



RUSSELLVILLE FIRE DEPARTMENT
POLICY MANUAL

Policy Number:
Section:
Original Date:
Revised Date:

PURPOSE

The purpose of this policy is to establish a standardized approach to dealing with high-rise building fires so that fire department personnel will operate in a safe and controlled manner.

POLICY

Fires in high-rise buildings are low-frequency labor-intensive events that require special tactics, equipment, knowledge. These fires present significant management, logistical, and safety problems. The size and complexity of the interior spaces, the enclosed nature of the hazard area, and the limited and sometimes difficult access to the fire area all contribute to the problems faced by suppression forces. The serious life hazard to occupants and firefighters, endangered by fire and smoke and presented with limited evacuation options, allows little room for error or disorganization.

Definitions

High-Rise Building - The generally recognized definition of a high-rise building is any building more than 75 feet tall, however, the Russellville Fire Department has identified the fact that there are many buildings within our response area that do not meet this definition but that will require the same command structure and tactics. Therefore, for the purpose of this policy the Russellville Fire Department shall treat any building with more than three floors above ground level as a high-rise building. The information outlined in this policy may be adapted for use at fires other than those involving high-rise buildings as the Incident Commander deems appropriate

Standing Orders:

Although ultimate responsibility for on scene tactical assignments rests with the Battalion Chief, the institution of standard fire ground orders will assist with equipment and task responsibilities. Company officers and Incident Commanders may deviate from these standing orders upon direct order or when circumstances dictate alternative actions. Firefighters should understand that it is impossible for these standing fire ground orders to address all the needs and required actions on the incident scene. Rather, this serves as a blueprint for anticipated and standard actions that regularly have to be addressed at high-rise building fires

The standard First Alarm assignment for a reported fire in a high-rise building will consist of:

- 4 Engines, Ladder 1, Battalion 1

Ladder Company

- Engineer – Setup Aerial Device as directed by Incident Commander and prepare for water supply
- Company Officer – Establish a Division on the fire floor – secure a stairwell
 - Equipment: TIC, Water Can, Pike Pole/Hook, irons

1st In Engine Company

- Engineer – Establish Lobby Control
- Company Officer/Firefighter – To the Division on the fire floor
 - Equipment: High-Rise Pack, Standpipe Kit, tools, extra cylinders

2nd In Engine Company

- Engineer – FDC

Approved

Fire Chief



RUSSELLVILLE FIRE DEPARTMENT
POLICY MANUAL

Policy Number:
Section:
Original Date:
Revised Date:

- Company Officer/Firefighter – To the Division on the fire floor
 - Equipment: High-Rise Pack, Standpipe Kit, tools, extra cylinders

3rd In Engine Company

- Engineer – Assist Ladder Company for Water Supply
- Company Officer/Firefighter – Establish a Division on the floor above the fire
 - Equipment: TIC, High-Rise Pack, Standpipe Kit, extra cylinders

4th In Engine Company

- Engineer – Establish Rapid Intervention Company
- Company Officer/Firefighter – Establish Rapid Intervention Company
 - Equipment: RIC Pack, irons, extra cylinders, TIC

Command Unit

- Battalion Chief – Operate and manage ICS and Safety functions

Medic Unit

- Crew - Have Cot and Equipment Ready

As evidenced by the Standing Orders the highest priority of the first alarm units is to place an attack line into operation on the fire floor.

Actions and Responsibilities of First Alarm Units:

The operational areas on the different floors of high-rise buildings will typically be organized as Divisions. Each Division is responsible for completing all of the fire ground tasks within their assigned area and it is the Division Supervisor's responsibility to ensure that all tasks are addressed. The only exception to this is when a Group is established to perform a specific function, such as Ventilation. The Ventilation Group is responsible for performing the ventilation function throughout the entire building.

Ladder Company

Upon arrival at the scene, contact a building representative and assess the alarm panel to determine the location of the fire and report findings to incoming units. If readily available, obtain a master key to facilitate search and evacuation. Proceed to the fire floor and establish a Division.

The initial primary responsibilities of the ladder company are to locate the fire, identify the attack stairs, and relay this information to the engine company(s) also assigned to their Division. The ladder company should further determine if it is safe to dry-stretch the attack line onto the fire floor or if it is necessary to charge the line in the stairwell. If an additional attack line is necessary, the Division Supervisor should alert incoming companies.

The ladder company is responsible for performing forcible entry to the fire area and other areas as necessary perform fire attack and search and rescue throughout the floor.

The ladder company is responsible for performing a search of the fire area. If fire conditions do not allow a search to be performed prior to attack line deployment, the ladder company should attempt to confine the fire by utilizing the water can or by closing doors to the fire compartment.

The ladder company may assist the engine company with attack line deployment or perform other functions as directed by the Division Supervisor.

Approved

Fire Chief



RUSSELLVILLE FIRE DEPARTMENT
POLICY MANUAL

Policy Number:
Section:
Original Date:
Revised Date:

1st In Engine Company

Proceed to the fire floor and notify the Incident Commander of your arrival there. Notify the Division Supervisor that you are standing by in the stairwell. Once the ladder company has located the fire and identified the attack stairs the engine company should begin deploying the attack line. Consult with the Division Supervisor to determine if it is safe to dry-stretch the attack line onto the fire floor or if it is necessary to charge the line in the stairwell.

Connect the attack line to the appropriate standpipe one floor below the fire floor, assign one firefighter as the standpipe operator with the radio designation of "Standpipe," and deploy the attack line to the fire area with the assistance of the 2nd -In Engine Company. Confine and extinguish the fire.

The engine company should be prepared to perform other functions as directed by the Division Supervisor.

2nd In Engine Company

Proceed to the fire floor and notify the Incident Commander of your arrival there. Contact the company officer of the 1st -In Engine and assist in deploying the attack line to the fire area. Confine and extinguish the fire.

The engine company should be prepared to perform other functions as directed by the Division Supervisor.

3rd In Engine Company

Obtain a master key, if readily available, and proceed to the floor above the fire and establish a Division.

The primary responsibilities of the 3rd In Engine Company are to perform a search, evacuate the floor by directing occupants to the appropriate stairwell, and check for fire extension. The engine company should begin the search directly above the fire area as this is the most likely area for fire extension and the area where occupants are in the most danger. The engine company should keep in mind that the most common routes of fire extension in high-rise buildings are through pipe chases, through void spaces at curtain walls, and by auto-exposure from the windows on the fire floor.

If fire extension is found the engine company should attempt to confine or extinguish the fire. They should notify the Incident Commander that there is fire extension and request additional resources as needed in order to deploy an attack line. The engine company is responsible for performing forcible entry to complete the search and extension check throughout the floor.

4th In Engine Company

Drop any extra SCBA cylinders at staging and proceed to the floor below the fire floor and notify the Incident Commander of your arrival there. Familiarize with the floor layout of the building and monitor radio traffic

Medic Unit

Be alert for injured building occupants and treat patients as needed. Notify the Incident Commander if additional Medic Units are needed. If no patients are encountered and conditions permit proceed to the building lobby with cot and appropriate medical equipment. Assist building occupants in safely exiting the building while maintaining readiness to treat patients.

Additional Alarms

If a confirmed working fire occurs in a high-rise building the Incident Commander will immediately call for a second or greater alarm. These additional alarm units will be deployed as determined by the Incident Commander with a high priority placed on deploying a backup attack line on the fire floor and performing search and rescue on and above the fire floor.

Approved

Fire Chief



RUSSELLVILLE FIRE DEPARTMENT
POLICY MANUAL

Policy Number:
Section:
Original Date:
Revised Date:

As prescribed in RFD Policy 201.19 Multiple Alarm Incidents, both off-duty Battalion Chiefs and the Fire Marshal's Office will be notified. Upon their arrival at the scene these chief officers should be placed in supervisory roles such as Division Supervisor on the fire floor or floor above the fire, Lobby Control Unit Leader, Staging Area Manager, Incident Safety Officer, or Deputy Incident Commander. This use of chief level officers in these critical positions will further solidify the command and control function at these high-risk incidents. Due to the life safety hazard and potential for large numbers of injured occupants the Incident Commander may assign personnel as a Medical Branch Director / Medical Group Supervisor. Members of the Fire Marshal's Office may be assigned as the Systems Control Unit due to their familiarity with the built-in fire and life safety systems that are present in these buildings.

Incident Command Concepts

Lobby Control Unit - The Lobby Control Unit consists of fire department personnel who are assigned to the lobby area of the fire building to direct fire department personnel and to act as the initial liaison with building representatives. The Lobby Control Unit is overseen by the Lobby Control Unit Leader which is usually staffed by the engineer of the 1st -In Engine.

Radio designation: "Lobby Control"

Duties of the Lobby Control Unit:

- Contact a building representative who is familiar with the building's systems, preferably the building engineer or maintenance supervisor.
- Direct the building's occupants out of the building.
- Direct fire department personnel to the appropriate attack stairs.
- Monitor the building's built-in fire communications system.
- Perform the duties of the Systems Control Unit until the Systems Control Unit is formally established.

Systems Control Unit - The Systems Control Unit monitors and maintains the built-in fire control, life safety, environmental control, communications, and elevator systems. This unit is implemented at the discretion of the Incident Commander, typically at multiple alarm incidents. The Systems Control Unit is led by the Systems Control Unit Leader which is typically staffed by the Fire Marshal or Deputy Fire Marshal. In the absence of a Systems Control Unit, these duties are performed by the Lobby Control Unit.

Radio designation: "Systems Control"

Duties of the Systems Control Unit:

- Ensure that the elevators have been recalled to the lobby and oversee operation of the elevators.
- Evaluate the status of the building's fire control systems.
- Determine location of alarm activations. (Silence the audible fire alarm once the fire is located to facilitate communications and reduce occupant panic.)
- Determine location of sprinkler activations.
- Determine the status of the building's fire pump.
- Evaluate the status of the HVAC system and ensure that it is shut down to prevent moving smoke throughout the building.
- Evaluate the status of the building's smoke removal system.
- Utilize the building's public address system to direct building occupants.
- Access the building's blueprints and floor plans.
- Communicate all findings to the Incident Commander.

Approved

Fire Chief



RUSSELLVILLE FIRE DEPARTMENT
POLICY MANUAL

Policy Number:
Section:
Original Date:
Revised Date:

Staging - Staging is the area in which available personnel and equipment are held awaiting deployment to an operational area. Staging is overseen by the Staging Area Manager (SAM) which is usually staffed by a staff officer or a member of a greater alarm company. Staging is located two floors below the fire floor in an area that is not contaminated by smoke or heat conditions that provides adequate space for manpower and equipment. The Rehab Area is located adjacent to Staging and is overseen by the SAM.

Radio designation: "Staging"

Duties of the Staging Area Manager:

- Establish a check-in procedure for arriving and departing companies to track which companies are in Staging and Rehab.
- Direct companies and equipment to designated operational areas as requested by the Incident Commander.
- Maintain an accounting of the equipment available in Staging and Rehab and request more from the Incident Commander as needed (examples: extra cylinders, tools, drinking water).

Safety Officer – The Safety Officer will be assigned by the Incident Commander and is responsible for overall scene safety. The Safety Officer will be located at the Command Post and will maintain personnel accountability by collecting the accountability passports from all arriving units.

Radio designation: "Safety"

Rapid Intervention Crew/Company – Rapid Intervention is typically staffed by the crew of the Rescue Company. In order to allow for rapid deployment the RI Group should be deployed one floor below the fire floor in an area not contaminated by smoke or heat conditions with appropriate tools and equipment. The RI Group should familiarize with the building by studying the layout of the floor below the fire and should closely monitor radio traffic in order to be aware of the conditions and operations that are occurring. When fire personnel are operating in widespread locations it may become necessary to assign multiple companies to perform the RI function.

Radio designation: "Rapid Intervention"

Upper Search and Evacuation Group - The Upper Search and Evacuation Group is responsible for performing an assessment of smoke conditions in the areas of a high-rise building that are two floors or more above the fire floor as well as performing search and evacuation of these areas as deemed necessary. The Upper Search and Evacuation Group will typically be staffed by additional alarm units as directed by the Incident Commander and will be overseen by an Upper Search and Evacuation Group Supervisor.

Radio designation: "Upper Search Group"

- Duties of the Upper Search and Evacuation Group:
- Proceed to the top floor via the evacuation stairs and assess the conditions in the evacuation stairs.
- Check the upper areas of the attack stairs for victims. (Caution should be used in this area as it is likely to have heavy smoke and high heat present.)
- Assess conditions on all assigned floors.
- Perform search and evacuation as necessary.
- Notify the Incident Commander of the conditions found.

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RUSSELLVILLE FIRE DEPARTMENT
POLICY MANUAL

Policy Number:
Section:
Original Date:
Revised Date:

Stairway Support Group - The Stairway Support Group is established during long-duration incidents to serve as a means to shuttle equipment from the lobby to Staging when the elevators are unusable. A member of the Stairway Support Group should be stationed every one to two floors to relay the equipment upward. Members of the Stairway Support Group should remove unnecessary PPE such as SCBA and bunker coat when safe to do so to prevent overexertion. The Stairway Support Group will typically be staffed by additional alarm units, preferably mutual aid companies, as directed by the Incident Commander and will be overseen by a Stairway Support Group Supervisor.

Radio designation: "Stairway Support Group"

Special Considerations in High-Rise Buildings

1. Command Post Location

The Incident Command System dictates that the first or second arriving company officer should establish Command. Typically the first arriving company at a high-rise fire will pass Command and proceed inside the building under the "Nothing Showing/Investigation" Command Mode. The next-in company should establish formal incident command. However, it is imperative that this company understand their command role is minimal and merely a formality early on in the incident. Incident Command at a high-rise incident, when established by a fire company, should still conduct their primary standing fire ground orders. Formal, organized, and effective incident command will occur in the form of the On Duty Battalion Chief.

Once the Battalion Chief arrives on scene and assumes command he must determine the best location to establish the Command Post. A Command Post located in the lobby of the building will allow the Incident Commander to have firsthand knowledge of events inside the building and will allow for improved communications, while an exterior Command Post will allow the Incident Commander to have a better overall view of the fire building. The location of the Command Post is left at the discretion of the Incident Commander based on the circumstances present. If the Command Post is located on the interior of a building, incident command vests should be utilized to clearly indicate the location of the Incident Commander. Regardless of which location is chosen, the emphasis must be on establishing a strong comprehensive command presence.

2. Elevator Usage

Due to the potential hazards posed by elevator usage under fire conditions, it is the policy of the Russellville Fire Department that elevators will not be used for the transportation of firefighters when there is a known or reported fire in a high-rise building. In long-duration multiple-alarm incidents where large amounts of equipment are needed at upper floors, elevators may be used to shuttle equipment from the lobby to Staging.

When investigating automatic alarms or smoke odors in high-rise buildings firefighters may use the elevators when deemed safe to do so. If there is any question about the safety of the elevators, the stairs should be used.

3. Attack Stairs

In most situations the attack stairs will be the stairs that are closest to the fire that contain standpipe connections. Once the door from the stairwell to the fire floor is chocked open, smoke and fire gases from the fire floor may enter the stairwell and rise to upper levels, thus endangering anyone in the stairwell above the fire floor. Prior to chocking the door open, companies must ensure that the stairwell above the fire floor is clear of building occupants.

Approved

Fire Chief

RUSSELLVILLE FIRE DEPARTMENT
POLICY MANUAL

Policy Number:
Section:
Original Date:
Revised Date:

The Incident Commander should assess the need for manually pressurizing the stairwell through the use of PPV fans to prevent smoke from migrating into the stairwell during fire attack. Some buildings contain built-in pressurization systems that automatically pressurize the stairwell. The presence of these systems should be identified by the Lobby Control Unit (or Systems Control Unit if activated) and relayed to the Incident Commander.

Opening roof access doors may create a draft that could depressurize the stairwell. This situation must be monitored closely and the door closed if it negatively impacts fire conditions.

4. Ventilation

Due to the size and configuration of high-rise buildings the ventilation of smoke and fire gases can prove difficult. Prior to attempting ventilation there are several factors that must be considered including: wind direction, wind speed at upper levels, stack effect, and the presence of built-in smoke removal systems. Due to the potential for negatively affecting fire conditions no ventilation should be attempted, including the breaking of windows, unless approved by the Incident Commander. Once a ventilation method is attempted its effects on the fire should be carefully evaluated and the ventilation should be stopped immediately if fire conditions worsen.

Horizontal ventilation through windows on upper floors should be used with caution. Horizontal ventilation has the potential to create a wind-driven fire and should rarely, if ever, be used on the windward side of the structure during firefighting efforts.

Many high-rise buildings have automatic smoke removal systems that begin operation when the fire alarm is activated. The Incident Commander must determine if these systems are having a positive or negative effect on fire conditions and may order the system shutdown when appropriate.

5. Communications

Due to the size and configuration of high-rise buildings, fire department personnel will be operating over a widespread area on a number of different floors. In order to ensure incident control and accountability, it is essential that all fire companies maintain crew integrity and maintain communications with their immediate supervisor. Each company officer is responsible for keeping the Incident Commander informed of their company's location and reporting their arrival at their assigned operational areas.

Examples: "Command from Ladder 1, Ladder 1 has established Division 6."

"Command from Engine 2, Engine 2 has arrived at Division 6."

As soon as practical after establishing a Division, the Division Supervisor should give an initial report to the Incident Commander and should then give periodic situation reports throughout the duration of the incident. These reports should follow the CAN Method: Conditions, Actions, and Needs.

Examples: "Command from Division 6, we have light smoke present, we are beginning primary search, request an additional company to assist with search."

"Command from Division 6, we have a knockdown on the fire and are continuing primary search."

Each company arriving at a Division should notify the Division Supervisor of their arrival. This notification SHOULD take place face-to-face, however the radio may be used alternatively. When communicating within a Division the Division Supervisor will have the radio designation of that Division while other companies operating on that Division will use their company designation.

Example: "Division 6 from Engine 2, we have arrived on Division 6 and are standing by in the stairwell."

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Fire Chief

Many high-rise buildings will be equipped with a public address (PA) system. The PA system should be utilized to direct building occupants as to the appropriate actions to take in the event of a fire. Occupants on the fire floor and the floor above the fire should be directed to evacuate immediately by using the designated evacuation stairs. Occupants below the fire and two or more floors above the fire should initially be given directions to shelter-in-place until conditions on those floors can be assessed by fire department personnel.

Controlling evacuation in this manner will reduce panic and allow firefighting operations to proceed unimpeded. Evacuation procedures announced over the PA system will be coordinated by the Lobby Control Unit (or System Control Unit, if activated).

6. Non-Standpipe Equipped High-Rises

There are some buildings that may not be equipped with a standpipe or sprinkler system. Fires on upper floors of these buildings will require innovative means to get attack lines into rapid operation. The Ladder Company or 1st In Engine Company will be responsible for locating the fire and consulting with the Incident Commander to determine the best means to attack the fire.

Some options for getting attack lines to upper floors include:

- Advancing hose lines up the stairs.
- Hoisting attack lines into windows with ropes.
- Advancing attack lines up ground ladders or aerial ladders.
- Utilizing aerial devices as standpipes. (Careful consideration should be given before employing this method as the aerial device will become unavailable for other uses such as rescue or ventilation.)

When bringing an attack line in through a window, whether by rope or by ladder, approaching from a safe area and leaving an avenue of retreat must be considered. It may be necessary to come in a window on the floor below the fire or in an area remote from the fire. The decision on where to bring in the hose should be based on fire conditions and building layout.

The Incident Commander should consider using a blitz attack with master streams from the exterior when a large body of fire is present in one of these buildings and getting an attack line into operation will be delayed. The blitz attack can be initiated while firefighters are deploying attack lines into the building as long as the firefighters are not in the same general area where the blitz attack is used. Communication is the key to performing this operation safely.

7. Evacuation

The level of evacuation of building occupants at a high-rise building fire should be based on fire and smoke conditions. Initially the only areas that will typically require mandatory evacuation are the fire floor and the floor above the fire while other building occupants who are below the fire or two floors or more above the fire should be advised to shelter-in-place. As soon as is practical, the Incident Commander should assign companies to assess the conditions on the non- evacuated floors to determine if the need for evacuation exists. This function will typically be performed by the Upper Search and Evacuation Group which is staffed by additional alarm units as assigned by the Incident Commander.

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Fire Chief