

GENERAL NOTE(S):

1. THIS TABLE IS BASED ON THE RESTRAINT CALCULATION SOFTWARE PROVIDED FREE OF CHARGE BY EBAA IRON INC. AT <http://www.ebaa.com/engineering.htm> AND THE FOLLOWING INPUT VARIABLES:

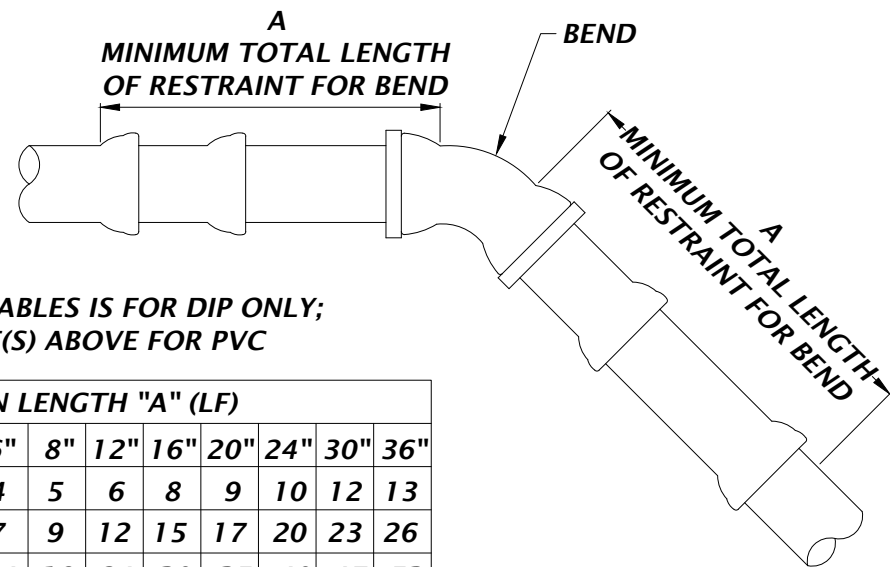
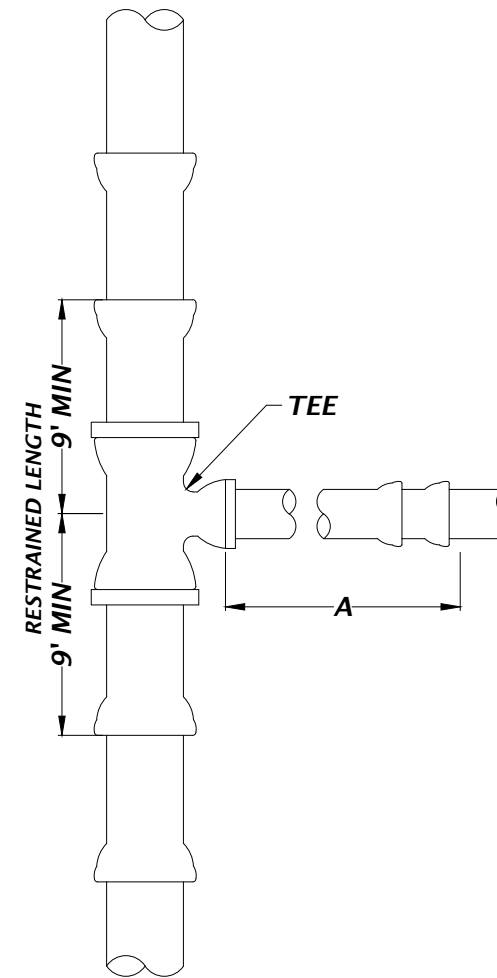
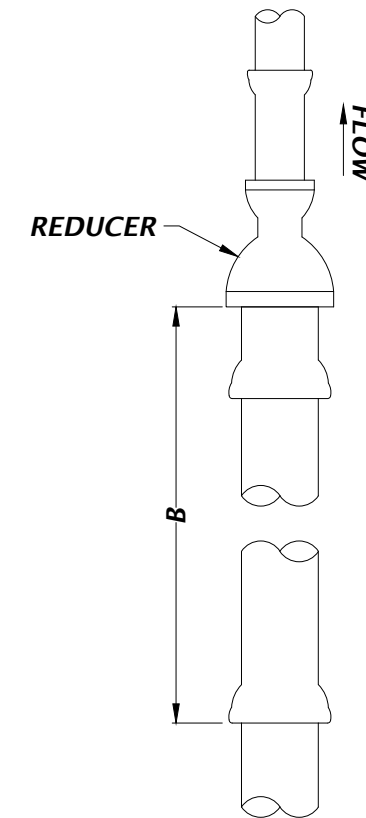
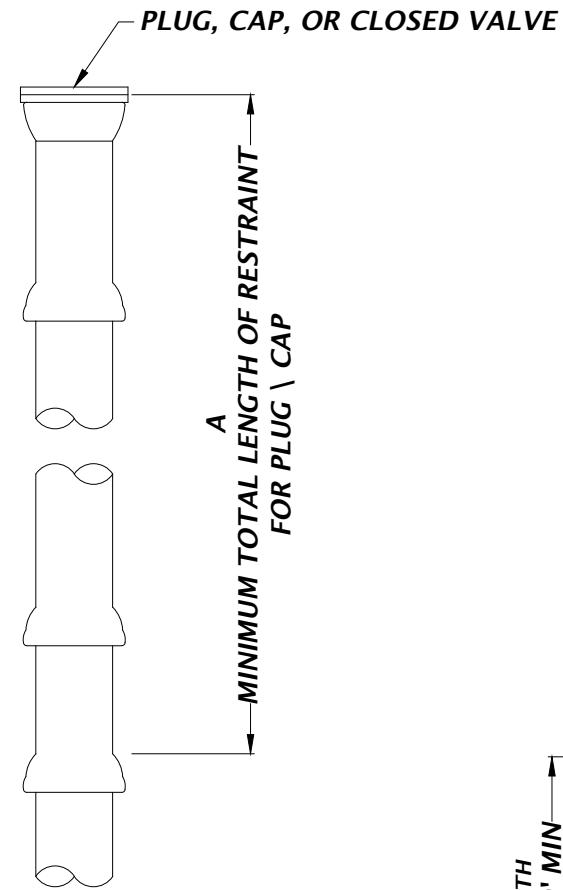
- A. MAXIMUM TEST PRESSURE OF 150 PSI
- B. LAYING CONDITION TYPE 3
- C. POOR SOIL CONDITIONS (SOIL TYPE ML)
- D. USING DIP
- E. 2 FEET OF COVER
- F. HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
- G. SAFETY FACTOR = 1.5 TO 1

2. FOR POLYWRAPPED DIP, MULTIPLY THE FOOTAGE BY 1.50

3. FOR PVC PIPE, MULTIPLY FOOTAGE BY 1.34

4. RESTRAIN PUSH-ON JOINTS OR MECHANICAL JOINTS WITH EBBA MEGALUG PRODUCTS. PIPE VENDOR'S RESTRAINED JOINT SYSTEM WILL BE SUBJECT TO SUBMITTAL REVIEW AND APPROVAL BY ENGINEER / COA.

5. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.



NOTE: THIS TABLES IS FOR DIP ONLY; SEE NOTE(S) ABOVE FOR PVC

RESTRAIN LENGTH "A" (LF)									
FITTING	4"	6"	8"	12"	16"	20"	24"	30"	36"
1 1/4° BEND	3	4	5	6	8	9	10	12	13
2 1/2° BEND	5	7	9	12	15	17	20	23	26
45°/OFFSET	10	14	18	24	30	35	40	47	53
90° BEND	24	33	42	58	72	85	97	112	126
DEAD END	42	58	75	104	131	157	181	213	243

A=MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED.

FITTING SIZE	RESTRAIN (LF)	
	TEE "A"	REDUCER "B"
4x4	21	*
6x4	10	30
6x6	37	*
8x4	A.T.	54
8x6	28	32
8x8	54	*
12x4	A.T.	90
12x6	11	76
12x8	37	55
12x12	82	*
16x6	A.T.	111
16x8	21	96
16x12	66	56
16x16	109	*
20x6	A.T.	141
20x8	8	130
20x12	51	99
20x16	93	55
20x20	134	*
24x6	A.T.	168
24x8	A.T.	159
24x12	37	134
24x16	77	99
24x20	117	54
24x24	157	*
30x6	A.T.	203
30x8	A.T.	196
30x12	20	177
30x16	57	150
30x20	94	116
30x24	132	75
30x30	189	*
36x6	A.T.	235
36x8	A.T.	229
36x12	7	214
36x16	40	193
36x20	74	166
36x24	109	133
36x30	162	74
36x36	218	*

A.T.=RESTRAINT REQUIRED AT TEE ONLY.
*-NOT APPLICABLE