The Corps Regulatory Program

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ACEC/HGAC Project Development Workshop

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Outline of Topics

- Jurisdiction
- Wetlands and Waters of the U.S.
- What do we regulate?
- Permit Process
- Application Submittal/Example Plans
- Mitigation

Map of Galveston District

Jurisdiction

Regulations and Definitions

Section 10 – Rivers and Harbors Act of 1899

- all navigable waters of the U.S.
  - subject to ebb and flow of tide shoreward to the mean high water mark
  - presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce
- extends seaward to include all ocean waters within a zone three nautical miles from the coast line (the "territorial seas")

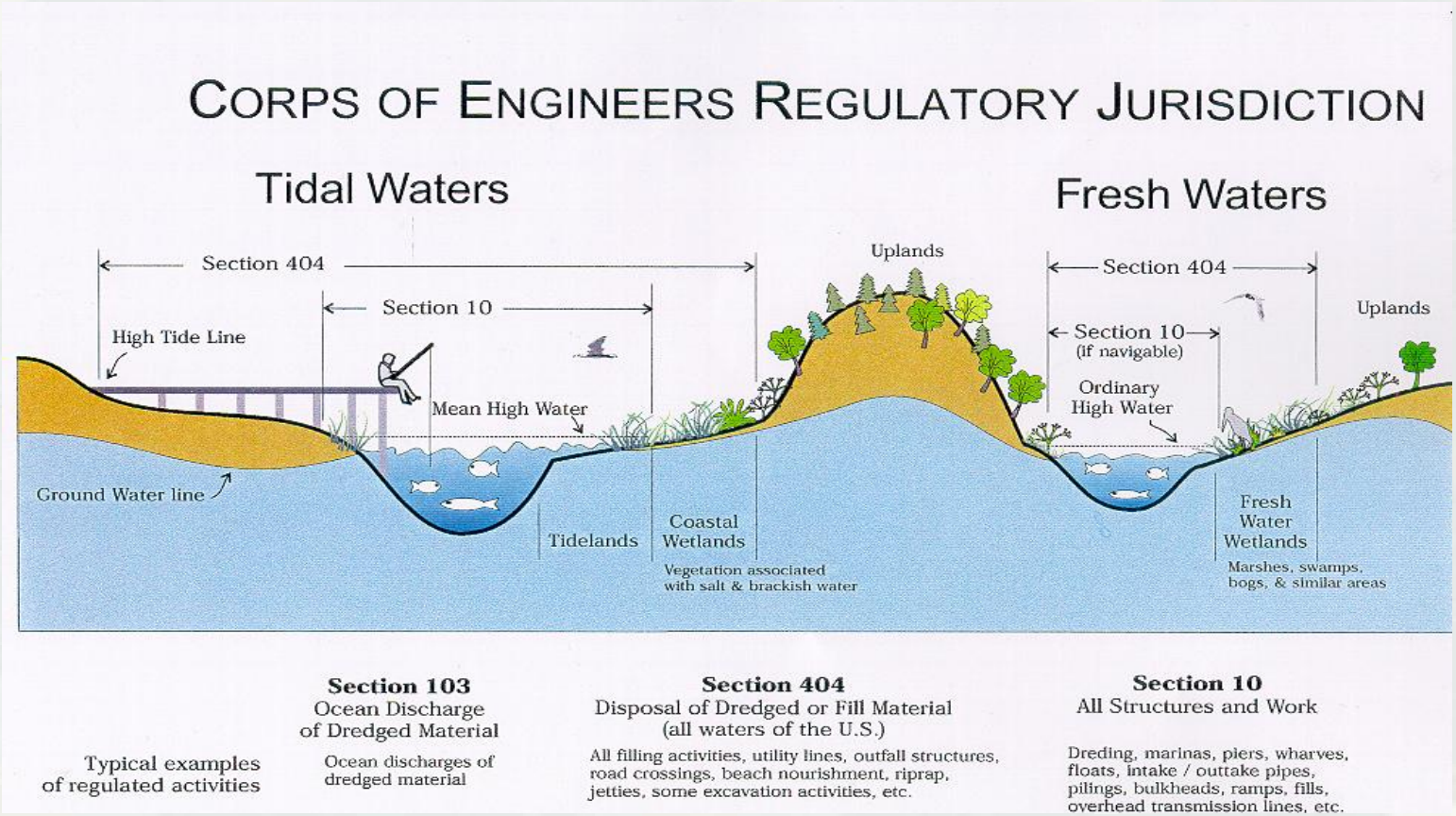
Section 404 – Clean Water Act of 1972

- "Waters of the United States, including the territorial seas" plus…
- Waters of the United States in 33 CFR 328.3(a)

Jurisdiction (JD)

Section 10 – Rivers and Harbors Act of 1899

Section 404 – Clean Water Act of 1972



Waters of the U.S.

as defined in 33 CFR 328.3(a)

- Surface water tributary systems (including intermittent streams, and associated water bodies)
- Adjacent Wetlands
- Vegetated Shallows (ex: Seagrass Meadows)
- Sanctuaries and Refuges
- Coral Reefs
- Riffle and Pool Complexes
- Some isolated waters (ex: sloughs, prairie potholes, playa lakes, natural ponds, abandoned construction and mining pits)

What is a Wetland?

- Hydrology = Water
- Hydrophytic Plants =
Plants Adapted for Wet Conditions
- Hydric Soils = Wet

Examples of Wetlands

Bottomland Hardwood Forested Wetlands

Freshwater Wetlands

Examples of Wetlands

Fringe Wetlands in a Riverine System

Salt Marsh

Wetland Identification and Delineation

- A tool that identifies the presence/absence, amount, and type of aquatic resources within the defined project boundaries
- The 1987 Wetland Delineation Manual maintains the technical guidance and procedures
- The regional supplements contain wetland indicators, delineation guidance, and other information specific to the particular region

Documenting Jurisdiction
(Section 10, 404, or both)

Approved Jurisdictional Determinations (AJD)

- Form used to document the amount and type of aquatic resources within the defined project boundaries that are subject to our regulations (Section 10, 404, or 10/404)

- May require coordination with EPA and Corps HQ
- Approved for 5 years
- Can be appealed through the appeal process as outlined in 33 CFR Part 331

Documenting Jurisdiction
(Section 10, 404, or both)

Preliminary Jurisdictional Determinations (PJD)

- Form that documents **ALL** aquatic resources that **APPEAR** within the defined project boundaries
- **ALL** aquatic resources will be considered to be jurisdictional for the purposes of permitting and mitigation

The Preliminary JD is not appealable, however an Approved JD can be requested at any time.

What do we regulate?

Work, Structures, Fill

Rivers and Harbors Act of 1899

Section 10 – Requires permit from the Corps for **structures or work** in, or affecting, the course, location, or condition of a navigable water of the United States

Clean Water Act of 1972

Section 404 – Requires authorization from the U.S. Army Corps of Engineers to discharge dredged or **fill** material into waters of the United States

Fill Material

Any material placed in waters of the U.S. where the material **has the effect** of replacing any portion of a water of the U.S. with dry land or **changing the bottom elevation of any portion of a water**

Section 10 – Rivers and Harbors Act of 1899

Structures

Work

Examples of Regulated Activities

Section 404 – Clean Water Act of 1972

Examples of Regulated Activities

Examples of Regulated Activities

Examples of Regulated Activities

Corps Permit Process

Corps Permit Process

Who Needs A Permit?

Anyone who conducts work, places structures, or discharges fill in a **jurisdictional aquatic resource** may need a permit.

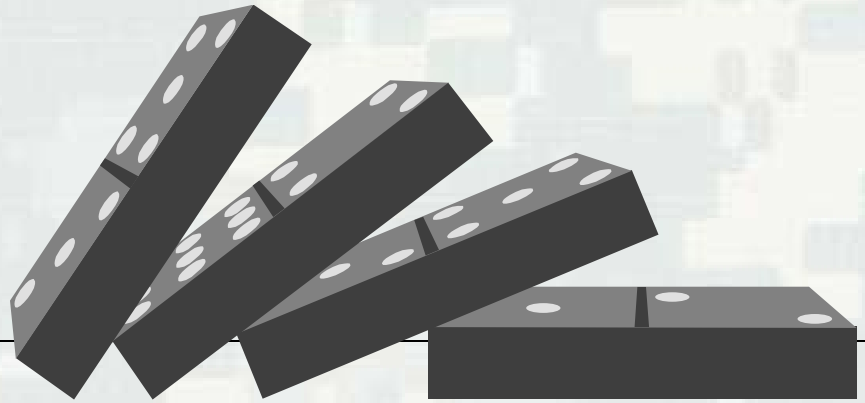
Is a Permit Required?

If in doubt, **ASK**.

The Corps will make determinations and verify wetland delineations.

The Corps' Permit Is one Trigger That Subjects the Regulated Activity to Jurisdiction of Other Laws

- The Corps' permit is one of many possible Federal actions that initiates review under other environmental laws such as: ESA, NHPA, NEPA and others
- If a Corps permit is not required, these other acts may or may not apply to the proposed action



Stepwise Process of Review

Avoid

Minimize

Then

Mitigate

Important Notes

- It is highly recommended that you coordinate with the Corps

- Consultants can give their opinion, but the final jurisdictional authority lies with the Corps

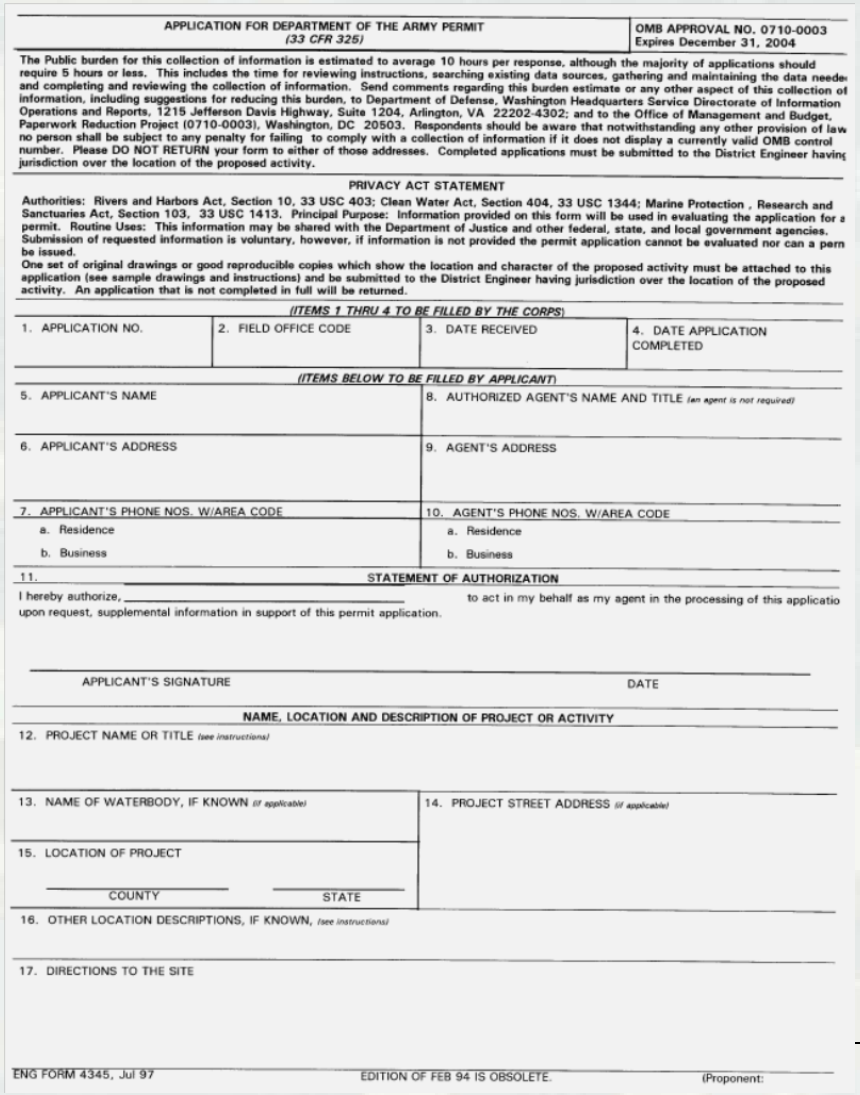
Tips on Working with Corps

- Contact the Corps **EARLY** in project planning
- Attend pre-application meetings OR Joint Evaluation Meetings
- Be aware that heavy Regulatory Program workload may delay Corps decisions

Joint Evaluation Meeting (JEM) Process

- Held 2nd Wednesday of each month from 9:30 am to 4 pm
- Participation is requested by Applicants
- Forum to meet with State and Federal Resource Agencies to discuss planned/proposed projects (pre- or post-application) i.e. EPA, NMFS, USFWS, TPWD, TGLO
- Topics include proposed impacts, pros/cons of proposed designs, suggestions to minimize environmental impact of projects, alternative project sites, potential compensation options (if required)

ENG 4345 – Application Form



APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 325)

OMB APPROVAL NO. 0710-0003
Expires December 31, 2004

The Public burden for this collection of information is estimated to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Respondents should be aware that notwithstanding any other provision of law no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection , Research and Sanctuaries Act, Section 103, 33 USC 1413. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued.
One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE *(an agent is not required)*
6. APPLICANT'S ADDRESS	9. AGENT'S ADDRESS
7. APPLICANT'S PHONE NOS. W/AREA CODE a. Residence b. Business	10. AGENT'S PHONE NOS. W/AREA CODE a. Residence b. Business

11. STATEMENT OF AUTHORIZATION

I hereby authorize, _____ to act in my behalf as my agent in the processing of this applicatio
upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE DATE

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE *(see instructions)*

13. NAME OF WATERBODY, IF KNOWN *(if applicable)*	14. PROJECT STREET ADDRESS *(if applicable)*
15. LOCATION OF PROJECT COUNTY STATE	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN, *(see instructions)*

17. DIRECTIONS TO THE SITE

ENG FORM 4345, Jul 97 EDITION OF FEB 94 IS OBSOLETE. (Proponent:

18. Nature of Activity *(Description of project, include all features)*

19. Project Purpose *(Describe the reason or purpose of the project, see instructions)*

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled *(see instructions)*

23. Is Any Portion of the Work Already Complete? Yes____ No____ IF YES, DESCRIBE THE COMPLETED WORK

24. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

25. List of Other Certifications or Approvals/Denials Received from other Federal, State or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Items to Include with the application

- Site Vicinity Map
- Plan and cross sectional views reflecting:
  - Named waterbody and/or all aquatic resources within the project boundaries
  - Mean high water or ordinary high water mark
  - Cubic yards of fill material (if applicable)
  - Wetland Delineation (if applicable)
  - Dimensions and cubic yards of material removed during dredging (if applicable)

Types of Permits

General Permits (GP)

- For activities having minor impacts

Nationwide General Permits (NWP)

- Subject to Section 10 and Section 404 for specific activities)
- These permits are developed by USACE Headquarters
- Already issued to the nation and have been pre-coordinated with other agencies for water quality impacts, endangered species concerns, etc.
- Some permits require notification to the Corps = Pre-Construction Notification (PCN)

Regional General Permits (RGP)

- Subject to Section 10 (for specific activities)
- These permits are developed by the USACE districts

Standard Permits (SP)

- For activities having more than minor impacts

Letters of Permission (LOP)

- Subject to Section 10 only
- These permits require a 15 Day Interagency Coordination
- Do not require Section 401 CWA Certification

Individual Permits (SP)

- Subject to Section 10 and Section 404
- The permits include a 15/30 Day Public Notice
- Requires all other elements of permit evaluation

Commonly used NWPs

NWP 3	Maintenance
NWP 7	Outfall Structures
NWP 12	Utility Line Activities (pipelines, power lines)
NWP 13	Bank Stabilization (bulkheads, riprap)
NWP 14	Linear Transportation Project (roads, railways)
NWP 18	Minor Discharges (fill material)
NWP 19	Minor Dredging
NWP 33	Temporary Construction Access and Dewatering
NWP 35	Maintenance Dredging

Each project is unique, not all projects qualify for a NWP

Summary of the NWP process

- Assigned to Project Manager
- Geographic Jurisdictional Determination
- Determination if project meets the terms of the General Permit
- Review of project plans and determination of completeness
- Internal Review
- Corps evaluates response and determines whether additional information or coordination is needed
- Decision document and Verification Letter written

Summary of the SP process

- Assigned to Project Manager
- Geographic Jurisdictional Determination
- Internal Review
- External Coordination/Public Notice
- Forward comments to applicant
- Applicant responds
- Corps evaluates response and determines whether additional information or coordination is needed

404(b)(1) Guidelines Alternative Analysis

- Inherent assumption to guidelines is that a non water dependent project does not need to be built in a **special aquatic site**
  - i.e.: Roadway
    - basic purpose is vehicular transportation
    - it does not need to be built in waters of the U.S.
- It is assumed there are other practicable alternatives and locations that are available

404(b)(1) Guidelines Alternative Analysis

- Permit can be NOT issued if it does not comply with the guidelines (33 CFR 320.4)
- Corps has final responsibility for determining compliance with the guidelines
- Must select “least environmentally damaging practicable alternative”
- Level of review commensurate to impact (RGL 93- 2)

404(b)(1) Guidelines Alternative Analysis

- The Alternative Analysis is not a **justification** of the action.
- It is the process of finding other practicable alternatives for the action.
- The majority of the actions that come into our office, do receive a permit, but most likely **will not** look like the action that was proposed.

Mitigation – 33 CFR 332

- Mitigating the environmental impacts of necessary development actions on the Nation's wetlands and other aquatic resources is a central premise of Federal wetlands programs
- The Clean Water Act (CWA) Section 404 permit program relies on the use of compensatory mitigation to offset unavoidable damage to wetlands and other aquatic resources through, for example, the restoration or creation of wetlands

http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/FederalRegulation.aspx

Type and Location of Mitigation

- Mitigation Banks
  - Regulatory In lieu Fee and Bank Information Tracking System (RIBITS) http://geo.usace.army.mil/ribits/index.html
- In-Lieu Fee
- Permittee-Responsible Mitigation
  - Under a Watershed Approach
  - On-site and In-kind
  - Off-site and/or Out-of-Kind
- Watershed Approach (Preservation, Restoration, and/or Enhancement)

How much Mitigation is Required?

- Sufficient to replace lost aquatic resource functions

- An appropriate functional or condition assessment method or other suitable metric that is available can be used for determination of the amount of compensatory mitigation required

End of Corps Permit Process

- The Corps generates an Environmental Assessment (EA) which evaluates environmental impacts, concludes with a “significance” determination if an EIS is or is not required

- The EA takes the form of a decision document that concludes a decision to issue, issue w/conditions, or deny the permit application

Why does it take so long?

- An estimated 4,355 permits were finalized in the last calendar year for the Galveston District
  - Includes pre-application meetings that were recorded
- The Galveston District has 10 project managers that carry an average of 30-50 permit applications each
- Training, section meetings, app phone calls, pre-application meetings, JEM, office day phone calls, etc. interrupt review time

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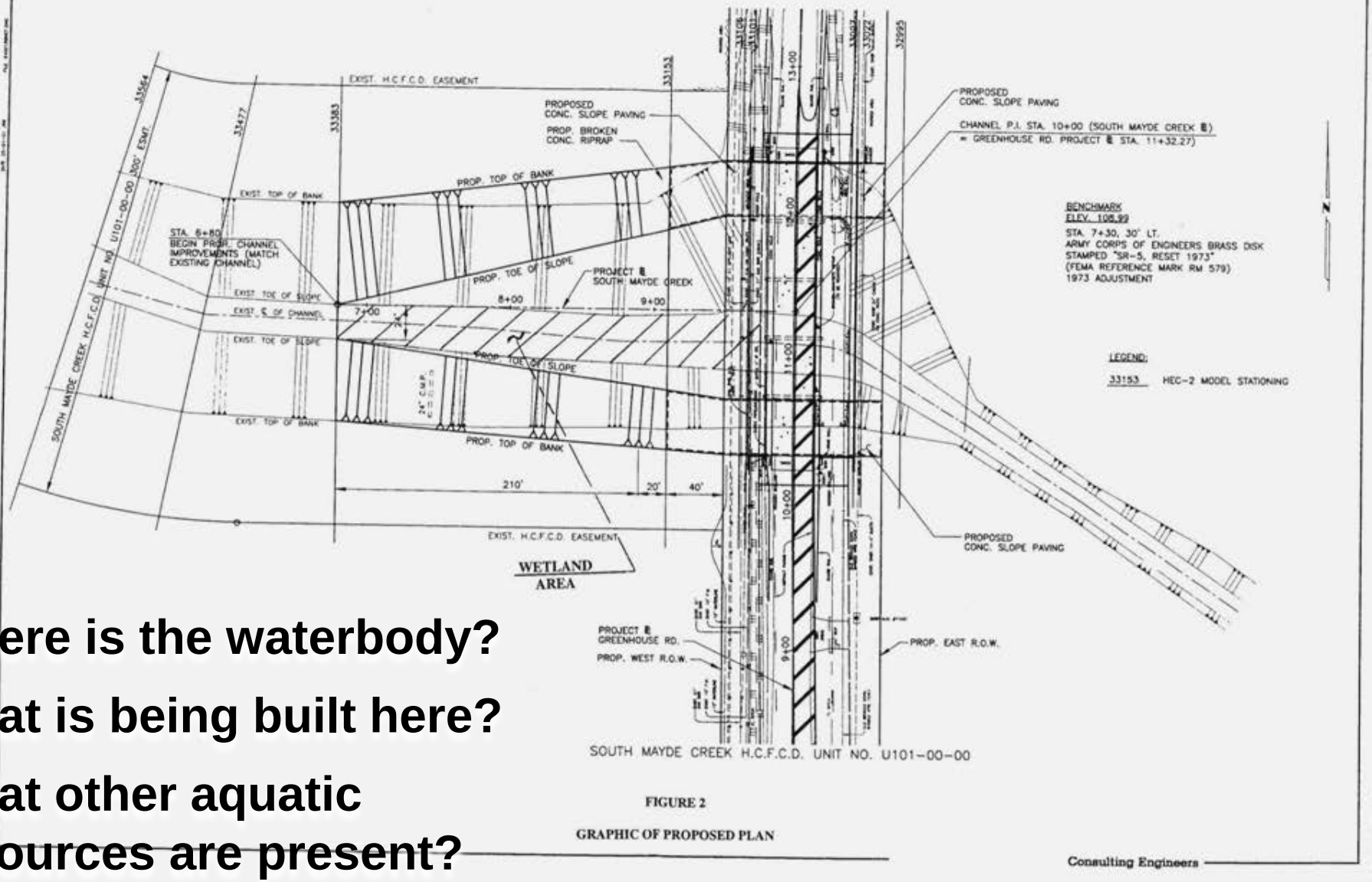
  - Dimensions and cubic yards of material removed during dredging (if applicable)

Example Project Plans

- How do we determine the limits of our geographic authority from these drawings?

- How does EPA, USFWS, NMFS, TPWD, local agencies, adjacent landowners review these impacts in light of their regulatory authority and personal interests?



Where is the waterbody?

What is being built here?

What other aquatic resources are present?

How much fill material is being discharged?

Why is this relevant to our review of the impacts to the aquatic resource?

TABLE OF DIMENSIONS & REINFORCING STEEL (Wings for One Structure End)

Maximum Wingwall Height Hw	W	X	Y	Z	Variable Reinforcing Bars J1 Size	Bars J1 Spa	Bars J2 Size	Bars J2 Spa	(3) Estimated Quantities per ft of Wing length (2-Wings) Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261
3'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0"	3'-8"	1'-9"	1'-3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0"	4'-2"	2'-0"	1'-6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0"	4'-8"	2'-3"	1'-9"	8"	#4	6"	#4	6"	81.49	0.535
10'-0"	5'-2"	2'-6"	2'-0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'-8"	2'-9"	2'-3"	8"	#6	6"	#5	6"	133.65	0.634
12'-0"	6'-2"	3'-0"	2'-6"	9"	#7	6"	#5	6"	162.29	0.721
13'-0"	6'-8"	3'-3"	2'-9"	11"	#7	6"	#5	6"	178.80	0.856
14'-0"	7'-2"	3'-6"	3'-0"	1'-0"	#8	6"	#5	6"	216.78	0.959
15'-0"	7'-8"	4'-0"	3'-0"	1'-1"	#9	6"	#6	6"	283.06	1.068
16'-0"	8'-2"	4'-6"	3'-0"	1'-3"	#9	6"	#6	6"	297.02	1.234

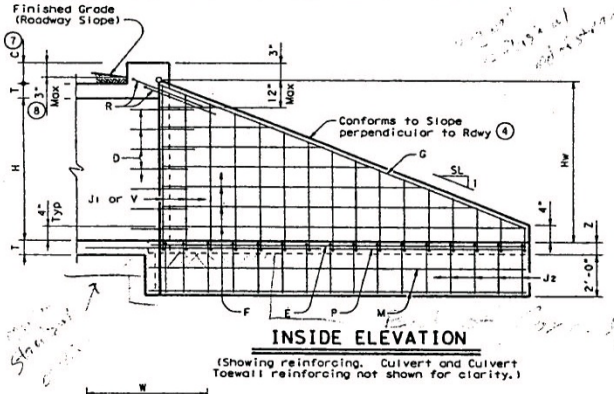
TABLE OF WINGWALL REINFORCING (2-Wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

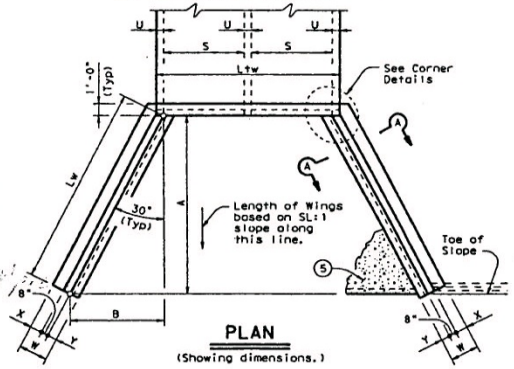
Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

1. Extend Bars P 3'-0" minimum into bottom slab of Box Culvert.
2. Adjust to fit as necessary to maintain 1 ¼" clear cover and 4" minimum between bars.
3. Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by Lw.
4. Recommended values of Slope are: 2:1, 3:1, 4:1, & 6:1.
5. When shown elsewhere on the plans, a 5" deep concrete riprap shall be constructed. Unless otherwise shown on the plans or directed by the Engineer, the riprap shall have a 6" wide by 1'-6" deep reinforced concrete toewall along all edges adjacent to natural ground; the toewall shall be reinforced by extending typical riprap reinforcing into the toewall; construction joints or grooved joints, oriented in the direction of flow, shall extend across the full distance of the riprap, at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required. Payment for riprap shall be as required by the pertinent Item.
6. At Contractor's option, Culvert Toewall may be ended flush with Wingwall Toewall. Adjust reinforcing from that shown as necessary.
7. 0" min to 5'-0" max. For T6 or C6 Rail, see T6-CM standard for additional details. For curbs without rail and greater than 1'-0" high, see ECD standard for additional details. Estimated curb heights are shown elsewhere in the plans.
8. For vehicle safety, curb heights and wall heights shall be reduced, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.



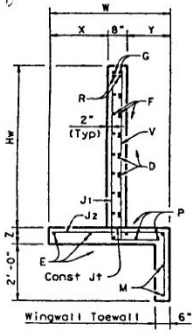
INSIDE ELEVATION

(Showing reinforcing. Culvert and Culvert Toewall reinforcing not shown for clarity.)

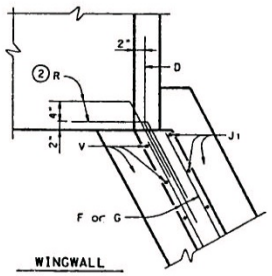


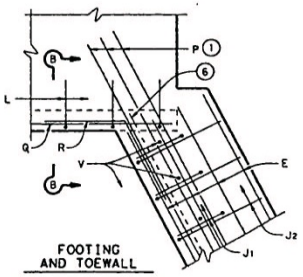
PLAN

(Showing dimensions.)



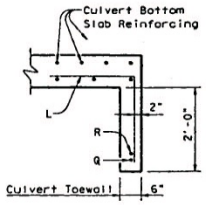
SECTION A-A



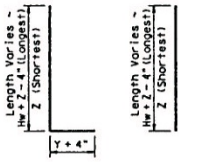


CORNER DETAILS

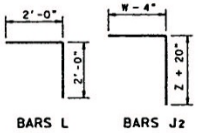
(Culvert and Culvert Toewall reinforcing not shown for clarity.)



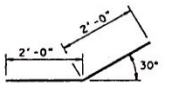
SECTION B-B (5)



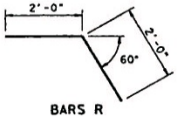
BARS J1 BARS V



BARS L BARS J2



BARS D



BARS R

WING DIMENSION CALCULATIONS:

Formulas: (All values are in Feet)
Hw = H + T + C - 0.250'
A = (Hw - 0.333') (SL)
B = (A) Tangent (30°)
Lw = (A) ÷ Cosine (30°)
For Cast-in-place culverts:
Ltw = (N) (S) + (N+1) (U)
For Precast culverts:
Ltw = (N) (2U+S) + (N-1) (0.500')
Total Wingwall Area (Two Wings ~ S.F.) = (Hw + 0.333') (Lw)

Hw = Height of Wingwall
SL:1 = Side Slope Ratio (Horizontal:1 Vertical)
Lw = Length of Wingwall
Ltw = Culvert Toewall Length
N = Number of Culvert Spans

See applicable box culvert standard for H, S, T, and U values.

GENERAL NOTES:

Designed according to current AASHTO Standard and Interim Specifications.
All reinforcing steel shall be Grade 60.
All concrete shall be Class "C" and shall have a minimum 28 day compressive strength of 3600 psi.
All reinforcing bars shall be adjusted to provide a minimum of 1 ¼" clear cover.
When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.
See BCS sheet for additional dimensions and information.
The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

COMMENTS:

LEVELS DISPLAYED

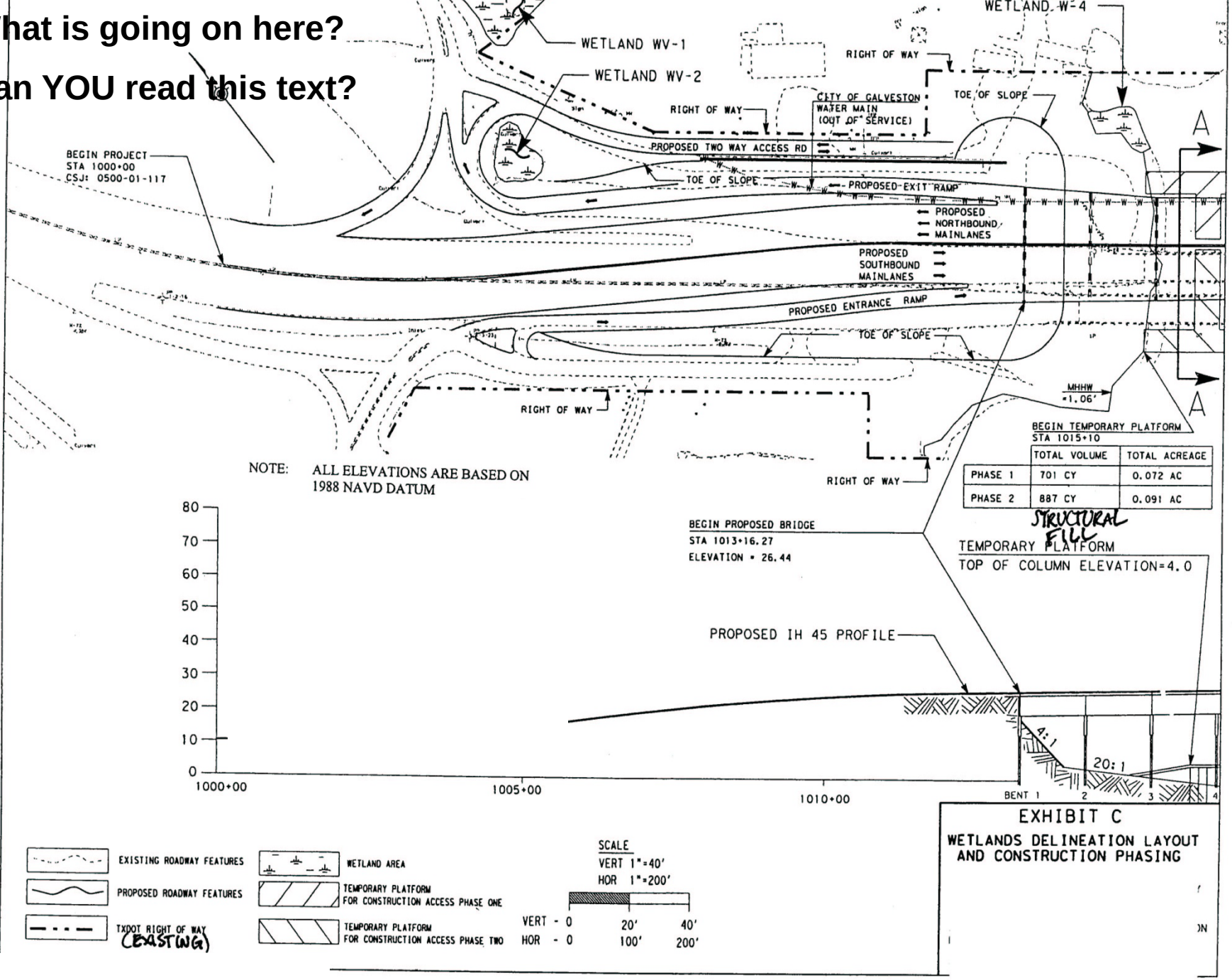
FLARED WINGS FOR 0° SKEW BOX CULVERTS

FW-0

FILE: fw-0std.dgn	DN: CAF	CK: CAT	DW: TxDOT	CK: GA
©TxDOT September 2000	DISTRICT	STATE PROJECT NO.		SHE
REVISIONS	HOU			101
	COUNTY	CONTROL	SECT	JOB

What is going on here?

Can YOU read this text?

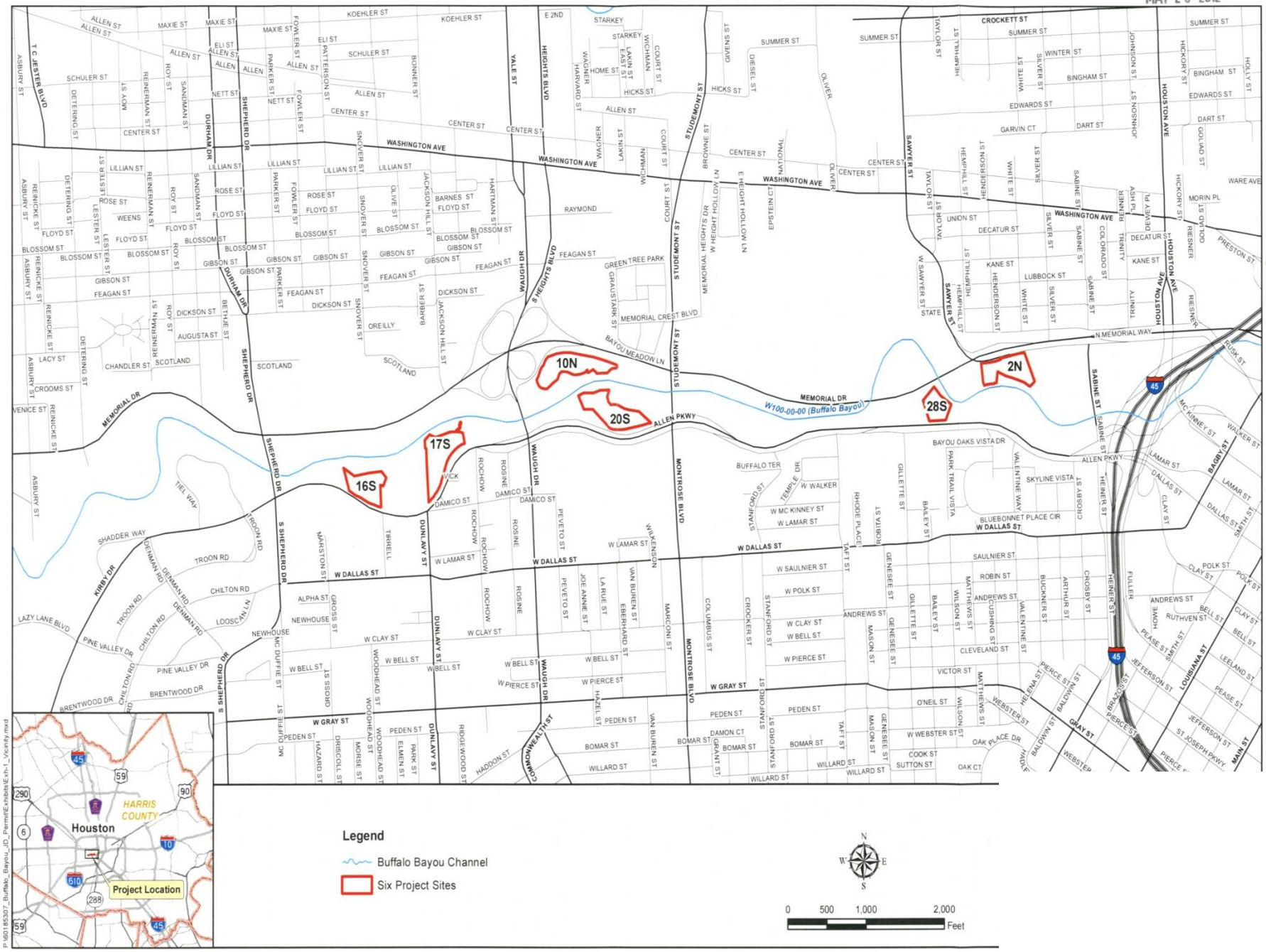


	TOTAL VOLUME	TOTAL ACREAGE
PHASE 1	701 CY	0.072 AC
PHASE 2	887 CY	0.091 AC

EXHIBIT C

WETLANDS DELINEATION LAYOUT AND CONSTRUCTION PHASING

MAY 29 2012



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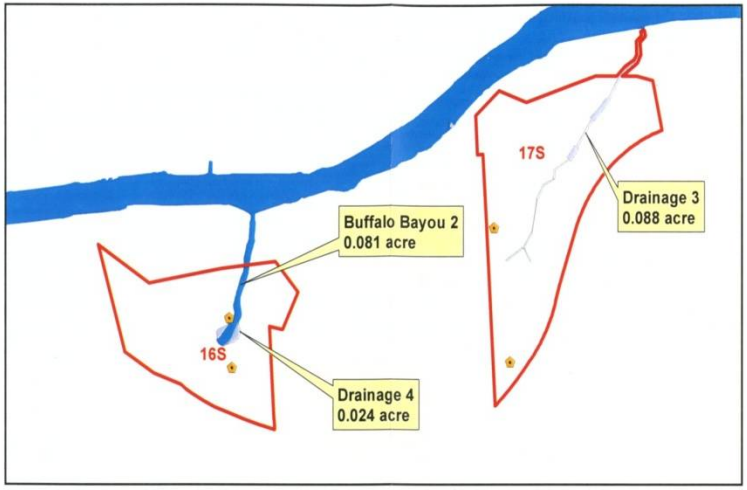
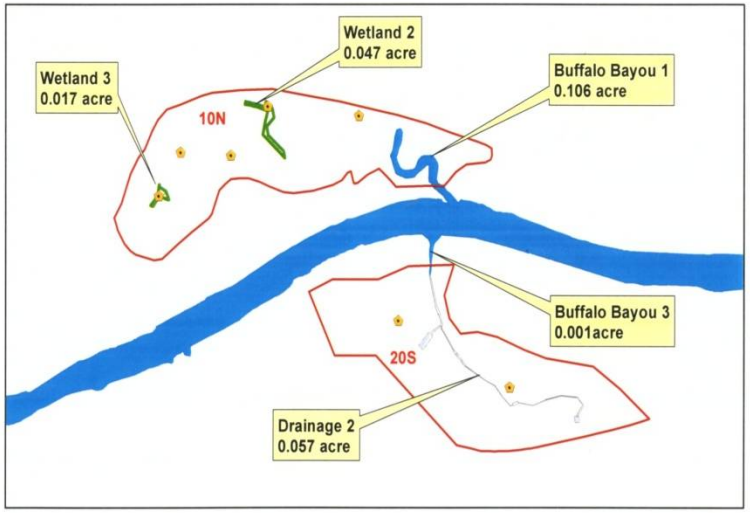
What is being done?

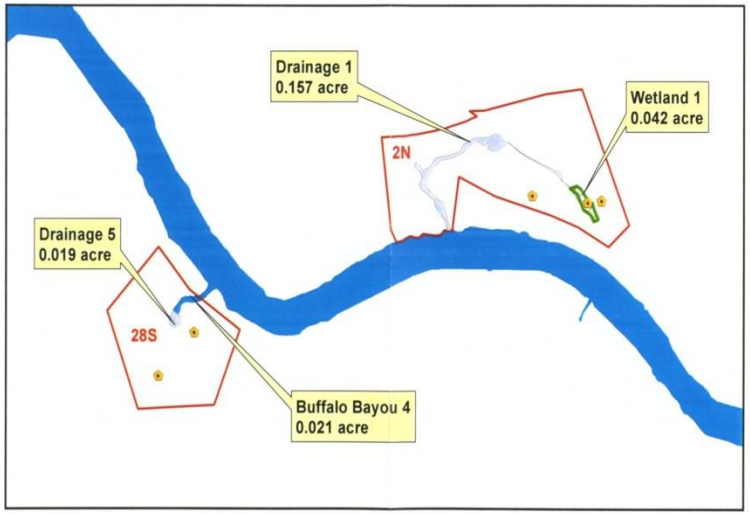
Where are the limits of our jurisdiction?

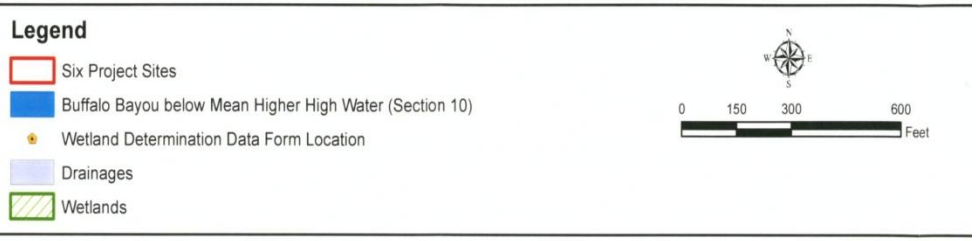
What other aquatic resources are present?

How much fill material is being discharged?





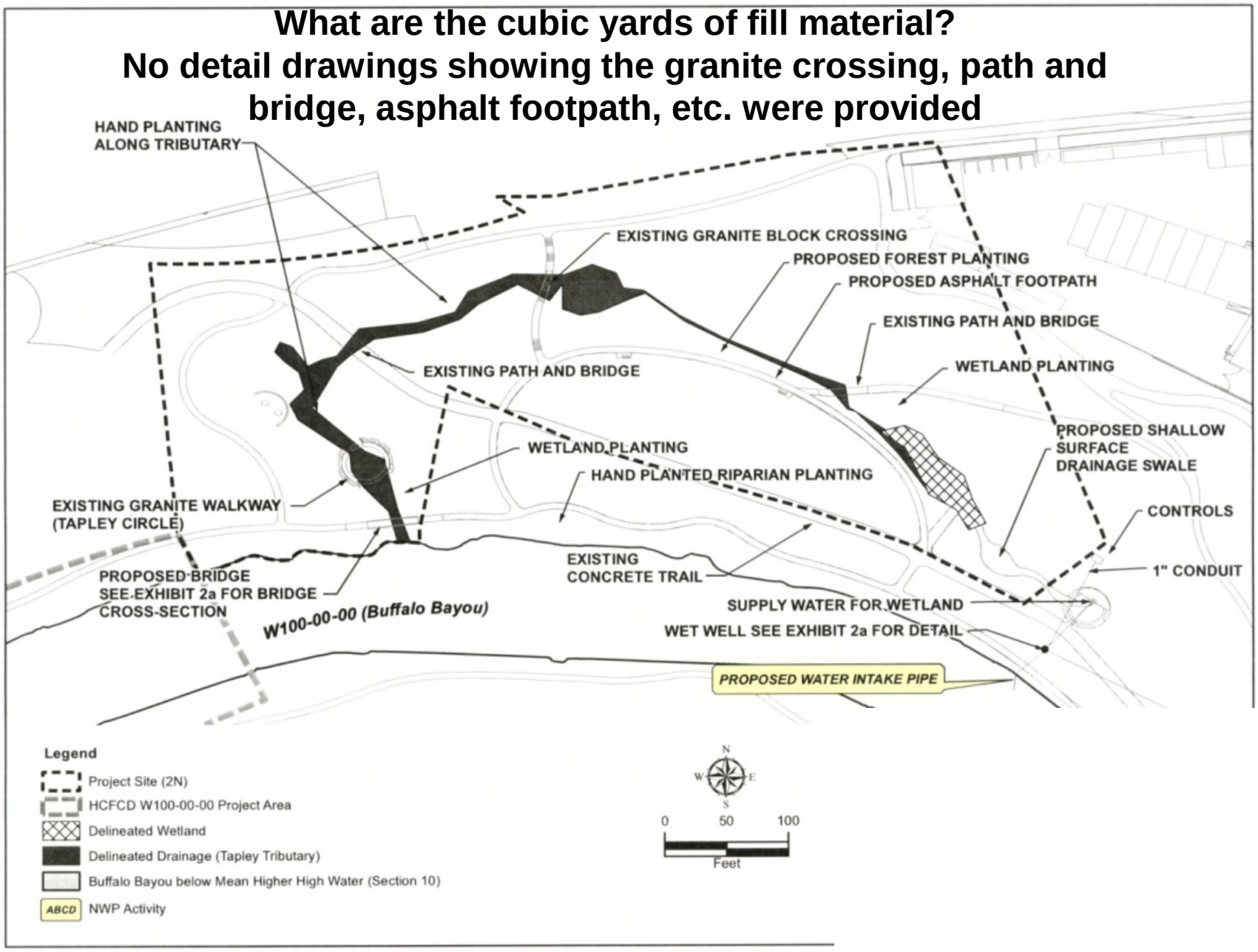




P:\60186307_Buffalo_Bayou_JD_Permit\Exhibits\Exh-15_Certified_Survey_Map.mxd

What is the acreage of the wetland?
What are the cubic yards of fill material?
No detail drawings showing the granite crossing, path and bridge, asphalt footpath, etc. were provided

MAY 29 2012



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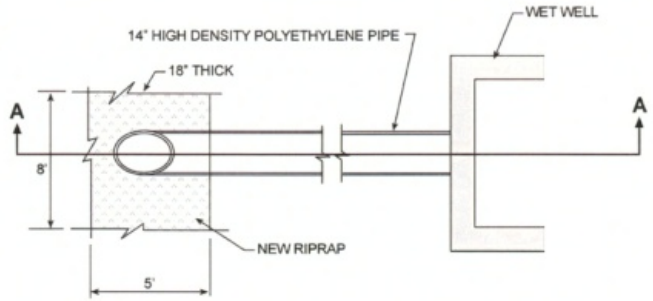
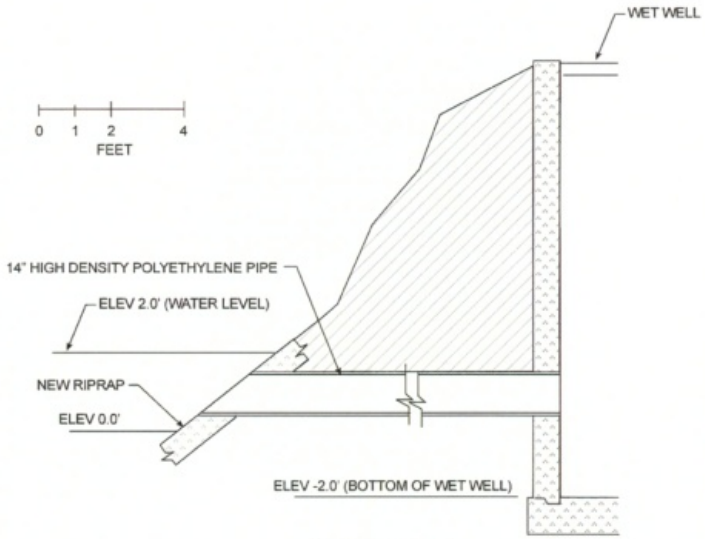


TIRRELL FALLS WET WELL - TOP VIEW



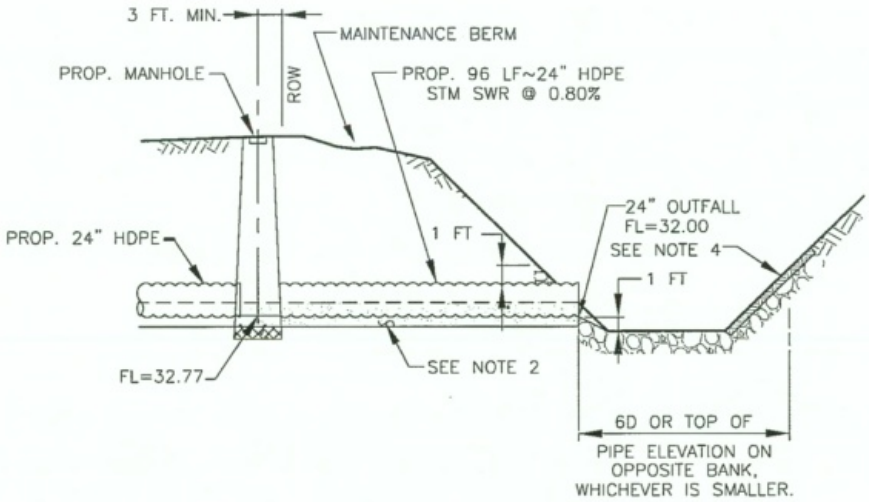
SECTION A - A

What kind of rip rap?

What size and cubic yards of rip rap?

The water level needs a reference datum. Our regulations lists MHW or OHWM.

FEB 2 2 2012



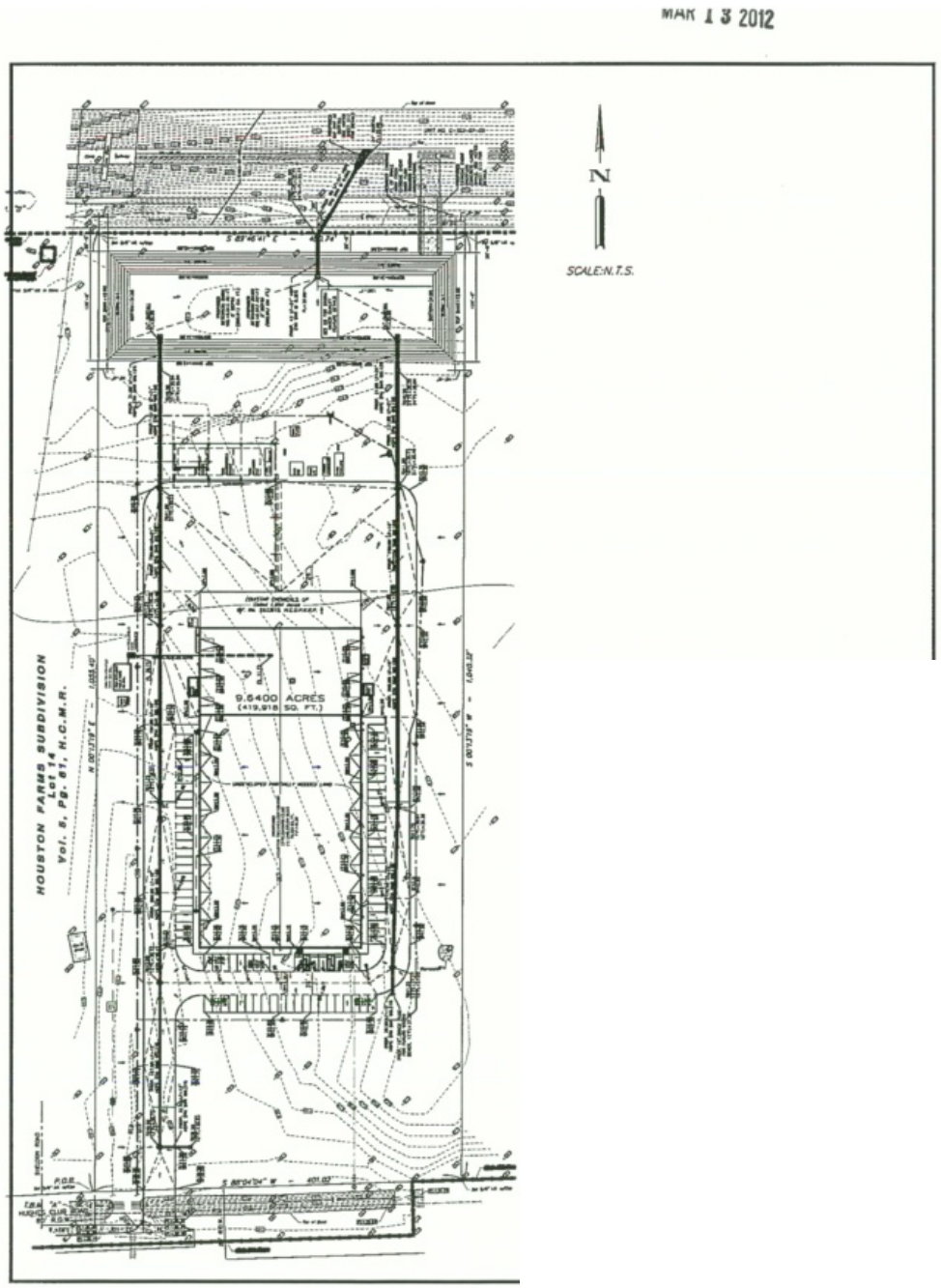
STORM SEWER OUTFALL NOTES:

1. STORM SEWER OUTFALL PIPES WITHIN THE HCFCD RIGHT-OF-WAY SHALL BE CMP OR HDPE IN ACCORDANCE WITH SPECIFICATION SECTION 02642-CORRUGATED METAL PIPE, HIGH DENSITY POLYETHYLENE PIPE (HDPE) IN ACCORDANCE WITH SPECIFICATION SECTION 02505-HIGH DENSITY POLYETHYLENE PIPE, OR APPROVED EQUAL. USE TABLE BELOW FOR CORRUGATED GALVANIZED STEEL PIPE.
2. PROVIDE AND PLACE CEMENT STABILIZED SAND IN ACCORDANCE WITH SPECIFICATION SECTION NO. 02321-CEMENT STABILIZED SAND.
3. STORM SEWER OUTFALLS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02316-STRUCTURAL EXCAVATING AND BACKFILLING.
4. RIPRAP SHALL BE PLACED IN ACCORDANCE WITH SPECIFICATION SECTION 02378-RIPRAP AND GRANULAR FILL. FILL RIPRAP VOIDS AND BURY RIPRAP A MINIMUM OF 6 INCHES WITH TOPSOIL ON SIDE SLOPE AS DIRECTED BY THE ENGINEER.

What is the name of the waterbody?

What is the water level – MHW/OHWM?

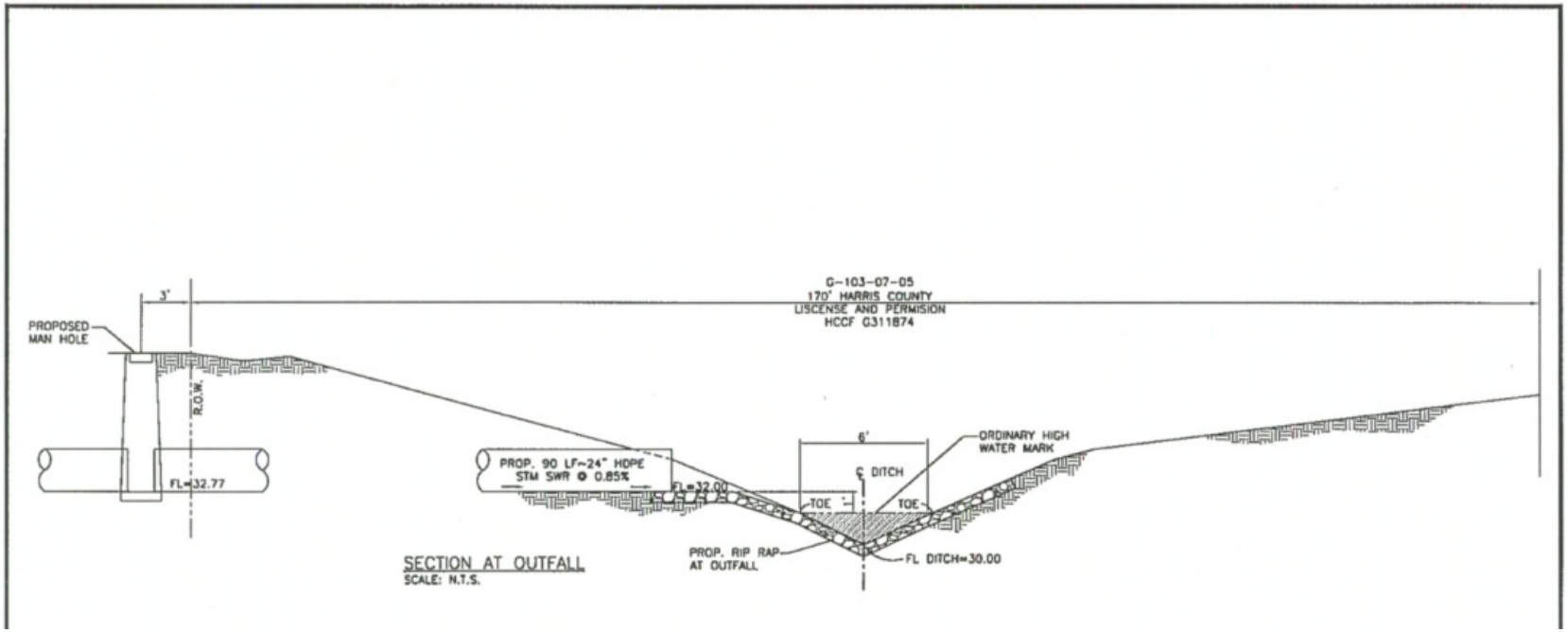
What is the size and cubic yards of the rip rap being placed for bank stabilization under the outfall?



What is being built?

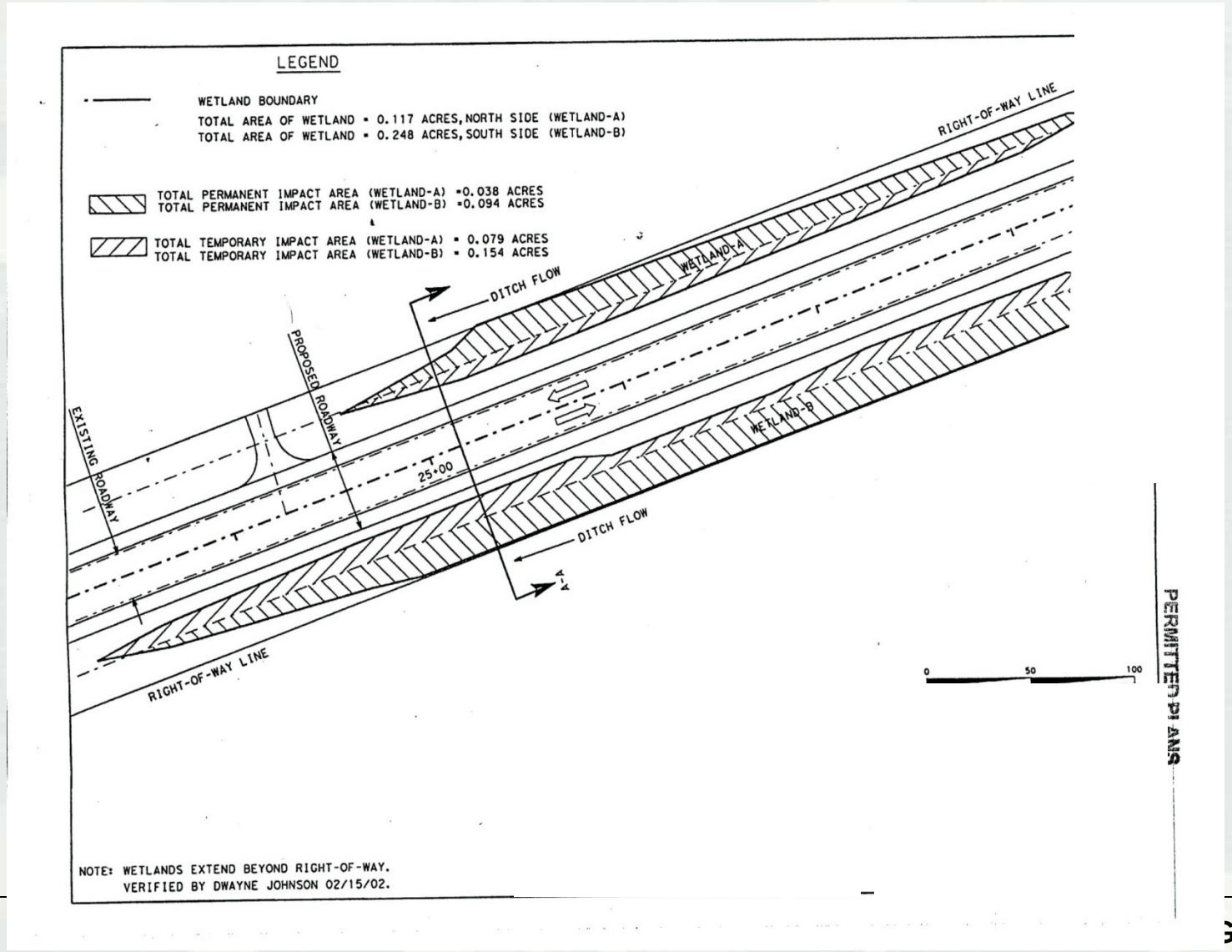
Where are the aquatic resources?

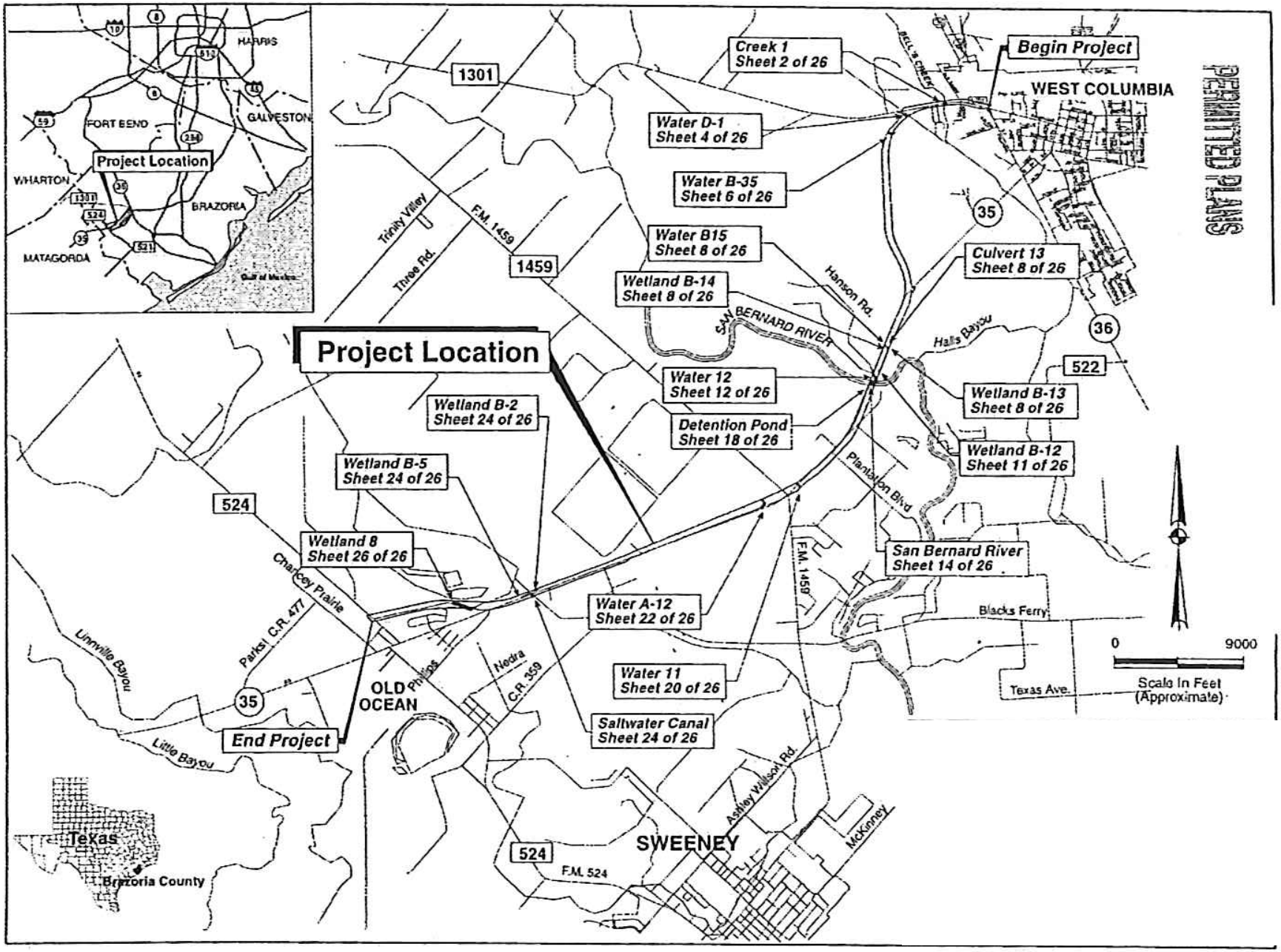
Where is the named waterbody?

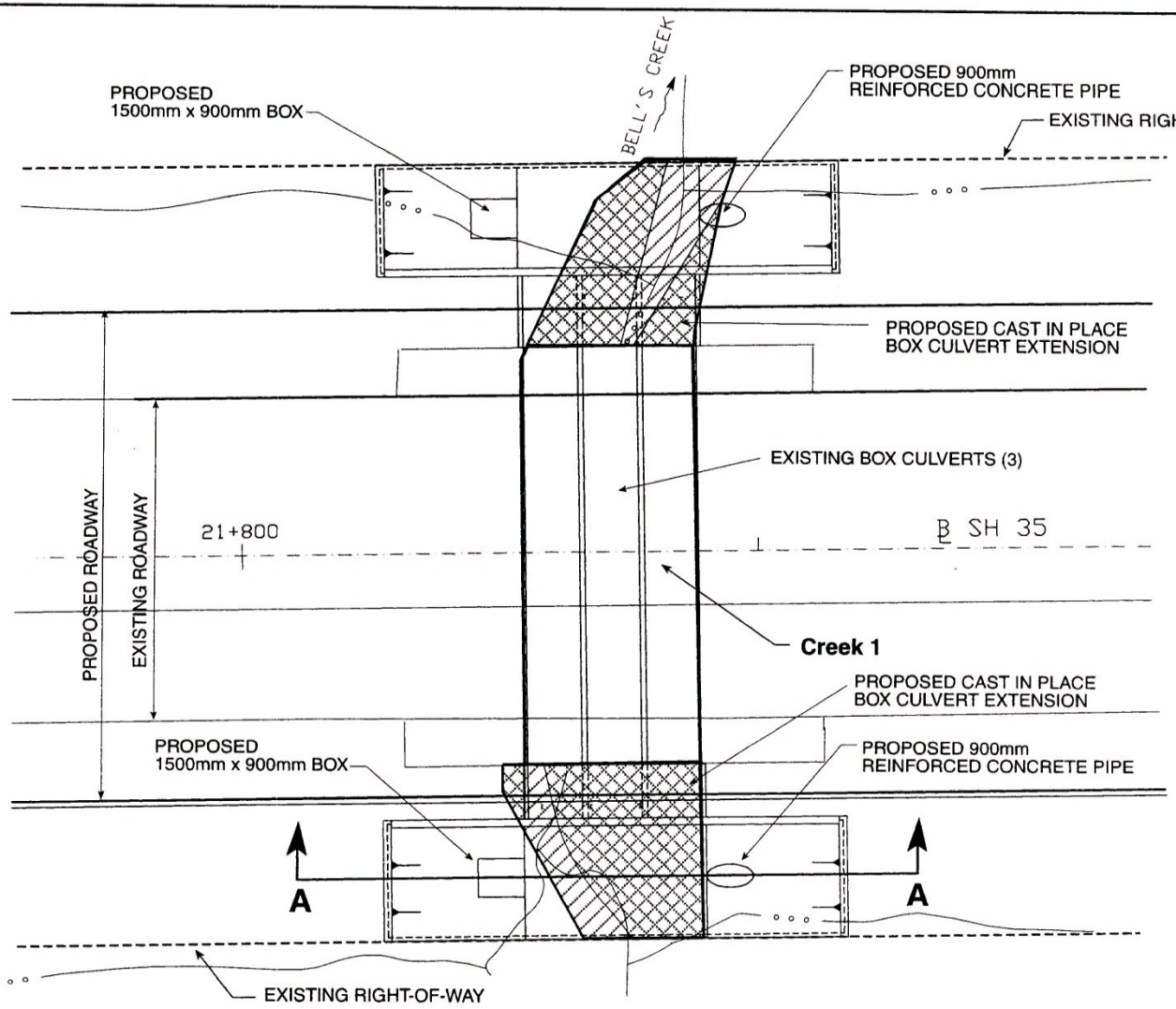


The OHWM is labeled but there are no units and values and no reference bottom elevation.

Example Permitted Plans




PERMITTED PLANS
Project Location
HARRIS
FORT BEND
GALVESTON
WHARTON
BRAZORIA
MATAGORDA
Gulf of Mexico
Project Location
Begin Project
WEST COLUMBIA
Creek 1
Sheet 2 of 26
Water D-1
Sheet 4 of 26
Water B-35
Sheet 6 of 26
Water B15
Sheet 8 of 26
Culvert 13
Sheet 8 of 26
Wetland B-14
Sheet 8 of 26
Water 12
Sheet 12 of 26
Wetland B-2
Sheet 24 of 26
Detention Pond
Sheet 18 of 26
Wetland B-13
Sheet 8 of 26
Wetland B-12
Sheet 11 of 26
Wetland B-5
Sheet 24 of 26
Wetland 8
Sheet 26 of 26
San Bernard River
Sheet 14 of 26
Water A-12
Sheet 22 of 26
Water 11
Sheet 20 of 26
Saltwater Canal
Sheet 24 of 26
End Project
OLD OCEAN
SWEENEY
1301
1459
524
35
36
522
Trinity Valley
Three Rd.
F.M. 1459
Hanson Rd.
SAN BERNARD RIVER
Halls Bayou
Plantation Blvd
Charcoey Prairie
Parks C.R. 477
Umbrella Bayou
Phillips
Nedra
C.R. 359
Little Bayou
Ashley Wilson Rd.
McKinney
F.M. 524
Blacks Ferry
Texas Ave.
0
9000
Scale In Feet
(Approximate)
Texas
Brazoria County



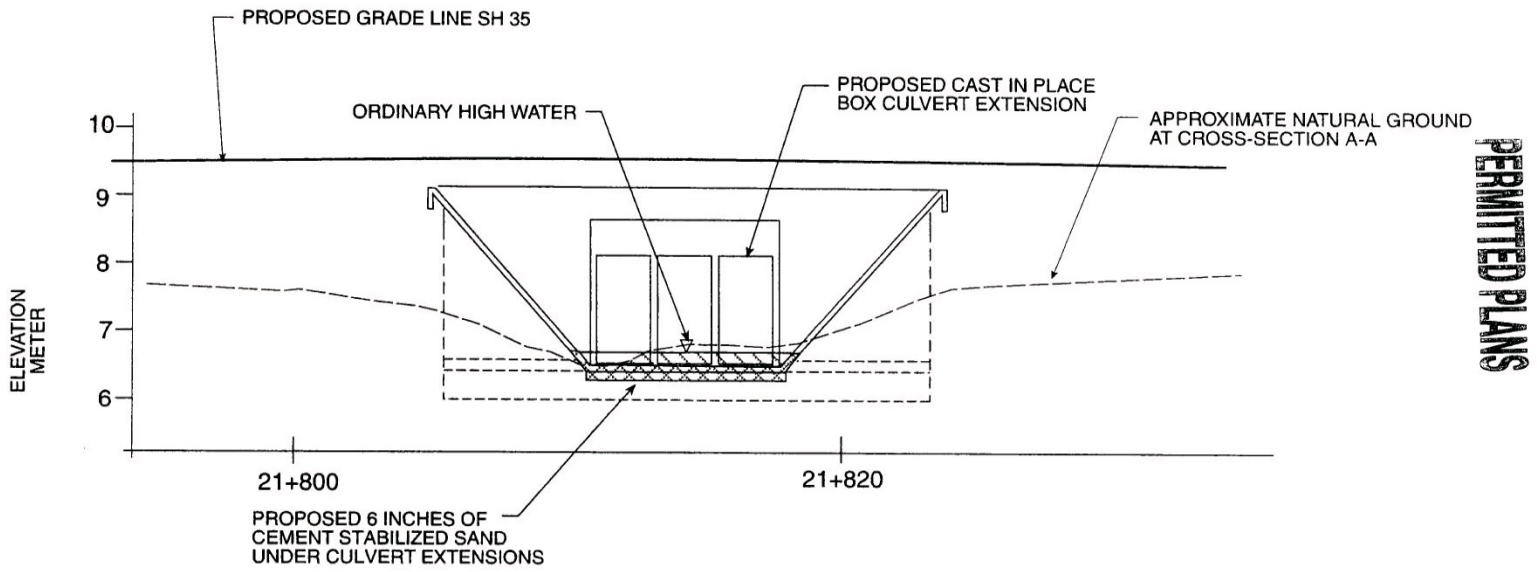
PERMITTED PLANS

0 5 10 meter
0 25 feet

Legend

- Excavation in Waters of the U.S.
- Combined Excavation/Fill in Waters of the U.S.
- Fill in Waters of the U.S.

JURISDICTIONAL AREA	EXCAVATION AREA	DIRT AND/OR STRUCTURAL FILL	JURISDICTIONAL AREA WITHIN ROW
Creek 1 (Bell's Creek)	0.02 Ac. (35 cy)	0.02 Ac. (14 cy)	0.05 Ac.



PERMITTED PLANS

SECTION A-A

Legend

- Excavation in Waters of the U.S.
- Combined Excavation/Fill in Waters of the U.S.
- Fill in Waters of the U.S.

0 5 10 15 20 meter

0 25 50 60 feet

Restoration Plan

In accordance with a NWP 33, the following restoration plan will be implemented. The proposed project will temporarily impact Wetland Z, Wetland Y and Wetlands ZZ during the construction of the turn-around road west of Cedar Bayou and the installation of bridge pilings for the proposed Cedar Bayou Bridge.

Within 2 weeks from completion of construction, all temporary fill will be removed to an area that has no waters of the US, and the area will be restored to pre-construction elevations and contours as depicted on the plans (**Attachment B**).

Based on the Wetland Delineation Report (SWG-1992-01589) with an Approved Jurisdictional Determination (AJD), the existing dominant vegetation within Wetland Z is Black willow (*Salix nigra*), Chairmaker's bulrush (*Schoenoplectus americanus*) and Bushy bluestem (*Andropogon glomeratus*).The existing dominant vegetation within Wetland Y and Z is Black willow (*Salix nigra*), Chinese tallow (*Triadica sebifera*), Broadleaf cattail (*Typha latifolia*), Dollarweed (*Hydrocotyle umbellate*) and Dwarf Palmetto (*Sabal minor*).

All temporary impacts to Wetland Z, Wetland Y and Wetland ZZ will be removed and restored to pre-construction contours. The restored areas will all be revegetated as appropriate, with native species as described above and in accordance with TxDOT's *Roadside Vegetation Management Manual* (Revised September 2013).

No secondary impacts to downstream flows, hydrology, or water quality are anticipated as a result of the proposed project.

General Condition 9 of the NWP Program requires compliance with Section 401 of the Clean Water Act, which stipulates the use of Best Management Practices (BMPs) to manage water quality on construction sites. Best Management Practices will be used during both pre- and post- construction. The Storm Water Pollution Prevention Plan (SW3P) prepared for this project would include at least one BMP in each of the three categories identified in the Section 401 Water Quality Certification Conditions for NWPs as published by the Texas Commission on Environmental Quality (TCEQ) on April 12, 2002. These BMPs will address the following categories:

- Category I: Erosion control
- Category II: Sediment Control
- Category III: Post Construction total suspended solids control.

Category I would be addressed by installing temporary vegetation and erosion control blankets and matting to disturbed areas. Category II would be addressed by the installation of silt fences across drainage swales and/or upstream of water bodies to prevent turbid discharges from adversely affecting ambient water quality. Category III would be addressed by extended detention basins. These measures would minimize potential adverse affects to water quality and with the implementation of these measures, no long-term effects to water quality are anticipated.

Tools to help

- Better plans and maps
  - **8 ½ x 11 size** – no blueprint sizes in tubes
  - Reflect the impact to the jurisdictional water of the U.S.
- Participate in pre-application meetings to discuss the project and information that is needed for our review
- Participate in the JEM process to discuss the project with agencies

Summary

- Areas of Jurisdiction (10 and 404)
- Jurisdictional Determinations
- Waters of the U.S. (wetlands, other special aquatic sites)
- Permit types (NWP, GP, LOP, IP)
- Permit Evaluation Process
- Mitigation (includes avoidance)

Questions ??

http://www.swg.usace.army.mil/

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