PMSTPCOL NPEmails

From: Muir, Jessie
Sent: Wednesday, October 27, 2010 8:04 AM
To: STPCOL
Subject: FW: STP Mitigation Plan
Attachments: STP_Mit_Plan.pdf

From: Hudson, Jayson M SWG [mailto:Jayson.M.Hudson@usace.army.mil]
Sent: Monday, October 25, 2010 10:25 AM
To: Muir, Jessie
Subject: STP Mitigation Plan

Jessie,

Attached is the proposed Compensatory Mitigation Plan for the STPNOC 3&4.

Jayson M. Hudson
Regulatory Project Manager
Galveston District
U.S. Army Corps of Engineers
Office: 409.766.3108 Fax 409.766.3931
To assist us in improving our service to you, please complete the survey found at
http://per2.nwp.usace.army.mil/survey.html

Please Consider the Environment Before Printing

Hearing Identifier: SouthTexas34NonPublic_EX
Email Number: 3447

Mail Envelope Properties (9C2386A0C0BC584684916F7A0482B6CA1A8A15D132)

Subject: FW: STP Mitigation Plan
Sent Date: 10/27/2010 8:03:46 AM
Received Date: 10/27/2010 8:03:48 AM
From: Muir, Jessie

Created By: Jessie.Muir@nrc.gov

Recipients:
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	592	10/27/2010 8:03:48 AM
STP_Mit_Plan.pdf	1941536	

Options
Priority: Standard
Return Notification: No
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Sensitivity: Normal
Expiration Date:
Recipients Received:

OCT 13 2010

Nuclear Operating Company

South Texas Project Electric Generating Station 4000 Avenue F – Suite A Bay City, Texas 77414

October 12, 2010
U7-C-STP-ACE-100002

U.S. Army Corps of Engineers – Galveston District
Jadwin Building
2000 Fort Point Road
Attention: Jayson Hudson
Galveston, TX 77553-1229

South Texas Project
Units 3 and 4
SWG-2007-00786 Mitigation Plan

The STP Nuclear Operating Company (STPNOC) submits the enclosed Mitigation Plan in support of the Department of Army permit application SWG-2007-00786 for dredge and fill activities associated with the construction of Units 3 & 4.

If you have any questions regarding this application, please contact me at (361) 972-7136, or Russell W. Kiesling at (361) 972-4716.

Scott Head
Manager, Regulatory Affairs
South Texas Project, Units 3 & 4

rwk

Enclosure: STP Nuclear Operating Company Mitigation Plan for Stream Impacts at the South Texas Project Unit 3 & 4 Expansion, Wadsworth, Texas. October 2010

STI: 32764758

cc: w/o attachment except*
(paper copy)

*Steven P. Frantz, Esquire
A. H. Gutterman, Esquire
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Ave. NW
Washington, D.C. 20004

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Nuclear Operating Company

South Texas Project Electric Generating Station 4000 Avenue F – Suite A Bay City, Texas 77414

USACE Project No. SWG-2007-00786

STP NUCLEAR OPERATING COMPANY
MITIGATION PLAN FOR STREAM IMPACTS AT THE SOUTH TEXAS PROJECT
UNIT 3 & 4 EXPANSION
Wadsworth, Texas
October, 2010

Introduction

The STP Nuclear Operating Company (STPNOC) proposes to place up to six culverts in man-made, engineered conveyances as part of the South Texas Project (STP) Unit 3 & 4 expansion. Attachment 1 contains project drawings that identify locations for these impacts. The U.S. Army Corps of Engineers (USACE) Galveston District has determined that the proposed STP Unit 3 & 4 expansion would result in impacts to 265 linear feet (ft) of Section 404 regulated streambed. In a letter from the USACE dated 16 September 2010 to STPNOC's Manager of Regulatory Affairs, it was stated that 136 debits would be required as mitigation to compensate for the 265 linear ft of proposed project impacts to relatively permanent waters. Attachment 2 contains a copy of this letter. In addition, as stated in the USACE letter, this compensatory mitigation may include on-site permittee responsible mitigation, off-site permittee responsible mitigation, Mill Creek Mitigation Bank (MCMB) or a combination of all three. In order to meet the compensatory mitigation requirements outlined by the USACE, STPNOC proposes to participate in the MCMB. Availability of Mitigation Units at the MCMB is verified in Attachment 3 and the banking instrument for MCMB is contained in Attachment 4.

In accordance with 33 CFR 332.4(c)(i), Mitigation for Losses of Aquatic Resources, permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, may submit mitigation plans that include only items described in paragraphs (c)(5) and (c)(6), and the name of the specific mitigation bank or in-lieu fee program to be used. Item (c)(5) is titled Baseline Information and item (c)(6) is titled Determination of Credits, both of which are presented below.

Baseline Information

The 265 linear ft of project impacts would occur at six locations within the jurisdictional limits of man-made conveyances. The USACE exerted jurisdiction over these conveyances due to their relatively permanent flow characteristics. The six impact locations are associated with the installation of new culverts at three locations (A, B, F), each requiring 80 linear ft of impacts.

Additional impacts include the potential replacement of 3 existing culverts at the remaining three locations (C, D, E) requiring five, twenty, and zero linear ft of new impacts respectively, These six impact areas are characterized herein as six stream reaches (A, B, C, D, E, F) based on the locations of the culverts.

Two of the three locations that would require new culvert installations (Culverts A and B) exhibit channel morphology that has been excavated, straightened and uniform (engineered channel). Water flow is contained within these incised channels and occurs below the root zone. The top of stream banks at both of these locations are maintained through frequent, periodic mowing and consequently the riparian community is poor and virtually nonexistent. As a result, these two stream channel reaches receive full sun and contain very sparse wildlife habitat like woody debris or refugia. The Stream substrate is somewhat varied and contains cobble rip rap for the majority of these reaches.

The third location proposed for a new construction (Culvert F) is also an engineered channel with similar channel morphology and substrate characteristic as the other two new culvert locations. However, this stream reach has not been mowed and maintained regularly. Consequently, this impact area contains a more developed scrub/shrub strata as well as a dense herbaceous layer which minimally increases its riparian value.

The remaining stream reaches (Culverts C, D, and E), are engineered channels that have been excavated and straightened. Each could require replacement of existing culverts. These locations are severely incised with vertical stream banks where flows occur well below the root zone and are confined to the trapezoidal channel. The riparian buffer associated with Culvert C contains the existing roadway and the remainder is maintained through frequent periodic mowing activities, consequently this buffer provides limited habitat value. The riparian buffer associated with the location of Culverts D and E are actively mowed and maintained in its entirety. The in-stream habitat elements associated with these locations is considered poor due to the lack of shade, due primarily to the lack of riparian buffer, and the limited amount of woody debris and refugia that would be expected from maintained engineered conveyances.

Determination of Credits

As previously stated, the USACE determined that the proposed project impacts for installation of the new and replacement of the existing culverts would result in 265 linear ft of impacts to Waters of the U.S. which may require up to 136 debits of compensatory mitigation. This level of debits for compensatory mitigation was determined by the USACE by accessing the ecological condition of the impact area using the Unified Stream Methodology (USM). The results of the USM enabled the development of an impact factor (IF) score which was used to determine the level of debits necessary to compensate for project impacts to Waters of the U.S. In this instance, the IF scoring associated with Culvert A, B and F is characterized as severe which is equal to a score of 1, while Culverts C and D are characterized as moderate, which equals to a score of 0.5. This IF score combined with the reach condition index and linear ft of impacts determined that 136 debits would be required to compensate for 265 ft of linear impacts to Waters of the U.S.

In order to compensate for the 265 linear ft of unavoidable project impacts to Waters of the U.S., STPNOC was provide four options by the USACE, which included on-site permittee responsible mitigation, off-site permittee responsible mitigation, use of MCMB, or a combination of all three. STPNOC has elected to compensate for project impacts by participating solely in the MCMB located in Austin County, Texas which is sponsored by Wetland Conservation Partners, LTD. STPNOC would purchase the equivalent of 136 debits in the MCMB in order to compensate for project impacts.

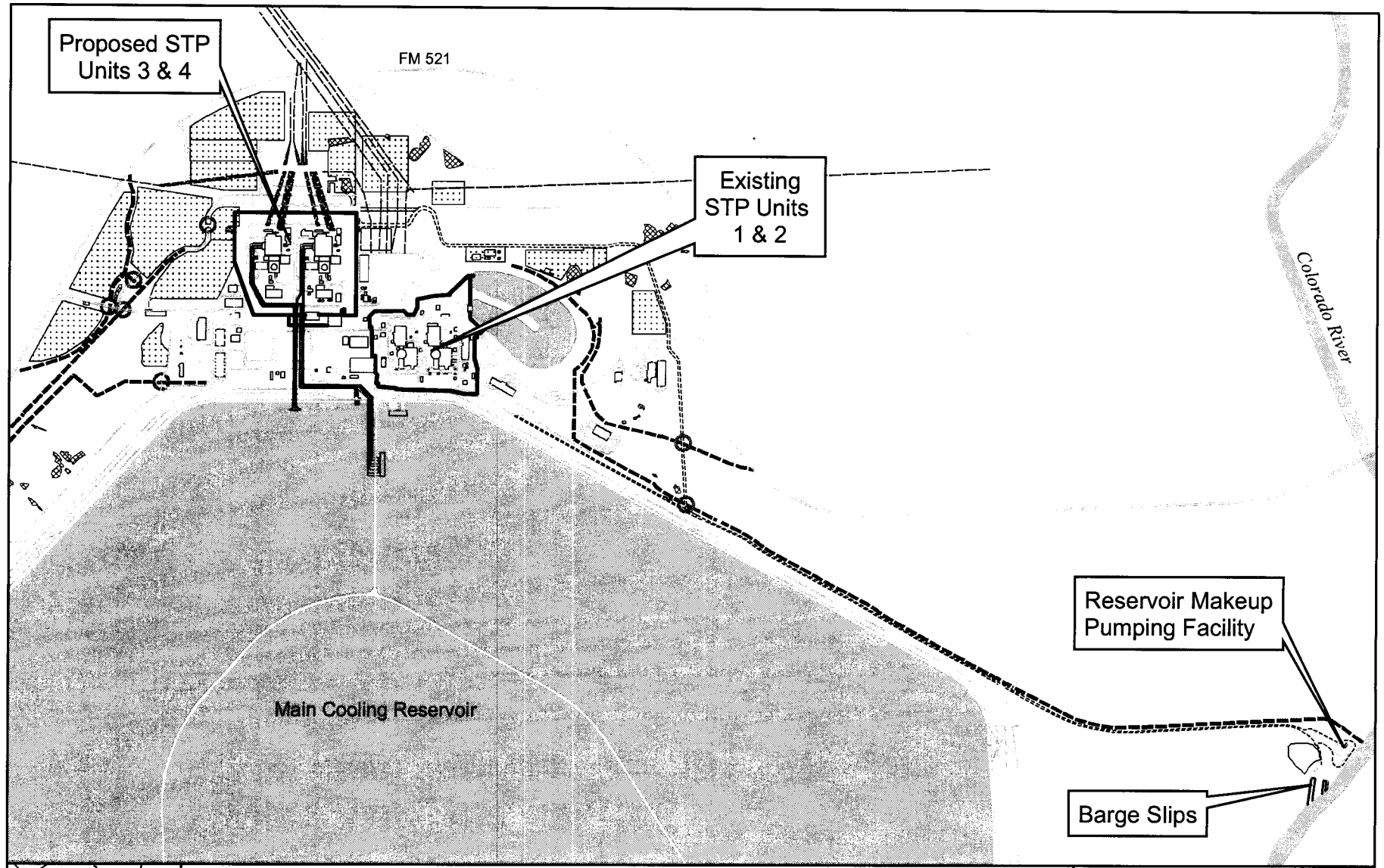
Mill Creek Mitigation Bank

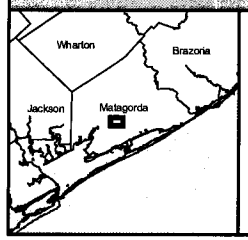
The MCMB was established and approved by the USACE in June 2008. MCMB has a total of 188.6 acres comprised of two tracts located in Austin County: the Shelby Unit (89.7 acres) and the Kenney Unit (98.9 acres). MCMB is generally comprised of Oak-Elm-Ash bottomland riparian wetlands along the West Fork of Mill Creek and Buffalo Creek. The Shelby Unit lands have been classified into three existing habitats: riparian forest wetlands, bottomland forested wetlands, and mixed scrub-herbaceous wetlands. The Kenny Unit contains bottomland forested wetlands, herbaceous wetlands and stream riparian zone habitats.

STPNOC would follow the procedures established in the MCMB mitigation instrument in order to legally secure in perpetuity, 136 debits to compensate for proposed project impacts related to installation and replacement of culverts.

Attachment 1

Project Drawings





Culvert Location
Jurisdictional Wetland
Jurisdictional Stream
Cooling Water Intake & Discharge
Transmission Line
Heavy Haul Road
Temporary Impacted Areas

N

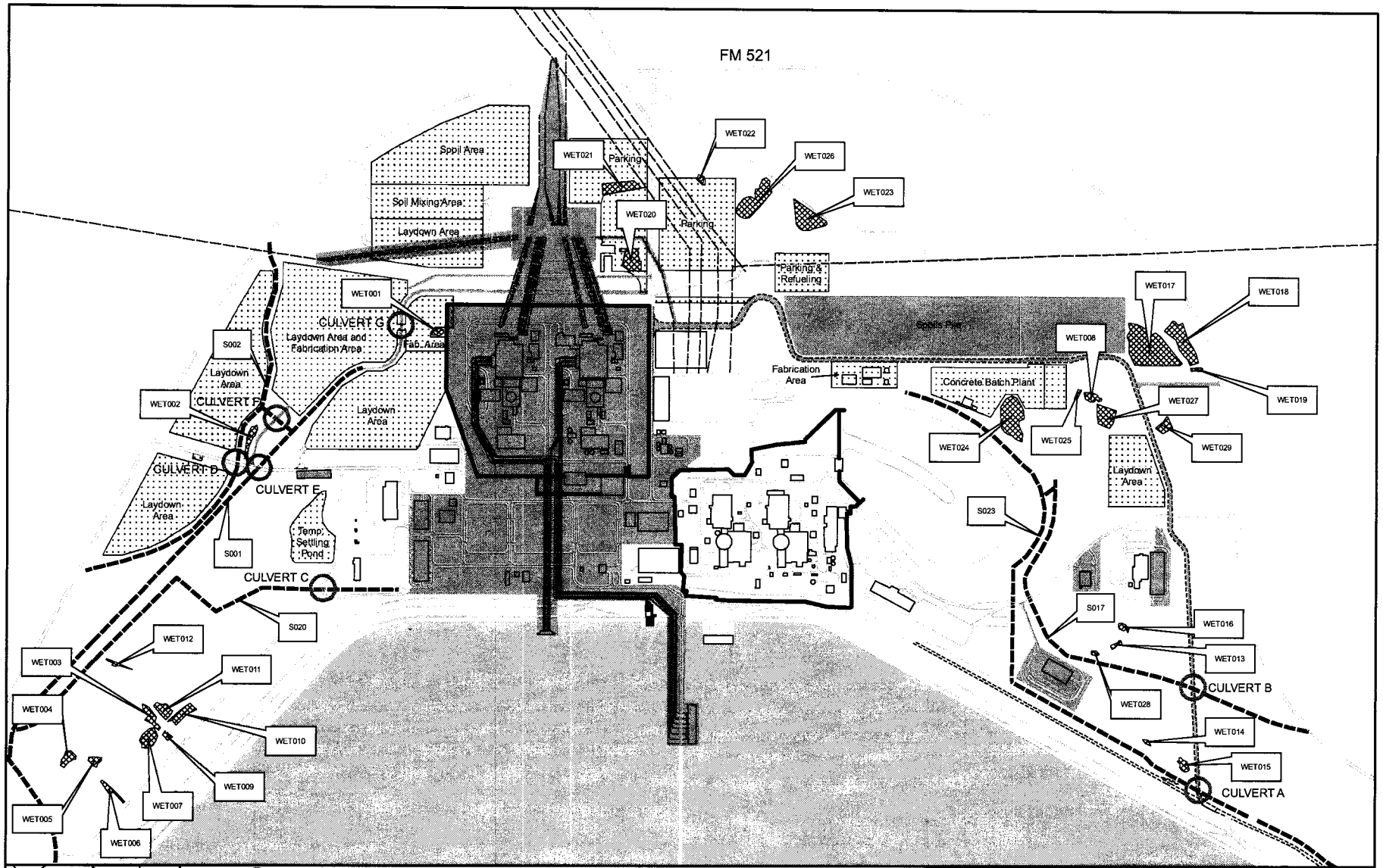
0 1,250 2,500 5,000 Feet

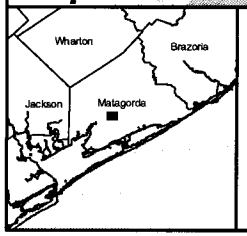
PBSJ
6504 Bridge Point Pkwy, Ste. 200
Austin, Texas 78730
Phone: (512) 329-8342 Fax: (512) 327-2453

Figure 1
South Texas Project
Location Map

Prepared for: USACE	
Job No.: 100015798	Scale: 1in = 2500ft
Prepared by: 18827	Date: 8-06-2010

File: N:/Clients/U_Z/USACE/STPNOC/100015798/geo/figs/STNP_Location.mxd





Culvert Location
Jurisdictional Wetland
Jurisdictional Stream
Cooling Water Intake & Discharge
Transmission Line
Heavy Haul Road
Existing Facilities
Proposed Facilities Permanent Impacts (Apprx 300 ac)
Proposed Facilities Temporary Impacts (Apprx 240 ac)

N

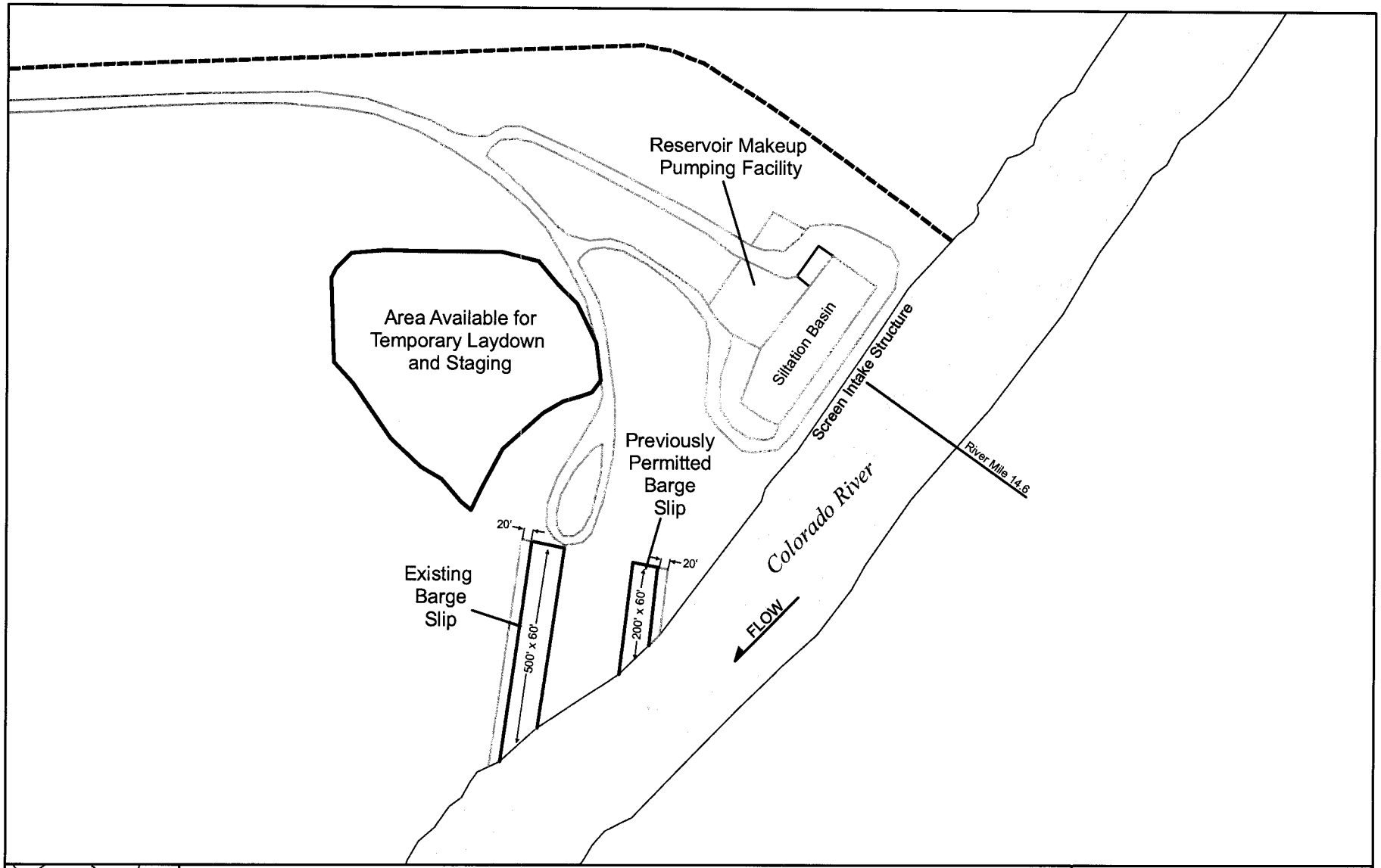
0 750 1,500 3,000 Feet

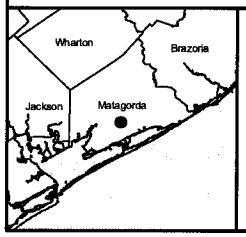
PBSJ
6504 Bridge Point Pkwy, Ste. 200
Austin, Texas 78730
Phone: (512) 329-8342 Fax: (512) 327-2453

Figure 2
South Texas Project- Plot Plan
Units 1, 2, 3, & 4

Prepared for: USACE	
Job No.: 100015798	Scale: 1in = 1500ft
Prepared by: 18827	Date: 8-04-2010

File: N:/Clients/U_Z/USACE/STPNOC/100015798/geo/figs/STNP_Site_Plan.mxd





Barge Slip

Drainage Ditch

Proposed Expansion

Area Available for Temporary Laydown and Staging

N

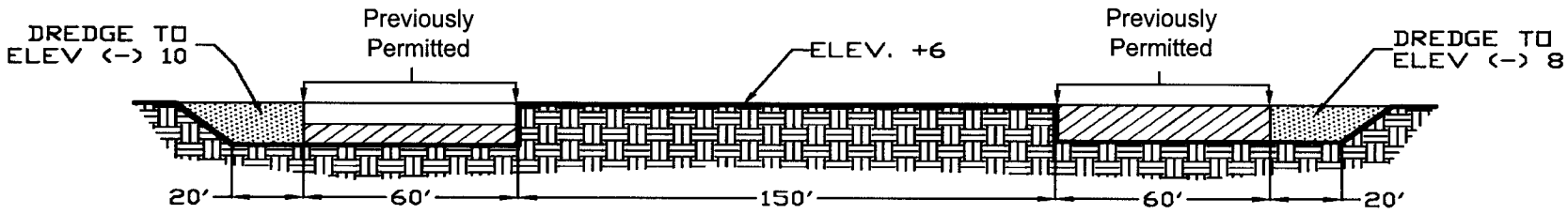
0 150 300 600 Feet

PBSJ
6504 Bridge Point Pkwy, Ste. 200
Austin, Texas 78730
Phone: (512) 329-8342 Fax: (512) 327-2453

Figure 3
South Texas Project
Barge Slips & Proposed Expansion

Prepared for: USACE	
Job No.: 100015798	Scale: 1in = 300ft
Prepared by: 18827	Date: 8-06-2010

File: N:/Clients/U_Z/USACE/STPNOC/100015798/geo/figs/STNP_Barge_Slip.mxd

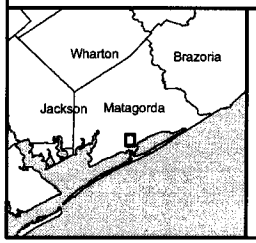


CROSS SECTION BARGE SLIP

NOTE: ELEVATIONS SHOWN ARE IN FEET.
DATUM IS IN MEAN SEA LEVEL.

LEGEND

- Proposed Expansion
- Deposited Material To Be Removed



South Texas Project Units 3 & 4
Matagorda County, TX

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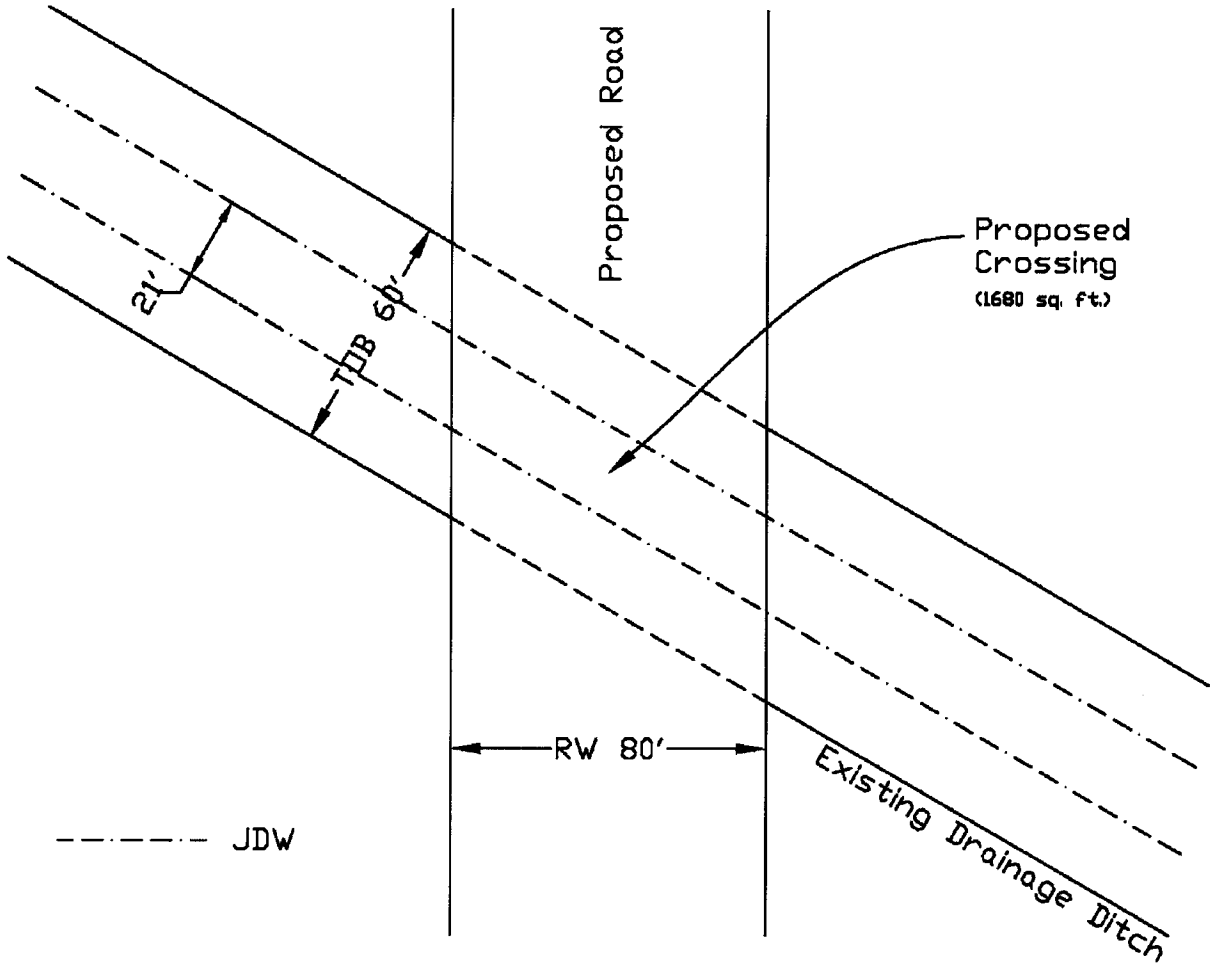
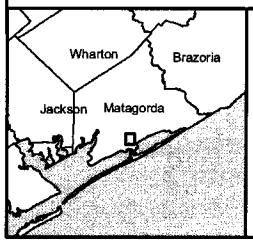
Figure 4
South Texas Project
Barge Slips & Proposed
Expansion Cross Section



Culvert "A" - Plan View



LEGEND
JDW: Jurisdictional Water
RW: Road Width
TOB: Top Of Bank

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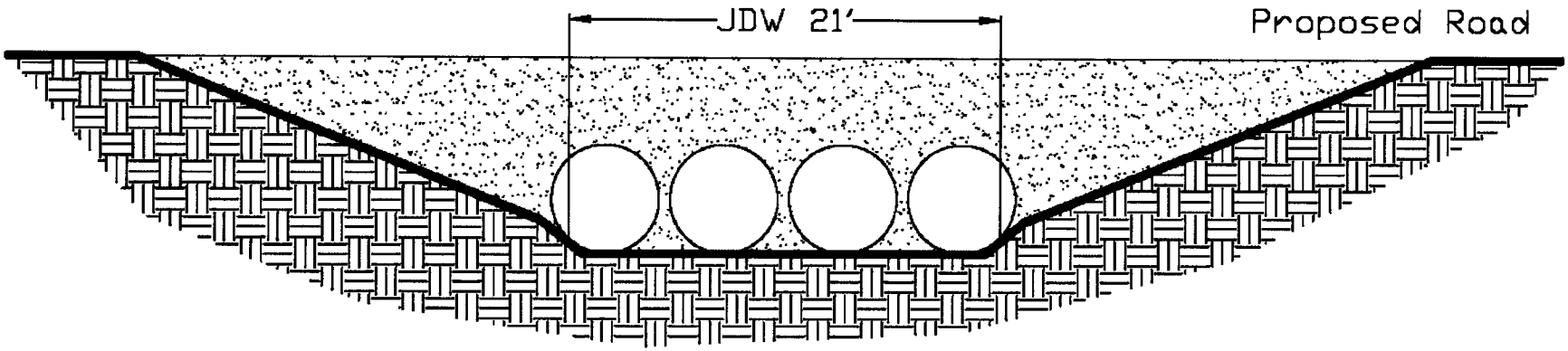
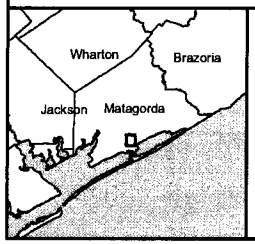
Figure 5
Culvert A - Plan View



Cross-section of culvert "A"



LEGEND

JDW: Jurisdictional Water

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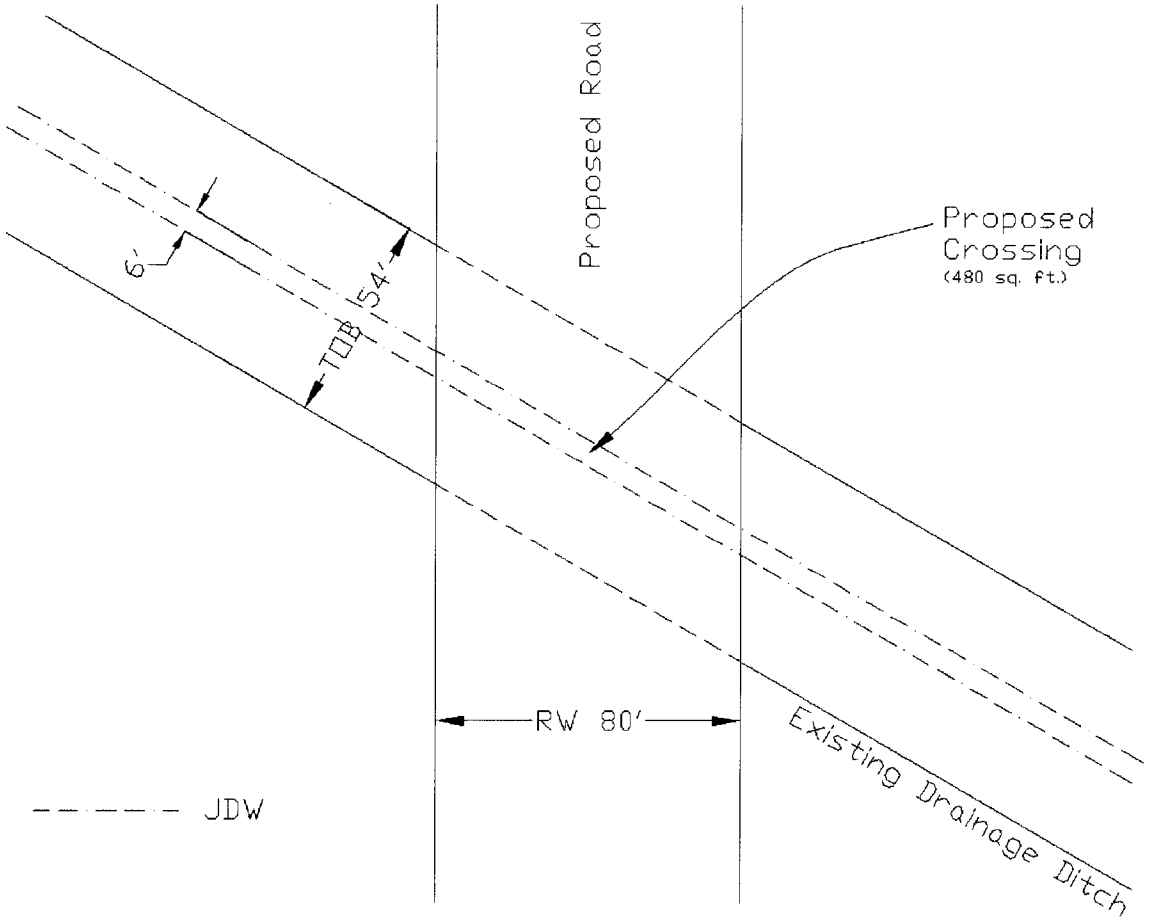
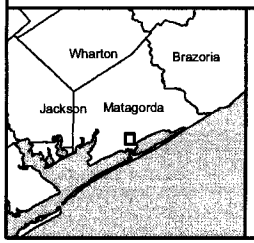
Figure 6
Culvert A - Cross Section



Culvert "B" - Plan View



LEGEND

JDW: Jurisdictional Water
RW: Road Width
TOB: Top Of Bank

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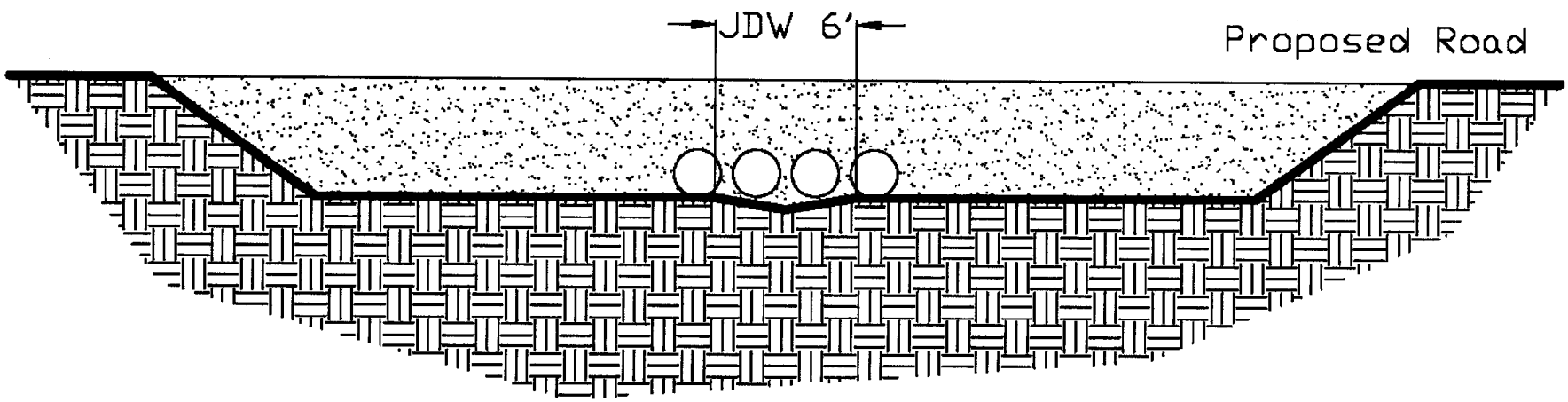
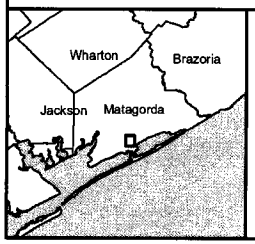
Figure 7
Culvert B - Plan View



Cross-section of culvert "B"



LEGEND

JDW: Jurisdictional Water

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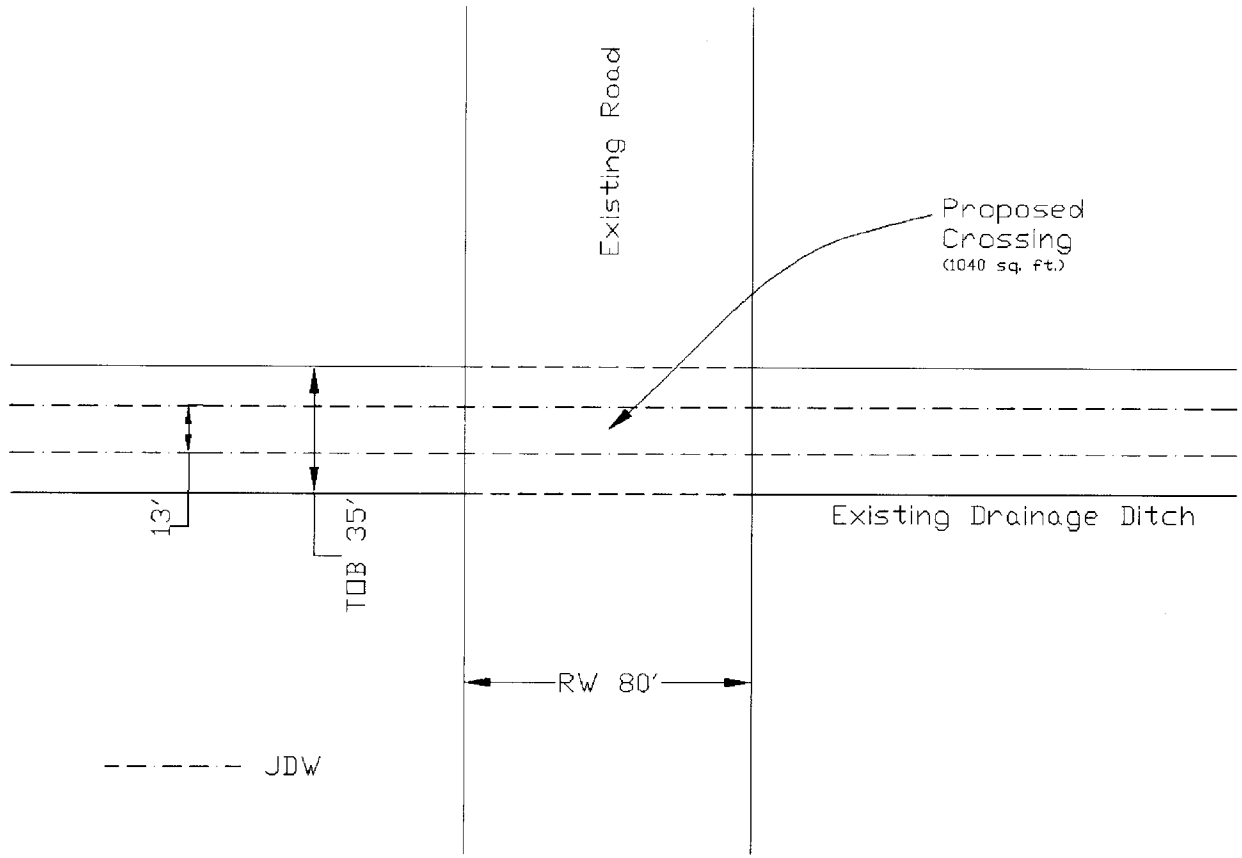
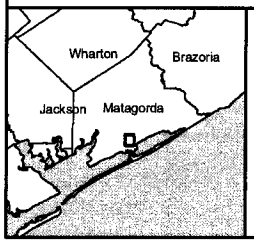
Figure 8
Culvert B - Cross Section



Culvert "C" - Plan View



LEGEND

JDW: Jurisdictional Water
RW: Road Width
TOB: Top Of Bank

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Matagorda County, TX

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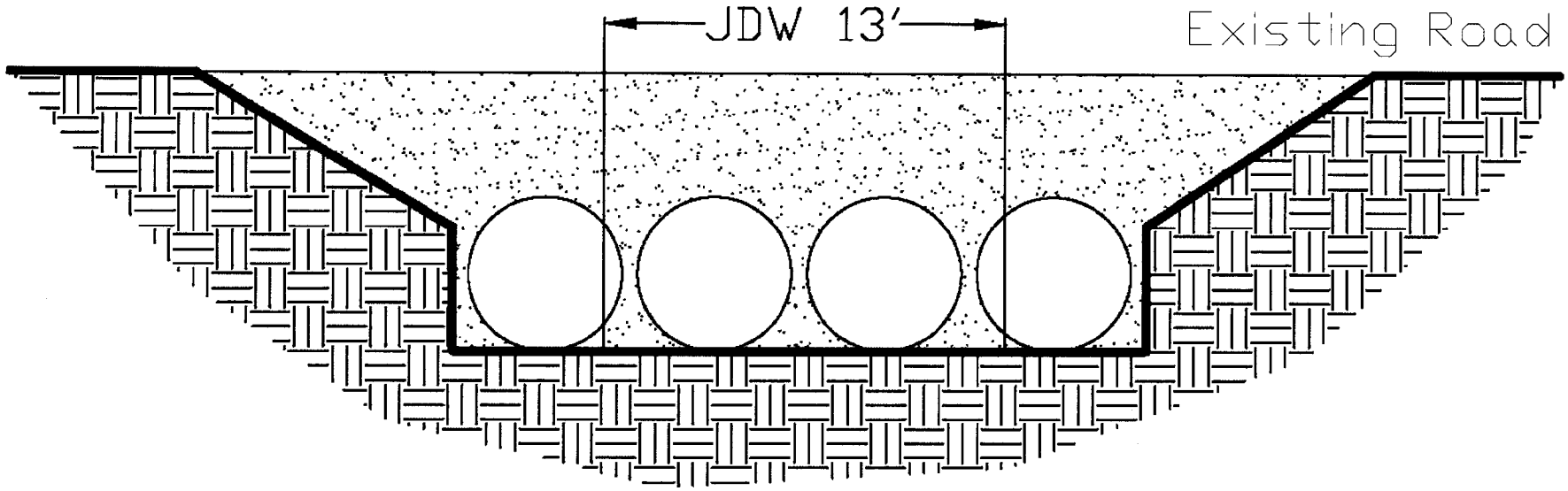
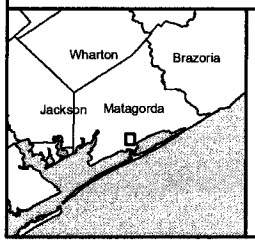
Figure 9
Culvert C - Plan View



Cross-section of culvert "C"



LEGEND

JDW: Jurisdictional Water

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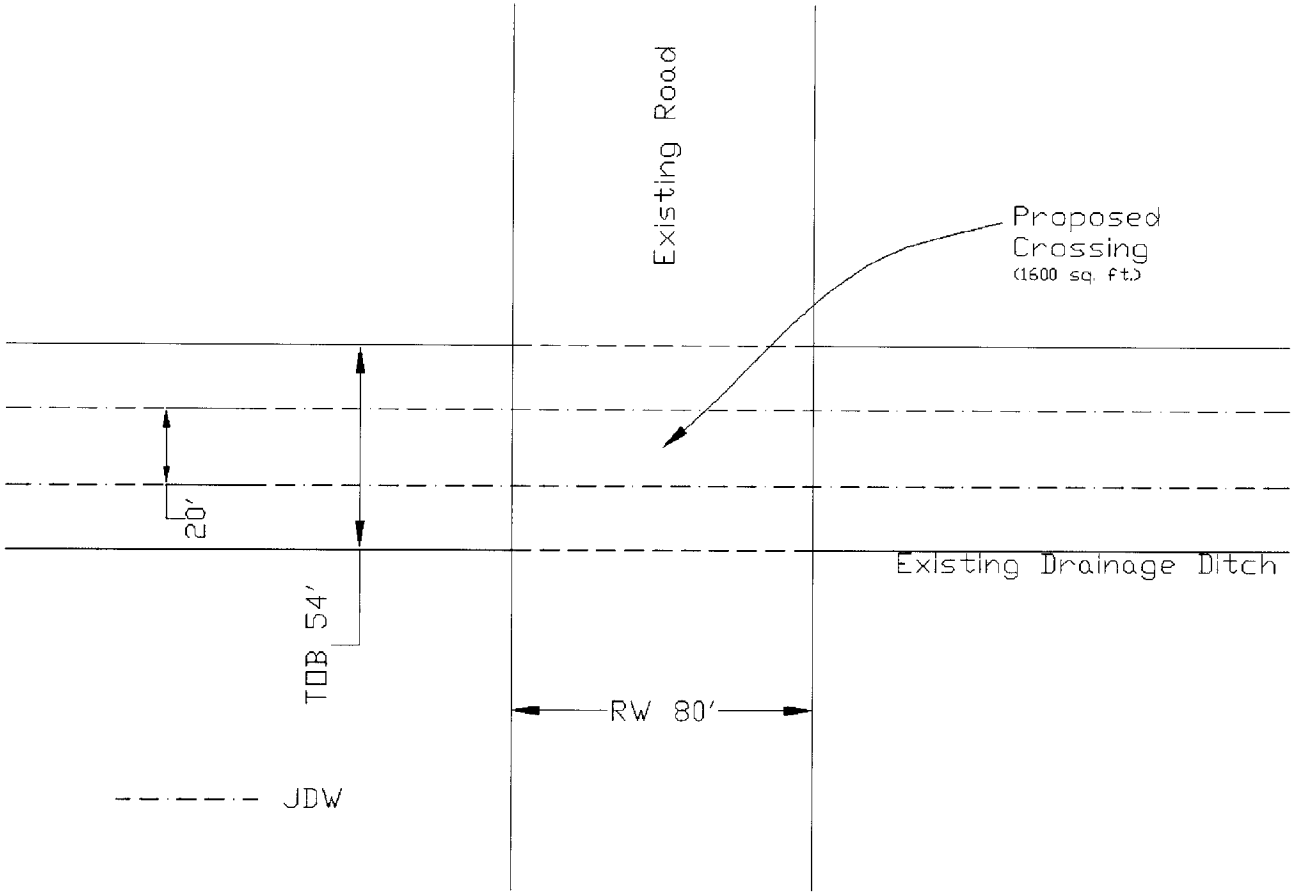
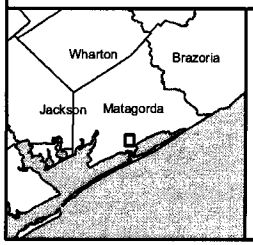
Figure 10
Culvert C - Cross Section



Culvert "D" - Plan View



LEGEND

JDW: Jurisdictional Water
RW: Road Width
TOB: Top Of Bank

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Matagorda County, TX

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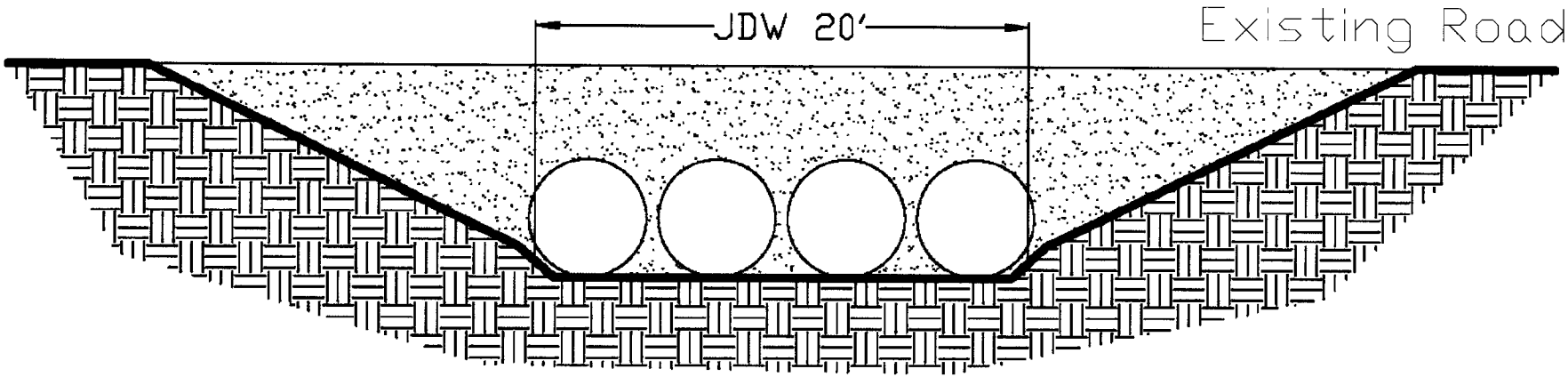
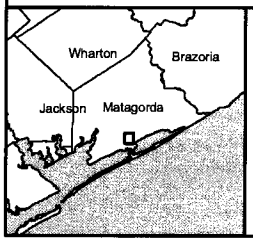
Figure 11
Culvert D - Plan View



Cross-section of culvert "D"



LEGEND

JDW: Jurisdictional Water

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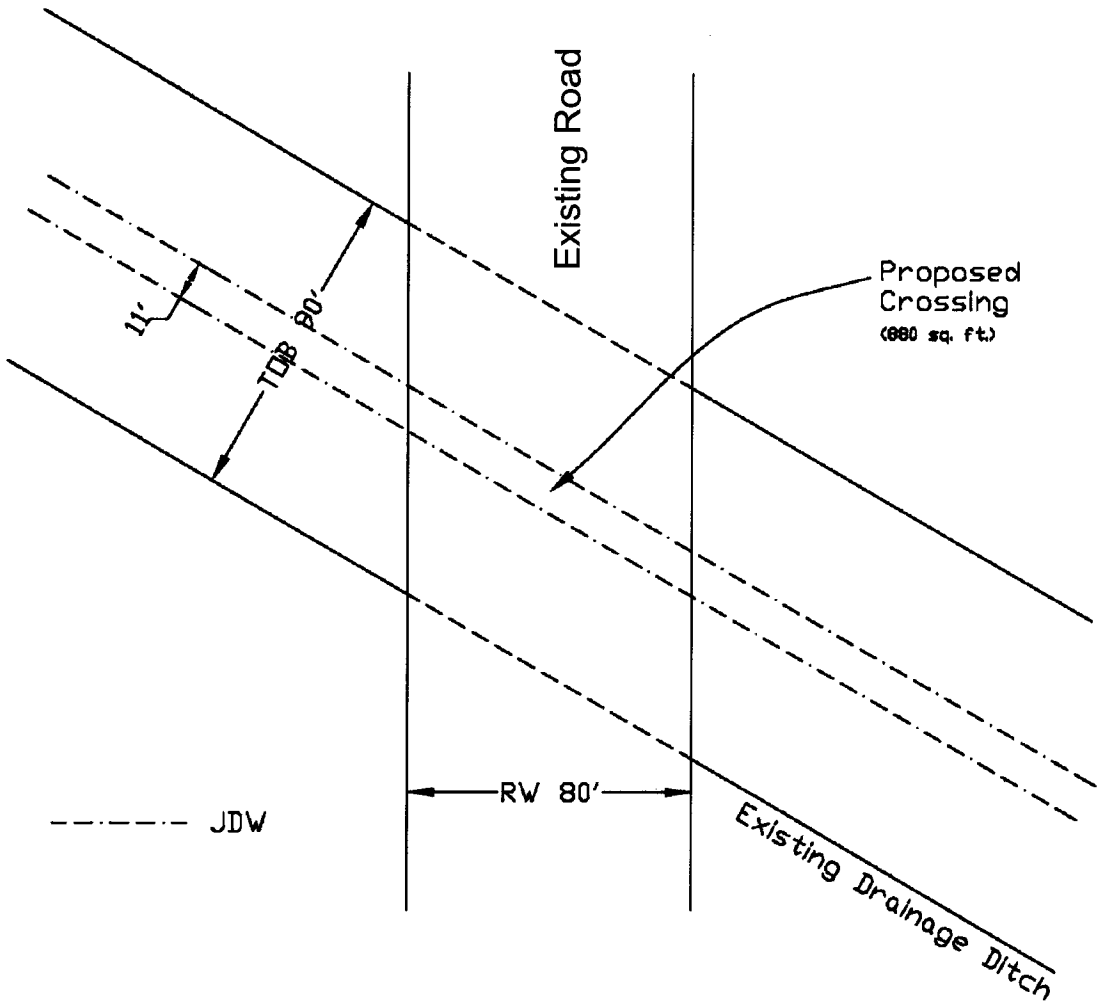
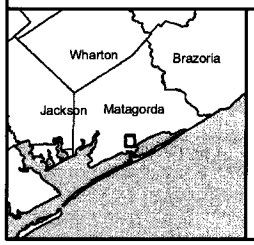
Figure 12
Culvert D - Cross Section



Culvert "E" - Plan View



LEGEND

JDW: Jurisdictional Water
RW: Road Width
TOB: Top Of Bank

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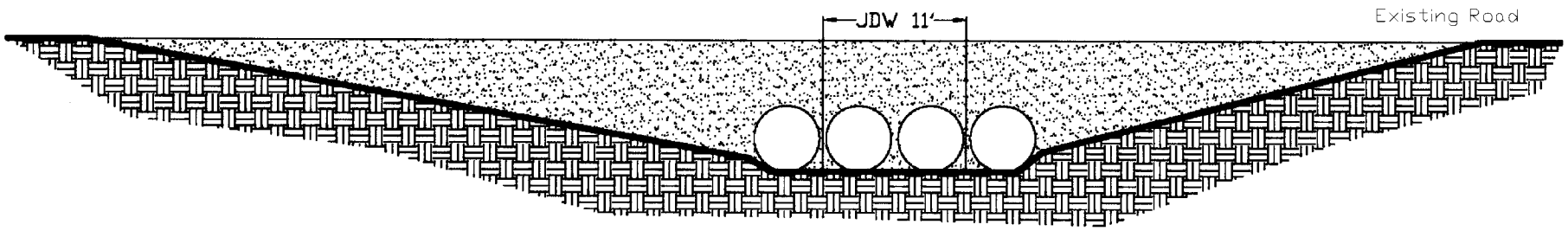
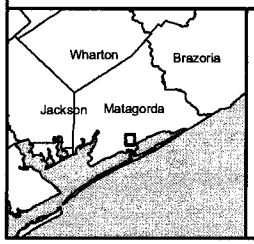
Figure 13
Culvert E - Plan View



Cross-section of culvert 'E'



LEGEND

JDW: Jurisdictional Water

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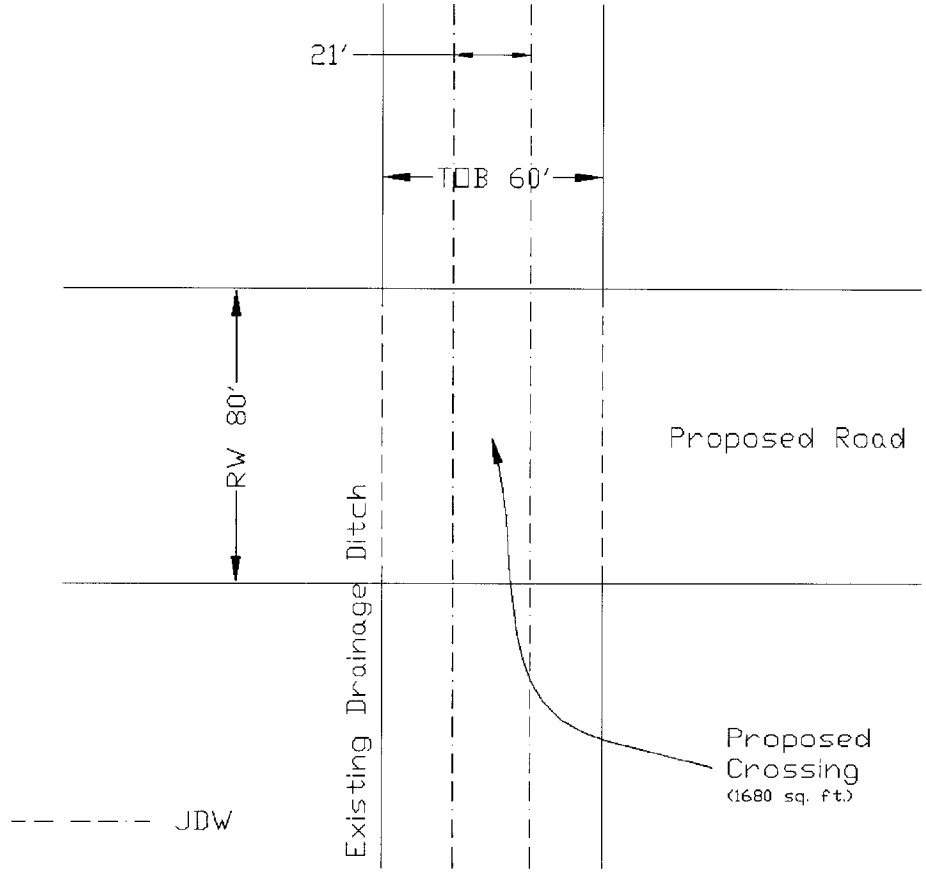
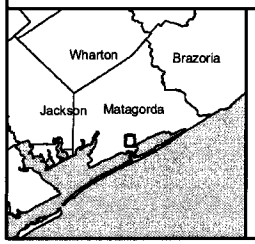
Figure 14
Culvert E - Cross Section



Culvert "F" - Plan View



LEGEND

JDW: Jurisdictional Water
RW: Road Width
TOB: Top Of Bank

South Texas Project Units 3 & 4
Matagorda County, TX

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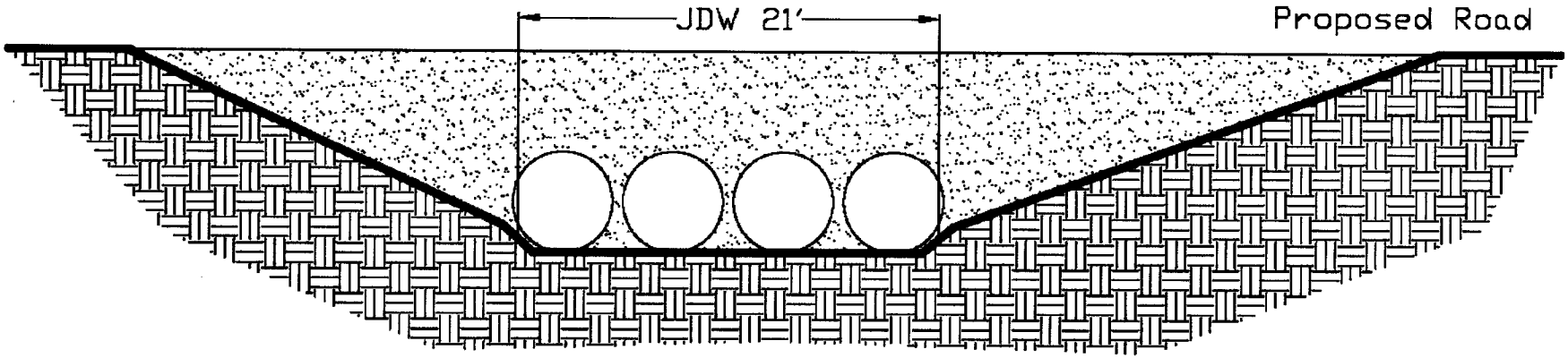
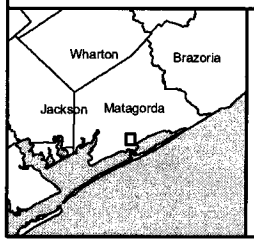
• Surveying

Figure 15
Culvert F - Plan View



Cross-section of culvert "F"



LEGEND

JDW: Jurisdictional Water

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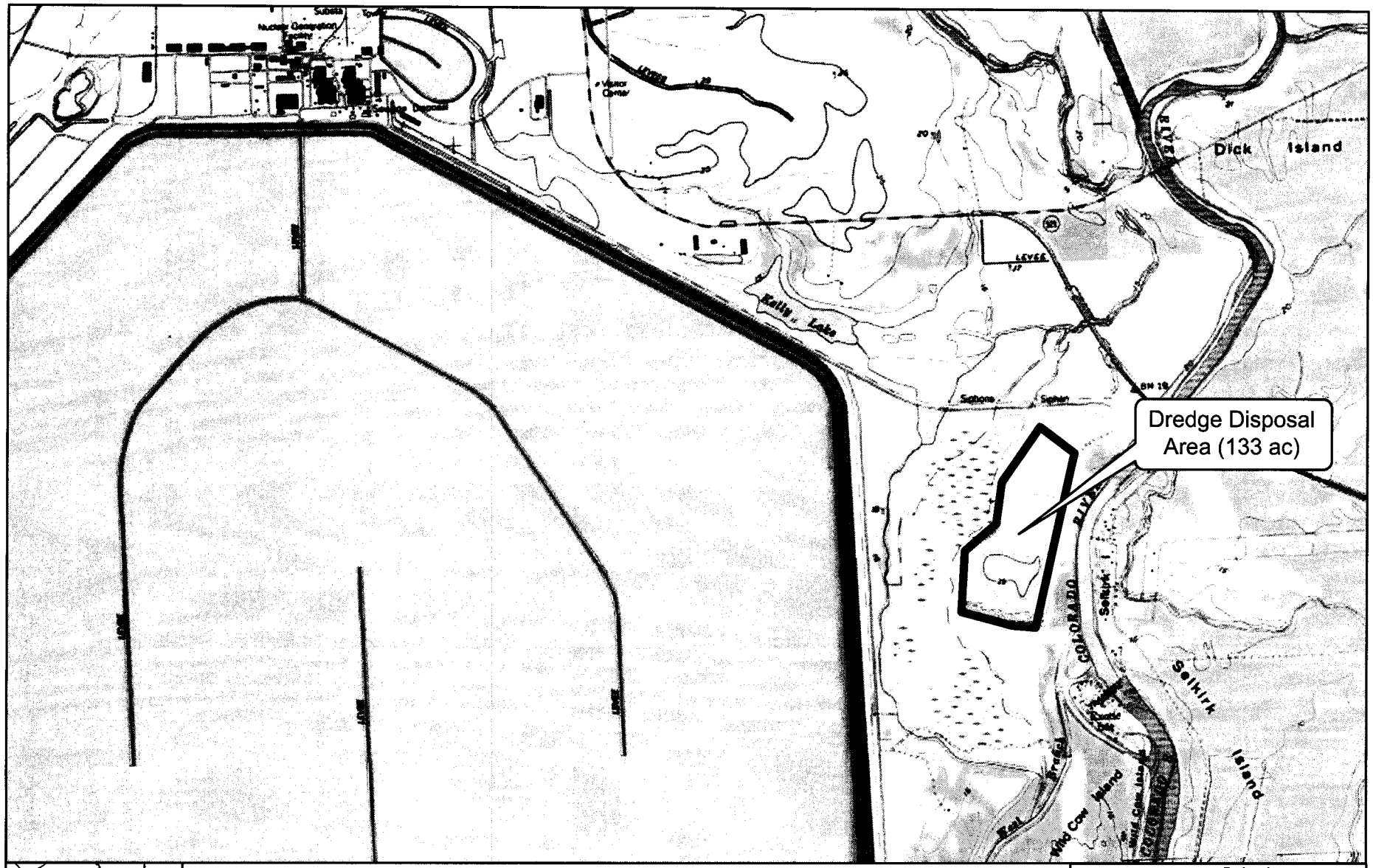
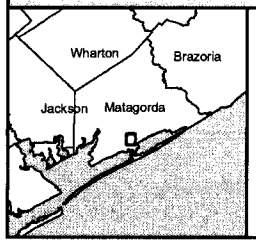
Figure 16
Culvert F - Cross Section





NOT TO SCALE

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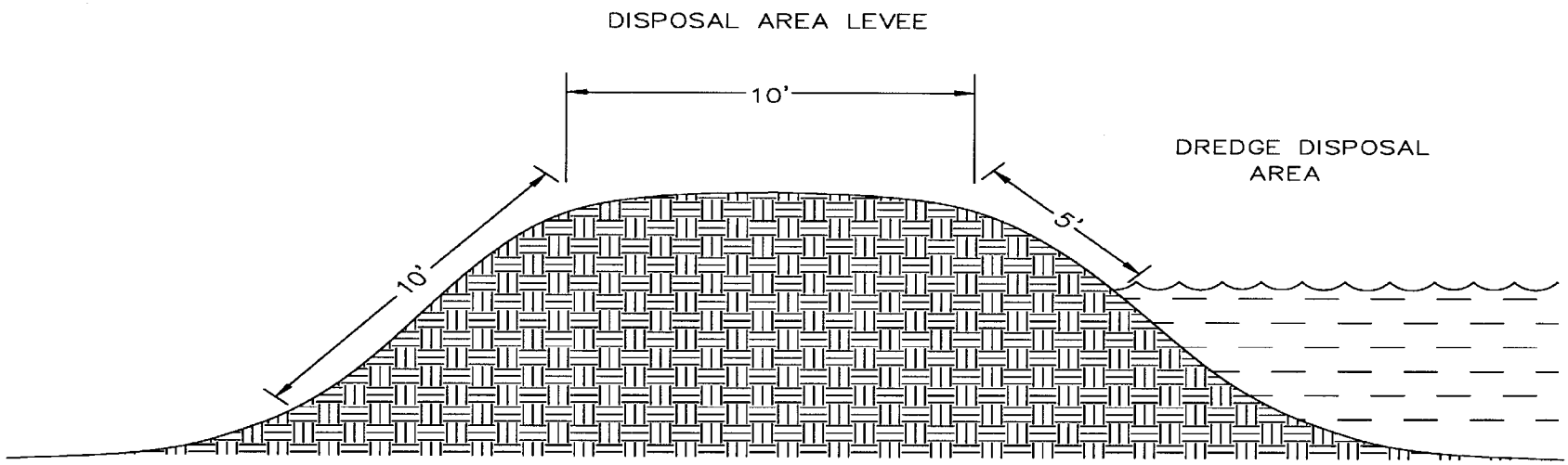
Figure 17
Dredge Disposal Area Location



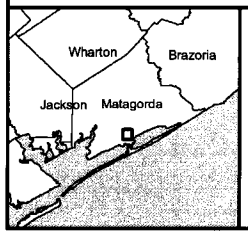


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Figure 18
Dredge Disposal Levee
Cross Section

Attachment 2

USACE Unified Stream Methodology Report