

CONCRETE COLLARS FOR PIPE OR BOX CULVERT EXTENSIONS

Bill of Materials

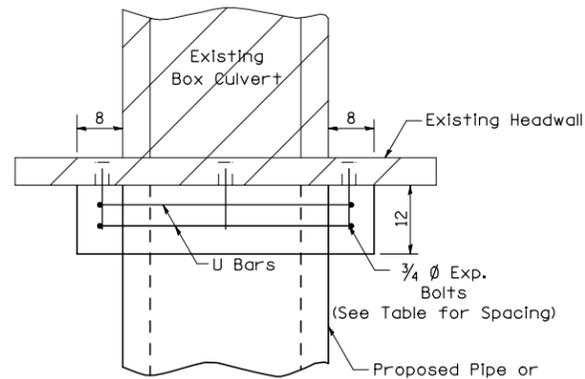
STATION	DIMENSIONS		h Bar	U Bar	EXPANSION BOLTS	CONCRETE COLLAR	REINF. BARS
	X	Y	No.	No.	Length	No.	Cu. Yd
376+67.44	2'-8"	2'-0"	4	6'-8"	4	0.3	20
All h Bars 18 Long				Total	4	0.3	20

General Notes

Concrete Collars shall be constructed of Class SI Concrete in accordance with Section 503 of the Standard Specifications

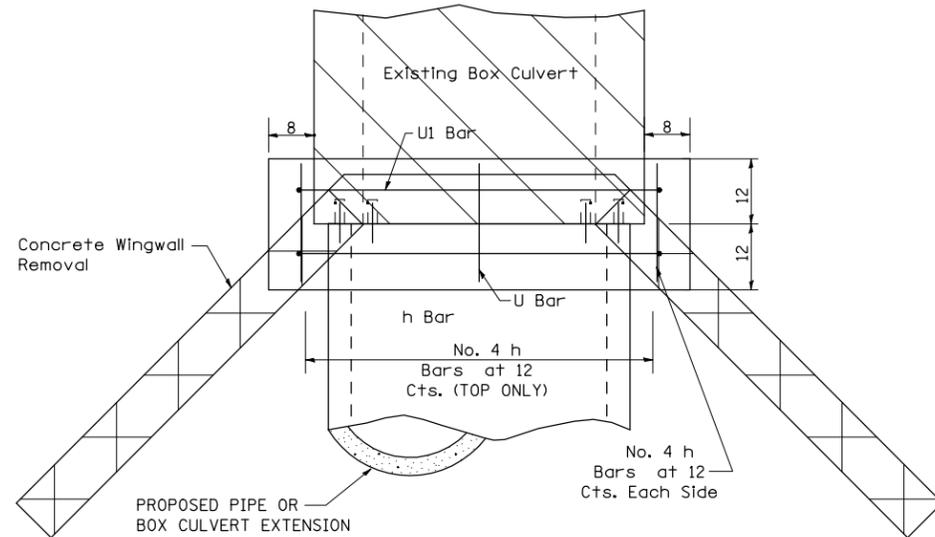
Reinforcement bars shall conform to Section 508 of the Standard Specifications.

The concrete will be paid for at the contract unit price per cubic yard for CONCRETE COLLAR. Reinforcement will be paid for at the contract unit price per pound for REINFORCEMENT BARS. Expansion Bolts, when required, will be paid for at the contract unit price each for EXPANSION BOLTS of the size indicated, which price shall include furnishing, drilling holes, and installing the expansion bolts complete in place. These bolts shall extend at least 8 inches into the new concrete.

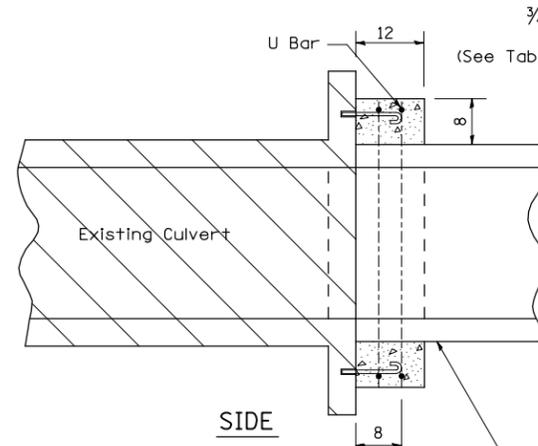


PLAN OF CULVERT WITH STRAIGHT HEADWALL

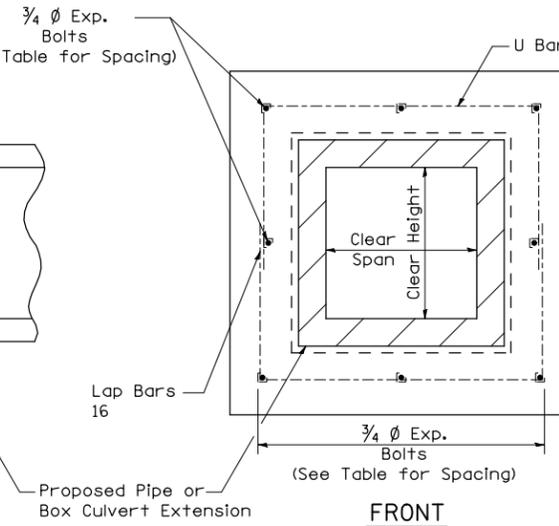
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.



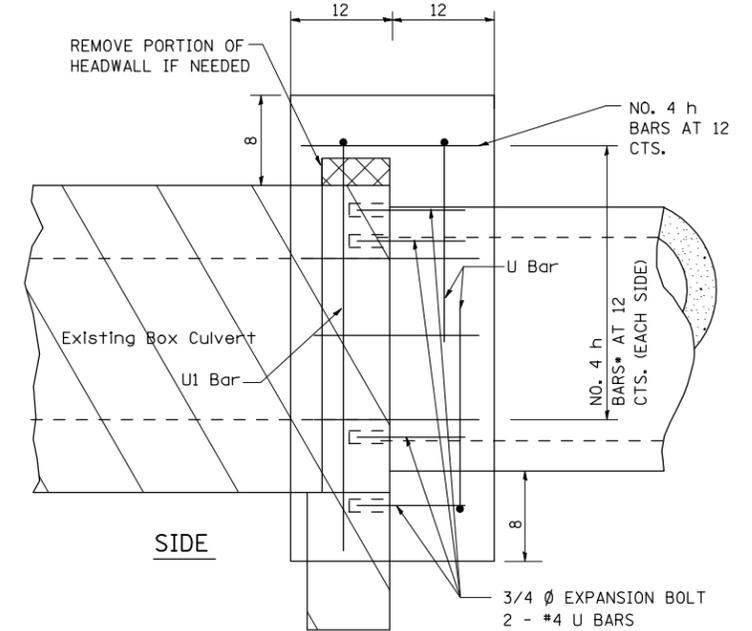
PLAN OF CULVERT WITH ANGLED WING WALLS



SIDE



FRONT

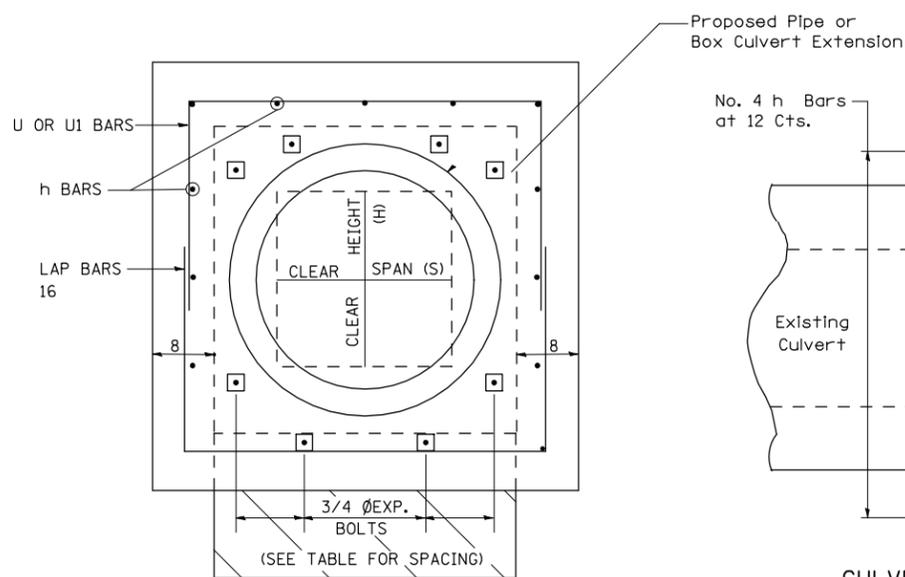


SIDE

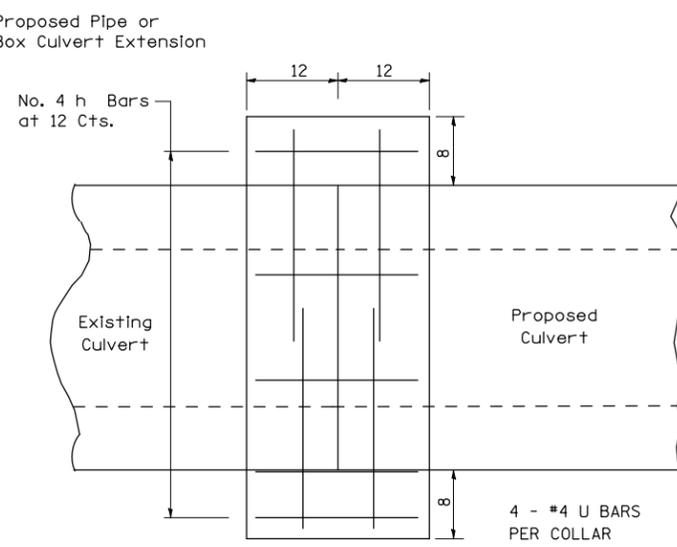
PLACEMENT DETAILS FOR EXPANSION BOLTS

H OR S	NUMBER OF EXPANSION BOLTS REQUIRED PER SIDE			
	EXTENSIONS < 15'		EXTENSIONS > 15'	
	NUMBER	SPACING	NUMBER	SPACING
24	*		*	
30	2	18	2	18
36	2	24	2	24
48	3	18	3	18
60	4	16	3	24
72	5	15	4	20
84	5	18	4	24
96	6	15	5	21
108	6	19	5	24
120	7	18	6	21
132	8	17	6	24
144	8	19	7	22

* MINIMUM ONE PER SIDE



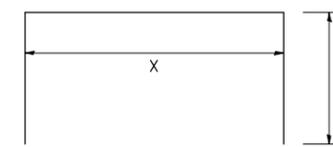
FRONT



CULVERT CONNECTION WITHOUT EXISTING HEADWALL



(#4) U BAR



(#4) U1 BAR

FILE NAME =	USER NAME = Elgin 110	DESIGNED -	REVISED - 10-17-11
...\\CADD SHEETS\Z00793SPL2014.dgn		DRAWN -	REVISED -
		PLOT SCALE = 20.0000' / IN.	REVISIED -
		PLOT DATE = 5/2/2013	REVISIED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE COLLARS FOR PIPE OR BOX CULVERT EXTENSIONS

33.1

REGION 2 / DISTRICT 2 STANDARD	
SCALE:	SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
303	129R	WINNEBAGO	968	712
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 64988	