

OPERATIONS IN BUILDINGS WITH SPRINKLER SYSTEMS

Purpose:

To establish a standard guideline for operations in buildings with automatic fire extinguishing systems.

Upon Arrival:

- A. Give a condition report.
- B. Continue size-up.
- C. Determine the exact location of the fire.
 - 1. Check with occupants.
 - 2. Check annunciator panel (if available).
 - 3. Check for alarm bells sounding, which may indicate the involved zone.
 - 4. Check for water flowing from exterior drains, which may indicate the general area.
- D. The second engine/quint to arrive at the scene of a building equipped with a sprinkler and/or standpipe system shall position the apparatus at the Fire Department Connection (FDC) and await orders to connect to the system and provide a water supply.
 - 1. The pump operator shall automatically connect to the FDC upon hearing that there is smoke or fire existing in the building as reported from the interior fire crews.
 - 2. The Boone County Administration Building located on Washington Street shall have a line placed to the FDC immediately on the arrival of the first engine company.

Safety:

- A. Maintain tight control over personnel during interior operations.
- B. Utilize hose lines and/or life lines during interior search operations.

Guidelines:

- A. The second arriving engine/quint shall be responsible for connecting supply lines to the FDC; however, if the first arriving engine has the FDC at their location that engine should supply the system.
- B. The minimum fire department hook up to the FDC should not be less than two 2 ½" hose lines. Most commercial connections in the district are 5" storz and shall be connected to with 5" hose. Residential apartment buildings with sprinkler systems have only one 2 ½" connection and should be supplied by only one 2 ½" hose line.

- C. If a fire is in progress and sprinkler heads have opened, 150 PSI should be provided to the FDC for commercial sprinkler systems and 90 PSI at residential systems. If long lines are required (over 100') between the pumper and FDC, the friction loss in the hose must be considered in hydraulic calculations.
- D. Unless it is known for sure that private mains provide an adequate supply, engines/quints should be connected to city hydrants, if available. A general rule is not to take suction from hydrants on a private system unless it is known that the system is adequate for the purpose.
- E. Send a firefighter, equipped with a radio, to inspect the shut-off valve to:
 - 1. Determine if the sprinklers are operating properly.
 - 2. Open the valve if it is closed.
 - 3. Shut off the valve promptly when the Incident Commander decides that sprinkler operations may be discontinued.
 - 4. Reopen the valve in the event that the fire rekindles and cannot be controlled by those hand lines, which are already in place.
- F. Normally, 1 ½" or 1 ¾" hand lines may be used for fire streams in sprinkled buildings. However, when fires involve unusual hazards, high piled stock or large areas, 2 ½" hand lines should be considered.
- G. Observe the affect of the sprinkler system on the fire to determine:
 - 1. If the system is operating properly.
 - 2. The size and number of hose lines that may be needed to effect complete control and extinguishment.
- H. Insure that evacuation, search and other life safety measures are promptly completed at fires in sprinkled buildings.
- I. Effective control of fires in sprinkled buildings requires proper ventilation. Whether such ventilation is accomplished by conventional means or by utilizing on site, built-in automatic systems, the following steps must be accomplished:
 - 1. A firefighter equipped with a radio must be sent to the shut-off valve to stand by.
 - 2. Hose lines must be ready, charged and in position for confinement and control before the sprinklers are shut off.
 - 3. Personnel must be in position and should have affected the necessary conventional opening(s) or be prepared to initiate available on site automatic systems before the sprinklers are shut off.
 - 4. The Incident Commander or the Operations Officer must insure proper communications and coordination.
 - 5. When the entire above have been accomplished, the sprinkler system should be shut down (slowly) to allow proper ventilation to occur and those members manning hand lines to move in and fully extinguish the fire.
 - 6. In the event that the hand lines are unable to affect control, the system should be turned on again until additional streams can be brought into position.

- J. Initiate prompt salvage and water removal operations to protect records, machinery, storage, stock and furnishings from water damage.
- K. After fire operations are complete:
 - 1. Contact owner, occupant, or agent about the sprinkler system being out of order and that they should contact a service representative to put the system back in operation.
 - 2. Explain to the owner, occupant, or agent that the property will not be protected or if connected to a central station an alarm will not be transmitted.