

City Utilities Design Standards Manual

Exhibit W5-6 Minor Losses Worksheet 2

Created: January 1, 2002

Revised: June 10, 2014

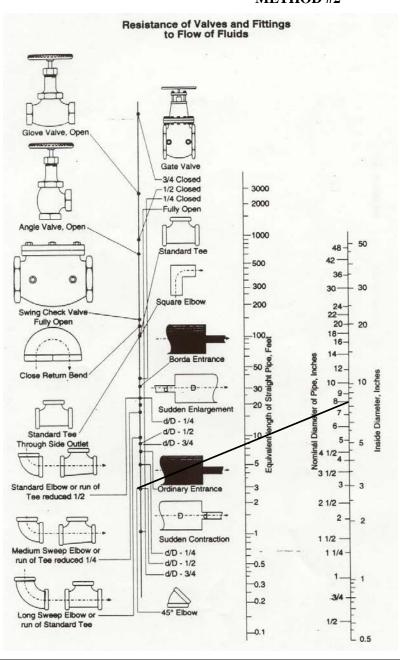
METHOD #1

Minor losses can be generalized into the pipe segment calculations by assuming a C factor of 10% less than original values.

Example: New PVC pipe without minor losses: C=120

New PVC pipe assuming minor losses: $C=108 (120 \times 0.9 = 108)$

METHOD #2



Determine Minor Losses by using equivalent lengths of pipe by drawing a straight line between the diameter of the pipe and the appropriate source of loss (fitting, valve, entrance, etc.), read the equivalent length of straight pipe.

Example:

Given: 45 degree elbow on 8" diameter line (see drawn line)

Solution: Equivalent length of straight pipe = 8 feet; Thus use 8 feet of 8" pipe for the friction loss calculations of the fitting.