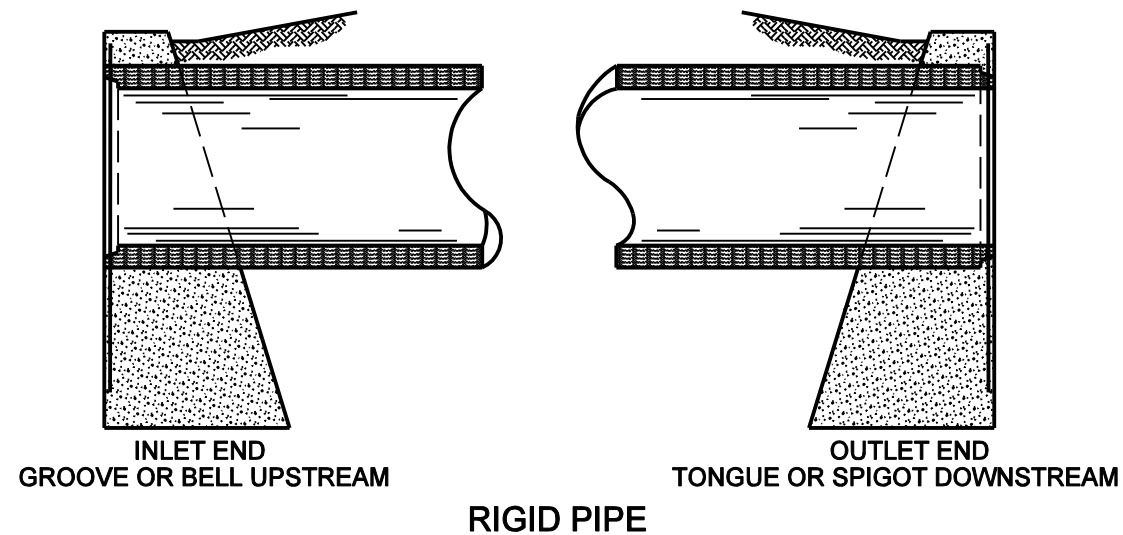
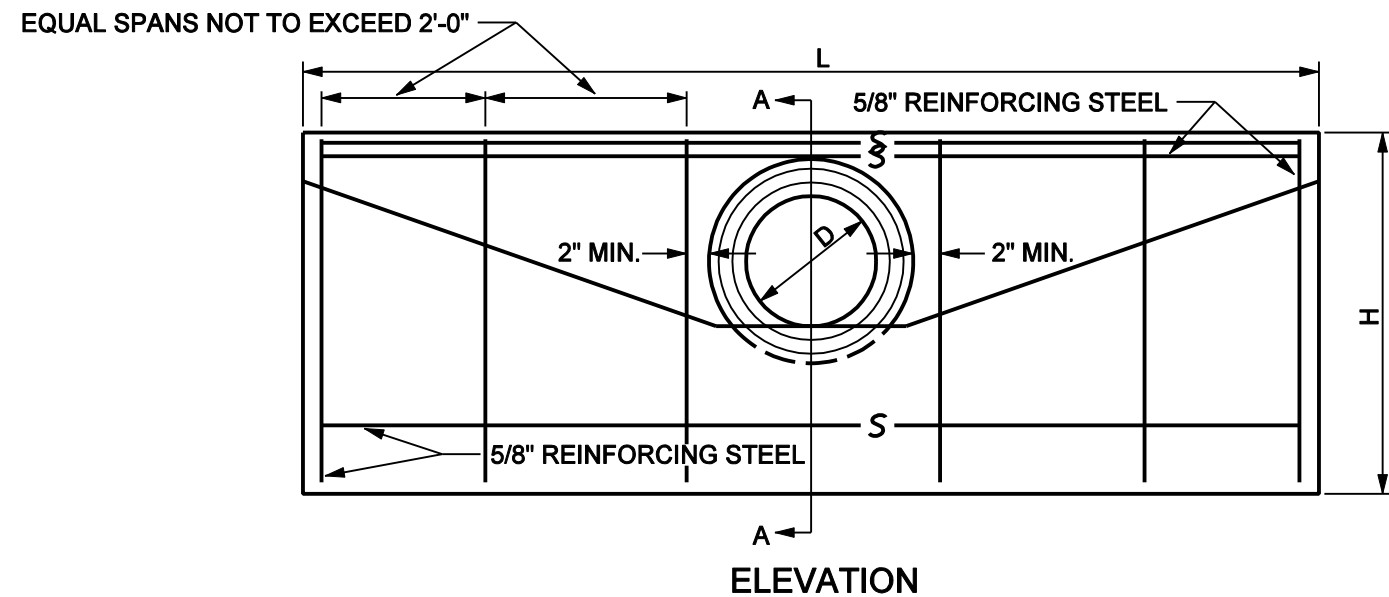
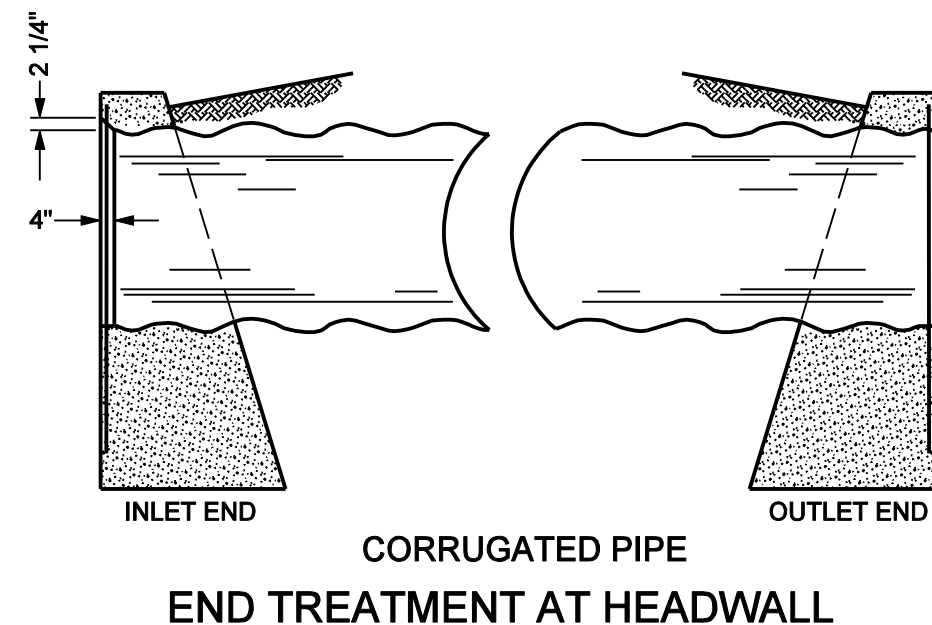
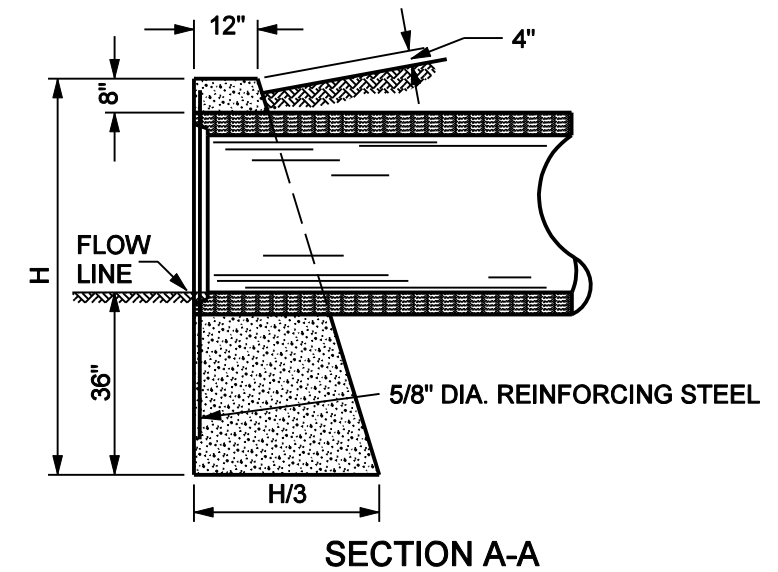




L CIRCULAR SECTIONS = $5D + 4T$
 L ELLIPTICAL OR PIPE-ARCH = $4R + 4T + S$
 H CIRCULAR SECTIONS = $D + T + 44"$
 H ELLIPTICAL OR PIPE-ARCH = $R + T + 44"$
 D = DIAMETER OF PIPE
 R = RISE OF PIPE
 S = SPAN OF PIPE
 T = THICKNESS OF BARREL
 L = LENGTH OF HEADWALL
 H = HEIGHT OF HEADWALL

DIMENSIONS			QUANTITIES ONE HEADWALL	
DIA.	H	L	CONC. (yds) ³	STEEL (lbs)
15"	5' - 2"	7' - 0"	1.7	41
18"	5' - 5"	8' - 4"	2.2	57
21"	5' - 8"	9' - 8"	2.8	62
24"	5' - 11"	11' - 0"	3.3	69
30"	6' - 5"	13' - 8"	4.7	92
36"	7' - 0"	16' - 4"	6.5	105



NOTES:

TYPE "A" HEADWALL WHERE REQUIRED WILL BE PROVIDED FOR NONSKEWED CULVERTS HAVING A DIAMETER OR RISE OF 36 INCHES OR LESS.

CONCRETE SHALL BE CLASS "A". REINFORCING STEEL BARS SHALL BE 5/8 INCH ROUND DEFORMED BARS.

DIMENSIONS AND QUANTITIES ARE SHOWN FOR CIRCULAR SECTION ONLY. IT WILL BE NECESSARY TO DETERMINE DIMENSIONS FOR THE TYPE "A" HEADWALL REQUIRED FOR REINFORCED ELLIPTICAL CONCRETE PIPE OR CORRUGATED METAL PIPE ARCHES IN ACCORDANCE WITH THE EQUATIONS LISTED ON THIS DRAWING.

CHAMFER ALL EXPOSED CORNERS 3/4 OF AN INCH.

WHERE THE SOIL BORINGS INDICATE A BEARING CAPACITY OF LESS THAN 2600 POUNDS PER SQUARE FOOT, IT WILL BE NECESSARY TO INCREASE THE WIDTH OF THE BASE.

MINIMUM COVER FOR REINFORCING STEEL SHALL BE 2 INCHES.