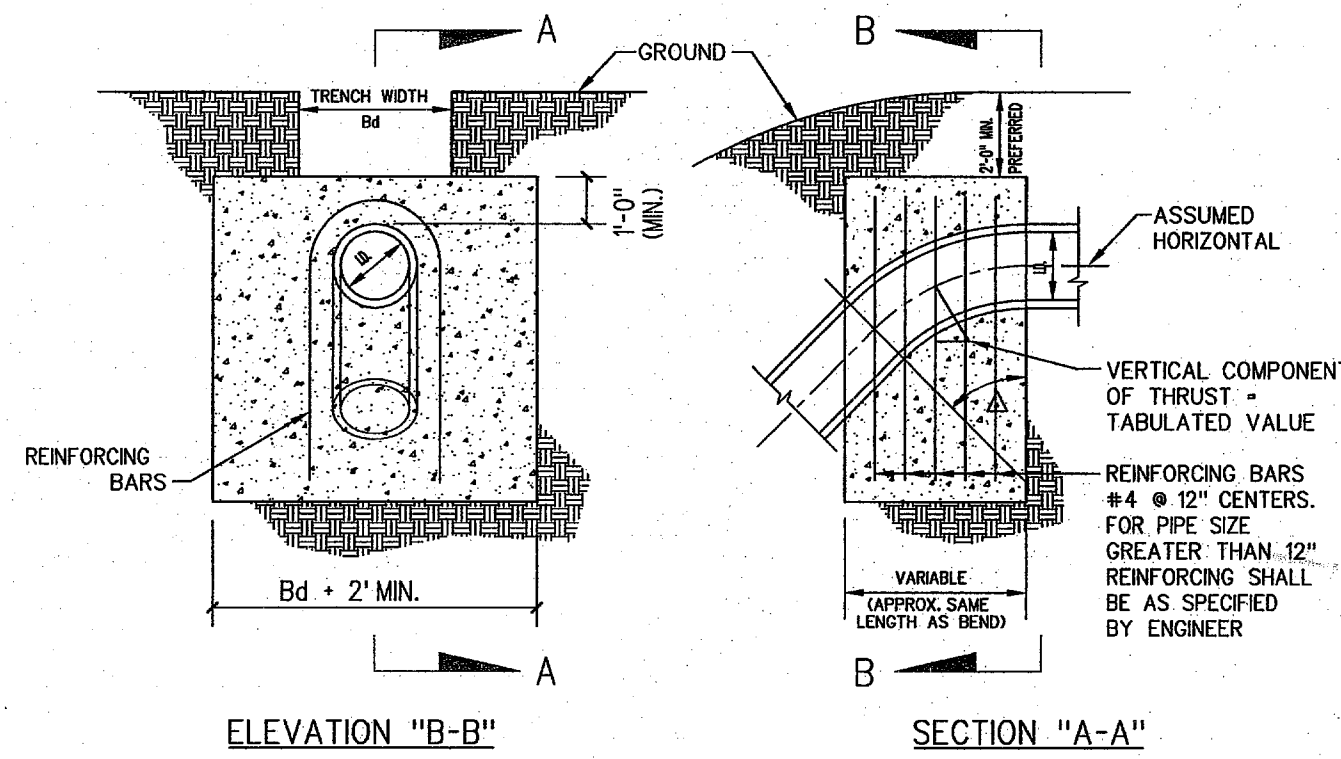


**HORIZONTAL BLOCKING TABLE**  
DIMENSION "X" TO BE A MINIMUM OF (1) FOOT, BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH WALL.

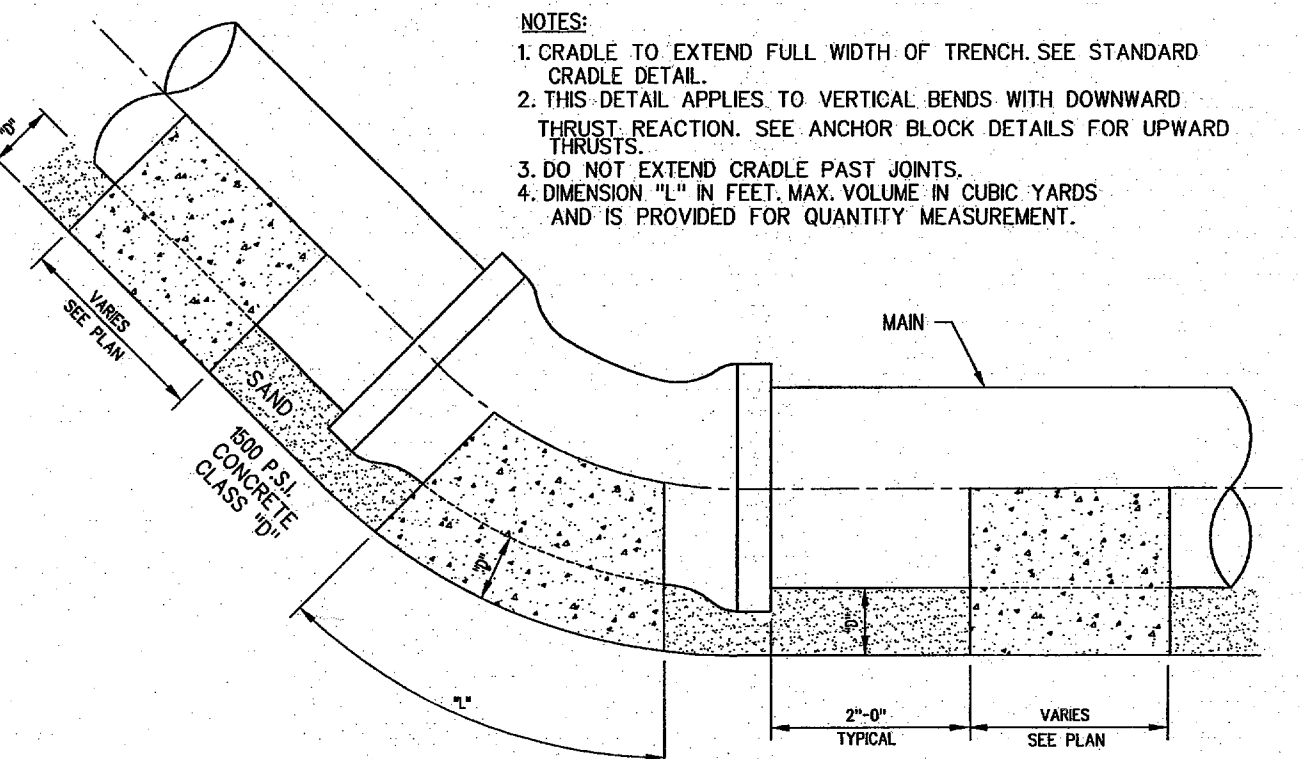
PIPE SIZE	"X" DIM.	PLUGS & TEES		90° BENDS		45° BENDS		22 1/2° BENDS		12 1/2° BENDS	
		"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"
4"	1'-6"	1'-0"	.83	1'-0"	.83	1'-0"	.83	1'-0"	.83	1'-0"	.83
6"	1'-6"	1'-0"	1.06	1'-0"	1.50	1'-0"	.83	1'-0"	.83	1'-0"	.83
8"	1'-6"	1'-3"	1.89	1'-6"	2.66	1'-3"	1.44	1'-0"	.83	1'-0"	.83
10"	1'-6"	1'-9"	2.95	1'-6"	4.17	1'-3"	2.26	1'-0"	.83	1'-0"	.83
12"	1'-6"	2'-0"	4.25	2'-3"	6.00	1'-9"	3.25	1'-3"	1.65	1'-0"	.83
16"	2'-0"	2'-7"	7.54	3'-0"	10.65	2'-3"	5.76	1'-8"	2.94	1'-2"	1.48
18"	2'-0"	2'-11"	7.70	3'-5"	10.89	2'-6"	5.89	1'-10"	3.01	1'-5"	1.51
20"	2'-0"	3'-8"	7.86	3'-9"	11.2	2'-9"	6.01	1'-10"	3.07	1'-7"	1.54
24"	2'-0"	3'-8"	11.33	4'-3"	16.00	3'-2"	8.65	2'-6"	4.42	1'-10"	2.22

NOTE: CALCULATIONS IN MIN. AREA COLUMN ARE IN Sq. Ft., CALCULATIONS IN MAXIMUM VOLUME COLUMN ARE IN Cu. Yd.



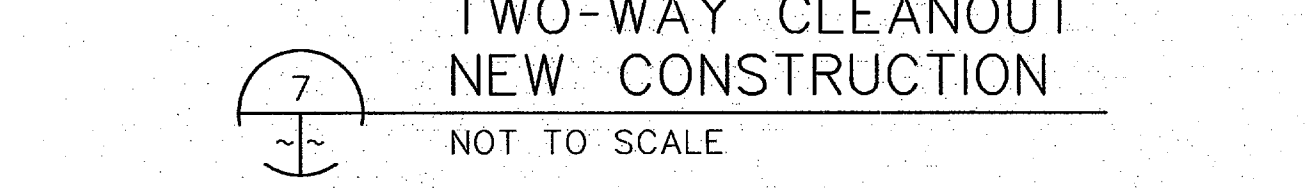
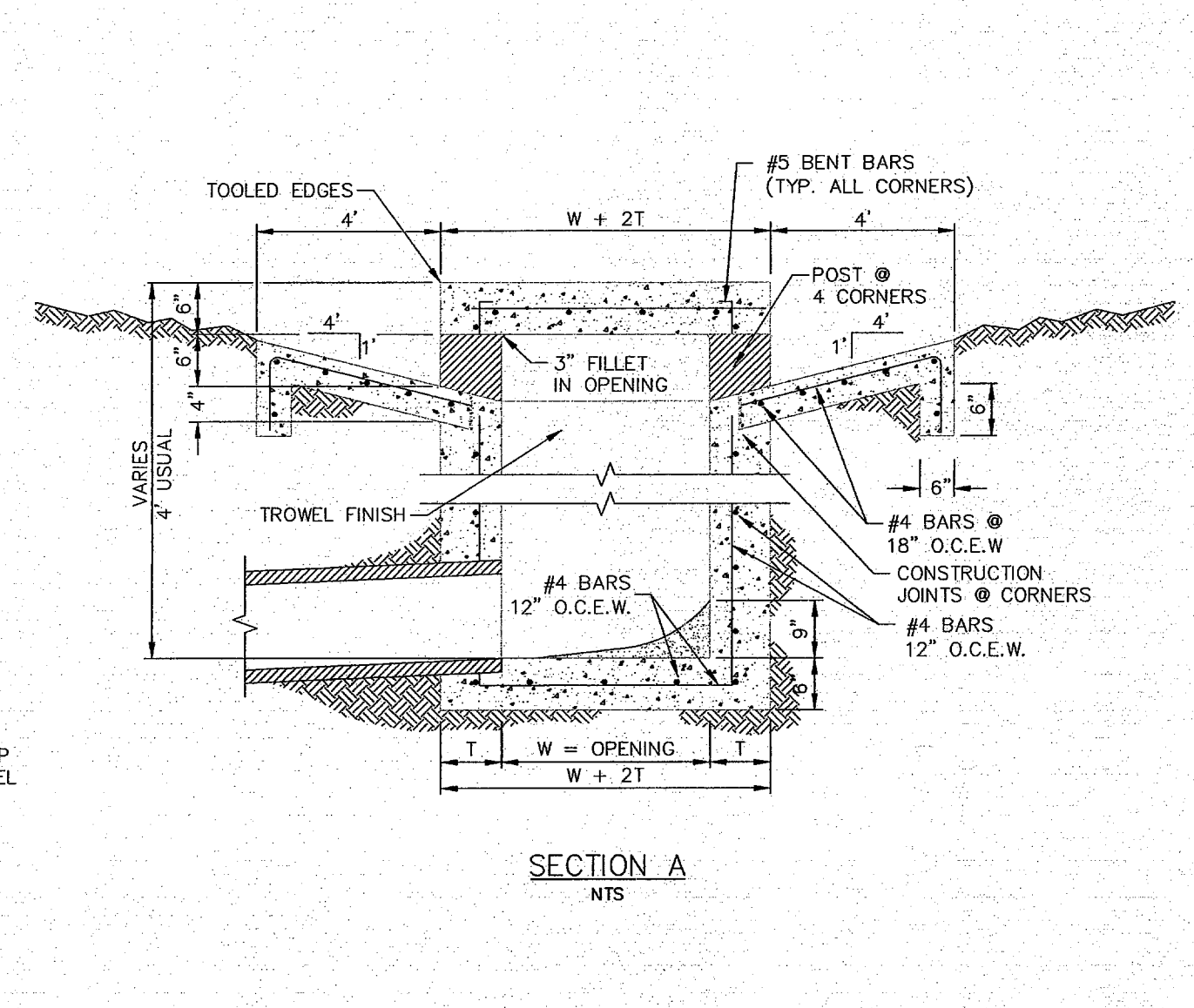
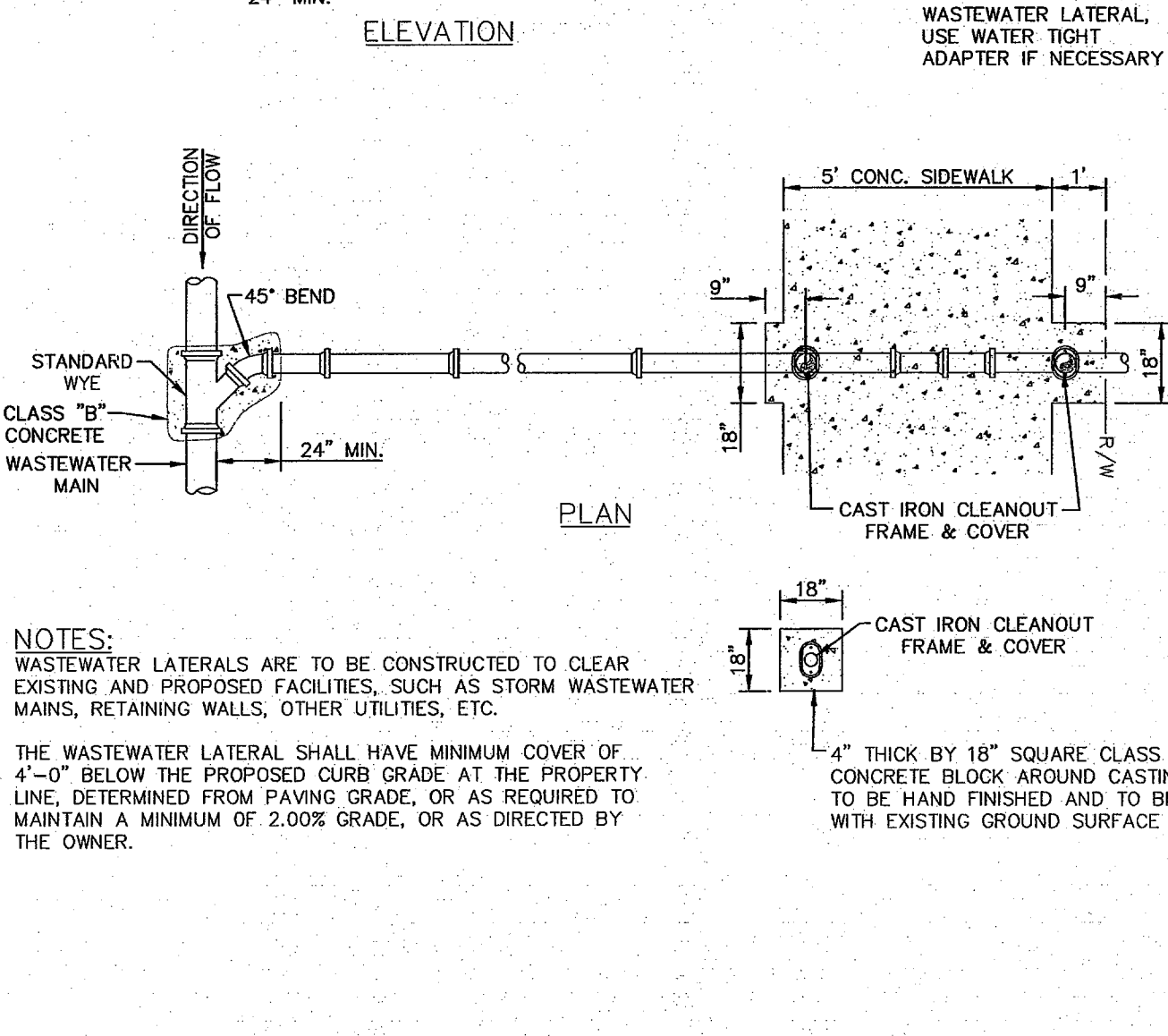
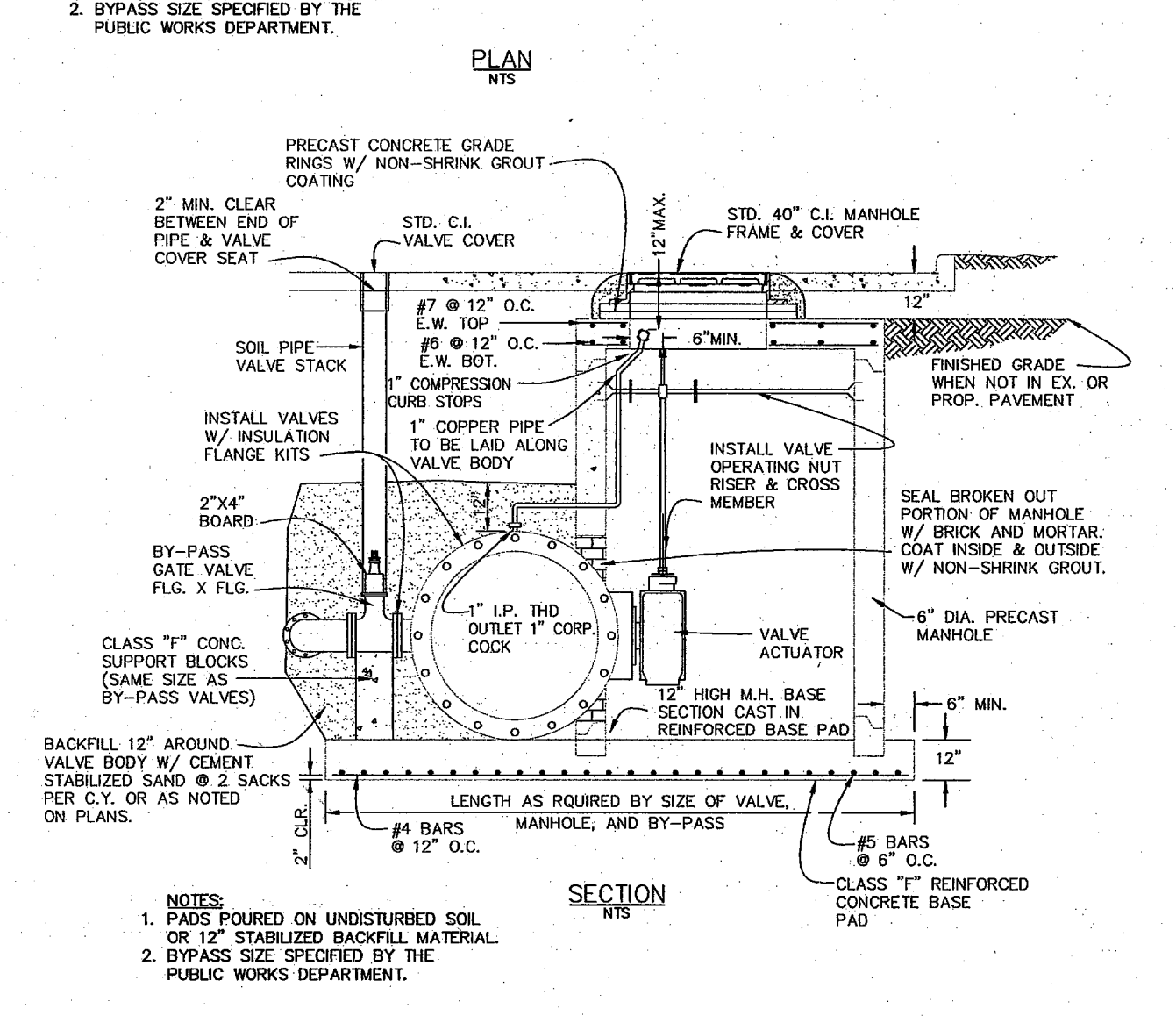
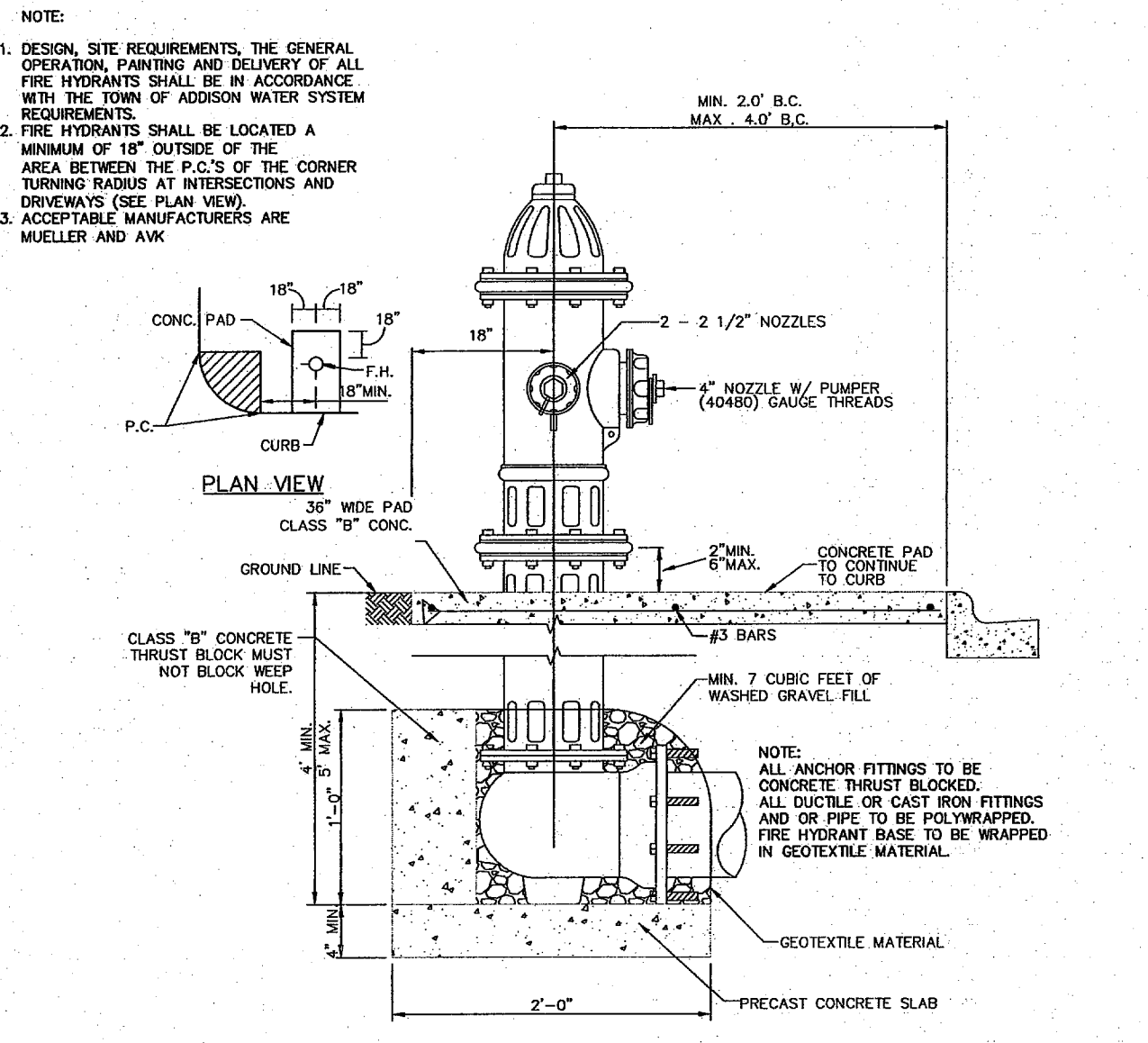
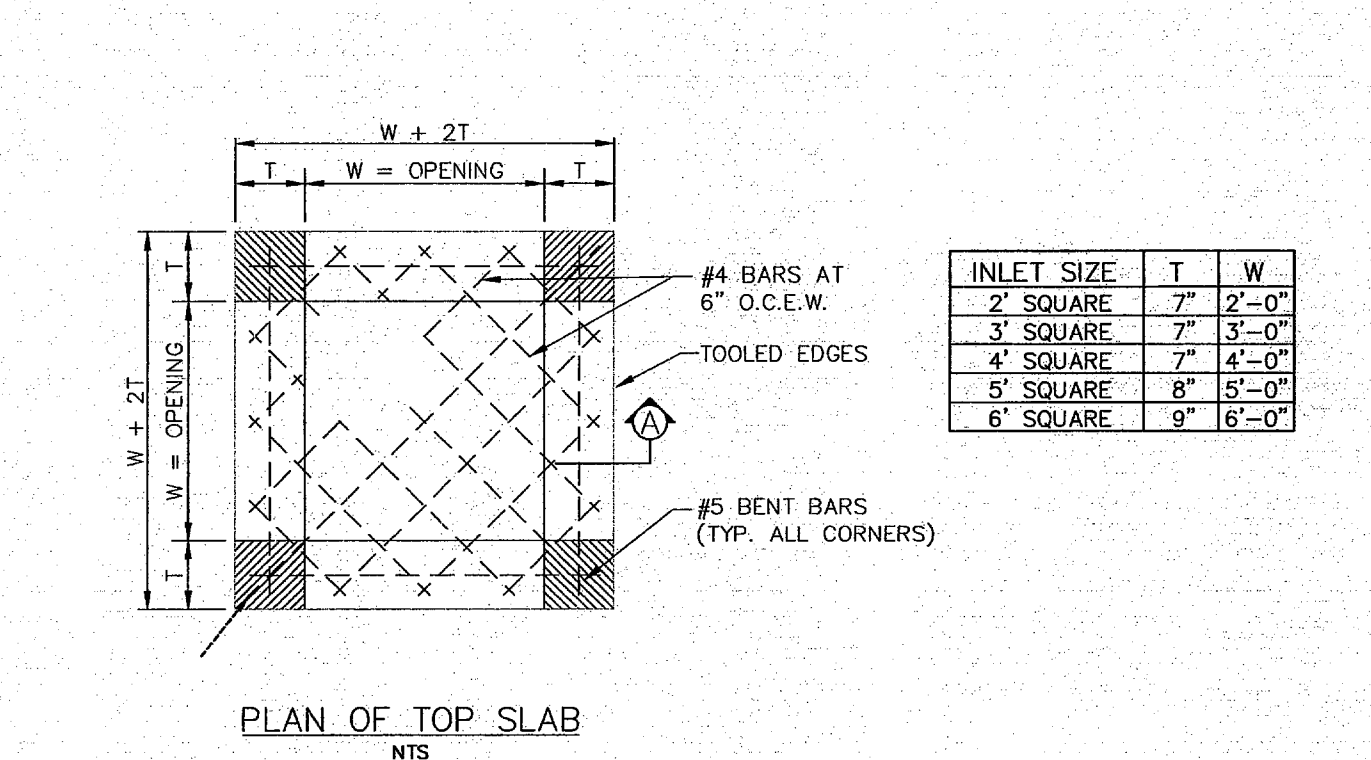
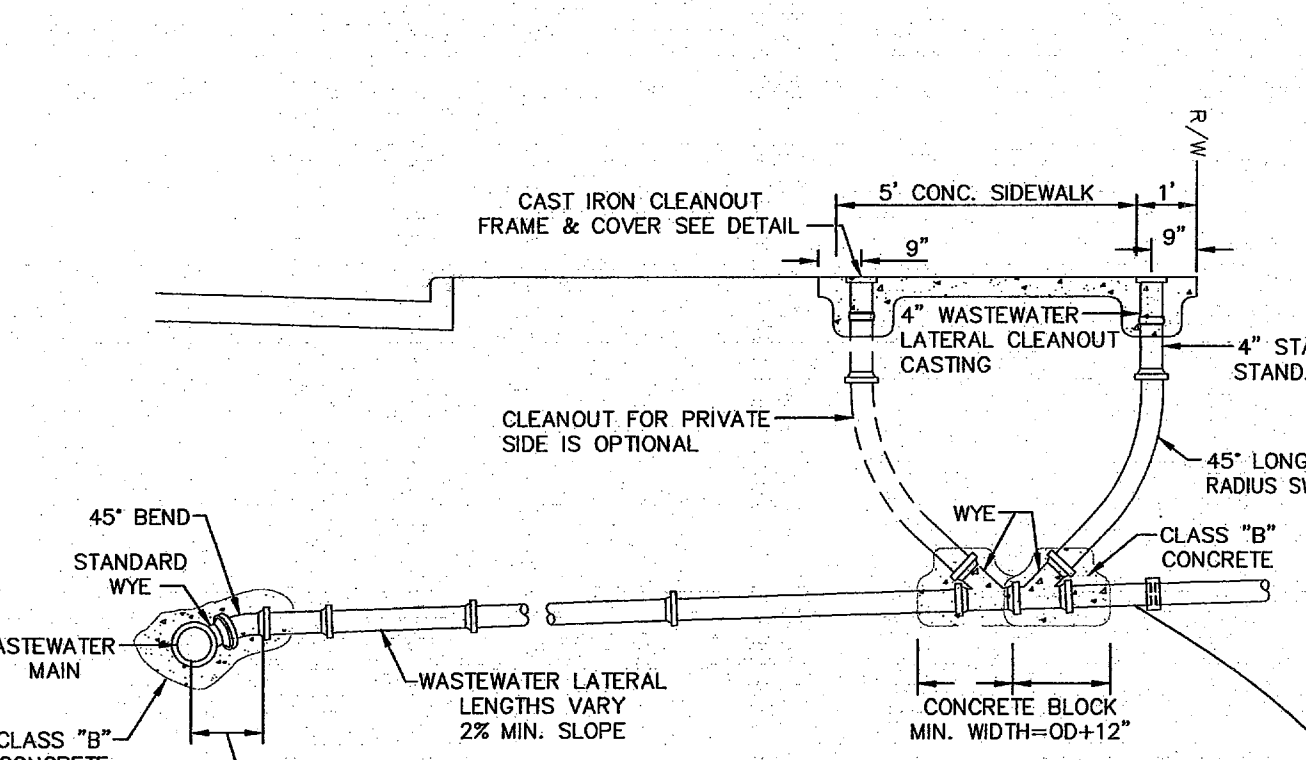
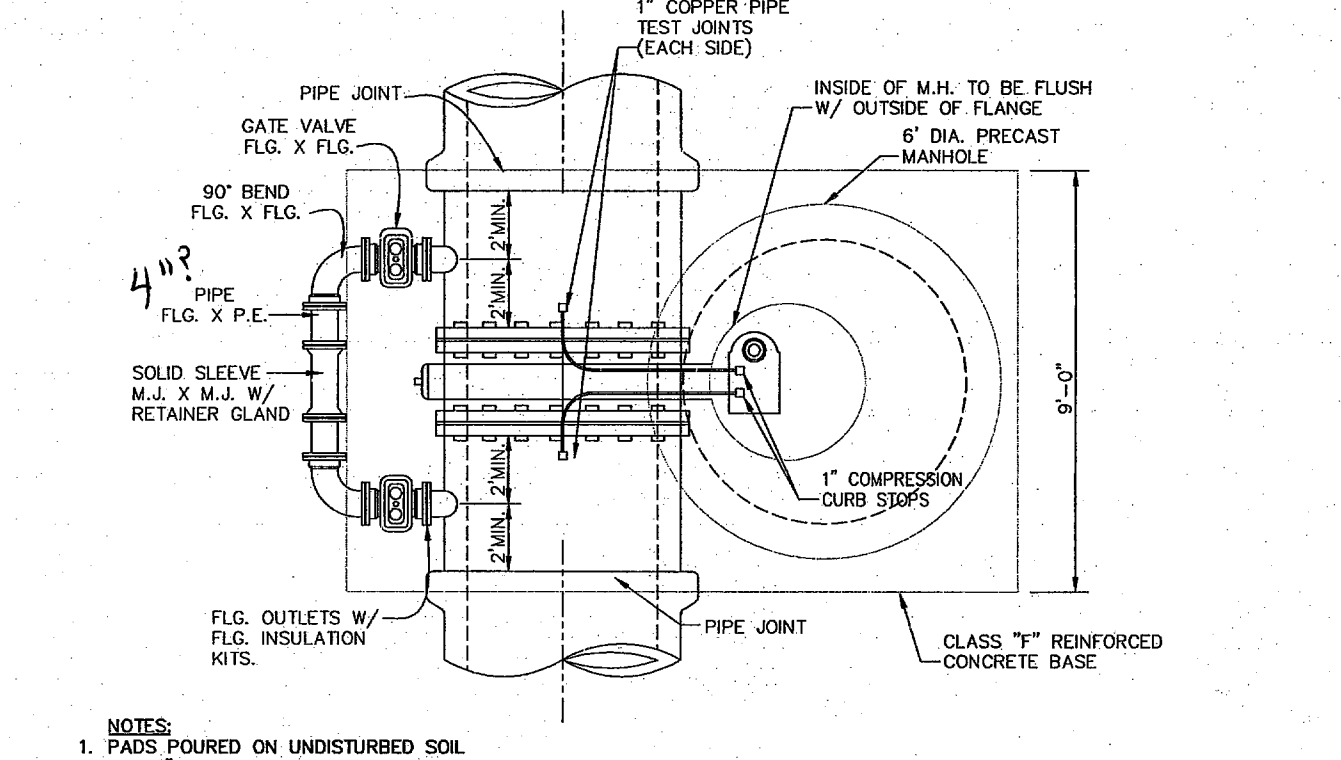
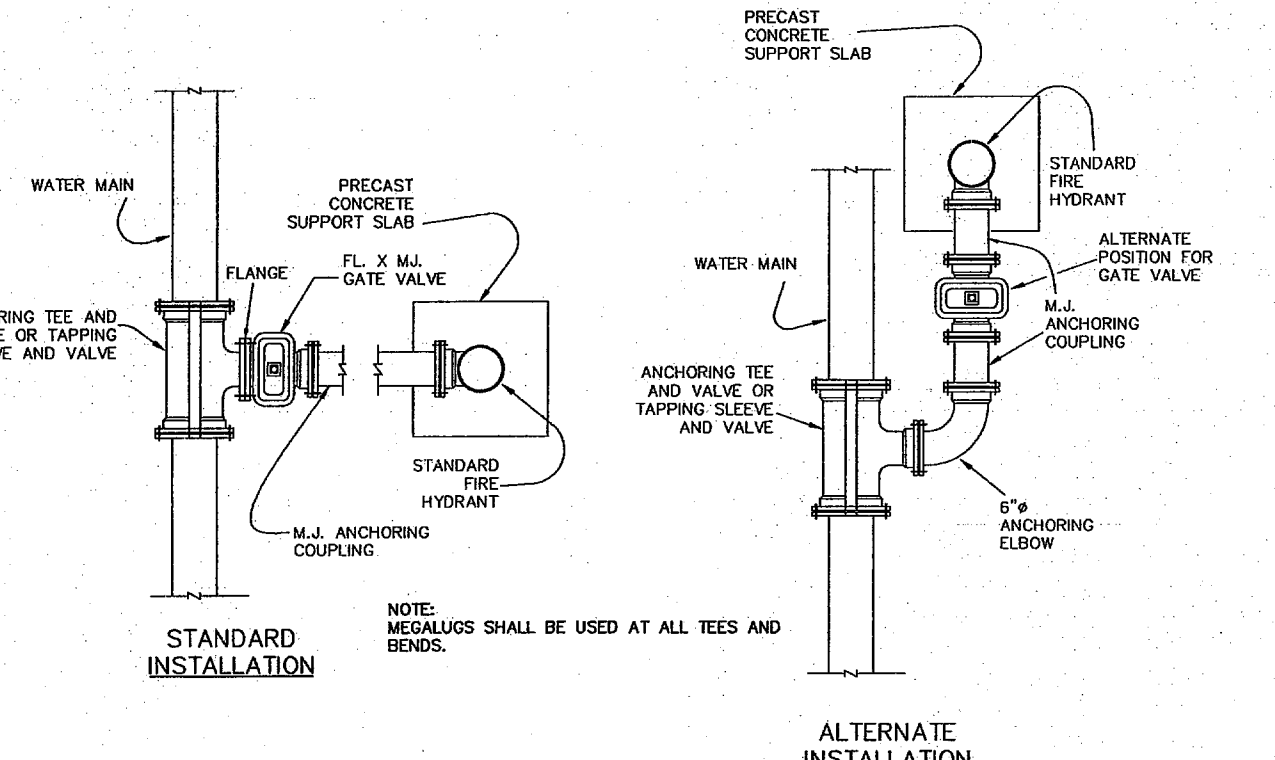
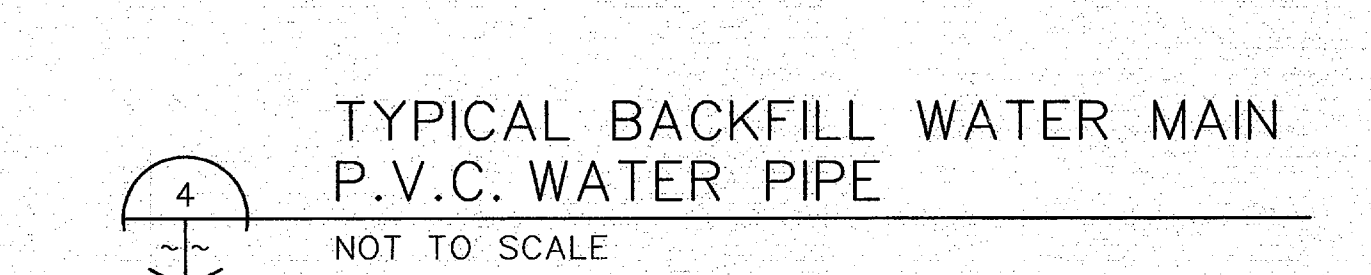
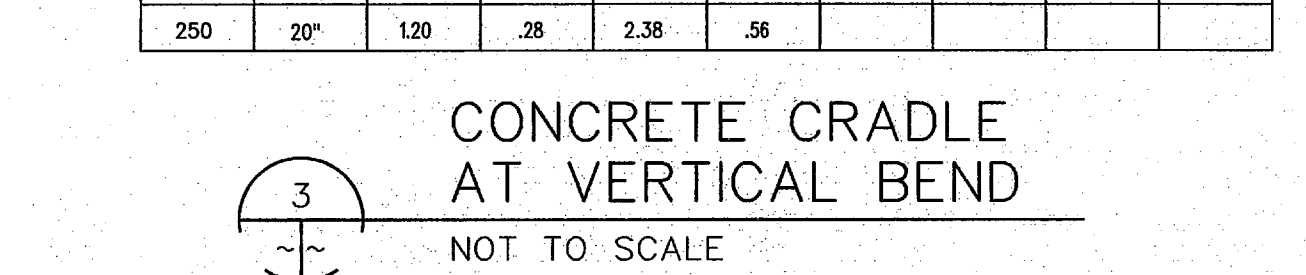
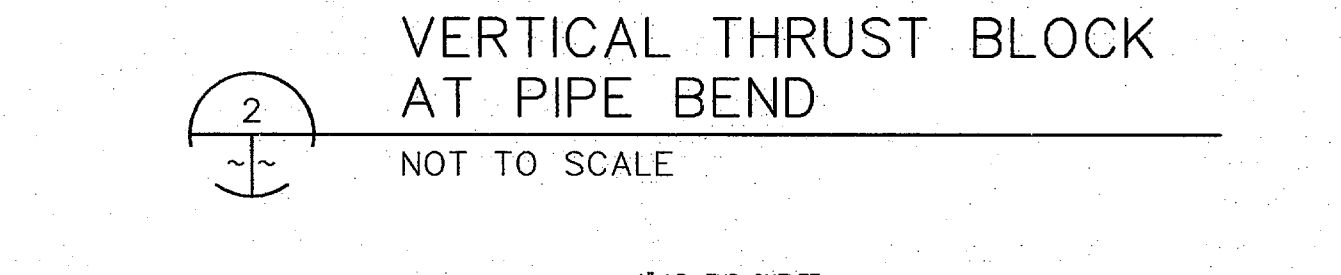
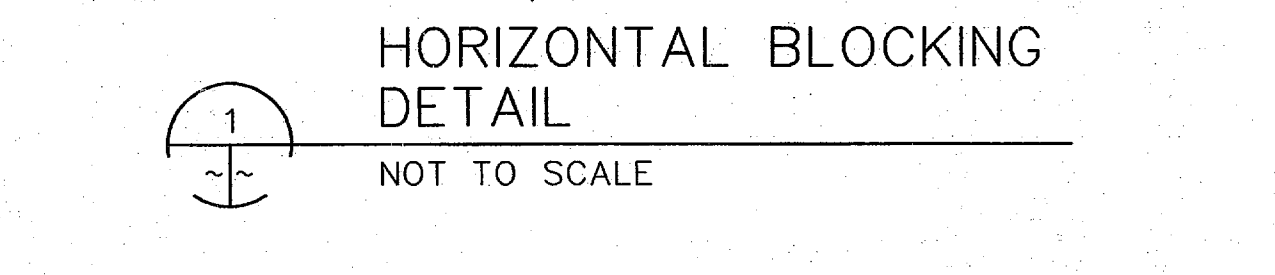
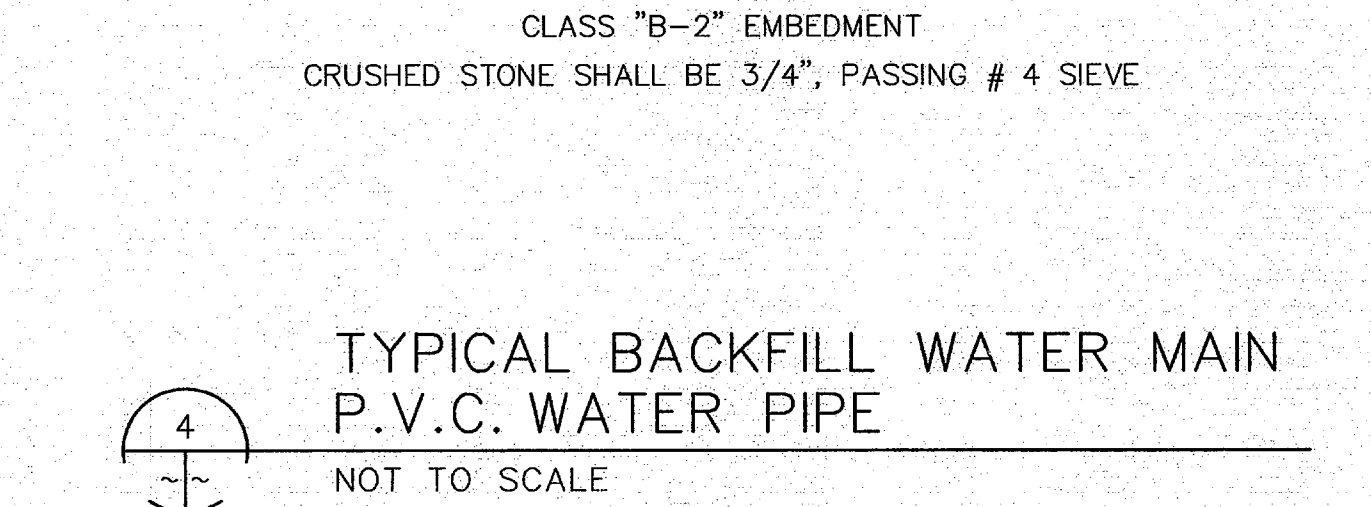
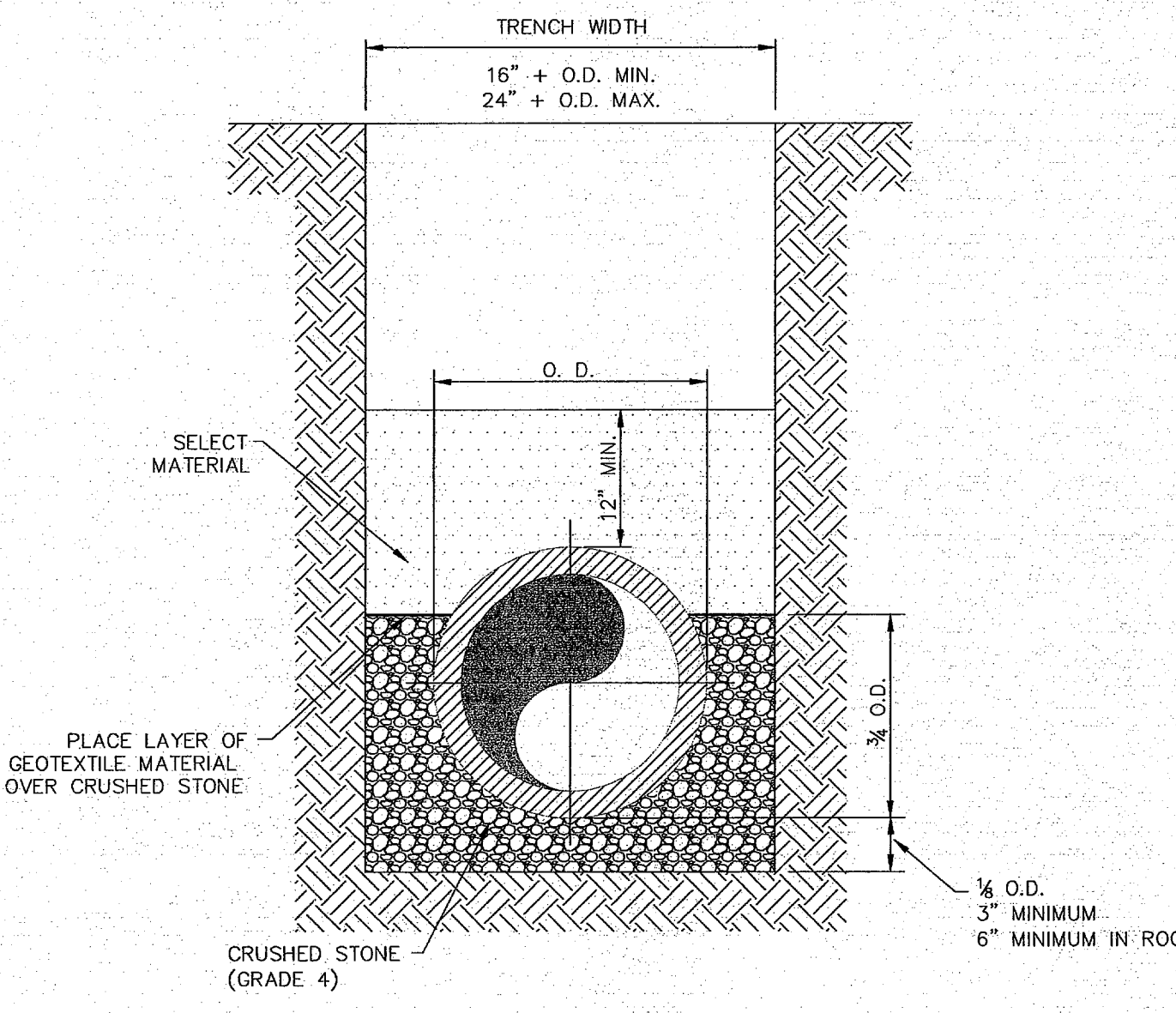
**VERTICAL THRUST BLOCK TABLE**

ID (IN)	11.25°		22.50°		30.00°		45.00°		67.50°		90.00°	
	THRUST (TONS)	VOL. (CU. YD.)	THRUST (TONS)	VOL. (CU. YD.)	THRUST (TONS)	VOL. (CU. YD.)	THRUST (TONS)	VOL. (CU. YD.)	THRUST (TONS)	VOL. (CU. YD.)	THRUST (TONS)	VOL. (CU. YD.)
4.6, 8	2.2	11	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.3	5.0	2.5
6, 8	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	12.7	6.4
8, 10	8.1	4.1	12.0	5.4	15.7	7.9	22.2	11	29.2	14.5	15.7	8.0
10, 12	11.3	5.7	16.4	8.2	21.6	11.3	32.0	16.0	41.8	20.9	22.6	11.3
12, 14	14.9	7.5	21.2	10.6	28.2	14.1	40.0	20.0	53.5	26.8	28.2	14.1
14, 16	20.3	10.1	28.6	14.3	38.0	19.0	53.0	26.5	71.0	35.5	38.0	19.0
16, 18	26.5	13.2	38.0	19.0	50.0	25.0	68.0	34.0	90.0	45.0	50.0	25.0
18, 20	33.5	16.8	48.0	24.0	63.0	31.5	88.0	44.0	115.0	57.5	63.0	31.5
20, 22	41.4	20.7	58.0	29.0	77.0	38.5	108.0	54.0	140.0	70.0	77.0	38.5
22, 24	50.1	25.0	69.0	34.5	92.0	46.0	128.0	64.0	170.0	85.0	92.0	46.0
24, 26	59.6	29.8	82.0	41.0	108.0	54.0	148.0	74.0	198.0	99.0	108.0	54.0
26, 28	69.9	35.0	97.0	49.0	128.0	64.0	178.0	89.0	238.0	119.0	128.0	64.0
28, 30	81.0	40.5	113.0	57.0	150.0	75.0	208.0	104.0	288.0	144.0	150.0	75.0
30, 32	93.1	46.5	130.0	65.0	175.0	87.5	240.0	120.0	330.0	165.0	175.0	87.5
32, 34	106.0	53.0	148.0	74.0	198.0	99.0	275.0	137.5	375.0	187.5	198.0	99.0

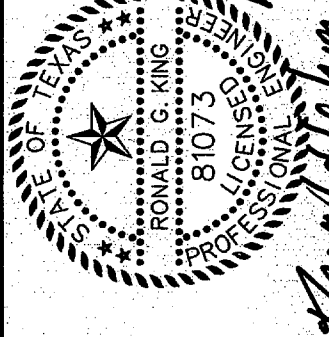


**CONCRETE CRADLE TABLE**  
"D" - 6" MINIMUM OR TO UNDISTURBED SOIL

PIPE CLASS	PIPE SIZE	18% - 15'		22% - 30'		45%	
		"L"	MAX. VOL.	"L"	MAX. VOL.	"L"	MAX. VOL.
150	6"	.42	.02	.45	0.02	.50	.02
150	8"	.42	.02	.45	.02	.80	.04
150	10"	.42	.03	.58	.03	1.15	.06
150	12"	.42	.04	.73	.05	1.43	.09
150	16"	.42	.08	.74	.11	1.48	.27
150	18"	.66	.14	1.30	.28		
150	20"	.77	.18	1.53	.38		
200	18"	.88	.18	1.74	.37		
200	20"	1.03	.24	2.04	.48		
250	18"	1.05	.22	2.03	.43		
250	20"	1.20	.28	2.38	.56		



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TOWN OF ADDISON, TEXAS  
SURVEYOR 1.5 MG EST  
CIVIL

UTILITY DETAILS

NO. ISSUES	FAN JOB NO.	ADD08459
SHEET	DATE	01/21/11
	DESIGNED	DAT
	DRAWN	SB
	REVISED	RJS
	CHECKED	RJK
	FILE NAME	CV-EST-DT-TYPO5.SHT

VERIFY SCALE Bar is one inch on original on this sheet, adjust scale.

DT-05