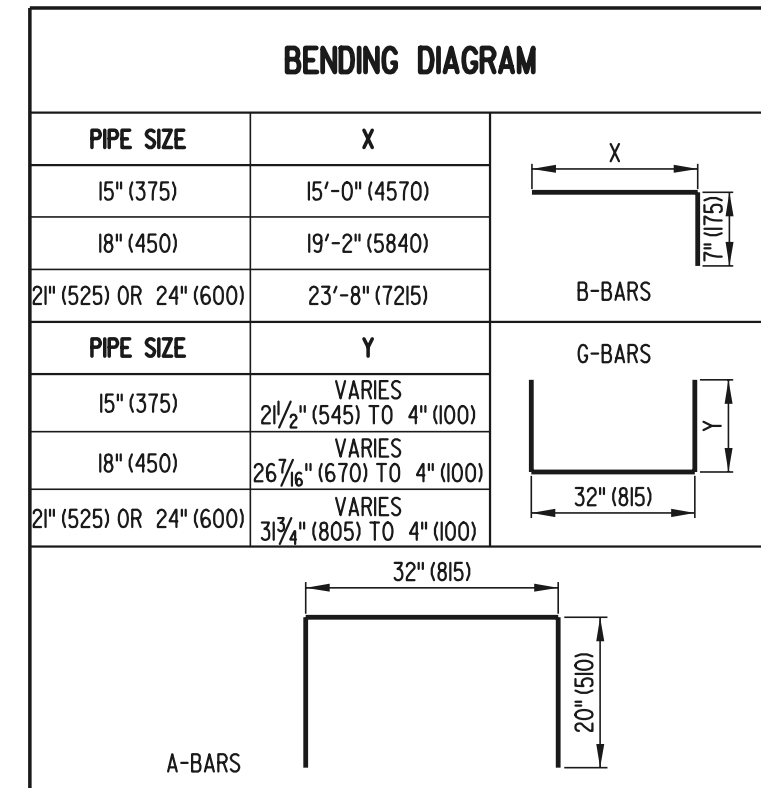


DIMENSIONS			
PIPE SIZE	A	B	C
15" (375)	15'-4" (4675)	2'-4 ³ / ₈ " (720)	14'-7" (4445)
18" (450)	19'-6" (5945)	2'-9 ³ / ₈ " (850)	18'-9" (5715)
21" (525) OR 24" (600)	24'-0" (7315)	3'-2 ¹³ / ₁₆ " (985)	22'-11" (6985)

APPROXIMATE QUANTITIES							
PIPE SIZE	CONCRETE FT ³ (m ³)		REINF. STEEL LBS. (kg)	NO. OF GRATES	LENGTH TO BE CUT FROM 1 GRATE	WEIGHT OF FULL SIZE GRATE LBS. (kg)	WEIGHT OF CUT GRATE LBS. (kg)
	CONC. PIPE	C.M. PIPE					
15" (375)	41.35 (1.171)	41.78 (1.183)	175.0 (79.38)	4	2'-1" (635)	270.92 (122.89)	135.47 (61.45)
18" (450)	50.11 (1.419)	50.68 (1.435)	227.0 (102.98)	5	2'-1" (635)	270.92 (122.89)	135.47 (61.45)
21" (525) OR 24" (600)	69.43 (1.966)	70.31 (1.991)	310.4 (140.79)	6	2'-1" (635)	270.92 (122.89)	135.47 (61.45)



SCHEDULE OF REINFORCING STEEL																				
PIPE SIZE	A-BARS				B-BARS				C-BARS				D-BARS				G-BARS			
	SIZE	NO.	SPA.	LENGTH	SIZE	NO.	SPA.	LENGTH	SIZE	NO.	SPA.	LENGTH	SIZE	NO.	SPA.	LENGTH	SIZE	NO.	SPA.	LENGTH
15" (375)	*4 (#13)	1	-	72" (1830)	*4 (#13)	5	8" (200)	15'-7" (4750)	*4 (#13)	2	-	15'-1 1/16" (4600)	*4 (#13)	4	8" (200)	VARIES 72 13/16" (1850) TO 145 5/8" (3700)	*4 (#13)	24	8" (200)	VARIES 40" (1015) TO 75 11/16" (1920)
18" (450)	*4 (#13)	1	-	72" (1830)	*4 (#13)	5	8" (200)	19'-9" (6020)	*4 (#13)	2	-	19'-3 3/8" (5875)	*4 (#13)	4	8" (200)	VARIES 89 5/8" (2275) TO 179 3/16" (4550)	*4 (#13)	30	8" (200)	VARIES 40" (1015) TO 85 3/4" (2180)
21" (525) OR 24" (600)	*4 (#13)	2	-	72" (1830)	*4 (#13)	5	8" (200)	24'-3" (7390)	*4 (#13)	2	-	23'-9 5/8" (7255)	*4 (#13)	6	8" (200)	VARIES 80 3/4" (2050) TO 242 1/8" (6150)	*4 (#13)	37	8" (200)	VARIES 40" (1015) TO 96 9/16" (2455)



DELAWARE
DEPARTMENT OF TRANSPORTATION

10:1 SAFETY END STRUCTURE

STANDARD NO. D-2 (2001)

SHT. 2 OF 2

APPROVED *Ryan M. Hershberg* 6/18/01
CHIEF ENGINEER DATE
 RECOMMENDED *Mehal Alghob* 6/18/01
DESIGN ENGINEER DATE