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Report of the Week

"Vent when needed, but come dressed for the occasion."

10/11/2012

Report Number: 12-0000241

Report Date: 08/30/2012 15:13

Synopsis

Roof collapses under FF during commercial fire.

Event Description

Note: Brackets denote reviewer de-identification.

On August 1, 2012 at around 0330 my truck company was responded to a fire in a building call. This call had come in originally as a water flow alarm which is only a single engine response. Once that engine arrived and saw smoke they called for a full alarm.

My truck company responded and upon arrival was assigned to roof operations. It was raining out that morning which further delayed our response time. When we arrived the first due engine had already placed a ground ladder to the "A/B" corner with a saw waiting for us on the ground. My engineer placed another ladder on the "A/D" corner.

This was an office building wood frame construction with a flat roof. There was a large dome on top of the building to the "D" side. The building was over 5000 square feet because it had sprinklers. This was basically a square box with an entrance on each side directly in the middle.

We had smoke showing from the interior of the building and smoke coming from the dome area of the roof. The dome had several vents located on it. This is where the majority of smoke came from on the roof.

The events are as follows:

My truck company climbed to the roof via the ladder on the "A/B" corner. We were on the roof with three. We sounded and used the TIC to traverse the area. Once on the roof we could see the majority of heat was located in the dome and on the "D" side via the TIC. There were heat signatures going from the "D" side to the B side almost directly in the middle of the structure.

We worked our way over to the dome hoping to be able to ventilate the building via the dome. As we got close to the dome the area around the dome was not stable enough to work on. We backed away from the dome and made our first ventilation hole. This was near the "D" side to the middle of the building as close to the dome as possibly safe.

We then worked our way back towards the "B" side and located the area for our next ventilation hole. Again, using the TIC and sounding as we moved. The area

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was sounded and we began cutting. My firefighters were working to the "D" side of a main beam in the middle of the building. At this point I began looking with the TIC at the area around us looking for the next area we would ventilate. I did have heat signatures on the TIC, but nothing like what you would expect for a large working fire underneath you. The signatures were very pronounced on the "D" side and faded as they moved to the "B" side of the building.

I took one step off the main beam to the "B" side without sounding that spot. I was within arm's reach of my crew and I went right through the roof and into the attic. I watched my foot go through the roof and open up into nothing but orange. I put my arms out to my sides hoping to catch something to stop me from going through. The next thing I saw was nothing but orange all around me. I was waiting for the thud as I hit the ground but it never came. I had stopped and I did not care how. I could feel some very loose footing below me. I reached back and began pulling myself back up along with using the very limited footing I had. I looked around and there was nothing but fire blowing upward all around me. I watched as my microphone melted and I kept working my way back up to the roof. I finally got a hold of something solid and pulled myself to the roof line. At this point I saw my crew moving up behind me and within seconds I was back on top of the roof.

Firefighter [B] had felt the heat from the ventilation hole I created as I went through the roof. He looked over to see what was going on and saw that I had fallen through the roof. I was not able to be seen at that point. All he saw was a large amount of fire coming from the hole. He got Firefighter [A]'s attention and let him know I had fallen through the roof and they needed to call a mayday. Firefighter [A] looked over to the hole and at that point I was climbing back up so he was able to see me. I made it to the beam which was as far as I could get on my own. That is when he grabbed my pack and pulled me out. At the same time Firefighter [B] grabbed my legs as I came out of the roof.

I received minor burns to the left side of my face and to my left side just above my waist. My buddy breather caught as I fell through the roof moving my jacket just enough to open up a channel for the fire to come through. The burn on my face is located just behind where my mask covered.

This could have gone very bad for me but thanks to my turnouts and having them on properly my burns are minor. I credit my crew with everything else. Their ability to be cool and calm under pressure saved me from a fate I do not want to think about. My turnouts would not have withstood much more of the punishment they were going through. My crew did an amazing job of rescuing me. Thank you guys!

Please understand that all of this took place in less than ten seconds or there about.

My truck company was on the roof for a total of 11 minutes. During this time three holes were cut and I was rescued by my crew after falling into the attic below.

Lessons Learned

- Never ever put a foot down without first sounding that area like your life depends on it because it does.
- Do your best to stick to the main support beams even just one step off of them could be your last.
- Trust your TIC, but only in conjunction with solid sounding techniques.
- Never ever get on any roof without all of your PPE being on and ready for work. Also take good care of your PPE and it will take good care of you when it counts.

Demographics

Department type: Combination, Mostly paid

Job or rank: Captain

Department shift: 24 hours on - 24 hours off (4s & 6s)

Age: 43 - 51

Years of fire service experience: 17 - 20

Region: FEMA Region IX

Service Area: Urban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.

Event date and time: 08/01/2012 03:30

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Cloudy and Rain

Do you think this will happen again?

What were the contributing factors?

- Decision Making
- Human Error
- Individual Action

What do you believe is the loss potential?

- Life threatening injury

Report of the Week

Good day.

Operating above a hostile fire is a high risk event for firefighters. Fires that have gained control of the attic space are eating away at the structure that is supporting ventilation teams operating on the roof. The need to ventilate a roof varies from incident to incident, and when properly performed, provides exponentially favorable relief to crews inside. When the need to vent the roof is determined, it is imperative that all members of the ventilation team are fully equipped and properly dressed for the work. As we will see in this week's ROTW, [12-241](#), proper equipment and proper training avert a catastrophe.

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The full report for [12-241](#) provides additional details about this harrowing experience. The overall outcome is good because the firefighter that fell through the roof was wearing full PPE properly and the rest of his crew acted quickly. Once you have read the entire account of [12-241](#), the related reports and watched the related media, consider the following:

1. What is the minimum number of firefighters your department commits to roof ventilation at structure fires?
2. Of the firefighters listed in Question 1 above, which firefighter is responsible for safe operations while the crew is operating on the roof?
3. Does your department's roof ventilation SOP require a TIC as part of the tool/equipment complement?
4. Compare the details of 12-241 and the related media clips listed below. Are there any commonalities between the report and the clips?
5. When was the last time your PPE was properly inspected?

Roof ventilation will continue to be a high risk tactic in structural firefighting. Managing the risk requires attention to three critical areas: constant training and familiarization with proper roof ventilation techniques, a sound working knowledge of roof construction and fire behavior, and properly maintained and

worn PPE. This triad of risk reduction actions will promote the job getting done and the crew readied for the next task.

Related Reports – Topical Relation: Roof Ventilation, Proper PPE Wearing

[05-416](#)
[09-293](#)

[06-518](#)
[10-683](#)

[07-990](#)
[11-077](#)

[08-285*](#)

*See the Illustrated Case Studies section on the Resources Page for photos related to this near-miss report.

Related Media:

<http://www.youtube.com/watch?v=5Yooeuvielg>

<http://www.youtube.com/watch?NR=1&v=bAEC6cahexI&feature=endscreen>

Have you experienced a near miss during a roof ventilation operation? Did PPE save you from harm? Submit your report to www.firefighternearmiss.com today so everyone goes home tomorrow.

Note: The questions posed by the reviewers are designed to generate discussion and thought in the name of promoting firefighter safety. They are not intended to pass judgment on the actions and performance of individuals in the reports.

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