In-Station Training

TM 25-16a Residential Fire

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Purpose

Coordination of fire control and ventilation tactics is essential to the effectiveness of an offensive firefighting strategy. Ventilation in advance of effective water on the fire can result in an increase in heat release rate and fire growth. Delay of ventilation post knockdown or fire control can make fire control and search operations more difficult.

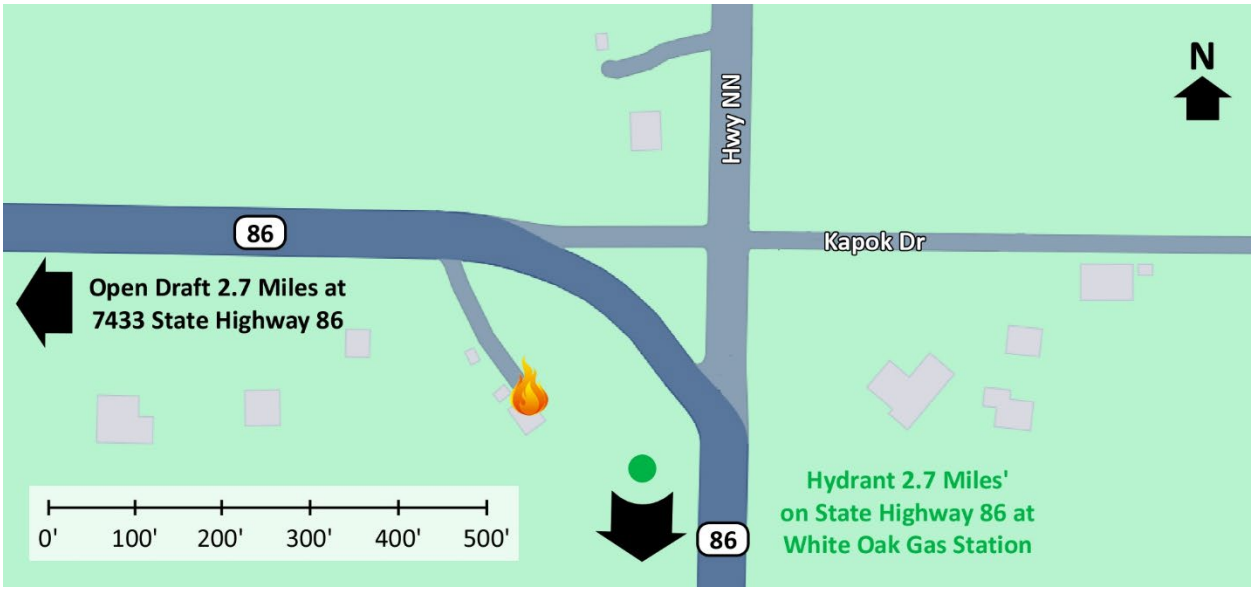
Learning Outcomes

Command officers perform effective ongoing 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 at 9771 State Hwy 86, Neosho, Missouri on Thursday, January 23, 2025, at 22:05 (The Breaking News Channel, 2025; Becker, 2025; & Joplin News First, 2025). Review the map and photos (Figures 1-3) to gain an understanding of the area and building involved.

Figure 1. Map of the Incident Area



Note: Adapted from Google. (2024a). [Map, 9771 State Hwy 86, Neosho, MO]. https://bit.ly/4jwDwDJ.

There are no hydrants in the immediate area. The closest water tender fill points are an open draft site 2.7 miles to the west on State Highway 86 and a hydrant 2.7 miles to the south on State Highway 86 at the White Oak Gas Station.

Figure 2. Aerial View

Note: Adapted from Google. (2024b). [Aerial view 9771 State Hwy 86, Neosho, MO]. https://bit.ly/3XdzlTL.

Figure 3. Alpha/Bravo Corner

Note: Adapted from Google. (2024c). [Street view 9771 State Hwy 86, Neosho, MO]. https://bit.ly/4hHUcqy.

The temperature is currently 19° F and wind is from the north northwest at 3 mph (Weather Underground, 2024). It is Thursday, January 23rd, and you have been dispatched along with three engines, two water tenders, a ladder company, and a medic unit, at 22:05 to 9771 State Highway 86 for a residential fire. The engines and ladder have four-person staffing[1]. The water tenders are cross staffed with two of the engines, providing three personnel on the engines and one on the water tender). You are responding to this incident as the first arriving command officer.

Time starts now! Answer the first eight questions within the next 10 minutes. After answering question 1, decide and put your answers in the form of communication you would have with the companies assigned to this incident. Save discussion for after answering the first eight questions.

1. What critical factors would you consider when dispatched and during response?

You hear three engines, two water tenders, a ladder company, and a medic unit go en route. The first engine will arrive from the south. The ladder company will arrive from the south three minutes after the first engine. **You will arrive from the south on State Highway 86 shortly after the ladder company.** The remaining first alarm companies will arrive after you.

While en-route, dispatch advises that this incident was initially reported as a chimney fire but upgraded to a residential fire based on additional calls indicating flames from the roof of the house.

Engine 1 arrives and provides the following initial radio report.

> *On-scene of a small, one and a half-story house with a working fire on Floor 2 and the attic. Stretching an attack line on Side Delta for fire control, on a hydrant, give me an additional engine and water tender, Engine 1 is 86 Command.*

86 Command provides the following follow-up report:

> *360 complete, one and a half stories on all sides, no basement, continuing offensive, Engine 1 is accountability on Side Alpha.*

[1] If your first alarm deployment is different, use your own resource assignment and staffing with the first and second arriving resources typical for your agency (e.g., two engines vs. engine and ladder).

Ladder 1 arrives and reports that they are Level 1 to the south on Highway 86 Command provides the following tactical assignment:

> *Park out of the way, stretch a second attack line off Engine 1 through Side Bravo for fire control and primary search.*

Watch the incident video from 01:20 to 02:30 (The Breaking News Channel, 2025) and examine Figure 4 illustrating conditions on your arrival.

Figure 4. Conditions on Arrival

Note: Adapted from The Breaking News Channel. (2025). *Devastating & very large structure fire. NN and 86 highway/ Kapok Road. Newton County, Mo 1-23/24-2025* [video]. https://bit.ly/416lwru.

2. What actions will you take prior to contacting IC #1 (Engine 1) to begin command transfer?

3. State your command transfer communication after IC #1 acknowledges your radio contact (exactly as you would transmit it).

Following your confirmation of the location and assignment of Engine 1 and request for a conditions, actions, and needs (CAN) report, IC #1 provides the following CAN:

> *Good knockdown from the exterior, fire has extended into floor 2 and the attic, opening around the chimney. applying water with good effect, need a continuous water supply and a company to complete primary search and assist Ladder 1 with fire control on Floor 2.*

4. State the communication you would have with IC #1 and dispatch to complete the command transfer exactly as you would transmit it.

5. What action would you take based on the CAN from Engine 1 (IC #1)? State the communications you would have with the operating companies exactly as you would transmit them.

6. Engine 2 arrives and reports that they and Water Tender 2 are Level 1 south of the incident on Highway 86. State the tactical assignments you would give Engine 2 and Water Tender 2 exactly as you would transmit them.

7. Engine 3 arrives and reports that they and Water Tender 3 are Level 1 west of the incident on Highway 86. State the tactical assignments you would give Engine 3 and Water Tender 3 exactly as you would transmit them.

Watch the incident video (The Breaking News Channel, 2025) from 05:45 to 06:13.

You receive the following radio transmission from Ladder 1:

> *86 Command, Ladder 1 with a status change, fire knocked down in the attic air status just below 1/2, need to recycle and a company to relieve us for overhaul on Floor 2.*

8. State the tactical assignment you will give Ladder 1 based on their status change.

Reflect on your strategic decision-making and responses to questions one through eight before answering the next six questions. Give some thought to what cues, patterns, or anomalies (differences from conditions that you would anticipate) inform your answers.

9. What was the problem?

10. What was getting in the way of achieving your tactical priorities?

11. Was there anything in this incident that could have hurt or killed you (right now)?

12. Was it reasonable to believe that the Main Fire Occupancy was occupied?

13. Was there searchable space?

14. If you believed it was reasonable that the building was occupied and there was searchable space, what could you do about it?

Watch the incident video (The Breaking News Channel, 2025) from 08:30 to 10:30 before answering the next question.

15. Based on the building, smoke, air track, heat, and flame (B-SAHF) fire behavior indicators visible in the incident video, what conditions would you anticipate on Floor 2? What B-SAHF indicators lead you to this conclusion?

Watch the incident video (The Breaking News Channel, 2025) from 14:00 to 15:34 before answering the remaining questions.

16. What factors may have impacted the ability of firefighters operating on Floor 2 to gain access to fire burning in the void spaces above Floor 2?

While only two sides of the building are visible, it does not appear that the companies operating at this incident performed any tactical ventilation until late in the incident (at 17:15 in the incident video a window on Floor 2 was opened).

17. What ventilation tactics could have been used in this incident and how would an increase in ventilation have impacted fire behavior and conditions on Floor 2?

Additional Learning: There are multiple options for tactical ventilation. These include horizontal or vertical natural ventilation and hydraulic or positive pressure ventilation. Discuss the application of these tactics with the members of your crew. If you (or the members of your crew) have not completed the Underwriters Laboratories Fire Safety Research Institute (UL FSRI) courses on tactical ventilation and coordinated fire attack, take advantage of these great learning opportunities.

- *Impact of Horizontal Ventilation on Fire Behavior* (UL FSRI, 2024a)
- *Vertical Ventilation and Suppression Tactics in Residential Structures* (UL FSRI 2024b).
- *Positive Pressure Attack* (UL FSRI, 2020).
- *Impact of Ventilation on Strip Mall Fires* (UL FSRI, 2021)
- *Residential Attic and Exterior Fires* (UL FSRI, 2024c)
- *Coordination of Suppression and Ventilation in Single-Family Homes* (UL FSRI-2022).

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