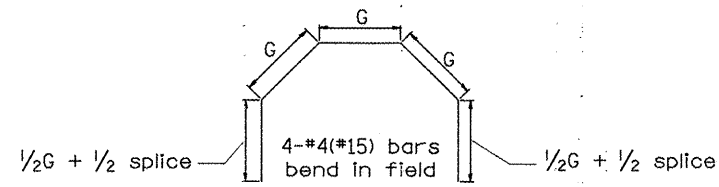


EXISTING BOX		EACH COLLAR					CONC. COLLAR			REINFORCEMENT BARS		EXPANSION BOLT
W	H	A	B	D	+	CU. YD. (m <sup>3</sup> )	G	L	LBS. (KG)	EACH		
12(300) PIPE		32 (810)	32 (810)	12 (300)	2(50)	0.18(0.14)	10 (254)	4'-7" (1.40m)	12(5.5)	4		
18(450) PIPE		39 (990)	39 (990)	18 (450)	2 1/2(65)	0.24(0.18)	12 3/4 (324)	5'-6" (1.68m)	15(7)	4		
24(600) PIPE		3'-10" (1.17m)	3'-10" (1.17m)	24 (600)	3(75)	0.30(0.23)	15 3/4 (400)	6'-6" (1.98m)	17(8)	4		
24(600)	24(600)	4'-5" (1.35m)	4'-5" (1.35m)	30 (750)	3 1/2(90)	0.37(0.28)	18 3/4 (416)	7'-6" (2.29m)	20(9)	4		
30(750)	30(750)	5'-0" (1.52m)	5'-0" (1.52m)	36 (900)	4(100)	0.45(0.34)	21 1/2 (546)	8'-5" (2.57m)	22.5(10)	8		
36(900)	36(900)	5'-7" (1.7m)	5'-7" (1.7m)	42 (1050)	4 1/2(115)	0.50(0.38)	24 1/2 (622)	9'-5" (2.87m)	25(11)	10		
42(1050)	42(1050)	6'-2" (1.88m)	6'-2" (1.88m)	48 (1200)	5(125)	0.61(0.47)	27 1/4 (692)	10'-4" (3.15m)	28(12.5)	10		
48(1200)	48(1200)	6'-9" (2.06m)	6'-9" (2.06m)	54 (1350)	5 1/2(140)	0.80(0.61)	30 1/4 (768)	11'-4" (3.45m)	30(14)	10		
42" PIPE		5'-8"	5'-8"	42	5	0.53	25	9'-7"	26	10		
30" PIPE		4'-6"	4'-6"	30	4	0.38	19	7'-7"	20	8		



**GENERAL NOTES**

1. The collar shall be constructed entirely of CLASS SI CONCRETE and in accordance with the applicable portions of Section 503 of the Standard Specifications. Reinforcement Bars shall conform to Section 508.
2. Expansion Bolts shall consist of approved Expansion Anchors, and 3/4(M20) Hook Bolts which conform to Section 1006.09. These Bolts shall extend at least 8(200) into the new Concrete.

**QUANTITIES**  
 CALC. BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION