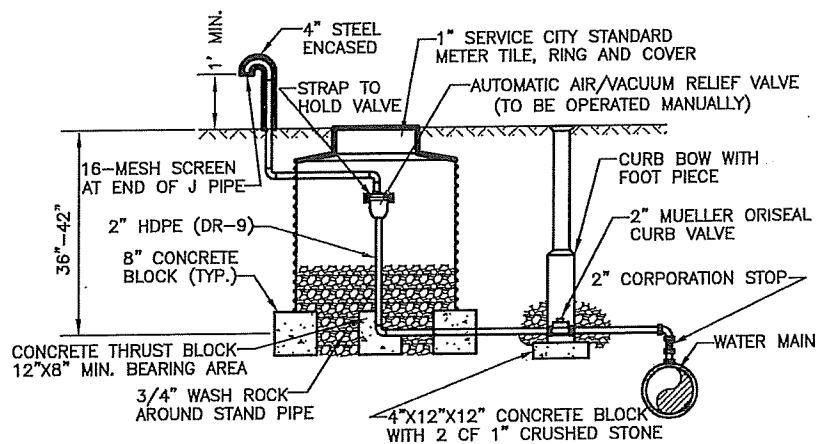


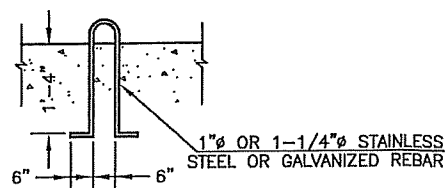
**AIR RELEASE BLOW-OFF**



**AUTOMATIC AIR/VACUUM RELEASE (OPERATED MANUALLY)**

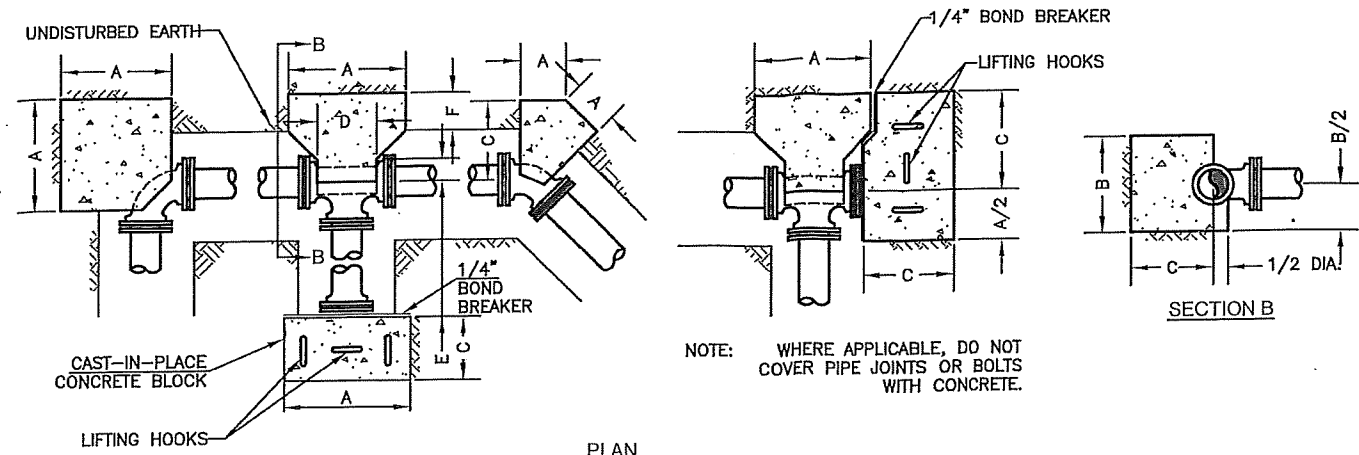
PIPE DIA.	45° VERTICAL BEND						22.5° VERTICAL BEND						11.25° VERTICAL BEND					
	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F
4"	30	30	30	18	12	12	21	21	12	12	12	12	18	18	24	12	12	12
6"	36	36	36	21	24	12	21	21	18	15	18	12	21	21	27	15	18	12
8"	42	42	42	27	36	18	36	36	42	18	24	18	24	24	30	18	24	18
10"	48	48	48	36	39	27	42	42	48	24	30	27	30	30	36	24	30	27
12"	54	54	54	42	48	33	48	48	54	27	36	30	33	33	39	27	36	30

ALL DIMENSIONS ARE IN INCHES.



ONE (1) 1"  $\phi$  HOOK FOR 16" AND SMALLER PIPING  
 TWO (2) 1-1/4"  $\phi$  HOOKS FOR 18" AND 24" PIPING  
 FOUR (4) 1-1/4"  $\phi$  HOOKS FOR 30" AND LARGER PIPING

**LIFTING HOOK DETAIL**

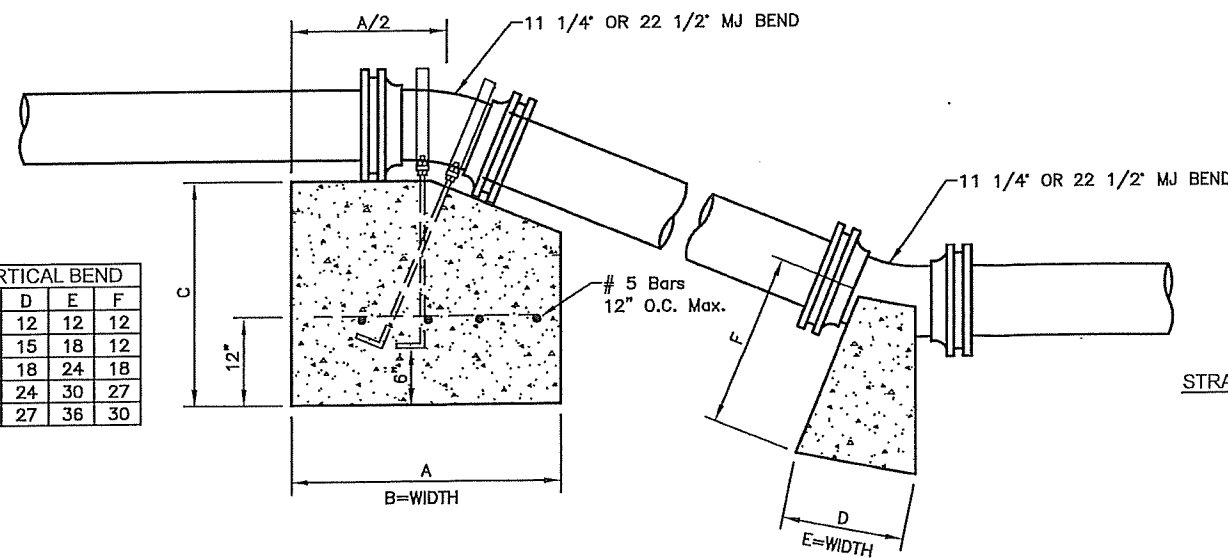


**PLAN**

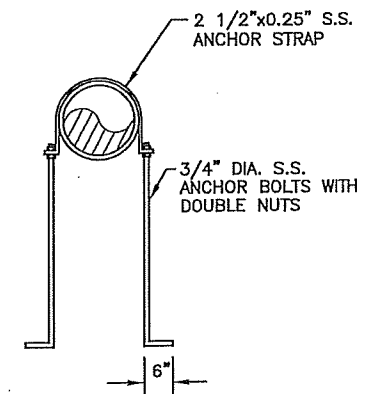
PIPE DIA.	TEES						PLUGS			90° BEND			45° BEND			22.5° BEND			11.25° BEND		
	A	B	C	D	E	F	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
4"	13	22	9	13	—	—	13	22	9	18	12	9	9	12	12	6	12	12	—	—	—
6"	24	30	16	16	6	6	24	30	12	24	18	16	10	24	12	7	18	12	—	—	—
8"	34	32	21	18	7	6	34	32	18	30	26	21	13	36	18	9	24	18	9	24	18
10"	40	42	23	22	8	6	40	42	24	35	34	24	18	38	27	12	30	27	12	30	27
12"	48	52	27	24	9	6	48	52	24	42	42	30	21	48	33	14	36	30	10	42	24
16"	54	54	32	30	12	6	54	54	24	50	42	36	24	48	40	15	42	34	10	42	24
18"	60	60	34	32	12	6	60	60	24	54	48	38	27	54	44	17	46	37	10	42	24
20"	72	66	36	36	24	10	72	66	24	72	66	54	36	66	48	18	66	42	15	48	30
24"	96	72	36	44	19	8	96	72	24	82	60	60	44	60	72	22	60	54	15	48	36
30"	108	96	60	50	20	12	108	96	24	108	72	84	54	72	84	28	72	64	17	60	36
36"	108	108	60	56	23	12	108	108	24	108	108	80	68	84	96	34	84	69	20	72	36

ALL DIMENSIONS ARE IN INCHES.  
 BLOCKING DESIGNED FOR 150 PSI WORKING PRESSURE AND 1500 PSF SOIL BEARING.  
 BLOCKING FOR REDUCED BRANCH TEES SHALL BE BASED ON BRANCH DIAMETER.  
 MAINTAIN MINIMUM "F" DIMENSION.

**CONCRETE BLOCKING DETAILS**



**11 1/4, 22 1/2, OR 45° VERTICAL BEND BLOCKING DETAIL**



**STRAP DETAIL FOR VERTICAL BEND**

Professional Engineer  
 License No. 14155  
 6.7.2018  
 KANSAS

NO.	DATE	REVISION	BY	APP'D
1	6/5/18	Corrected table values	DHS	PB

EDITED BY: DHS  
 APP'D BY: PB



**SHAWNEE COUNTY, KANSAS**  
**PUBLIC WORKS DEPARTMENT**  
 1515 NW SALINE  
 TOPEKA, KS 66618  
 (785) 233-7702

**TOPEKA**  
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 ENGINEERING  
 620 SE MADISON St., 2nd Floor • TOPEKA, KS 66607  
 Phone: (785) 368-2842 • Fax: (785) 368-3861

**STANDARD DETAILS**

**WATER DETAILS I**  
 (DT-23)

DATE: \_\_\_\_\_  
 SHEET: \_\_\_\_\_  
 PROJ.: \_\_\_\_\_