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Report of the Week

Could you make that an even dozen firefighters, please?
6/11/09

Report Number: 09-485
Report Date: 05/12/2009 0002

Synopsis
Lightweight failure causes firefighter to fall.

Demographics
Department type: Combination, Mostly paid
Job or rank: Driver / Engineer
Department shift: 24 hours on - 24 hours off
Age: 34 - 42
Years of fire service experience: 14 - 16
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: 11/26/2006 0600
Hours into the shift:
Event participation: Witnessed event but not directly involved in the event
Weather at time of event: Clear and Dry
Do you think this will happen again?

What were the contributing factors?
- Decision Making
- Human Error
- Situational Awareness

What do you believe is the loss potential?
- Lost time injury

Event Description
A total of seven personnel staffing 2 Engines, 1 Squad and a Chief Officer were dispatched to an automatic water flow alarm supported by a 911 telephone call at a local fast food restaurant. Once on scene, a cold smoke situation was encountered and two firefighters were assigned to locate and extinguish the fire. Visibility inside the building was zero and a thermal imaging camera was used to identify the seat of the fire. It was determined that the fire was in the attic space above the kitchen. Due to the visibility issue it was determined that vertical ventilation needed to be conducted to support the attack. The interior crew exited the structure and one of the firefighters was reassigned to the roof for vertical ventilation. After ventilation was completed the initial two interior firefighters were ordered back into the structure to locate the seat of the fire. Visibility was still zero. The interior crew made several attempts to pull ceiling and locate the seat of the fire but were unsuccessful in their efforts. Two additional firefighters were assigned back to the roof to extinguish visible fire in

the attic. While attempting to assess the extent of the fire in the attic, one of the firefighters operating on the roof fell through the weakened roof decking.

The firefighter suffered burn injuries as a result of this fall. His SCBA and facepiece were torn off by the rafters during the fall. Thankfully, the firefighter landed feet first about 10 feet from an exit and walked out to safety. This firefighter had been assigned to the interior attack team, redirected to the roof for vertical ventilation and assigned once more to the roof for extinguishment at the time of this incident.

Lessons Learned

The limited staffing assigned to this incident required multiple tasks to be completed one after another without coordinated efforts. This allowed for a longer burn time. It also required that the firefighter who fell to be reassigned to multiple tasks without rehab. This problem can be solved with an automatic mutual aid agreement or increased staffing levels.

There was an activated sprinkler in the attic space that was confining the fire. This created a pressurized smoke condition at the floor level. Once the sprinkler system was shut down, the smoke vented as we would have expected and the visibility cleared up instantly. This issue could be corrected with better situational awareness.

The decision was made to make an attack on the fire from the roof on a fire that had been burning for at least 20 minutes. The building was made of lightweight truss construction and an offensive attack was contraindicated.

The firefighter who fell failed to continually sound the roof. This situation could have been averted by sounding a roof while you travel.

Discussion Questions

Staffing levels impact performance. A limited number of firefighters arrive at the scene of 09-485 and try to do the work of many more. The end result is a near miss due to staffing that led to too few firefighters performing multiple tasks, fatigue that led to corrupted decision making, which then led to the firefighter working on the weakened roof and so on. The links in this near-miss chain are clearly identified. Once you have read 09-485 and the related reports, consider the following:

1. How does your department's first alarm response compare to the incident in 09-485 in relation to completing the tasks these firefighters were required to complete?
2. If your department responded to this incident with seven firefighters, what is the reflex time involved in assembling an additional seven? How about an additional 14?
3. Does your department have a philosophy of "self-sufficiency" or does it readily call for automatic and mutual aid to build personnel complements?
4. Would you characterize this incident as "typical?" If so, does the "typical" nature of the incident suggest that the department will or will not change practices?
5. At what point would you as a firefighter in this incident, speak up to address the issues here: on the incident scene, at a department meeting, or through a grievance process?

Related Reports
05-638 06-309 07-698 08-377.

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.