

DEETER FOUNDRY, INC.
2047 CURB INLET GRATES
AND FRAME

TYPE	INSIDE WIDTH *	INSIDE LENGTH
B-3 B-3S	2'-6" MIN	3'-0"
B-6 B-6S	2'-6" MIN	6'-0"
B-9 B-9S	2'-6" MIN	9'-0"

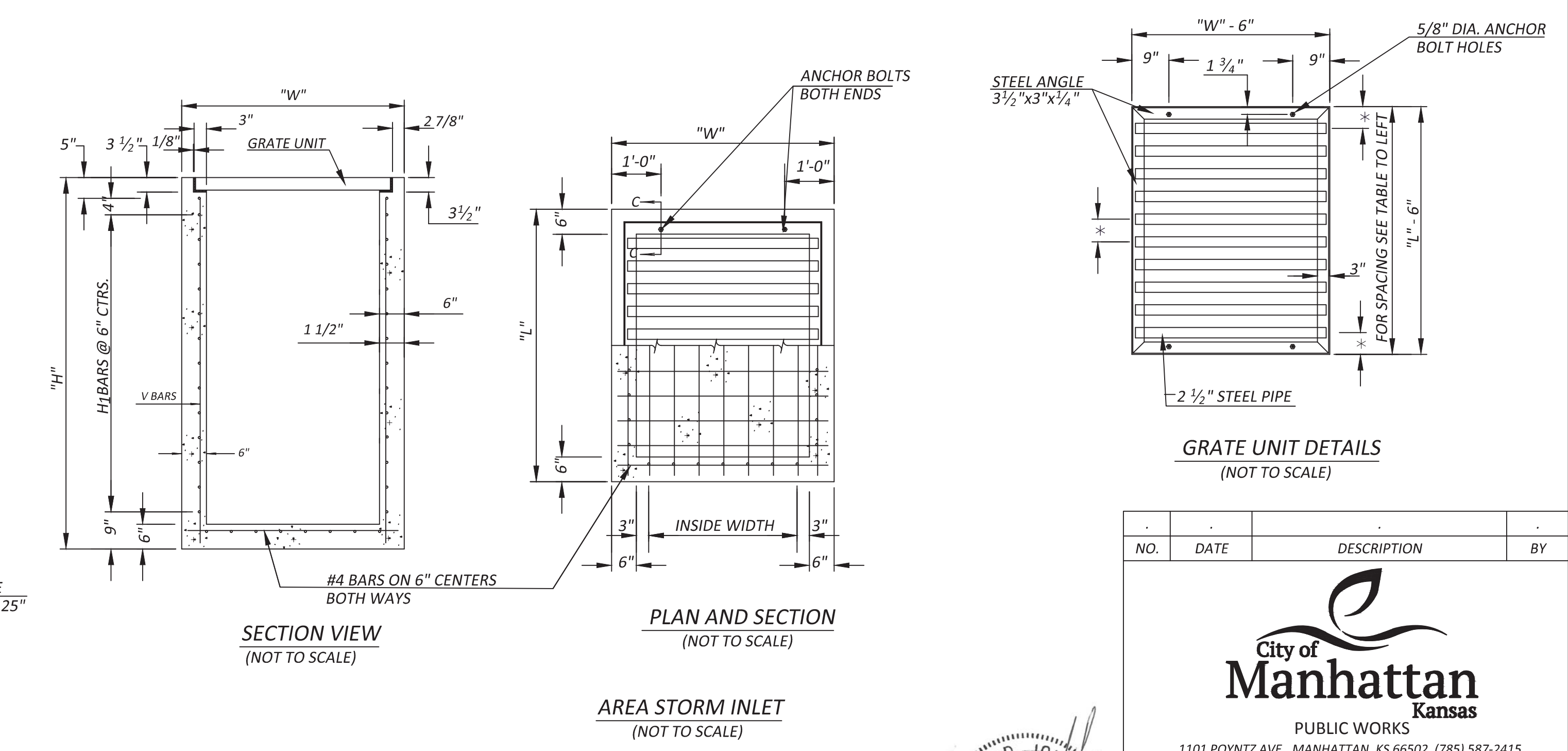
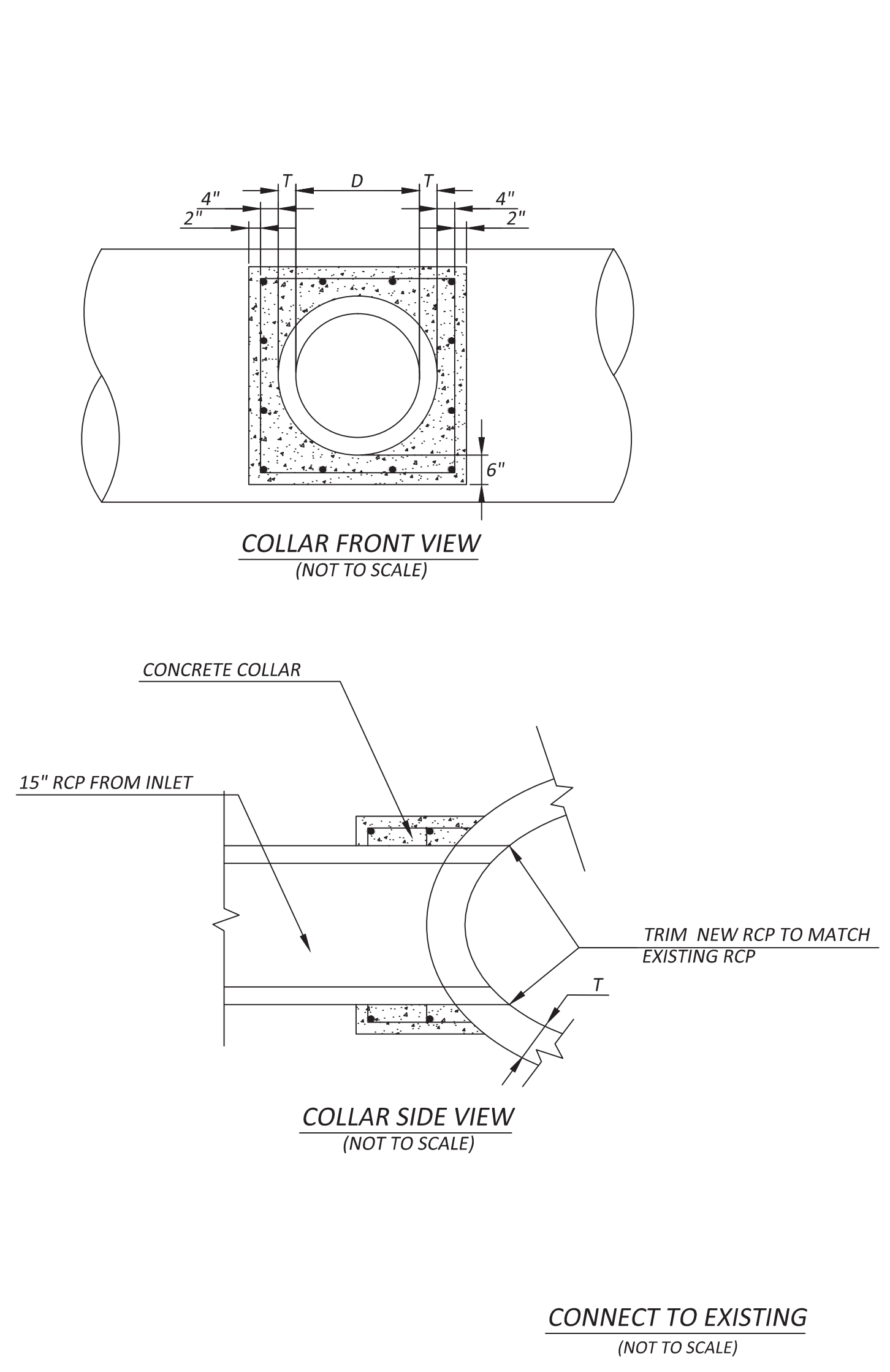
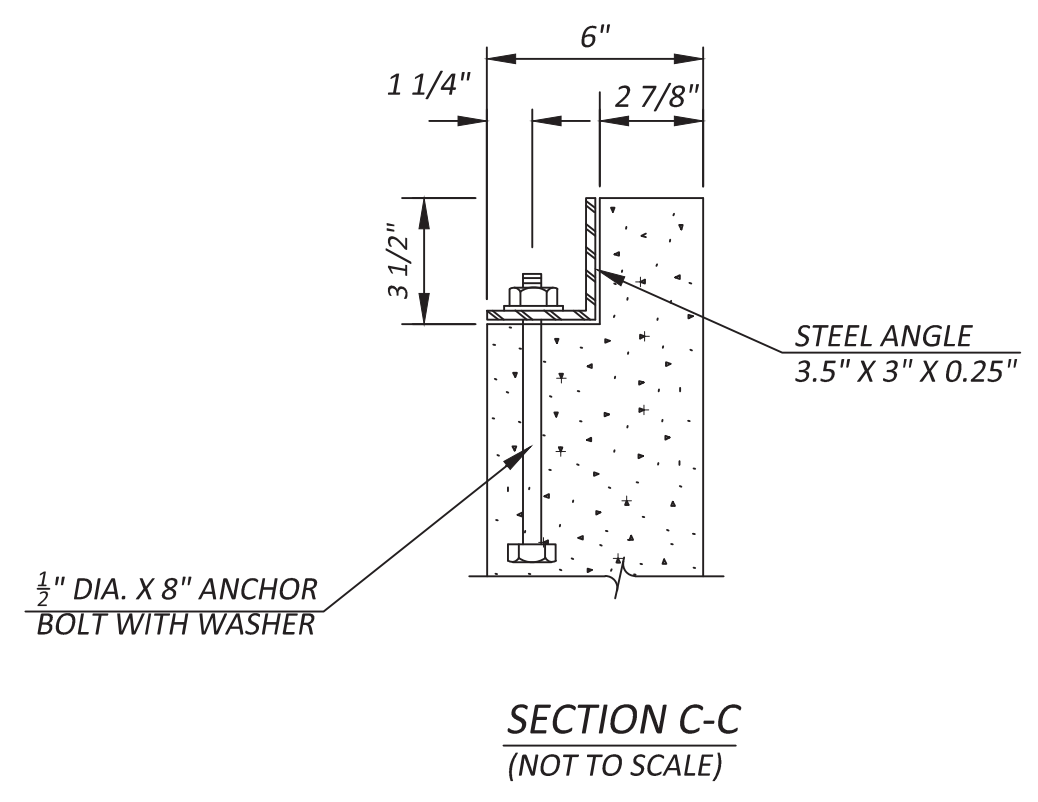
* FOR PIPES UP TO 24" IN DIAMETER WIDTH SHALL BE 2'-6".
* FOR PIPES LARGER THAN 24" IN DIAMETER WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 3" CLEARANCE ON EACH SIDE.

TYPE B STORM INLET
(NOT TO SCALE)

- NOTES:**
1. CONCRETE GRADE 3.0, CONCRETE GRADE 3.0 (AE), OR THE MIX USED IN CONCRETE PAVEMENT, AT THE CONTRACTORS OPTION, SHALL BE USED THROUGHOUT.
 2. ALL EXPOSED EDGES SHALL BE FINISHED WITH AN EDGING TOOL.
 3. REINFORCING BARS SHALL BE BENT AROUND PIPE.
 4. THE FLOOR OF THE INLET SHALL BE SHAPED PER MSD 2410.
 5. WHEN DIRECTED BY THE ENGINEER, A SMALL OPENING IN THE BACK OF THE INLET SHALL BE PROVIDED IN ORDER TO DRAIN A LOW AREA.

- NOTE:**
1. THE GRATE SHALL BE FABRICATED FROM STANDARD OR COMMERCIAL GRADE STRUCTURAL STEEL AND BLACK STEEL PIPE.
 2. THE GRATE SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 EXCEPT A MINIMUM COATING GRADE OF 85 SHALL BE ATTAINED.

GRATE PIPE DIMENSIONS AND SPACING			
BOX OUTSIDE L x W	NO. OF PIPES	DIA. X LENGTH X SPACING	*
7'-6" x 4'-6"	13	2 1/2" X 3'-10 1/4" PIPES @ 6" CTRS.	6"
5'-6" x 4'-6"	10	2 1/2" X 3'-10 1/4" PIPES @ 5 1/4" CTRS.	5 1/4"
4'-6" x 4'-6"	8	2 1/2" X 3'-10 1/4" PIPES @ 5 1/2" CTRS.	4 3/4"
4'-0" x 4'-0"	7	2 1/2" X 3'-4 1/4" PIPES @ 5 1/2" CTRS.	4 1/2"



REINF. CONCRETE ELBOWS AND COLLARS							CONC. CU. YDS.	STEEL LBS.
PIPE SIZE "D"	KIND	"T"	NUMBER OF BARS			BOT.		
			TRANS.-VERT.	TOP.	I-SIDE			
15"	COLLAR	2 1/4"	12	4	2	4	0.36	50
	15°						0.40	54
	30°						0.43	57
18"	COLLAR	2 1/2"	12	4	2	4	0.50	59
	15°						0.42	55
	30°						0.49	59
21"	COLLAR	2 3/4"	12	4	2	4	0.56	63
	15°						0.64	66
	30°						0.48	57
24"	COLLAR	3"	12	4	2	4	0.54	61
	15°						0.63	66
	30°						0.72	69
30"	COLLAR	3 1/2"	12	4	2	5	0.53	61
	15°						0.63	65
	30°						0.74	70
36"	COLLAR	4"	12	4	2	5	0.86	74
	15°						0.63	71
	30°						0.79	76
42"	COLLAR	4 1/2"	12	5	3	6	0.96	82
	15°						1.14	88
	30°						1.01	83
48"	COLLAR	5"	12	5	3	6	1.26	91
	15°						1.16	98
	30°						1.32	104
54"	COLLAR	5 1/2"	12	5	3	6	1.69	115
	15°						1.16	98
	30°						1.66	110
60"	COLLAR	6"	12	5	3	6	2.19	123
	15°						1.34	108
	30°						2.01	121
							2.70	136
							1.54	110
							2.29	128
							3.28	144

NOTE: ALL REINF. STEEL SHALL BE #5 BARS, PLACED AS SHOWN

NO.	DATE	DESCRIPTION	BY

City of Manhattan Kansas
 PUBLIC WORKS
 1101 POYNTZ AVE., MANHATTAN, KS 66502 (785) 587-2415

MANHATTAN STANDARD DETAILS
MSD 2420 STORM SEWER DETAILS

CITY ENGINEER: BRIAN JOHNSON, P.E. DESIGN BY: _____
 CITY PROJ. #: _____
 DATE: _____ DRAWN BY: _____ PAGE OF _____

