



In-Station Training

TM 24-27 Residential Fire-Entrapment



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Purpose

Response to a residential fire with a report of multiple trapped occupants presents a considerable challenge for the first arriving companies with the need to rapidly prioritize and address fire control and life safety priorities.

Learning Outcomes

Firefighters and officers perform an effective size-up, select an appropriate strategy, and implement tactics based on the strategic decision-making model.

Conducting the Drill

This incident involved a residential fire in a duplex located at 729 3rd Street, Catasauqua Borough, Pennsylvania on February 25, 2024, at 11:27 (Newsworking, 2024a, 2024b, Reinhard, 2024, & Broadcastify, 2024a, 2024b). Review the map and photos (Figures 1-5) to gain an understanding of the area and building involved.

Figure 1. Map of the Incident Area



Note: Adapted from Google. (2024a). [Map, 729 3rd Street, Catasauqua Borough, PA].

<https://bit.ly/3ULTL4d>.

Figure 2. Aerial View



Note: Adapted from Google. (2024b). [Aerial view 729 3rd Street, Catasauqua Borough, PA].
<https://bit.ly/3ULUdPX>.

Hydrants are located to the northwest and southeast of the incident location on 3rd Street as illustrated in Figure 1.

Figure 3. Alpha/Delta Corner



Note: Adapted from Google. (2019a). [Street view 729 3rd Street, Catasauqua Borough, PA].
<https://bit.ly/3V4FrFt>.

Figure 4. Alpha/Delta Corner (intersection of Centre and 11th Streets)



Note: Adapted from Google. (2019b). [Street view 729 3rd Street, Catasauqua Borough, PA]. <https://bit.ly/3UReung>.

Figure 5. Charlie/Delta Corner



Note: Adapted from Redfin. (2019). 729 3rd St, Catasauqua Borough, PA 18032. Retrieved May 20, 2024 from <https://bit.ly/3K7sSmn>.

The temperature is currently 30° F with no appreciable wind from the north (Weather Underground, 2024). You have been dispatched to 729 3rd Street for a residential fire. You are the company officer or AIC of the first arriving engine and have your company's typical staffing.

1. What critical factors would you consider when dispatched and during response and what conversations would you have with your crew while responding?

You hear a command officer, three other engines, and an advanced life support ambulance with typical staffing for your agency go enroute. You will arrive from the southeast on 3rd Street. The second engine will arrive from the same direction three minutes after you. The command officer will arrive shortly after the second engine. All other units dispatched on the first alarm will arrive after the command officer.

Dispatch provides an update reporting a fire on Floor 1 with 10 occupants trapped. A subsequent report indicates that the occupants have escaped and are out of the house.

Watch the [incident video](#) (Newsworking, 2024a) from 00:48 to 00:58 and examine Figure 6 illustrating conditions on arrival. Important! *The incident audio is not synchronized with the video. Chief 18 made entry to rescue an occupant but was out of the building when the first engine arrived. For the purposes of this 10-Minute Training, the engine arrives prior to the chief.*

Figure 6. Conditions on Arrival



Note: Adapted from Newsworking. (2024a). PRE-ARRIVAL: Apartment fire goes 2-alarms at 729 3rd Street in Catasauqua, Pennsylvania [video]. <https://bit.ly/3KaNxpl>.

2. State your initial radio report (IRR) exactly as you would transmit it to dispatch.
3. What specific actions would you take (as the company officer) immediately upon arrival and exiting the apparatus and what task orders you would give your crew?

An occupant reports that there is at least one occupant still inside, information is not completely clear if all others were able to evacuate. There is no significant smoke visible on Sides Charlie and Delta

4. Would you change the action you are taking or modify the assignments given to your crew? If so, what task orders would you provide?
5. State your update report exactly as you would transmit it to dispatch.

Watch the [incident video](#) (Newsworking, 2024a) from 01:20 to 01:50 before answering the next two questions.

6. Engine 2 arrives and reports that they are Level 1 on a hydrant at 3rd and Walnut Streets. State the tactical assignment you would give them exactly as you would transmit it.
7. Based on the anticipated effectiveness of your tactical operations, state your conditions, actions, and needs (CAN) report that you would provide to the first arriving command officer as part of command transfer to IC #2.

Reflect on your strategic decision-making and responses to questions 1 through 7 before answering the next six questions.

8. What was the problem?

9. What was getting in the way of achieving your tactical priorities?
10. Was there anything in this incident that could have hurt or killed you (right now)?
11. Was it reasonable to believe that the Main Fire Occupancy was occupied?
12. Was there searchable space?

Watch the [incident video](#) (Newsworking, 2024a) from 01:50 to 02:50 before answering the next several questions.

13. In this incident, the first arriving unit was a chief officer who confirmed entrapment and entered the building (likely alone) to rescue a reported occupant. Based on observed incident conditions, was this a reasonable action? Why or why not?
14. The first arriving engine stretched a dry 1 ¾" attack line through the door on Side Alpha. Given observed conditions and the location of the fire, what are the risks of stretching a dry line into the building?
15. Consider the building, smoke, air track, heat, and flame (B-SAHF) indicators visible in the incident video. What are your thoughts about the stages of fire development, burning regime (fuel or vent limited), location of the fire, and access to the fire area from the door on Side Alpha? What leads you to these conclusions? Are the conditions at the door and window on Floor 1 Side Alpha congruent with one another? Why or why not? What do these conditions tell you?

Additional Learning: What were your conclusions regarding the interior layout and configuration of this building?

Examine Figure 7. What might the presence of a second mailbox labeled “2nd Floor” indicate? How might this impact floor plan and arrangement?

Figure 7. Door on Side Alpha



Note: Adapted from Newsworking. (2024a). *PRE-ARRIVAL: Apartment fire goes 2-alarms at 729 3rd Street in Catasauqua, Pennsylvania* [video]. <https://bit.ly/3KaNxpl>.

Go back and look at Figure 4. Do you think that the one-story section of the building on Side Alpha was originally enclosed or was an open porch that was renovated to provide additional living space? Do you think that this room can be accessed from just inside the door on Side Alpha? Why or why not?

Examine Figures 8 and 9, illustrating the child’s bedroom (room of origin) and master bedroom on Floor 1, Side Alpha and the living room in the middle of the house (windows on Side Delta). It is likely that the first-floor unit was accessed via a hallway between the front door and the living room. How would this floor plan and configuration have impacted fire development and stretching the initial attack line for fire control and primary search on Floor 1?

Figure 8. Floor 1 Bedrooms



Note: Adapted from Redfin. (2019). 729 3rd St, Catasauqua Borough, PA 18032. Retrieved May 20, 2024 from <https://bit.ly/3K7sSmn>.

Figure 9. Floor 1 Living Room



Note: Adapted from Redfin. (2019). 729 3rd St, Catasauqua Borough, PA 18032. Retrieved May 20, 2024 from <https://bit.ly/3K7sSmn>.

Examine the interior door, hall, and stairwell illustrated in Figure 10. How would this interior configuration have impacted access to the first and second floor units (consider the direction of swing on the interior door)?

Figure 10. Interior Door, Hall, and Stairwell



Note: Adapted from Redfin. (2019). 729 3rd St, Catasauqua Borough, PA 18032. Retrieved May 20, 2024 from <https://bit.ly/3K7sSmn>.

How did the floor plan and interior arrangement differ from your initial perception at the start of this 10-Minute Training? How could these differences have impacted your decision process? If you made entry as the officer of the first arriving engine and discovered the floor plan and arrangement presented in this incident, how would these critical factors influence your task level actions and/or communications with IC #2?

Important! Keep in mind that the incident video provides a single perspective on incident operations. The purpose of this additional learning is not to criticize the firefighters and officers involved in this incident. Examining the incident and firefighting operations serves to provide a framework for examining building construction, fire behavior, and the impact of tactical operations to inform our practice.

Watch the remainder of the [incident video](#) (Newsworking, 2024a) and consider the following questions:

- What factors may have delayed water on the fire and knockdown (approximately 04:24 in the video) after the first attack line was stretched to the interior?
- Post knockdown, the fire regrew (approximately 06:15 in the incident video), and smoke was visible from the Floor 2 eaves (approximately 07:29 in the incident video). What factors could have impacted regrowth?
- What are the likely avenues of fire spread from the bedroom on Side Alpha to Floor 2 and the attic?
- There was significant smoke discharge and vent point ignition after regrowth (approximately 08:59 in the incident video). What does vent point ignition indicate regarding fire conditions inside the bedroom?
- The crew that deployed the initial attack line appears to exit, leaving their line in place (approximately 09:16 in the incident video) and a short time later the IC had companies withdraw (approximately 11:26 in the incident video). An exterior line was placed into operation on Side Alpha (approximately 12:29 in the incident video). What factors may have influenced the IC's decision to withdraw companies from the building? Was the use of an exterior stream effective?
- After the exterior water application, crews reentered the building (approximately 12:50 in the incident video) and began vertical ventilation on the first-floor roof (above the bedroom on Side Alpha). What effect would this ventilation opening likely have had on conditions on Floor 1 and on any fire extension into structural voids?

What other lessons can you draw from this incident?

References

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