



LENGTH OF RESTRAINED PIPE

NOMINAL PIPE ϕ	4"	6"	8"	12"	16"	20"
FITTING	L	L	L	L	L	L
90° BEND, TEE, DEAD END	30'	46'	61'	90'	116'	141'
VALVE	30'	46'	61'	90'	116'	141'
45° BEND	9'	13'	18'	26'	34'	41'
22 1/2° BEND	2'	3'	5'	7'	9'	11'
11 1/4° BEND	1'	1'	1'	2'	2'	3'

NOTES:

1. LENGTH OF RESTRAINED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. MINIMUM 4'-6" GROUND COVER REQUIRED.
3. BASED ON 150 POUNDS PER SQUARE INCH WORKING PRESSURE.
4. CROSSES MUST BE RESTRAINED IN ALL DIRECTIONS.
5. WHEN REDUCERS ARE USED ON A VALVE INSTALLATION THE LENGTH OF RESTRAINT SHALL BE BASED ON THE SIZE OF THE PIPE NOT THE SIZE OF THE VALVE.
6. WHEN INSTALLING VALVES ON EXISTING MAINS 12" AND SMALLER, USE MECHANICAL RESTRAINTS IN ACCORDANCE WITH MS-29 ON INSTALLED VALVES AND ASSOCIATED FITTINGS. REMOVE ALL PUSH ON JOINTS WITHIN THE EXCAVATION.

ERRATA 6

 DENVER WATER	
LENGTH OF RESTRAINED PIPE	
Scale: <u> NONE </u>	Date: <u> November 2015 </u>
Drawn: <u> RLB </u>	Ck: <u> K ROSS </u>
Approved: <u> Steph C. Row </u>	Dr. <u> 127 </u> No. <u> 35 </u>