

**LINE OF DUTY
DEATH REPORT
REPORT SLIDES**



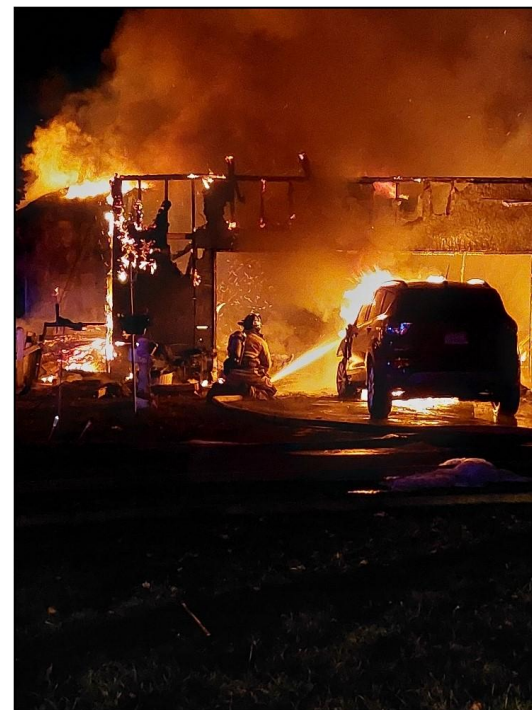
F2022-09

Lieutenant Dies from a Floor Collapse
in Residential Structure Fire with
Unpermitted Renovations – Illinois



Summary

- On December 4, 2021, a 38-year-old lieutenant (the officer of Engine 6 North) died after falling into the basement when the floor collapsed at a residential structure fire.
- On December 3, 2021, at 23:04 hours, a Still Alarm for mutual aid box alarm system (MABAS) Box 30 was dispatched for a residential structure fire.
- The county dispatch center (TwinComm) dispatched Engine 48 (E48), Engine 41 (E41), Engine 6 North (E6N), Tender 1 North (T1N), Car 1 South, Car 1 North, Deputy Chief 2 South (DC2S), and Deputy Chief 2 North (DC2N).



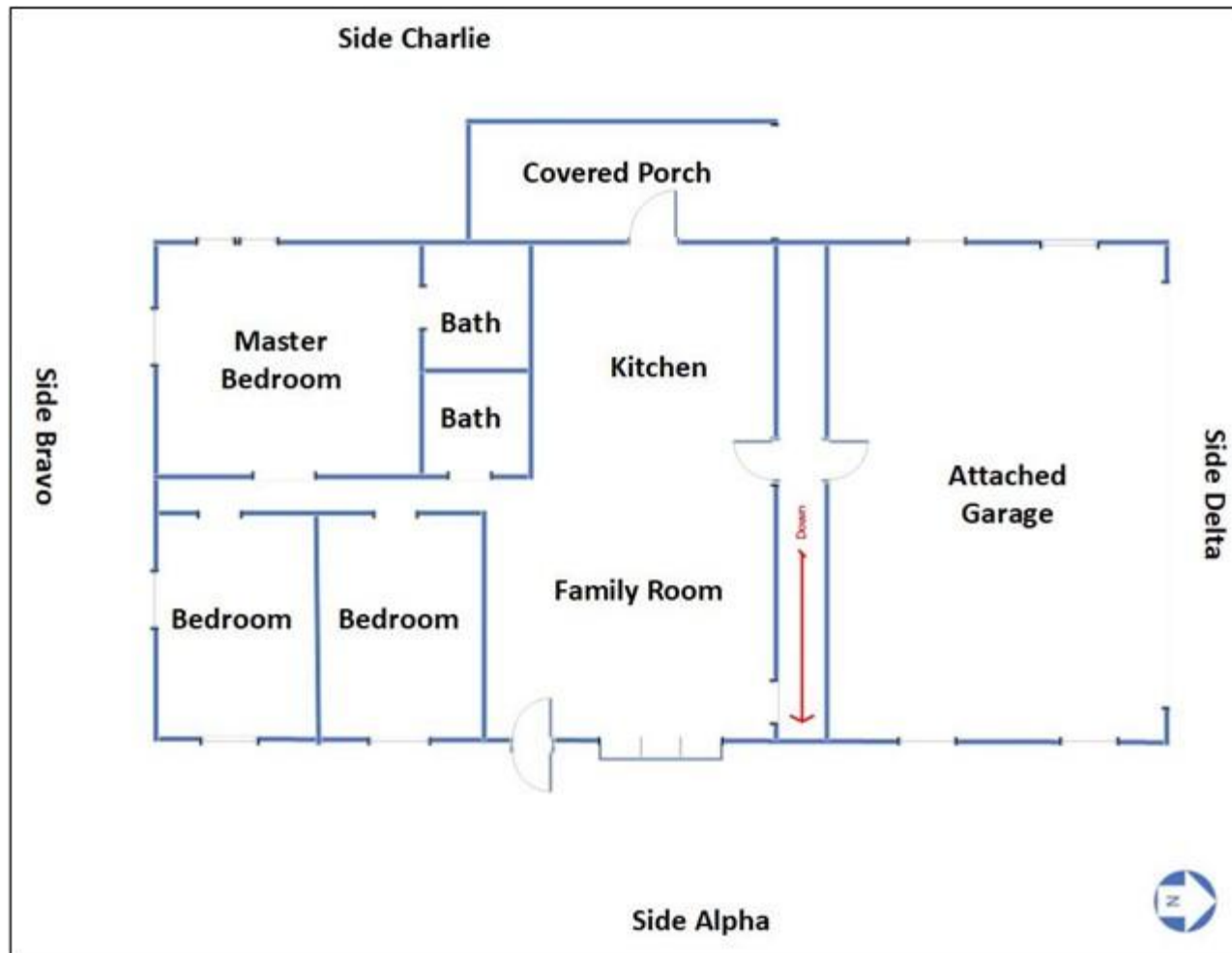
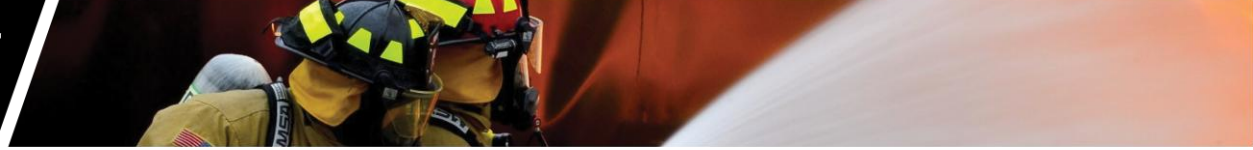
A firefighter from Engine 48 attempting to knock down the fire in the garage.
(Courtesy of Heather Smith - Eye on News)



Summary

- Car 1 South arrived on-scene at 23:14 hours and found a fire in the attached garage that had extended into the house.
- Car 1 South established himself as the incident commander (IC) on arrival.
- E48 arrived on-scene at 23:14 hours.
- IC ordered E48 to stretch a 2½-inch and 1¾-inch hoseline towards the garage.
- As E6N arrived on-scene at 23:18 hours, E48 initiated an exterior attack on the garage.
- DC2S arrived on-scene at 23:18 hours and was assigned as the accountability officer.

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The floor plan (first floor) (Prepared by NIOSH)



Summary

- E48 moved to Side Alpha to make entry through the front door.
- Upon entry, they noticed the entire attic space was involved in fire.
- The officer of E6N (E6NA) (deceased firefighter) and the officer of TIN (TINA) joined E48 to enter the house.
- Car 1 North arrived at 23:21 hours and was assigned as Operations Section Chief/Division Alpha Supervisor.
- The two firefighters from E6N went to Side Charlie with a 1¾-inch hoseline to knock down the porch fire. At 23:28 hours, DC2N arrived on-scene and was assigned as Division Charlie Supervisor.



An E48 firefighter deployed a hoseline to knock down the fire in the garage and vehicle.
(Courtesy of Heather Smith - Eye on News)



Summary

- At 23:29 hours, fireground operations were at 15 minutes.
- At this time E48, E6NA, and TINA exited the structure together after their self-contained breathing apparatus (SCBA) end of service time indicators (EOSTIs) sounded.
- After a cylinder change, the crew from E48 reentered the structure through the front door on Side Alpha.
- E6NA and TINA reentered the house through the front door, but split up and went to different rooms to pull ceilings.
- TINA pulled ceiling until he was completely out of air.
- As he left the structure through the front door, he encountered two firefighters from E41. TINA went to the rehabilitation area and met a firefighter from E48, who was with him on the initial fire attack.
- During this time, the accountability officer had E6NA on a team with two other firefighters in the building.



Summary

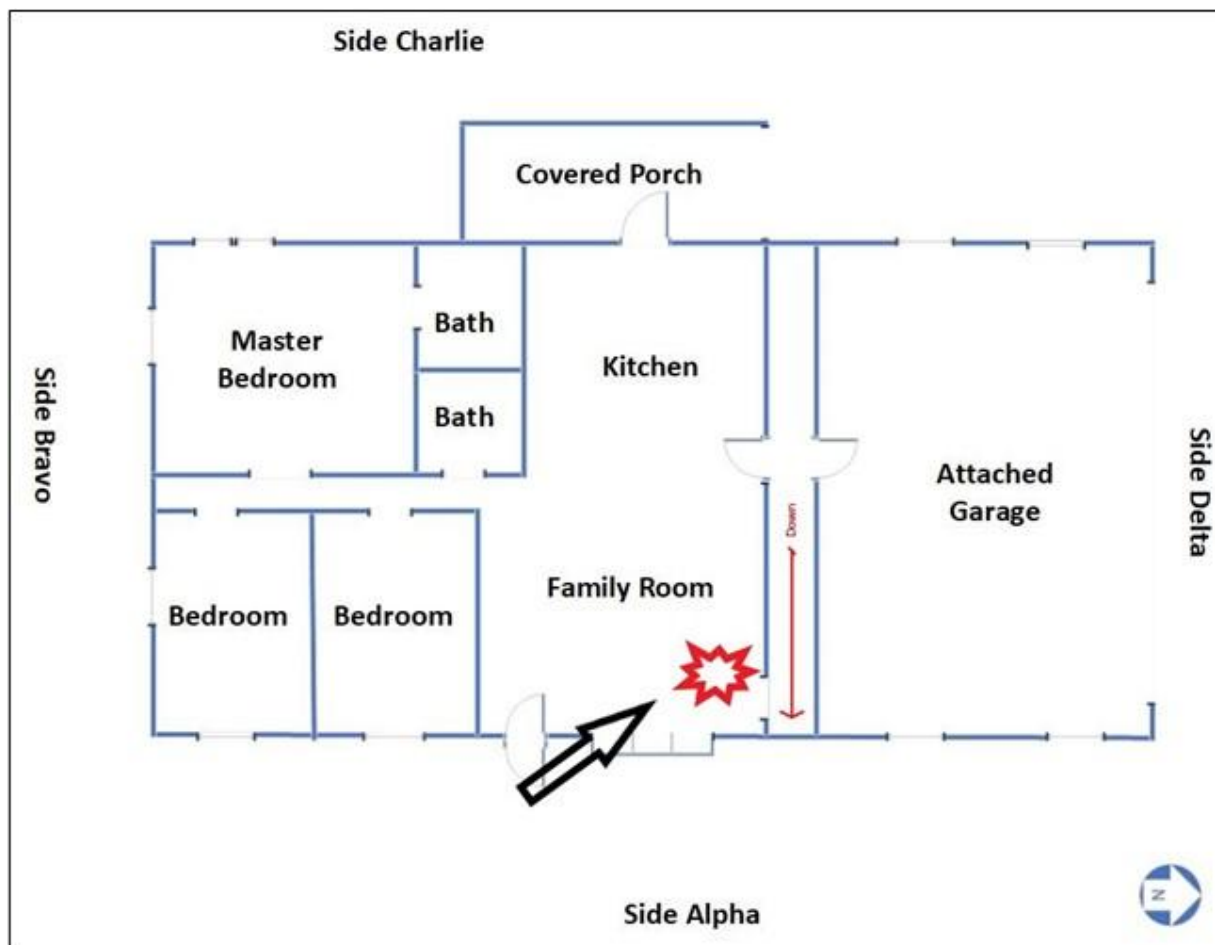
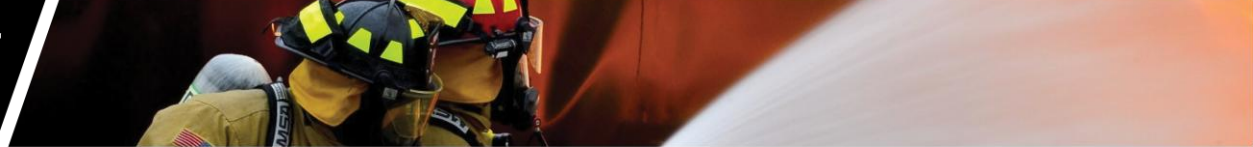
- At 23:44 hours, fireground operations were at 30 minutes.
- A crew of three firefighters were then assembled and directed to enter the building and report to the E6NA for an assignment.
- Interior operations continued with firefighters from multiple departments rotating in and out of the structure.
- At 23:54 hours, Car 1 North advised IC that the fire was under control and major overhaul was underway.
- At approximately 23:59 hours, E6NA met face-to-face with the incoming firefighters and then headed towards the outside.
- Since his crew had already been sent to rehab, E6NA was alone at this point.
- Fireground operations were at 45 minutes at this time.



Summary

- At approximately 00:01 hours on December 4, a radio report was transmitted on MABAS Red of a partial floor collapse.
- As E6NA exited the building, he fell through a fire weakened portion of the floor into the basement near the Side Alpha/Side Delta corner of the family room floor.
- E6NA transmitted a Mayday at approximately 00:04 hours on the dispatch channel.
- Most crews were operating on the MABAS Red and did not hear the Mayday.
- Car 1 North declared emergency traffic and asked for the member who called the Mayday to repeat the message.
- There was no response.
- A personnel accountability report (PAR) was initiated at approximately 00:06 hours.

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The arrow shows the location in the family room where the floor collapsed and E6NA fell into the basement. (Prepared by NIOSH)



Summary

- A firefighter from Squad 1 (a part of Car 1 North) was initially thought to be the missing firefighter.
- This firefighter was found on Side Charlie.
- After approximately 10–12 minutes, a message was transmitted over MABAS Red stating, “We have PAR.”
- Car 1 North advised IC that all interior crews were accounted for at this time.
- At approximately 00:37 hours, firefighters in the rehabilitation area could not locate E6NA.
- A search operation was initiated.



Summary

- During the search, IC advised the house had a full basement.
- The presence of a basement was unknown to initial responding units because all the basement windows were boarded up and painted over to match the siding of the structure.
- A crew went to the basement steps but could not enter because of debris from the 1st floor collapse.



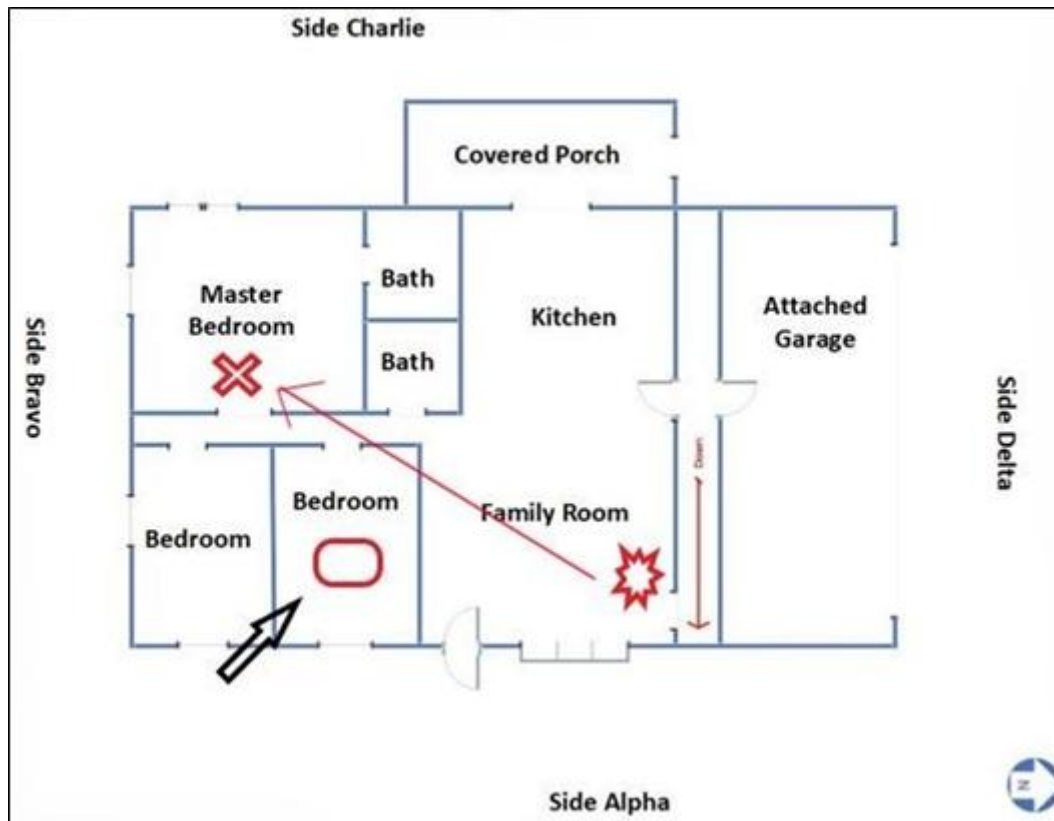
The concrete foundation of the house. The red circles indicate the location of the basement windows. The red arrow indicates the basement steps that were the only access to the basement. The green circles indicate the shed and propane tank. (Courtesy of NIOSH)



Summary

- A crew from a mutual aid fire department entered a front bedroom/office and cut a hole in the 1st floor.
- A crew from mutual aid fire department Engine 6 (DCE6) used an attic ladder to enter the basement through the hole.
- DCE6 reported heavy smoke, no visibility, and no visible fire.
- Shortly after entering the basement, a crew member heard an SCBA personal alert safety system (PASS) alarm sounding.
- The crew located E6NA with his SCBA facepiece and regulator intact and his helmet on.
- DCE6 reported to IC that they found E6NA and requested emergency medical services (EMS) at approximately 00:52 hours.

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The approximate path that E6NA took after falling into the basement through a hole in the family room floor and being found in the area under the master bedroom. The arrow points to the hole that a RIC company made in the bedroom to gain access to the basement. (Prepared by NIOSH)



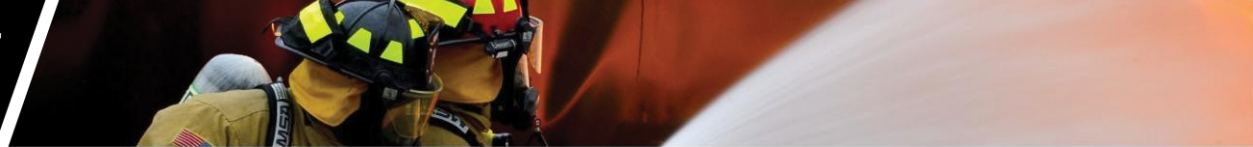
Summary

- The third attempt to remove E6NA from the basement was successful.
- E6NA was transferred to EMS personnel for care at approximately 01:02 hours.
- He was transported by ambulance to a local trauma hospital and was pronounced deceased at 01:41 hours.
- The fire was marked under control at approximately 02:00 hours by IC.
- The fire was declared out at approximately 06:45 hours.



Contributing Factors

- Scene size-up and risk assessment
- Personnel accountability
- Crew integrity
- Basement fire
- Professional development
- Lithium-ion battery fire
- Emergency communications
- Unpermitted occupancy renovations



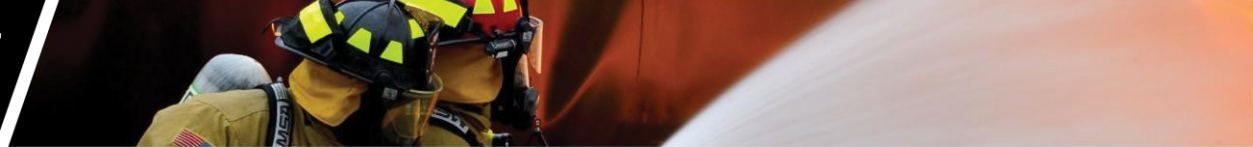
Recommendations

- Fire departments should ensure initial and ongoing size-ups and risk assessments are conducted throughout the incident.
- Fire departments should train ICs to provide ongoing accountability to include immediately establishing divisions/groups with a supervisor to communicate conditions and critical benchmarks.
- Fire departments should use a personnel accountability system to identify the location and function of all personnel operating at an incident.
- Fire departments should ensure company officers and firefighters maintain crew integrity.



Recommendations

- Fire departments should ensure fire department operations include Standard Operating Procedures (SOPs)/Standard Operating Guidelines (SOGs) for identifying basements and below-grade fires.
- Fire departments should ensure the implementation of a training, education, and professional development program is based upon each rank.
- Fire departments should raise awareness about the fire dangers of lithium-ion battery-powered products among community members through fire and life safety education programs.



Recommendations

- Public Safety Answering Points (federal, state, regional/county, and local) should ensure a communication SOP and equipment is in place for dispatchers to support fireground operations and the IC, including the ability to receive emergency alert button (EAB) signals from portable radios as well as monitor and record all radio traffic during fireground operations.
- Governing municipalities (federal, state, regional/county, and local) should ensure the applicable fire and life safety codes are enforced for renovations in residential occupancies and relevant information is shared with the fire department.

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