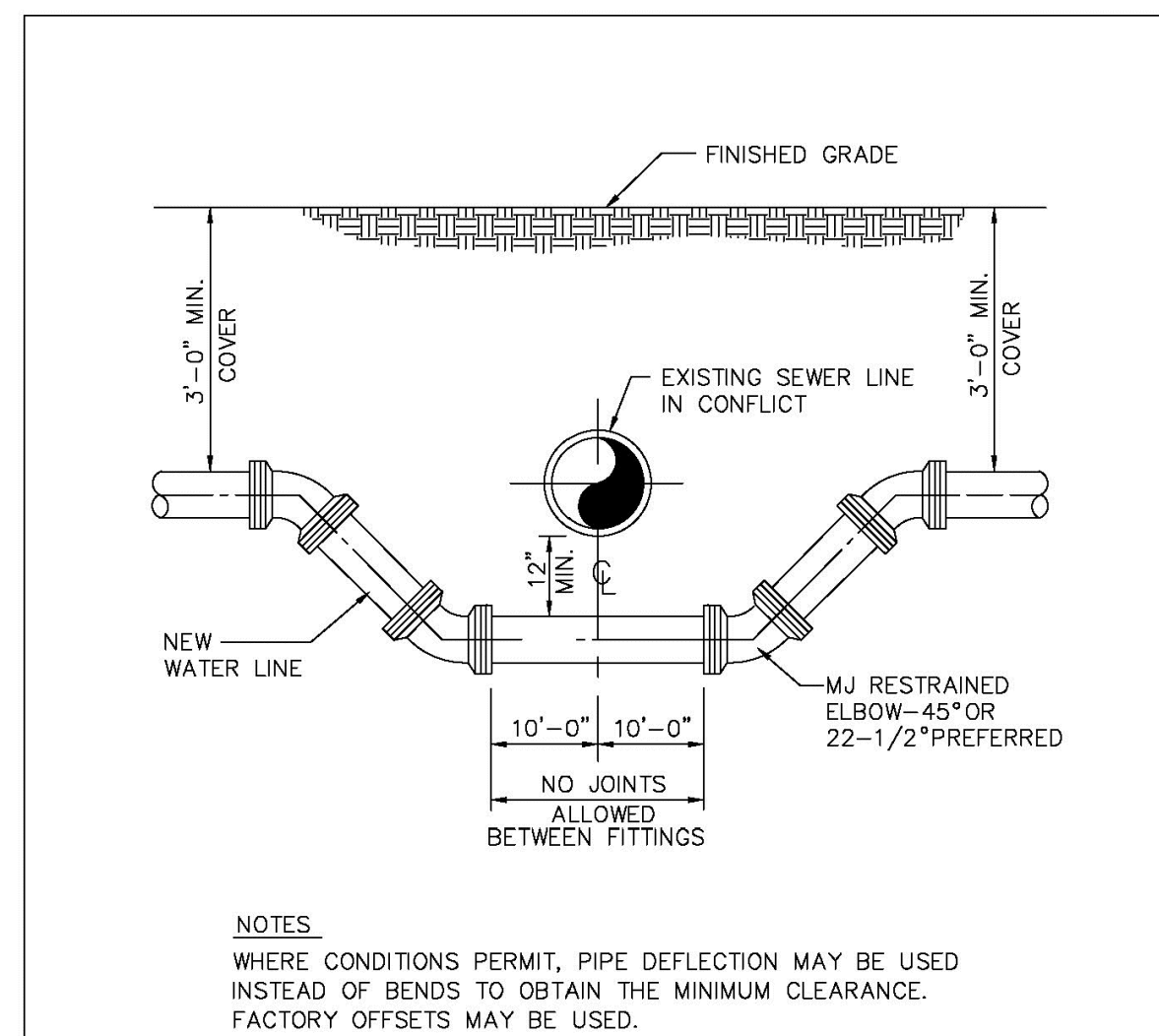
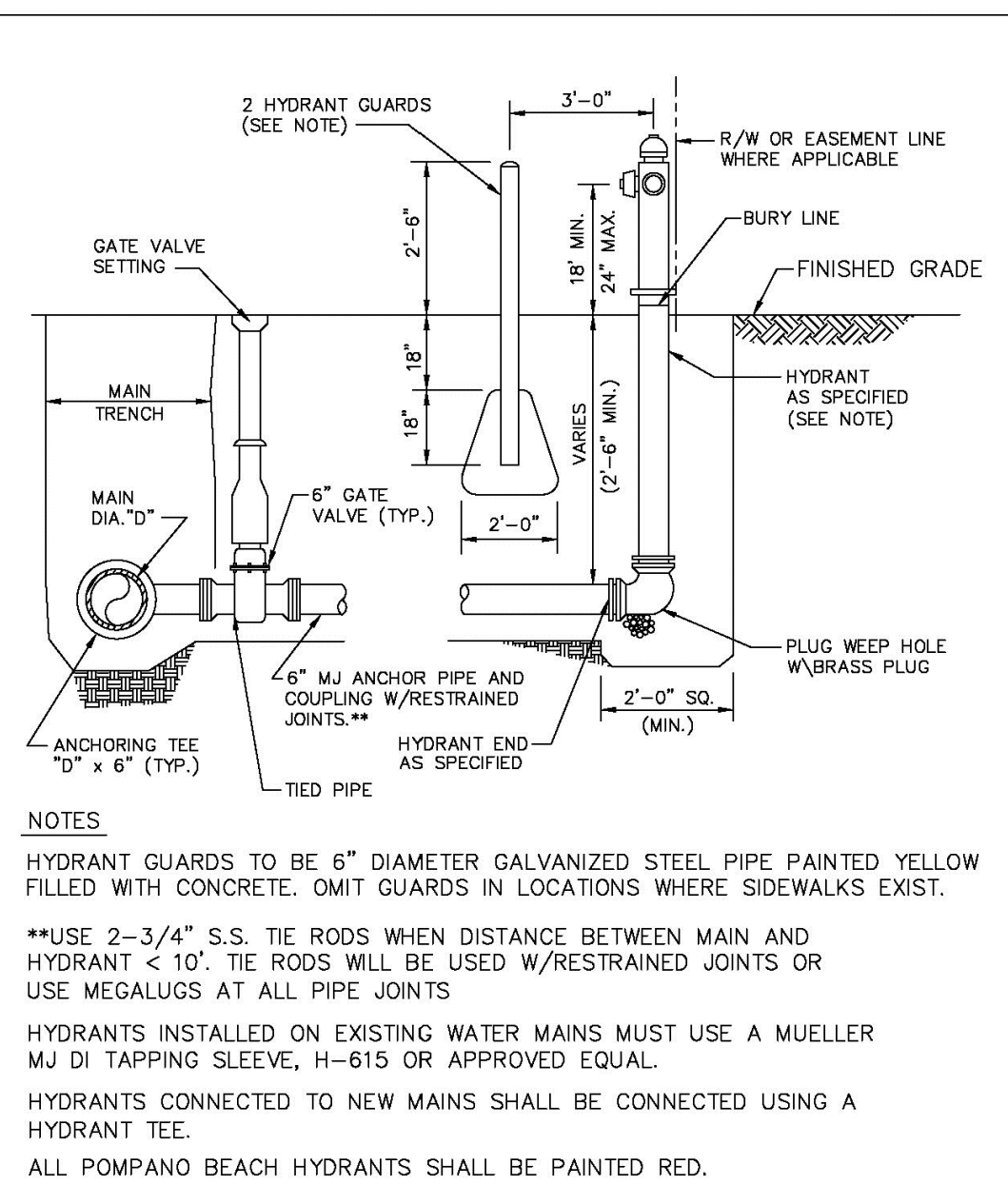


<b>FIRE METERS - OS &amp; Y VALVES, GASKETS &amp; METER</b>						 2" MIN. TRAVEL	
(NEPTUNE MACH 10 Ultrasonic Meter)							
<b>SIZE</b>	<b>VALVES (2)</b>	<b>GASKETS (4)</b>	<b>METER w/ Strainer</b>	<b>TOTAL LENGTH</b>			
3" w/ 4" X 3" Reducer **	16"	1/2"	30" **	46 1/2"			
4"	18"	1/2"	27 1/2"	46"			
6"	21"	1/2"	33"	54 1/2"			
8"	23"	1/2"	30"	53 1/2"			
10"	26"	1/2"	41"	67 1/2"			
<b>FIRE &amp;/or Domestic Water Service METERS - TEES, OS &amp; Y VALVES, GASKETS &amp; METERS</b>							
(NEPTUNE MACH 10 Ultrasonic Meter)							
<b>SIZE</b>	<b>TEES (2)</b>	<b>VALVES (2)</b>	<b>GASKETS (6)</b>	<b>Strainer</b>	<b>Meter w/</b>	<b>TOTAL LENGTH</b>	
3" w/ 4" X 3" Reducer **	3" X 3" - 22"	16"	3/4"	30" **		68 3/4"	
4"	4" X 3" - 26"	18"	3/4"	27 1/2"		72 1/4"	
6"	6" X 4" - 32"	21"	3/4"	33"		86 3/4"	
8"	8" X 4" - 36"	23"	3/4"	30"		89 3/4"	
10"	10" X 6" - 44"	26"	3/4"	41"		111 3/4"	
<p>*All fittings, valves and meters are flanged &amp; all dimensions are from face of flange to face of flange.</p>		<p><b>NOTE:</b> PLEASE NOTE THAT WATER METERS 3" AND LARGER ARE SUBJECT TO AN APPROXIMATE ORDER LEAD TIME OF 60 TO 75 BUSINESS DAYS AFTER FULL PAYMENT. PLEASE CONTACT CUSTOMER SERVICE AT 954-786-4637 TO ARRANGE FOR METER PROCUREMENT AND INSTALLATION. LARGE METERS MUST BE AT MINIMUM ORDERED PRIOR TO INITIAL INSPECTIONS.</p>					

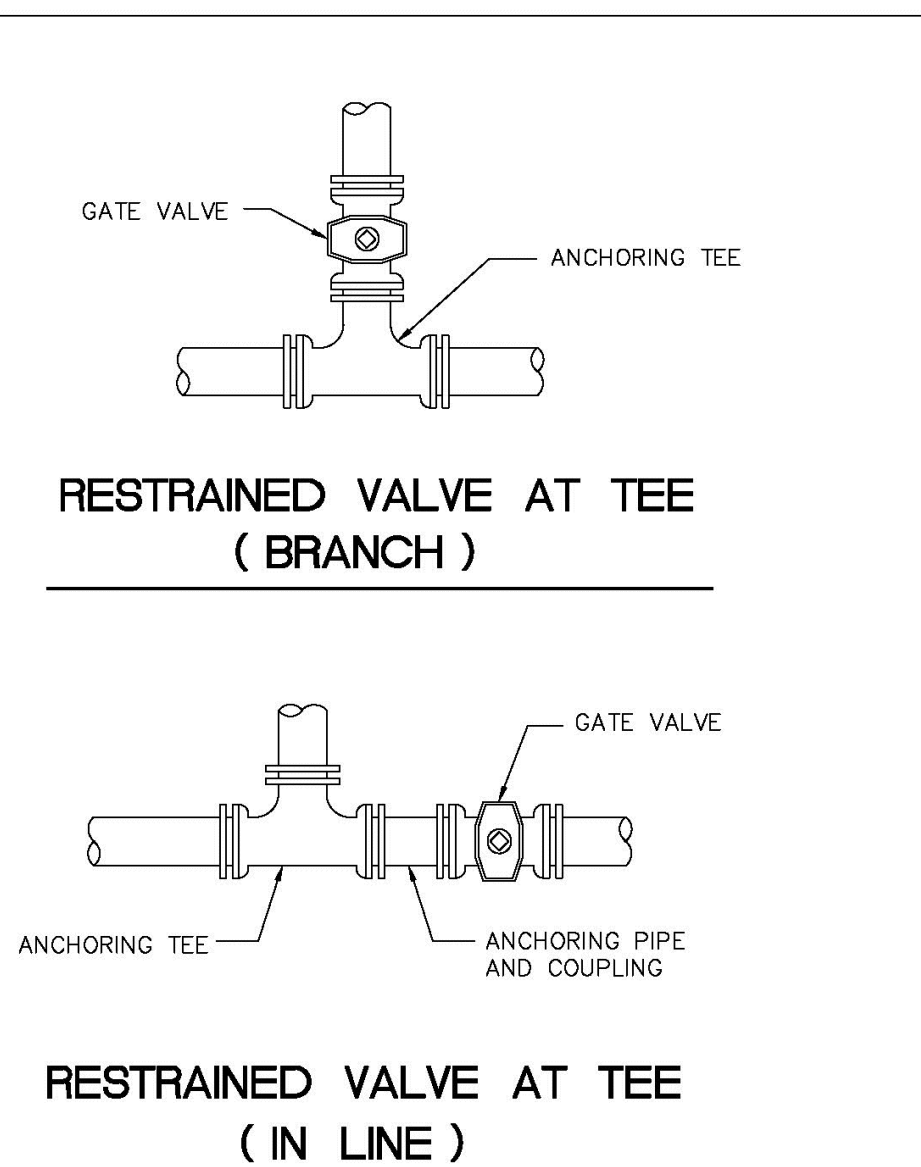
ENGINEERING STANDARDS 2025				
REVISIONS		ENGINEERING DIVISION CITY OF POMPAÑO BEACH	METER INSTALL DIMENSION LIST	
BY	DATE		DATE: JAN, 2022 DWG. NO. 106-4	
T.W.	02-2008			
S.S.	11-2016			
A.S.	01-2022		SCALE: N.T.S.	



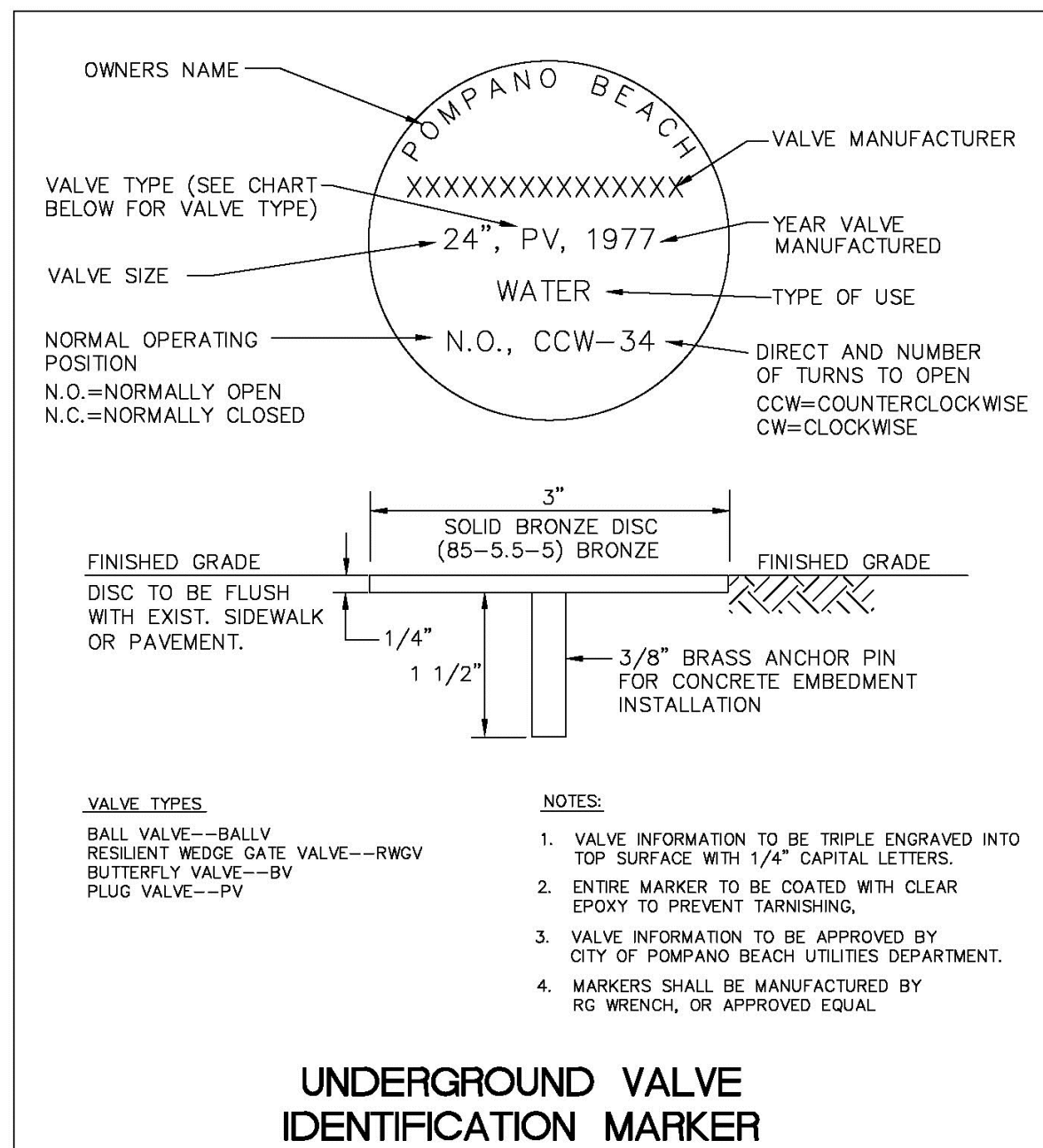
ENGINEERING STANDARDS 2025				
REVISIONS		ENGINEERING DIVISION CITY OF POMPANO BEACH	TYPICAL CONFLICT (WATER)	
BY	DATE			
S.S.	04-2005		DATE: MAY 2022 DWG. NO. 108-1	
S.S.	01-2012			
SCALE: N.T.S.				



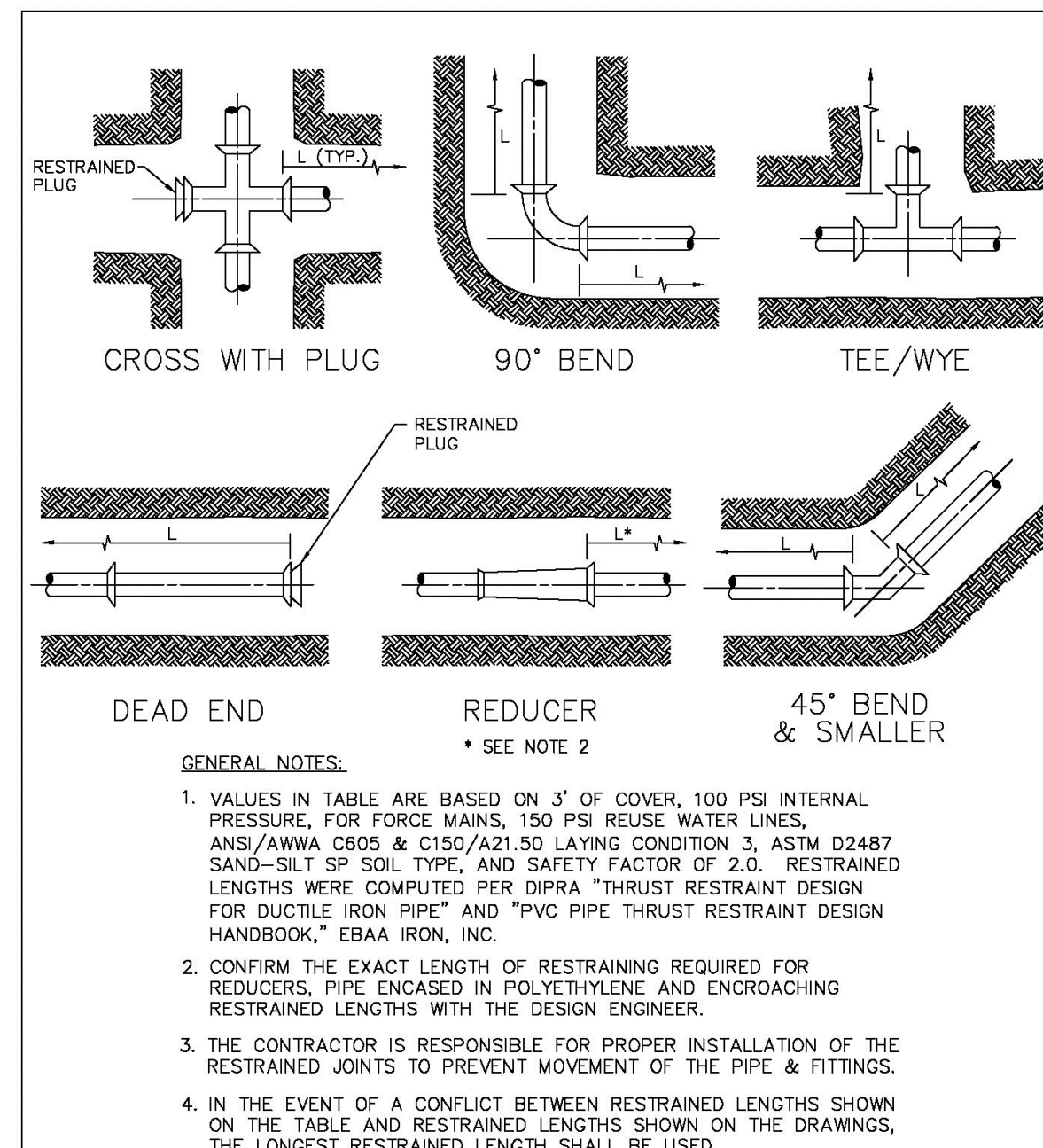
ENGINEERING STANDARDS 2025			
REVISONS		ENGINEERING DIVISION CITY OF POMPANO BEACH	FIRE HYDRANT ASSEMBLY
BY	DATE		
T.W.	11-2007		
T.W.	10-2010		
S.S.	2-2012		
S.S.	11-2012		
SCALE: N.T.S.		DATE: MAY 2022 DWG. NO. 109-1	



ENGINEERING STANDARDS 2025			
REVISIONS		ENGINEERING DIVISION CITY OF POMPANO BEACH	RESTRAINED VALVE AT TEE
BY	DATE		
S.S.	JUNE 2005		
SCALE: N.T.S.		DATE: MAY 2022 DWG. NO. <b>111-1</b>	



ENGINEERING STANDARDS 2025				
REVISIONS		ENGINEERING DIVISION CITY OF POMPANO BEACH	UNDERGROUND VALVE IDENTIFICATION MARKER	
BY	DATE		DATE: FEB. 2022 DWG. NO. 115-1	
S.S.	JUNE 2005			
T.W.	11-2007			
T.W.	02-2008			
S.S.	1-24-12	SCALE: N.T.S.		



ENGINEERING STANDARDS 2025			
REVISIONS		ENGINEERING DIVISION CITY OF POMPANO BEACH	RESTRAINED JOINT INFORMATION
BY	DATE		
SCALE: N.T.S.		DATE: MAY 2022 DWG. NO.	118-1

PVC HORIZONTAL BENDS AND VERTICAL UP BENDS					
PIPE SIZE (IN.)	RESTRAINED JOINT LENGTH L (MINIMUM DISTANCE IN FEET FROM FITTING – EACH WAY)				CROSS WITH PLUG LOAD IN TIE/WYE
	BENDS				
	90°	45°	22.5°	11.25°	
6	26	11	6	3	53
8	33	14	7	4	68
12	46	19	10	5	96

PVC VERTICAL DOWN BEND				
PIPE SIZE (IN.)	RESTRAINED JOINT LENGTH L (MINIMUM DISTANCE IN FEET FROM FITTING - EACH WAY)			
	BENDS			
	90°	45°	22.5°	11.25°
6	26	11	6	3
8	33	14	7	4
12	46	19	10	5

DIP HORIZONTAL BENDS AND VERTICAL UP BENDS					
		RESTRAINED JOINT LENGTH <sup>L</sup> (MINIMUM DISTANCE IN FEET FROM FITTING – EACH WAY)			
PIPE SIZE (IN.)	BENDS				CROSS WITH PLUG DEAD END TEL/WTE
	90°	45°	22.5°	11.25°	
12"	68	28	14	7	144
24"	119	49	24	12	258

DIP VERTICAL DOWN BEND				
	RESTRAINED JOINT LENGTH <sup>L</sup> (MINIMUM DISTANCE IN FEET FROM FITTING - EACH WAY)			
PIPE SIZE (IN.)	BENDS			
	90°	45°	22.5°	11.25°
12"	144	60	29	14
24"	258	107	51	25

ENGINEERING STANDARDS 2025			
REVISIONS		ENGINEERING DIVISION CITY OF POMPANO BEACH	RESTRAINED JOINT INFORMATION
BY	DATE		
SCALE: N.T.S.		DATE: MAY 2022	118-2
		DWG. NO.	

MIN. LENGTH OF PIPE (FEET) TO BE RESTRAINED (SOURCES: EARTH FROM RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 51, AND DIPA. DRAINAGE RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 32)												
FITTING TYPE	PIPE SIZE											
	4"	6"	8"	10"	12"	16"	20"	24"	30"	36"	42"	48"
80° HORIZ. BEND	14	20	25	30	35	45	62	88	124	152	184	135
90° HORIZ. BEND	6	8	11	13	15	19	23	26	41	51	58	58
22.5° HORIZ. BEND	3	4	5	6	7	9	11	12	19	22	27	29
11.25° HORIZ. BEND	2	3	4	5	6	8	10	11	18	21	26	28
90° VERT. BEND	10	14	18	23	28	34	46	65	116	134	214	268
45° VERT. BEND	7	10	13	16	19	25	30	35	57	66	74	83
22.5° VERT. BEND	12	19	24	29	34	38	48	56	88	102	114	126
11.25° VERT. BEND	3	4	6	7	8	10	12	13	23	27	31	34
PLUG (HEAD END)	3	4	6	9	12	14	17	19	23	27	43	55
22.5° VERT. STOP	1	2	4	4	5	6	8	9	11	13	15	16
11.25° VERT. STOP	3	4	6	7	8	9	11	13	21	24	27	30
TEE (HEAD END)	1	1	1	2	2	3	3	3	6	6	7	8
PLUG (HEAD END)	32	45	59	70	83	107	129	151	214	246	278	304
IN-LINE WELD	10	14	18	22	26	35	56	85	120	152	180	193
4" x 6"	21	26	-	-	-	-	-	-	-	-	-	-
6" x 8"	23	30	-	-	-	-	-	-	-	-	-	-
8" x 10"	24	31	-	-	-	-	-	-	-	-	-	-
10" x 12"	18	24	47	-	-	-	-	-	-	-	-	-
12" x 16"	18	26	48	58	-	-	-	-	-	-	-	-
14" x 18"	13	20	44	57	69	-	-	-	-	-	-	-
16" x 20"	7	11	24	31	42	50	80	103	128	158	193	228
20" x 24"	1	21	38	52	65	88	109	-	-	-	-	-
24" x 30"	1	18	34	49	62	86	108	129	-	-	-	-
30" x 36"	1	16	31	46	58	80	102	126	148	180	218	260
36" x 42"	1	12	25	35	46	60	103	124	160	240	-	-
42" x 48"	1	11	22	33	43	57	70	102	125	205	230	270
48" x 54"	1	7	17	27	34	45	57	97	120	203	236	286
54" x 60"	1	7	17	27	34	45	57	97	120	203	236	286
60" x 66"	1	7	17	27	34	45	57	97	120	203	236	286
66" x 72"	1	7	17	27	34	45	57	97	120	203	236	286
72" x 78"	1	7	17	27	34	45	57	97	120	203	236	286
78" x 84"	1	7	17	27	34	45	57	97	120	203	236	286
84" x 90"	1	7	17	27	34	45	57	97	120	203	236	286
90" x 96"	1	7	17	27	34	45	57	97	120	203	236	286
96" x 102"	1	7	17	27	34	45	57	97	120	203	236	286
102" x 108"	1	7	17	27	34	45	57	97	120	203	236	286
108" x 114"	1	7	17	27	34	45	57	97	120	203	236	286
114" x 120"	1	7	17	27	34	45	57	97	120	203	236	286
120" x 126"	1	7	17	27	34	45	57	97	120	203	236	286
126" x 132"	1	7	17	27	34	45	57	97	120	203	236	286
132" x 138"	1	7	17	27	34	45	57	97	120	203	236	286
138" x 144"	1	7	17	27	34	45	57	97	120	203	236	286
144" x 150"	1	7	17	27	34	45	57	97	120	203	236	286
150" x 156"	1	7	17	27	34	45	57	97	120	203	236	286
156" x 162"	1	7	17	27	34	45	57	97	120	203	236	286
162" x 168"	1	7	17	27	34	45	57	97	120	203	236	286
168" x 174"	1	7	17	27	34	45	57	97	120	203	236	286
174" x 180"	1	7	17	27	34	45	57	97	120	203	236	286
180" x 186"	1	7	17	27	34	45	57	97	120	203	236	286
186" x 192"	1	7	17	27	34	45	57	97	120	203	236	286
192" x 198"	1	7	17	27	34	45	57	97	120	203	236	286
198" x 204"	1	7	17	27	34	45	57	97	120	203	236	286
204" x 210"	1	7	17	27	34	45	57	97	120	203	236	286
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216" x 222"	1	7	17	27	34	45	57	97	120	203	236	286
222" x 228"	1	7	17	27	34	45	57	97	120	203	236	286
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234" x 240"	1	7	17	27	34	45	57	97	120	203	236	286
240" x 246"	1	7	17	27	34	45	57	97	120	203	236	286
246" x 252"	1	7	17	27	34	45	57	97	120	203	236	286
252" x 258"	1	7	17	27	34	45	57	97	120	203	236	286
258" x 264"	1	7	17	27	34	45	57	97	120	203	236	286
264" x 270"	1	7	17	27	34	45	57	97	120	203	236	286
270" x 276"	1	7	17	27	34	45	57	97	120	203	236	286
276" x 282"	1	7	17	27	34	45	57	97	120	203	236	286
282" x 288"	1	7	17	27	34	45	57	97	120	203	236	286
288" x 294"	1	7	17	27	34	45	57	97	120	203	236	286
294" x 300"	1	7	17	27	34	45	57	97	120	203	236	286
300" x 306"	1	7	17	27	34	45	57	97	120	203	236	286
306" x 312"	1	7	17	27	34	45	57	97	120	203	236	286
312" x 318"	1	7	17	27	34	45	57	97	120	203	236	286
318" x 324"	1	7	17	27	34	45	57	97	120	203	236	286
324" x 330"	1	7	17	27	34	45	57	97	120	203	236	286
330" x 336"	1	7	17	27	34	45	57	97	120	203	236	286
336" x 342"	1	7	17	27	34	45	57	97	120	203	236	286
342" x 348"	1	7	17	27	34	45	57	97	120	203	236	286
348" x 354"	1	7	17	27	34	45	57	97	120	203	236	286
354" x 360"	1	7	17	27	34	45	57	97	120	203	236	286
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366" x 372"	1	7	17	27	34	45	57	97	120	203	236	286
372" x 378"	1	7	17	27	34	45	57	97	120	203	236	286
378" x 384"	1	7	17	27	34	45	57	97	120	203	236	286
384" x 390"	1	7	17	27	34	45	57	97	120	203	236	286
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432" x 438"	1	7	17	27	34	45	57	97	120	203	236	286
438" x 444"	1	7	17	27	34	45	57	97	120	203	236	286
444" x 450"	1	7	17	27	34	45	57	97	120	203	236	286
450" x 456"	1	7	17	27	34	45	57	97	120	203	236	286
456" x 462"	1	7	17	27	34	45	57	97	120	203	236	286
462" x 468"	1	7	17	27	34	45	57	97	120	203	236	286
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474" x 480"	1	7	17	27	34	45	57	97	120	203	236	286
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486" x 492"	1	7	17	27	34	45	57	97	120	203	236	286
492" x 498"	1	7	17	27	34	45	57	97	120	203	236	286
498" x 504"	1	7	17	27	34	45	57	97	120	203	236	286
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516" x 522"	1	7	17	27	34	45	57	97	120	203	236	286
522" x 528"	1	7	17	27	34	45	57	97	120	203	236	286
528" x 534"	1	7	17	27	34	45	57	97	120	203	236	286
534" x 540"	1	7	17	27	34	45	57	97	120	203	236	286
540" x 546"	1	7	17	27	34	45	57	97	120	203	236	286
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552" x 558"	1	7	17	27	34	45	57	97	120	203	236	286
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570" x 576"	1	7	17	27	34	45	57	97	120	203	236	286
576" x 582"	1	7	17	27	34	45	57	97	120	203	236	286
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588" x 594"	1	7	17	27	34	45	57	97	120	203	236	286
594" x 600"	1	7	17	27	34	45	57	97	120	203	236	286
600" x 606"	1	7	17	27	34	45	57	97	120	203	236	286
606" x 612"	1	7	17	27	34	45	57	97	120</			

ENGINEERING STANDARDS 2025			
REVISIONS		ENGINEERING DIVISION CITY OF POMPANO BEACH	RESTRAINED JOINT INFORMATION
BY	DATE		
SCALE: N.T.S.		DATE: MAY 2022	118-3
		DWG. NO.	

[illegible]