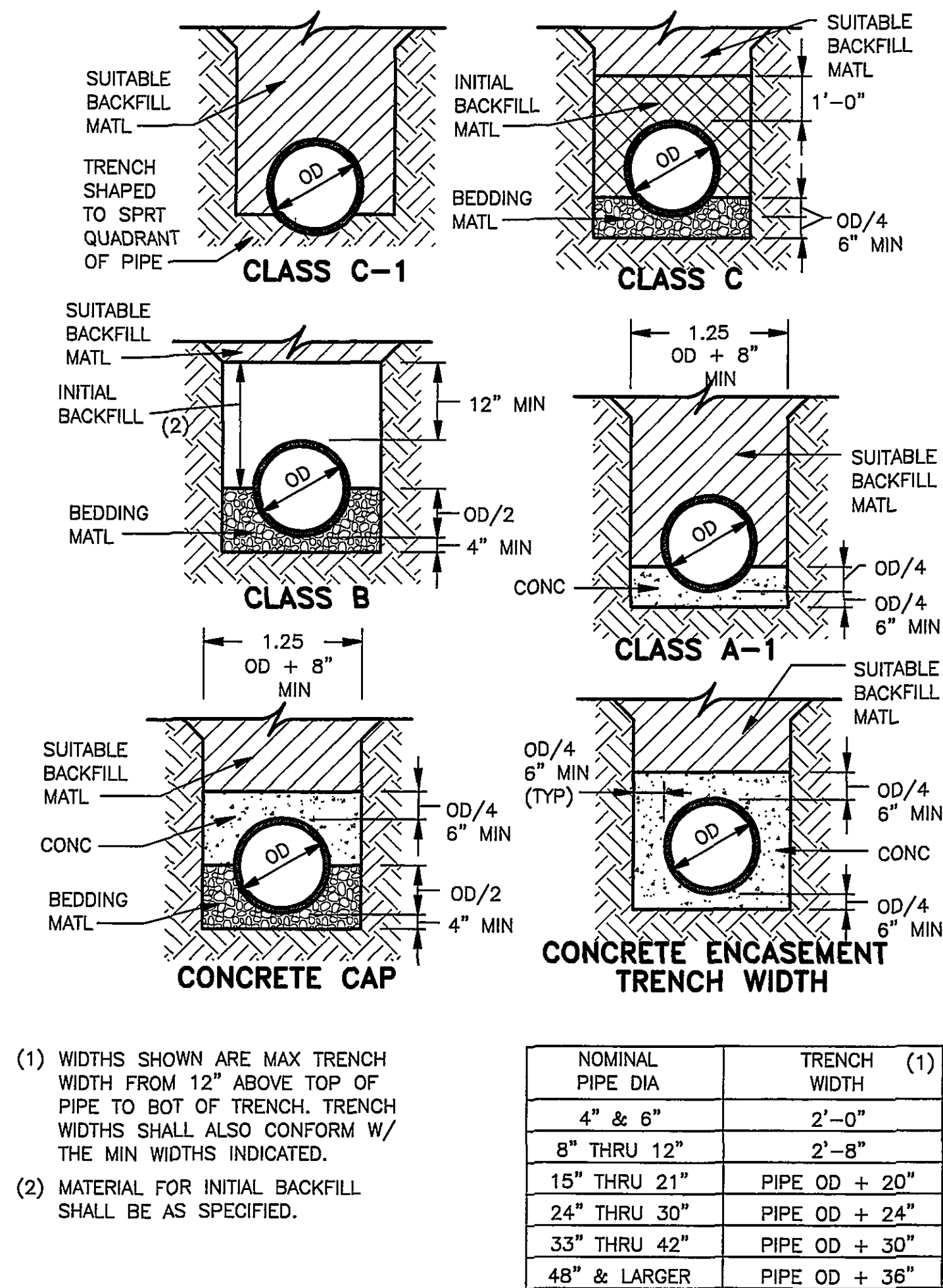
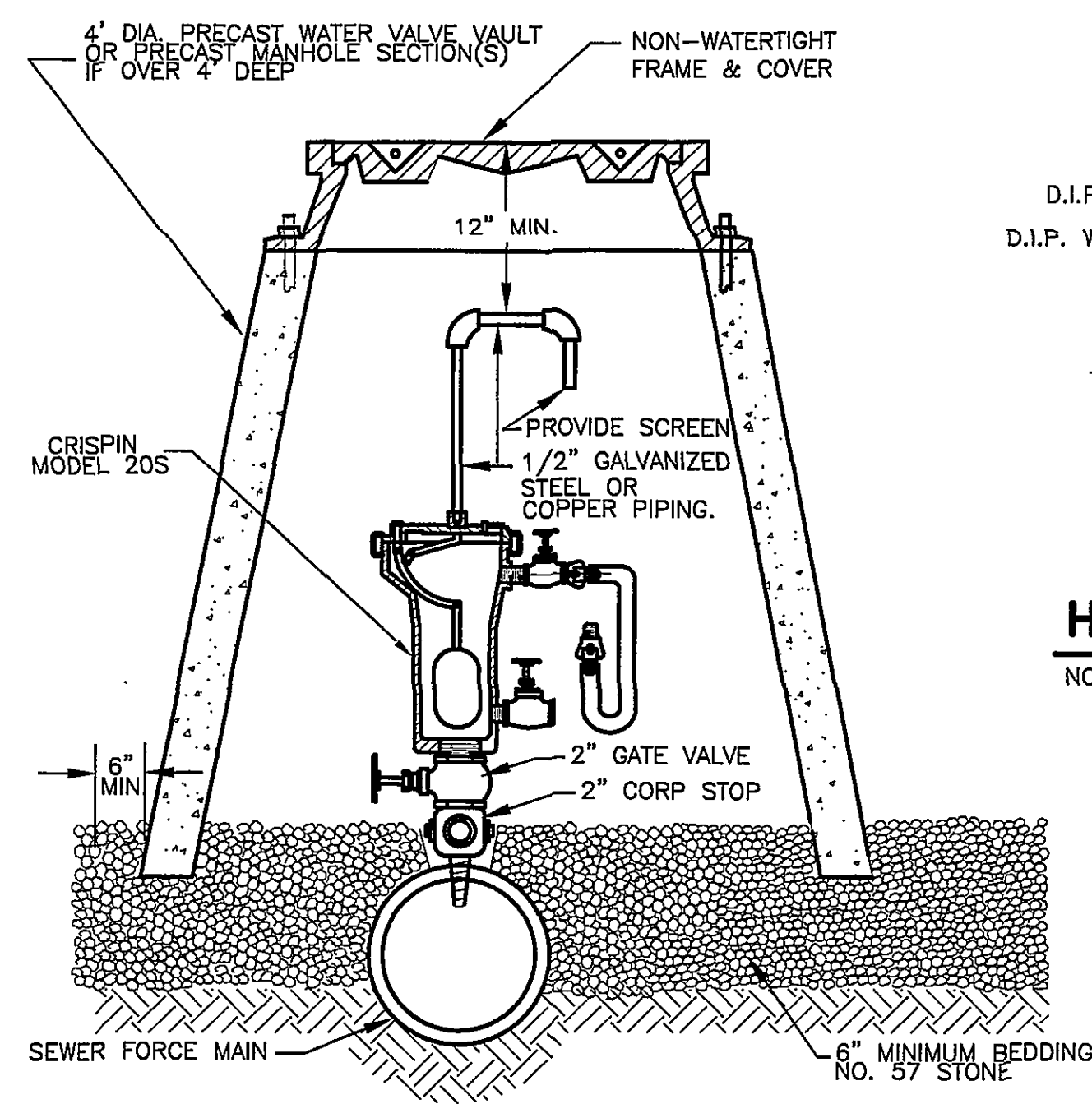
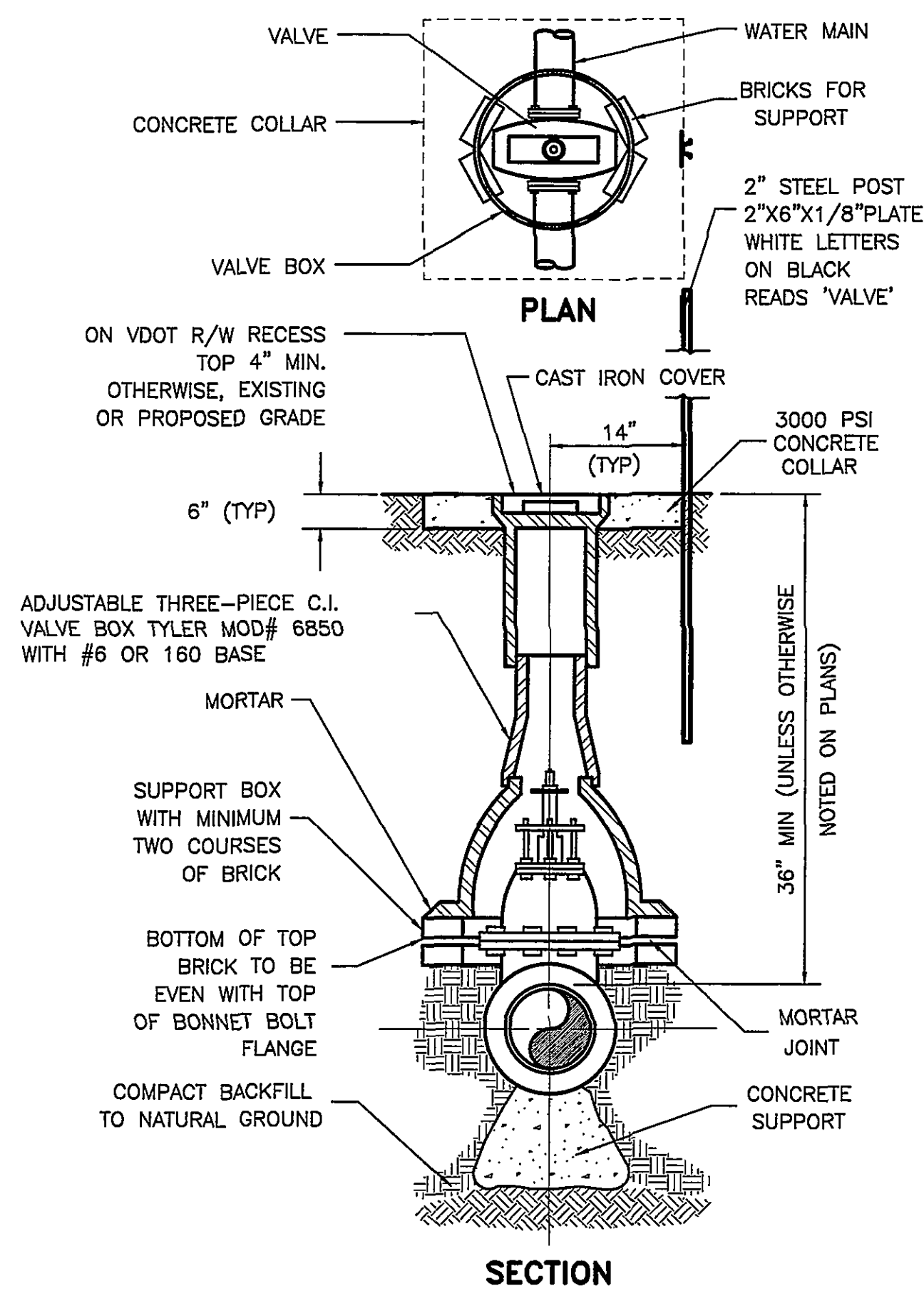
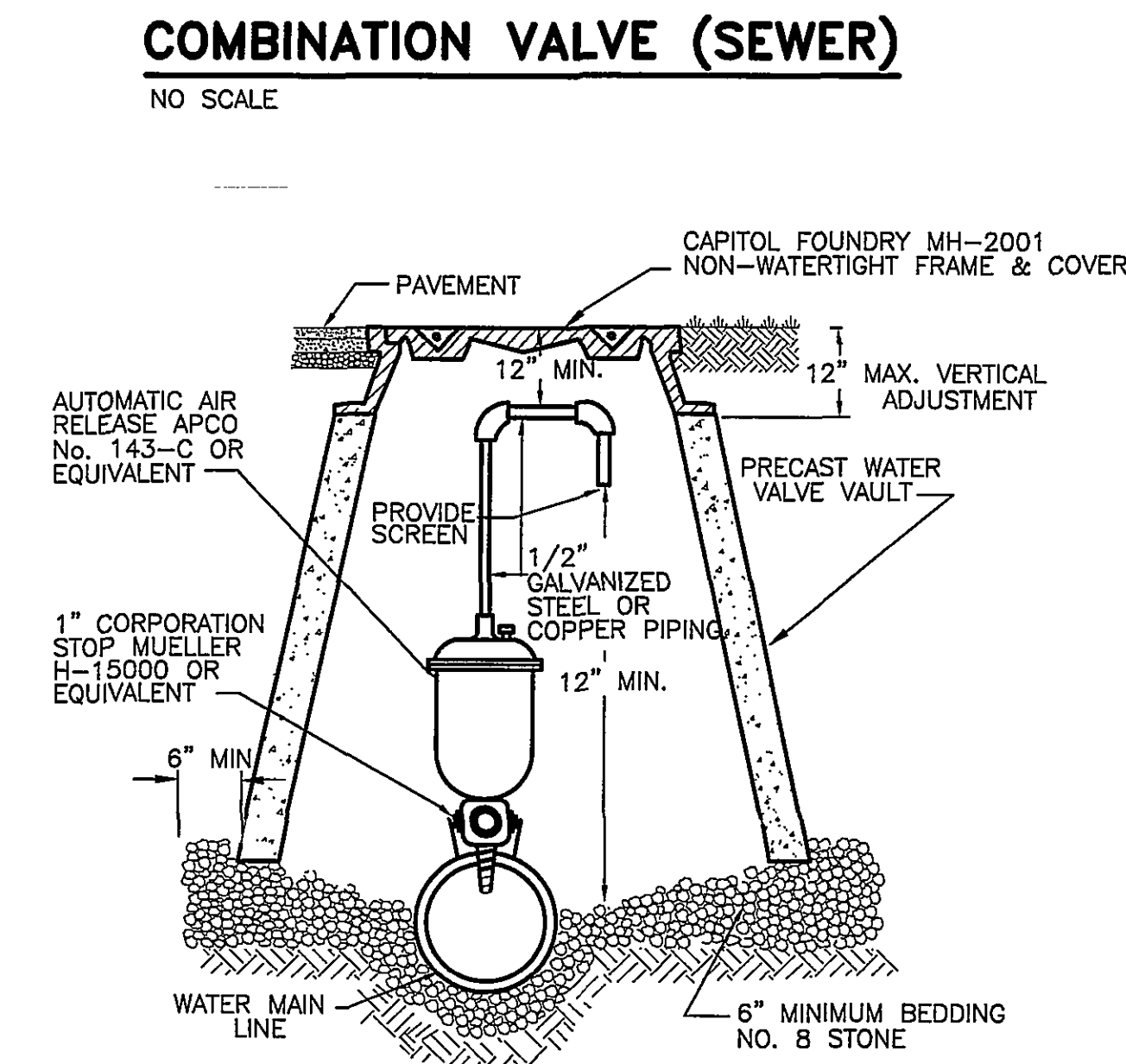




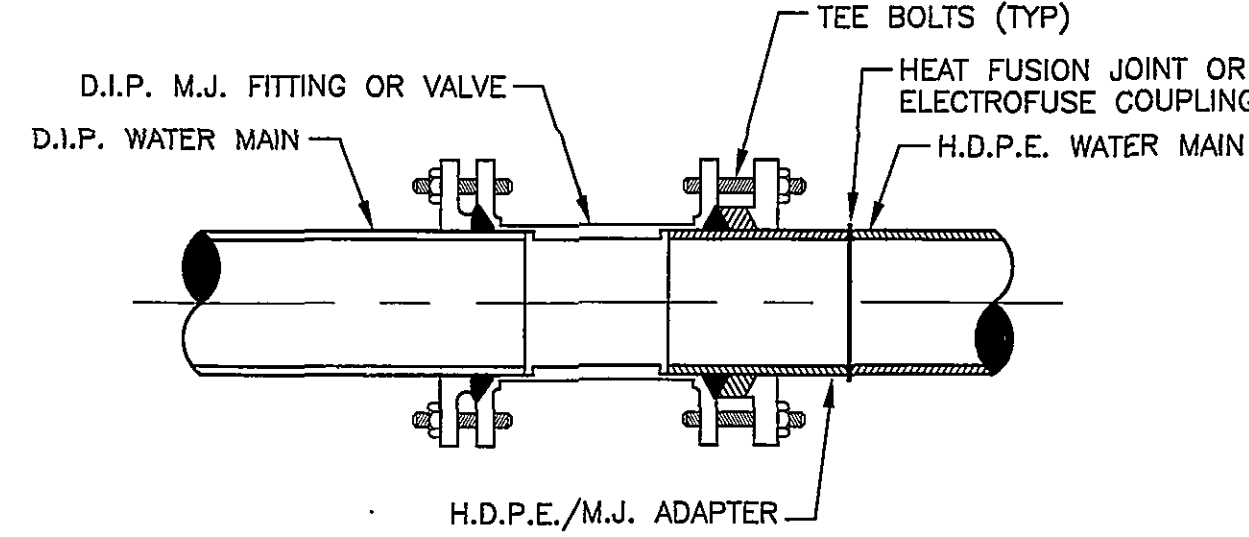
PIPE TRENCH DETAIL
NO SCALE



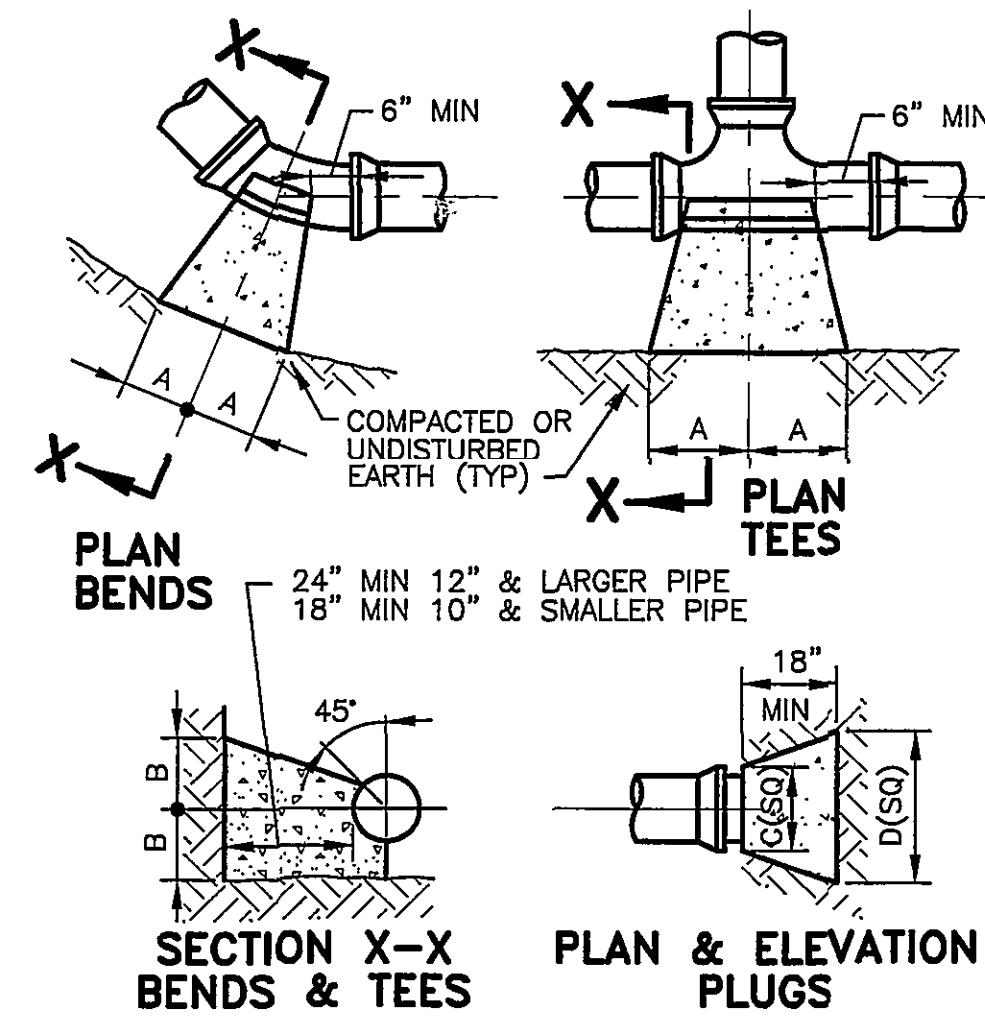
4" AND LARGER IN DIAMETER. TEES WITH THE BRANCH LEG OF 2" SHALL BE USED FOR ALL FORCE MAINS LESS THAN 4" IN DIAMETER. A 2" DIAMETER PORT SHALL BE PROVIDED FROM THE FORCE MAIN TO AIR/VACUUM VALVE.



TYPICAL VALVE SETTING DETAIL
NO SCALE



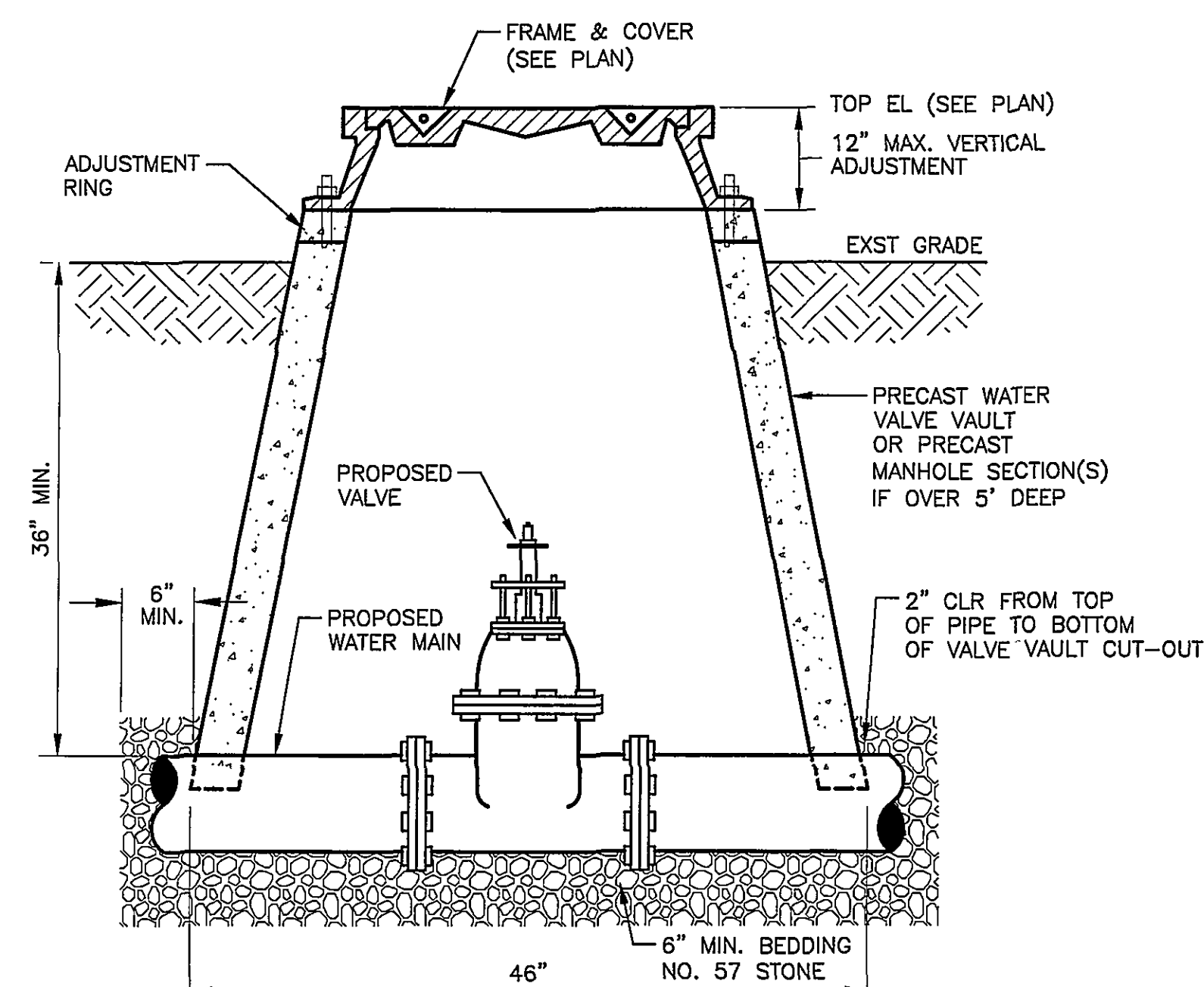
H.D.P.E. / M.J. ADAPTER DETAIL
NO SCALE



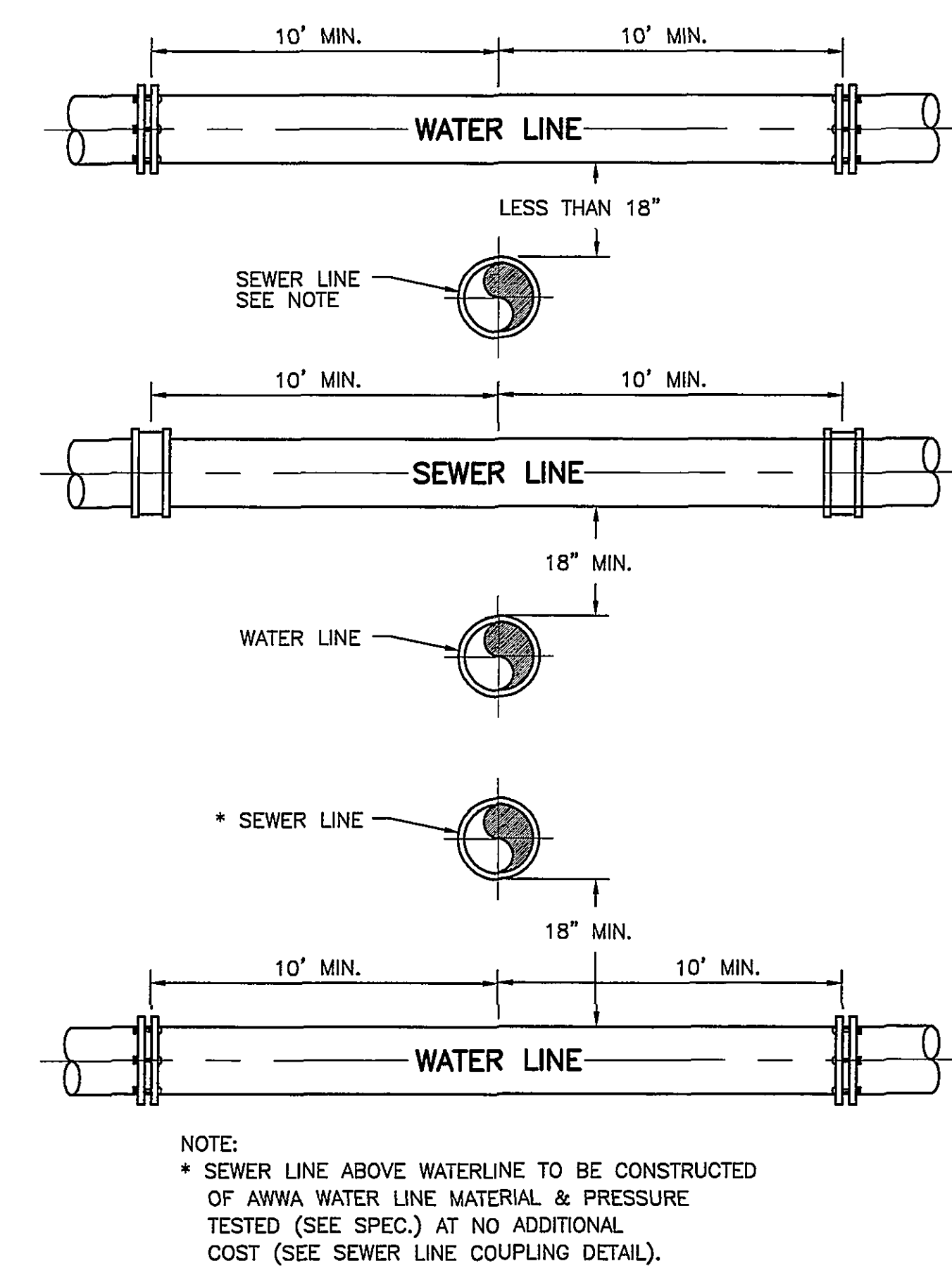
SIZE	1/4 BEND	1/8 BEND	1/16 BEND	TEES	PLUGS
6"	16"	10"	8"	10"	12"
8"	22"	13"	10"	13"	16"
10"	28"	21"	16"	21"	24"
12"	34"	27"	21"	27"	30"
14"	40"	33"	27"	33"	36"
16"	46"	39"	33"	39"	42"
18"	52"	45"	39"	45"	48"
20"	58"	51"	45"	51"	54"
22"	64"	57"	51"	57"	60"
24"	70"	63"	57"	63"	66"
26"	76"	69"	63"	69"	72"
28"	82"	75"	69"	75"	78"
30"	88"	81"	75"	81"	84"
32"	94"	87"	81"	87"	90"
34"	100"	93"	87"	93"	96"
36"	106"	99"	93"	99"	102"
38"	112"	105"	99"	105"	108"
40"	118"	111"	105"	111"	114"
42"	124"	117"	111"	117"	120"
44"	130"	123"	117"	123"	126"
46"	136"	129"	123"	129"	132"
48"	142"	135"	129"	135"	138"
50"	148"	141"	135"	141"	144"
52"	154"	147"	141"	147"	150"
54"	160"	153"	147"	153"	156"
56"	166"	159"	153"	159"	162"
58"	172"	165"	159"	165"	168"
60"	178"	171"	165"	171"	174"

NOTES:
1. PROVIDE 2 SQ. FT. BEARING AREA FOR PIPE SIZES LESS THAN 6".
2. BASED ON 2000 PSF SOIL BEARING AND 100 PSI STATIC PRESSURE + AWWA WATER HAMMER.

THRUST BLOCKS
NO SCALE



WATER MAIN VALVE DETAIL

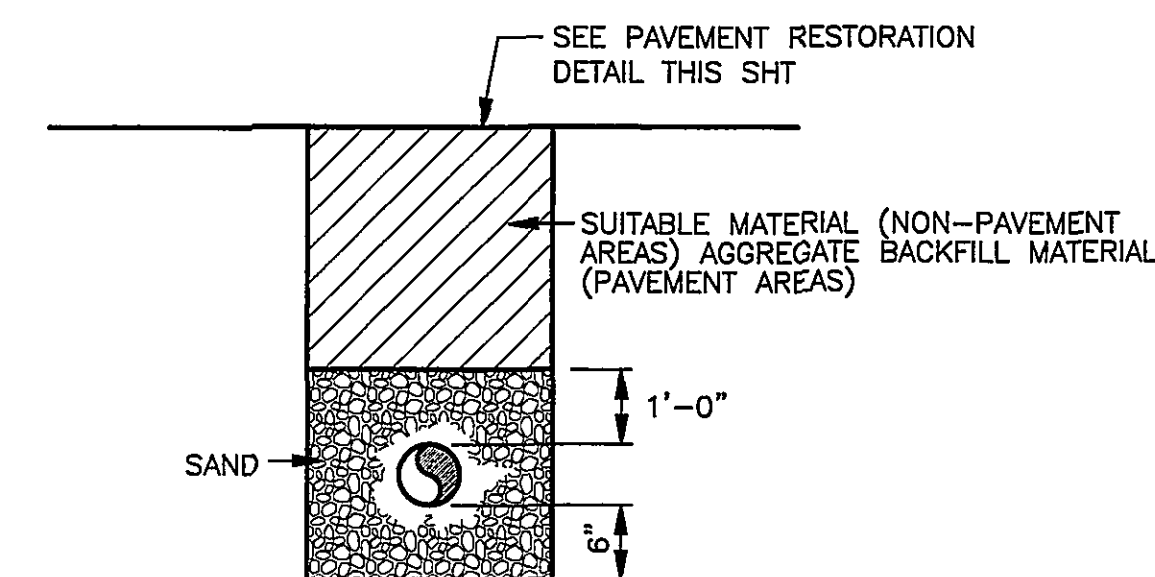


WATER AND SEWER CROSSING DETAIL
NO SCALE

PIPE SIZE	PIPE DIA.	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	VALVE	TEE	REDUCER	VERT. 45°	VERT. 22 1/2°	VERT. 11 1/4°
6"	6"	28'	12'	6'	3'	38'	34'	20'	23'	11'	5'
8"	8"	37'	15'	7'	4'	51'	47'	21'	30'	15'	7'
10"	10"	45'	18'	9'	4'	61'	57'	20'	37'	18'	9'
12"	12"	53'	22'	11'	5'	73'	69'	38'	43'	21'	10'
14"	14"	61'	26'	13'	6'	85'	81'	43'	51'	26'	13'
16"	16"	69'	30'	15'	7'	97'	93'	49'	59'	30'	15'
18"	18"	77'	34'	17'	8'	109'	105'	55'	67'	34'	17'
20"	20"	85'	38'	19'	9'	121'	117'	61'	73'	38'	19'
22"	22"	93'	42'	21'	10'	133'	129'	67'	81'	42'	21'
24"	24"	101'	46'	23'	11'	145'	141'	73'	89'	46'	23'
26"	26"	109'	50'	25'	12'	157'	153'	79'	97'	50'	25'
28"	28"	117'	54'	27'	13'	169'	165'	85'	105'	54'	27'
30"	30"	125'	58'	29'	14'	181'	177'	91'	113'	58'	29'
32"	32"	133'	62'	31'	15'	193'	189'	97'	121'	62'	31'
34"	34"	141'	66'	33'	16'	205'	201'	103'	129'	66'	33'
36"	36"	149'	70'	35'	17'	217'	213'	109'	137'	70'	35'
38"	38"	157'	74'	37'	18'	229'	225'	115'	145'	74'	37'
40"	40"	165'	78'	39'	19'	241'	237'	121'	153'	78'	39'
42"	42"	173'	82'	41'	20'	253'	249'	127'	161'	82'	41'
44"	44"	181'	86'	43'	21'	265'	261'	133'	169'	86'	43'
46"	46"	189'	90'	45'	22'	277'	273'	139'	177'	90'	45'
48"	48"	197'	94'	47'	23'	289'	285'	145'	185'	94'	47'
50"	50"	205'	98'	49'	24'	301'	297'	151'	193'	98'	49'
52"	52"	213'	102'	51'	25'	313'	309'	157'	201'	102'	51'
54"	54"	221'	106'	53'	26'	325'	321'	163'	209'	106'	53'
56"	56"	229'	110'	55'	27'	337'	333'	169'	217'	110'	55'
58"	58"	237'	114'	57'	28'	349'	345'	175'	225'	114'	57'
60"	60"	245'	118'	59'	29'	361'	357'	181'	233'	118'	59'

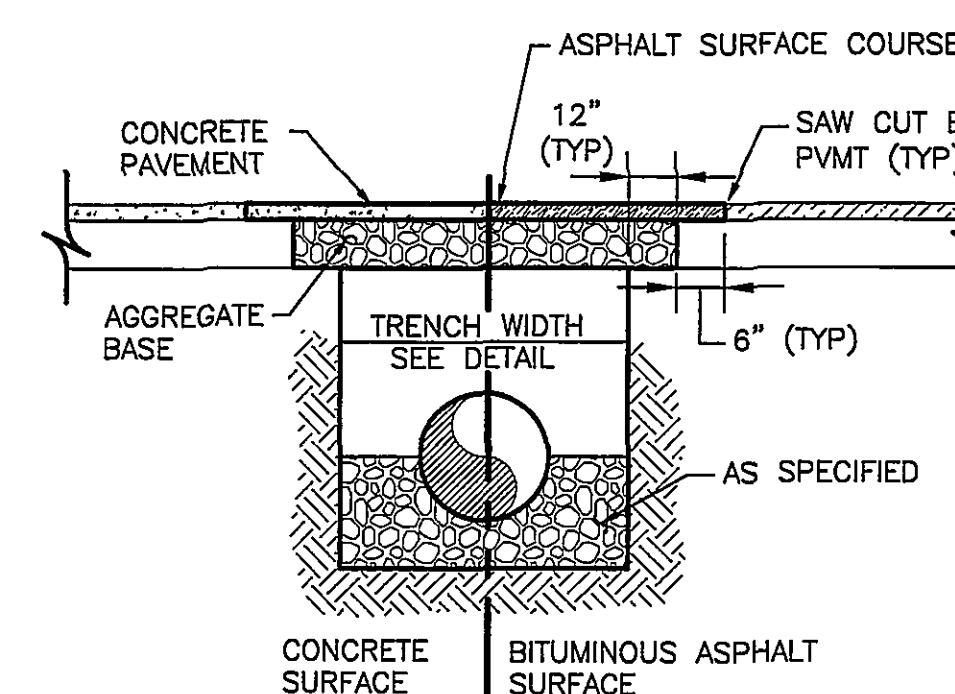
1. ALL JOINTS SHALL BE RESTRAINED ON BOTH SIDES OF THE FITTING FOR THE LENGTH SHOWN UNLESS OTHERWISE INDICATED.
2. REDUCER IS ONE SIZE SMALLER THAN PIPE LISTED. RESTRAINED LENGTH IS UPSTREAM ON THE LARGE SIDE OF THE REDUCER.

TABLE-RESTRAINED JOINTS
NO SCALE



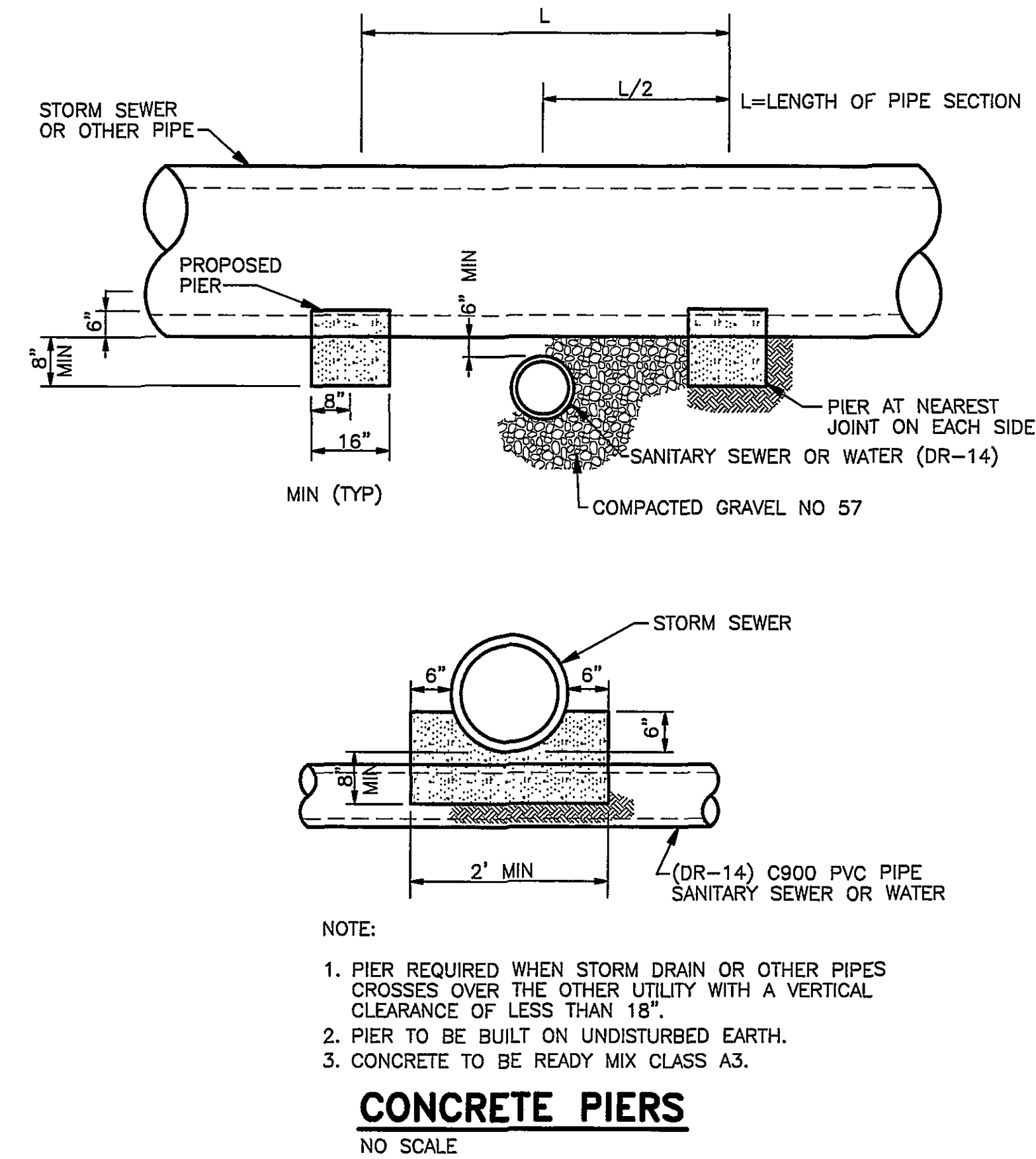
NOTES:
1. MAXIMUM AND MINIMUM TRENCH WIDTHS ARE 2'-0" - 1'-0" FOR 4" & PIPE AND 2'-6" - 1'-6" FOR 6" & PIPE, MEASURED 1 FOOT ABOVE THE TOP OF THE PIPE.

TRENCH FOR PVC PIPE DETAIL
NO SCALE

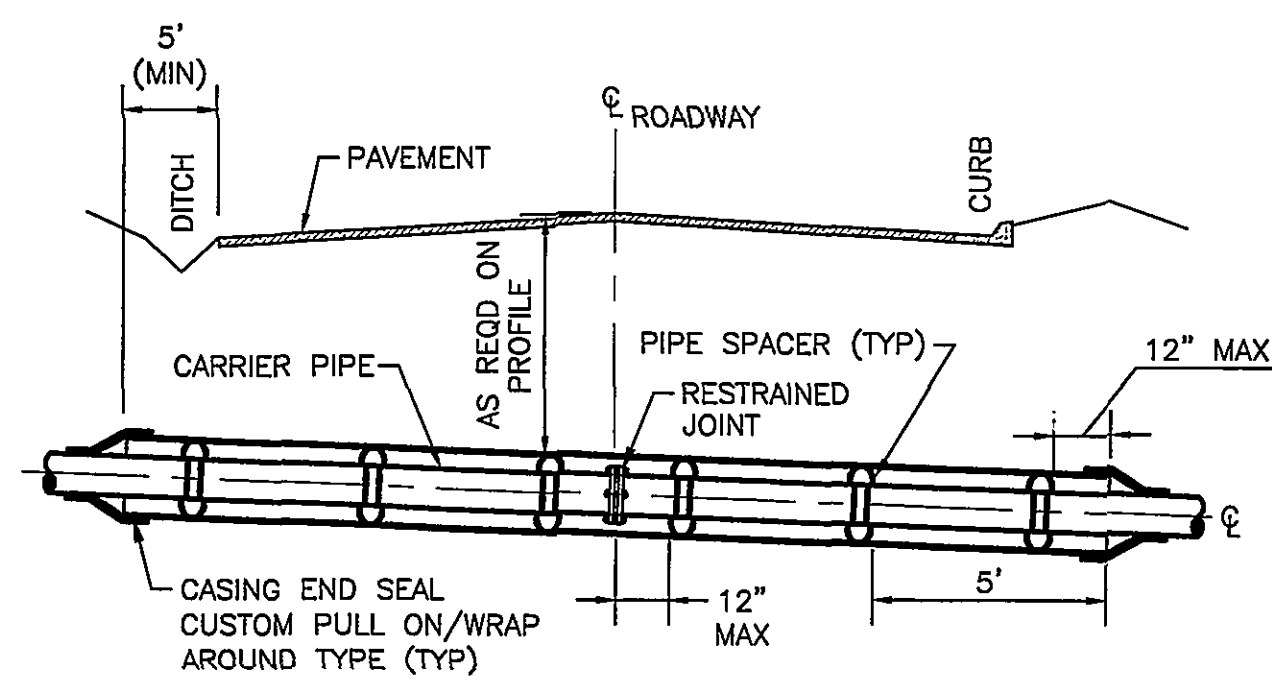


NOTE:
1.) MINIMUM THICKNESS OF ASPHALT SURFACE COURSE SHALL BE 2-1/2" OR MATCH EXISTING THICKNESS WHICHEVER IS GREATER.
2.) MINIMUM THICKNESS OF AGGREGATE SHALL BE 8" OR MATCH EXISTING THICKNESS WHICHEVER IS GREATER.
3.) CONCRETE TO MATCH THICKNESS AND SURFACE ELEVATION OF EXISTING CONCRETE PAVEMENT.

PAVEMENT RESTORATION DETAIL
NO SCALE



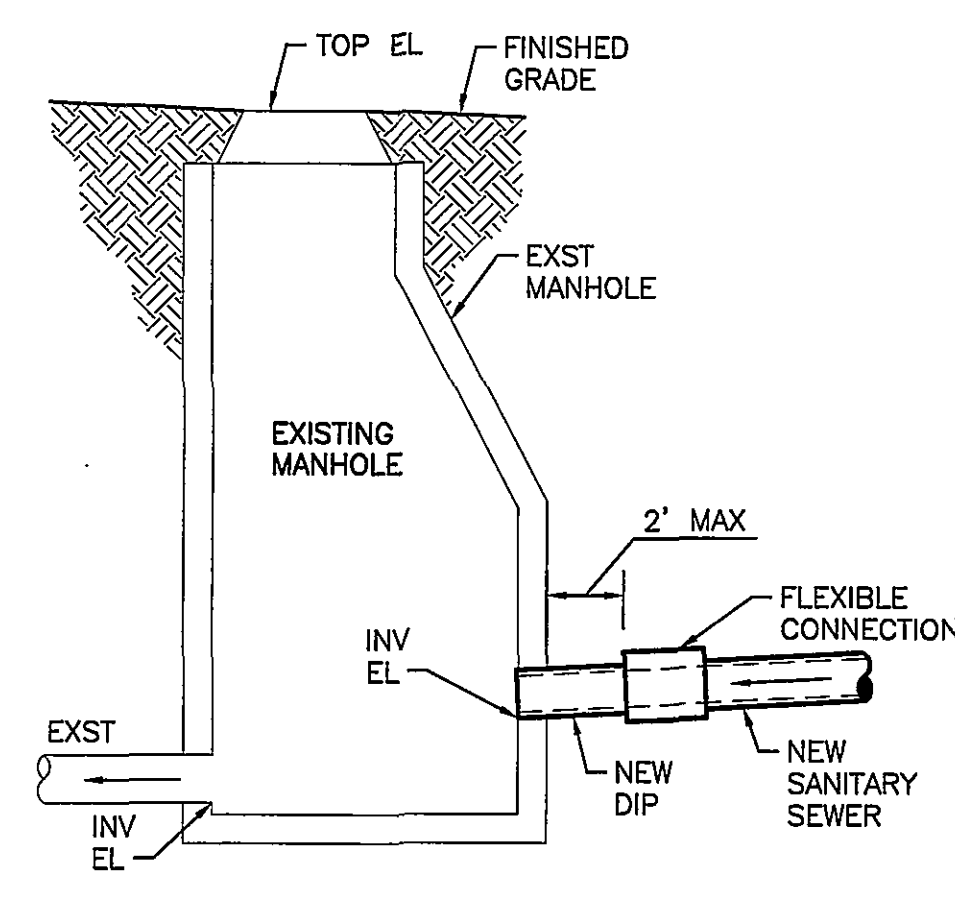
CONCRETE PIERS
NO SCALE



NOTE:
1. STEEL CASING SHALL EXTEND TO THE BACK OF CURB, DITCH, SIDEWALK, ETC., OR FOR A MINIMUM OF 5' BEYOND THE EDGE OF PAVEMENT.
2. CASING AND CARRIER PIPE FOR GRAVITY SEWER SHALL BE INSTALLED WITH THE SPECIFIED SLOPE INDICATED ON CONSTRUCTION PLANS.

CARRIER PIPE & STEEL CASING DIMENSIONS		
DIA CARRIER PIPE	DIA CASING PIPE	WALL THICKNESS CASING PIPE
6"	16"	0.250"
8"	18"	0.250"
10"	18"	0.250"
12"	24"	0.344"
14"	24"	0.344"
15"	24"	0.344"

TYPICAL STEEL SLEEVE INSTALLATION UNDER ROADWAY
NO SCALE



NOTES:
1. TAP INTO EXST MANHOLE BY CORING
2. SECURE 8" DIP SPOOL PIECE, IN PLACE, WITH NON-SHRINK GROUT
3. CONNECT 8" DIP SPOOL PIECE TO NEW 8" SANITARY SEWER WITH A FLEXIBLE CONNECTION
4. RESHAPE MANHOLE INVERT

CONNECTION TO EXST MANHOLE
NO SCALE



REV	DATE	DESCRIPTION	APP

COMM NO: 10075
ISSUE DATE: FEBRUARY 1, 2007
DESIGNED BY: SMS DRAWN BY: SMS
CHECKED BY: MLC SUBMITTED BY: JMC
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