

 DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES	REVISION DATE
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1. STRUCTURAL FIRE ATTACK

- Full PPE with SCBA.
- An aggressive, interior attack will be attempted whenever possible.
- All fire control efforts should support the primary search and rapid control of the fire.

1.1. Fire Attack will be based upon the following fire control methods:

1.1.1. **Offensive Mode:** An offensive attack requires an aggressive interior fire attack.

1.1.1.1. Department officers are responsible for the following:

- ☞ The safety of firefighters under their supervision
- ☞ Work in pairs- one leaves building, both will leave building.
- ☞ Proper use of protective equipment
- ☞ Check personnel before entering structure
- ☞ Obtaining a continuous water supply
- ☞ Selecting the appropriate attack line from options provided on each apparatus.
- ☞ Attack line with hose line of equal or greater size as backup.
- ☞ Constantly communicating with command as to the status of the fire, searches, ventilation, etc.

1.1.2. **Defensive Mode:** Defensive fire attacks are mounted in those situations that preclude interior attack and the saving of life is not possible or necessary.

1.1.2.1. This mode is designed to flow the maximum amount of water in the shortest time.

1.1.2.2. Defensive attacks should start with no less than one 2 ½" line. 1 ¾" lines should only be used when absolutely necessary.

1.1.2.3. Master streams will be used for a rapid knockdown when possible

1.1.2.4. Reverse lays with pumped lines may be necessary for additional water supply.

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2. STRUCTURE FIRES IN SPRINKLERED BUILDINGS

- 2.1. This standard operating guideline applies to fires in sprinklered structures. This SOG will be used on any incident involving this type of structure. The IC may choose to employ different procedures when conditions warrant.
- 2.2. The first arriving officer or unit will complete a 360 degree survey of the fire building and relay a brief report of conditions to other units.
 - 2.2.1. The following priorities will be established:
 - Rescue
 - Exposures
 - Ventilation
 - Attack
 - Salvage
- 2.3. If a water flow alarm is reported from a particular zone or riser, the first arriving engine company will proceed to the fire department connection for that zone or riser and deploy 3" lines (or a 4" / 5" line for storz connections) to supply the sprinkler system.
- 2.4. One fire fighter (w/a radio) will proceed to the sprinkler control valve and verify water flow.
- 2.5. That fire fighter will remain posted at the control valve for the duration of the incident until the IC orders the system shut down.
- 2.6. The order to shut down will come directly from the IC.
- 2.7. The first arriving ladder company will operate at the most advantageous position, usually on side "A". The Ladder Company will be responsible for ventilation and ground ladder placement.
- 2.8. The second arriving engine/tanker will ensure the provision of an adequate water supply to the first engine. If possible, the second arriving engine will also deploy appropriate-sized attack lines.
- 2.9. All other apparatus will assume Level 1 staging and await further orders.

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3. FIRE ATTACK

- 3.1. On structural incidents, only **one attack line** should be flowed from the attack engines booster tank, **until an outside water source is secured**. A safety back-up hose line can also be charged from your booster tank, but this lines role is restricted to that of a safety back-up hose line.
- 3.2. The smallest attack line that should be used at any incident other than grass and brush fires is a 1 3/4 ".
- 3.3. All combination fog nozzles should be stored in the straight stream position, with the nozzle closed.
- 3.4. All intake bleeder valves shall be left in the open position, except when being used. They will be left open till all air is bled out of the line and then they will be closed, at which time the intake valve may be opened slowly.
- 3.5. All lines will be charged slowly and shut down slowly to avoid any quick snapping of the hose.
- 3.6. There shall be a minimum of 2 Firefighters on a 1 3/4" hose line, and 3 Firefighters on a 2 1/2" handline.
- 3.7. A minimum of 2 Firefighters shall man any deck gun that is operating other than those mounted on a rig.
- 3.8. All hoses going up any ground ladders shall be supported by hose straps positioned at least every ten feet on the ladder.
- 3.9. Any charged handline should be flowed briefly before entering the hazardous area, to insure a water supply and to bleed the air out of the hose.
- 3.10. **Supply Line – 4” or 5”**
 - All hose loads will be in a flat load.
- 3.11. If pulling the 2nd pre-connect of a gate wye, a Firefighter shall be assigned to open the gates. The pump operator shall ensure all appropriate gates are open.

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4. COLLAPSE ZONES

4.1. This SOG provides general guidelines to be followed to establish collapse zones.

4.2. Once a fire has shifted from burning the contents of a building to burning the structure of a building, a structure collapse is just a matter of time.

4.3. There are many different warning signs of structural failure:

- Smoke or water from masonry cracks
- Sudden appearance of cracks
- The widening of cracks
- Falling brick work
- Sagging floors
- Doors or windows sticking or dragging on the floor
- 'Groaning' of the building
- Previous damage to the building prior to the fire
- Leaning, crooked or out of plumb walls
- Sagging rooflines
- Smoke or fire in truss loft or truss void
- Wooden lintels, 'iron stars' and corner bracing
- Fire that has burned through the roof, walls or floor.
- The evidence of one or more of these conditions should be communicated to the IC. However a building may collapse without showing any of the above tell-tale signs due to unauthorized renovation, or the additional structural loading of the firefighters, their water and equipment, snow loads. No list can be considered all inclusive. Safety Officers, ICs, Line Officers, and firefighters must be constantly aware of the building's changing condition.

4.4. If warranted by fire ground observations, preplan, or previous history, the IC may institute collapse zones. If a collapse zone is established, all personnel should be withdrawn from the structure and collapse zone.

4.5. The initial collapse zone should be established a distance out from the structure, equal to the height of the wall. Masonry walls will require a larger collapse zone to account for flying bricks. All apparatus should be relocated to corners of the structure, or out of the

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collapse zones. If hose lines are required to operate within the collapse zone, unmanned monitors should be set up and abandoned in the zone.

- 4.6. Consideration should also be given to the type of occupancy. A warehouse full of paper will absorb a great weight of water in the paper stock. Note a lack of appropriate runoff. This could indicate building water weight, precipitating a collapse.

5. STANDPIPE OPERATIONS

- 5.1. Although not all fire districts currently have Standpipe equipped buildings, we have included this section for Mutual Aid and future purposes.

5.2. Responses to buildings with a single FDC Connection (FDC) and a known fire location:

5.2.1. The first arriving Engine company will position their apparatus for a fire attack and, if possible, in a position to connect to the FDC, if needed.

5.2.2. The second arriving Engine Company is responsible for connecting to the FDC, if first Engine has not.

5.3. Responses to buildings with multiple FDC's and a known fire location:

5.3.1. The first two arriving Engine companies will connect to separate FDC's. Crews will advance into the building with at least one attack line per crew. The IC will designate, based on interior reports, an "attack stairwell or attack door" and both hoselines will be advanced through this stairwell or door. Evacuation will be done through a different stairwell or door as not to hinder hose line advancement or contaminate stairwells being used for evacuation.

5.3.2. The company officer or driver will notify command when the FDC is being fully supported.

5.3.3. The starting pressure on the FDC should be 150 psi.

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5.4. Response to buildings with Sprinkler System:

- ☛ Charge the FDC with **150 psi** only if:
 - The IC orders you to supply the line; or
 - Fire or smoke showing

5.5. General Requirements:

- 5.5.1. Only FD carried hose and nozzles will be utilized.
- 5.5.2. The second Engine Company will, when necessary, be responsible for water supply and will be ready to charge the FDC when visible smoke or flame has been reported.
- 5.5.3. Placement of standpipe lines into service will have a direct effect on fire loss and firefighter safety. Standpipe lines should be connected, flaked up the stairs to the landing above if possible, charged and cleared in the stairwell or from behind a fire door (when possible) before entering a fire area.
- 5.5.4. In heavy fire conditions, the second arriving Engine will advance a minimum of one 2 ½" attack line to the fire area from the standpipe or the Engine.
- 5.5.5. On responses without a fire location, Engine personnel will standby and not commit to a FDC. An officer and one member of the Engine Company or the Ladder company crew, will enter the building to try and ascertain the location of the fire. Remaining members of first two Engines will standby at first Engine to await orders on where to advance the hose line.