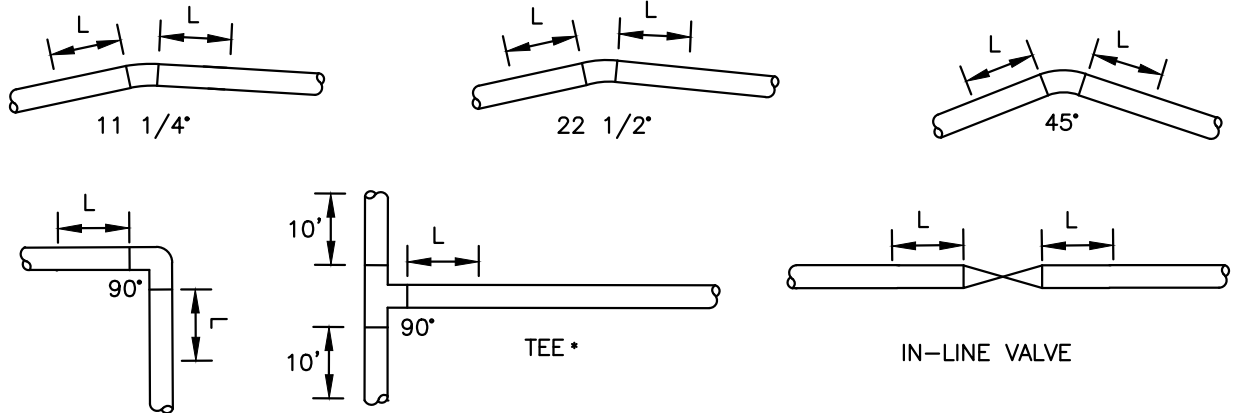


HORIZONTAL BENDS



| HORIZONTAL - L (FEET) | | | | | | |
|-----------------------|---------|---------|-----|-----|------------------|-----------------------|
| DIAMETER | 11-1/4° | 22-1/2° | 45° | 90° | TEE* (BRANCH) | VALVES OR DEAD END |
| 4" | 2 | 4 | 8 | 18 | 20 | 39 |
| 6" | 3 | 5 | 11 | 25 | 36 | 55 |
| 8" | 4 | 7 | 14 | 33 | 52 | 72 |
| 10" | 4 | 8 | 16 | 39 | 65 | 87 |
| 12" | 5 | 9 | 19 | 45 | 80 | 102 |
| 14" | 5 | 11 | 21 | 51 | 93 | 116 |
| 16" | 6 | 12 | 24 | 57 | 107 | 131 |
| 18" | 7 | 13 | 26 | 63 | 120 | 145 |
| 20" | 7 | 14 | 29 | 68 | 133 | 159 |
| 24" | 8 | 16 | 33 | 79 | 157 | 185 |
| 30" | 10 | 19 | 39 | 93 | 192 | 222 |
| 36" | 11 | 21 | 44 | 106 | 225 | 257 |
| 42" | 12 | 24 | 49 | 117 | 254 | 289 |
| 48" | 13 | 26 | 53 | 128 | 283 | 321 |
| | | | | | | |

NOTES:

1. THE REQUIREMENTS SET FORTH ABOVE WERE CALCULATED FOR PVC PIPE BASED UPON THE FOLLOWING ASSUMPTIONS:
 - SOIL CONDITIONS: SILTY SAND (SM)
 - TRENCH TYPE: 3 (PIPE BEDDED IN 4" MINIMUM OF LOOSE SOIL WITH BACKFILL LIGHTLY COMPACTED)
 - MINIMUM COVER: 3 FT
 - SAFETY FACTOR: 1.5
 - TEST PRESSURE: 150 PSI
 - * SIZE ON SIZE TEE & 5' LENGTH ALONG RUN
2. IF FIELD CONDITIONS DIFFER FROM THE ABOVE, THE ENGINEER-OF-RECORD (EOR) SHALL SUBMIT CALCULATIONS BASED ON THE FIELD CONDITION FOR REVIEW AND APPROVAL OF SLWSD.



**MINIMUM CONSTRUCTION STANDARDS FOR
ST. LUCIE WEST SERVICES DISTRICT
450 SW UTILITY DRIVE,
PORT SAINT LUCIE, FL 34986
PHONE: (772) 340-0220**

PIPELINE RESTRAINT REQUIREMENTS (HORIZONTAL)

**DETAIL: SLWG-05
DATE: 03/2020
SCALE: N.T.S.
SHEET: 1 OF 1**