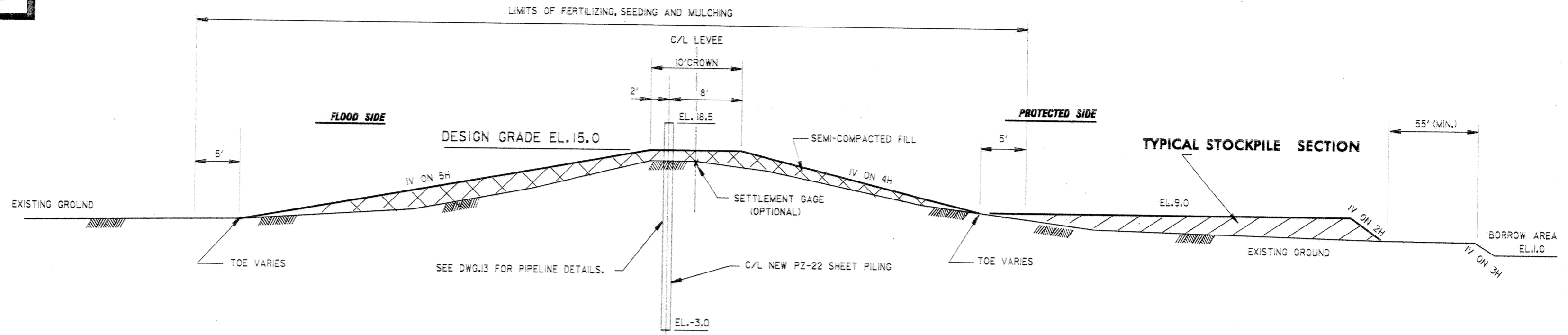
ADD MATERIAL FROM ADJACENT BORROW, DRESS  
AND GRADE TO ORIGINAL GROUND SURFACE.



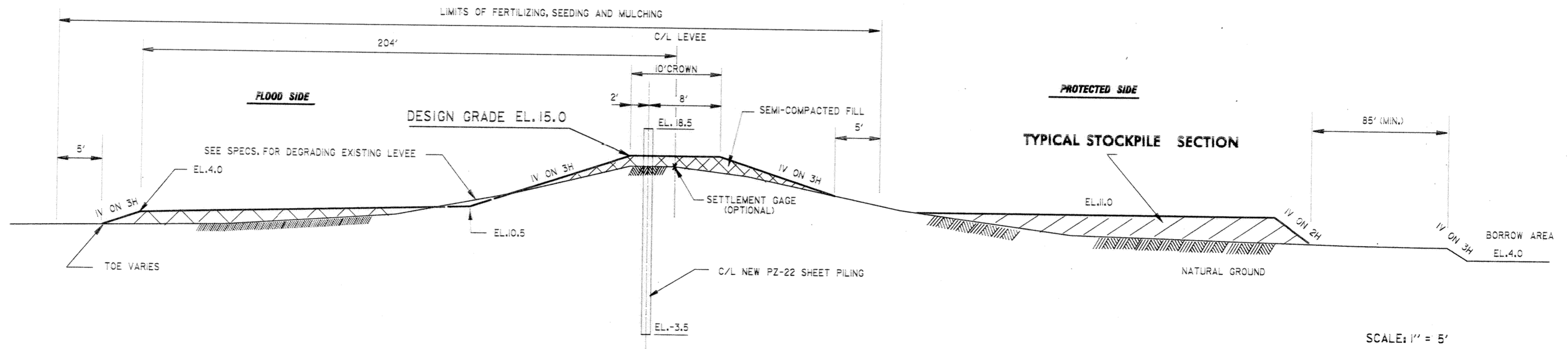
COMPUTER  
AIDED  
DESIGN  
DRAFTING

| REVISION  | DATE               | DESCRIPTION      | BY               |
|---|--------------------|------------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA  |                    |                  |                  |
| LAKE FORTCHACRTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA |                    |                  |                  |
| <b>TYPICAL WALL SECTIONS</b><br><b>STA. 366+60 CL TO 487+18 CL</b>  |                    |                  |                  |
| DESIGNED:   | WRIGHT             | DATE:            | MAY '92          |
| DRAWN:  | MATTHEWS           | SCALE:           | 5:1              |
| CHECKED:  | ROMERO             | FILE NO.:        | <b>H-4-30920</b> |
| SUBMITTED:  | <i>[Signature]</i> | SPEC. NO.:       | 30920FIG. 33N    |
|   |                    | DACW29-92-B-0061 | DWG. 8 OF 17     |

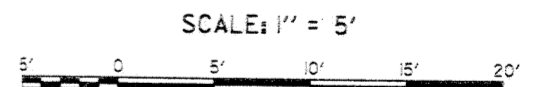
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**TYPICAL WALL SECTION**  
**SOUTHERN NATURAL PIPELINE CLOSURE**  
**APPROX. STA. 579+90 CL TO APPROX. STA. 604+15 CL**



**TYPICAL WALL SECTION**  
**REPAIR AREA CLOSURE**  
**APPROX. STA. 621+60 CL TO APPROX. STA. 647+20 CL**  
**REPAIR AREA**  
**APPROX. STA. 652+86 CL TO APPROX. STA. 656+45 CL**

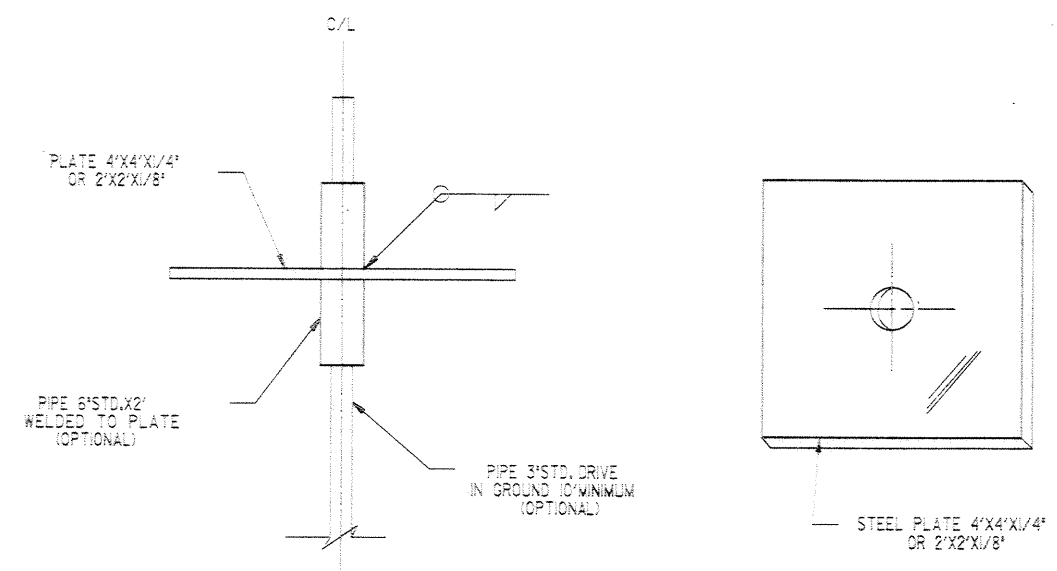
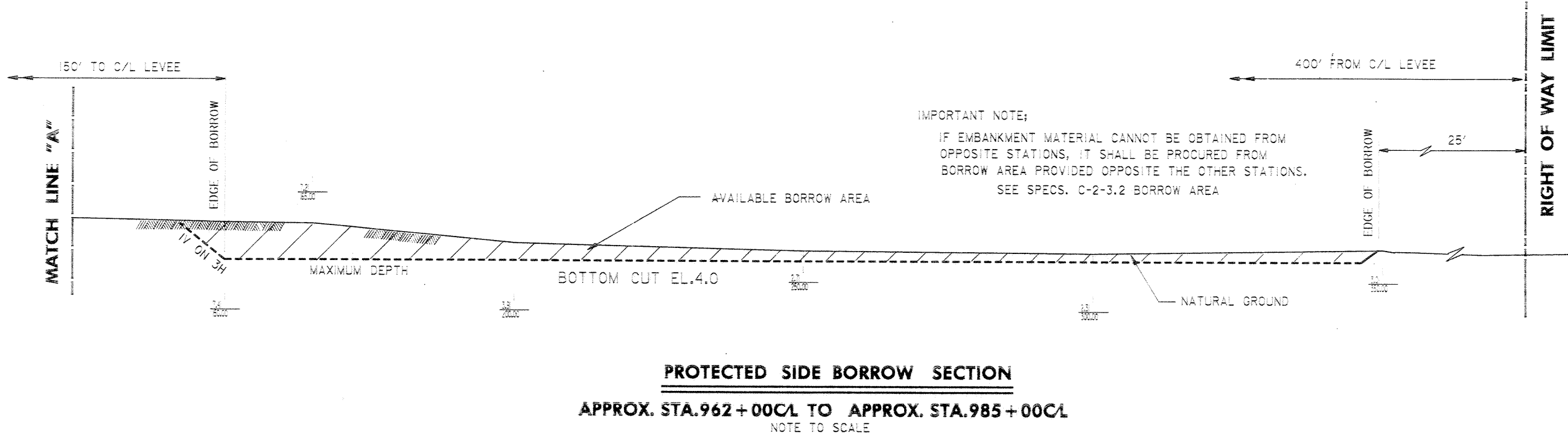
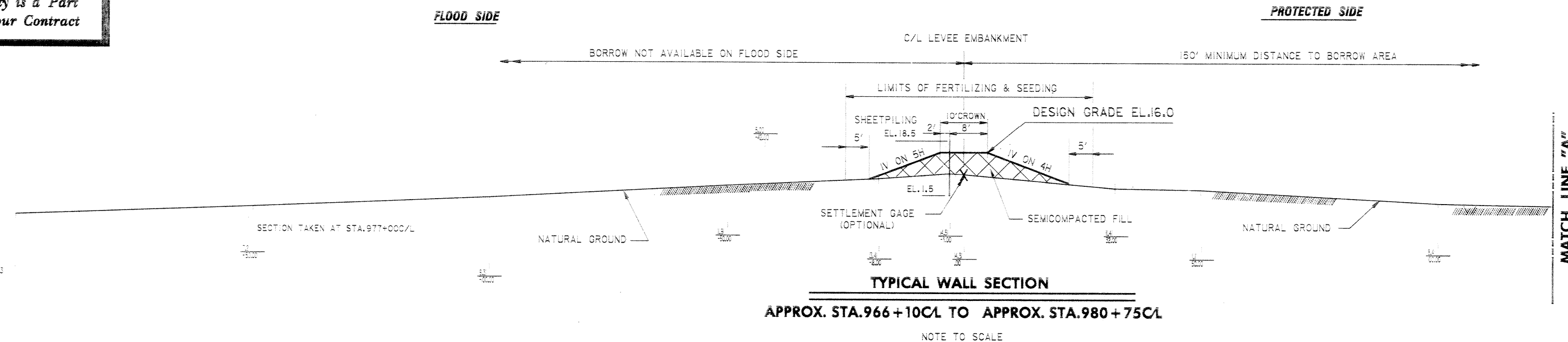


COMPUTER AIDED DESIGN DRAFTING



| REVISION  | DATE                       | DESCRIPTION              | BY               |
|---|----------------------------|--------------------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br><b>CORPS OF ENGINEERS</b><br><b>NEW ORLEANS, LOUISIANA</b>  |                            |                          |                  |
| LAKE FORTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA. |                            |                          |                  |
| <b>TYPICAL WALL SECTIONS</b><br><b>STA. 579+90 CL TO STA. 656+45 CL</b>   |                            |                          |                  |
| DESIGNED: WRIGHT  | DATE: MAY '92              | PLOT SCALE: 5:1          | FILE NO.         |
| DRAWN: WRIGHT   | CHECKED: ROMERO            | DESIGN FILE: 30920PILDGN | <b>H-8-30920</b> |
| SUBMITTED:  | SPEC. NO. DACW29-92-B-0081 | DWG. 9                   | OF 17            |

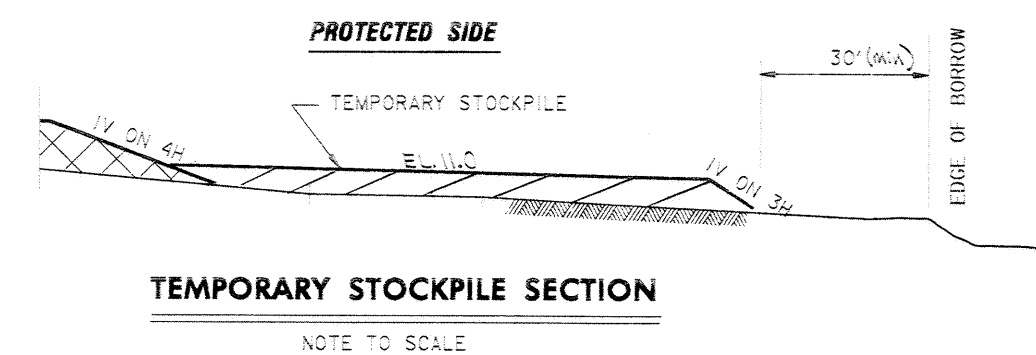
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of Your Contract



TYPICAL GAGE DETAIL  
NOTE TO SCALE

**SETTLEMENT MEASUREMENT GAGES**

SHOULD THE CONTRACTOR DESIRE PAYMENT FOR PLACING ADDITIONAL FILL DUE TO FOUNDATION SETTLEMENT DURING CONSTRUCTION, HE SHALL FURNISH AND INSTALL SETTLEMENT GAGES AT LOCATIONS SHOWN ON THE DESIGN SECTION AND AS SPECIFIED IN THE CONTRACT SPECIFICATIONS. THE SETTLEMENT MEASUREMENT RANGE FOR EACH SETTLEMENT GAGE SHALL BE FOR A DISTANCE OF 150 FEET IN EACH DIRECTION FROM EACH SETTLEMENT GAGE MEASURED ALONG THE CENTERLINE OF THE LEVEE SECTION, EXCEPT WHERE SETTLEMENT GAGES ARE PLACED AT LESS THAN 300 FOOT INTERVALS, IN WHICH CASE, THE SETTLEMENT MEASUREMENT RANGE SHALL BE TO A POINT 1/2 THE DISTANCE BETWEEN SETTLEMENT GAGES. RISER PIPES ARE PERMITTED ON SETTLEMENT GAGES. LOCATION OF SETTLEMENT GAGES MAY BE MOVED HORIZONTALLY ON THE EXISTING LEVEE CROWN AT CONTRACTOR'S OPTION WITH THE APPROVAL OF THE CONTRACTING OFFICER.



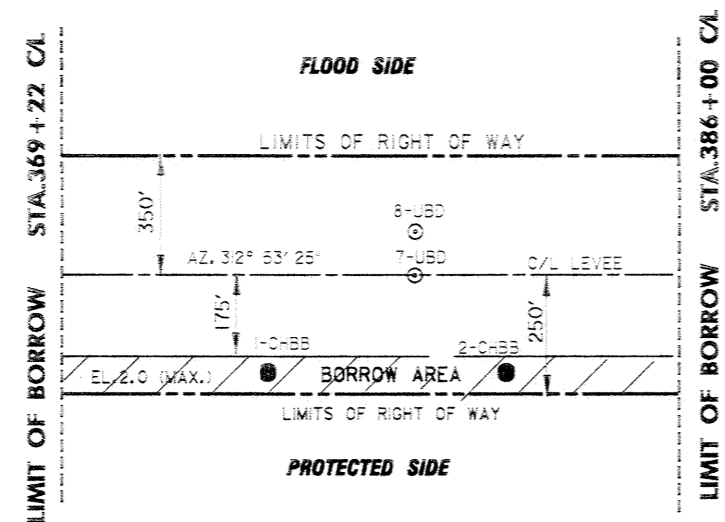
TEMPORARY STOCKPILE SECTION  
NOTE TO SCALE

COMPUTER  
AIDED  
DESIGN  
DRAFTING

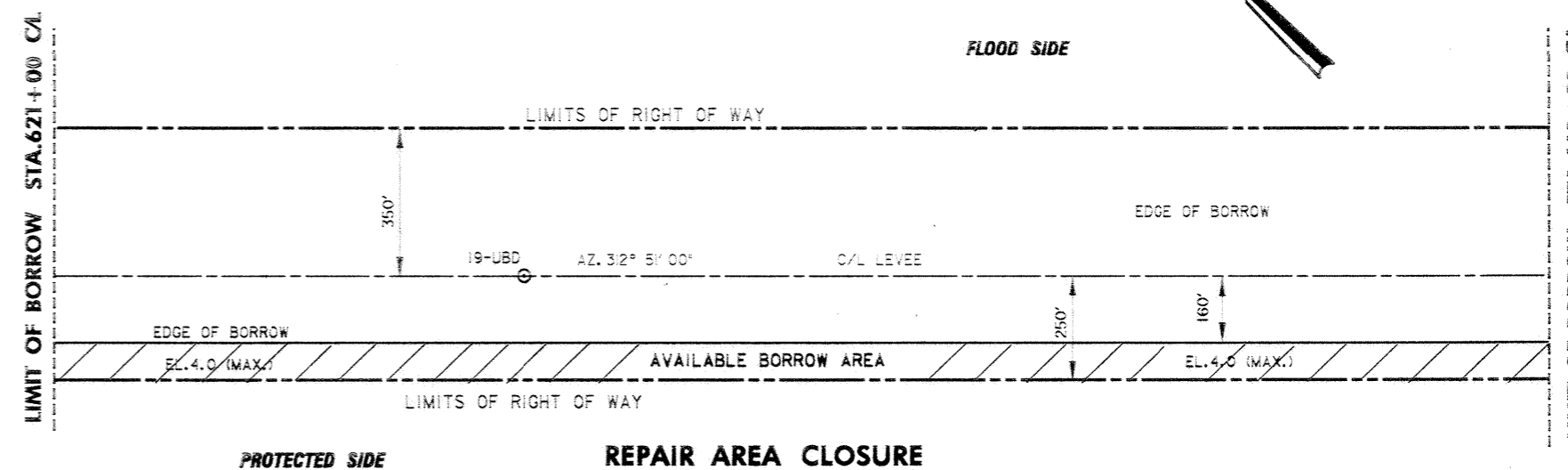


| REVISION  | DATE                       | DESCRIPTION     | BY                 |
|---|----------------------------|-----------------|--------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br><b>CORPS OF ENGINEERS</b><br><b>NEW ORLEANS, LOUISIANA</b>  |                            |                 |                    |
| LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 966+00 CL TO STA. 1007+91 CL)<br>ST. BERNARD PARISH, LA |                            |                 |                    |
| <b>TYPICAL WALL SECTION</b><br><b>STA. 966+10 CL TO STA. 980+75 CL</b>  |                            |                 |                    |
| DESIGNED: T. WRIGHT   | DATE: MAY '92              | PLOT SCALE: 120 | FILE NO. H-8-30920 |
| DRAWN: T. WRIGHT  | DESIGN FILE: SL DESIGN     |                 |                    |
| CHECKED: R. P. LEE  |                            |                 |                    |
| SUBMITTED: <i>Ronald Lee</i>  | SPEC. NO. DACW29-92-B-0061 | DWG. 10         | OF 17              |

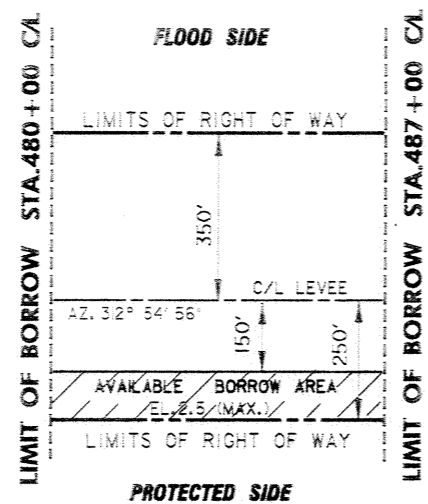
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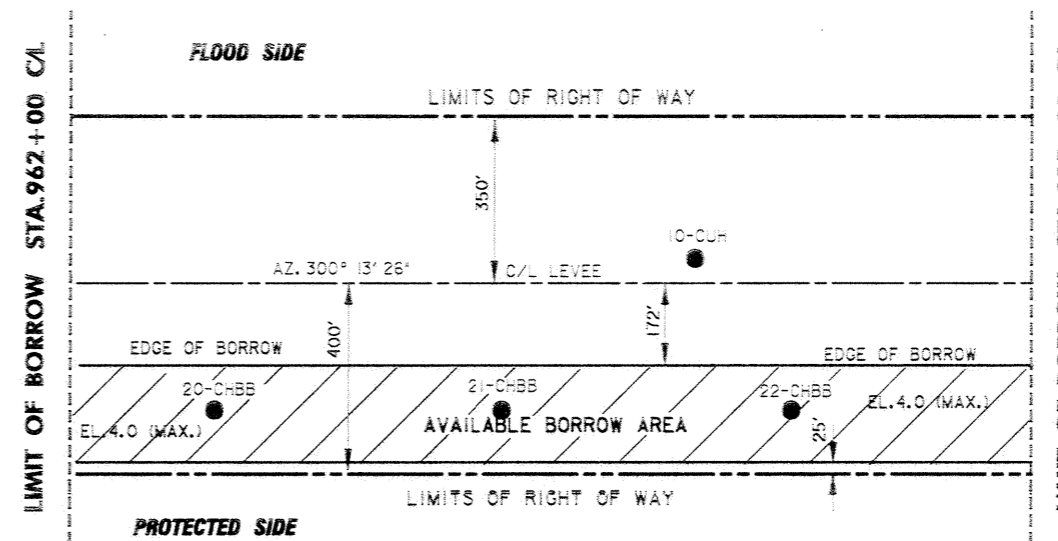
**BAYOU BIENVENUE CLOSURE**  
MATERIAL AVAILABLE FOR FILLING HOLES AND REDRESSING LEVEE SECTION DUE TO CONSTRUCTION OPERATION PRIOR TO FERTILIZING, SEEDING AND MULCHING  
APPROX. STA. 369+22 CL TO APPROX. STA. 386+00 CL  
NOT TO SCALE



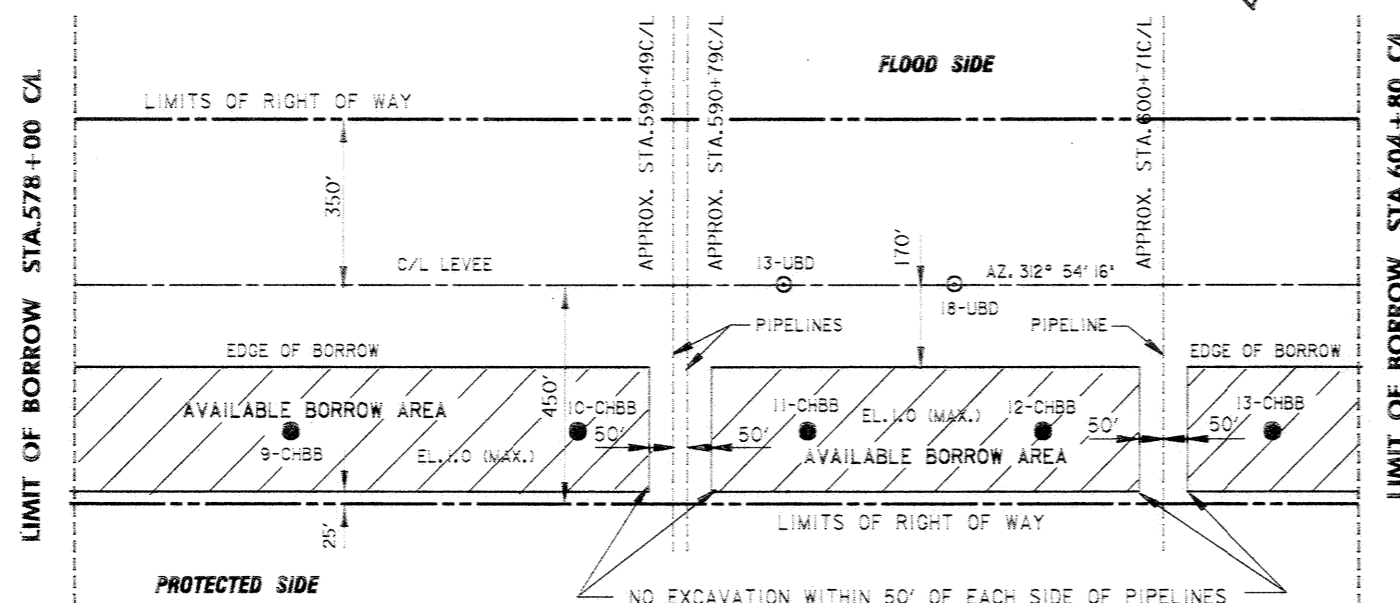
**REPAIR AREA CLOSURE**  
APPROX. STA. 660+00 CL TO APPROX. STA. 656+00 CL  
NOT TO SCALE



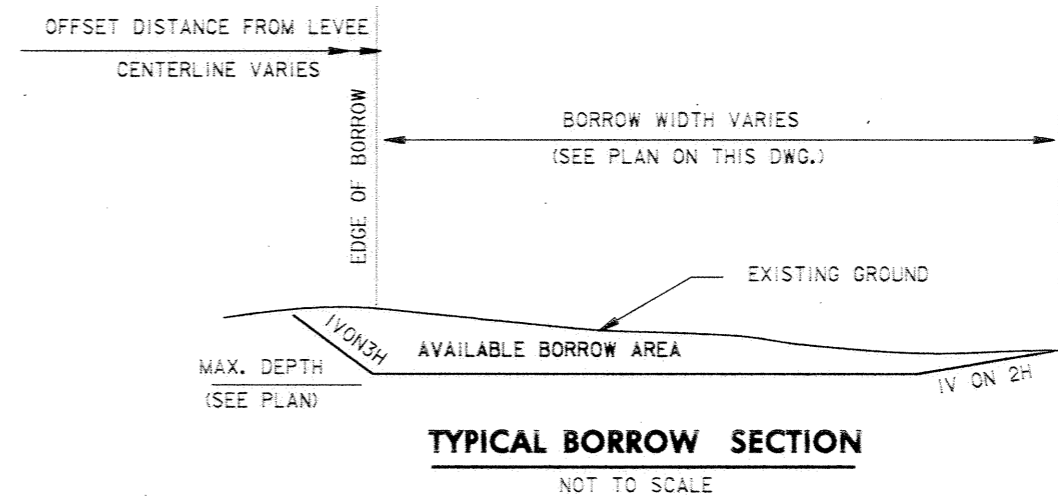
**REPAIR AREA**  
MATERIAL AVAILABLE FOR FILLING HOLES AND REDRESSING LEVEE SECTION DUE TO CONSTRUCTION OPERATION PRIOR TO FERTILIZING, SEEDING AND MULCHING  
APPROX. STA. 480+00 CL TO APPROX. STA. 487+00 CL  
NOT TO SCALE



**REPAIR SLIDE AREA**  
APPROX. STA. 962+00 CL TO APPROX. STA. 985+00 CL  
NOT TO SCALE



**SOUTHERN NATURAL PIPELINE CLOSURE**  
APPROX. STA. 578+00 CL TO APPROX. STA. 604+80 CL  
NOT TO SCALE



**TYPICAL BORROW SECTION**  
NOT TO SCALE

NOTE:

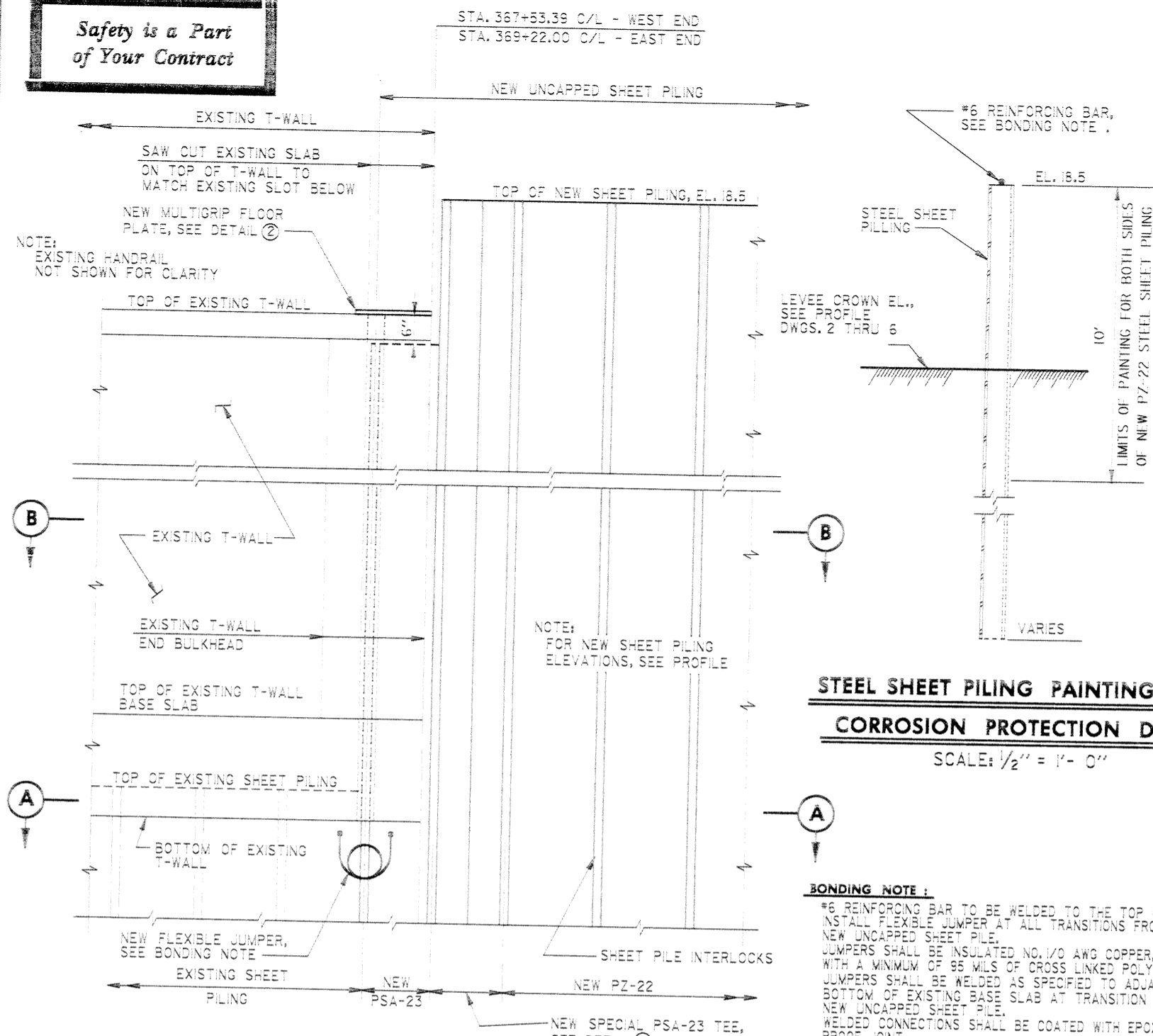
1. CARE SHALL BE EXERCISED IN PLACING FILL ADJACENT TO PIPELINES AND PIPELINE SUPPORT STRUCTURES TO PREVENT UNBALANCED SIDE PRESSURE. THE DIFFERENCE IN FILL HEIGHT BETWEEN ONE SIDE OF THE PIPE AND THE OTHER SIDE SHALL NOT EXCEED 2 FEET.

COMPUTER  
AIDED  
DESIGN  
DRAFTING



| REVISION  | DATE                       | DESCRIPTION              | BY               |
|---|----------------------------|--------------------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS<br/>CORPS OF ENGINEERS<br/>NEW ORLEANS, LOUISIANA</b>  |                            |                          |                  |
| LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA. |                            |                          |                  |
| <b>PLAN<br/>BORROW AREA LOCATIONS</b>   |                            |                          |                  |
| DESIGNED: T. WRIGHT   | DATE: MAY '92              | PLOT SCALE: 200:1        | FILE NO.         |
| DRAWN: T. WRIGHT  | CHECKED: R.P. LEE          | DESIGN FILE: CLOSURE.DGN | <b>H-8-30920</b> |
| SUBMITTED: <i>Ronald Lee</i>  | SPEC. NO. DACW28-92-B-0061 | DWG. 11                  | OF 17            |

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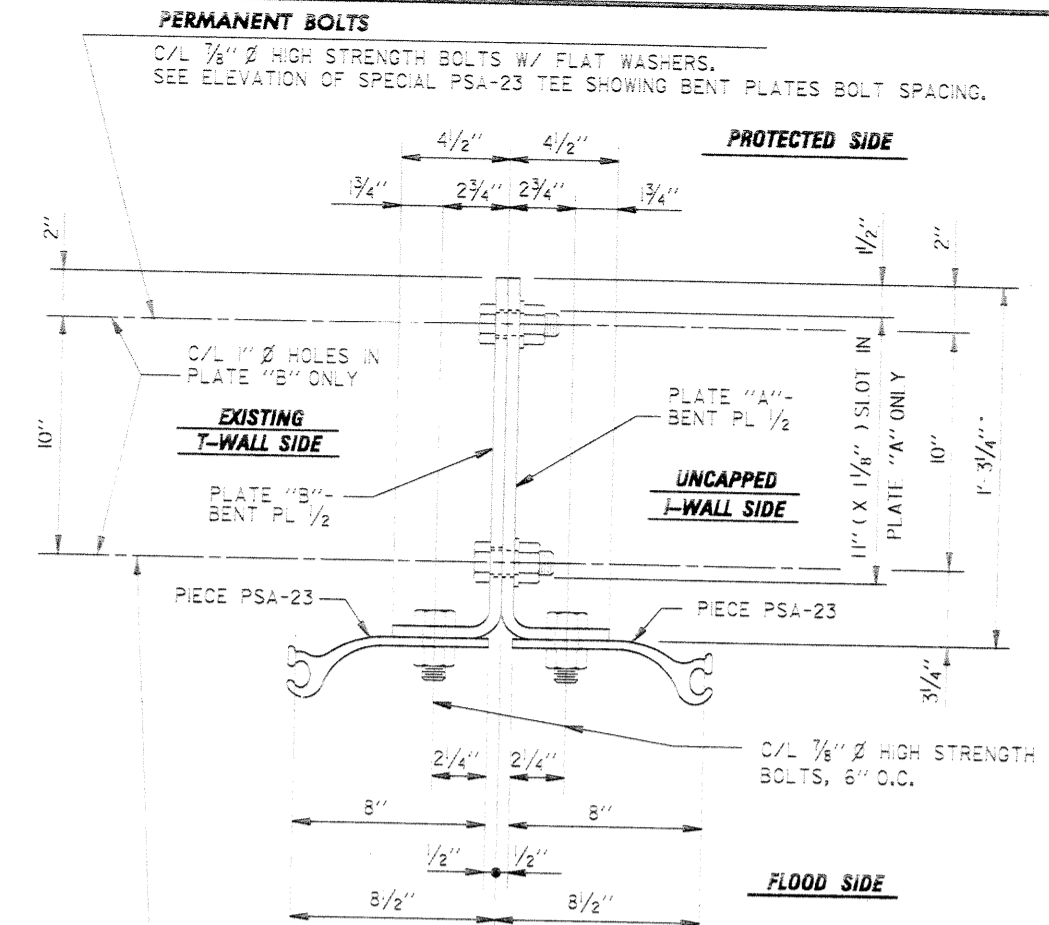
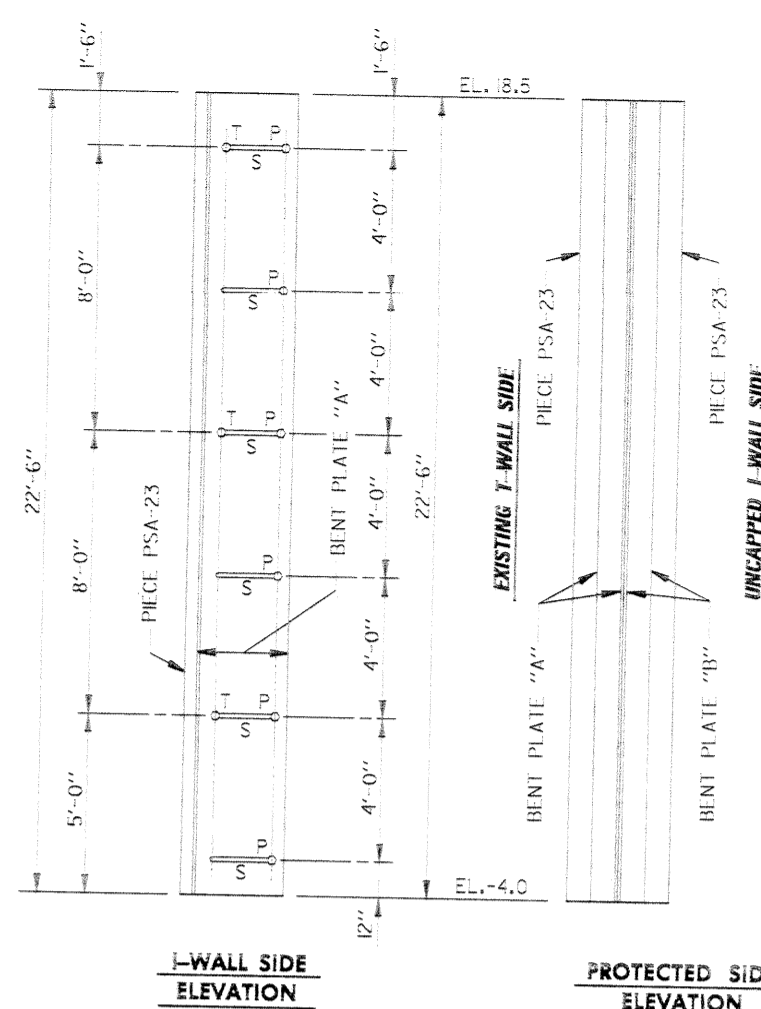


**STEEL SHEET PILING PAINTING AND  
CORROSION PROTECTION DETAIL**

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

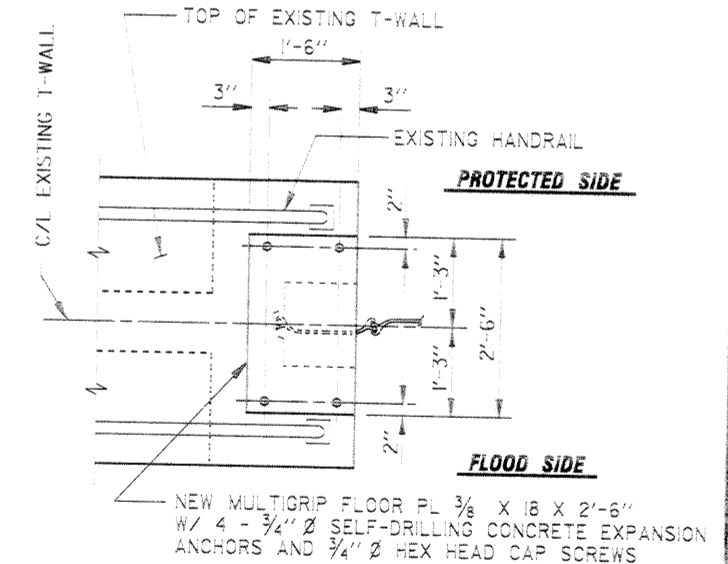
**BONDING NOTE:**

#6 REINFORCING BAR TO BE WELDED TO THE TOP OF EACH STEEL SHEET PILE. INSTALL FLEXIBLE JUMPER AT ALL TRANSITIONS FROM EXISTING T-WALL TO NEW UNCAPPED SHEET PILING. JUMPERS SHALL BE INSULATED NO. 1/40 AWG COPPER, TYPE USE, INSULATED WITH A MINIMUM OF 95 MILS OF CROSS LINKED POLYETHYLENE IN A 8" Ø LOOP. JUMPERS SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL PILES 2'-6" BELOW BOTTOM OF EXISTING BASE SLAB AT TRANSITION FROM EXISTING T-WALL TO NEW UNCAPPED SHEET PILING. WELDED CONNECTIONS SHALL BE COATED WITH EPOXY TO OBTAIN MOISTURE PROOF JOINT. SEE SPECIFICATIONS.



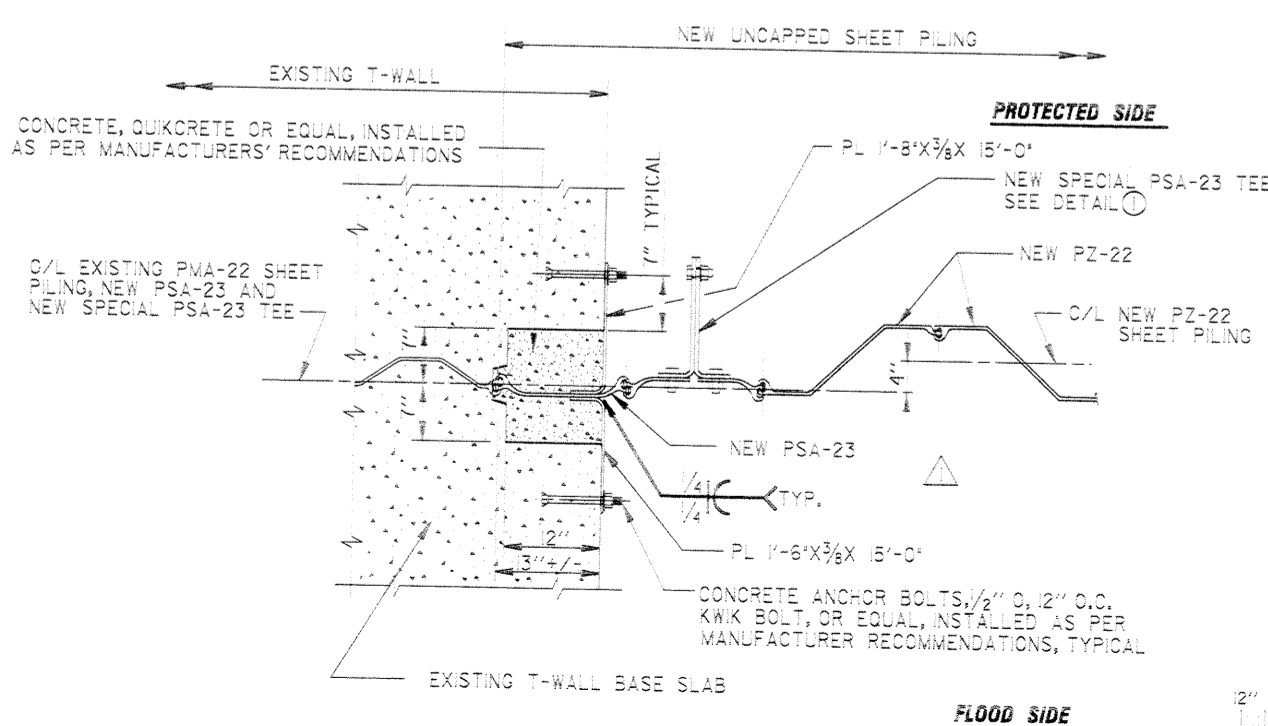
**DETAIL 1  
SPECIAL PSA-23 TEE**

SCALE: 3" = 1'-0"



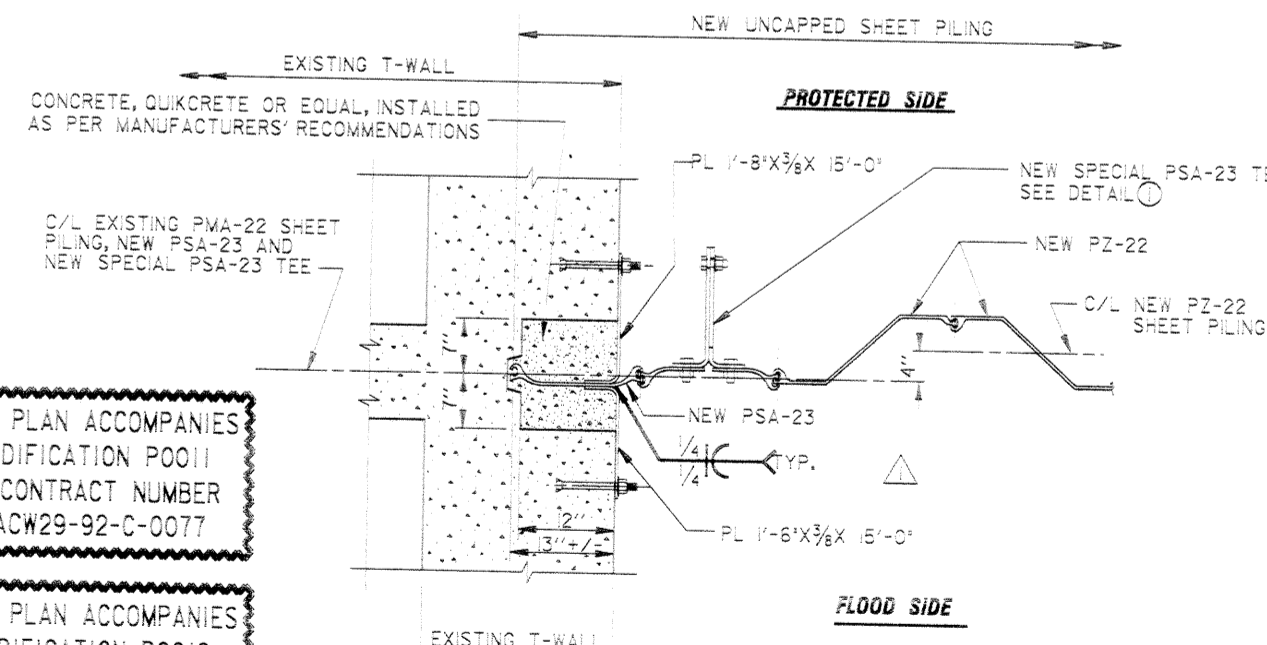
**DETAIL 2  
MULTIGRIP FLOOR PLATE**

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



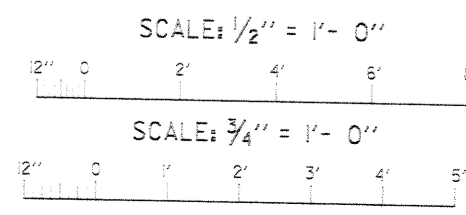
**SECTION A**

SCALE: 1" = 1'-0"



**SECTION B**

SCALE: 1" = 1'-0"



THIS PLAN ACCOMPANIES  
MODIFICATION P0011  
TO CONTRACT NUMBER  
DACW29-92-C-0077

THIS PLAN ACCOMPANIES  
MODIFICATION P0012  
TO CONTRACT NUMBER  
DACW29-92-C-0077

COMPUTER  
AIDED  
DESIGN  
DRAWING

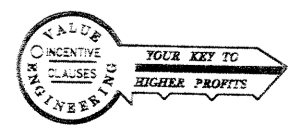
|          |         |   |    |
|----------|---------|---|----|
| REVISION | DATE    | DESCRIPTION   | BY |
| △        | 5/26/93 | REVISED SECTION A&B, AND ADDED PLATE ON R.U.G. SHEET PILE JOINT. MOD. 11 AND 12 |    |

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

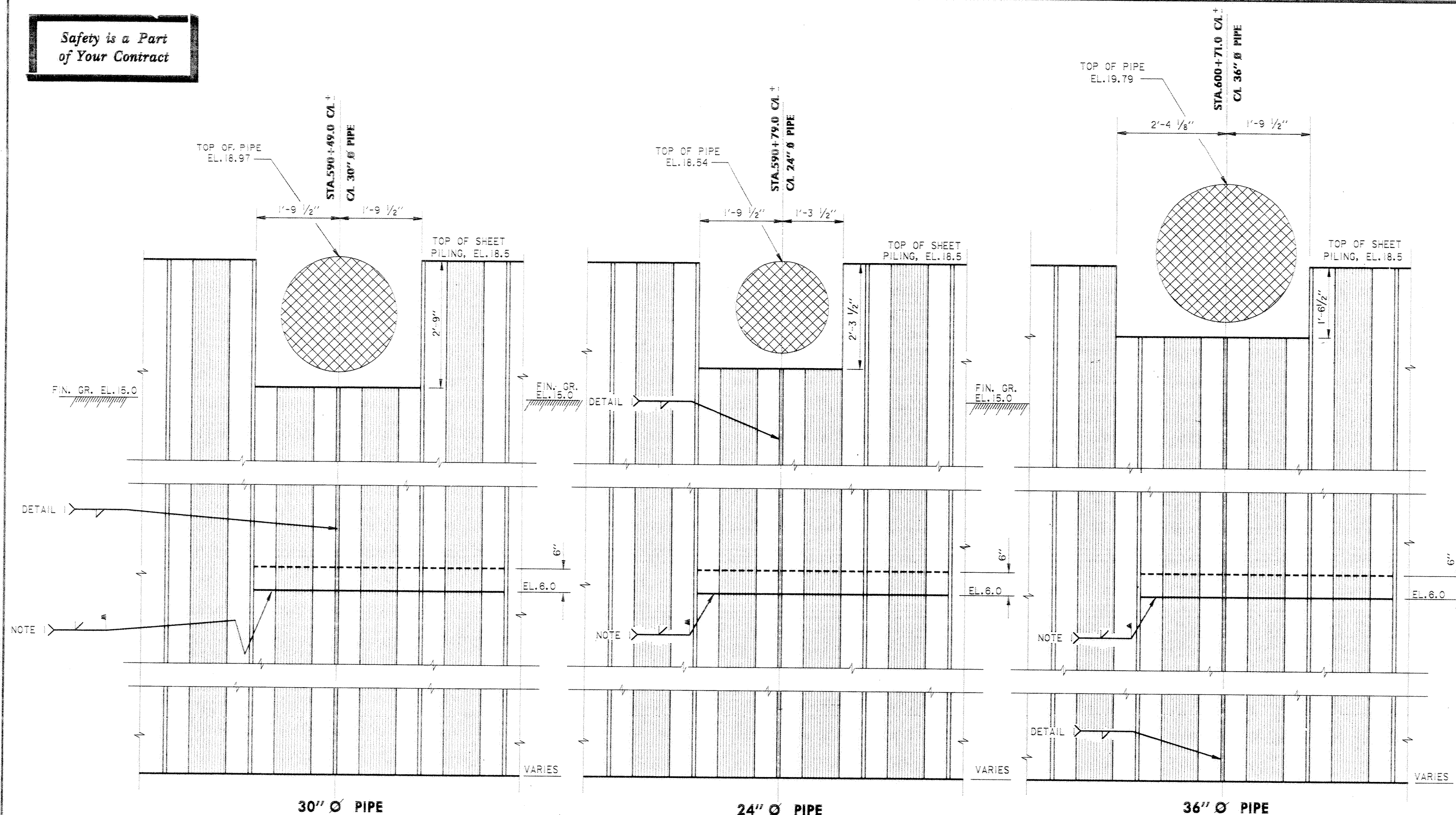
LAKE PONCHARTRAIN, LOUISIANA AND VICINITY  
CHALMETTE AREA PLAN  
HURRICANE PROTECTION LEVEE CLOSURES  
(STA. 366+00 CL TO STA. 1007+91 CL)  
ORLEANS PARISH AND ST. BERNARD PARISH, LA.

**SHEET PILE DETAILS**

|                        |                            |                |                  |
|------------------------|----------------------------|----------------|------------------|
| DESIGNED: ACHREJA      | DATE: MAY '92              | PLOT SCALE: 12 | FILE NO.         |
| DRAWN: HOWAT           | DESIGN FILE: 30920P2.DGN   |                | <b>H-8-30920</b> |
| CHECKED: ROWERG        |                            |                |                  |
| SUBMITTED: [Signature] | SPEC. NO. DACW29-92-B-0061 |                | DWG. 12 OF 17    |



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30" Ø PIPE

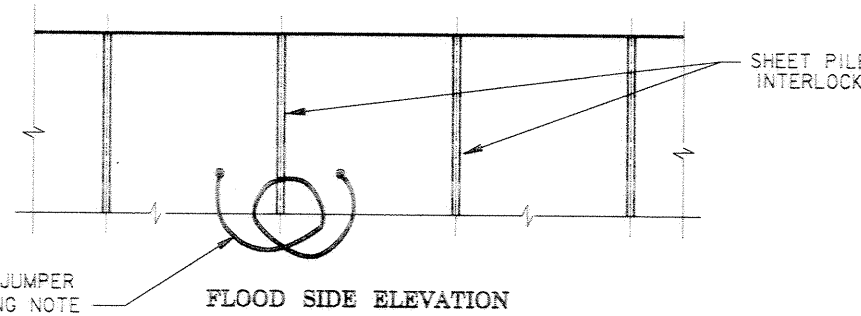
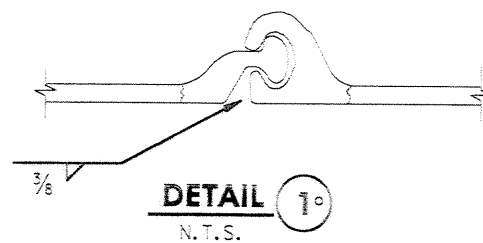
24" Ø PIPE

36" Ø PIPE

**DETAILS OF SHEET PILING CUTOUT AND  
INSTALLATION AT EXISTING PIPELINES**

SCALE: 1" = 1'-0"

- NOTE 1:  
DO NOT WELD ACROSS SHEET PILE INTERLOCKS
- NOTE 2:  
UPON DRIVING EACH LENGTH OF SHEET PILING, REMOVE TOP 6" OF SHEET PILING AND PREPARE SURFACE TO RECEIVE NEXT SHEET PILING.



**DETAIL OF FLEXIBLE JUMPER**

N.T.S.

**BONDING NOTE**  
#6 REINFORCING BAR SHALL BE WELDED TO THE TOP OF EACH SHEET PILE TO CONNECT PILES.  
#6 REINFORCING BAR SHALL NOT EXTEND ACROSS THE SHEET PILE INTERLOCK TO WHICH THE FLEXIBLE JUMPERS ARE INSTALLED.  
INSTALL FLEXIBLE JUMPER AT 30'-0" O.C. ACROSS NEAREST SHEET PILE INTERLOCK. JUMPER SHALL BE INSULATED 1/0 AWG. COPPER TYPE USE INSULATED, WITH A MINIMUM OF 25 MILS OF CROSS-LINKED POLYETHYLENE IN A 8" O LOOP. JUMPERS SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL SHEET PILES 2'-6" BELOW FINISHED GRADE. WELDED CONNECTIONS SHALL BE COATED WITH SPLICING EPOXY TO OBTAIN MOISTURE PROOF JOINT. SEE SPECIFICATIONS.

| REVISION  | DATE                       | DESCRIPTION    | BY               |
|---|----------------------------|----------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS<br/>CORPS OF ENGINEERS<br/>NEW ORLEANS, LOUISIANA</b>  |                            |                |                  |
| <small>LAKE PONCHARTRAIN, LOUISIANA AND VICINITY<br/>CHALMETTE AREA PLAN<br/>HURRICANE PROTECTION LEVEE CLOSURES<br/>(STA.366+00 CL. TO STA.1007+91 CL.)<br/>ORLEANS PARISH AND ST. BERNARD PARISH, LA.</small> |                            |                |                  |
| <b>PIPELINE DETAILS</b>   |                            |                |                  |
| DESIGNED: MATTHEWS  | DATE: MAY '92              | PLOT SCALE: 12 | FILE NO.         |
| DRAWN: MATTHEWS   | DESIGN FILE: 30920F13.DGN  |                | <b>H-8-30920</b> |
| CHECKED: ROMERO   | SPEC. NO. DACW29-92-B-0061 |                | DWG. 13 OF 17    |
| SUBMITTED:  |                            |                |                  |

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AIDED  
DESIGN  
DRAFTING

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

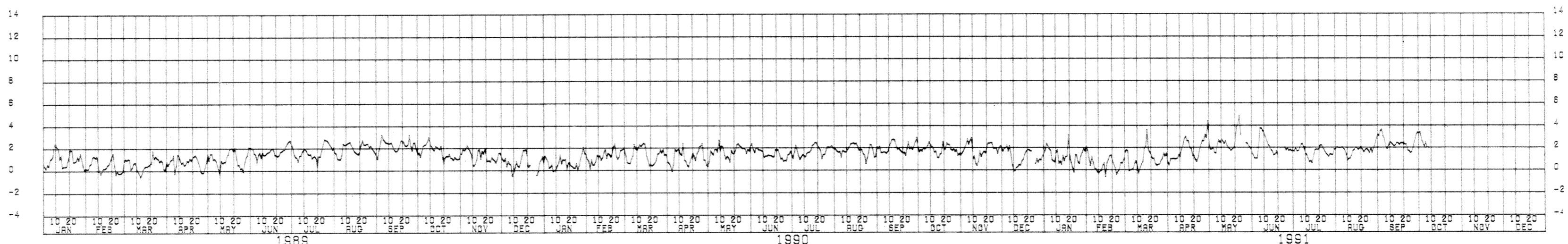
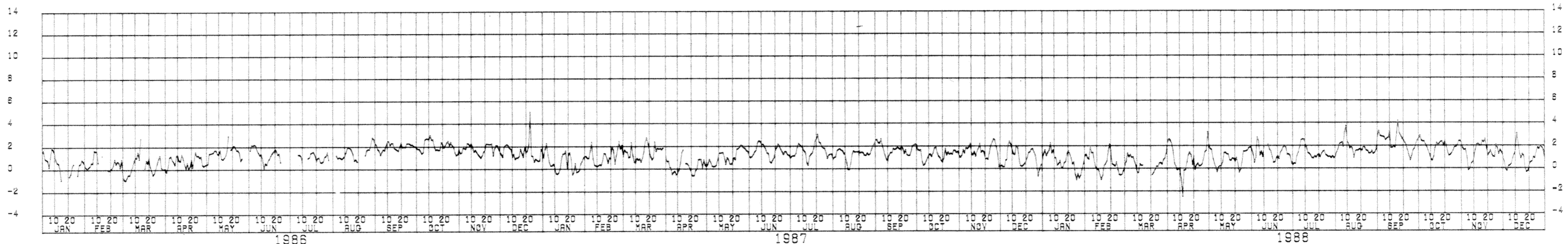
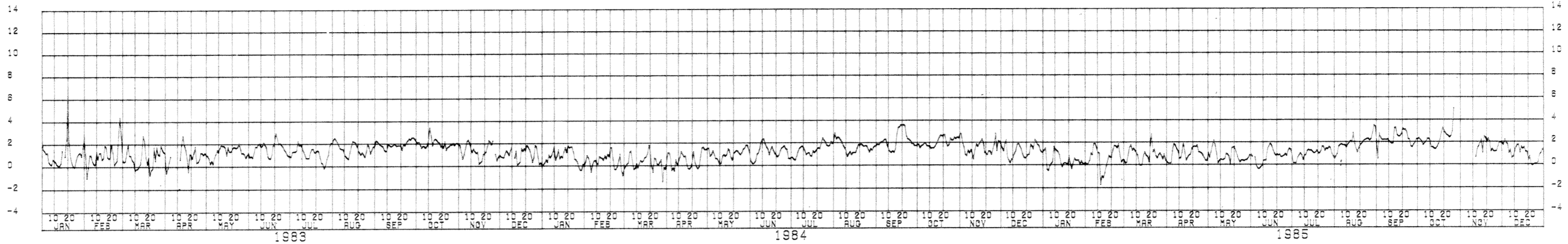
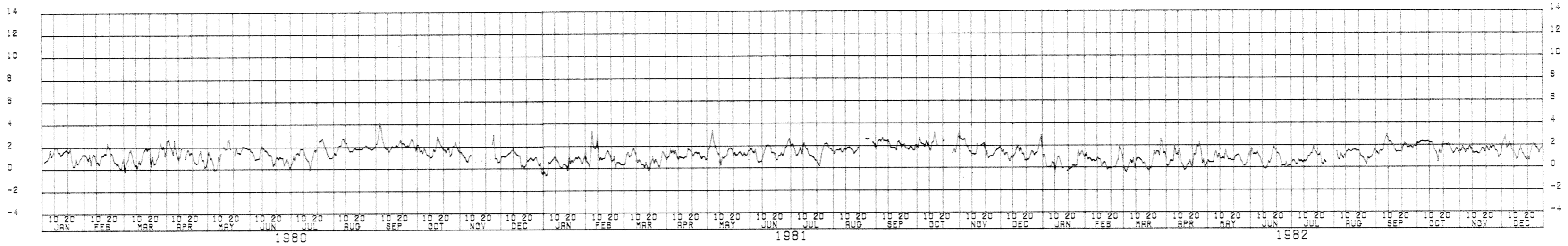
SCALE: 1" = 1'-0"





GAGE READINGS IN FT NGVD

GAGE READINGS IN FT NGVD

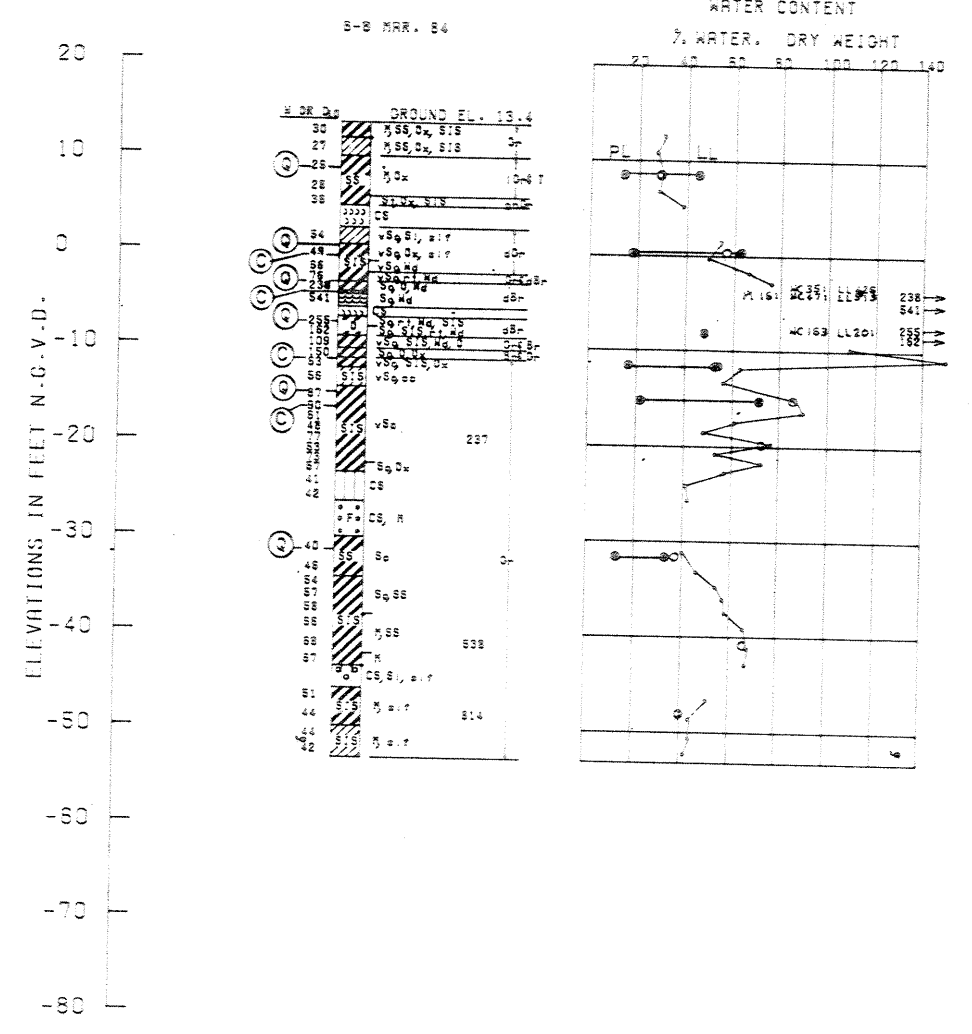


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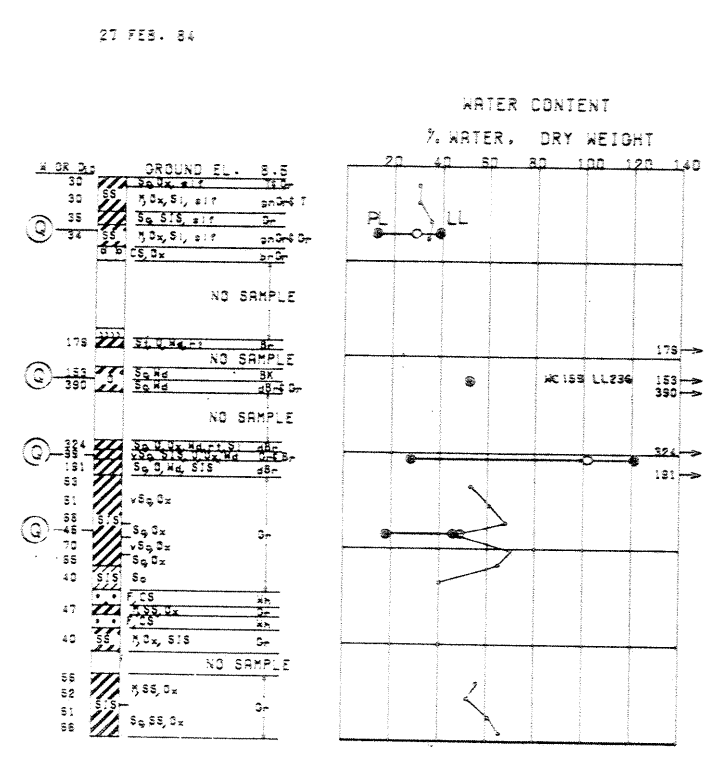
| REVISION  | DATE                 | DESCRIPTION  | BY               |
|---|----------------------|--------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA<br>LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 866+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNAARD PARISH, LA<br><b>STAGE HYDROGRAPHS</b> |                      |              |                  |
| DESIGNED:   | TAWRIGT              | DATE:        | MAY '92          |
| DRAWN:  | TAWRIGT              | PLOT SCALE:  | 1/12             |
| CHECKED:  | RILEE/JRWERO         | DESIGN FILE: | GAP-EG-006       |
| SUBMITTED:  | <i>Donald L. Lee</i> | SPEC. NO.:   | DACW28-92-E-0061 |
|   |                      | FILE NO.:    | H-8-30920        |
|   |                      | DWG.:        | 14 OF 17         |

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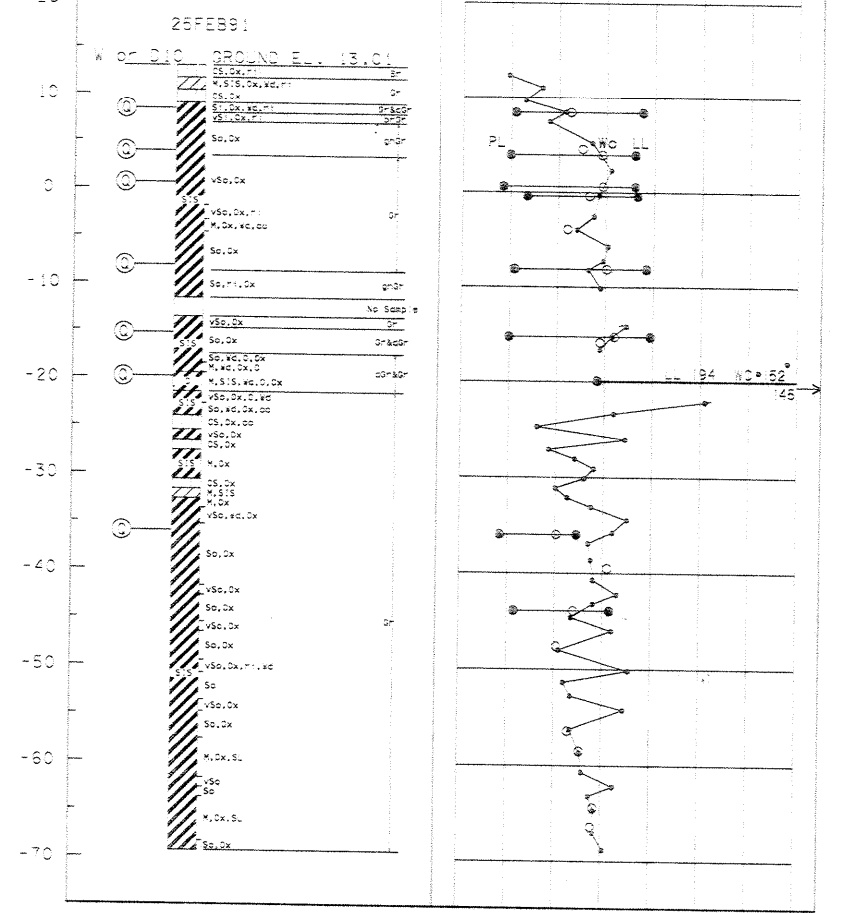
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M.R.G.D. B/L STA. 378+80.  
C/L OF LEVEE  
8-8 MAR. 84



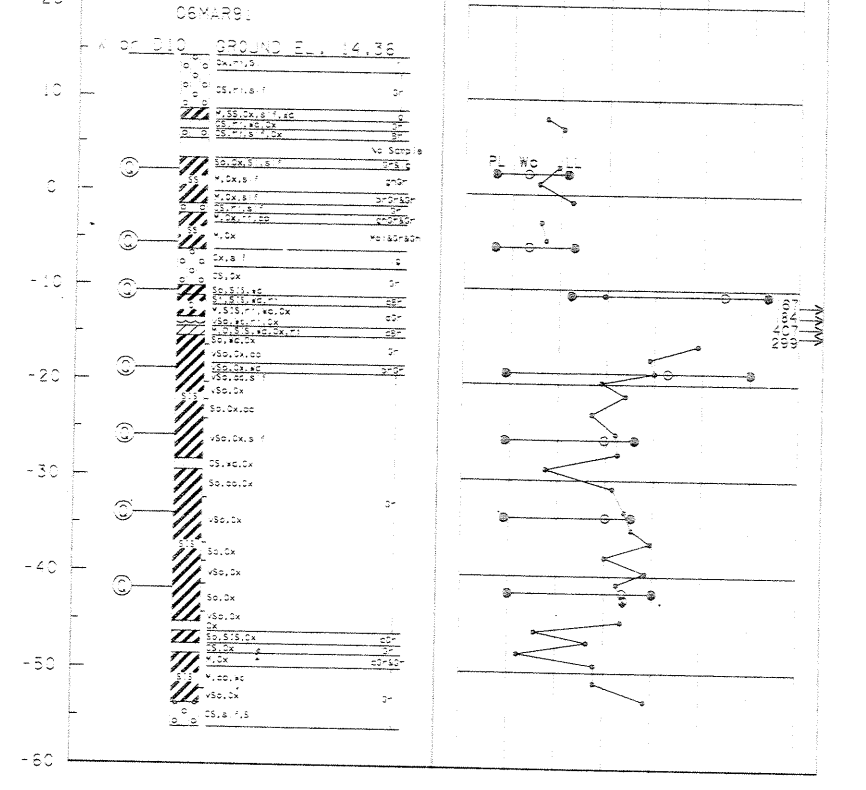
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27 FEB. 84



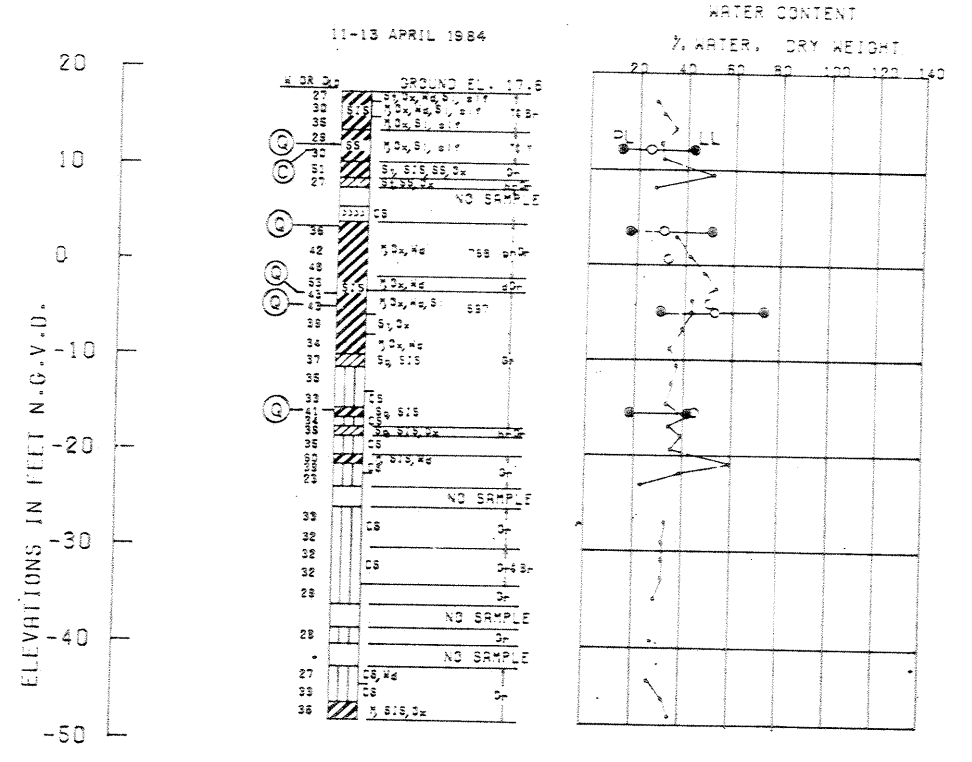
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C/L LEVEE  
25 FEB 84



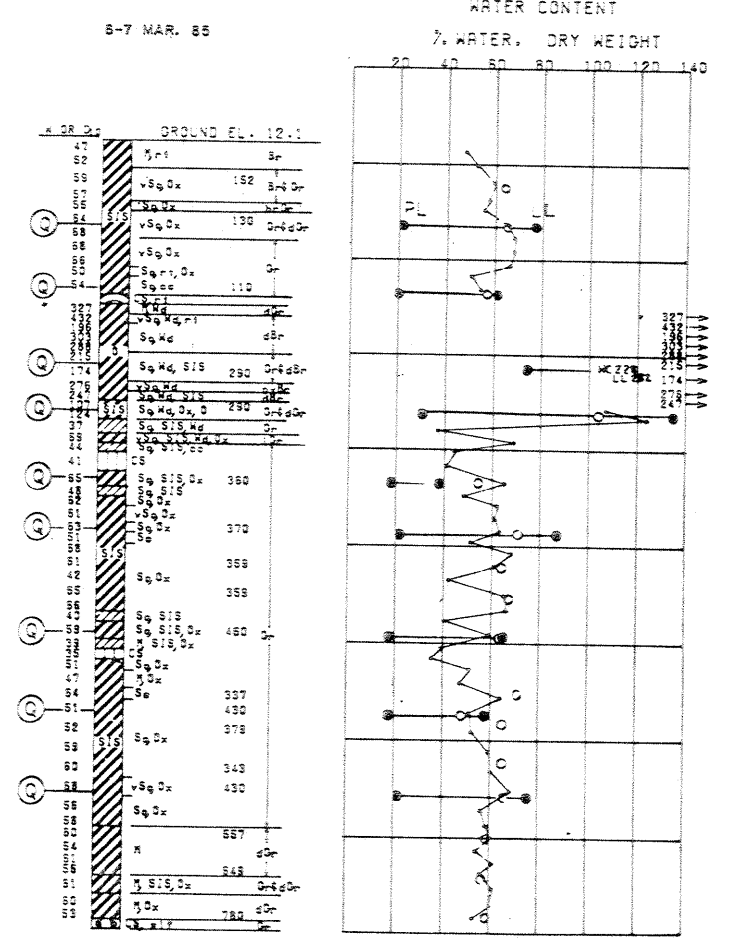
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C/L LEVEE  
05 MAR 84



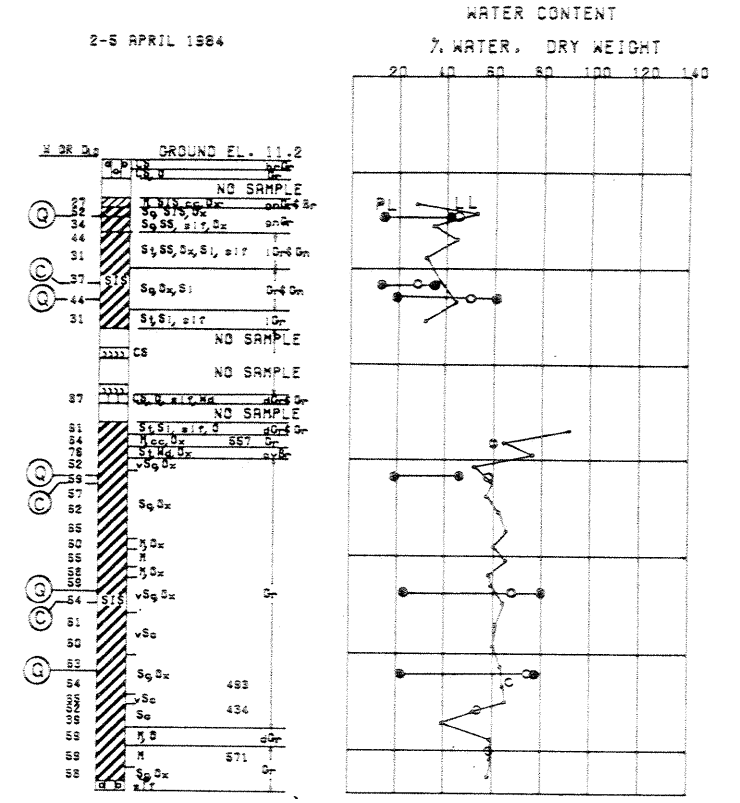
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M.R.G.D. B/L STA. 708+00  
C/L OF LEVEE  
11-13 APRIL 1984



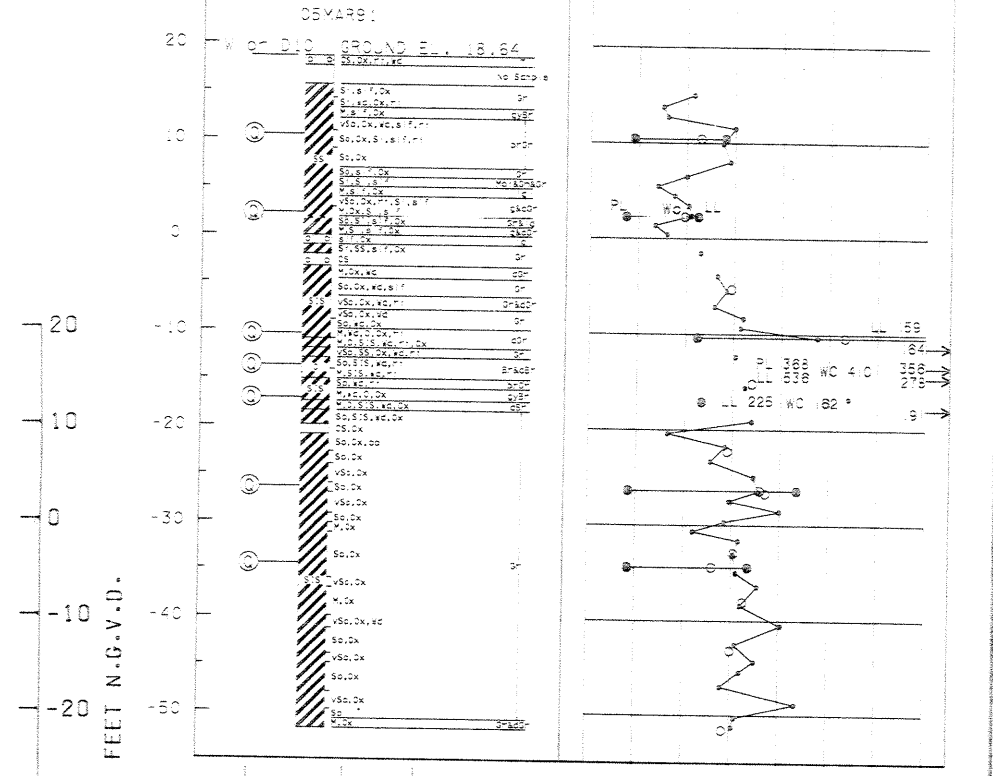
**BOR. 10-CUH**  
M.R.G.D. B/L STA. 975+00  
50 FT. F.V.S. LEVEE C/L  
8-7 MAR. 85



**BOR. 13-UBD**  
M.R.G.D. B/L STA. 692+80  
C/L OF LEVEE  
2-5 APRIL 1984

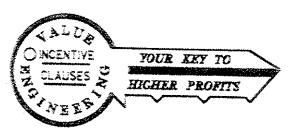


**BOR. 19-UBD (91-02)**  
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C/L LEVEE  
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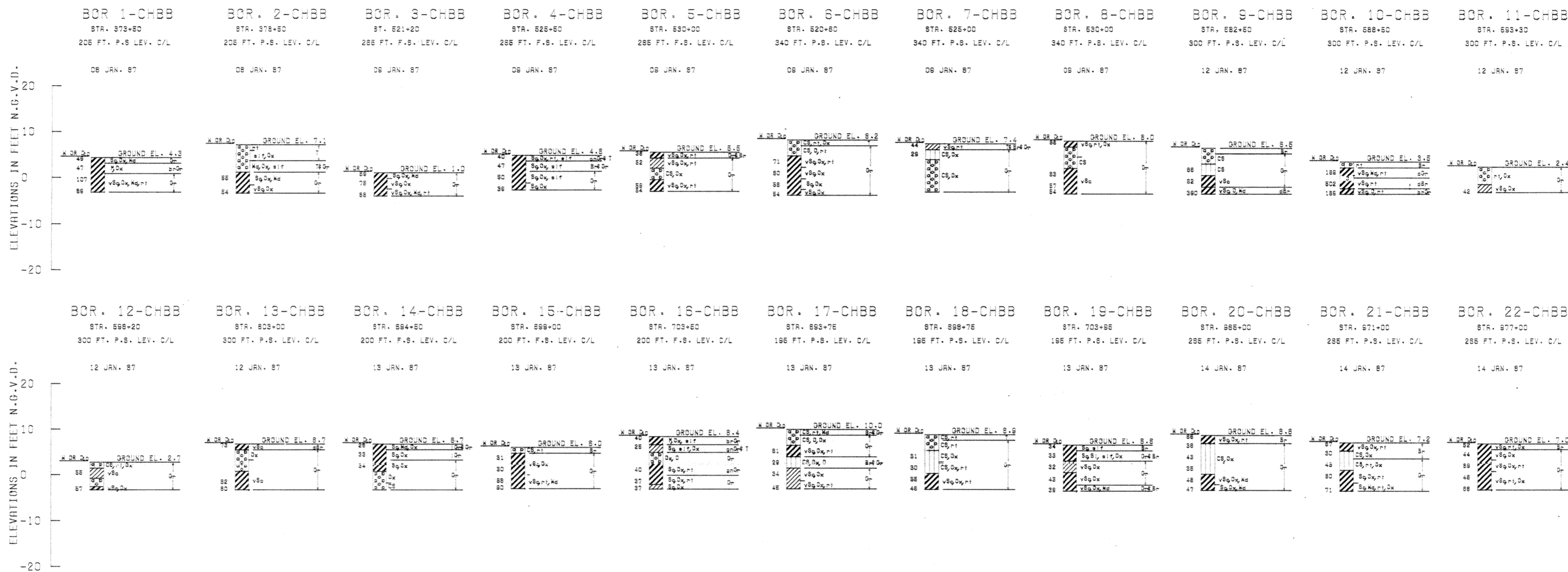


ELEVATIONS IN FEET N.G.V.D.

ELEVATIONS IN FEET N.G.V.D.



| REVISION   | DATE                 | DESCRIPTION  | BY               |
|--|----------------------|--------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA<br>LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA. |                      |              |                  |
| <b>SOIL BORING LOGS</b>  |                      |              |                  |
| DESIGNED:  | T. WRIGHT            | DATE:        | MAY '92          |
| DRAWN:   | T. WRIGHT            | PLOT SCALE:  | 200:1            |
| CHECKED:   | R. P. LEE            | DESIGN FILE: | CLOSURES.DGN     |
| SUBMITTED:   | <i>Ronald P. Lee</i> | SPEC. NO.:   | DACW29-92-B-0061 |
|  |                      | FILE NO.:    | H-8-30920        |
|  |                      | DWG. NO.:    | 15 OF 17         |



| REVISION  | DATE                 | DESCRIPTION  | BY               |
|---|----------------------|--------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA<br>LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA.366+00 CL TO STA.1007+91 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA.<br><b>BORROW AREA BORINGS</b> |                      |              |                  |
| DESIGNED:   | T.WRIGHT             | DATE:        | MAY '92          |
| DRAWN:  | T.WRIGHT             | PLOT SCALE:  | 1:12             |
| CHECKED:  | RULEE/J.ROVERO       | DESIGN FILE: | GAPLEG.DGN       |
| SUBMITTED:  | <i>Ronald P. Lee</i> | SPEC. NO.:   | DACW28-92-B-0061 |
|   |                      | FILE NO.:    | H-8-30920        |
|   |                      | DWG.:        | 16 OF 17         |

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## UNIFIED SOIL CLASSIFICATION

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

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       | slf    |
| BROWNISH-GRAY | br Gr  |                                |  |        | Organic matter        | O      |
| GRAYISH-BROWN | gy Br  |                                |  |        | Clay strata or lenses | CS     |
| GREENISH-GRAY | gn Gr  |                                |  |        | Silt strata or lenses | SIS    |
| GRAYISH-GREEN | gy Gn  |                                |  |        | Sand strata or lenses | SS     |
| GREEN         | Gn     |                                |  |        | Sandy                 | S      |
| BLUE          | Bl     |                                |  |        | Gravelly              | G      |
| BLUE-GREEN    | Bl Gn  |                                |  |        | Boulders              | B      |
| WHITE         | Wh     |                                |  |        | Siltsides             | SL     |
| MOTTLED       | Mo+    |                                |  |        | Wood                  | Wd     |
|               |        |                                |  |        | Oxidized              | Ox     |

PLASTICITY CHART  
For classification of fine-grained soils

### NOTES:

FIGURES TO LEFT OF BORING UNDER COLUMN "W OR D<sub>10</sub>"

Are natural water contents in percent dry weight

When underlined denotes D<sub>10</sub> 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 1/8" I.D., 2" O.D.) and a 140 lb. driving hammer with a 30" drop

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

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

\* The D<sub>10</sub> size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D<sub>10</sub>

\*\* 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 represents 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.



COMPUTER  
AIDED  
DESIGN  
DRAFTING

| REVISION   | DATE                       | DESCRIPTION      | BY               |
|--|----------------------------|------------------|------------------|
| <b>U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS</b><br>CORPS OF ENGINEERS<br>NEW ORLEANS, LOUISIANA<br>LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY<br>CHALMETTE AREA PLAN<br>HURRICANE PROTECTION LEVEE CLOSURES<br>(STA. 366+00 CL TO STA. 1007+81 CL)<br>ORLEANS PARISH AND ST. BERNARD PARISH, LA.<br><b>SOIL BORING LEGEND</b> |                            |                  |                  |
| DESIGNED: T.WRIGHT   | DATE: MAY '92              | PLOT SCALE: 1:12 | FILE NO.         |
| DRAWN: T.WRIGHT  | DESIGN FILE: GAPLEG.DGN    |                  | <b>H-8-30920</b> |
| CHECKED: R.LEE/J.R.OWERS   | SPEC. NO. DACW29-92-B-0061 |                  | DWG. 17 OF 17    |
| SUBMITTED: <i>Smith &amp; Lee</i>  |                            |                  |                  |