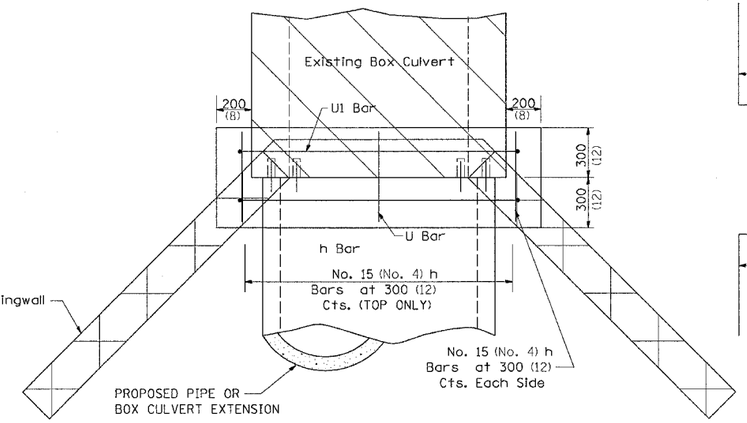
CONTRACT NO. 64560

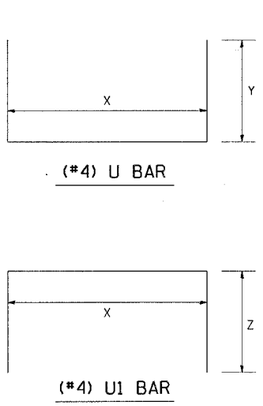
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	CARROLL	548	219
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

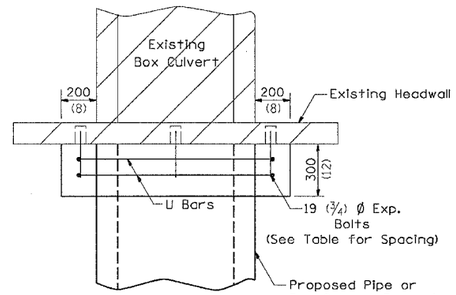
* ROUTE 17 (US 52 / IL 64)
** (1,2)RS & (3,1)RS-1

CONCRETE COLLARS FOR PIPE OR BOX CULVERT EXTENSIONS

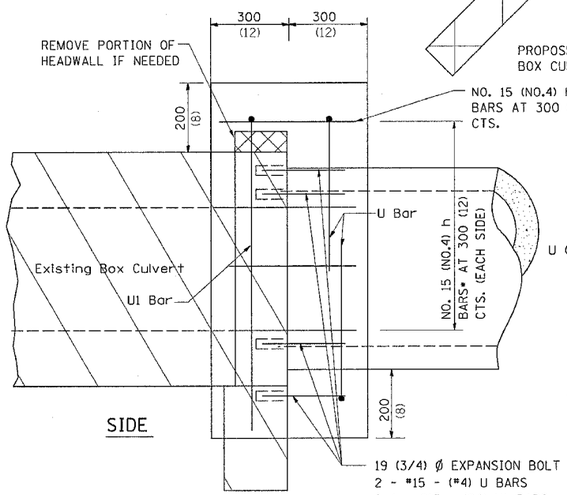


PLAN OF CULVERT WITH ANGLED WING WALLS

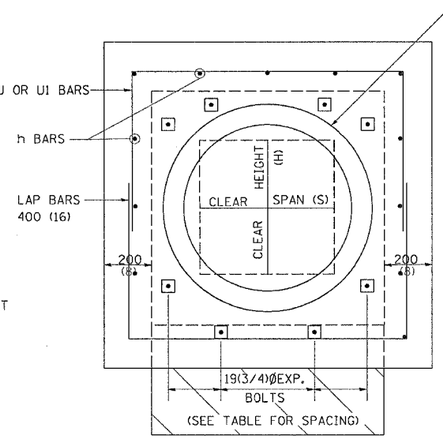




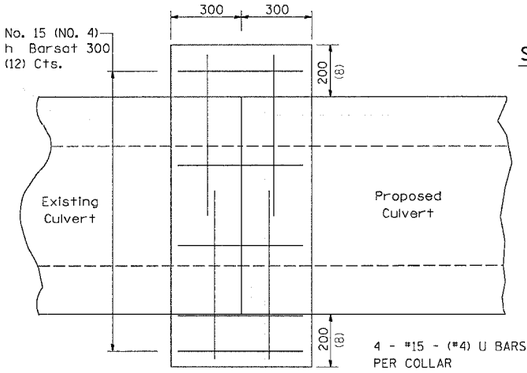
PLAN OF CULVERT WITH STRAIGHT HEADWALL



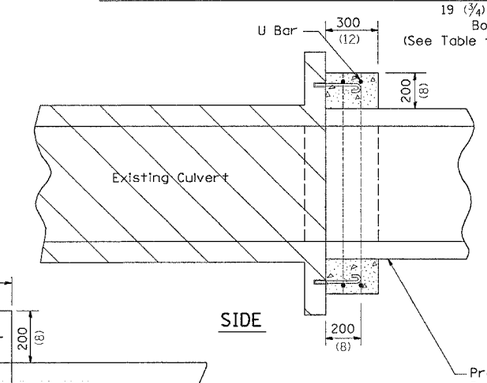
SIDE



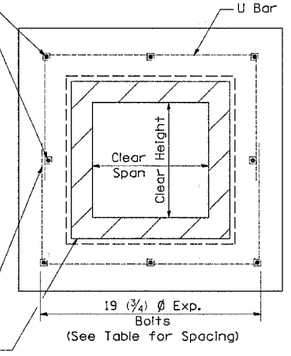
FRONT



CULVERT CONNECTION WITHOUT EXISTING HEADWALL



SIDE



FRONT

PLACEMENT DETAILS FOR EXPANSION BOLTS

H OR S	NUMBER OF EXPANSION BOLTS REQUIRED PER SIDE			
	EXTENSIONS < 4.57m (15')		EXTENSIONS > 4.57m (15')	
	NUMBER	SPACING	NUMBER	SPACING
600 (24)	*		*	
750 (30)	2	450 (18)	2	450 (18)
900 (36)	2	600 (24)	2	600 (24)
1200 (48)	3	450 (18)	3	450 (18)
1500 (60)	4	400 (16)	3	600 (24)
1800 (72)	5	375 (15)	4	500 (20)
2100 (84)	5	450 (18)	4	600 (24)
2400 (96)	6	375 (15)	5	525 (21)
2700 (108)	6	475 (19)	5	600 (24)
3000 (120)	7	450 (18)	6	525 (21)
3300 (132)	8	425 (17)	6	600 (24)
3600 (144)	8	475 (19)	7	550 (22)

* MINIMUM ONE PER SIDE

Bill of Materials

STATION	DIMENSIONS X	DIMENSIONS Y	h Bar No.	U Bar No.	U Bar Length	EXPANSION BOLTS No.	CONCRETE COLLAR Cu. Yd	REINF. BARS LBS
189+11	5.7'	3.7'	22	4	13	10	1.02	65.5
189+11	5.7'	3.7'	22	4	13	10	1.02	65.5
470+31	10.9'	3.7'	40	4	21.5	22	1.86	110.9
					Total	42	3.90	241.9

All h Bars 450 (18) Long

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 CONCRETE COLLAR. Reinforcement will be paid for at the contract unit price per CONCRETE COLLAR. Expansion Bolts, when required, will be paid for at the contract unit price per CONCRETE COLLAR. Which the price shall include furnishing, drilling holes, and installing the expansion bolts complete in place. These bolts shall extend at least 200 (8 inches) into the new concrete.

PLOT DATE = Fri Mar 23 11:09:05 2007
FILE NAME = d:\projects\tc207401\d07401gpl.dgn
PLOT SCALE = 50.0000 '/ IN.
REFERENCE = REF

CONCRETE COLLARS FOR PIPE OR BOX CULVERT EXTENSIONS