

# Salt River Fire Department Operating Guidelines

## HIGH-RISE OPERATIONS

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## HIGH RISE OPERATIONS

### Policy:

The purpose of this policy is to set Standard Operating Guidelines for Emergency High Rise Operations.

### Definition:

A high rise building may be defined as a multiple story commercial facility or one that lacks viable exterior access to the upper floors. Other factors are; where firefighters must place a high degree of reliance on the building's systems and components (i.e.: sprinklers, standpipes, compartmentalization, etc.)

### Objective:

Provide a fire ground organization that places the accountability and safety for building occupants and emergency response personnel as its top priority.

### BASIC OPERATIONAL APPROACH

This plan is intended to adapt normal standard operating procedures and systems to high-rise operations. High-rise fires present some particular problems in firefighting operations. Most of these are related to the difficulties of access, the complexities of construction, and the number of occupants in these structures. By virtue of these considerations, any situation in a high-rise structure is more complicated than the same situations occurring in a low-rise environment.

An aggressive coordinated attack has proven to be the most effective tactical option in the majority of high-rise fire situations.

The construction of most high-rise buildings effectively shields the interior from the outside. Even with "nothing showing," an assumption of a concealed fire should be made by Command.

The initial arriving units should be concerned with:

1. Identifying the fire floor.
2. Providing an attack on the fire floor with at least TWO (2) companies.
3. Providing for the life safety of persons in immediate danger.
4. Providing water supply for the initial attack.
5. Establishing Lobby Control.
6. Making a size-up of conditions on the fire floor and the floor above.

In most high-rise situations the need for establishing Command "in the street" is secondary to the urgency of getting an officer and crew up to the fire area. A single company, arriving alone, should prepare to go up into the building with basic equipment. The officer of that company should give his arrival report, announce his actions, and PASS COMMAND to the next arriving officer.

When several units arrive simultaneously, the officer of the first arriving company should assume Command. At least one officer must go up to lead the attack. If arriving simultaneously with a chief officer, the first-in company officer will give his arrival report, announce his actions, and PASS COMMAND to the chief officer by radio.

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The initial attack should consist of at least two (2) companies (preferably one engine and one ladder). The officer leading the attack will be responsible for selecting the method of ascent to the reported fire area depending on conditions.

As soon as the fire floor is reached and identified, the officer will give Command a report of conditions on the fire floor, his immediate needs, and a confirmation of the actual fire floor number. (Note: Be aware that due to superstition, some buildings may not have a numbered 13th floor.) Command should then establish the fire floor as a division (Floor 16 = Division 16).

When a building has multiple standpipes, the Fire Floor Division Supervisor must advise Command where he needs water, and Command will confirm the availability of pumped water to that particular riser. At least one, but preferably two, members should be left in the lobby to gain control of all elevators using emergency recall or manual override. They will inform the assigned Lobby Control Officer, on his arrival, of the method of ascent used by the attack companies.

The initial attack companies will go upstairs with only SCBAs, hose packs, basic forcible entry tools, and an extinguisher. Other equipment will be pooled in the lobby until its need becomes apparent or a Resource Group is established.

### COMMAND PRIORITIES

Once the attack companies have started up to the fire floor, Command must be concerned with the following:

1. **Consider** calling for additional resources. Any type of working situation will quickly utilize an entire first alarm assignment. Call for additional alarms as soon as the need is identified.
2. Provide a water supply for the attack. Assign engineers and pumpers, as needed, to provide water to dry standpipes. When there are multiple systems, lines must be provided for each one in the fire area. (If the building has a working wet system, this becomes a lower priority.)
3. Establish Lobby Control. At least two members are needed for Lobby Control to take control of elevators, alarm systems, and stairways. Additional personnel may be required to assist as time permits. (See LOBBY CONTROL.)
4. Assign a company, chief officer, or support personnel to survey the outside of the building on all sides. Many times conditions on one side of a high-rise building are not representative of conditions on another side. The outside survey should include a careful visual check for endangered persons, smoke conditions, and fire spread.
5. Assign a company to check the floor above the fire floor. Command must get a report on conditions above the fire as quickly as possible.
6. Begin to establish supporting systems. A fire which is not controlled by the initial attack companies will require a larger attack force and a supporting structure including Staging, Resource Group, increased emphasis on Lobby Control, and necessary additional elements. Begin to build this structure as soon as possible.
7. Establish divisions/groups early. Early assignment will allow for a more controlled, coordinated, and safer operation.

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### INITIAL ATTACK

#### ORGANIZATION FOR WORKING FIRES

A working fire in a high-rise may not be controlled by the initial attack companies. In such a case, the operation becomes prolonged and escalates into a major operation. A strong organization is required to support a firefighting force above ground. The principle objective of this supporting organization is to provide the firefighting divisions with manpower and equipment to operate effectively and to assist in solving some of the major problems involved in high-rise structures.

Command must start to identify and build this organization as quickly as possible after assigning units needed for Initial Attack. These elements can be expanded upon as the availability of personnel increases. The major elements which need to be considered in most working high-rise situations are:

- Fire Floor Division
- Lobby Control
- Floor above (extension)
- Resource Group (emphasis on SCBA air supply)
- Staging
- Floor below (property conservation)
- Personnel relief and rehabilitation (Rehab)

#### PRIORITY OF ASSIGNMENTS FOR FIRST ALARM COMPANIES

The success or failure of fire department operations at a high-rise incident depends on actions taken by the first alarm assignment. Apply the acronym of **AWLU**:

- A = FIRE ATTACK / SEARCH
- W = WATER SUPPLY / RIC / SEARCH
- L = LOBBY / STAGING
- U = UNCOMMITTED NEXT IN UNITS TO LOBBY or STAGING

### Upon Arrival- Critical Update Information / Standard Equipment

#### Updates you should address:

Designation of fire floor  
Designation of building A-side  
Stairwell ascended  
Command Mode  
Standpipe connection location  
Ventilation needs  
Evacuation/rescue needs

#### All units take the following with you:

SCBA's (Spare Bottles)  
Radio (s)  
Axe and Forcible entry tools  
High Rise Packs / Bag  
Lock Box keys  
TIC

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### 1. First Arriving Unit - Fire Attack

Officer may elect to take entire crew into building or leave Engineer with truck. The officer's decision must be communicated to responding personnel. Proceed to the fire floor via the stairwell - **DO NOT USE ELEVATORS!** Give a report of conditions on smoke/fire conditions on each floor as the stairwell is ascended (i.e.: "second floor clear"). Start firefighting operations as soon as possible. In addition to your standard on-scene report, updates are critical to responding personnel.

### 2. Second Arriving Unit - Water Supply / RIC / On Deck / Search & Rescue

Engineer / Crew will connect a water supply to the standpipe and sprinkler system. **The first connection made should be to the appropriate standpipe to supply fire attack (100psi with "nothing showing" 150psi +/- elevation with "smoke showing" or reported "working fire"); the second connection should be to the sprinkler system** (May be done by a second unit- depending on location of riser).

Remainder of company may be assigned RIC / IRIC functions, assigned to the Firefight, Search and Rescue, or placed On Deck depending on the situation relayed by the Incident Commander. Bring RIC bag and equipment. This company shall don protective clothing and SCBA as they may serve as the initial Rapid Intervention Company (RIC) or other function operating in an IDLH.

### 3. Third Arriving Unit - Lobby Control and Staging

Establish Lobby Control (Officer) - Recon to establish access and Staging (Engineer / Firefighter).

Lobby Control is responsible for controlling the elevators, active alarms, the HVAC system, stairwell access, and making contact with the building R.P. / Security. Lobby Control is also responsible for coordinating the movement of resources from exterior to Staging. Elevators should be returned to the ground floor and locked out. As a general rule, shut the HVAC system down (Check with on-sight R.P.) until the IC decides differently. Lobby control should unlock or force entry on all ground level entrances and direct incoming companies as to which stairwell to use, along with location of Staging. Utilization of markers should indicate stairwell identifiers, visible from the outside if applicable.

Staging Area should generally be two floors below the fire floor. Staging should be located in a large non-congested area - **NOT IN THE STAIRWELL**. Staging should designate and identify the following areas:

- Reserve Company Area
- Rehab area
- Equipment cache area
- EMS area
- Bottle exchange area

If applicable, make signs on the walls / floors to designate these areas.

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#### 4. Fourth Arriving Unit – To Lobby / Staging

Report to Lobby. If ordered to fire area, use the stairwell designated by Lobby. Bring all Standard Equipment, contact Lobby for any specific equipment needs. Likely assignments include: Back-up of Fire Attack, Search & Rescue, Ventilation, On Deck, or shuttling equipment to Staging as directed by the IC.

#### 5. Fifth Arriving Unit – To Lobby / Staging

Report to Lobby. If ordered to fire area, use stairwell designated by Lobby. Bring all Standard Equipment, contact Lobby for any specific equipment needs. Likely assignments include: Back-up of Fire Attack, Search & Rescue, Ventilation, On Deck, or shuttling equipment to Staging as directed by the IC.

#### 6. First Arriving Rescue Company- RIC / On Deck / Staging

Report to lobby. If ordered to fire area, use stairwell designated by Lobby. Bring all Standard Equipment, contact Lobby for any specific equipment needs. Likely assignments include: Assignment to RIC, Back-up of Fire Attack, Search & Rescue, Ventilation or shuttling equipment to Staging as directed by the IC.

#### 7. Incident Command

The Incident Command System will be applied as usual. Note the variation from the standard definition of “Staging”.

Establish ICP at least 200 feet from the building, or at designated location. If smoke is showing the IC should consider calling for a Second Alarm and determine the need to establish a Base or have additional units simply perform Secondary Staging. As other Chief Officers arrive they should be assigned to General Staff positions as well as critical Division Supervisor assignments.

The Operations Section Chief should operate from inside the building so he/she can “face-to-face” communicate with Division/Group Supervisors as well as the Lobby / Staging Area Manager.

The Planning / Logistics Section Chief is critical for keeping Situation as well as Resource Status updated, along with identifying and establishing Base, Stairwell Support, and all other Unit functions associated with Planning / Logistics.

#### 8. Additional Companies

All additional companies shall respond and report into Secondary Staging or Base. They will be directed by and receive assignments from the IC on a priority basis (i.e.; Division assignments, Stairwell Support, Staging, Relief, or Overhead Assignments).

Stairwell Support will be established at larger incidents. Stairwell support is responsible for moving equipment from the ground floor to Staging. One firefighter should be assigned for every two floors.

Ladder Trucks or Quint Apparatus shall be placed for rescue or in a defensive position.

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### 9. Communication Plan

The standard SRFD Tactical Channel 15 will be utilized for events not utilizing Mutual Aid Units. **All SRFD units will have both UHF and VHF radios within their divisions.**

In the event of Smoke Showing or an obvious Working Fire or situation dictates that Mutual Aid response is needed, the IC will contact Phoenix alarm (Phoenix Channel 1) requesting a channel (preferably channel 7 or 11) and request a “Working Fire Response (3 & 1, 1-Battalion Chief, 1-Deputy Chief). This then can be “balanced to a First Alarm” faster if deemed necessary by the IC and the responding Mutual Aid Deputy Chief. The IC will advise the SRFD alarm room of what Phoenix channel the incident will be operating on, and all communication will be through Phoenix alarm room.

SRFD Dispatch shall insure all SRFD units responding acknowledge the change of operating channel.

### LOBBY CONTROL GROUP

Lobby Control should be established by Command at high-rise fires and similar situations where control of access to the interior of a complex building is necessary. Generally, the captain and at least one additional member from the engine assigned to supply standpipe/sprinkler systems will be utilized to establish Lobby Control. Additional personnel, as required, should be assigned as quickly as possible and additional resources may be needed in major situations. Lobby Control must identify and report to Command the point of access that will be used by anyone entering the building. Lobby must control all points of access to the building and only allow personnel authorized by Command to enter. All personnel entering the building **MUST** report to Lobby before reporting to any other division or assignment. Civilian personnel entering the building must be accompanied by a firefighter, and when available, a portable radio. The primary responsibilities assigned to the Lobby Control Group are:

#### **Initial**

1. Obtain, identify and distribute keys from lock box.
2. Keys for elevator must remain in Lobby.
3. Take control of all elevators and return to ground using emergency control feature.
4. Determine safety of elevators for use by attack companies and/or for evacuation of occupants. Assign operators to cars which will be used, and establish communications if possible.
5. Control access to stairways.
6. Identify stairways to be used by firefighting forces.
7. Direct occupants leaving stairways to safe location and away from Lobby, and prevent re-entry.
8. Record names of personnel going up into building.
9. Keep crew with an officer as much as possible.
10. Keep individual personnel, not attached to a company, in the Lobby until they can report to their company or be reassigned to another company.

#### **Working Fire**

1. Take control of alarm systems. Shutting off alarm system when it is determined that the building or area is evacuated, will allow for better radio communication.
2. Assign personnel to establish liaison with building maintenance personnel.
3. Communicate with Resource and Staging to coordinate equipment and manpower needs.

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4. Stockpile equipment in Lobby for transportation to Resource. Control dispatch of manpower and equipment to Resource and maintain log(collect passports). Companies assigned from Staging should be instructed to unload needed equipment at Lobby.
5. Establish stairway support if needed. When elevators are inoperative or unsafe, equipment must be carried up the stairways. Assign personnel to every other floor landing (every floor if sufficient personnel is available) to relay equipment up the stairs. These personnel should have protective equipment available, but work in fatigues.

### RESOURCE GROUP

Command is responsible for identifying the need for establishment of Resource and assigning its implementation. This requires the assignment of a group supervisor and sufficient manpower to operate the Resource Group, as outlined below.

1. The Resource Group is established as a supply pool to provide a standby supply of manpower and equipment for operating divisions/groups.
2. The Resources Group provides an identifiable location, at which available supplies are assembled to provide immediate support when needed. This requires anticipation of equipment and/or manpower which will be needed by operating companies.
3. The Resource Group should be established in close proximity to the scene of operations, but outside of the defined fire ground perimeter in a safe location. (For high-rise operations, the Resource Group is normally established TWO FLOORS below the fire floor.) Command may identify the location of the Resource Group or direct the assigned division supervisor to find and announce an appropriate location.
4. The radio identification for this group will be "Resource". Communications will involve interaction with Command and Staging to provide supplies to the Resource Group. (In a high-rise incident Lobby Control will also be involved.)
5. Operating divisions/groups may obtain equipment by direct communication with "Resource". Manpower requests will be directed to Command.
6. The Resource Group Supervisor should attempt to identify the types of equipment and supplies which will be required according to the situation and provide for their delivery to the Resource Group. This often involves moving tools and equipment from apparatus in Staging to the Resource Group. (In a high-rise, this would also involve Lobby Control.) Typical supplies involved would include spare air bottles, hose, nozzles, hand tools, blowers, lights, and salvage equipment.
7. Air bottles play a particularly significant role in initial fire attack capability in a high-rise building. All members should bring as many spare bottles as possible and leave them at Lobby Control.
8. In situations which are manpower intensive, companies may be ordered to abandon apparatus in Staging and report to the Resource Group with appropriate equipment. Companies in Resource should be kept intact and assigned as a unit. Command will call Resource to assign available companies to operating divisions/groups.
9. Companies may be returned to the Resource Group to standby for further assignment when released from operating divisions/groups.
10. The Resource Group will maintain an inventory of equipment, supplies, and companies available at all times.

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11. A minimum of one company for every company on the fire floor should be maintained in Resource. The group supervisor will assign sufficient manpower to provide for adequate support within the group including necessary movement of equipment.
12. A log will be maintained of all assignments of companies to other divisions/groups, including time of assignment.
13. Equipment areas in the resource pool should be grouped by type, denoting equipment that is ready and equipment that is spent.

## SPECIAL CONSIDERATIONS

### **Stairways**

In structuring firefighting operations, at least one stairway should be kept clear to provide access to, or escape from, floors above the fire. This will require communicating which stair is being used for firefighting access and/or ventilation, and which is being kept clear for access above. Almost all stairways have vent hatches or roof access at the top to allow venting for trapped smoke. A blower introducing fresh air at the bottom will usually help to clear smoke trapped in the shaft or keep smoke from entering. Avoid intentionally venting the fire into a stairway.

### **Air Handling Systems**

Some air handling systems, particularly in sprinklered buildings, are designed for smoke removal and fresh air supply. Unless the system is designed for this purpose, it should be shut down until the fire is stabilized and the method of smoke removal is decided. Lobby Control is responsible for establishing contact with building maintenance personnel to assist with these systems. The controls may be at a building control system in the lobby or in an equipment area.

### **Alarm and Communications Systems**

Fire Alarm and/or one or two-way voice communications systems are required for all high-rise buildings. These provide a method of sounding alarms or making announcements on individual floors selectively or to the whole building. Lobby Control will have the responsibility for manning these systems at the main panel. (Alarm systems will not be shut off until Command has been advised of an "all clear".)

The construction of most high-rise buildings will tend to shield radio transmissions, particularly between Alarm headquarters and portables inside the structure. A unit in the street usually will be able to communicate with units inside and may have to relay messages to Alarm. Internal communications systems in some buildings may be used in addition to normal radio communications; Command will need to establish communications with the system control panel.

### **Evacuation Officer**

In some situations a significant number of occupants may need to be evacuated, or otherwise directed. It may be advantageous to separate this area of responsibility from firefighting and assign companies under an Evacuation Officer to accomplish this function and thus reduce Command's span of control.

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### **Evacuation Policy**

The evacuation routes available to occupants of a high-rise building are normally limited to two stairways. The stairways are also the prime access route for firefighting forces to make an attack. Occupants in the immediate fire area should be evacuated as quickly as possible to a safe area such as the THIRD FLOOR BELOW the fire, another wing, etc. Further evacuation should be predicated on risk to the occupants, since premature evacuation often hinders fire control efforts and adds to general confusion at the scene. The determination of risk and the decision to evacuate should be made by personnel on the floor.

All stairways should be accounted for in search and rescue operations with special emphasis on handicapped people who may have sought refuge there. Subsequent evacuations should be managed to avoid interference with operations as much as possible.

### **Command Officers**

A Command Officer will be assigned to the firefighting level of a high-rise fire as quickly as possible. The first Command Officer should establish an effective Command Post position "in the street" that provides maximum visibility of the building and surrounding area. As soon as a second Chief arrives, one should be assigned to the Fire Floor Division to command the attack. Chief Officers should relieve company officers as early as possible in each division and each fire area.

## **SAFETY PROCEDURES**

### **High-Rise Safety**

Fire personnel conducting operations in high-rise buildings are faced with many non-typical hazards due to the design, elevation, limited access/egress, etc., inherent in these buildings. For this reason when operating in a high-rise building, it is to be considered a high hazard area. If a working fire is suspected in a high-rise building, the following procedures shall be adhered to:

1. Always utilize stairways to go aloft if possible.
2. Remote elevators which exit to an open walkway on each floor may be used when they are obviously not near the fire area.
3. Elevators with firemen service feature, may be used to go aloft provided the following measures have been taken:
  - a. The elevator shaft must be checked to insure that heat/fire have not damaged the hoist mechanism, etc. This can be done by checking the space between the door frame and the elevator car and shining a light up the shaft. If smoke, fire, or water are visible in the shaft, **DO NOT USE THE ELEVATOR.**
  - b. The following procedures will be utilized when using elevators with firemen service feature:
    - i. Engage the firemen feature.
    - ii. Take elevator to the floor two floors below the suspected fire floor.
    - iii. Be prepared to close the elevator door immediately usually by removing finger from the door control button if fire or smoke is visible on the floor.
    - iv. Have a dry chemical fire extinguisher in the elevator in event of an emergency, for the personal safety of the operator and passengers.
    - v. **ELEVATORS WILL NOT BE USED WITHOUT APPROVAL OR DIRECTION FROM COMMAND.**

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When operating at a high-rise building where the potential hazards of falling glass and debris exists, a fire ground perimeter shall be established approximately 200' from the building and shall be observed by all fire personnel as a high hazard area. (If conditions require the breaking of glass, Command should be notified prior to this action.)

Pumpers supplying water shall utilize hydrants outside the perimeter area if possible. Command and staff support personnel shall remain outside the perimeter area unless entering the area to assist with interior operations.

To insure accountability of personnel operating in high-rise buildings, the Lobby Control Officer and the Resource Officer respectively shall record the names of all crew members going aloft or operating on upper floors.