

AFTER-ACTION REPORT

**225 EAST MADISON ST FIRE
LANCASTER, PA**

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INTENT OF THIS REPORT

The intent of this report is to provide the Lancaster Bureau of Fire (LBF) leadership team with information that should be shared with first responders to improve administrative and operational efficiency. It is not intended as finger-pointing or placing blame, but a comprehensive review of the challenges faced by the first responders. The intent is to provide a framework to allow for problem identification, accountability and better command decisions, during the initial stages of a residential fire with the report of citizens trapped. The key to improving public service and personnel safety is by having all emergency protective action based on an on-going evaluation of risk management principles and proven fire service command procedures.

The investigation team would like to thank those who submitted reports and that were interviewed in discussing and providing valuable feedback about the fireground operations and rescue of a LBF member at the 225 East Madison Street fire.

BACKGROUND

The reviewers recognized that safe and efficient fireground operations requires regular ongoing training and emergency actions of all responders that must comply with the below listed documents. When considering the actions of responders at the residential fire at 225 East Madison Street these documents and the bibliography in Appendix C, was part of that review process.

- Homeland Security Presidential Directive (HSPD)-5, “Management of Domestic Incidents”, President George W. Bush ordered Director Thomas Ridge to develop and administer the National Incident Management System (NIMS). The NIMS document provides a consistent nationwide approach to emergency response. On March 1, 2004 NIMS became applicable to all jurisdictional levels. Three of the NIMS components are “Command and Management,” “Preparedness,” and “Resource Management.” All three components are designed to provide a standardized incident management structure to reduce the loss of life and property. This systematic and proactive approach requires compliance to the characteristics found in the Incident Command System (ICS). All of the NIMS ICS 100, 200, 300, and 400 courses focus on the clarification of roles and teams working in a coordinated manner at any emergency scene.
- The National Fire Protection Association’s (NFPA) Standard #1021 Standard for Fire Officer Professional Qualifications” (2009), NFPA Standard #1500 Standard on Fire Department Occupational Safety & Health Program (2007), NFPA Standard #1521 Standard for Fire Department Safety Officer (2008), NFPA Standard #1971 Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Firefighting (2007). These standards place a strong emphasis on preparedness and acceptable “risk-taking” by first responders.
- The National Fallen Firefighter’s Foundation (NFFF) has researched the common causes of acute line-of-duty deaths. A key element in that research is that in many cases it was found that command officers failed to maintain situational awareness and therefore do not stay ahead of changing conditions. The NFFF recommends advance planning, preparedness and decisive deployment of resources to improve the delivery of public safety and maximize personnel health and wellness.
- The National Institute for Occupational Safety and Health (NIOSH) found that the most common threads listed as contributing factors to firefighter fatalities are breakdowns in practical application of the concepts of the Incident Command System.
- Command and Control of Fire Department Operations at Multi-Alarm Incidents, Command and Control of Incident Operations: National Fire Academy Courses.
- The Advanced Safety Management and Operations, National Fire Academy class.
- Fundamentals of Fire Fighter Skills, a joint collaboration between the NFPA and the International Association of Fire Chiefs (IAFC), published by Jones and Bartlett.

THE INVESTIGATION

The 225 East Madison Street Fire was a tragedy taking the lives of a 39 year old adult female and a 6 year old female child. Additionally, the fire critically burned a fire lieutenant from Engine 3 and caused other firefighter injuries. Yet it was fortunate that the lieutenant and firefighter from Engine 3 were not killed at this incident. The lieutenant was saved due to training and aggressive actions taken by other firefighters to fight their way into the fire building while risking their own lives. The other firefighters were able to rescue the lieutenant while the Engine 3 firefighter was able to escape through a second floor front room window.

This after-action report was developed by receiving statements from the firefighters and fire officers who responded on the original first alarm assignment which consisted of Engines 1, 2, 3, Truck 2 and Captain 4. Members submitted memorandums of their actions at the incident scene as well as member interviews.

The radio transmissions of the incident and the transcript of that audio which was developed by the LBF, were closely reviewed.

The information received was used along with photographs and videos that were available.

This after-action report is intended to address three areas: strategic concerns, safety considerations and lessons learned. The intent of this after-action report is to be a blue-print for sharing information, addressing areas where positive administrative and operational changes can be made, and recommending meaningful training.

This report is not intended to, nor did it consider, the everyday staffing in the LBF. It is narrow in scope and specifically looked at the incident at 225 East Madison Street and the initial staffing that was present at that incident scene on February 18, 2013.

The period of time targeted by this report is from the time that Lancaster County Wide Communications (LCWC) received the report of the fire via a 911 call, until the lieutenant of Engine 3 was removed from the fire building.

This report contains definitions used by firefighters. Most terminology is easily understood by anyone reading the report. Exceptions may be the definitions used for dividing/sectoring at an incident scene. It consists of identifying the front of a building as the A or Alpha side and then going clockwise around the structure as faced from the front. The left side would be the B or Bravo side, the rear would be the C or Charlie side, and the building to the right would be the D or Delta side.

Another possible point of confusion is the use of the term rapid intervention team (RIT) or rapid intervention crew (RIC). NIMS uses the term RIC. In this report the term RIT is used which is commonly used in the LBF. The purpose of the RIT is a standby team that is used as a precautionary measure should a firefighter/s find themselves in trouble.

The LBF uses the rank of captain to perform the duties and responsibilities of a shift commander or duty officer.

A typical complement of firefighters on an engine or truck company consists of three members; a lieutenant or Acting Officer (AO), driver, and firefighter who is referred to as the “back-end” firefighter.

The Incident Commander (IC) may be referred to as Command or IC.

LANCASTER BUREAU OF FIRE

The LBF is a career Fire Department which is budgeted for 74 positions. Daily fire station staffing consists of 10 personnel to 14 personnel. On February 18, 2013 the on-duty staffing was 13 personnel. That consisted of each engine company (Engines 1, 2, 3) and Truck 2 being staffed with 3 personnel each. The Duty Officer was a captain who fills the position of the shift commander. The LBF is supplemented by the recall of off-duty personnel and mutual aid agreements from neighboring fire companies.

THE FIRE BUILDING

The fire building was located at 225 East Madison Street in the City of Lancaster. It is a 2-story dwelling of ordinary construction. The original dimensions of the fire building were 13-feet 3-inch wide, by 34-feet 1-inch deep. There was a one-story frame addition (it has been referred to as a rear porch) attached to the rear of the dwelling adjacent to the kitchen that measured 12-feet 11-inches wide, by 10-feet 11-inches deep, and contained bedroom furnishings. East Madison Street is 18-feet 9-inches wide from curb to curb and with parked cars it is reduced to 11-feet 7-inches wide. The rear of the property can be accessed via a narrow alleyway located to the east and adjacent to 233 East Madison Street. This alleyway started at the curb-line of 233 East Madison Street and continued past the rear of the properties and became a dead-end around 215 East Madison Street.

The origin of the fire as determined by the LBF Fire Marshal was found to be in the basement directly under the first-floor kitchen, which was located in the rear of the dwelling. The fire extended upward heavily damaging the building.

SUMMARY OF INCIDENT

On February 18, 2013 the Lancaster Bureau of Fire (LBF), Lancaster, PA responded to a fire in a two-story row dwelling which would reach a general alarm and heavily destroy the building. The first floor kitchen area collapsed into the basement. This fire caused the death of a 39-year old female and a 6 year old female child. Their bodies were found in the second floor middle bedroom. Three firefighters were injured; one of whom sustained substantial burns which required hospitalization in the Crozier Chester Medical Center-Nathan Speare Regional Burn Treatment Center. The other injured firefighters were treated and released from local hospitals.

RECOMMENDATIONS FOR REDUCING RISK TO RESPONDERS

In reviewing this incident it was found that to minimize the risk of similar occurrences fire departments should consider the following factors: (These recommendations are made in conjunction with the issues as identified under “Issues and Recommendations” as noted in this report on pages 16 to 26. Item 23 is discussed in the Summary on pages 27-29.)

1. Response assignments and familiarity with city streets must be reinforced during station training exercises.
2. Proper apparatus placement is necessary at incident scenes.
3. An initial size-up must be performed by the first arriving company officer, which should include a 360-degree walk-around of the fire building. This walk-around should also be performed by later arriving officers who have the authority to assume command. This walk-around is needed to create a comprehensive picture of the fire scene, and to assist the IC in determining during the course of the incident how operations are proceeding.
4. An outcome of size-up is that the Incident Commander needs to perform a risk assessment. This is needed to determine the risk to firefighters versus the gain to be achieved. Size-up and risk assessment allows the IC to develop the incident objectives, strategies, and be able to give unit assignments.
5. An incident action plan is required for all incidents. Though it does not need to be written, it must include consideration of conditions, actions, and resource requirements.
6. The location of the Command Post should be in such a place that the IC can fully evaluate the situation using personal observation and progress reports received from company officers assigned to key positions.
7. Supervision and communications are critical components for effective fireground operations.
8. A transfer of command is important to maintain effective command, control, communications, and coordination at an incident scene. A face-to-face transfer of command between the initial company officer and the Captain is preferred, or via radio if a face-to-face transfer cannot occur. This communication and transfer of command and information is critical.
9. One of the most important aspects of incident scene operations is on-scene communications. This includes initial and ongoing progress reports between the Incident Commander and the interior crews. Changing fire conditions that are observed need to be reported to Command immediately. These progress reports allow the IC to make changes to modes of attack, such as going from an interior attack to an exterior attack, or ordering additional hose-lines for fire attack.
10. Communications between companies enhances fireground operations.
11. Whenever a conflicting order is received the person giving the conflicting order should be made aware of the initial order and then he/she can decide on the immediacy of the

necessary action to be taken. Likewise, the officer issuing the first order should be made aware of the change in the order.

12. Water supply from a hydrant to the first arriving engine company can be secured by taking a wrap around the hydrant with a hose-line. The hose-line can then be laid using the apparatus and can be attached to the hydrant by later arriving firefighters.
13. Company officers should be utilized as supervisors for critical assignments.
14. Once a decision is made to operate above an uncontrolled fire, each firefighter should have a secondary escape plan should they need to make an emergency exit from the building.
15. Hose-lines should be charged prior to entering an area that is immediately dangerous to life and health.
16. When faced with a working fire, a hose-line is needed to control a fire on a lower floor, prior to attempting rescues on upper floors.
17. At working fires a back up interior hose-line should immediately be stretched to protect the firefighters and assist in controlling the fire.
18. Ventilation is a critical part of firefighting and must be coordinated with an interior fire attack.
19. It needs to be reinforced that a basic function of truck companies is rescue.
20. Back to basics training at the company level for routine evolutions needs to be a necessary component of a training program.
21. All issued safety equipment should be utilized as intended at every incident.
22. The selection, care and maintenance of personal protective equipment (PPE) must have an inspection process. Members must wear their own issued bunker gear.
23. The LBF needs to expand their written standard operational guidelines and address training as noted in the “Summary” of this report.

THE INCIDENT

On February 18, 2013 at 04:24:20 hours, Lancaster County Wide Communications (LCWC) received a 911 call for a fire in a dwelling located in Lancaster City at 225 East Madison Street.

At 04:25:13 the LCWC dispatched Engine 1, Engine 2, Engine 3, Truck 2 and Captain 4 to that location. While en route the LCWC transmitted two messages to the responding units that they were receiving multiple calls of the report of an adult female and her young niece being trapped in the fire building and if they are “anywhere they should be in an upstairs bedroom on the 2nd floor towards the front.” Those messages were acknowledged by Captain 4 who was responding as the shift commander.

Engine 3 while responding transmitted a radio message stating that they had “smoke in the area one block away.” This notification enabled responding units to recognize that a working fire was in progress. As the first arriving company, Engine 3 was met by police who confirmed the report of two trapped occupants possibly in the second floor front room. The conditions Engine 3’s lieutenant reported was “heavy smoke showing side Alpha.” One Engine 3 firefighter described the conditions as appearing to be “untenable,” while the other firefighter stated that he observed “heavy black smoke violently pushing from the front of the house.” Confronted with many challenges Engine 3’s (“back end”) firefighter stretched a pre-connected 1¾-inch hose-line and flaked part of it on the narrow street and then into the heavily smoke charged structure. He immediately climbed the interior stairs to the second floor in an attempt to find the missing occupants. This firefighter encountered dense smoke and heat conditions and used a thermal imaging camera (TIC) to assist in trying to locate the occupants. The TIC showed nothing but a white screen. Attempting to enter the second floor front bedroom he found his path blocked by a bureau which was knocked over and leaning into the doorway. He was able to climb over the bureau and started a primary search of the bedroom. With zero visibility and moderate heat conditions, he found what he thought to be a child on the bed. He broke out a front bedroom window and held the “body” outside the window and tried to get help. In holding the “body” outside the window he noticed that it was lifeless and appeared to be burnt. He was able to get a better look at what he was holding and realized that it was a lifeless dog, which he placed back onto the bed.

At approximately that same time the lieutenant of Engine 3 proceeded up the interior stairs and reached the hallway outside of the second floor middle bedroom. He encountered moderate heat in the hallway. Within a very short period of time the first floor flashed over with fire. The flames spread up the open staircase and significantly increased the amount of heat on the second floor. Quickly the second floor became involved in fire. The lieutenant in a prone position called for the firefighter from Engine 3 to help him as both the first and second floor were now involved in fire. The firefighter from Engine 3 was still in the front bedroom doing a primary search. He grabbed the hose-line and attempted to knock down the fire in the hallway. He found

that there was no pressure in the hose-line. There were now high heat conditions on the entire second floor. The firefighter considered reentering the hallway by again climbing over the bureau and attempting to rescue the lieutenant. He realized that such an action would probably result in his own death in the hallway. He then yelled for the lieutenant to retreat back down the stairs and he rapidly exited the second floor to the porch roof via the window he had originally broken out. He landed on the front porch roof. The porch roof was a light weight steel corrugated assembly. He held onto the window sill and tried to keep his head below the tremendous heat venting from the window that he had just exited. He sounded a Mayday message for the lieutenant of Engine 3. Due to the intense heat and flames blowing out the first floor window, the light weight corrugated steel roof failed. The firefighter was injured as he fell through the roof to the first floor porch below.

The firefighter from Engine 3 was pulled from the porch by other LBF firefighters who tended to his injuries. He told the firefighters of the lieutenant's location and attempted to reenter the dwelling to assist in rescuing the lieutenant, but was restrained as others performed that function.

Prior to entry, the lieutenant of Engine 3 was on the front porch of the dwelling at the exact same time as the Acting Officer (AO) of **Truck 2** (T-2). The two never spoke and the lieutenant of Engine 3 failed to take the opportunity to communicate his incident action plan. The T-2 AO seeing the hose-line stretched into the fire building, proceeded to have a 28-foot ladder raised to the roof at the front of the building. T-2's AO then broke out a first floor window on the front porch. Then the T-2 AO along with another T-2 member proceeded to the rear of the dwelling (Charlie side), through the adjoining Bravo exposure with a roof ladder. The roof ladder was raised to the rear roof of the one-story frame addition. They ventilated by breaking out a second floor rear bedroom window. The Truck-2 AO then crawled in through the vent opening and yelled for any occupants. There was no reply. He found rapidly deteriorating conditions on the second floor and had to retreat back onto the rear 1st floor roof and descended the ladder. Truck-2's AO and the Truck-2 firefighter then entered the first floor rear addition which contained bedroom furnishings and pushed open the adjoining kitchen door. They found the kitchen fully involved. As they quickly exited the building via the rear door there were rapidly deteriorating conditions. They left the door open to ventilate the area. They stated that this was at the same time in which they could hear the Mayday being called for the lieutenant of Engine 3. At this time there was heavy fire venting from the rear of the fire building and the frame addition was now fully involved.

While en route, **Engine 2** was ordered by the Incident Commander (Captain 4) to stretch a supply 5-inch hose-line to Engine 3's apparatus. The hydrant they chose was located at East Madison and Lemon Sts. This hose-line stretch had to be made from the rear hose-bed and around the front of Engine 3's apparatus, on a narrow street, due to the apparatus' location and the choice of the hydrant to be utilized. Engine 2's personnel along with the driver/pump

operator of Engine 3 were involved in the process of stretching 3-100-foot lengths of the 5-inch hose-line to the hydrant 228-feet away. Additionally, a firefighter from Engine 1, a firefighter from Truck 2, and police officers assisted to some degree in this water supply operation.

The AO of **Engine 1** was ordered by the IC to stretch a 1¾-inch hose-line to back up Engine 3 on the building's interior. The lieutenant of Engine 2 then changed that assignment. He ordered the AO of Engine 1 to have his company remove from Engine 3's apparatus their portable extension ladder and to raise it to the front porch roof of the fire building.

Meanwhile the first floor flashed over and became fully involved in fire. The lieutenant of Engine 3 became trapped in the second floor hallway, and the firefighter from Engine 3 in the front bedroom. Members from Engine 1 and a member from Engine 2 seeing the developing situation stretched 2 pre-connected hose-lines from Engine 3. A request to the driver of Engine 3 to pressurize the hose-lines was made. There was a delay by Engine 3's driver in pressurizing the hose-lines. Those stretching the hose-lines understood that the members of Engine 3 were still inside the fire building and their intent was to knock down the fire and enter the fire building.

The heavy fire pushing from the first floor front doorway and window caused the light weight porch roof to fail. This caused the firefighter from Engine 3 who was now on that roof to fall through the roof onto the porch landing. The AO of Engine 1 and another firefighter from Engine 1 dropped their uncharged 1¾-inch hose-line and came to his aid. The other hose-line was pressurized and a firefighter from Engine 1 and another from Engine 2 were able to fight their way into the first floor driving the flames toward the rear of the dwelling as they reached the base of the stairway to the second floor. With one firefighter operating the hose-line as protection, the other firefighter was able to reach the second floor hallway and assist the lieutenant of Engine 3 down the stairs to the first floor and then to the exterior.

Once accountability of all members was determined, the Incident Commander withdrew all firefighters from interior firefighting operations and commenced a defensive or exterior fire attack.

Captain 4 arrived on the incident scene prior to Engine 3 entering the fire building. He announced that he was assuming Madison Street Command. En route to the incident Captain 4 struck a second alarm and called for the Metro Rapid Intervention Team (RIT). He also gave assignments to Engine 1 and Engine 2. Once the Mayday was sounded by the firefighter from Engine 3, he ordered the RIT to assist in the rescue and removal of the downed lieutenant of Engine 3.

Dispatch records indicate that Captain 4, Engine 2, Engine 1 and Truck 2 all arrived on the incident scene within seconds of each other.

The untenable conditions as reported by the initial arriving firefighters of Engine 3 would indicate that the occupants had been overcome by the high concentrations of carbon monoxide which was being produced by the fire prior to the arrival of the fire department. The investigation by the fire marshal found that the floor of the kitchen had burned through. This indicates a long burn time and possibly an extended period of time prior to notifying the fire department. This delay would have caused the smoke and carbon monoxide to permeate the entire building. No early warning smoke detectors were found in the building, which if present may have alerted the occupants in adequate time to evacuate the dwelling. Surviving occupants stated to the Fire Marshal that they had attempted to climb the stairs to the second floor but were driven back by the heavy smoke conditions.

TIME LINE TAKEN FROM LANCASTER BUREAU OF FIRE TRANSCRIPT OF AUDIO TAPE

On February 18, 2013 at 04:24:20 hours, the Lancaster County Wide Communications (LCWC) “received a 911 call for a fire in a dwelling located in Lancaster City at 225 East Madison Street.”

04:25:13 the LCWC dispatched Engine 1, Engine 2, Engine 3, Truck 2, and Captain 4 to that location.

04:27:30 LCWC notified responding units that they were “receiving multiple calls for possible people trapped.” This message was acknowledged by Captain 4 who was the responding shift commander.

04:28:24 LCWC followed that message with the message to responding units “people that are to be there are a female and her niece if they are anywhere they should be in an upstairs bedroom on the 2nd floor towards the front.” That message was acknowledged by Captain 4.

04:28:32 Engine 3’s driver reported via radio “all units we have smoke in the area one block away.” This notification enabled responding units to recognize that a working fire was in progress.

04:29:30 the first arriving fire department apparatus was Engine 3 and they reported “County, Engine 3 on the scene, heavy smoke showing side Alpha, 2 story brick middle of the row.”

04:32:05 Captain 4 ordered Engine 2 to get Engine 3 hooked up to a hydrant.

04:32:13 Captain 4 announced that he was on location and “I’ll be Madison Street Command.”

Between 04:32:19 and 04:32:26 Engine 2, Engine 1 and Truck 2 arrived on the scene.

4:36:57 Firefighter from Engine 3 sounds a Mayday for the lieutenant of Engine 3.

4:43:25 Lieutenant of Engine 3 is removed from the fire building.

ISSUES AND RECOMMENDATIONS

- 1. Issue: Unfamiliarity with the response location.** Some units responding to this assignment were not familiar with the exact address location. Engine 1 and Truck 2 both missed the turn onto East Madison Street and went blocks out of their way and were delayed in arriving on the incident scene.

Recommendation: Training needs to be ongoing. New recruits need the training to learn the process and all firefighters need training to refresh their skills. This training needs to include street familiarization with response assignments throughout the community. This training should be scheduled and given by the lieutenants and routinely monitored by the captain. It is incumbent on all members to know the predetermined response routes of all responding apparatus to enable them to avoid intersection accidents with other responding apparatus and to allow proper placement of apparatus at the incident scene. Additionally, prior to leaving the station on a response if the officer or driver is not familiar with the address it can be looked up on the station map or assistance can be requested from dispatch.

- 2. Issue: Apparatus placement.** At this fire Engine 3's apparatus failed to pull past the front of the fire building to allow Truck 2 to reach their pre-assigned location in front of the fire building. Additionally, Truck 2 did not follow their pre-assigned response pattern and entered the fire location from the opposite direction. In the LBF it is accepted practice to reserve the front of the fire building for the truck company. At this incident this did not occur.

Recommendation: It is incumbent on the first-due engine's apparatus driver to ensure that he/she properly places their apparatus. This could require the first-due engine company to pull past the front of the fire building or by stopping short of the fire building to ensure proper truck company positioning. Should the engine's driver fail to comply, then the engine company officer needs to order the correct positioning of the apparatus. Likewise, the truck company must ensure that on arrival they are at their pre-designated location.

- 3. Issue: Size-up:** The location of the fire in the dwelling was never determined by the lieutenant of Engine 3 or Captain 4 since neither of them performed a 360-degree size-up to get an evaluation of all sides of the fire building. In this case it could have been accomplished by going through the Bravo exposure or by accessing the alleyway directly across from the incident command post. This walk-around could have assisted in determining the location of the fire in the first floor rear.

Recommendation: On arrival, the first arriving company officer or acting officer needs to perform a 360-degree walk-around of the fire building. At times this can be accomplished by driving past the rear of the fire building en route to the front of the building. This walk-around is a critical part of problem identification. It is recognized that with the staffing level in the LBF this may cause a short delay in entering the fire building, but it is a necessary component of

firefighting safety. This walk-around also needs to be performed by higher ranking officers prior to their assuming command at an incident.

- 4. Issue: Lack of risk assessment.** Engine 3 committed to a rescue operation without any thought of the danger to themselves. The fact that one firefighter from Engine 3 described the conditions as appearing to be “untenable,” while another Engine 3 firefighter stated that he observed “heavy black smoke violently pushing from the front of the house.” These indicators were serious enough that the lieutenant of Engine 3 and Captain 4 should have taken additional control measures to best protect both the firefighters and the reported trapped occupants. These conditions demanded that a properly operating 1¾-inch hose-line be utilized by Engine 3 to contain the fire on the first floor at the base of the interior stairs, while a primary search of the second floor could be made.

Recommendation: Risk assessment should be used to place risk into one of three categories: high, medium or low. There is also a need to evaluate the gain or benefit to be achieved in relation to the risk. A report of trapped occupants, who could be still alive, would be a high gain or benefit situation. A decision to enter a fire building and go directly to an upper floor via interior stairs with an uncontrolled fire on a lower floor is a high risk. With a high risk/high gain situation there needs to be decisions made to minimize the danger to firefighters. This may be accomplished with the placement and utilization of interior hose-lines in a coordinated effort to protect the entry and egress paths while conducting a search.

- 5. Issue: No Incident Action Plan:** Size-up was not properly performed by the lieutenant of Engine 3 or Captain 4 prior to the on-scene deployment of resources. There was no known Incident Action Plan (IAP) and no identifiable strategies in place at this incident. Captain 4 stated that “the rapidly changing fire conditions dictated the immediate IAP initiated by Engine 3 personnel.” Captain 4 never spoke to any of Engine 3’s personnel he did not know what that IAP was. Captain 4 stated that he “did not speak to Engine 3 or Truck 2 and he assumed what they were doing.”

Recommendation: A good initial size-up including a 360-degree walk-around of the fire building is required to manage the scene and ensure firefighter safety. This size-up is needed to determine the incident objectives, strategies and tactics prior to giving unit assignments. The IC must utilize size-up for command, control and coordination of all operating units. An incident action plan is required for all incidents. Though it does not need to be written, there does need to be a consideration of conditions, actions, and resource needs. The plan needs to be disseminated to those members who are working at the tactical and task levels. Though the Incident Commander may have a mental plan at an incident; it must be made known to everyone. Normally, at a working structure fire the IC should verbalize the incident action plan through unit assignments. This ensures that all tactical units receive the needed information and the resources to carry out their portion of the IAP. When an IC fails to inform personnel of what the incident action plan is, and does not give specific assignments and orders to accomplish the

strategies, but relies on each individual “to do what they need to do,” then freelancing occurs and personnel safety is jeopardized.

- 6. Issue: Command post location.** The location of the command post (CP) did not allow the IC to evaluate the incident scene conditions and the ongoing fireground operations. At this fire with the tremendously heavy smoke conditions pushing from the fire building to the east toward the CP, it did not allow the IC a comprehensive view of the fire building. At this incident the fact that the smoke conditions did not improve in the early stages of the incident as viewed from the exterior, could have indicated that no water was controlling the fire.

Recommendation: It can be beneficial for the IC to leave the command vehicle and establish a CP at a location with the best view of the incident scene. Flexibility enables the IC to use personal knowledge and experience to evaluate the progress or lack of progress that is occurring, including the actions of the firefighters. The IC at a properly placed command post can see the placement of hose-lines and ladders as well as any rapidly changing fire conditions.

- 7. Issue: Lack of supervision and poor communications:** On arrival, Engine 3’s firefighter pulled the 1¾-inch pre-connected hose-line and started to flake it out on the street. He then immediately entered the fire building alone and proceeded to the second floor. The lieutenant of Engine 3 ascended the stairs separately. Shortly after the lieutenant’s arrival on the second floor, the fire on the first floor flashed over and extended up the open stairs attacking him in the hallway and trapping the firefighter from Engine 3 in the front bedroom.

Recommendation: Supervisors must ensure strict accountability and clear communications. Firefighters cannot operate independently, but must maintain crew integrity. There can be no freelancing. Company officers need to control the aggressiveness of their firefighters and ensure that their actions are following the IAP. When firefighters enter or operate in locations that are IDLH, they must operate in a minimum team of two.

- 8. Issue: No transfer of command.** There was not a face-to-face transfer of Command between the Lieutenant of Engine 3 and Captain 4, nor did any take place via radio. At the East Madison Street incident the lieutenant of Engine 3 had not yet entered the fire building when Captain 4 arrived. Captain 4 didn’t speak to anyone; he assumed what Engine 3 was doing. Captain 4 should have spoken to the lieutenant of Engine 3 and determined what his goals and objectives were as well as his intended actions. It should be noted that Captain 4 did try to contact Engine 3’s lieutenant via his portable radio.

Recommendation: Whenever possible a face-to-face transfer of command is best practice. In cases where the initial arriving company officer has already entered the fire building and is performing the command function as a mobile command; then the transfer of command needs to be performed via radio. The transfer of command process must be performed properly to ensure

a constant focus on effective operations and personnel safety. NIMS clearly describes the “best practice” of the transfer of command as an exchange of objectives, strategies, current actions, and a resource summary. A short briefing is essential to the development of a solid and consistent incident action plan.

- 9. Issue: Lack of effective on-scene communications.** There were no reports, including initial and ongoing progress reports between the Incident Commander and the interior crews. There was not one radio report given to command on conditions. The IC attempted to make contact with the lieutenant of Engine 3 on two occasions, but was unable to do so. The IC should have requested a progress report from another company. Changing fire conditions that are observed need to be reported to Command immediately. Truck 2 found heavy fire conditions on the first floor rear, yet never reported it to Command until approximately 13-minutes after the lieutenant of Engine 3 had been removed from the interior.

Recommendation: Communications are the backbone of fireground operations. It is a policy of the LBF to require progress reports. Without progress reports it is impossible to determine the conditions found, tasks that have been accomplished, and those still requiring attention. Progress reports permit the Incident Commander to continue to compare responder risk and operational benefits. The importance of this exchange of information and the immediate conditions found on entering the fire building must be emphasized to the company officers.

The Lancaster Bureau of Fire should establish a strict procedure for timely radio reports to be given from the interior whenever units enter a structure, and from other key positions at an incident scene. This should include sizing up initial conditions involving the extent and location of the fire, the need for a primary search, the progress being accomplished, additional resources needed to accomplish necessary tactical assignments, and other pertinent factors. Some fire departments require a “CAN” report. This mnemonic is defined as “Conditions, Actions and Needs.” The individual giving the report states the conditions found, the actions being taken and that still need to be taken, and the resources needed to accomplish their assignment.

Situational awareness is critical. Training must include the importance of this data and what should be contained in an initial entry report to the IC once that first arriving unit enters the fire building. The need for ongoing progress reports must also be stressed. Additionally, communication is a two-way flow of relevant information. Command should apprise the interior crews of his/her observations from the command post location. This aspect of communications must be taught by the captain during training sessions, discussed during post incident reviews and reinforced at all incident scenes so that it becomes routine.

- 10. Issue: Lack of communications between companies.** The AO of Truck 2 noted that when he arrived at the front door of the fire building, the lieutenant of Engine 3 was on the front porch and was just entering the building. The AO of Truck 2 did not talk to the lieutenant of Engine 3. With the rapidly deteriorating conditions found at the East

Madison Street fire, the lieutenant of Engine 3 reacted to the report of trapped occupants without giving a thorough analysis of the risk to himself and the other firefighter from Engine 3. They entered the second floor without control of the first floor fire. This reaction to the life safety of the trapped civilians is noteworthy in his concern for the occupants, but as we see in the outcome it created a very dangerous situation. The lieutenant of Engine 3 could have ordered Truck 2 to prepare for rescue via radio or face-to-face. The coordination between Engine 3 and Truck 2 could have led to a combined effort with Engine 3 controlling the fire on the first floor, while Truck 2 performed a primary search of the second floor. Truck 2 would have been afforded the protection of Engine 3's hose-line.

Recommendation: The first arriving company officer or acting officer is the Incident Commander. In the LBF with the quick arrival of the captain, the first arriving company officer is initially a mobile command, with responsibility that includes developing an incident action plan. Though not written, the IAP needs to encompass the other arriving companies and how to best utilize them. This includes the coordination between fire attack, search, rescue and ventilation. Likewise, it is imperative that all companies communicate with each other to ensure coordination.

11. Issue: Lack of communications with a superseded order. The Incident Commander assigned Engine 2 to supply Engine 3's apparatus with 5-inch hose-line. He then ordered Engine 1 to stretch a 1¾-inch hose-line to backup Engine 3 on the interior. The stretching by Engine 1 of the 1¾-inch backup hose-line did not occur immediately. The lieutenant of Engine 2 ordered Engine 1's AO to place Engine 3's portable ladder to the porch roof after he saw the gloved hand of a firefighter from Engine 3 at the window. Truck 2 placed a 28-foot ladder to that roof prior to Engine 1 placing their ladder. In this instance the lieutenant of Engine 2 was most likely unaware of the Engine 1's orders to stretch a backup 1¾-inch hose-line to the interior. The lieutenant of Engine 2 should have known that there were 3 engines and a truck company on the scene. Engine 3 was already operating on the interior and his company, Engine 2, was stretching the 5-inch hose-line to supply Engine 3's apparatus. Truck 2 was in the process of taking ladders and tools to the front of the fire building. By ordering Engine 1 to place a ground ladder to the porch roof, that left no one to stretch a 1¾-inch hose-line to the interior to backup Engine 3. Likewise, if the IC had made his IAP known it may have prevented this confusion from occurring.

Recommendation: Conflicting orders can be problematic. Whenever a conflicting order is received the person giving the conflicting order should be made aware of the initial order and then he/she can decide on the immediacy of the necessary action to be taken. Likewise, the officer issuing the first order should be made aware of the change in the order. Unity of command is an important component of supervision, resource management and scene control.

12. Issue: Supplying a 5-inch hose-line for Engine 3's apparatus. While responding from over a block away from the fire, Engine 3's driver reported heavy smoke in the immediate area; indicating a working fire. At the intersection of Lime and East Madison Streets, Engine 3 passed a fire hydrant which was 271-feet from the fire building. The IC ordered Engine 2's lieutenant to utilize his company to stretch a 5-inch hose-line to supply Engine 3's apparatus. A firefighter from Truck 2 and a firefighter from Engine 1 along with the driver of Engine 3 also assisted in this operation. At one point 6 of the 12 firefighters/fire officers that were on location had been involved in some way in stretching the 3-100 foot lengths of 5-inch hose-line to complete this assignment. That amounts to one-half of the firefighters and fire officers on the incident scene at that time.

Recommendation: It is difficult to accomplish all of the required duties at an incident scene when everyone is working in coordination. It can be impossible when operating without a plan and where personnel are pulled from other assignments. Though a water supply to an apparatus is certainly important, other assignments can be even more critical. The first-due engine company should be trained to consider stopping and taking a wrap around a hydrant with 5-inch hose-line when responding to a location where conditions would indicate a working fire. This would be an important tactic as the hose-line is stretched by the apparatus along the curb to the fire building. Another responding firefighter can then attach the 5-inch hose-line to the hydrant while the driver of the first-due engine can attach the hose-line to their apparatus to ensure a continuous water supply. This would minimize the number of personnel needed for this tactic. Though this is not a current practice in the LBF, it has been found to be an effective tactic in the fire departments that utilize it. It is recommended that members of the LBF be trained on this tactic and that it be utilized on future operations where it is likely to be a working fire. The LBF also has computer technology aboard their apparatus to identify the location of hydrants while en route to an incident which can be utilized.

13. Issue: Supervision is needed for critical assignments. At this fire in addition to the lieutenant of Engine 3, the only other company officer was the lieutenant of Engine 2. The other two companies had acting officers. Engine 2's lieutenant was assisting in stretching a back up hose-line for Engine 3. When the Mayday was sounded he never took any actions to supervise, or assist in the removal of the lieutenant of Engine 3. He directed one of his firefighters to go to the fire building and assist in the rescue. The IC did dispatch the RIT, but better organization of all personnel should have occurred. The IC should have immediately asked for progress reports from Engine 1 and Truck 2. He should have assigned the lieutenant of Engine 2 to the front of the fire building to give him a report from that location indicating what exactly was being done and additionally what else needed to be accomplished. Though the rescue occurred due to the aggressiveness of two firefighters acting as a team, they were acting independent of any supervision or direction. These firefighters from different companies stretched a pre-connected 1¾-inch hose-line from Engine 3's apparatus and after a delay in Engine 3's

driver pressurizing their hose-line, were able to enter the fire building. Their actions are certainly commendable, but the lack of supervision could have proven otherwise.

Recommendation: The IC needs to best utilize the company officers as supervisors. The strategic considerations at an incident will change drastically once a Mayday is sounded. The situation can become chaotic and the IC needs to ensure that all units are working towards one goal and that becomes the safe removal of trapped firefighters. The ability to command a Mayday incident demands that the IC have a good handle of what is occurring. That information can be received through verbal reports and what the IC can see. Progress reports are essential. Simulated training in fireground operations should include situations where problems occur and allow the participants to decide on the proper methods of solving those problems. It can be done at a burn building, or at a firehouse with hands on training. Another method is utilizing table top exercises that are driven by injects that would create problems that need to be addressed.

14. Issue: Operating on the floor above a fire. At the East Madison Street fire, a firefighter and the lieutenant from Engine 3 became trapped by a fast moving fire which flashed over on the first floor and heavily involved the second floor. The firefighter from Engine 3 had an escape plan and was able to retreat out of the second floor front window. The lieutenant of Engine 3 could have entered the middle bedroom on the second floor and closed the door while awaiting arrival of a ground ladder to allow him to escape the second floor.

Recommendation:

Prior to entering a fire building each firefighter should personally size-up the building and notice the location of windows, adjoining roofs and the placement of portable ladders that may be accessed should they be needed as an emergency means of egress. This information can assist them in creating a mental, secondary escape plan, should they get into trouble. Training must stress that firefighters constantly be aware of their location within a fire building and anticipate what actions they need to take should conditions warrant the need for an emergency exit.

Training should include the various methods by which firefighters can protect themselves. A basic procedure like seeking shelter in an uninvolved room within a fire building and closing the door to seek protection should be stressed. Likewise, if performing a search of a room on an upper floor the simple act of closing the door to the room being searched can offer protection to any occupants and the firefighters.

15. Issue: Operating above a fire with an uncharged hose-line. Engine 3's 1¾-inch hose-line was stretched to the second floor but was not charged until approximately the same time the Mayday was called. Engine 3's driver had called Engine 3 to see if they wanted the hose-line charged on two occasions, but there was no reply. In the interim the hose-line had numerous kinks and burned through on the stairs leaving Engine 3's personnel on the second floor with no protection from the fast moving fire. Engine 3's lieutenant or the firefighter from Engine 3 should have ordered the hose-line charged.

The IC should have recognized that the fire conditions had gotten worse and in monitoring the radio transmissions from Engine 3's driver to Engine 3 personnel, realized that no one was fighting the fire.

Recommendation: Once a decision is made to operate above an uncontrolled fire the crew must ensure that they have the protection of their hose-line. That hose-line needs to be charged before entering the structure. It should be noted that "When advancing a hose-line into a fire structure, air should be bled from the line once it is charged and before entering the structure. ¹"

A role of the IC is to monitor all radio messages to gather as much information as possible. When hearing messages that denote that an operation is not being performed well, or that a problem exists, the IC needs to clarify what is happening and take steps to rectify the problem. The IC should check with all units operating at an incident to keep abreast of conditions.

16. Issue: Not controlling the first floor fire before attempting to perform rescues on the second floor. The conditions found at 225 East Madison Street demanded that the fire be controlled prior to going to the second floor and attempting rescues. By not controlling the first floor fire placed the lives of the firefighters going to the second floor in jeopardy.

Recommendation: Typically the first hose-line controls the fire on the first floor and the second hose-line can assist in the extinguishment on the first floor, or it can be stretched to the second floor to control any extension of fire and as protection during a primary search.

"It is crucial that the engine company personnel understand that more lives are actually saved by properly positioning and operating hose-lines than any other rescue techniques. ²"

"The most important firefighting operation at a structure fire is stretching the first-attack hose-line to the fire. ³"

17. Issue: Delay in stretching a backup 1¾-inch hose-line. Due to the fact that this was an obvious working fire, a back up 1¾-inch hose-line should have been immediately stretched to protect the firefighters already committed to the interior from Engine 3. A back up 1¾-inch hose-line was not stretched until the fire flashed over, fully involving the first floor. The fire was pushing heavily out the front windows and extending to the second floor via the open stairway. This caused the lieutenant and firefighter from Engine 3 to be trapped on the second floor. Though the IC did order Engine 1 to stretch a backup hose-line it did not occur. Once the first floor became fully involved and fire showed from out the front window and door, and spread to the second floor, two 1¾-inch hose-lines were then stretched. The importance of that initial hose-line can be seen that when one 1¾-inch hose-line was in place on the first floor by one firefighter, it allowed the other firefighter to reach the second floor and assist the lieutenant of Engine 3 down the stairs and out of the fire building.

Recommendation: Standard operational guidelines should be written by the LBF to indicate the need for, and assignment of a company to stretch a second hose-line to back up the first hose-line at a working building fire .

"The first hose-line has to protect civilians who are still exiting the building or in need of

rescue. This line should be placed between them and the fire. If the first line is able to extinguish the fire, the rescue will be a simple task. If the amount of fire is too great for one line, the protection of the trapped occupants and firefighters attempting to rescue them is vital. If fire involves or threatens an open stairway, the same line should be positioned to also protect the stairs, or the second line can be given this priority. ⁴”

“Gaining control of the stairs is the first step in gaining control of the building. Protected stairs can be used by firefighters entering the structure and by civilians leaving the building. Proper hose-line placement can reduce the heat of the fire extending to the upper floors via the stairs. The second line should then back up the first line. If fire involves more than one floor, this line can be placed on the floor above to control the fire there. ⁴”

18. Issue: Ventilation was not coordinated with fire attack. Ventilation must occur in conjunction with interior firefighting operations. At this incident Truck 2 saw the 1¾-inch hose-line stretched to the interior via the front door and thought that Engine 3 was attacking the fire. Truck 2 then proceeded to ventilate the building. They broke out the first floor front window and then proceeded to the rear. They broke out the second floor rear window and called out for occupants with negative results. Truck 2 then descended the ladder and entered the first floor rear door and after finding the kitchen fully involved in fire, they opened the rear doors venting that area. This all occurred while no hose-lines were operating on the fire. These actions caused a rapid acceleration of the fire throughout the fire building. There were two second floor front windows. One was broken from the interior by Engine 3’s firefighter while the other window was never broken for ventilation.

Recommendation: Though ventilation is a primary duty of a truck company it must be performed in conjunction with hose-lines attacking the fire. Without an incident action plan and communications and coordination between the IC and all units, and between the truck company and the companies operating on the interior, problems can and will occur. Training must emphasize the need for communications, coordination and constant size-up to determine if conditions are improving or getting worse.

19. Issue: The truck company was not utilized for rescue. A primary duty of a truck company is rescue. At this incident the AO of Truck 2 stated that his primary function was ventilation. If there had been coordination between the lieutenant of Engine 3 and Truck 2’s AO they could have worked as a team. The fire could have been attacked alongside the first floor stairway and controlled at that location by Engine 3. This would have allowed Truck 2 to perform a primary search of the second floor. The placement of the protective hose-line on the first floor is critical due to the nature of the fire conditions. Additionally, with Truck 2 venting the building, it accelerated the fire and flashover occurred. The orders for Engine 3 and Truck 2 to work together should have also been given by Captain 4.

Recommendation: Life safety being the number one priority, the IC must ensure that all efforts are directed toward that endeavor. This includes assigning units to accomplish tasks and not assuming that someone is going to do it. Writing standard operating guidelines (SOGs) and then training on those SOGs will standardize fireground operations for the LBF.

20. Issue: Equipment and apparatus problems. In removing Engine 3's portable ladder from their apparatus, the bed ladder and the fly section started to extend and caused a delay in placing the ladder.

Another issue was a delay by Engine 3's driver in pressurizing the backup 1¾-inch hose-lines that were stretched to control the fire and rescue the lieutenant of Engine 3.

The lieutenant of Engine 2 forgot to take his face mask for his self-contained breathing apparatus and had to return to Engine 2 to retrieve the mask causing a delay.

Recommendation: Ladder utilization is like every duty, it takes practice. Additionally, the driver of an apparatus at the start of each tour of duty should be checking that all equipment is properly stored and ready for use.

At the beginning of each shift the apparatus should be operated by the driver and checked for pump operations. Likewise, training on hose-line operations and pump operations keeps everyone ready to perform at an emergency.

Firefighters and fire officers need to don all of their protective equipment when they leave the apparatus to ensure that they are fully prepared to handle emergency scene conditions.

Back to basics training at the company level for routine evolutions needs to be a necessary component of a training program.

21. Issue: Failure to utilize all safety equipment. Personal Alert Safety System (PASS) devices need to be activated whenever operating in an atmosphere that is Immediately Dangerous to Life and Health (IDLH). The LBF provides not only an integrated PASS device in their self contained breathing apparatus, but an external Grace Industries PASS device. At this incident it was found that the integrated PASS device of the lieutenant of Engine 3 worked as designed, but the external Grace Industries PASS device was never turned on.

Recommendation: Safety equipment is intended to protect the individual wearing that equipment. The LBF feels that redundancy with 2 PASS devices is a necessary added safety feature. It must be impressed upon personnel the need to utilize these safety features at all incidents. Their utilization will not only further protect themselves, but the RIT personnel who will be trying to locate them in a smoke filled, zero visibility environment

22. Issue: Wearing by the members their own and latest issued departmental PPE. One member had been issued a new set of bunker gear, yet was wearing his older bunker gear. Another member was wearing bunker pants which belonged to another member.

Recommendation: This investigation did not delve into the LBF's administrative policies of the selection, care and maintenance of personal protective equipment. It is incumbent of the LBF to ensure that its members are protected by the most up to date gear that is departmentally issued. This requires an ongoing inspection program by the company officers (lieutenants) that needs to be monitored for compliance by the captains.

SUMMARY

This report is the opinion of the reviewers based upon their 88 years of combined fire service experience. There have been recommendations made that will require acceptance by the Lancaster Bureau of Fire. The recommendations are potential methods of correcting deficiencies noted at the 225 East Madison Street fire based on strategic considerations, safety concerns and lessons to be shared to increase operational preparedness. The reviewers of this report did not do an in-depth review study of the systems already in place in the LBF, or of any other fire departments that responded to this incident. The narrow scope of this investigation only looked at this general alarm incident based on the information supplied by responders in written and verbal form that were at the scene, photos provided, video that was available on the internet, and written documentation that was received. The LBF may find better methods that can be employed to address the challenges that are identified in this after-action report rather than those recommended by the reviewers. There may already be systems in place that are not being employed or not completely enforced that could also address these issues and deficiencies. Changes may have already been incorporated since this fire.

It is the opinion of the reviewers, based on the input and information provided that a more comprehensive approach to training, maintaining up-to-date training records, and fireground operations should occur in the LBF. It is strongly suggested that the LBF form a working committee to examine how the LBF policies, procedures and practices can support the framework of NIMS, the consensus standards of the NFPA, the research performed by the NFFF, and the tragic findings in many NIOSH firefighter fatality reports that have similarities to the 225 East Madison Street fire. It is incumbent that management and the firefighter's union work together in a cooperative effort to ensure firefighter and civilian safety in the city of Lancaster.

One prime area for an improvement plan as cited by those interviewed is the introduction of realistic mandatory training. This should include multiple company operations, coordination with attack hose-lines, and communication training. It was suggested by some members that were interviewed that training on fires such as 225 East Madison Street should be given. By using this report as a case-study, the lessons learned can be incorporated into a productive training session.

The LBF has a long tradition of firefighting and they should consider a "back to basics" approach. This training needs to have oversight and input from the training officer. That individual needs to ensure that all training records can be readily accessed to identify training that has been performed by each fire department member. The training officer needs to create and monitor the training needs of the LBF. The recent LBF training on rapid intervention training (RIT) was cited as a key factor by the firefighter in Engine 3 of his being able to successfully call a Mayday which saved the life of the lieutenant of Engine 3.

The LBF has basic fireground procedures in the duties of companies at an incident scene that are known by some firefighters. Yet these procedures are not contained within a written document and are not common knowledge of all members. This can lead to confusion. The LBF

daily staffing of fire apparatus can vary from 10 to 14 personnel. This potential daily change in personnel can impact on fireground operations. In order to ensure that incidents are run as smoothly as possible, there should be written operational guidelines on specific duties required of responding units. This written procedure must take into consideration the basic duties of rescue, ventilation, exposures and stretching hose-lines when operating with varying crew sizes and reduced companies. Once written these procedures should be trained on by all members. A committee should be formed to write these SOG's. Once they are established the companies need to be trained under the supervision of the captains (shift commanders) with oversight from the training officer to ensure that the written documents are practical evolutions and that all platoons/shifts are operating the same way. If discrepancies are found in the procedures as written, they should be corrected to allow a working document that is adhered to by all four platoons/shifts.

Another area of training that is needed, according to the interviews of members, should encompass the duties and responsibilities of acting officers, lieutenants, and captain. It was stated that acting officers and officers were given no specific training to perform the duties of their rank, or the next rank when they are needed to act in that capacity. An SOP should be written to ensure that prior to a firefighter being able to assume the Acting Officer's position that he/she completes the training. A written training program should be established for each rank, and LBF should consider creating an officer's development program. Additionally, training programs delivered by the Pennsylvania State Fire Academy and the National Fire Academy (NFA) should be examined for attendance by members at offsite facilities, or explore the possibility of having these programs delivered to on-duty personnel. Two-day NFA programs can be tailored to be delivered on a platoon/shifts two scheduled day works. Programs can also be developed by the LBF and be delivered by the bureau members. One method of delivery can be through a Train-the-Trainer (TtT) program. Once it is decided what is to be covered in these training sessions, then it should be developed and trainers selected from each platoon/shift. That individual can then present it to their platoon/shift while they are on duty. In addition to the TtT program each platoon should be encouraged to create programs to enhance the safety and operations of the LBF. This can be done by the captain directing the lieutenants to create training sessions that he/she recognizes are needed. The captain should then monitor the creation and delivery of the programs.

It is recognized that programs are being delivered to members by the chief of the department, and those training sessions should continue.

The duties between engine and truck company operations are a difference in specialization. Truck company operations are higher skilled positions. At this incident Truck 2 was staffed with an Acting Officer and two shift firefighters. The duty of the shift firefighter is to augment staffing as needed on a daily basis. These members are the lowest in seniority and perform in that assignment until a position becomes available and they are able to bid on a permanent assignment. The potential problem with this arrangement is that the amount of training given in specific engine or truck company duties can vary widely. With only one truck company in the

LBF, there needs to be training set up to ensure that the hands-on truck company duties are performed by having multi-company drills and emphasis placed on the strategic considerations of both engine and truck company operations. Consideration for daily truck company staffing should be given to the more experienced firefighters.

Communications training will enhance the systems that are already available to the LBF. This incident showed a major gap in the sharing of critical information at the strategic and tactical levels. Those accepting the positions of Command must ensure that they are clearly communicating with responders whom they are directly responsible to supervise.

There was a complaint that portable radios were not reliable. It is our understanding that an upgrade in the portable radios is a current priority and will occur in the near future.

Conclusion:

The strategic and safety lessons from the 225 East Madison Street fire incident cannot be quickly dismissed. Whenever firefighters are trapped and seriously injured; the leadership of their organization must be willing to make positive and meaningful changes to ensure that similar occurrences do not occur at a future incident. The LBF leadership has expressed their strong desire to prevent a similar situation in the future by initiating this report. Implementing this report's recommendations can further assist them in that endeavor.

Appendix B: Reviewers

Deputy Chief James P. Smith (ret)

- Member of the Philadelphia Fire Department from 1966 to 2007
- Member of the Atlantic County Incident Management Team
- National Fire Academy Instructor since 1984
- Served in various positions in the Philadelphia Fire Department including: Director of the Philadelphia Fire Academy, Departmental Safety Officer and Field Commander for one-half of the City.
- Pro Board Certified Incident Safety Officer
- Contributing editor for Fire House Magazine since 1988 writing the bimonthly column "Fire Studies"
- Author of the textbook "Strategic and Tactical Considerations on the Fireground, third edition, published by Pearson/Prentice Hall/Brady Books
- Frequent speaker at national conferences and seminars

Deputy Chief William Shouldis (ret)

- Member of the Philadelphia Fire Department from 1972 to 2007
- National Emergency Training Center instructor since 1991
- Served in various positions in the Philadelphia Fire Department including: Director of the Philadelphia Fire Academy, Departmental Safety Officer, Special Investigation Officer and Field Commander for one-half of the City
- Pro Board Certified Incident Safety Officer
- Master's Degree in Public Safety from Saint Joseph's University (Philadelphia PA)
- Adjunct Faculty, Graduate School Saint Joseph's University - "Disaster Planning and Management" course.
- Editorial Advisory Board at Fire Engineering Magazine and frequent speaker at the Fire Department's Instructor's Conference (FDIC)

Appendix C: Bibliography

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2. Firefighting Strategies and Tactics, Angle, published by Delmar
3. Safety and Survival on the Fireground, Deputy Chief Vincent Dunn (ret), published by Fire Engineering,
4. Strategic and Tactical Considerations on the Fireground, 3rd ed, Deputy Chief James P. Smith (ret), published by Pearson/Brady.



Appendix "D" Fireground Photos By Glenn Usdin



Report Master Document 052813.doc