



In-Station Training

TM 23-50a Commercial Fire



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Purpose

There are multiple factors that can impact operating companies' ability to achieve an adequate flow rate and distribution necessary for effective fire control. IC #2 needs to ensure that companies are in appropriate positions from a strategic perspective and if the current tactical operations are supporting the strategy.

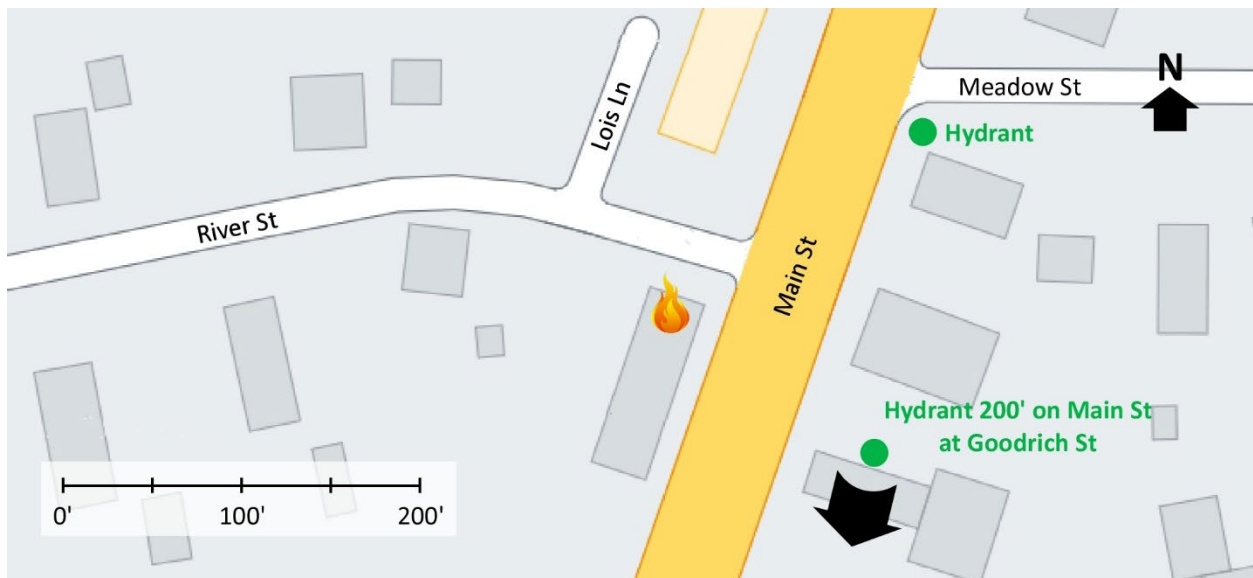
Learning Outcomes

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 commercial fire at fire Tracey's Variety located at 306 Main Street in Bingham, Maine on February 14, 2021, at 22:30 (O'Connor, 2021 & Abbott, 2021). Review the map and photos (Figures 1-6) to gain an understanding of the area and building involved.

Figure 1. Map of the Incident Area



Note: Adapted from Google. (2023a). [Map, 306 Main Street, Bingham, ME]. <https://bit.ly/3QSW6K4>.

The closest hydrant is at Main Street and Meadow Street and a second hydrant is located on Main Street at Goodrich Street as illustrated in Figure 1.

Figure 2. Aerial View



Note: Adapted from Google. (2023b). [Aerial view 306 Main Street, Bingham, ME].
<https://bit.ly/40ymnAu>.

Figure 3. Alpha/Delta Corner



Note: Adapted from Google. (2011a). [Street view 306 Main Street, Bingham, ME].
<https://bit.ly/40PZoRP>.

Figure 4. Side Alpha



Note: Adapted from Google. (2011b). [Street view 306 Main Street, Bingham, ME].
<https://bit.ly/3sxOt2o>.

Figure 5. Alpha/Bravo Corner



Note: Adapted from Google. (2011c). [Street view 306 Main Street, Bingham, ME].
<https://bit.ly/40HrluP>.

Figure 6 illustrates the Charlie/Delta Corner of the main fire occupancy. At the time of the incident, the stairway on Side Charlie had been reversed accessing Floor 2 from Side Delta, rather than from Side Bravo as illustrated in Figure 6.

Figure 6. Charlie/Delta Corner



Note: Adapted from Google. (2011d). [Street view 306 Main Street, Bingham, ME].
<https://bit.ly/46bdEp1>.

You have been dispatched to Tracey's Variety, 306 Main Street for a commercial fire at 22:30. You are responding to this incident as the first arriving command officer. Temperature is 18° F with no appreciable wind from the north (Weather Underground, 2021). While responding you hear four engines, an advanced life support (ALS) ambulance, and a second command officer go enroute. The engines have staffing typical of your agency.

While enroute, dispatch provides an update that callers report smoke from the second floor of Tracey's Variety. The first engine will arrive from the south southwest on Main Street. The second engine and ALS ambulance approximately six minutes after the first. The third engine will arrive eight minutes after the first arriving engine. Make a note of your resource and staffing assumptions prior to continuing with this 10-Minute Training. **You will arrive from the south southeast on Main Street after the second company.** The fourth arriving engine and any additional resources on the first alarm (based on your response plan) will arrive later in the incident.

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

As you were responding Engine 1 provided the following initial radio report:

On-scene of a small one and one-half story commercial with a working fire, smoke from Floor 2, Side Charlie. Stretching an attack line on Side Alpha for fire control, in the offensive strategy, give me two additional engines with Level two staging two blocks south at Main Street and Rollins Street, establishing Tracey's Command.

You hear Tracy's Command modify the initial assignment to stretch an attack line on Side Alpha, having Engine 1 stretch the attack line around Side Delta to the exterior stairs on Side Charlie. Tracy's Command provides the following update report:

360 complete, one and a half stories all sides, no basement, working fire on Floor 2, attack line redeployed on Side Charlie for fire control with access over exterior stairs. Engine 1 is accountability on Side Alpha, which will be Main Street, continuing offensive.

Engine 2 and Medic 2 arrive and advise Tracey's Command they are Level 1. Tracey's Command provides the following orders to Engine 2 and Medic 2.

Medic 2, integrate with Engine 1 on Side Charlie, we will be stretching through Side Charlie, Floor 2 for fire control and primary search. Engine 2, forward lay to Engine 1, park out of the way, stretch an attack line off Engine 1 on Side Charlie, go on deck.

Engine 3 arrives and advises Tracey's Command they are Level 1. Tracey's Command provides the following orders to Engine 3.

Engine 3, park out of the way, stretch an attack line off Engine 1, through Side Alpha for fire control and primary search.

Watch the [incident video](#) (O'Connor, 2021) from 01:13 to 01:43 and examine Figure 7 illustrating conditions on your arrival.

Figure 7. Conditions on Arrival of Chief 1



Note: Adapted from O'Connor, D. (2021). *Bingham Structure Fire 2-14-2021* [video]. <https://bit.ly/49ucckt>.

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).

Watch the [incident video](#) (O'Connor, 2021) from 01:43 to 02:03 (changing conditions during your transfer of command). Following your confirmation of the location and assignment of Engines 1 and 2 and request for a conditions, actions, and needs (CAN) report, IC #1 provides the following CAN:

That is correct. We just had an explosion on Floor 2. Fire conditions worsening, need another line for fire control to gain access to Floor 2 from Side Charlie.

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.

Engine 3 arrives and reports that they are Level 1 two blocks north on Main Street at Murry Street.

6. State the tactical assignment that you will give Engine 4 exactly as you would transmit it.
7. Chief 2 arrives and advises that they are Level 1. State the assignment you will give Chief 2 exactly as you would transmit it.

Engine 4 arrives and reports that they are Level 1 two blocks north on Main Street at Murry Street.

8. State the tactical assignment that you will give Engine 4 exactly as you would transmit it.

Watch the [incident video](#) (O'Connor, 2021) from 01:45 to 02:15 and examine Figure 8 before answering the four questions (you may want to watch this segment several times).

9. Did you see any B-SAHF (building, smoke, air track, heat, and flame) indicators that indicated potential for a rapid fire progression event prior to the explosion on Floor 2? If so, what were they? Do you think that these indicators (if present) would have been visible to the company operating on the second-floor deck?
10. What type of rapid fire progression event do you think occurred on Floor 2, backdraft or fire gas ignition such as a flash fire or smoke explosion? What leads you to this conclusion?
11. Did the fire behavior change after the explosion on Floor 2? If so, how, and what factors may have influenced these changes?
12. Did you change strategy after the explosion on Floor 2? Why or why not? If not, did you identify trigger conditions that would prompt a shift from offense to defense and if so, what were they?

Figure 8. Changing Conditions



Note: Adapted from O'Connor, D. (2021). *Bingham Structure Fire 2-14-2021* [video].
<https://bit.ly/49ucckt>.

Before answering the next several questions, it is important to recognize that the video of this incident provides a single view of incident operations (from the Charlie/Delta Corner). Additional operations are likely to have been taking place on Side Alpha or in the attachment between the Main Fire Occupancy and the Bravo 1 Exposure. Watch the [incident video](#) (O'Connor, 2021) from 02:15 to 04:30 before answering the remaining questions.

13. Why might there be a deck and exterior stairs on Side Charlie? Did you consider the possibility that this was a residential over commercial occupancy? Did you think that there was access to Floor 2 from the interior of the store? Why or why not?

14. Was the ongoing exterior application of water effective? What factors may have influenced the incident commander's decision to continue exterior operations?

Figure 9. Post Fire Conditions



Note: Adapted from Abbott, T. (2021). Fire destroys Tracey's Variety in Bingham. <https://bit.ly/3MLsZW0>

Additional Learning: There are multiple fire behavior phenomena that can result in explosive fire development such as encountered in the Bingham, Maine incident. Firefighters and fire officers in the United States are generally familiar with the backdraft phenomena, but less so with other types of fire gas ignitions. Read [Fire Gas Ignition](#) (Lambert, 2011) and watch [FGI – the hidden killer! We have defined Flashover & Backdraft. Do you understand the hidden killer?](#) (Raffel, 2023). Discuss these fire behavior phenomena with your crews.

References

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