



## Coffee Break Training - Fire Protection Series

### Access and Water Supplies: Fire Flow Formulas: Part 14: Insurance Services Office Needed Fire Flow: Communication Factor Values

No. FP-2013-49 December 3, 2013

**Learning Objective:** The student will be able to explain the communication factor variable,  $P_i$ , in the Insurance Services Office (ISO) Needed Fire Flow (NFF) formula.

Now we will describe communications or openings; they are the final variable in the ISO NFF formula:

$$NFF_i = (C_i) (O_i) [1 + (X_i + P_i)]$$

Where:

$X_i$  = a factor for exposure to adjacent buildings

$P_i$  = a factor for communications (openings) in party-walls

The factor for  $P_i$  depends upon the protection for communicating party-wall openings as well as the length and construction of communications between fire divisions. (See Coffee Break Training FP-2013-42 for an explanation of fire divisions.) Like the “exposure factor,”  $X_i$ , the factor for  $P_i$  is taken from a table in ISO’s “Guide for the Determination of Needed Fire Flow” document.

When there is more than one opening that, on any wall, communicates to another fire division, only the factor for the largest one is inserted into the formula. If there are no openings in adjacent walls, the value for  $P_i$  equals zero.

The following conditions are not included as communicating charges in the ISO NFF formula:

- Buildings that meet the ISO standards for being fully sprinklered.
- Residential buildings, including their outbuildings.
- Buildings that are ISO Construction Class 5 or 6. (See Coffee Break Training FP-2013-40.)
- Buildings that are ISO Construction Class 3 or 4 with C-1 or C-2 contents combustibility class. (See Coffee Break Training FP-2013-45.)

Next week’s Coffee Break Training will provide samples of the communications effect in the ISO NFF formula.

For a complete version of the ISO “Guide for the Determination of Needed Fire Flow,” visit [www.iso.com](http://www.iso.com).

For additional information on fire protection, see National Fire Academy classes at <http://www.usfa.fema.gov/nfa/>.



Inadequately protected openings between buildings allow fire and other products of combustion to spread, and they must be considered in the Insurance Services Office (ISO) Needed Fire Flow (NFF) formula.



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