

**LINE OF DUTY
DEATH REPORT
REPORT SLIDES**



F2019-09

Paid-On-Call Fire Fighter
Becomes Disorientated and Dies
Following Stairway Collapse in
Two-Story Vacant Structure Fire –
Illinois



Summary

- On May 5, 2019, a 24-year-old career firefighter became disorientated and died following a stairwell collapse on the 2nd floor during a fire in a vacant commercial structure.
- Upon arrival the Engine 201 lieutenant and the assistant chief noticed heavy smoke on Side Charlie and the 2nd story windows on Side Bravo.
- Engine 204 arrived and connected to a hydrant on Side Bravo.
- The lieutenant and a firefighter from Engine 201 made entry after forcing open the south door on Side Bravo to search the 1st floor.



Side Bravo of the fire building.
(NIOSH photo)



Summary



Side Bravo north and south doors, shown left to right. Engine 201 firefighters placed a ground ladder to the completely cleared window on the 2nd floor. *NIOSH Photo*

- Engine 201 took tools and a 1¾-inch hoseline off Engine 204 into the structure to perform a search.
- They encountered a mattress and debris on fire near the middle of the structure and some fire along an east wall (Side Delta).
- After extinguishing the fire and completing their search of the 1st floor, they exited the building, and changed their SCBA cylinders.
- At approximately 0357 hours, the municipal fire chief and additional resources arrived on scene. Ground ladders were placed at windows on Side Bravo while a Side Bravo door was forced open.
- The lieutenant and firefighter from Engine 201 were preparing to re-enter the building.



Summary

- They came to the open door and noticed the stairs to the 2nd floor.
- Several stairs appeared to be structurally unsound, so a roof ladder was used to bridge the stairs.
- They ascended to the 2nd floor with a hoseline, hand tools, and a thermal imager carried by the lieutenant.
- The thermal imager indicated heat on the Side Delta wall but no fire.
- They met the assistant chief, who had ascended one of the ground ladders to the 2nd floor.



The stairwell against Side Charlie where the lieutenant and firefighter made entry to 2nd floor. The lieutenant was rescued by RIT underneath of the stairwell.

Photo by NIOSH



Summary

- Assistant Chief 2 felt his ears starting to burn and said that the firefighters needed to back out of the 2nd floor.
- Assistant Chief 2 indicated he was going to exit via the ground ladder.
- The lieutenant misunderstood and thought Assistant Chief 2 was getting low on air.
- The lieutenant noticed conditions worsening and indicated to the firefighter the need to exit the 2nd floor.
- The lieutenant believed the firefighter was right behind him as he started down the stairs.
- As he stepped on the roof ladder lying on the stairs, the stairs collapsed sending him under the stairwell, covering him with debris.
- The lieutenant immediately called a Mayday.
- The lieutenant called out for the firefighter.

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Side Charlie door with A/C unit over top of it. The stairwell landing to 2nd floor that collapsed is just above door and A/C unit inside the wall.
Photo by NIOSH



The Delta Exposure 1 first floor roof. The third window from left was used by RIT to recover firefighter.
Photo by NIOSH



Summary

- The rapid intervention team (RIT) was sent in and was able to pull the lieutenant out.
- The lieutenant indicated the firefighter must still be on the 2nd floor.
- RIT teams made several attempts to access the 2nd floor via the ground ladders.
- They could not advance towards the middle of the building due to deteriorating conditions.
- The strategy was switched to defensive operations until the fire was knocked down.
- At approximately 0541 hours, Engine 3 from an adjoining county fire department arrived with a specialized RIT crew of four firefighters.
- The RIT accessed the firefighter by using the roof of the one-story Side Delta exposure (Delta 1).
- The RIT entered a 2nd floor window on Side Delta of the fire building.
- Following the sound of a personal alarm safety system alarm, the RIT located the firefighter, approximately 2 hours and 27 minutes after the Mayday.
- The fallen firefighter was placed in a stokes basket, lowered to the ground, and loaded into an ambulance.

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A view of the 2nd floor from Delta 1 Exposure roof. Note the hole in the Side Charlie/Side Delta corner. The red star indicates the approximate location of downed firefighter.

Photo by NIOSH



A view of the 2nd floor looking from Side Charlie/Delta corner to the Side Alpha/Side Bravo corner. The hole in the floor is approximately 10 feet x 25 feet on Side Charlie/Side Delta corner where the stairwell was located. The downed firefighter (indicated by red star) was located approximately 10 feet to the right of the mattress near the right corner of the hole. *Photo by NIOSH*



Contributing Factors

- High risk/low frequency event – abandoned commercial structure
- Lack of firefighter survival skills
- Insufficient incident management
- Lack of crew integrity
- Lack of mutual aid box alarm system training



Recommendations

- Fire departments should ensure a standard operating procedure/standard operating guideline for high risk/low frequency events is developed, implemented, and firefighters are trained for fires in commercial structures.
- Fire departments should ensure firefighters are properly and repetitively trained in “out of air” and “low air” SCBA emergencies.
- Fire departments should ensure Mayday training programs are developed and implemented so firefighters are prepared to call a Mayday.
- Fire departments should ensure crews are properly assigned when operating in an Immediately Dangerous to Life and Health atmosphere.
- Fire departments should ensure firefighters communicate critical incident benchmarks to the incident commander throughout the incident.
- Fire departments should ensure all fireground ventilation is coordinated with firefighting operations.



Recommendations

- Fire departments should ensure a single, effective incident management system is established with one designated incident commander, especially when multiple fire departments respond to automatic aid incidents.
- Fire departments should ensure firefighters are trained in fireground survival procedures.
- Fire departments, local and municipal governments, and authorities having jurisdiction that have adopted the Mutual Aid Box Alarm System should participate in joint area-wide training exercises so that consistent procedures can be implemented and enforced.
- Fire departments should ensure adequate incident scene rehabilitation is established in accordance with NFPA 1584, *Standard on the Rehabilitation Process for Members during Emergency Operations and Training Exercises*.
- Municipalities should ensure fire department telecommunicators are properly trained and certified, which includes the operation of alarm box cards for proper dispatching of resources.

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