	T R A V I S C O U N T Y E S D #5 **MANCHACA FIRE RESCUE** **Department Best Practices**	**A201**	
	Authorized by: *Fire Chief Chris Barron*	**Effective:**	1/24/2018
		Rescinds:	
	High-Rise Fires	**Reference:**	AFD A201.4
		Application:	Shift Personnel

I. Purpose

To establish guidelines for mitigating high-rise fires.

II. Background

After September 11, 2001, firefighters and the general public have dramatically altered their views on high-rise emergencies and the actions to take if one occurs. The emergencies can include both fire and structural collapse. The public can be expected to immediately evacuate the structure: This means all stairwells may become "evacuation stairwells."

High-rise fires may be controlled easily (and oftentimes prior to AFD arrival) by fire control systems and compartmentalization, or they may escalate and become catastrophic events. Any high-rise has the potential to present a serious rescue challenge; furthermore, there are unsprinklered residential towers in Austin that are especially vulnerable to emergencies.

Although high-rise buildings are engineered to withstand a great deal of stress and are usually compartmentalized to restrict spread of smoke and fire, all responding personnel should watch for falling debris and potential collapse indicators during their approach. The Incident Commander needs to continually assess the building's condition and consult with an on-scene AFD Fire Protection Engineer.

This document is a direct adaptation of the Austin Fire Department SOG on High-Rise Fires. It has been adopted by Manchaca Fire Rescue as an Auto Aid partner to maximize standardization between partner agencies. Variations and additions to the language from the parent AFD document will be signified by text in italics. Generic changes that do not affect content such as formatting and changing "AFD" to "MFR" will not be noted.

III. Policy

A. **High-Rise defined..** High-Rise procedures shall be utilized when a fire is reported in any structure that meets the definition of a high-rise according to the International Fire Code and International Building Code, which are buildings having occupied floors located more than 75 feet above the lowest level of fire department vehicle access (usually about seven or eight floors).

B. **Additional alarms.** The first arriving Company Officer shall state, as part of their initial size-up that high-rise procedures will be in effect. If there is evidence of a working fire upon arrival, or at any time during the investigation, the alarm should be upgraded to a multiple alarm.

IV. Best Practices

> **The following best practices should be followed at all firefighting and emergency scene operations, except where deviation can be justified by Fire Officers. Any significant deviation should be communicated to responding/on-scene units as soon as possible.**

> **There is also a training manual that accompanies this best practices document. The manual is intended to explain tactics and concepts presented in this best practices document in greater detail.**

A. **CAD Caution Note information.** City of Austin high-rise buildings should be marked in the CAD notes section as "***HIGH-RISE***" along with important information such as the number of floors, occupancy type, FDC location, etc. Dispatchers and Companies Officers should utilize this CAD high-rise information to ensure the proper response and procedures are used at high-rise buildings.

B. **Response plan.** A High-Rise Alarm complement shall consist of four Engines, three Aerial Apparatus, one Rescue unit and two Battalion Chiefs. These resources are adequate for investigating a report of a high-rise fire and mitigating incipient fires. However, if evidence of a working fire is found, a second alarm must be requested to have the minimum amount of resources necessary to make an offensive fire attack in a high-rise building.

C. **Preassigned roles.** Units arriving at the scene of a high-rise incident will assume the pre-assigned functional responsibilities as described below (refer to Figure 1):

> **Note:** Even if the first arriving Company reports that they are investigating, the high-rise functional assignments should still be assumed. Companies may need to deviate from the following assignments in extreme circumstances (e.g., the need for aerial rescue). In the event of deviation, Command is responsible for ensuring that the functional responsibilities are filled by other companies.

1. **Incident Commander.** The first arriving Officer shall assume Command. Command will be passed according to policy until the first arriving Battalion Chief assumes Incident Command and establishes a Command Post. There are many factors to be considered when selecting a command post location for a high-rise incident. Locating the command post in the building lobby near the fire control room should be given serious consideration due to the ability to better communicate with companies inside the structure. However, if a command post inside the structure is not a good choice, the command post may be established outside and at a safe distance from the structure. The use of the COA Command Vehicle (CV1) should also be considered, if available.

2. **Falling debris.** Should the incident evolve into a working fire, a safe perimeter should be established and maintained with consideration being given to the height of the structure and the probable landing zone of any falling debris. If the Command Post is located outside the structure, it should be located or relocated beyond this safe perimeter.

3. **Division 'X' Supervisor.** The second arriving Battalion Chief should report to the Incident Commander for briefing. Then, one Chief will be the Incident Commander and the other Chief will be assigned as the fire floor Division Supervisor. *The fire floor Division will be named after the floor number (the term "Division X" is a generic term for policy purposes only, if a fire was on the 15th floor, the Division would be called "Division 15").* All of the companies working on the fire floor will be under the command of this Division Supervisor.

4. **Initial Attack.** The first arriving Aerial Apparatus or Rescue Unit will assume Inside Truck and serve as the Division Supervisor on the fire floor until the arrival of a Chief Officer. The first arriving Engine Company will assume Fire Attack 1. The second arriving Engine Company will assume Fire Attack 2. These three initial attack teams should work together and perform operations on the fire floor to locate and confine the fire.

   a. **Duties of initial attack.** All three initial attack teams should bring standpipe hose and equipment into the building with them. The Inside Truck is responsible for truck work on the fire floor including locating the fire, forcing entry for access to the fire, primary search in the fire area, salvage, etc. Fire Attack 1 and 2 should work together to deploy a hoseline and begin fire confinement and extinguishment.

   b. **Two-In Two-Out.** The initial attack teams must comply with the MFR Best Practices A104 Two-In/Two-Out. Normally this is accomplished by leaving two members in the Attack Stairwell, which is outside the IDLH atmosphere.

   c. **Fire Control Room.** The first arriving initial attack team will respond to the Fire Control Room (FCR) to check the fire alarm panel, obtain building keys, and obtain plug-in phones.

   d. **Five Size-ups.** All operations depend on the conditions found and actions taken by the initial attack teams. Therefore, it is critical that the initial attack teams communicate their actions and give size-up reports from five locations:

      i. **Exterior.** The exterior upon arrival; including the number of stories and if fire/smoke is showing.
      ii. **FCR.** The Fire Control Room; including the information obtained from the fire alarm panel.
      iii. **Attack stairwell.** The Fire Attack Stairwell; including the designation of the Attack Stairwell and smoke conditions within that stairwell.
      iv. **Fire floor.** The fire floor; including confirmation of the fire floor number, the fire/smoke conditions on that floor and actions being taken.
      v. **Fire room.** The fire room/apartment; including the fire room/apartment number and actions being taken.

   e. **Other information.** Other information such as status of occupant evacuation, if elevators are being utilized, whether or not a sprinkler system is operating, etc. should also be conveyed.

Note: By definition, the Attack Stairwell becomes open to fire products; operations in this stairwell are inherently dangerous to both firefighters and civilians. Recent tests have proven that PPV fans can be used to pressurize the Attack Stairwell to prevent the products of combustion from entering. This is best accomplished by placing one fan blowing into the stairwell at the bottom and a second fan blowing into the stairwell three floors below the fire floor. To assist Command determining the need for stairwell pressurization with PPV fans, the initial attack teams should advise Command of the smoke conditions within the stairwell.

Note: Hose lines should initially be placed on the floor of fire origin, and the fire should be attacked at that area. Secondary hoselines should then attack any extension on the floors above. Except in rescue circumstances, fire cut-off on floors above the origin floor should not be undertaken unless the fire below is under control.

5. **Water Supply.** The third arriving Engine Company will assume Water Supply. Water Supply will be responsible for:

    a. **Sprinklers.** Supplementing the sprinkler system;

    b. **Standpipe.** Supplementing the standpipe system;

    c. **Water supply.** Establish a hydrant water supply:

        i. **FDC supply.** This is usually accomplished by connecting two 3" hoses to the FDC and then laying out to a nearby hydrant. Additional 3" hoses should then be added to supply all inlets on an FDC.

        ii. **Tandem pumping.** If the sprinkler or standpipe system requires 225 psi or more pressure, water supply to the FDC should be established utilizing threaded 3" supply hose and with two pumping apparatus in a tandem pumping operation.

    d. **Fire pump.** Determining the operational readiness of the fire pump:

        i. **Report status.** Fire personnel assigned to check the operational readiness of the fire pump should do so and report their findings to Command, and should then report to Systems Control Unit.

        ii. **Carbon Monoxide hazard.** Fire personnel should be aware that carbon monoxide may build up in apparently "clear" basements; SCBAs should be worn.

6. **Lobby Control Unit.** The fourth arriving Engine Company will assume Lobby Control. This function will be established in the lobby or other location within the structure where ingress and egress can be controlled. Lobby Control will be responsible for:

    a. **Knox box.** Obtaining Knox Box keys if the initial attack teams have not obtained them.

b. **Access control.** Establishing entry/exit control at all building access points.

c. **Access routes.** Determining access routes to be utilized throughout the incident (stairwells or elevators).

d. **Stair pressurization.** Ensuring stairwells are pressurized. If not, coordinate the use of PPV fans for pressurization.

e. **Company briefings.** Providing Companies entering the building with pertinent information about the building and incident and then direct the Companies to appropriate stairwell or elevator for their assignment.

f. **Elevator capture.** Ensuring the capture of all elevators (refer to the MFR Best Practices B303 Use of Elevators). Coordinate the use of elevators for shuttling personnel and equipment up and down. Consideration should be given to assigning one member to operate an elevator.

g. **Systems Control Unit.** Lobby Control will perform the job of the Systems Control Unit until relieved of those duties.

7. **Recon Group.** The second arriving Aerial Apparatus or Rescue Unit will assume the function of Recon Group. This group is responsible for operations above the fire floor(s).

a. **Recon mission.** The Recon Group should use an Evacuation Stairwell and respond above the floor(s) to search for occupants and check for fire extension. Special consideration should be given to the area in the Attack Stairwell above the fire floor. Any occupants remaining in this dangerous location should be removed as soon as possible.

b. **Communication with Command.** A size-up of the conditions found should be conveyed by the Recon Group to Command. Because Recon is a functional group not limited to a specific geographic location within the building, it is important that Command know the location of the Recon Group at all times and be informed of changing conditions above the fire floor. Depending upon the conditions found, the Recon Group might need to assist with occupant evacuation or implement a strategy for defending the occupants in place.

c. **Ventilation.** Another consideration for the Recon Group is vertical ventilation. Ventilation should be closely coordinated with Operations and the Division Supervisor on the fire floor. Normally, pressurization of the stairwells is preferred over vertical ventilation during fire attack. However, smoke removal from the stairwells may be necessary after the fire is under control.

Note: Stairwells in Austin high-rises are usually pressurized from the top down; be aware that smoke may bank to landings in the stairwell below the fire floor.

8. **Logistics Section Chief/Systems Control Unit.** The third arriving Aerial Apparatus or Rescue Unit Officer will assume Logistics and the driver will assume Systems Control Unit. The Logistics Chief

is initially responsible for all activities that support fire attack; this includes Water Supply, Lobby Control and Systems Control. The fire fighters on the Aerial Apparatus or Rescue Unit will be assigned to assist with these support functions as deemed necessary by the Logistics Chief.

a. **Systems Control Unit.** The Systems Control Unit is responsible for staffing the Fire Control Room (FCR):

  i. **Staffing of FCR.** Report when the Fire Control Room is staffed.

  ii. **Monitor FACP.** Check the fire alarm panel and report any changes from the initial size-up given by the initial attack teams.

  iii. **Silence alarms.** After Lobby Control has secured entry/exit points and prevented occupant re-entry, silence any audible alarms with Command approval.

  iv. **Building communications.** Operate communications equipment to calm and direct building occupants as necessary. As soon as possible, the building occupants should be advised to use the Evacuation Stairwell(s) and avoid using the Attack Stairwell.

  v. **Firefighter communication.** If needed, assist with communication between the fire floor Division Supervisor and the Command Post.

  vi. **HVAC control.** Control the buildings HVAC system as necessary. Determine if the system can be used for smoke removal.

  vii. **Coordinate with building staff.** Establish communication with building personnel to coordinate the operation of the selected systems.

9. **Staging.** The fourth arriving Aerial Apparatus or Rescue Unit will ascend with the RIC equipment and will assume Staging two floors below the fire floor. Since a RIC team is not assigned until a 2nd alarm, the fourth Aerial Apparatus or Rescue should also be prepared to act as the RIC team if needed.

a. **Internal staging stations.** The following stations should be established:

  i. **Staging.** Division X – 2 (Fire Floor -2) Staging
  ii. **Rehab.** Division X – 2 (Fire Floor -2) Rehab
  iii. **Equipment.** Division X – 2 (Fire Floor -2) Reserve Equipment

b. **Staging log.** Staging shall maintain a log of resources and Companies in that interior Staging Area and the Companies in that interior Rehab Area.

c. **Incidents on lower levels.** For incidents reported on the third floor or below, a Staging Area should only be established outside of the structure. This can usually be accomplished with the normal multiple alarm staging procedures and the fourth Aerial Apparatus or Rescue Unit

can then be given a different assignment. Refer to MFR Best Practices A713 Staging at Multiple Alarm Incidents.

10. **Medical Group.** A/TCEMS units should be assigned as the Medical Group upon arrival. If medical monitoring is necessary in Rehab, an EMS unit may be assigned there also.

11. **Support Personnel.**

    a. **AFD Support.** For Austin incidents, on-call Command Staff personnel and Incident Support Team (IST) members shall respond to all multiple alarm incidents. Their role will be dictated by the situation upon their arrival.

    b. **Other support.** For Austin incidents, other support personnel (Community Services Group, on-call Emergency Prevention Inspector, Fire Protection Engineer, etc.) will respond per individual section protocol. Upon arrival, the on-call Prevention Inspector should be assigned to the Systems Control Unit and Department Engineers should be assigned to the Planning Section as Technical Specialists.

12. **Second Alarm.** Should the High-Rise Alarm escalate to a 2nd alarm, additional tactical resources will be dispatched. The following positions should be filled (refer to Figure 1):

    a. **Operation Section Chief and Planning Section Chief.** The third and fourth arriving Battalion Chiefs should report to the Command Post for a briefing. Then, one Chief will be assigned as Operations and the other Chief as Plans.

    b. **RIC Group.** The second arriving Rescue Captain will assume the function of the RIC Group Supervisor. The RIC Group Supervisor will respond to the interior Staging Area below the fire floor, request at least one company in addition to the Rescue personnel to utilize as the RIC team(s), identify the best location(s) for the RIC team(s) and report when RIC is established.

    c. **Exterior Staging Manager, Base Manager, and Exterior Rehab Manager**. The officer from the first Engine arriving on the second alarm will assume the function of Staging Manager for the exterior Staging area. Personnel from this Company will also assume Base Manager and Rehab Manager for the exterior Rehab area. Refer to MFR Best Practices A713 Staging at Multiple Alarm Incidents.

    d. **Backup.** At least one Engine Company should be assigned to deploy a backup hoseline to protect the Fire Attack teams.

    e. **Evacuation Group.** At least one Company should be assigned to assist and direct the evacuation of the occupants using the Evacuation Stairwell(s) and ensuring that the occupants evacuate to a safe location.

    f. **Command Staff Positions.** The positions of Safety Officer and PIO should be assigned.

13. **Third Alarm.** Should the High-Rise Alarm escalate to a 3rd alarm, additional tactical resources will be dispatched. The following positions should be filled (refer to Figure 1):

   a. **Logistics Support Branch/Medical Unit.** The Support Branch and Medical Unit within Logistics should be established. This may best be accomplished by assigning a Chief Officer as the Logistics Chief and utilizing the Aerial or Rescue Captain as the Support Branch Director. The Medical Unit is responsible for overseeing the two Rehab Areas.

   b. **Ground Support Unit.** A Ground Support Unit may be needed to transfer equipment from the Incident Base up to the floor where the interior Staging Area has been established. Personnel assigned to the Ground Support Unit should be assigned at a rate of one person per two floors. Each person will carry equipment up two floors, pass it to the next person and return to their assigned landing for another load. If the operation is long, relief can be provided by doubling the assignment (two people per two floors), with the personnel alternating loads. Personnel assigned to this function may wear uniform footwear rather than firefighting boots.

   c. **Resource Unit.** To assist the Planning Section Chief with tracking companies and ensuring accountability, a Resource Unit should be established.

   d. **Technical Specialist.** Department Engineers should be assigned as Technical Specialists and report to the Planning Section Chief.

14. **Fourth Alarm and Greater.** Should the High-Rise Alarm escalate to a 4th Alarm with fire attack necessary on multiple floors or with multiple patients, the following ICS positions may necessary:

   a. **Operations Branches and Divisions.** Fire Branches with Divisions based on floor assignments and Groups based on function.

   b. **Medical Branch.** Medical Branch with a Treatment Unit and a Transport Group.

   c. **Air Operations Branch.** Air Operations Branch with a Helicopter Coordinator and a Helispot Manager.

   d. **Situation Unit.** A Situation Unit to assist the Planning Section Chief preparing, posting and disseminating situation status information.

15. **General Procedures.**

   a. **Communications.** As with any large-scale incident, heavy radio traffic on the primary channel can be expected. In order to reduce the radio traffic on the primary channel, the following uses of additional channels should be considered:

      i. **Alternate channel.** All Companies responding on a multiple alarm and reporting to either Staging Area should use the assigned alternate channel. Only after given an assignment

to a Division or Group should Companies switch to the primary channel. Refer to MFR Best Practices B401 Radio Communications.

    ii. **Logistics channel.** Upon upgrading to a 2nd alarm, the Logistics Section and all Companies reporting to Logistics should switch to the assigned alternate channel.

    iii. **Additional channels.** Upon upgrading to a 4th alarm, an additional set of channels should be requested for use by Command, CSG, etc.

b. **Reserve forces.** Additional Companies should be directed from the exterior Staging Area to interior Staging Area two floors below the fire floor as early as practical. Companies should be held available in this Staging Area to relieve members working on the fire floor or above. A rule of thumb is to have two companies in reserve for each company committed to the fire attack. Also, a minimum of one Engine Company should be held in reserve at the exterior Staging Area.

c. **Equipment pool.** Companies reporting for an assignment inside a high-rise structure should carry as much equipment as possible to the lobby. An equipment pool can then be established and later transferred to the interior Staging Area. This will minimize the time required to retrieve equipment needed later in the incident. Priority should be given to standpipe hose and equipment, spare air cylinders, hand lights, and forcible entry tools.

d. **PPE downgrades.** The Safety Officer or Staging Manager may recommend that members in the interior Staging Area, or operating below, be allowed to remove all or part of their Personal Protective Equipment. It must be kept available should conditions change within the structure.
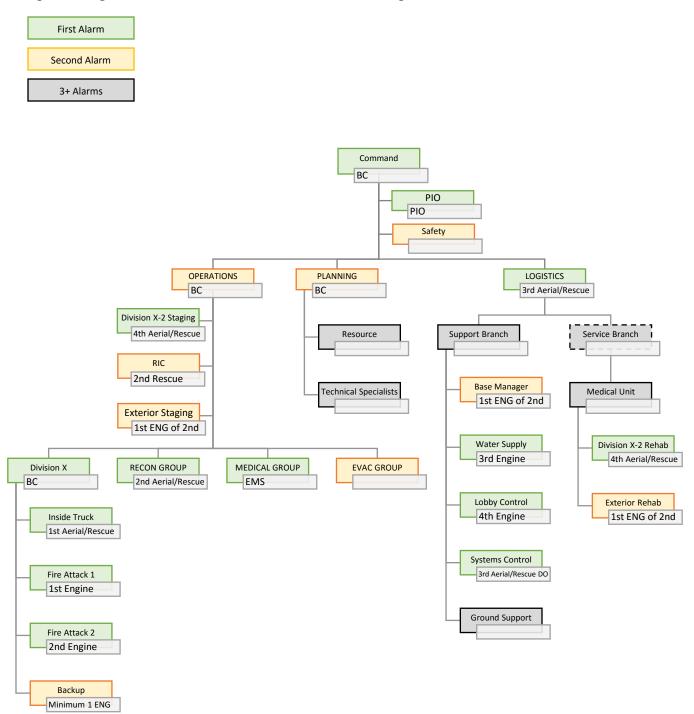
Figure 1: High-Rise Alarm ICS Structure and Resource Assignments

Legend:
- First Alarm
- Second Alarm
- 3+ Alarms

Command — BC

- **PIO** — PIO
- **Safety** —

OPERATIONS — BC
- **Division X-2 Staging** — 4th Aerial/Rescue
- **RIC** — 2nd Rescue
- **Exterior Staging** — 1st ENG of 2nd
- **Division X** — BC
  - **Inside Truck** — 1st Aerial/Rescue
  - **Fire Attack 1** — 1st Engine
  - **Fire Attack 2** — 2nd Engine
  - **Backup** — Minimum 1 ENG
- **RECON GROUP** — 2nd Aerial/Rescue
- **MEDICAL GROUP** — EMS
- **EVAC GROUP** —

PLANNING — BC
- **Resource** —
- **Technical Specialists** —

LOGISTICS — 3rd Aerial/Rescue
- **Support Branch** —
  - **Base Manager** — 1st ENG of 2nd
  - **Water Supply** — 3rd Engine
  - **Lobby Control** — 4th Engine
  - **Systems Control** — 3rd Aerial/Rescue DO
  - **Ground Support** —
- **Service Branch** —
  - **Medical Unit** —
    - **Division X-2 Rehab** — 4th Aerial/Rescue
    - **Exterior Rehab** — 1st ENG of 2nd