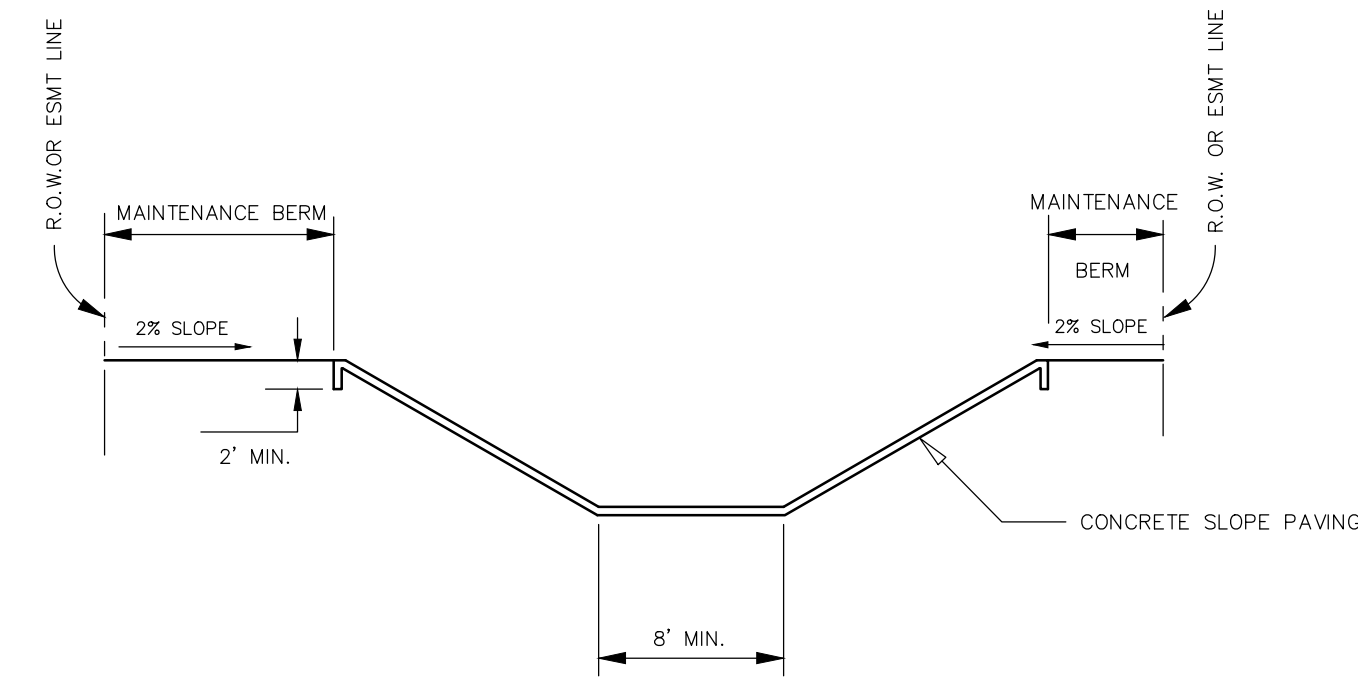
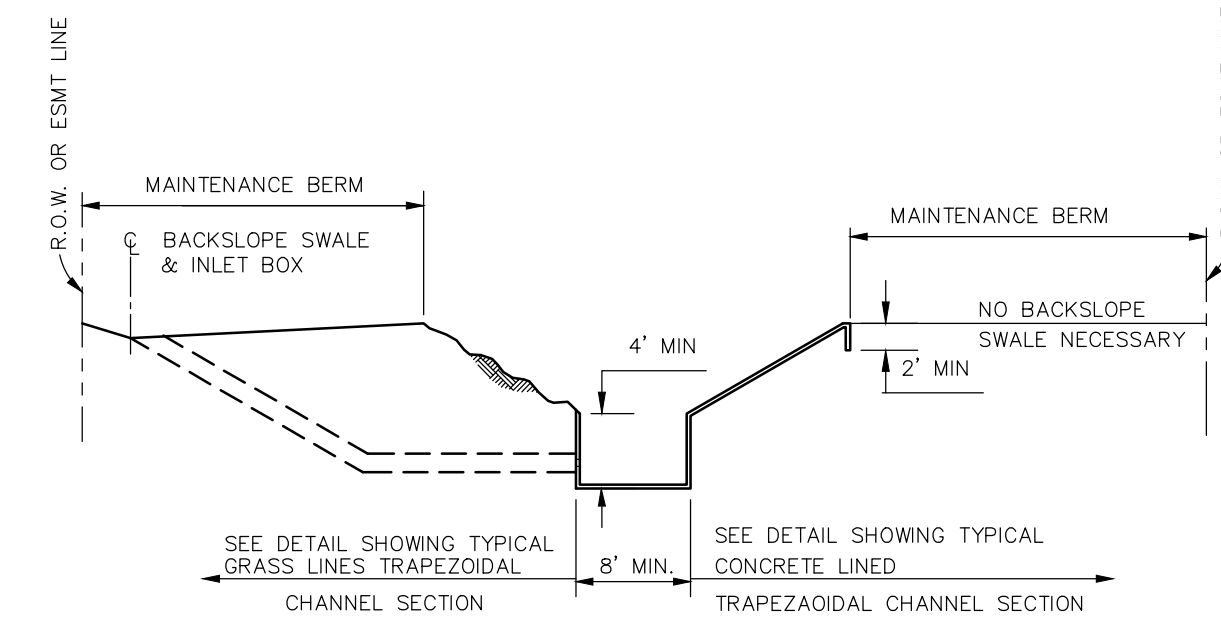


TYPICAL GRASS LINED  
TRAPEZOIDAL CHANNEL SECTION  
DETAIL 2013-07-18-07



- NOTES.**
- SEE RULES, REGULATIONS, AND GUIDE LINES FOR SIDE SLOPE REQUIREMENT. A GEOTECHNICAL ANALYSIS MAY BE REQUIRED.
  - BACK SLOPE SWALES ARE AND INTERCEPTORS ARE NOT REQUIRED FOR CONCRETE LINED SECTIONS.
  - SEE OTHER DETAILS FOR SLOPE PAVING AND TOE WALL REQUIREMENTS.
  - MAINTENANCE BERM WIDTHS VARY BASED UPON CHANNEL DEPTH AND OTHER FACTORS SEE RULES REGULATIONS, AND GUIDELINES FOR ADDITIONAL INFORMATION.

TYPICAL CONCRETE LINED  
TRAPEZOIDAL CHANNEL SECTION

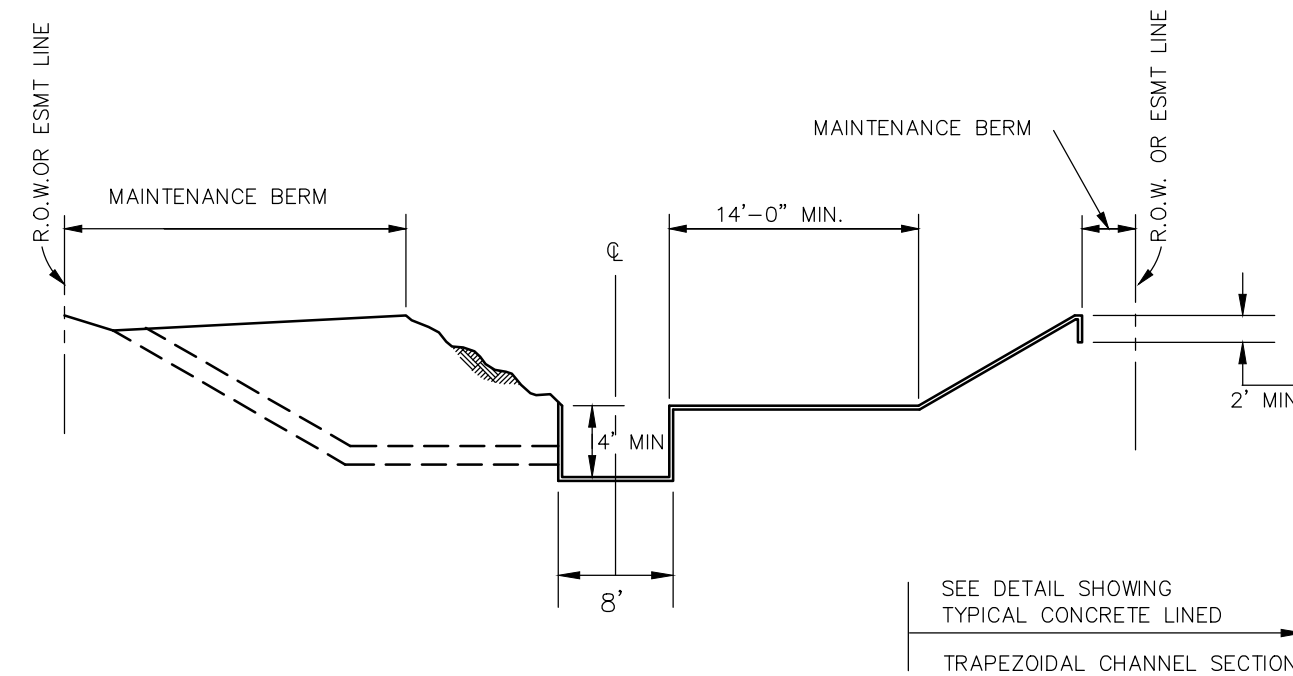


TYPICAL CONCRETE LINED LOW FLOW CHANNEL SECTION  
WITH/WITHOUT CONCRETE SLOPE PAVING  
DETAIL 2013-07-18-09

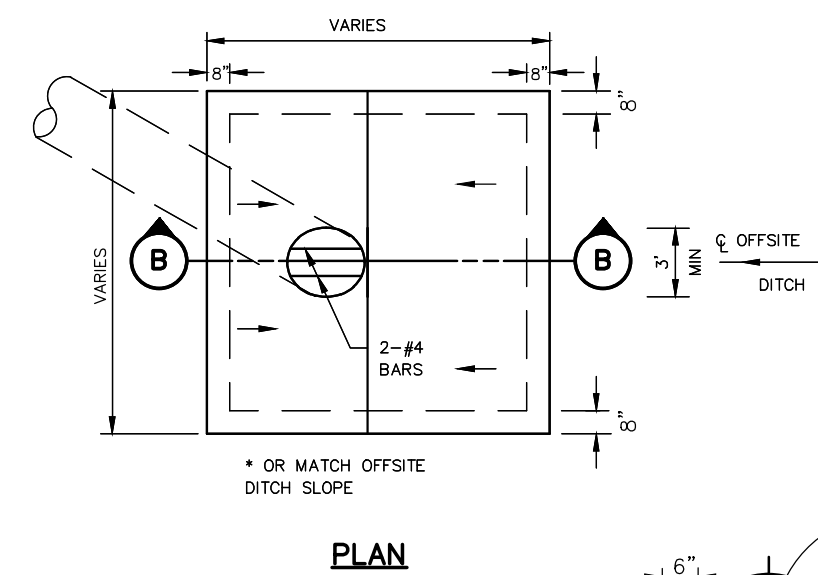
**BDD#4 SPECIAL NOTES**

- ANY GOVERNMENTAL BODY FOR PURPOSES OF DRAINAGE WORK MAY USE DRAINAGE EASEMENTS AND FEE STRIPS PROVIDED THE DISTRICT IS PROPERLY NOTIFIED.
- PERMANENT STRUCTURES, INCLUDING FENCES AND PERMANENT LANDSCAPING, SHALL NOT BE ERRECTED IN A DRAINAGE EASEMENT OR FEE STRIP.
- MAINTENANCE OF DETENTION FACILITIES IS THE SOLE RESPONSIBILITY OF THE OWNER OF THE PROPERTY. THE DISTRICT WILL PROVIDE MAINTENANCE OF REGIONAL FACILITIES OWNED AND CONSTRUCTED BY THE DISTRICT, OR SUBREGIONAL FACILITIES CONSTRUCTED BY DEVELOPER(S) FOR WHICH OWNERSHIP HAS BEEN TRANSFERRED TO THE DISTRICT WITH THE DISTRICTS APPROVAL. THE DISTRICT IS RESPONSIBLE ONLY FOR THE MAINTENANCE OF FACILITIES OWNED BY THE DISTRICT UNLESS THE DISTRICT SPECIFICALLY CONTRACTS OR AGREES TO MAINTAIN OTHER FACILITIES.
- CONTRACTOR SHALL NOTIFY THE DISTRICT IN WRITING AT LEAST FORTY-EIGHT (48) HOURS BEFORE PLACING ANY CONCRETE FOR DRAINAGE STRUCTURES.
- THE DISTRICT'S PERSONNEL SHALL HAVE THE RIGHT TO ENTER UPON THE PROPERTY FOR INSPECTION AT ANY TIME DURING CONSTRUCTION OR AS MAY BE WARRANTED TO ENSURE THE DETENTION FACILITY IS OPERATING PROPERLY.
- APPROPRIATE COVER FOR THE SIDE SLOPES, BOTTOM AND MAINTENANCE BERM SHALL BE ESTABLISHED PRIOR TO ACCEPTANCE OF THE CONSTRUCTION BY THE DISTRICT. AT LEAST 95% GERMINATION OF THE GRASS MUST BE ESTABLISHED PRIOR TO ACCEPTANCE OF CONSTRUCTION BY THE DISTRICT.
- NO BUILDING PERMIT SHALL BE ISSUED FOR ANY LOT WITHIN THIS DEVELOPMENT UNTIL THE DETENTION FACILITY HAS BEEN CONSTRUCTED AND APPROVED BY THE DISTRICT.
- THE DISTRICTS APPROVAL OF THE FINAL DRAINAGE PLAN (AND FINAL PLAT IF REQUIRED) DOES NOT AFFECT THE PROPERTY RIGHTS OF THIRD PARTIES. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING AND MAINTAINING ANY AND ALL EASEMENTS, FEE STRIPS AND/OR ANY OTHER RIGHTS-OF-WAY ACROSS THIRD PARTIES' PROPERTIES FOR PURPOSES OF MOVING EXCESS RUNOFF TO THE DISTRICTS DRAINAGE FACILITIES AS CONTEMPLATED BY THE FINAL DRAINAGE PLAN AND FINAL PLAT.

SEE THE RULES, REGULATIONS AND GUIDELINES FOR BRAZORIA DRAINAGE DISTRICT NO. 4, APPENDIX "A". EFFECTIVE MAY 1, 2013



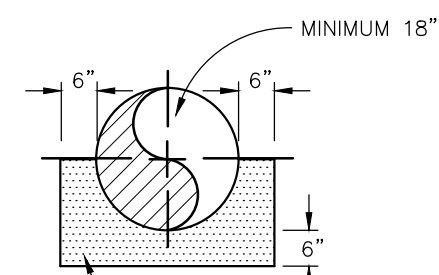
TYPICAL CONCRETE LINED CHANNEL WITH  
LOW FLOW SECTION AND MAINTENANCE SHELF.  
DETAIL 2013-07-18-10



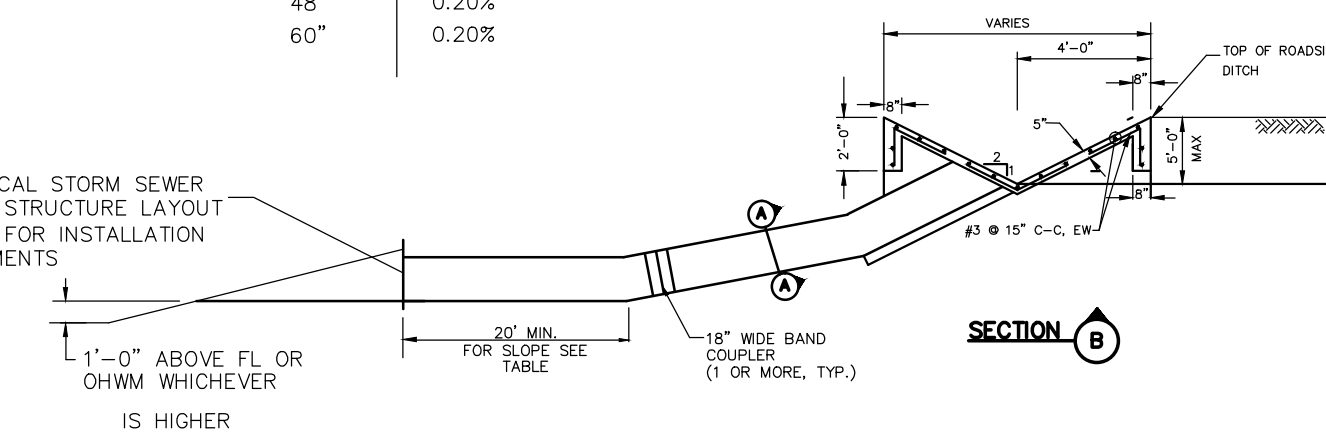
**MODIFIED TYPE "B" BERM INLET**

(HIGHWAY LOADING)  
(SECTION A-A')

PIPE DIA.	SLOPE
24"	0.60%
36"	0.30%
48"	0.20%
60"	0.20%

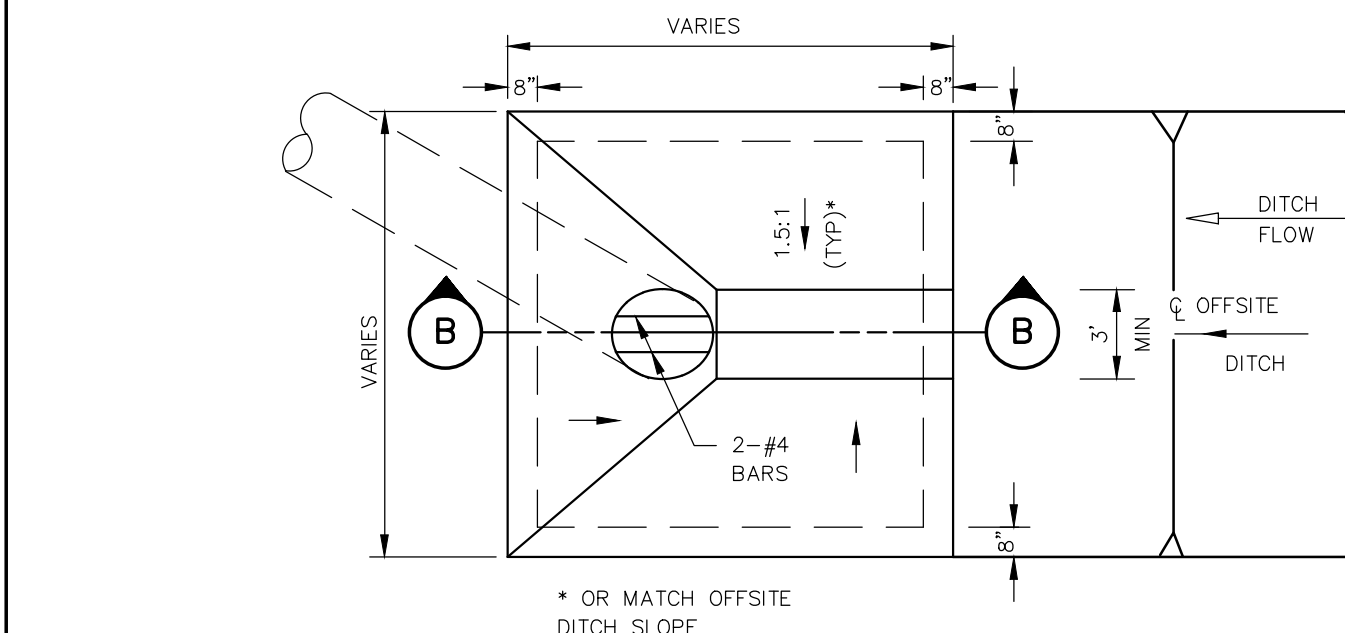


SEE TYPICAL STORM SEWER  
OUTFALL STRUCTURE LAYOUT  
(SHT. 3) FOR INSTALLATION  
REQUIREMENTS

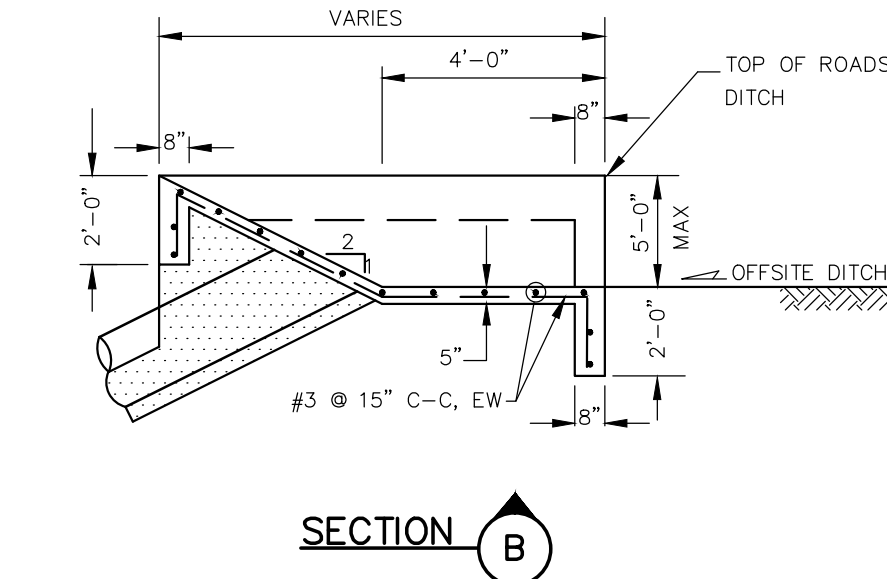
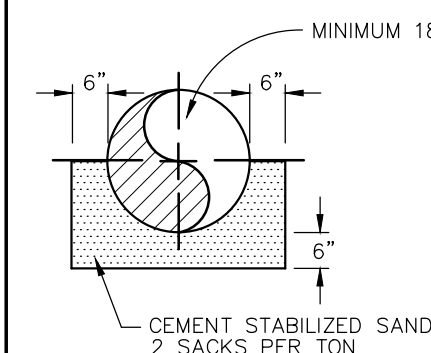


NOTE:  
OHWM - ORDINARY HIGH WATER MARK

BACKSLOPE INTERCEPTOR STRUCTURE



**PLAN**



**SECTION B**

ROADSIDE DITCH  
INTERCEPTOR STRUCTURE  
DETAIL 2013-07-18-14

SIGNATURE BLOCK FOR PRELIMINARY APPROVAL

**APPROVED BY BRAZORIA DRAINAGE DISTRICT NO. 4**

DISTRICT SUPERINTENDENT	DATE
DISTRICT ENGINEER	DATE

THE ABOVE SIGNATURES ARE VALID FOR THREE HUNDRED SIXTY-FIVE (365) CALENDAR DAYS FROM THE DATE SHOWN. THE ABOVE SIGNATURES DO NOT CONSTITUTE AUTHORIZATION FOR ANY CONSTRUCTION.

SIGNATURE BLOCK FOR FINAL APPROVAL

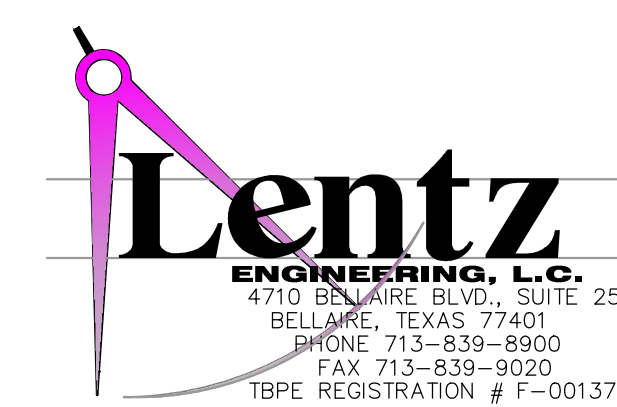
**APPROVED BY BOARD OF COMMISSIONERS ON**

BRAZORIA DRAINAGE DISTRICT NO. 4	DATE
DISTRICT ENGINEER	

THE ABOVE HAVE SIGNED THESE PLANS AND/OR PLAT BASED ON THE RECOMMENDATION OF THE DISTRICT'S ENGINEER WHO HAS REVIEWED ALL SHEETS PROVIDED AND FOUND THEM TO BE IN GENERAL COMPLIANCE WITH THE DISTRICT'S RULES, REGULATIONS, AND GUIDELINES". THIS APPROVAL IS ONLY VALID FOR THREE HUNDRED SIXTY-FIVE (365) CALENDAR DAYS. AFTER THAT TIME RE-APPROVAL IS REQUIRED. PLEASE NOTE, THIS DOES NOT NECESSARILY MEAN THAT ALL THE CALCULATIONS PROVIDED IN THESE PLANS AND/OR PLATS HAVE BEEN COMPLETELY CHECKED AND VERIFIED. PLANS SUBMITTED HAVE BEEN PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE ENGINEERING IN THE STATE OF TEXAS AND PLAT HAS BEEN SIGNED AND SEALED BY REGISTERED PROFESSIONAL LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF TEXAS, WHICH CONVEYS THE ENGINEER'S AND/OR SURVEYOR'S RESPONSIBILITY AND ACCOUNTABILITY.

NO.	DATE	REVISIONS	APP.
	06-01-10	EFFECTIVE	JDA
	05-01-13	REVISED STANDARD DETAILS	JDA

# BRAZORIA DRAINAGE DISTRICT NO. 4



STANDARD DETAILS	
DRAWN BY:	
DESIGNED BY:	SCALE: NTS
APPROVED BY:	DATE UPDATED: 05-01-13
JOB NO.:	SHEET NO.: 1 OF 4