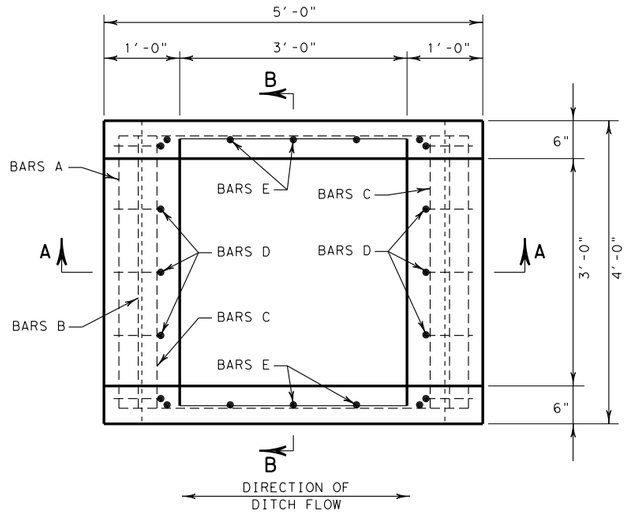
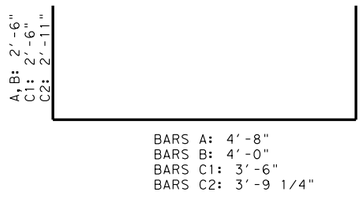
DISCLAIMER :
THE USE OF THIS STANDARD IS GOVERNED BY THE "TEXAS ENGINEERING PRACTICE ACT". NO WARRANTY OF ANY KIND IS MADE BY TXDOT FOR ANY PURPOSE WHATSOEVER. TXDOT ASSUMES NO RESPONSIBILITY FOR THE CONVERSION OF THIS STANDARD TO OTHER FORMATS OR FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

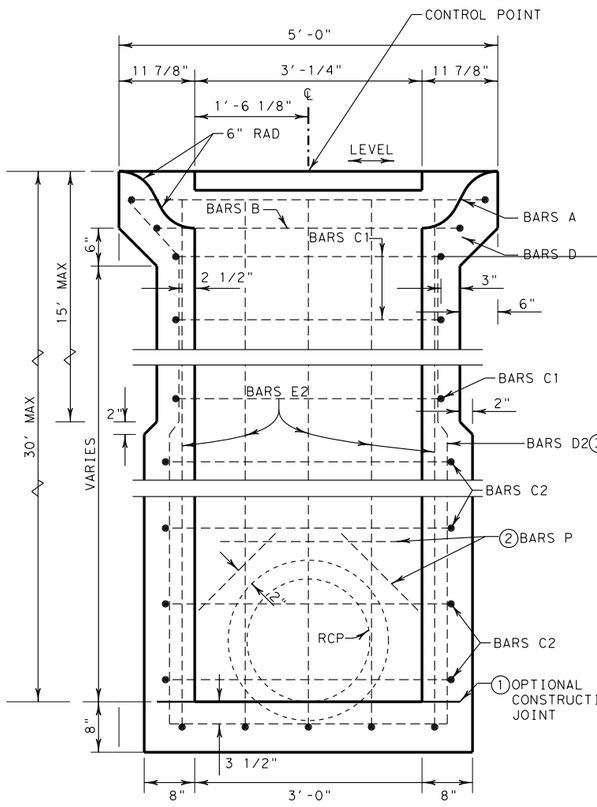


PLAN VIEW
N.T.S.

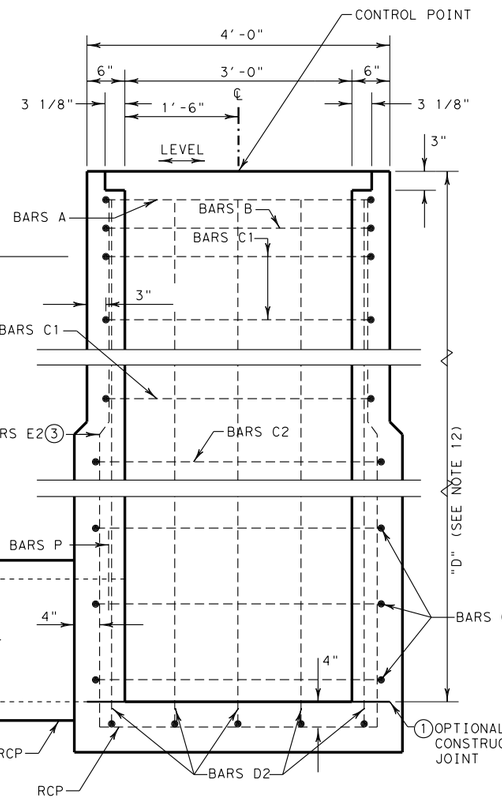


BARS A: 4'-8"
BARS B: 4'-0"
BARS C1: 3'-6"
BARS C2: 3'-9 1/4"

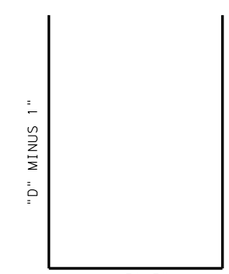
TYPE AD INLET (FREE-STANDING) BILL OF REINFORCING STEEL											
			"D" = 4.00'			"D" = 15.00'			"D" = 30.00'		
BAR	SIZE	SPACING (IN)	NO.	LENGTH (FT)	WT (LBS)	NO.	LENGTH (FT)	WT (LBS)	NO.	LENGTH (FT)	WT (LBS)
A	#4	-	2	9.667	13	2	9.667	13	2	9.667	13
B	#4	-	2	9.000	12	2	9.000	12	2	9.000	12
C1	#4	10	8	8.500	45	30	8.500	170	30	8.500	170
C2	#5	12	-		0	-		0	30	9.604	301
D1	#4	10	5	11.500	38	5	33.500	112	-		0
D2	#5	10	-		0	-		0	10	32.875	343
E1	#4	10	5	11.250	38	5	33.250	111	-		0
E2	#5	10	-		0	-		0	10	33.125	345
SUMMARY OF QUANTITIES											
TOTAL REINFORCING STEEL (LBS)					146			418			1184
CLASS "C" CONCRETE (CY)					1.52			4.38			9.87
ADJUSTMENT FOR DEPTHS OTHER THAN THOSE SHOWN ABOVE											
FOR "D" = 4' TO 15'						FOR "D" = 15' TO 30'					
REINFORCING STEEL (LBS)			146 + 25 #/LF			REINFORCING STEEL (LBS)			571+ 41 #/LF		
CLASS "C" CONCRETE (CY)			1.52 + 0.26 CY/LF			CLASS "C" CONCRETE (CY)			4.44 + 0.36 CY/LF		



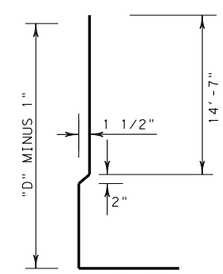
SECTION A-A



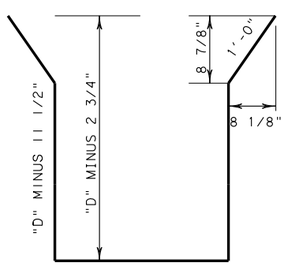
SECTION B-B



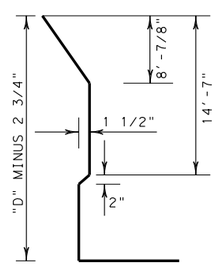
BARS E1



BARS E2



BARS D1



BARS D2

GENERAL NOTES

1. DESIGNED FOR AASHTO LRFD HL 93 LOADING. TYPE AD INLETS ARE NOT INTENDED FOR USE IN AREAS DESIGNATED FOR TRAFFIC OR PEDESTRIAN ACCESS. INLETS MAY BE USED IN DITCHES LOCATED WITHIN THE ROADWAY CLEAR ZONE.
2. PRECAST UNITS WITH EQUIVALENT REINFORCING MAY BE FURNISHED. SUBMIT SEALED ENGINEERING CALCULATIONS AND DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
3. USE CLASS "C"CONCRETE FOR CAST-IN-PLACE STRUCTURES; USE CLASS "H" (MINIMUM 5000 PSI COMPRESSIVE STRENGTH) CONCRETE FOR PRECAST STRUCTURES.
4. USE GRADE 60 STEEL FOR ALL REINFORCING.
5. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO THE CENTERS OF BARS.
6. FIELD CUT OR BEND BARS AS NECESSARY TO ACCOMMODATE STORM DRAIN PIPE. DO NOT USE WITH STORM DRAIN PIPE LARGER THAN 24" NOMINAL DIAMETER.
7. FABRICATE GRATES FROM WELDED STEEL, IN ACCORDANCE WITH ITEM 471.
8. LOCATION OF INLET AS SHOWN IN THE PLANS REFERS TO THE CONTROL POINT SHOWN HEREON AND DETAILED ON THE "DRAINAGE STRUCTURE CONTROL DATA" SHEET. FOR INLET RISERS LOCATED ON BASE STRUCTURE, LOCATE AND POSITION BASE AS DETAILED ON THE DRAINAGE STRUCTURE CONTROL DATA SHEET, OR AS DIRECTED. FOR INLETS LOCATED ON BOX CULVERT LESS THAN 4' SPAN, USE WITH BASE STRUCTURE.
9. CONSTRUCT INLET WITH LEVEL TOP, TO ALIGN WITH DITCHES OR AS DIRECTED. ALIGN INLET SO THAT GRATE VANES ARE PARALLEL TO DITCH FLOW.
10. FABRICATE BOTTOM OF PRECAST INLET TOP TO MATCH BASE OR RISER.
11. FOR PLACEMENT ON BOX SEWER, SEE STANDARD MI-CBC (FTW). DO NOT USE WITH BOX CULVERTS WITH LESS THAN 4' SPAN. FOR USE WITH BOX CULVERTS LESS THAN 4' SPAN, BASE AND RISER MUST BE USED. SEE STANDARD MI-B&R (FTW) FOR ADDITIONAL INFORMATION.
12. MAXIMUM DEPTH "D" FOR CAST-IN-PLACE FREE-STANDING INLETS IS 30', WITH INCREASED WALL THICKNESS AND ADDITIONAL REINFORCEMENT FOR DEPTHS GREATER THAN 15', AS DETAILED. MAXIMUM DEPTH "D" FOR PRECAST INLETS, OR "C" FOR RISERS ON BASE STRUCTURES, IS 25' TO THE TOP OF THE BASE SLAB, IN ACCORDANCE WITH STANDARD MI-B&R (FTW). DETERMINE QUANTITIES FOR DEPTHS OTHER THAN THOSE SHOWN HEREON BY INTERPOLATION.
13. FOR PIPE CONNECTIONS TO PRECAST STRUCTURES, SEE STANDARD DETAIL SHEET, PBGC.

① CIP CONSTRUCTION ONLY

② BARS P LENGTH = PIPE O.D. + 9"
PLACE 3 BARS P AS SHOWN AT EACH PIPE OPENING WITH 2" CLEAR COVER OVER PIPE POSITIONED AS NEEDED TO PROVIDE 2" CLEAR COVER AT WALLS

③ BARS D2 AND E2 SHOWN; BARS D1 AND E1 ARE FOR DEPTHS LESS THAN 15'

TYPE AD - FREE-STANDING INLET
MAXIMUM CONDUIT SIZE = 24" DIA
N.T.S.

Texas Department of Transportation

Fort Worth District Standard

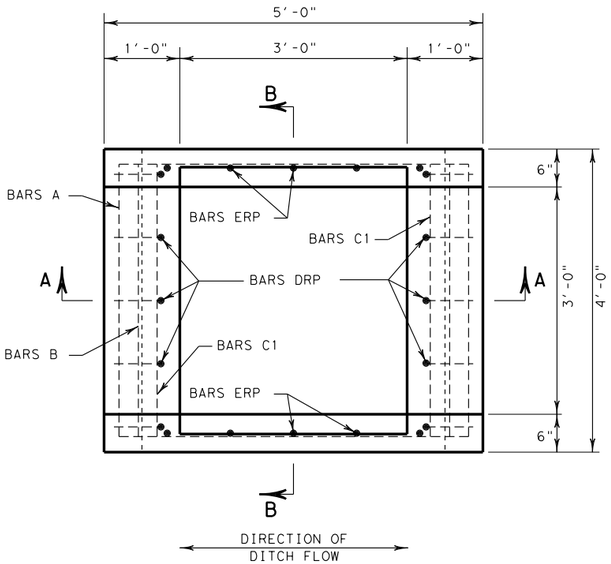
AREA-DITCH INLET TYPE AD
I-AD (FTW)

ORIGINAL DRAWING: 05/2019	iad-ftw.dgn	FED.RD. DIV.NO.	PROJECT NO.	SHEET NO.
DATE	REVISIONS	6		
05/2019	REPLACES DI-1-02(FW)	STATE	STATE DIST.NO.	COUNTY
07/2022	REVISE NOTES AND ADD DETAILS FOR USE WITH PRECAST BASE & RISER	TEXAS	FTW	
		CONT.	SECT.	JOB / HIGHWAY NO.

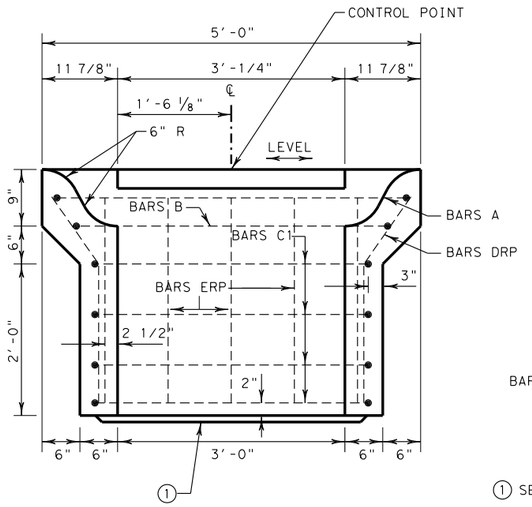
©2022 by Texas Department of Transportation; All Rights Reserved

http://www.dot.state.tx.us/ftw/specinfo/standard.htm
7/6/2022 4:12:42 PM
$PATH$
T:\Groups\00_KATY\PROJECTS\TXDOT\16121\5 FTW Standards Revision\CADD\SWA1\Standard Revisions\To TxDOT\Finals\TxDOT Formats\I-AD(FTW).dgn

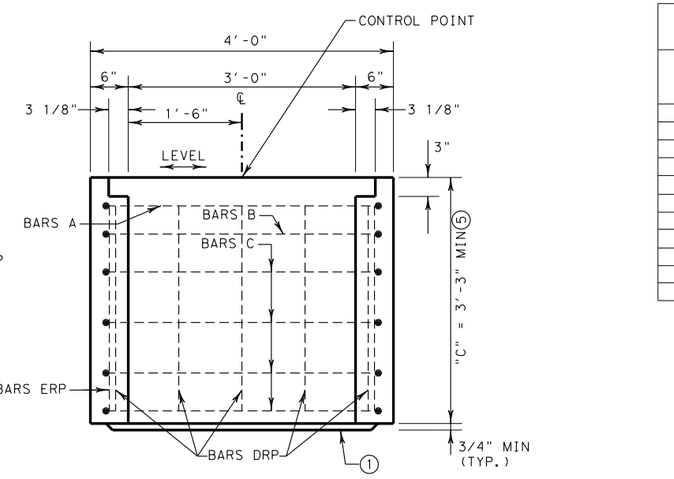
DISCLAIMER :
THE USE OF THIS STANDARD IS GOVERNED BY THE "TEXAS ENGINEERING PRACTICE ACT". NO WARRANTY OF ANY KIND IS MADE BY TXDOT FOR ANY PURPOSE WHATSOEVER. TXDOT ASSUMES NO RESPONSIBILITY FOR THE CONVERSION OF THIS STANDARD TO OTHER FORMATS OR FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.



PLAN VIEW
N.T.S.



SECTION A-A

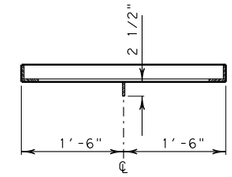


① SEE GENERAL NOTE 10

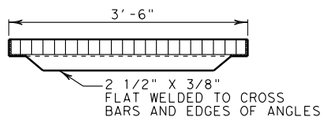
⑤ MINIMUM TO RESIST TIPPING

SECTION B-B

TY AD INLET (PRECAST RISER ONLY) BILL OF REINFORCING STEEL					
			"C" = 3.25'		
BAR	SIZE	SPACING (IN)	NO.	LENGTH (FT)	WT (LBS)
A	#4	-	2	9.667	13
B	#4	-	2	9.000	12
C1	#4	10	6	8.500	34
DRP	#4	10	10	2.833	19
ERP	#4	10	10	2.667	18
SUMMARY OF QUANTITIES					
TOTAL REINFORCING STEEL (LBS)					96
CL "H" CONC (F'c = 5000 PSI) (CY)					0.96
ADDITIONAL QUANTITIES					
REINFORCING STEEL (LBS/LF)					25
CLASS "H" CONC (CY/LF)					0.26

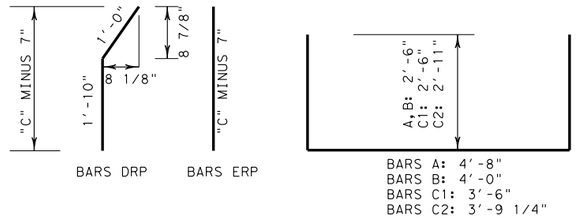


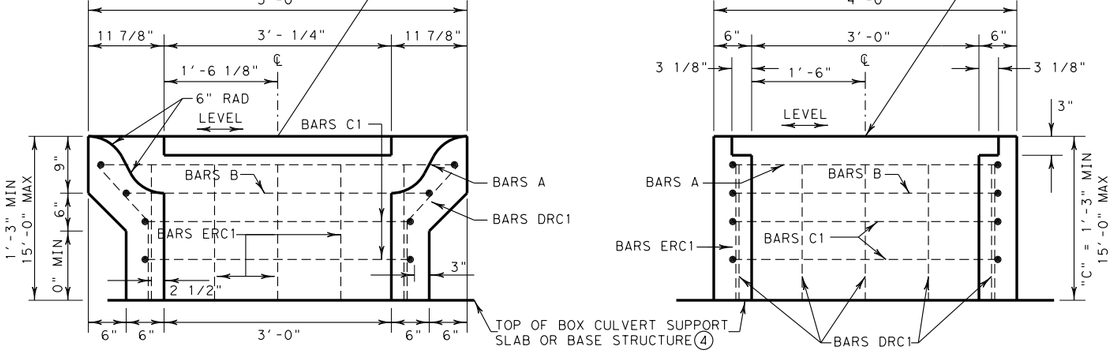
SECTION C-C



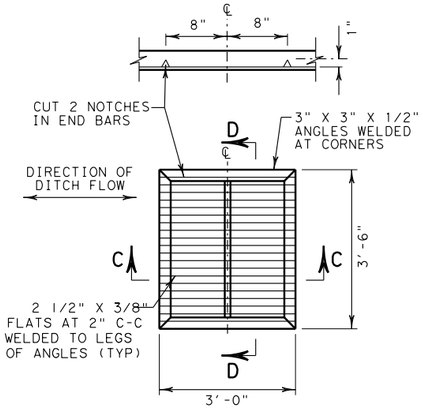
SECTION D-D

PRECAST INLET TOP
FOR USE WITH PRECAST RISER
SEE MI-B&R (FTW)
N.T.S.



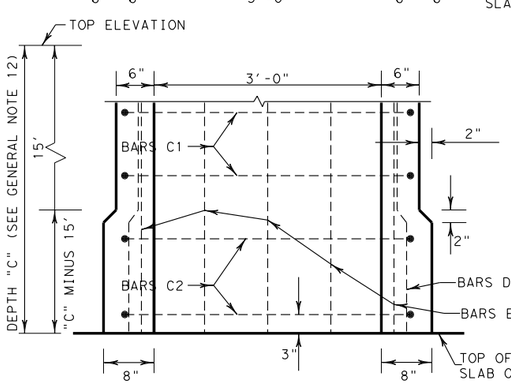


TYPE AD INLET (CIP RISER ONLY) BILL OF REINFORCING STEEL										
			"C" = 1.25'			"C" = 15.00'			"C" = 30.00'	
BAR	SIZE	SPACING (IN)	NO.	LENGTH (FT)	WT (LBS)	NO.	LENGTH (FT)	WT (LBS)	NO.	LENGTH (FT)	WT (LBS)
A	#4		2	9.667	13	2	9.667	13	2	9.667	13
B	#4		2	9.000	12	2	9.000	12	2	9.000	12
C1	#4	10	2	8.500	11	30	8.500	170	30	8.500	170
C2	#5	12			0			0	30	9.604	301
DRC1	#4	10	10	1.000	7	10	14.75	99			0
DRC2	#5				0			0	10	29.927	312
ERC1	#4	10	10	0.833	6	10	14.625	98			0
ERC2	#5				0			0	10	29.625	309
SUMMARY OF QUANTITIES											
TOTAL REINFORCING STEEL (LBS)				49			392				1117
CLASS "C" CONCRETE (CY)				0.41			3.98				9.41
ADJUSTMENT FOR DEPTHS OTHER THAN THOSE SHOWN ABOVE											
FOR "D" = 4' TO 15'						FOR "D" = 15' TO 30'					
REINFORCING STEEL (LBS) 49 + 25 #/LF						REINFORCING STEEL (LBS) 571+ 41 #/LF					
CLASS "C" CONCRETE (CY) .41 + 0.26 CY/LF						CLASS "C" CONCRETE (CY) 3.98 + 0.36 CY/LF					

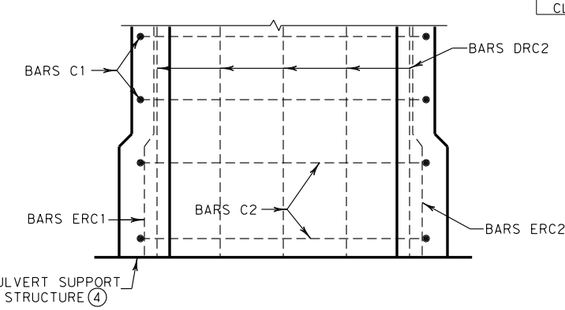


PLAN VIEW

GRATE DETAIL
N.T.S.



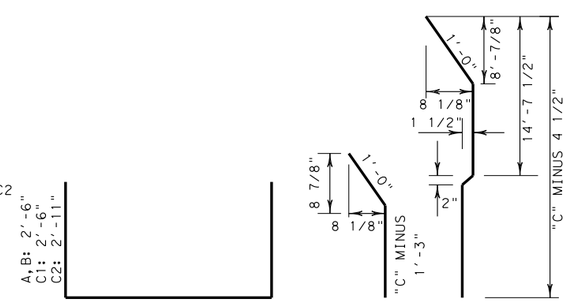
SECTION A-A



SECTION B-B

CAST-IN-PLACE INLET RISER
FOR PLACEMENT DIRECTLY ON BOX CULVERT OR BASE
DO NOT USE WITH BOX CULVERT SPAN LESS THAN 4'
FOR BOX CULVERT LESS THAN 4' SPAN, SEE MI-B&R
N.T.S.

④ SEE STANDARD MI-CBC (FTW) FOR CONNECTION TO BOX CULVERT AND SUPPORT SLAB DETAILS.
SEE STANDARD MI-B&R (FTW) FOR CONNECTION TO BASE STRUCTURE.



©2022 by Texas Department of Transportation; All Rights Reserved

SHEET 2 OF 2 SHEETS

Texas Department of Transportation

Fort Worth District Standard

AREA-DITCH INLET TYPE AD
I-AD (FTW)

ORIGINAL DRAWING: 05/2019	iad-ftw.dgn	FED.RD. DIV.NO.	PROJECT NO.	SHEET NO.
DATE	REVISIONS	6		
05/2019	REPLACES DI-1-02(FW)	STATE	STATE DIST.NO.	COUNTY
07/2022	REVISE NOTES AND ADD DETAILS FOR USE WITH PRECAST BASE & RISER	TEXAS	FTW	
		CONT.	SECT.	JOB / HIGHWAY NO.

http://www.dot.state.tx.us/ftw/specinfo/standard.htm
7/6/2022 4:12:42 PM
$PATH$
T:\Groups\00_KATY\PROJECTS\TXDT1612\5 FTW Standards Revision\CADD\SWA1\Standard Revisions\To TxDOT\Finals\I-AD(FTW).dgn