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## FIRE FIGHTER SAFETY: ABANDONED BUILDINGS

By Richard Schulte

On the morning of Wednesday, December 22, 2010, the Chicago Fire Department (CFD) lost two fire fighters to a fire which occurred in an abandoned building. Losing fire fighters to an abandoned building is certainly something that should never happen (without good reason). Perhaps it's time for the Chicago Fire Department to take a look at its protocols for fire fighting in abandoned buildings. Other fire department around the country have done just that. One such department is the Flint (Michigan) Fire Department.

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The following are excerpts from a paper titled "*Vacant Structure Fires and Firefighter Injuries In The City Of Flint*" written by Primary Captain Andy Graves of the Flint Fire Department in June 2007.

*"How many firefighters are being injured during fires at vacant and abandoned buildings? The answer to that seemingly simple question led the City of Flint Fire Department to implement revolutionary changes in the way it approaches vacant and abandoned building fires. . .After firefighters performed property conservation measures at vacant and abandoned buildings, it was found that*

*the overwhelming majority of such structures simply remained abandoned, burned repeatedly, or was demolished. It was further found that firefighters were initiating interior attacks to attempt to save abandoned buildings that had been previously condemned for demolition by building inspectors. An aggressive interior operation aimed at property conservation of abandoned buildings was conclusively found to be a very dangerous exercise in futility."*

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*"In response to the study and investigation, Flint has implemented its first-ever NFPA 1500-based policy specifically addressing fire-ground operations at vacant and abandoned buildings. At abandoned buildings, property conservation efforts are conducted using a more cautious, defensive approach. . . Through a cooperative effort with the City's Building Safety and Inspection Department, Battalion Chiefs now receive regularly updated lists of property scheduled for demolition to assist in making informed fireground decisions. Through the policy, the Department has greatly improved firefighter safety and has become a proactive partner in the identification and reporting of abandoned buildings."*

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*"Fires in vacant structures are a major problem in the City of Flint."*

*"62% of the Department's fireground injuries occurred at vacant structure fires."*

*"Out of the 767 total structure fires dispatched, 443 resulted in a report of an actual structure fire occurring. The 443 actual structure fires involved 264 occupied structures and 179 vacant structures."*

*"Injuries occur more frequently at vacant structure fires and have a higher degree of severity."*

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*“Reports were then received from bystanders that a vagrant might be inside the building. Despite the appearance that the fire would be non-survivable for anyone inside, fire crews then made an interior attack into poor conditions. . . Crews were withdrawn from the building and defensive operations were resumed. Several hours after extinguishment, the remains of a civilian were discovered amidst collapsed debris in the basement.”*

*“We will not risk our lives at all for buildings or lives that are already lost.”*

*“When there is no ability to save lives or property, there is no justification to expose fire department members to any avoidable risk, and defensive fire suppression efforts are the appropriate strategy.”*

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*“The Fire Department of New York established a vacant building fire procedure in 1986. Some excerpts are as follows:*

- Members must psychologically adjust to a “no rush” approach. In these buildings, the life hazard is to the firefighter. A slower, more cautious operation is definitely indicated.*
- The life hazard at vacant building fires is almost solely that of our operating members. It must be stressed, the primary emphasis in vacant building operations is that of exterior attack.”*

*“A well-involved building would likely represent a zero survivability profile. Similar conditions in an abandoned building would indicate little survivability and little property to be saved and members should avoid an offensive fire fight.” (Source: Phoenix Fire Department)*

*“No level of risk to responders is acceptable in situations where there is no potential to save lives or property.” (Source: Fulton County (Georgia) Fire Department)*

*“In some cases, it is more heroic to not make an interior attack because that officer is placing the safety of their crew first, rather than feeling compelled to take an unnecessary risk.” (Source: Jonesboro (Arkansas) Fire Department)*

*“Many of the vacant buildings at which offensive attacks were initiated were abandoned properties that had no civilian life hazard and essentially no measurable value before the fire, making for a dangerous exercise in futility. Firefighters must recognize that fires in vacant and abandoned structures require a different approach than a fire in an occupied structure. A fire in a vacant property, especially an open and abandoned property, should be viewed for what it truly represents: a uniquely dangerous hazard that is waiting to injure and kill firefighters.”*

*Firefighters must recognize that fires in vacant and abandoned structures require a different approach than a fire in an occupied structure. A fire in a vacant property, especially an open and abandoned property, should be viewed for what it truly represents: a uniquely dangerous hazard that is waiting to injure and kill firefighters.”*

*“By fighting fires in vacant and abandoned buildings in a smarter and safer way, risk and injury to firefighters can be reduced.”*

## **Analysis**

On the evening of June 18, 2007, the Charleston Fire Department ignored basic fire fighter safety precautions at the Sofa Super Store. In a little less than 30 minutes after arriving at the one story building, nine fire fighters were lost in smoke of what began as a trash fire on the exterior of the building. The events which occurred at the Sofa Super Store should have been a lesson to every fire department in the United States of the importance of fire fighter safety. Apparently, the lessons of the Sofa Super Store fire were lost on the Chicago Fire Department.

A newspaper story on the fire which appeared on the Chicago Sun-Times website titled *“When tragedy strikes, no one knows the drill”* written by Mark Brown dated December 22, 2010 included the following excerpts regarding the fire in Chicago:

*“This was not one of those situations where the firefighters were attacking the fire so aggressively as to call into question their approach or running into the flames for the obvious purpose of saving a young child. As described by [Fire Commissioner] Hoff, this sounded more like routine mop-up work, in case any squatters were occupying the building when the fire started.”*

*“Snippets from his remarks captured the essence of the stunning day. The fire crews arrived on the scene and “were making good progress,” [Fire Commissioner] Hoff said. The roof collapsed “without warning.” “Despite our best efforts” to rescue them, the two men died. All procedures had been followed “by the book.” He couldn’t say for sure whether the fire had even caused the roof to collapse, suggesting it might have been the snow and ice.”*

*“No matter how well you’re prepared, no matter how much experience you have on the job, a morning like this still takes you by surprise,” [Tom] Ryan [president of Fire Fighters Union Local 2] said.”*

*“. . . All procedures had been followed “by the book”. . . .”*

Another newspaper story on the fire which appeared on the Chicago Tribune website titled *“Fatal fire: Building owner told to fix roof in 2007”* written by Antonio Olivo and Ray Gibson (with contributions by Serena Maria Daniels and Will Lee) and dated December 23, 2010 contained the following excerpts:

*“After his South Shore laundry failed about six years ago, Chuck Dai said he gave up on the broken-down building on East 75th Street that he and a relative had been struggling to hold on to.”*

*“In 2007. . . the city cited them for 14 separate building code violations, records show.”*

*“The roof held “additional weights” that were improperly attached to the triangular wooden trusses that made up its underbelly, according to a 2007 court complaint. Violations also included cracked walls, broken and loose windows, a crumbling chimney, and a stagnant pool of sewage in the basement.”*

Another Chicago Tribune story on the fire titled *“Devasting”* written by Joel Hood, Annie Sweeney and Stacy St. Clair also dated December 23, 2010 included the following excerpts:

*“Though the front of the structure had a flat roof, the truss covered the back. There was no indication of structural damage when the firefighters entered, officials said.”*

*“City building inspectors had ordered the building's owners in 2007 to repair the roof, deeming it structurally unsound, court records show. Unable to pay for the repairs or mounting code enforcement fines, the building's owner, Chuck Dai, told the Tribune that he simply tried to keep it boarded up, but vagrants kept finding a way to break in.”*

*“City building inspectors had ordered the building's owners in 2007 to repair the roof, deeming it structurally unsound, court records show. . .”*

*“[Fire Commissioner] Hoff said firefighters always check abandoned buildings because it's common for people to take shelter there during the winter.”*

*““We can go into any vacant building somewhere and find someone who broke into a place to seek refuge to get out of the cold,” he said. “That's why we do what we do.””*

In short, the building where the two CFD fire fighters were lost was abandoned and the Chicago Building Department had noted that the building was structurally unsound prior to the fire. Add to that that the roof trusses in the building were exposed to fire and it seems obvious that putting fire fighters in the building and on the roof

*(See **NIOSH 2005-132**, **Preventing Injuries and Deaths of Fire Fighters due to Truss System Failures**, April 2005.)*

of the building was risky in the extreme. (See **NIOSH 2005-132**, **Preventing Injuries and Deaths of Fire Fighters due to Truss System Failures**, April 2005.) Given this, it seems reasonable to ask: would the two fire fighters be alive today if the Chicago Fire Department had observed the abandoned building protocols adopted by the Flint Fire Department, FDNY, the Phoenix Fire Department, the Fulton County Fire Department or the Jonesboro Fire Department (and recommended in NIOSH 2005-132)?

According to Captain Andy Graves' paper above, the FDNY adopted special procedures for fire fighting operations in abandoned buildings in 1986. There is little doubt that homeless folks also take refuge in vacant and abandoned buildings in Flint, Michigan and in New York City due to the cold. If the special fire fighting procedures for vacant and abandoned buildings have been successfully utilized by the various fire departments cited in Captain Graves' paper, it would seem that those special procedures should also be workable in the City of Chicago.

In the mid-1970's, the set of building and fire code ordinances referred to as the Chicago Building Code were ahead of their time. Unfortunately, code development in Chicago has stagnated over the last 30 years and the Chicago Building Code is now archaic. Chicago is one of the few cities, if not the only city in the United States, which does not use a model building code today.

At present, Chicago is considering the adoption of the International Building Code (IBC), but has yet to adopt the IBC. If my memory serves me well, the City of Chicago was considering adopting the BOCA National Building Code for well over 20 years (between 1980 and 2000), but just never got around to it. Perhaps Chicago will dilly-dally another 20 years before it adopts a modern building code and begins to participate in the model code development process.

Similarly, in the mid-1970's, the Chicago Fire Department was one of the top fire departments in the United States. As with the Chicago Building Code, the Chicago Fire Department seems to be living in the past. Fire fighters no longer hang on the back of apparatus in Chicago, but the CFD was one of the last fire departments in the United States where that practice was used.

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The Chicago Fire Department is a department which is “steeped in tradition” and old ways die hard. Perhaps the death of two fire fighters on December 22<sup>nd</sup> will be the impetus for the Chicago Fire Department to catch up with the fire service in the rest of the nation. Fire fighter safety is an important issue in departments throughout the nation. It’s time for the Chicago Fire Department to catch up to the FDNY, the Phoenix Fire Department, fire departments throughout the State of California and even the Flint Fire Department.

Changing the traditions and the “culture” of the Chicago Fire Department will be a difficult task. Is Fire Commissioner Robert Hoff up to the task? The first thing that the Commissioner and the rest of the Department will have to do is admit that the Chicago Fire Department is still using the old “book” on fire fighting. The new “book” on fire fighting used by departments around the country works everywhere else, so there is no reason why it can’t work in Chicago. Fortunately, Flint, Michigan is only a few hours drive away from Chicago.

Perhaps the deaths of these two fire fighters will drag the Chicago Fire Department out of the past and will be the last fire fighters to die in an abandoned building in Chicago.

May Chicago Fire Department fire fighters Edward Stringer and Corey Ankum rest in peace. Perhaps the deaths of these two fire fighters will drag the Chicago Fire Department out of the past and will be the last fire fighters to die in an abandoned building in Chicago. That would be a wonderful Christmas gift for the families of fire fighters who make up the Chicago Fire Department.

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