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"Average Joe" Firefighting Operations

By **BARRY S. DASKAL**

Albert Einstein once said, "Everything should be made as simple as possible, but not simpler." This article is a hybrid of information from various comprehensive sources on structural firefighting operations that the "Average Joe" firefighter can find useful.

SIZE-UP

Your first concern always starts with size-up. The classic 13-point size-up method is to use the acronym COAL WAS WEALTH.

Construction. How and with what material is the building built? There is a difference in fighting a fire in a wood-frame private dwelling vs. a building of ordinary construction. Is the building of truss construction, or is it a commercial building, where you might anticipate open void spaces? Fire travels differently, and our tactics must be different.

Occupancy. Is this a place of public assembly such as a shopping mall or a health care facility? What about a paint store or a pool store? Does a lumberyard have a heavy fire load with long stretches?

Area. How much of the structure (or other fire area) is involved? As with the occupancy, should you expect long hoseline stretches?

Life. This is always your number-one priority, period. Do you have rescues visible on arrival? Is the building otherwise occupied, or does it appear vacant? Remember, vacant isn't just destitute; it could be for sale or under construction.

Water supply. Are there hydrants in your district? If so, are they low- or high-pressure? At a glance, will tank water handle the job or at least last for a quick knockdown? Is another engine or tanker responding for a relay? Is drafting an option?

Auxiliary appliances. Does the building have standpipe or sprinkler systems? If so, how are the systems supplied? Are they wet or dry?

Streets. Are they under construction? Are there trees or overhead wires that could impact aerial or ground ladder operations?

Weather. This is probably the most straightforward point to understand. Remember the inherent differences and problems.

Exposures. There are six sides to every problem: the traditional four sides of the emergency location as well as above and below.

Apparatus and equipment. What is your staffing level? Who else is on the road, and how many firefighters do they have? Is an aerial apparatus or a tanker responding?

Location (extent of fire). Where is the fire? Is it visible? Is it a heavy volume of fire, or can you knock it down with tank water? Will it threaten the exposures?

Time of day. Do you expect a life hazard at 2 a.m. in a private dwelling? Absolutely. A commercial building? Maybe, but less likely. Are security guards locked inside? This is not uncommon in certain cultures.

Height. How tall is the structure, and do you have ladders to ascend it?

If you can remember each point while under stress, you will do well.

FORCIBLE ENTRY

The goal of forcible entry is to get in quickly and safely. One of the fire service's most common mistakes is not to "try before you pry." Have you ever spent 30 seconds at the front door fighting with the locks, only to have the one second of clarity to remember to see if the door was unlocked? I have; in one case, the door was unlocked. I will never make that mistake again.

In a life-threatening situation, carry out forcible entry operations as quickly as possible. To achieve speed, efficiency, and proficiency, practice with your bread-and-butter tools such as the halligan and flathead ax. Depending on your size-up, you may need a hydraulic forcible entry tool or a maul (photos 1, 2).



(1) Photos by author.



(2)

One quick tip: If you insist on kicking the door in, don't face the door while kicking it. I once watched an officer kick a door in this way, only to have it spring back and slam into his nose. Also, you may kick the door into an unconscious victim.

Lock pullers such as a K-tool and an improvised "bam-bam" tool (photo 3) remove the cylinder and expose the locking mechanism. Drive the K-tool onto the lock cylinder, and then pull it with a halligan or similar tool in a deliberate motion. With the locking mechanism exposed, it is very easy to manipulate the lock with a file, a screwdriver, a key tool, or another similar tool (photo 4).



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SEARCH AND RESCUE

Rescuing people in danger is the fire department's primary objective. Start your rescue process evaluation with a basic size-up, and continue from there. Some key points to look for include the following:

- Is the fire building a closed-up dwelling with heavy smoke showing?
- Are people calling for help?
- Is fire showing? If so, where?

You can obtain some of this information from first on-scene police, neighbors, and evacuating tenants. Use caution, however, as reports that "everyone is out" might be false.

If an immediate rescue is apparent, even with minimal staffing onboard a first-due engine, attempt the rescue. If you have a specific assignment on the fireground and observe an obvious rescue, call for help, and notify your officer that your original task will be delayed.

On arriving on-scene, begin primary search operations immediately. This isn't, however, an isolated task of just getting into the structure and blindly searching; coordinate it with the fire attack. Conduct a thorough, planned search for victims at every fire. Your search technique may differ, depending on your assignment.

The fire floor team/entry team searches quickly toward the fire and then thoroughly from the fire area out; most victims are found between the fire and the point of egress. The occupants in the most danger are closest to the fire, so work from there out. This also reinforces the idea that the primary search is not

just for life but also to determine the fire's location.

The floor-above team/outside vent team/roof team searches immediately on entering the fire building. You will likely use alternate means of entry such as a window, where occupants are often found. You can accomplish this by vent-enter-search, an aggressive search tactic that provides one of the best chances of survival for trapped occupants. Make sure you search the opening that you make to enter the area for obstructions (e.g., blinds, shades, and window cross-sections), and immediately isolate the area from the fire's main body by closing the door to the room you have entered.

While you search for occupants (and fire), ventilate where needed. This is known as "vent as you go." This allows smoke and heat to lift, making the situation more comfortable physically and psychologically. Be very careful when using this technique: It may draw fire in your direction. Employ this method when you can close a door to isolate yourself from the fire. Use a tool to extend your reach when probing for victims. As you make your way around the room, keep turning and moving in the same direction. You and your partner should keep track of each other by touch, sight, and sound. Check all areas on the primary search such as bathrooms, closets, and spaces behind large chairs and under beds (photos 5, 6). Also check directly under windows for victims.



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On reaching the fire room, release the lock slowly and open the door slightly (photo 7). If there is a strong push of heat or fire, close the door and wait for a hoseline. When confronted with a contents fire, quickly probe into the fire room if possible, and then close the door to isolate the fire. Make sure victims are not lying against doors that open inwardly, as victims may be found near doors. The first member through the door must check behind it for victims (photo 8).



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When you knock down the fire, different crews must conduct a secondary search. This ensures that the same individual does not search the same area twice; something you may have missed during the

primary search you may unintentionally miss again in the secondary search.

RESCUE CONSIDERATIONS

Rescue doesn't necessarily mean removing occupants from the building; it can mean removing them from danger. Some of the main factors that indicate the difficulty of rescues are the number of people in the fire building, the paths by which fire and smoke can reach them, the routes available to crews for reaching and removing people from the building, and the fire conditions themselves. Occupants will try to escape through doors, windows, halls, and stairwells. For safety, the interior stairs is the preferred method of victim removal, whenever possible.

FIRE SUPPRESSION STAGES

There are so many stretches and variables to consider such as stairwells, standpipes, fire escapes, windows, fire to hydrant, and hydrant to fire. As always, follow your local standard operating procedures.

To successfully extinguish the fire, recognize that as a fire initiates and grows in stages, firefighting also progresses in stages, which include the following.

Stage One: Locate the fire. This is your size-up phase. It begins with your initial dispatch information. From the time you're dispatched, you begin to gather important information such as the response area in your district, which can provide clues to building construction, response patterns, life hazards, and water supply. Radio traffic can provide other useful information such as additional caller and on-scene police reports as well as preplan information, if available.

Stage Two: Confine the fire. On locating the fire room/area, attempt to confine the fire by any means possible while waiting for the hoseline. You can often accomplish this by closing the fire room door. A 2½-gallon extinguisher can be invaluable here to hold the fire in check. If needed, you can dedicate the first handline to this sole purpose; the second handline will be the attack line.

Stage Three: Extinguish the fire. To accomplish this stage, practice handline placement and operation.

HANDLINE PLACEMENT

The first handline must, except in some circumstances, go through the front door. The idea is to place the first line between the fire and anyone in danger. Protect the occupants' primary means of egress, and

control the interior staircase to protect operating firefighters. Then advance this line to the primary area or main body of fire to confine and extinguish it.

The second handline commonly backs up the first handline and generally takes the same route into the fire building. The second handline's primary purposes are to back up the first line in case of a burst or other water loss, provide additional water flow to make a simultaneous push on a heavy body of fire, protect the interior stairs, and advance to the floor above. The second line must be at least one length longer than the first handline.

The third handline covers a secondary means of egress as well as protects exposures. Avoid an "opposing streams" situation.

FIRE ATTACK

As you advance into the fire building, stay low and look for the fire's glow; this is the direction in which to go. Remember, you are heading into the area from which everyone else is fleeing. The glow and the heat changes may be the only indications of the fire's location, especially once you open the handline. After you open the line, visibility will not improve without ventilation. While waiting for water, crack open the nozzle to bleed air out of the line as the water rushes forward. Bleed and charge the line before entering the fire area. Never enter the area without a charged line.

There are several ways to advance. You can crawl on two knees, move forward on one knee and leg, or duck walk. As the company advances, stay low, with the nozzle team on the same side of the line. Remember to sweep the floor ahead of you as you move in and let the stream's reach do the work on the fire (photos 9-11). Keep the nozzle out in front of you and push it out as you move forward, darkening down the fire above you, cooling the room. As this happens, start sweeping down to extinguish the burning contents.



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Now, here you are in this hostile environment and you find yourself wondering, “How do I know that all this is going right?” Think about basic first aid and CPR—look, listen, and feel. Look for the fire’s glow, listen for the fire crackling and the stream striking the walls, and feel for the changes in heat conditions.

Once the fire appears knocked down, shut down and let the smoke and steam lift. However, be ready to reopen the nozzle immediately. At this point, you can use the hoseline at a window on a fog or broken pattern to vent the fire area.

OVERHAUL

Overhaul's main purpose is to make sure no trace of fire remains to rekindle or reflash. To perform this properly, you must have a thorough knowledge of fire travel and building construction. The overhaul process begins after you extinguish the fire. There is no reason to rush or take chances. Overhaul is no time to let your guard down, as substantial pockets of fire could remain. Carbon monoxide and other products of incomplete combustion will remain and necessitate the use of self-contained breathing apparatus. You must also make sure the area you work in is safe in terms of fire damage (intact floors, etc.).

SALVAGE

Salvage's main objective is to protect the building and contents from water damage, take necessary firefighting interventions, and make sure the fire is completely out. It makes very little sense to put effort into controlling a fire while allowing water to ruin office equipment or domestic furnishings.

Salvage operations should start as soon as the attack begins; overhaul operations do not start until most of the fire is extinguished. Do not hesitate to ask for additional personnel if it is available to help perform salvage operations.

Spread covers over contents in the most danger of being damaged by water, which in most cases is on the floor below the fire floor. When the number of covers is limited, the available covers, such as towels, shower curtains, and tarps, should protect the most valuable contents.

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