SCHULTE & ASSOCIATES
Building Code Consultants
880D Forest Avenue
Evanston, IL 60202
fpeschulte@aol.com
504/644-8900

FIRE FIGHTER FATALITIES: STRUCTURAL FIRE FIGHTING

By Richard Schulte

> "*According to NFPA Fire Analysis and Research Department statistics, 250 fire-fighters died of injuries suffered at structure fires from 1997 to 2006. Of those, 44 were killed inside buildings as a result of structural collapses, and another nine were outside and struck when walls collapsed. Of the 44 killed inside, 24 were killed in roof collapses in 14 fires, 17 in floor collapses in 13 fires, two in a wall collapse in a fire, and one in a ceiling collapse.*"
>
> **Source:** "*It's not lightweight construction. It's what happens when lightweight construction meets fire.*", Alan R. Earls, NFPA Journal®, July/August 2009

According to statistics collected by the National Fire Protection Association (NFPA), more than 500,000 structure fires occurred annually in the United Sates during this same time period, 1997 to 2006. Based upon this, the fire fighter fatality rate due to structural collapse is 1 fire fighter fatality for each 20,000^{+} fires. In other words, fire fighter fatalities due to structural collapse are relatively rare.

In other words, fire fighter fatalities due to structural collapse are relatively rare.

One way to reduce the number of fire fighter fatalities (and injuries) which occur due to structural collapse is to heed the recommendations contained in **NIOSH 2005-132**, *Preventing Injuries and Deaths of Fire Fighters due to Truss System Failures*, and **NIOSH 2010-153**, *Preventing Deaths and Injuries of Fire Fighters using Risk Management Principles at Structure Fires*.

Of course, another way to reduce the number of fire fatalities (and injuries) at structure fires is to provide sprinkler protection in buildings, including single-family dwellings. Sprinkler protection not only protects building occupants from fire, but also provides protection for fire fighters.

The greatest impediment to providing sprinkler protection in buildings is still cost. One way to reduce the cost of installing sprinkler protection in buildings is through reductions in the requirements for passive fire protection when sprinkler protection is provided, commonly known as sprinkler “trade-offs”.

Sprinkler protection is a highly reliable form of fire protection, particularly when compared to the reliability of passive fire protection features (*e.g.*, fire doors, fire dampers, fire separations). With more than 3 decades of experience with sprinkler “trade-offs” under out belts, we know that sprinkler “trade-offs” do not endanger building occupants or fire fighters.

“*Sprinklers save lives*”.

* * * * *