

# BOX CULVERT END SECTION CULVERT NO. 9 STA. 1023 + 85

## BILL OF MATERIALS

(For Information Only)

BAR	NUMBER	SIZE	LENGTH	SHAPE
a	38	#4	9'-5"	—
d	36	#4	4'-6"	└
d1	8	#4	4'-6"	└
h	22	#4	18'-5"	—
h1	9	#4	19'-0"	—
h2	2	#4	17'-2"	—
s	11	#4	3'-3"	□
v	13	#4	5'-6"	—
x	11	#4	2'-8"	└
x1	3	#4	9'-5"	—
x2	4	#4	9'-0"	└
x3	4	#6	9'-5"	—
*x4	12	#4	12'-0"	└

DESCRIPTION	UNIT	QTY.
Concrete Box Culverts	CuYd	7.4
Reinforcement Bars	LBS	970
3" I.D. Galv Steel Pipe	3 @	10'-0"
	3 @	16'-6"
1/2" Dia. Galv. Expansion Bolts	EACH	12
3" Galv Pipe Caps	EACH	12
1/4" Galv Steel Plate (9" Nominal)	EACH	6
1/2"x4"x14" Galv Steel Plate	EACH	6
5/8"x9" Galv Steel Bolts	EACH	9
L 4 x 4 x3/8 x 3" Long	EACH	3
5/8" φ Anchor Rods	EACH	6
2 1/2" x 2 1/2" x 5/16" W Washer	EACH	6
3/4" φ X 6 1/2" A307 Bolt	EACH	3

\* Only required with precast end section. Weight not included in Reinforcement Bars quantity.

### GENERAL NOTES:

This work shall be paid for at the contract unit price per Each for Box Culvert End Section No. 9.

This work shall be done in accordance with the applicable portions of sections 503, 508, AND 540 of the Standard Specifications.

Contractor shall field verify Galvanized pipe lengths.

Exposed edges shall be beveled 3/4".

The contract unit price "EACH" for Box Culvert End Section No. 9 shall include the Bolts, Galvanized pipe, Nuts, Washers, Anchor Rods, and pipe caps, Steel Plates, Reinforcement Bars, and Concrete Box Culverts.

The Contractor has the option of using Precast construction for the end section, if so the concrete collar will also be included in the cost of Box Culvert End Section No.9

Contractor shall provide galvanizing for holes, threads, etc. for field-fabricated grate assembly.

The cost of earth excavation, where required, and necessary grading to fit the inlet as shown in the cross-sections or to the slope is included in the cost of Box Culvert End Section No.9

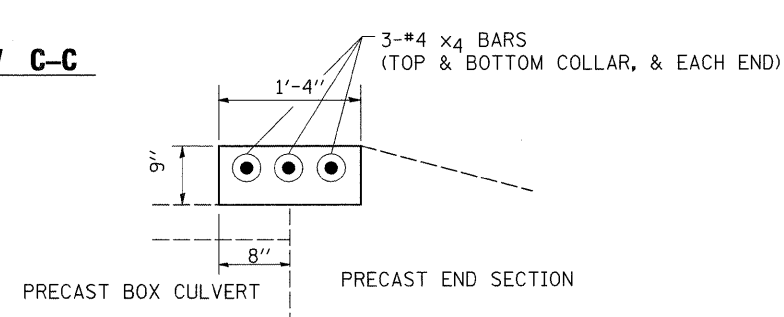
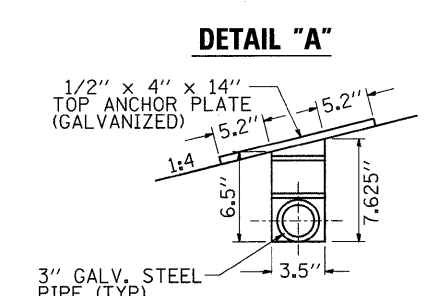
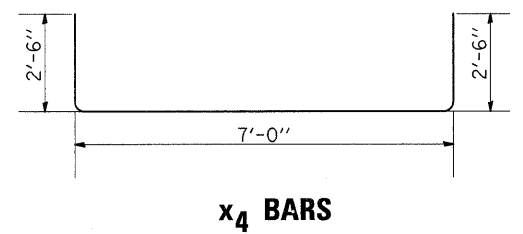
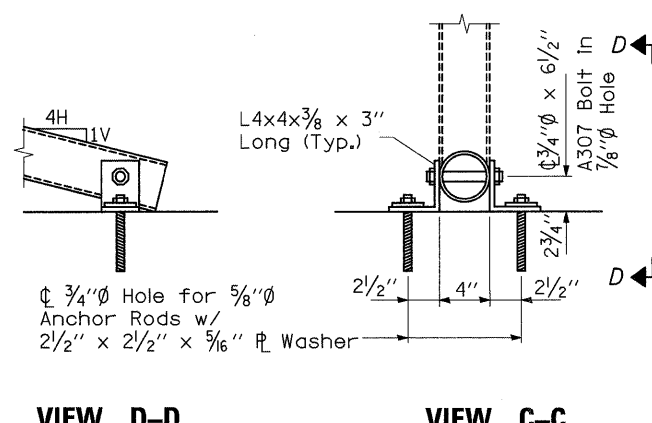
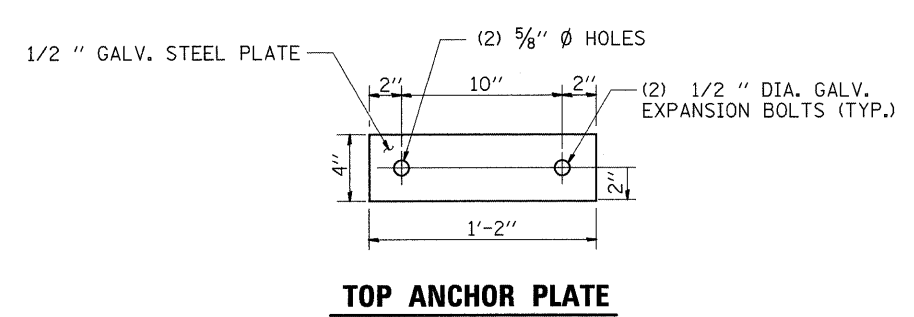
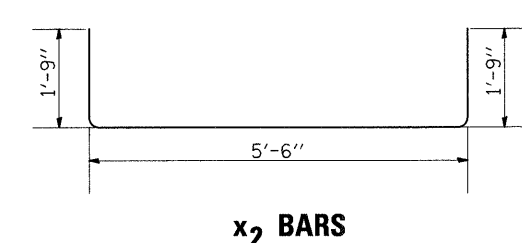
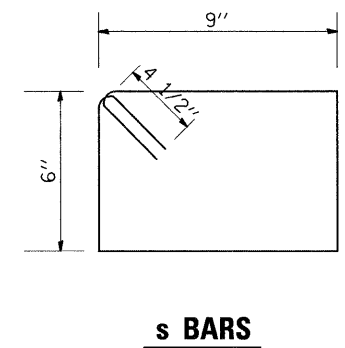
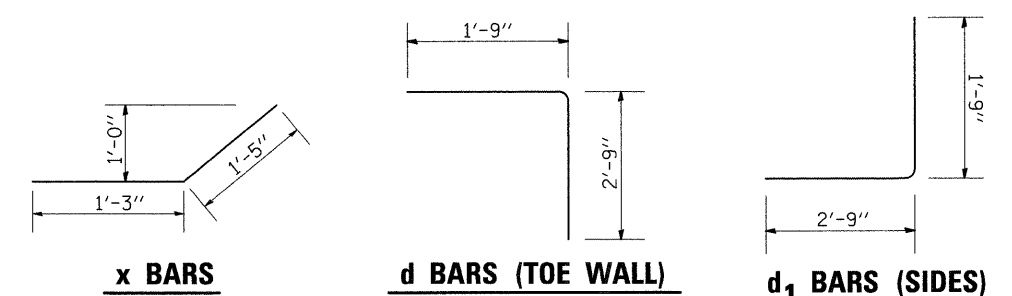
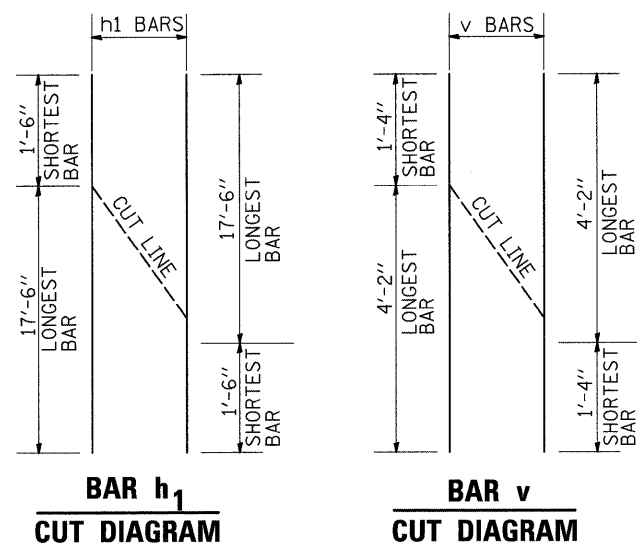
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60 (IL Modified). See Special Provisions.

Steel plates shall conform to AASHTO M-270 Grade 36 and shall be galvanized conforming to AASHTO M-111.

Bolts, Nuts, Washers, and Anchor Rods shall be in accordance with article 505 of the Standard Specifications and shall be galvanized.

See Plan and Profile Sheet for more information.

See Cross Section Sheet for more information.



### COLLAR DETAIL "PRECAST OPTION ONLY"

FILE NAME =	USER NAME = cushmanbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BOX CULVERT END SECTION CULVERT NO. 9	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pw_work\PIWID01\CUSHMANBW\dms31213\466808culvdetail.dgn	DRAWN -	REVISED -	742			37R-4	OGLE	867	186	
PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	CONTRACT NO. 64E17							
PLOT DATE = wed Mar 31 08:57:14 2010	DATE -	REVISED -	SCALE:			SHEET NO. 1 OF 2 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	