COMMAND FUNCTION #3 – SITUATION EVALUATION

Effective:	November 6, 2026
Scheduled Review:	November 6, 2029
Approved:	Fire Chief Mike Kennedy

I. COMMAND FUNCTION #3 – SITUATION EVALUATION

The primary goal is to develop a routine approach to size-up using the standard information management categories and critical fireground factors (CFFs).

Brunacini, Alan V., and Nick Brunacini. *Fire Command*. 3rd ed., Across the Street Productions, 2026 is the foundational resource document for this SOP.

The standard outcome for structural firefighting operations is completion of tactical priorities. In order they area:

1. Fire control
2. Life safety
3. Property conservation
4. Customer support
5. Firefighter decontamination

The information-management phase, known as size-up, involves the systematic, yet rapid and deliberate consideration of all the incident's critical incident factors. This standard size-up approach must begin at the very start of every incident operation. This insures the incident commander will develop a rational incident strategy and corresponding action plan based on the current conditions.

II. SIZE-UP

The incident commander uses the following process to choose the incident strategy and develop the corresponding incident action plan (IAP).

1. Identify the CFFs (size-up)
2. Process the CFFs through the risk management plan
3. Identify the correct strategy
4. Develop the IAP

As the CFFs change, so must the IC's plan. The IC must continually evaluate the incident scene whenever firefighters are operating in a hazard zone.

We base every IAP on size-up of the critical factors. The IC processes the size-up information through the standard decision-making process to produce to IRR, which serves as the IAP for the initial operation.

1. Size, height, and occupancy type

- Size– There are four categories to describe a structure's size: small, medium, large, and huge.

Calling out the structure's size highlights extended travel distances and longer work times that impact SCBA management. Including occupancy type with size produces the following scale for houses:

- Small: ≤ 1,500 ft^2
- Medium: 3,000 ft^2
- Large: 4,500 ft^2
- Huge: over 4,500 ft^2

The opposite end of the spectrum applies to big-box structures:

- Small: 50,000 ft^2
- Medium: 150,000 ft^2
- Large: 250,500 ft^2
- Huge: 500,500 ft^2

- Height – How many stories does a building have on each side? Does it have a basement?
- Occupancy type – Five of the most common occupancy types for structural firefighter operations are house, apartment, strip mall, commercial, and big box. Other occupancy types include industrial, manufacturing, and industrial. High-rise is any structure that involves five (5) elevator stops or greater or 55 feet in height or greater.

2. **Fire**

   Standard reporting categories for fire include:

   - Nothing showing – no visible smoke or fire. Ventilation-controlled fires can present as nothing showing until we make entry, which introduces air into the structure and triggers rapid fire growth. Nothing showing does not mean the building is not on fire; simply means the IC found normal conditions on arrival and will investigate further.
   - Light smoke – describes situations where smoke is visible, but the source is not easily identified. We also use light smoke to describe odors of burning material. Level 1 staging allows IC #1 to investigate reports of light smoke while holding later-arriving companies in tactical reserve.
   - Working fire – describes offensive fire conditions and should include the conditions and locations, including sides, and floors.
   - Defensive fire – describes situations where nothing remains to save (fire has destroyed all life and property).

3. **Special factors – status** (open, closed, occupied, vacant, abandoned, etc.)
4. **Actions** – assignments to later arriving units and their effects if different than 3.23 Working Fire Assignments.
5. **Resource determination**
   - Cancel the assignment because the first-arriving company can handle.
   - Hold the assignment because the current number of assigned units will be able manage the incident.
   - Request additional alarms.

III. VISUAL FACTORS

IC #1 initiates the size-up process when they arrive at the incident location and observe CFFs. Whenever possible, IC #1 should conduct a 360 to evaluate all sides of the structure. If a 360 cannot be performed (due to the building's size or access issues), IC #1 should announce this over the radio. IC #2 is responsibility for conducting the 360 or assigning it if not completed. When conducting a 360, consider the following:

1. Immediate life safety issues
2. Fire's location, extent, and size
3. Whether the structure has a basement
4. Potential collapse areas
5. Hazardous roof conditions
6. Status / condition of power lines
7. Gas meter or tanks
8. Apparatus access to Charlie side

IV. CRITICAL FACTORS

The IC uses the CFFs as the basis for information management. Each fire has thousands of factors. Only some of these factors are critical, meaning they have a profound effect on firefighter safety and completing the incident's tactical priorities. Situation evaluation uses the following eight critical factor categories:

1. Building
- Size - area and height
- Interior arrangement and access (stairs, halls, elevators)
- Construction type: ability to resist fire effect
- Age
- Condition: faults / weaknesses
- Value
- Compartmentation and separation (firewalls and fire doors) Vertical and horizontal openings (shafts, channels)
- Concealed spaces / attack characteristics
- Basements
- Exterior access
- Fire's current effect on the structure
- Fire's estimated impact on the building over time (how long before offensive conditions become defensive conditions)
- How much of the building is left to burn?
- Built-in fire protection systems (sprinklers, alarms, fire corridors)

2. Fire
- Size
- Extent (percent of structure involved)

- Location
- Stage (inception through flashover)
- Direction and avenues of travel (most dangerous)
- Duration of involvement
- Type and amount of material involved (structural components, interior finish, contents, etc.)
- Fire fuels and hazards
- Type and amount of material left to burn
- Flow paths
- Productions of combustion liberation / intensity (smoke, heat, flame, gas, etc.)
- Fire's perimeter
- How widespread is the fire area?
- Fire access: ability to operate directly on all seven sides of the fire
- Thermal imager data, temperature of the flow path

3. Occupancy

- Specific occupancy type: business, mercantile, public assembly, institutional, hazardous, industrial, storage, school, etc.)
- Value characteristics associated with occupancy, i.e., salvage profile
- Fire load (size, nature)
- Status (open, closed, occupied, vacant, abandoned, under construction)
- Occupancy type: associated characteristics/hazards
- Type of contents (based on occupancy)
- Time of day: affects occupancy use
- Property conservation profile/susceptibility of contents to damage / need for salvage
- Impact of loss: is the structure a community landmark or similar?

4. Life Hazard

- Number of occupants
- Location of occupants (in relation to the fire)
- Condition of occupants (based on fire exposure)
- Incapacities of occupants
- Commitment required for search and rescue (firefighters, equipment, and command)
- Fire control required for search and rescue
- EMS needs
- Time estimate of fire's effect on victims
- Exposure / control of spectators
- Hazards to fire personnel

- Rescue access to victims
- Characteristics of escape routes / avenues of escape (type, safety, fire conditions, etc.)

5. Arrangement
- Access, arrangement, and distance of external exposures
- Combustibility of exposures
- Access, arrangement and nature of internal exposures (fuel load)
- Severity and urgency of exposures
- Value of exposures
- Most dangerous direction fire could travel / avenue of spread
- Time estimate of fire effect on exposures (internal and external)
- Barriers or obstruction to operations
- Capability / limitations on apparatus movement and use
- Number of buildings

6. Resource
- Staffing and equipment on scene
- Responding staff and equipment
- Staffing and equipment available in reserve
- Estimated response time for personnel and equipment
- Response distance
- Condition of responders and equipment
- Personnel's capability and willingness
- IC's capability
- Adequacy of water supply
- Number and location of hydrants
- Supplemental water sources
- Built-in private fire protection (sprinklers, standpipes, alarms, protected spaces, automated smoke removal, foam other fire suppression systems, etc.)

7. Action
- Is there water on the fire?
- Impact of current actions
- Things we must do and things we must not do
- Stage of operation (fire control, rescue, property conservation, customer stabilization, firefighter decon)
- Defensive evaluation of water application versus no water application (allow the fire to burn itself out)
- Is command established and working?
- Have we established an effective organization?

- Has the IC forecasted effectively?
- Is there a sufficient IAP in place?
- Tactical priority questions: are the victims okay? Is the fire extinguished? Has the loss been stopped?
- What is the worst thing that can happen? Are operating positions proving effective? Are operating functions proving effective?
- Are troops operating safely? Do you fear for their lives?
- Is there an established safety plan / organization in case someone gets into trouble (on-deck crews, tactical bosses, safety officers, etc.)?
- What is the incident status? Under control? Out of control?
- Have our actions changed the ventilation profile in any way?
- Are there environmental concerns?

8. Special Circumstances
- Time of day/night
- Day of week
- Special hazards due to holidays and special events
- Weather conditions such as wind (most important), rain, snow, heat, cold, humidity, visibility
- Social unrest

V. MANAGING CRITICAL FACTORS

The CFFs are the basic items an IC must consider when evaluating tactical situations. They constitute a checklist of major elements associated with size-up, decision-making, initiating operations, and review and revision.

When IC#1 chooses the offensive strategy, they make their initial size-up from an exterior position. The IC sees the effect the incident problem is having outside the hazard zone. The mobile IC then moves to the interior and begins collecting information about how the incident problem is affecting the inside of the structure. These conditions, such as the problem location and the amount of smoke and heat, are utilized in the decision-making process to assign subsequent arriving units.

When IC #2 is operating in a strategic command position, they usually have a good view of the incident scene. As the IC assigns units to the different operational positions around the inside and outside of the incident scene, they will receive size-up information in the form of CAN reports from these different positions. The IC must consider these reports along with what they are actually seeing. Whatever the IC sees, trumps all other reports.

These critical factors are very dynamic; they are either getting better, or they are getting worse, but they never stay the same. The current and forecasted incident conditions must drive the strategy, the IAP and our risk-management plan.

VI. CONSIDER FIXED FACTORS - MANAGE VARIABLE FACTORS

Fixed factors pertain to the things that cannot be changed, such as the way a building sits on a piece of property, the occupancy type or the distance of an exposure. These fixed factors present certain realities that the IC must plug into their incident action plan.
Variable factors are things that can change. If a building is full of smoke, the IC can order ventilation. If the building is heavily secured, a ladder company can force entry. Engine crews manage the fire by applying enough water to extinguish it. When we do not (or cannot) control the variable factors, we should be in safe locations, away from the factors that may harm us.

VII. RED FLAGS - HIGH-STAKES CRITICAL FACTORS

Red flags are critical factors that have significant safety consequences for firefighters operating in the hazard zone. Red flags often precede drastic changes to incident conditions (including flashover and structural collapse) and can work to the IC's advantage. The IC knows the position and function of all firefighters operating in the hazard zone, which allows them to keep responders out of harm's way when a red flag appears.

Common red flags include:

- Priority radio traffic
- Wind
- Attack positions without an uninterrupted water supply
- Heavy fire from the roof
- Fire in a basement
- Operating above or below an out-of-control fire (in attics or basements of on the floor above)
- Heat driving firefighters to the floor during offensive operations
- Fire continuing to burn despite adequate fire streams
- Fires more than 170 feet deep in the building
- Smoke continuing after the fire has been controlled
- Interior crews requesting ventilation due to heat
- Offensive operations that cannot locate an obvious fire
- Utility company report power shut off in an area that still has the lights on
- Any incident involving flammable gas
- Offensive attacks requiring multiple crew rotations with no declaration of fire control
- Insufficient tactical resources
- Copious water runoff from the structure while the fire continues to burn
- Officers screaming on the radio
- Companies on the roof requesting attack lines
- Second-due chiefs with a hose or ax in hand