DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1229
GALVESTON, TEXAS 77553-1229

FILE COPY

REPLY TO ATTENTION OF:
Evaluation Section

April 11, 1997

SUBJECT: Permit No. 20486(01)

Commanding Officer
Department of the Navy
Naval Facility Engineering
Command
2155 Eagle Drive
North Charleston, South Carolina 29419-9010

Dear Sir:

Your request to modify Permit 20486, is approved. The modification consists of placing dredged material into the mitigation site by hydraulic means. The original permit authorized the dredging of approximately 400,000 cubic yards of material for the construction of an entrance channel, turning basin and slip for Avenger and Osprey Class Naval vessels and to deposit dredged material into the mitigation site by mechanical means. The project is located at the confluence of the Jewell Fulton Canal and La Quinta Channel west of Ingleside, Nueces County, Texas.

The enclosed plans in 15 sheets supersede all previous permit plans. All conditions of the original permit remain in full force and effect, including the expiration date of the permit which is December 31, 1999.

FOR THE DISTRICT ENGINEER:

For Robert W. Heinly
Leader, South Evaluation Unit

Enclosure

Copies Furnished:

Eighth Coast Guard District, New Orleans, LA

NOAA/NOS, Coast & Geodetic Survey, Silver Spring, MD

Texas General Land Office, Austin, TX

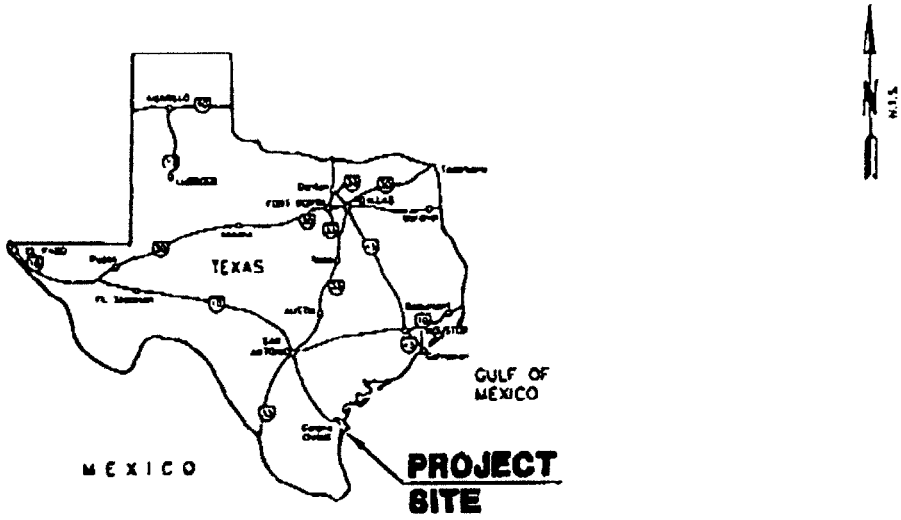
Texas General Land Office, Corpus Christi, TX

Mr. John S. Yeend, P.E., Gee & Jenson, Engineers, Architects, Planners, Inc., One Harvard Circle, West Palm Beach, FL 33409

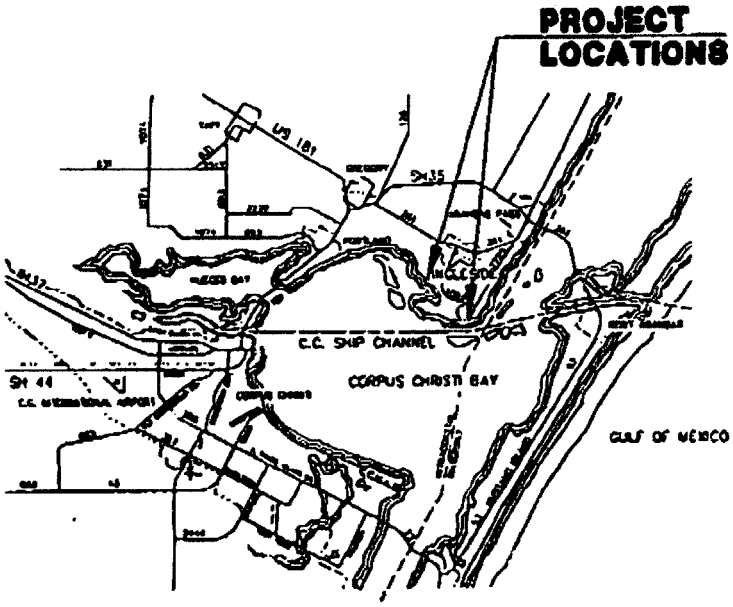
Resident Officer in Charge of Construction, ATTN: Robb Pickerill, 8851 Ocean Drive, Suite 101, Corpus Christi, TX 78419-5525

20486(01)

F:\JDASTAL\P-CDV.DWG Plotted: 2/16/1998 1:12 pm Plot Scale: 1=1.0




MAP OF TEXAS

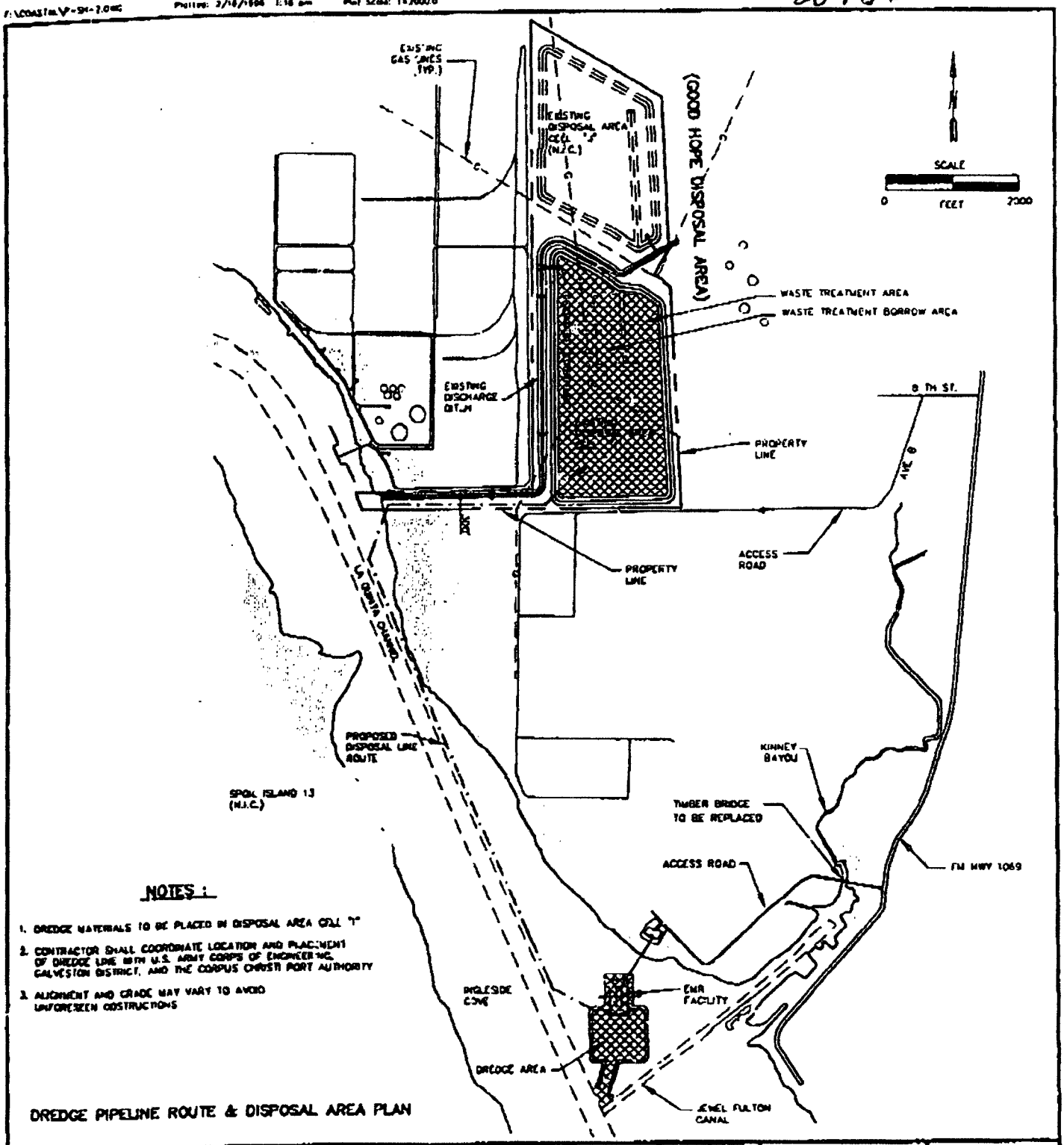



VICINITY MAP

| | | | | | | |
|---|---|---|---|---|---|---|
| GEE & JENSON | DESG JSY | EMR FACILITY & SMALL CRAFT PIER | | | | SCALE N.T.S. |
| | DRAW GOO | NAVAL STATION | | | | JOB # 93-282.53 |
| | CHKD JDM | INGLESIDE, TEXAS | | | | SHEET 1 OF 11 |
| | APRV | APPLICANT: DEPARTMENT OF THE NAVY | DATE | APRV | REVISION | |
| | DATE 2/16/96 | | | | | |

Sheet 1 of 15

20486(01)




NOTES :

1. DREDGE MATERIALS TO BE PLACED IN DISPOSAL AREA CELL "F"
2. CONTRACTOR SHALL COORDINATE LOCATION AND PLACEMENT OF DREDGE LINE WITH U.S. ARMY CORPS OF ENGINEERS, GALVESTON DISTRICT, AND THE CORPUS CHRISTI PORT AUTHORITY
3. ALIGNMENT AND GRADE MAY VARY TO AVOID UNFORESEEN OBSTRUCTIONS

DREDGE PIPELINE ROUTE & DISPOSAL AREA PLAN

| | | | | | | |
|---|---|---|---|---|---|---|
| GEE & JENSON | DESG. JSY | EMR FACILITY<br>NAVAL STATION<br>INGLESIDE, TEXAS | DATE | APRV | REVISION | SCALE SHOWN |
| | DRAW NCP | | | | | JOB # 93282.53 |
| | CHKD JSM | | | | | SHEET 2 OF 11 |
| | APRV | | | | | |
| | DATE 2/16/96 | APPLICANT: DEPARTMENT OF THE NAVY | | | | |

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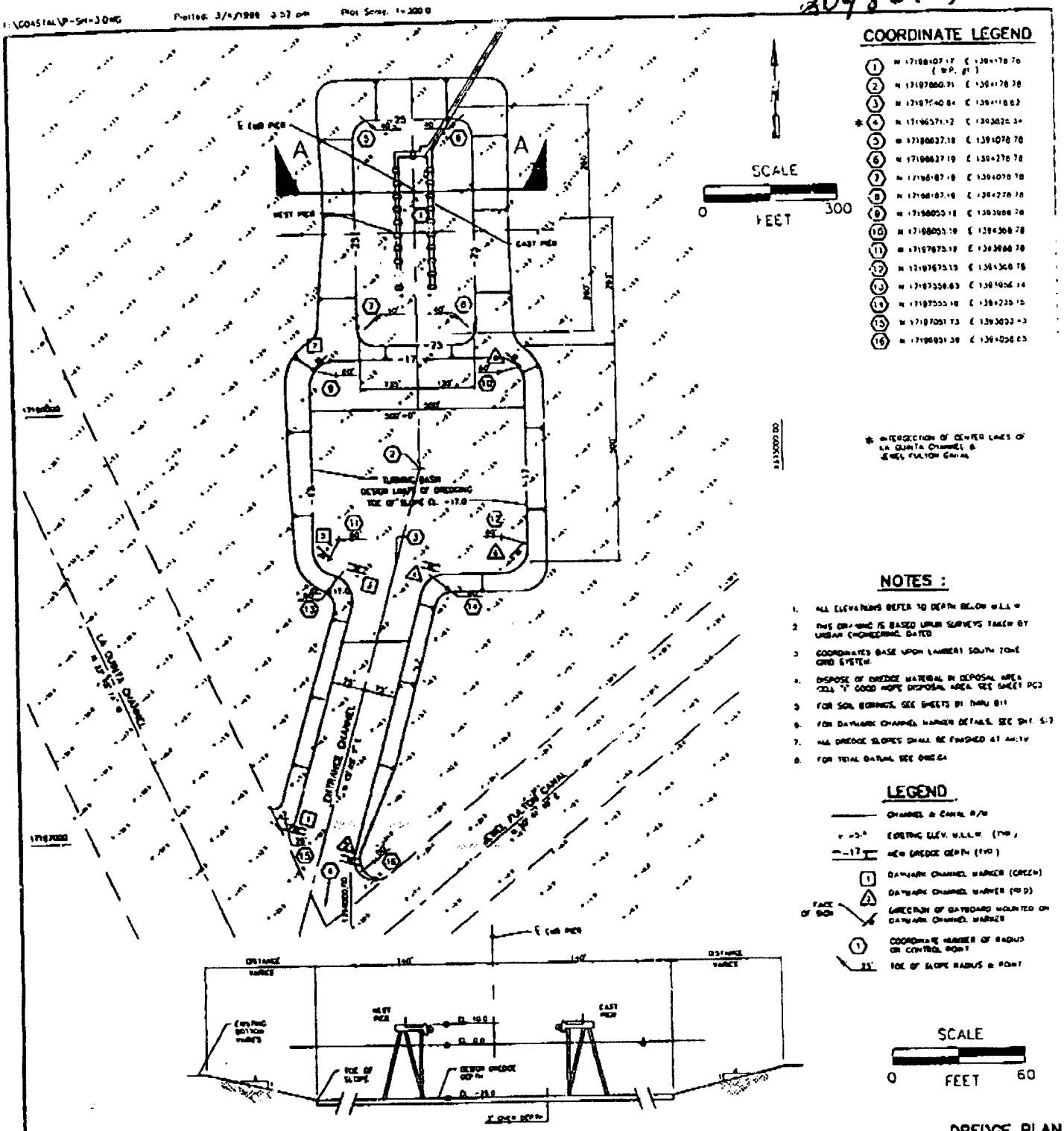
20486(01)




| | | | | | | |
|---|---|---|---|---|---|---|
| GEE & JENSON | DESC. JSY | EMR FACILITY<br>NAVAL STATION<br>INGLESIDE, TEXAS | | | | SCALE SHOWN |
| | DRAW NCP | | | | | JOB # 93-282.53 |
| | CHKD | | | | | SHEET |
| | APRV | | | | | 3 OF 11 |
| | DATE | APPLICANT: DEPARTMENT OF THE NAVY | DATE | APRV | REV. LEGEND & SECTION<br>REVISION | |

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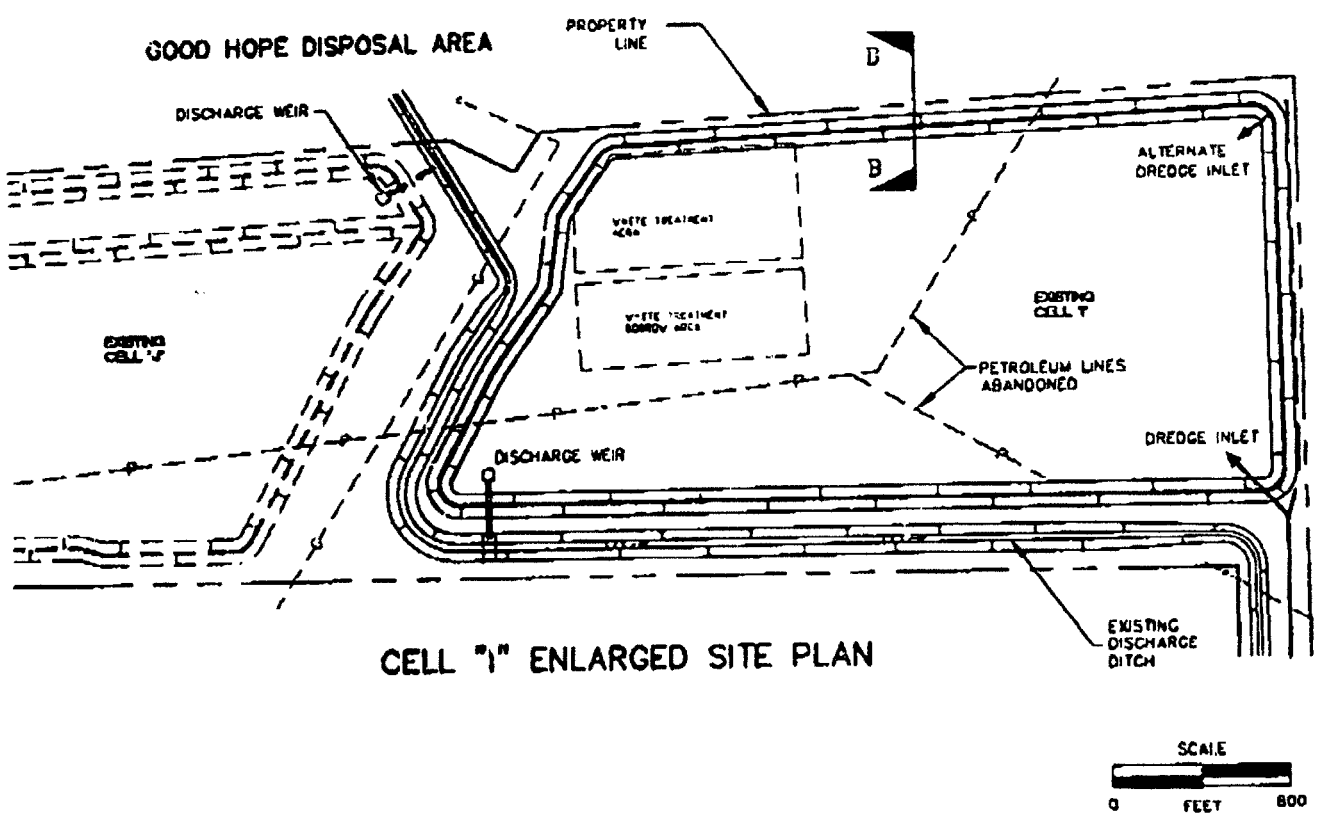
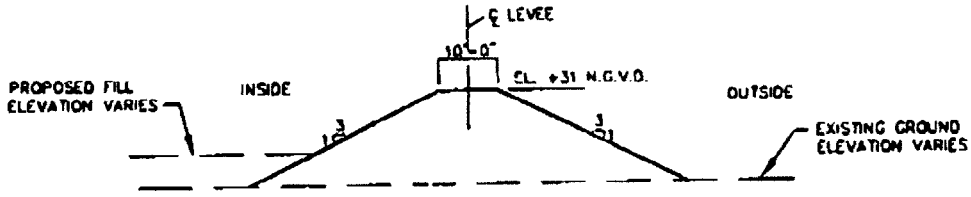
20486(01)

F:\COASTAL\P-DH-1.DWG Plotted: 2/16/1998 1:22 pm Plot Scale: 1=800.0




CELL "I" ENLARGED SITE PLAN




SECTION B-B

TYPICAL SECTION - EXISTING PERIMETER LEVEE

N.T.S.

DISPOSAL AREA SITE PLAN & SECTION

| | | | | | | |
|---|---|---|---|---|---|---|
| GEE & JENSON | DESG. JSY | EMR FACILITY | DATE | APRV | REVISION | SCALE SHOWN |
| | DRAW NCP | NAVAL STATION | | | | JOB # 93-282.53 |
| | CHK JDM | INGLESIDE, TEXAS | | | | SHEET 4 OF 11 |
| | APRV | | | | | |
| | DATE 2/16/96 | APPLICANT: DEPARTMENT OF THE NAVY | | | | |

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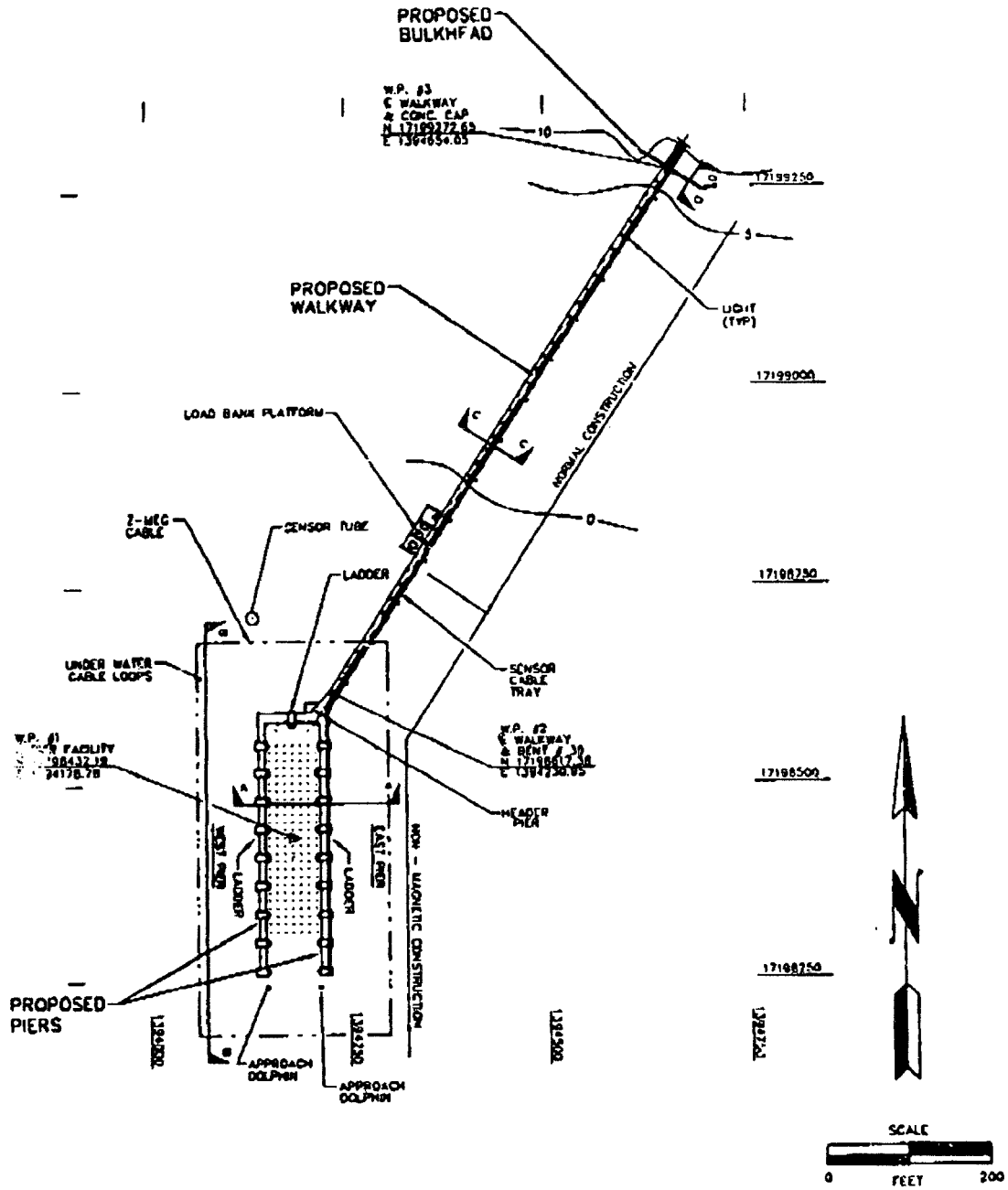
20486(01)

F:\COASTALV-PH-5.DWG Plotted: 2/10/1996 1:37 pm Plot Scale 1=1000




PIER SITE PLAN

| | | | | | | |
|---|---|---|---|---|---|---|
| GEE & JENSON | DESC. JSY | EMR FACILITY<br>NAVAL STATION<br>INGLESIDE, TEXAS | | | | SCALE SHOWN |
| | DRAW GOO | | | | | JOB # 93-282.53 |
| | CHKD | | | | | SHEET |
| | APRV | | | | | 5 OF 11 |
| | DATE 2/12/96 | APPLICANT: DEPARTMENT OF THE NAVY | DATE | APRV | REVISION | |

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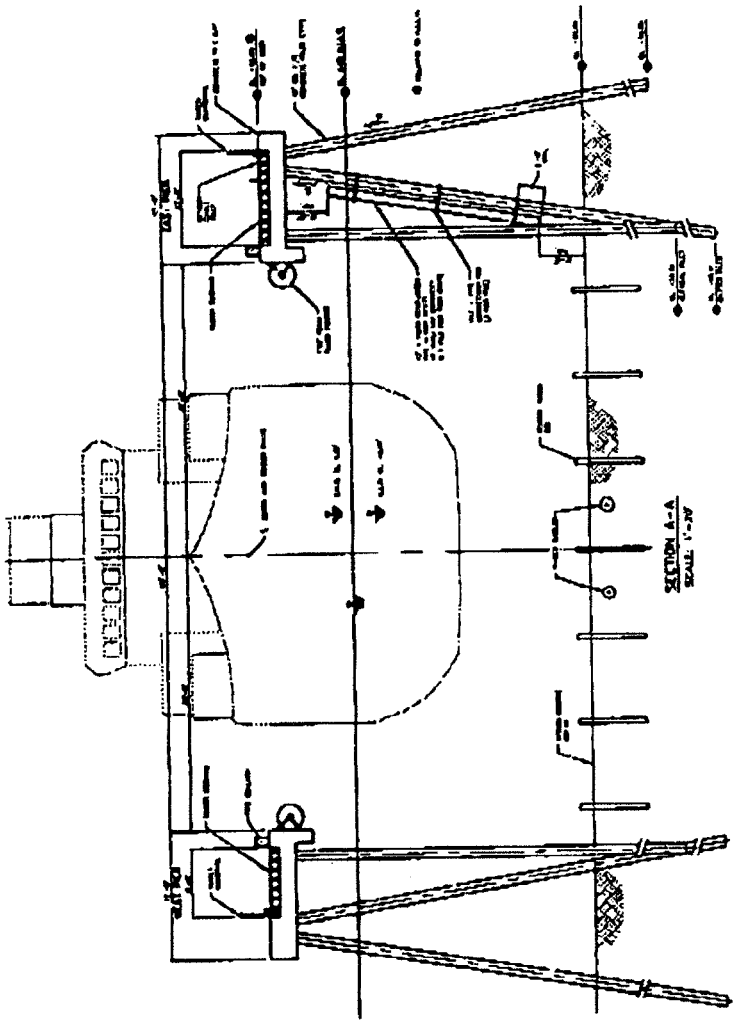
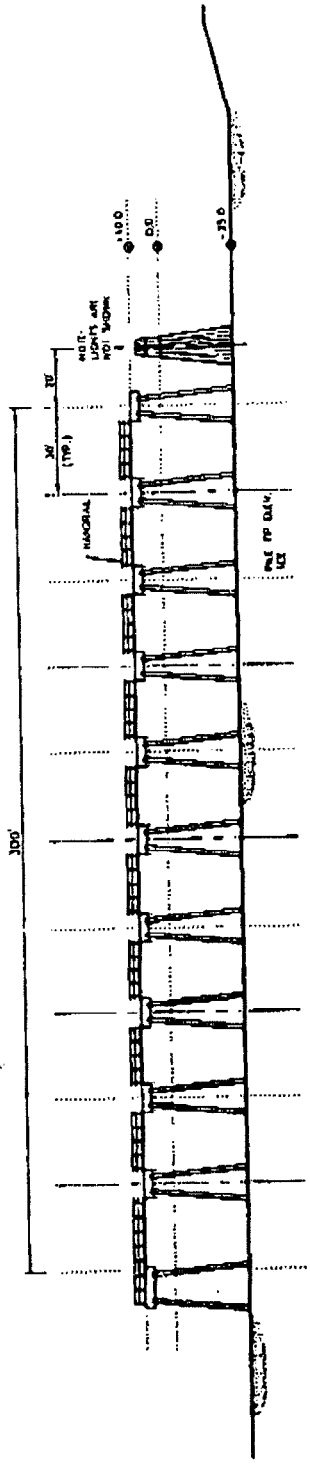
20486 (01)




SCALE
0 FEET 60

PIER SECTIONS

| | | | | |
|---|---|---|---|---|
| GEE & JENSON | DESC. JSY<br>DRAW GOO<br>CHKD. JDM<br>APRV<br>DATE 2/16/99 | EMR FACILITY<br>NAVAL STATION<br>INGLESIDE, TEXAS<br><br>APPLICANT: DEPARTMENT OF THE NAVY | DATE / APRV / REVISION | SCALE SHOWN<br>JOB # 93-282.53<br>SHEET 6 OF 11 |

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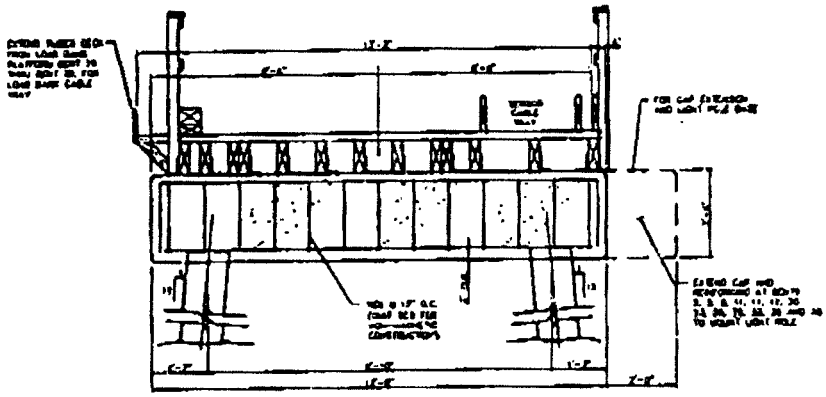
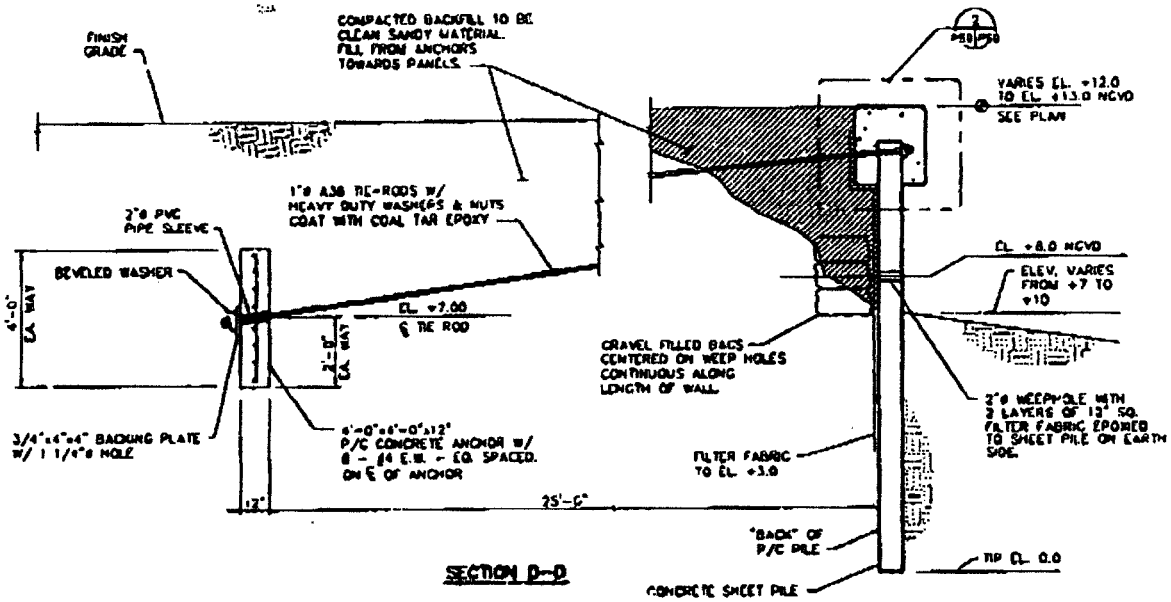
20486(01)

F:\COASTAL\P-SH-7.DWG Plotted: 2/10/1998 3:01 pm Plot Scale: 1=5.0



SECTION C-C




SECTION D-D

SCALE

0 FEET 5

TYPICAL SECTIONS

| | | | | | | |
|---|---|---|---|---|---|---|
| CE & JENSON | DESG. JSY | EMR FACILITY | | | | SCALE SHOWN |
| | DRAW GOO | NAVAL STATION | | | | JOB # 93282.53 |
| | CHKD | INGLESIDE, TEXAS | | | | SHEET 7 OF 11 |
| | APRV | | | | | |
| | DATE 2/16/98 | APPLICANT: DEPARTMENT OF THE NAVY | DATE | APRV | REVISION | |

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20486(01)

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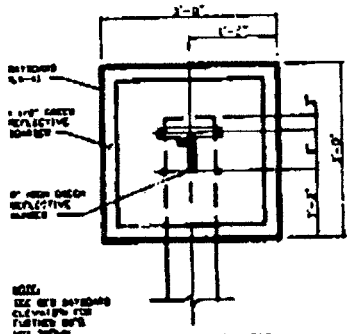
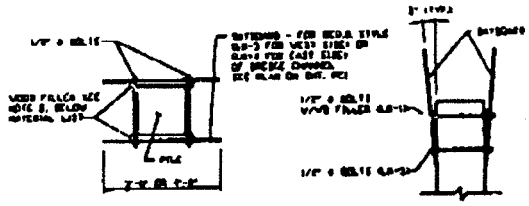
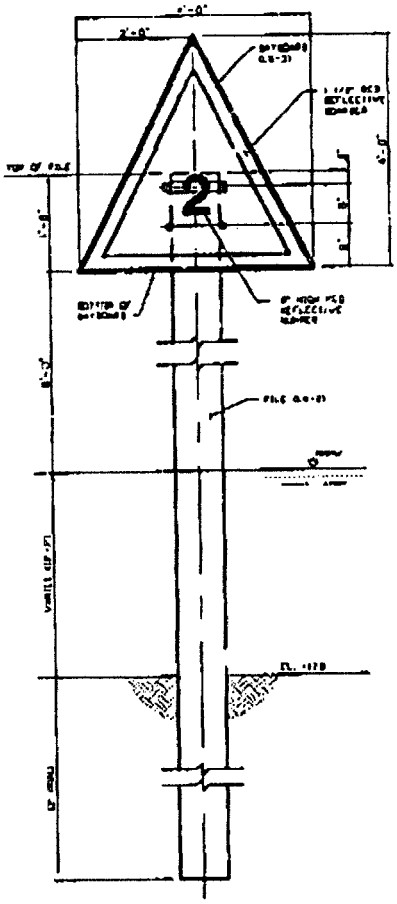


PARTIAL ELEVATION
GREEN DAYBOARD



TOP VIEW SIDE VIEW

DAYBOARD DETAILS
N.T.S.



ELEVATION
RED DAYBOARD

DAYMARK DETAILS

NOTE: JET, DRIVE OR PUNCH AS NECESSARY TO INSTALL DAYMARK PILES TO REQUIRED GRADE. SUBSTRATE MAY INCLUDE CEMENTED SAND.

| MATERIAL LIST FOR DAYMARK INSTALLATION | | | |
|---|---|---|---|
| ITEM | QUANTITY | MATERIALS | SIZE |
| LII-1 | 16 | 6061 ALUMINUM ALLOY BOLTS, NUTS, & WASHERS | 1/2" X 1'-3" |
| LII-2 | 8 | PRESTRESSED CONCRETE PILE, LENGTH AS REQ'D | 10" X 10" |
| LII-3 | 4 | RED DAYBOARD (NUMBERS 2 THRU 8) 5052-H38 ALLODIZED ALUM. | 48" TRIANGLE |
| LII-4 | 4 | GREEN DAYBOARD (NUMBERS 1 THRU 7) 5052-H38 ALLODIZED ALUM. | 36" SQUARE |
| LII-5 | 16 | 6061 ALUMINUM ALLOY BOLTS, NUTS, & WASHERS | 1/2" X 1'-2" |

NOTES:

1. ALL ALUMINUM BOLTS SHALL MEET ASTM STANDARDS FOR MARINE USE.
2. 2" X 4" PRESSURE TREATED WOOD FILLER PLACED BETWEEN THE DAYBOARD AND THE PILE AT THE UPPER BOLT CONNECTION TO PROVIDE A 5° OUT-BOARD TILT.
3. DAYBOARDS TO BE CONSTRUCTED OF 1/8 INCH, 5052-H38 ALLODIZED ALUMINUM, COVERED WITH 3M ENGINEER GRADE, REFLECTIVE SHEETING.
4. PRESSTRESSED PILES TO BE CONSTRUCTED W/ NITRONIC 33 STAINLESS STEEL PRESTRESS STRANDS & WIRE

SCALE
0 FEET 30

DAYMARK CHANNEL MARKER

GEE & JENSON

| | |
|---|---|
| DESG. | JSY |
| DRAW | NCP |
| CHKD | TDM |
| APRV | [illegible] |
| DATE | 2/16/98 |

EMR FACILITY
NAVAL STATION
INGLESIDE, TEXAS

APPLICANT: DEPARTMENT OF THE NAVY

| DATE | APRV | REVISION |
|---|---|---|

SCALE 1" = 30'
JOB # 93-282.53
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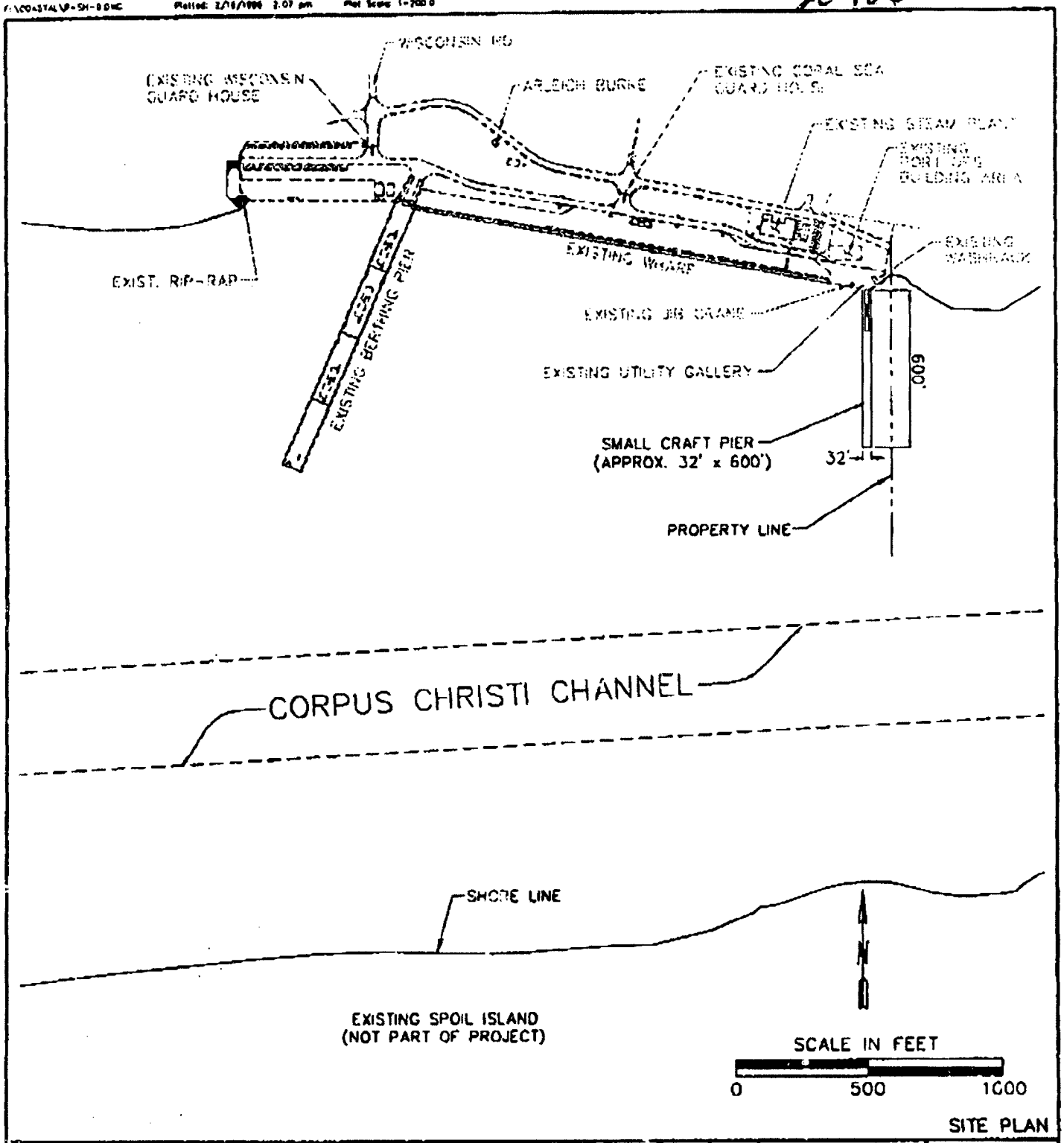


SITE PLAN

| | | | | | | |
|---|---|---|---|---|---|---|
| GEE & JENSON | DESG. JSY<br>DRAW GOO<br>CHKD<br>APRV<br>DATE 2/16/96 | SMALL CRAFT PIER<br>NAVAL STATION<br>INGLESIDE, TEXAS<br><br>APPLICANT: DEPARTMENT OF THE NAVY | DATE | APRV | REVISION | SCALE SHOWN<br>JOB # 93-282.53<br>SHEET 9 OF 11 |

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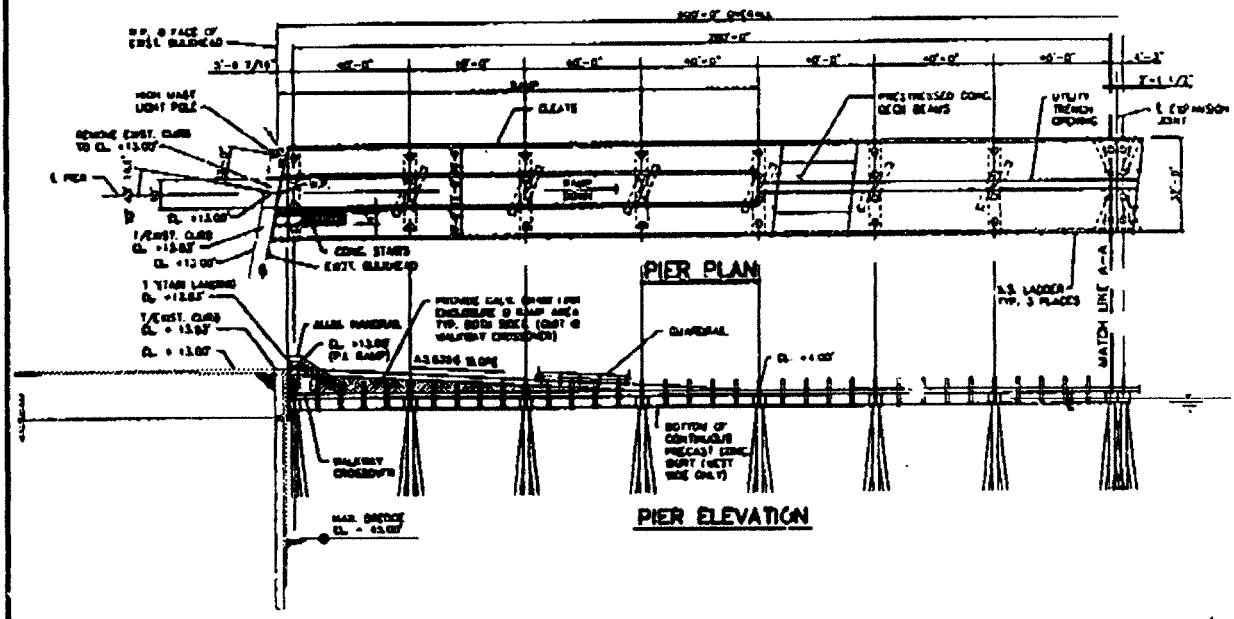


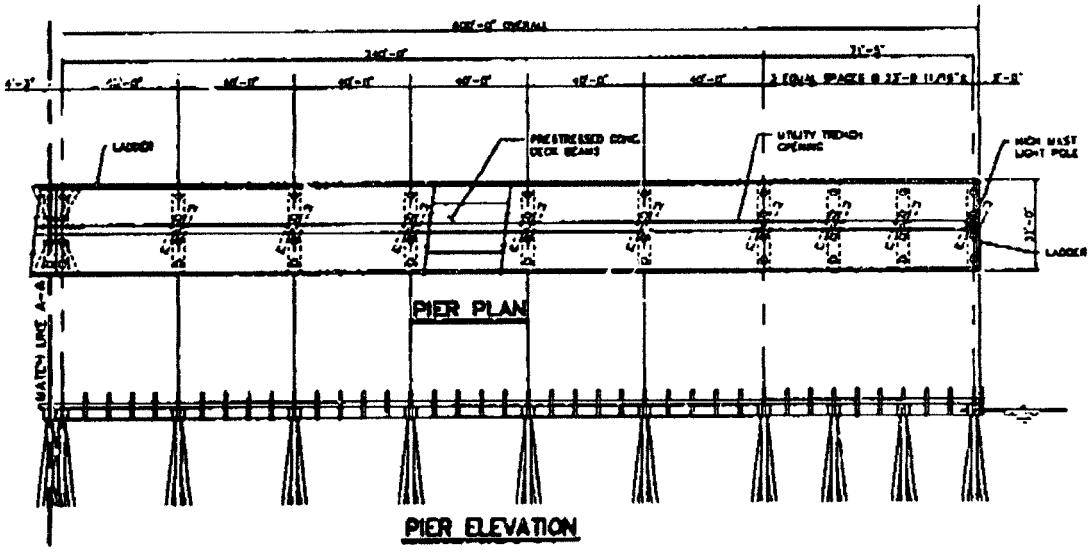


SCALE IN FEET

0 60 120

PIER PLANS & ELEVATIONS

| | | | | | |
|---|---|---|---|---|---|
| GEE & JENSON | DESG. JSY<br>DRAW GOO<br>CHKD JDM<br>APRV<br>DATE 2/16/96 | SMALL CRAFT PIER<br>NAVAL STATION<br>INGLESIDE, TEXAS<br><br>APPLICANT: DEPARTMENT OF THE NAVY | DATE / APRV / REVISION | SCALE SHOWN<br>JOB # 93-282.53<br>SHEET 10 OF 11 | |

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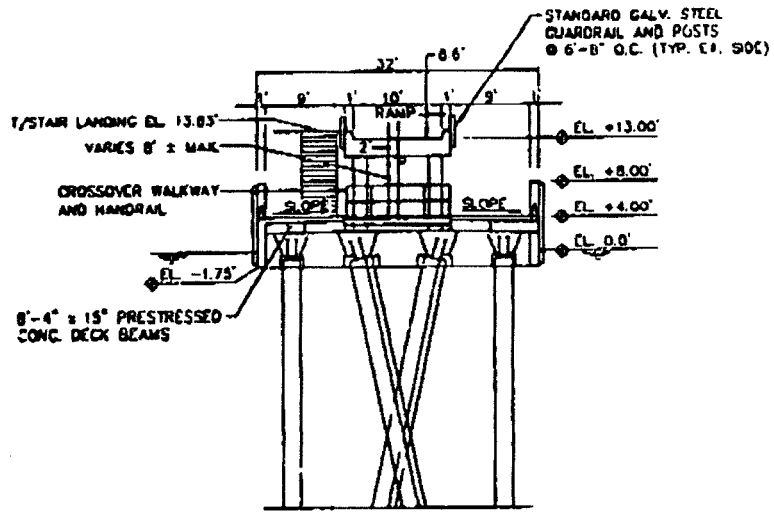
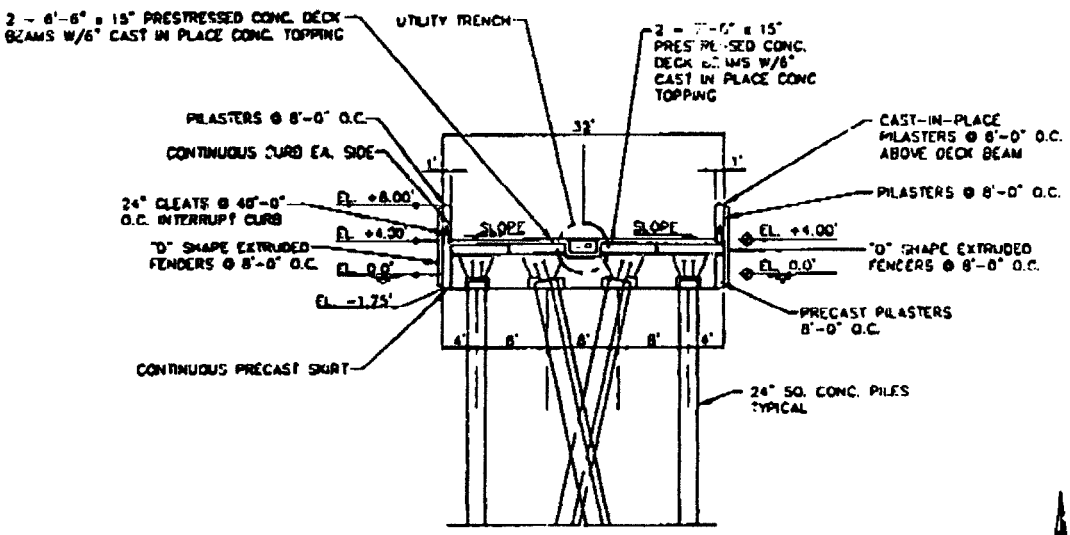
F:\COASTAL\P-SH-11.DWG Plotted: 2/16/1996 2:18 pm Plot Scale: 1=20.0




PIER SECTION @ RAMP

(SHOWING CONCRETE FENDER ALTERNATE)




TYPICAL PIER SECTION

(SHOWING TIMBER FENDER ALTERNATE)

N

SCALE IN FEET

0 20 40

TYPICAL PIER & RAMP SECTION

| | | | | | | |
|---|---|---|---|---|---|---|
| GEE & JENSON | DESG. JSY | SMALL CRAFT PIER<br>NAVAL STATION<br>INGLESIDE, TEXAS | DATE | APRV | REVISION | SCALE SHOWN |
| | DRAW GOO | | | | | JOB # 93-282.53 |
| | CHKD JSM | | | | | SHEET 11 OF 11 |
| | APRV | | | | | |
| | DATE 2/16/96 | APPLICANT: DEPARTMENT OF THE NAVY | | | | |

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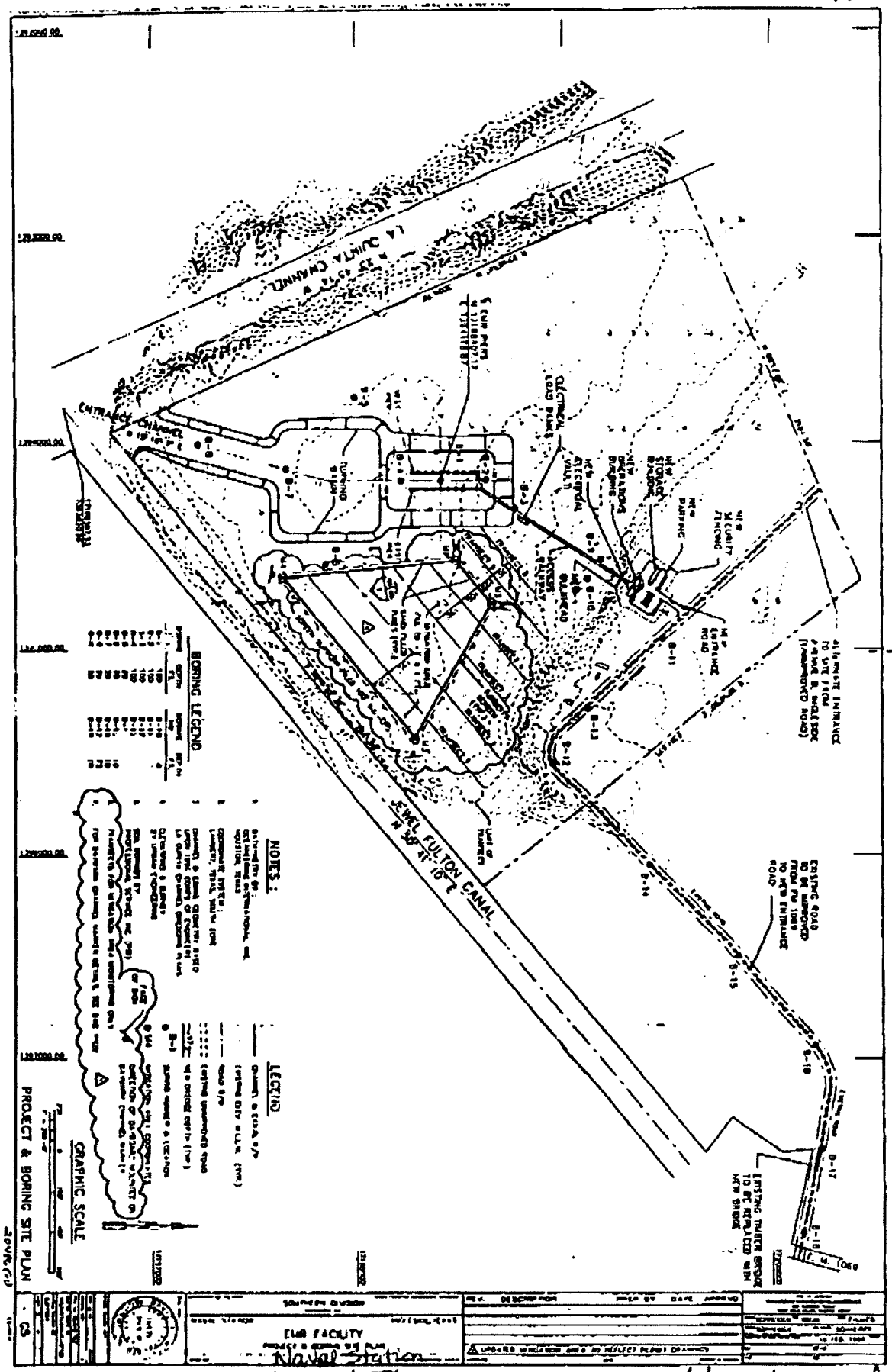


Naval Station
Ingleside TX

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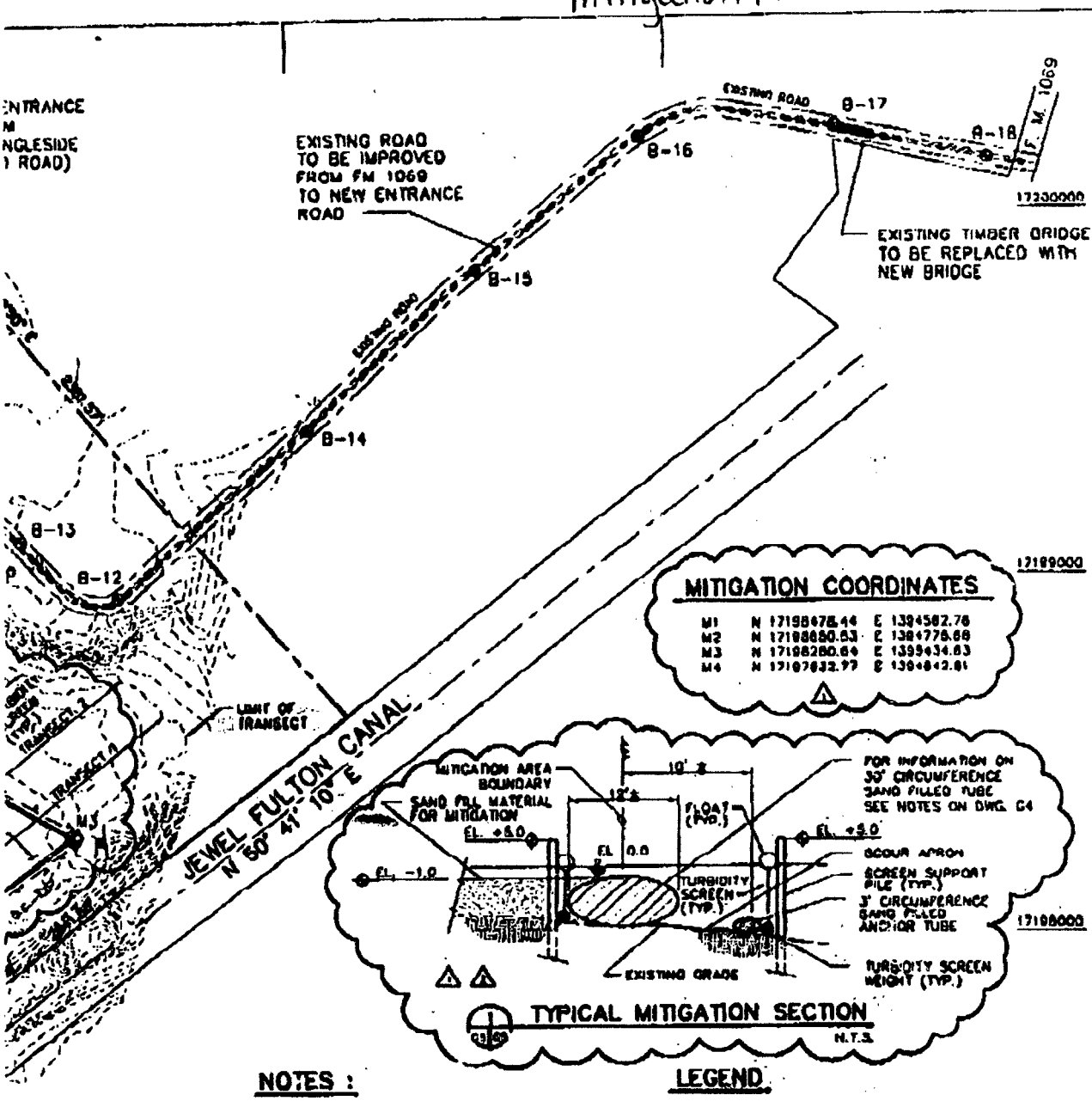
20486(01)

Mitigation Plan




## NOTES :

1. DATHYMETRY BY : OCEANEERING INTERNATIONAL, INC. HOUSTON, TEXAS
2. COORDINATE SYSTEM : LAMBERT, TEXAS, SOUTH ZONE.
3. CHANNEL & CANAL GEOMETRY BASED UPON 1990 CORPS OF ENGINEERS LA QUINTA CHANNEL DREDGING PLANS
4. ELEVATIONS & SURVEY BY URBAN ENGINEERING
5. SOIL BORINGS BY PROFESSIONAL SERVICE INC. (PSI)
6. TRANSECTS FOR MITIGATION AREA MONITORING ONLY
7. FOR DAYMARK CHANNEL MARKER DETAILS, SEE DWG. PS26

## LEGEND

| BORING NO. | DEPTH FT. |
|---|---|
| B-10 | 50 |
| B-11 | 10 |
| B-12 | 10 |
| B-13 | 10 |
| B-14 | 10 |
| B-15 | 10 |
| B-16 | 10 |
| B-17 | 75 |
| B-18 | 10 |

## LEGEND

- CHANNEL & CANAL R/W
- EXISTING ELEV. M.L.L.W. (TYP.)
- ROAD R/W
- EXISTING UNIMPROVED ROAD
- NEW DREDGE DEPTH (TYP.)
- B-1 BORING NUMBER & LOCATION
- M4 MITIGATION AREA COORDINATES
- FACE OF SIGN — DIRECTION OF DAYBOARD MOUNTED ON DAYMARK CHANNEL MARKER

GRAPHIC SCALE

300' 0 200' 400' 600'

1" = 200'-0"

PROJECT & BORING SITE PLAN

Naval Station Ingleside, TX

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1396000.00

1397000.00

| REV. | DESCRIPTION | PREP BY | DATE | APPRVD |
|---|---|---|---|---|
| | | | | |

SCHNEIDER AMAN PALUTO
SCHNEIDER SCHNEIDER
15 FEB. 1996

ADDED TURBIDITY SCREEN TO TYP. SECTION
UPDATED MITIGATION AREA TO REFLECT PERMIT DRAWINGS

SOUTHERN DIVISION
NAVAL STATION INGLESIDE, TEXAS
EMR FACILITY
PROJECT & BORING SITE PLAN

DAVID W. MOYER CERTIFICATE 16939 STATE OF TEXAS REGISTERED ENGINEER

N62467-94-C-0733

5311589

G5

# MITIGATIVE PROCEDURES/CONDITIONS FOR SEAGRASS TRANSPLANTING EFFORTS

1. Material to be used for construction of the mitigation area shall be removed from the borrow area and placed in the mitigation site by mechanical or hydraulic means.

2. After placement of material in the mitigation area and following a sediment conditioning time of at least 90 days, the 10.5 acre mitigation area will be planted with locally harvested shoal grass. All shoal grass planting will be conducted between mid-March and mid-June, or between mid-September and mid-October. Harvest sites will be coordinated with the COE, NMFS, USFWS, and TPWD at least two weeks prior to commencement of transplanting activities. Initial planting shall be completed within one year of initiation of dredging associated with EMR construction.

3. No more than one 15 cm plug of source material per one square meter will be obtained from the designated seagrass borrow areas. Incidental damage to borrow areas will be strictly avoided.

4. Permittee will conduct a transplant survival survey of the planted area within 60 days following the initial planting effort. If 50% survival of transplant material is not achieved in this first 60 days, a second planting effort will be completed within the next 30 days. A written report detailing the results of this effort shall be submitted to the Corps within 60 days of survey completion.

5. Six transects will be established for the purposes of post-planting surveys: two transects outside of the mitigation area in adjacent seagrass beds; and four transects which cross the mitigation area and extend beyond the geo-textile tubes to the mean high water line. Surveys along these transects shall be performed at 6 months, 1 year, 2 years, and 3 years to determine success of mitigation. To determine success, three core samples will be taken at several points inside the mitigation area. These points will be located at 20-foot intervals along the four transects within the mitigation site. Species and coverage of seagrasses will be documented and coverage will be calculated using presence or absence of grass at each core sample. Similar methodology shall be followed on the transects located outside of the mitigation area but these sites will be examined only to determine if secondary impacts to existing grasses are occurring due to construction of the mitigation area.

6. If at least 70% coverage of the mitigation area is not achieved within 2 growing seasons following the initial planting, an additional planting effort will be made, and those areas not successfully vegetated will be replanted to original specifications.

7. The mitigation will be considered successful if 70% of the mitigation area is covered by seagrass within 3 years of the initial planting. If mitigation is determined to be unsuccessful at the end of the three year monitoring period the applicant will be required to take necessary corrective measures to insure success.

Naval Station
Ingleside, TX

20486(01)

8. During the four surveys performed to determine success of seagrass planting and during the 5th, 7th, and 9th year after initial planting, surveys will be conducted along the geo-textile tubes. These geo tube surveys will be performed at 25-foot intervals along the entire length of the tubes and will include a bathymetric survey of the area outside the mitigation site to 50 feet from the outside of the tubes. These surveys will include notation of scouring/sediment accumulation at each bathymetric point, notation of condition of tubes (tears, slumping, etc.), and water depth. The applicant will be responsible for maintaining the integrity of the tubes based on information reported in the tube surveys.

9. The geo-textile tubes will be marked on-site by means of surveyed corner piles with signs.

10. The applicant will prepare monitoring reports detailing all required surveys. These monitoring reports will be submitted to the Corps, USFWS, TPWD, and NMFS within 60 days of survey completion.

11. Two silt screens will be in place along the inner and outer edges of the geo-tube prior to placement of any hydraulic material in the mitigation site and an additional silt screen will be placed on the waterward side of the seagrasses along the shoreline.

12. Seagrass surveys will be performed before and after placement of hydraulic material in the mitigation site at 200-foot intervals along the outer edge of the geo-tubes and shall extend 500 feet away from the geo-tube. If, during the pre-construction survey, grasses are found, the vegetated area will be delineated. Surveys will be submitted to the Corps Regulatory Branch within 6 weeks of completion. If impacts to seagrasses outside the mitigation site are determined to have occurred, the applicant will be required to offset these impacts in a manner to be determined by the Corps.

Naval Station
Ingleside, TX