## FIRE-WATER CALC WORKSHEET FOR _____

(Based upon the Hazen-Williams Formula)

NAME/ADDRESS OF PROJECT

## INFORMATION REQUIRED TO CALCULATE WATER SERVICE SIZE

1. Sprinkler Demand: 1 Sprinkler (gpm) ____ 2 Sprinklers (gpm) ____ Total GPM = _____
   Sprinkler Manufacturer; _____ Model # _____ K-Factor; _____
2. Difference in elevation from main to extermal pressure tank or to building control valve. (feet) _____
3. Size of the water meter when applicable. Example; 5/8, 3/4, 1, 2, 3, 4. _____
4. Developed length from main or external pressure tank to building control valve. (feet) _____
5. Low pressure at main in street or external pressure tank. (psig) _____

## CALCULATE WATER SERVICE PRESSURE LOSS

6. Low pressure at main in street or external pressure tank. (value of #5 above) _____
7. Water service diameter is _____ Material is _____ Pressure loss
   per 100 ft = _____ psi X _____ (decimal equivalent of service length, i.e. 65 ft = 0.65) _____
   (Subtract line 7. From line 6.) subtotal _____
8. Determine pressure gain or loss due to elevation. (multiply the value of #2 above by 0.434) value of "8" _____
9. Available pressure after the bldg. Control valve. (subtract or add line 8. Enter in "B".) **subtotal** _____

## CALCULATE THE PRESSURE AVAILABLE FOR UNIFORM LOSS (VALUE OF "A")

B. Available pressure after the building control valve. (from "9" above) value of "B" _____

C. Pressure loss of water meter. (when meter is required or installed) value of "C" _____
   (subtract line C. From B.) **subtotal** _____

D. Pressure at controlling sprinkler(s). value of "D" _____
   (controlling sprinkler(s) is _____)
   (subtract the value of D.) **subtotal** _____

E. Difference in elevation between the building control valve and
   the controlling sprinkler(s) in feet; _____ X 0.434 psi/ft. value of "E" _____
   (subtract the value of E.) **subtotal** _____

F. Pressure loss due to water treatment devices, instantaneous water heaters and backflow
   preventers which serve the controlling fixture. value of "F" _____
   Pressure loss due to _____ (subtract the value of F) **subtotal** _____

G. Developed length from building control valve to controlling sprinkler in feet _____ X 1.5 value of "G" _____
   (divide by the value of G.) **subtotal** _____
   (Note: Excesive number of fittings refer to material fitting pressure loss tables)
   Water distribution piping material is: _____

(multiply by 100) 100

A. Pressure available for uniform loss **"A" =** _____

Comments

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