



# PROCEDURES MANUAL

**SUBJECT:** Structure Fire Operations – Strategy and Risk Management

**NUMBER:**

203.01.06

**APPROVED:**

FIRE CHIEF

**TYPE:** Structure Fire Operations

**EFFECTIVE DATE:** 12/2020

Page 1 of 7

**REVISED DATE:** 12/2020

## 203.01.06 Structure Fire Operations – Strategy and Risk Management

### A. Purpose

To outline guidelines for the fire ground strategy to be employed and the management of the risks involved at structure fires.

### B. Strategy

1. Fire ground operations will fall in one of two strategies, **OFFENSIVE OR DEFENSIVE**.
2. The two strategies are based on a standard Risk Management Plan that is to be employed at ALL structure fires.

### C. Risk Management

1. WE MAY RISK OUR LIVES A LOT TO PROTECT *SAVABLE* LIVES.
2. WE MAY RISK OUR LIVES A LITTLE TO PROTECT *SAVABLE* PROPERTY.
3. WE WILL NOT RISK OUR LIVES AT ALL TO SAVE WHAT IS ALREADY LOST.

### D. Plan of Action

1. Considering the level of risk, the Incident Commander will choose the proper strategy to be used at the fire scene. The strategy can change with conditions or because certain benchmarks (i.e. ALL CLEAR) are obtained. The strategic mode will be based on:
  - a. The building (type of construction, condition, age, etc)
  - b. Structural integrity of the building (contents vs. structural involvement)
  - c. The fire load (what type of fuel is burning and what's left to burn)
  - d. The fire and/or smoke conditions (extent, location, etc.)
  - e. The rescue profile (savable occupants/survivability profile)

- f. Treat all buildings as if made from light-weight construction until proven otherwise.
- 2. The Incident Commander is responsible for determining the appropriate fire ground strategy.
  - a. The proper strategy will be determined based on the following:
    - i. Avoiding simultaneous **OFFENSIVE** and **DEFENSIVE** strategies in the same fire area.
    - ii. This occurs by first committing personnel to interior positions, then operating master streams from exterior positions. Interior crews are then in danger of injury or death. Darkening down a fire from the exterior while companies are in a protected area away from the fire area is acceptable; however only occurs through the direct order of Command.
    - iii. Matching the appropriate strategy to the fire conditions of the structure, and minimizing risk to fire fighters.
  - b. The Incident Commander needs to ensure that all personnel are operating within the determined strategy.
  - c. By controlling the fire ground strategy, the Incident Commander is providing overall incident scene safety.
- 3. Managing fire ground strategy must start with the arrival of the first unit and be constantly monitored and evaluated throughout the entire incident.
  - a. The initial Incident Commander (usually a Company Officer) will include the fire ground strategy in the follow-up radio report.
  - b. As Command is transferred to later arriving officers, these officers assuming Command must evaluate the fire ground strategy based on the Risk Management Plan.
- 4. Fire ground strategy provides a starting point for fire ground operations. Once the strategy is announced, all fire fighters know whether to operate on the interior or exterior of the building. The fire ground strategy cannot be a mystery to anyone, everyone operating on the fire ground must be operating in the same strategic mode; Offensive or Defensive.

#### E. Offensive Strategy

- 1. Within the framework of the Risk Management Plan, the structure must first be determined to be safe to enter.
- 2. Once determined safe, an Offensive Fire Attack is centered on RESCUE / Fire Attack.

3. *When safe to do so*, the Cincinnati Fire Department will initiate offensive operations at the scene of structure fires.
4. The following are guidelines for offensive fire attacks:
  - a. Ensure a RAT team is on the scene or one is responding.
  - b. Ensure a Safety Engine is on the scene or one is responding.
  - c. Initial attack efforts must be directed toward supporting a primary search and the first attack line must go between the victims and the fire to protect avenues of rescue and escape.
  - d. Determine fire conditions and extent before starting fire operations (as far as possible).
  - e. Attack the fire from the interior of the building; however, an aggressive interior attack can begin with a stream operating from the exterior of the building prior to attack lines entering. This is called “Quick Water”. This should only occur when:
    - i. Presented with a large volume of fire that needs darkened down before entering.
    - ii. Fire at entry point (front door) extending outwards and involving porch, siding or other materials.
    - iii. Delayed entry due to access or forcible entry issues.
  - f. Command must consider the most critical direction and avenues of fire extension, plus its speed, particularly as they affect:
    - i. Rescue activities
    - ii. Level of risk to fire fighters
    - iii. Confinement efforts
    - iv. Exposure protection
  - g. Confining the fire is the number one priority; everything else gets better when “water is put on the fire”.
5. Command must allocate personnel and resources based upon this fire-spread evaluation.
6. Command must not lose sight of the very simple and basic fire ground reality that at some point fire fighters must engage and fight the fire.
  - a. Command must structure whatever operations are required to **PUT WATER ON THE FIRE**.  
NOTE: It may take the first two Engine Companies working together on the first line to accomplish this task.
  - b. The rescue/fire control-extension/exposure problem is solved in the majority of cases by a fast, strong, well-placed attack.
  - c. Command must establish an attack plan that overpowers the fire with ACTUAL water application, either from offensive or defensive positions.
7. Command must consider the 7 sides of the fire: front, rear, both-sides, top, bottom, and interior. Fires cannot be considered under control until all 7 sides are addressed. Failure to do so frequently results in fire extension.

8. Where the fire involves concealed spaces (attics, ceiling areas, construction voids, etc.), it becomes paramount that Companies open up and operate fire streams into such areas.
  - a. Early identification and response to concealed space fires will save the building.
  - b. Officers who hesitate to open up because they don't want to beat up the building may lose the entire structure.
9. Ventilation is a major support item that must be carefully addressed during fire attack.
  - a. Ventilation must be well coordinated with the fire attack line.
  - b. Communication must occur between the ventilation crew and the fire attack line to ensure water is ready to be flowed on the fire prior to the ventilation occurring.
  - c. **Do not** break windows, doors or vent the roof until a hose line is in place and operational.
  - d. Ventilation openings should only be made in the fire area.
  - e. Ventilation that is not coordinated and occurs too early will cause increase in fire intensity and fire spread. This also decreases the time prior to flashover.
  - f. Controlling the doors is also a method of controlling the fire flow path and decreasing fire intensity.
    - i. Doors to the fire area should remain controlled or closed until a hose line is in place, this includes the entrance door.
    - ii. Once the hose is advancing, control of the entry door isn't a great concern.
    - iii. Companies that locate a fire should isolate the fire by controlling the door to the fire area.
    - iv. Doors to rooms adjacent to the fire area should remain closed.
10. ***Command must get ahead of the fire.*** Command must make critical decisions that relate to cutoff points and develop a fire control strategy.
  - a. It takes a certain amount of time to get water to a location, and the fire continues to burn while the attack is being set up (REFLEX TIME)
  - b. Command must consider where the fire will be when attack efforts are ready to actually go into operation; if misjudged, the fire may burn past the attack/cutoff position before resources and personnel are in position.
  - c. Don't play "catch up" with a fire that is burning through a building. Project your set-up time, write off property and get ahead of the fire. Set up adequately ahead of the fire, and then overpower it.

11. **WRITE-OFF PROPERTY THAT IS ALREADY LOST** and go on to protect exposed property based on the most dangerous direction of fire spread. Do not continue to operate in positions that are essentially lost.
12. Marginal Conditions
  - a. Command must balance and integrate attack size and position with fire conditions, risk and resources.
  - b. Many times offensive/defensive conditions are clear cut and Command can quickly determine the appropriate strategy. In other cases, the situation is MARGINAL and Command must initiate an offensive interior attack, while setting up defensive positions on the exterior.
  - c. **THE ONLY REASON TO OPERATE IN MARGINAL SITUATIONS IS RESCUE.**
13. The effect of the interior attack must be constantly evaluated, and the attack abandoned if necessary. Strategy changes can develop almost instantly or can take considerable time. Command must match the strategy with the conditions. The Incident Commander controls overall incident scene safety by determining the proper strategy to be used.
14. If the Incident Commander doesn't change strategies from offensive to defensive until the building is disassembling itself due to structural damage, Command is late in strategy determination.
  - a. Often times when the building gets to make those decisions, fire fighters become traumatized (physically and/or emotionally).
  - b. **THE INCIDENT COMMANDER DETERMINES THE STRATEGY, THE BUILDING SHOULDN'T.**
15. Command should abandon marginal attacks when:
  - a. A primary all clear is obtained and the situation is still marginal.
  - b. The roof is unsafe or untenable. Especially working fires in large unsupported attics, bowstring truss or lightweight trussed attic spaces.
  - c. Interior forces encounter heavy heat and cannot locate the fire or cannot make any progress on the fire.
  - d. Heavy smoke is being forced from the building under pressure and is increasing.
16. Command needs to constantly evaluate conditions while operating in marginal situations. This requires frequent and detailed reports from Division/Group Supervisors.
17. It is imperative that Command assign a Roof Division as early as possible during marginal situations for rapid evaluation of roof conditions.
  - a. Roof evaluation should occur from an aerial ladder or adjacent building.
  - b. In these situations, Command should strongly consider not committing crews to the interior of a structure unless he/she

receives a report from the Roof Division that the roof of the structure is safe to operate on and under.

- c. It is better to go from an offensive to a defensive strategy too soon rather than too late.
18. "Fire under control" means the forward progress of the fire has been stopped and the remaining fire can be extinguished with the on-scene resources; it does not mean the fire is completely out. When the fire is brought under control, Command will notify Dispatch utilizing the standard radio report of "FIRE UNDER CONTROL." Dispatch will record the time of this report. Command must initiate a PAR report from all on scene resources.

#### F. Defensive Strategy

1. The decision to operate in a defensive strategy indicates that the offensive attack strategy, or the potential for one, has been abandoned for reasons of personnel safety, and the involved structure has been conceded as lost (*the Incident Commander made a conscious decision to write the structure off*).
2. The announcement of a change to a defensive strategy will be made as Emergency Traffic (*Reference Section 203.01.15 Mayday & Emergency Declaration*)  
(Example: "Emergency all Companies at (address) retreat, retreat, retreat we are going defensive")
3. All personnel will withdraw from the structure AND MAINTAIN A SAFE DISTANCE FROM THE BUILDING outside the collapse zone which is at least 1 ½ times the distance of the highest point of the building. Note: In brick or ordinary buildings, consider a larger collapse zone due to secondary spread of block and brick once it strikes the ground.
4. Officers will account for their crews and advise Command/Division/Group Supervisor on the status of their crew (PAR). Division/Group Supervisors will notify Command of the status of the crews assigned to their Division/Group.
5. **A PAR (Personnel Accountability Report) shall be obtained after any switch from offensive to defensive strategy.**
6. Interior lines will be withdrawn and repositioned when changing to a defensive strategy.
  - a. Crews should retreat with their hose lines if safe to do so.
  - b. If retreat is being delayed because of hose lines, and it's unsafe to stay in the building, hose lines should be abandoned.
7. All exposures, both immediate and anticipated, must be identified and protected. The first priority in defensive operations is personnel safety; the second is exposure protection.

8. The next priority may be to knock down the main body of fire. This may assist in protection of exposures but does not replace it as a higher priority.
9. Master streams are generally the most effective tactic to be employed in defensive operations. For tactical purposes, a standard master stream flow of greater than 750 GPM should be the guideline. Adjustments may be made upward or downward from this figure but it is very significant in the initial deployment of master streams.
10. Exposures
  - a. Control with 2-1/2" or Master Stream
  - b. Protect exposures in the following order:
    - i. Greatest life hazard first.
    - ii. Greatest value.
    - iii. Most severe exposure
  - c. When the exposure is severe and water is limited, the most effective tactic is to apply water directly to the exposed building and alternate between the exposure and fire building until another fire line is in service on the exposure.
  - d. Once exposure protection is established, attention may be directed to knocking down the main body of fire and thermal-column cooling.
11. Fire under control means the forward progress of the fire has been stopped and the remaining fire can be extinguished with the on-scene resources; it does not mean the fire is completely out. When the fire is brought under control, Command will notify dispatch utilizing the standard radio report of "FIRE UNDER CONTROL." Dispatch will record the time of this report. Command must initiate a PAR report from all on scene resources.
12. If defensive operations are conducted from the onset of the incident, Command will notify Dispatch that there will not be a primary search completed for the affected structure(s).
13. CHANGING FROM DEFENSIVE TO OFFENSIVE STRATEGY  
(Reference Section 203.01.16 – Changing from Defensive to Offensive Strategy)