

FIRE SAFETY HANDBOOK

DEVELOPED FOR MULTI-RESIDENTIAL
BUILDING OWNERS & MANAGERS



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Introduction

Fire is usually unexpected. Preparing for it should not be. Responding to a fire requires quick decisions and fast actions in a setting that can be loud, smoky, dark and hot. The dense nature of apartment living allows for the spread of smoke, heat and fire.

Lives and property can be saved by being prepared before fire strikes. The Fire Code and State Building and Housing Codes establish fire safety regulations for multi-residential housing. These rules require property owners to develop and provide a fire emergency guide for tenants. This handbook is intended to assist multi-residential property managers, owners and homeowners associations in their fire safety efforts. The fire safety sections of this handbook can be shared with building residents.

Disclaimer

This Fire Safety Handbook has been prepared by the City of Jackson Fire Department as a general informational resource for multi-residential property owners, managers, and occupants.

This handbook is intended to provide a summary of common fire safety practices, general guidance, and selected requirements related to fire prevention, emergency planning, and life safety. It is not intended to be, and shall not be construed as, a comprehensive statement of all applicable laws, codes, regulations, or standards.

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Users of this handbook are encouraged to consult directly with the Jackson Fire Department or other qualified professionals regarding specific questions, interpretations, or compliance obligations.

CHAPTER 1

Common Fire Hazards



In a typical year, the Jackson Fire Department responds to dozens of fires in multi-residential buildings from cooking to structural and everything in between. Understanding where and how residential fires begin and following a few basic rules will help reduce the risk. The following information is intended to inform building managers and owners about the potential fire hazards common to multi-residential buildings. This information should be shared with tenants on a regular basis.



What is real fire like?

- ◆ **Real fire is fast.** Once a fire begins to flame it can double in size every 30 seconds. At this rate, a room can become fully involved in minutes.
- ◆ **Real fire is dark.** Fires produce large amounts of thick, black smoke that obscures vision, causes nausea and may even lead to unconsciousness or death. Three out of four people who die in residential fires die from smoke inhalation.
- ◆ **Real fire is hot.** A fire can cause the temperature at ceiling level to reach excesses of 1200 degrees Fahrenheit; at just five feet, it can be 800 degrees.
- ◆ **Real fire is unpredictable.** Each fire is unique. Some fires may smolder for hours filling a room with smoke. Others will burn at very high temperatures, consuming everything with flames.

Cooking Safety for Residents

In the United States, cooking is one of the leading causes of home fires and home fire injuries.



Safety precautions for residents

- ◆ Stay in the kitchen when you are frying, boiling, grilling or broiling food. Turn off the burner if you leave the kitchen for any reason. If you are simmering, baking or roasting food, check it regularly and stay in the home. Use a timer to remind you that you are cooking.
- ◆ Keep the stove and oven clean. Do not allow grease to build up.
- ◆ Keep anything that can catch fire – oven mitts, wooden utensils, food packaging, towels, and curtains – away from your stovetop.
- ◆ Keep children and pets away from the stove while cooking.
- ◆ Keep loose-fitting clothing away from hot burners.
- ◆ Never use the stove or oven to heat your home.
- ◆ Use all cooking equipment according to manufacturer's directions. Do not alter stovetops, burners or backsplashes.
- ◆ Never pour water on a cooking pan grease fire.
- ◆ In case of an oven fire, turn off the heat and keep the door closed until it is cool. Only open the door once you are confident the fire is completely out, standing to the side as you open the oven door.

Always keep a lid nearby when you are cooking. If a small grease fire starts in a pan, smother the flames by sliding the lid over the pan. Turn off the burner. Do not move the pan. To keep the fire from restarting, leave the lid on until the pan has cooled.

Avoid setting off the building fire alarm. If smoke from cooking is inside the apartment, do not open the door to the hallway to remove smoke. Instead, turn on the stove fan and open a window to clear the air. Fan the smoke alarm in the unit with a dishtowel to stop the alarm from sounding.



Use a lid to cover a pan fire

Heating Safety for Residents

Heaters are the second leading cause of fires in residential buildings. As would be expected, most heating-related fires occur during the winter months when heaters are turned on and the use of portable heaters and fireplaces increases. Fires caused by furniture, bedding and other materials placed too close to baseboard heaters and portable heaters are the most common types of heating-related residential fires.



Fire caused by items too close to baseboard heater

Safety precautions for residents:

- ◆ Do not put anything close to any type of heater. Baseboard heaters need one foot of clearance and portable space heaters need three feet of clearance.
- ◆ Plug portable space heaters directly into a wall outlet. Never use an extension cord or power strip with a portable heater.
- ◆ Make sure your portable heater is listed by an independent testing laboratory and has an automatic shut off feature if it tips over or overheats.
- ◆ Turn portable heaters off before leaving the room or before going to bed.
- ◆ Never permit any item to drape across heaters.

For management:

- ◆ Clean or replace furnace filters regularly.
- ◆ Inspect all heating equipment yearly and always hire an experienced licensed service person to do any necessary repair work on your heaters.

Smoking Safety for Residents

Smoking is the leading cause of home fire deaths. Most of the deaths from smoking fires start in the living room and bedroom. The leading area of origin for home smoking fires was the exterior balcony or open porch (NFPA 2019).

Safety precautions for residents

- ◆ If you smoke, smoke outside. Make sure to extinguish cigarettes in an approved container.
- ◆ Never smoke in bed or when feeling drowsy.
- ◆ Keep ashtrays off sofas or chairs. Use deep ashtrays. If ashtrays are not available, use a metal can or pail. Never empty smoking material directly into a Trash can. Place the ashtrays or metal cans away from anything that can burn.
- ◆ Do not leave lit smoking materials unattended. Put them out before you walk away.
- ◆ For outdoor areas, decks and patios - Do not throw out cigarettes into vegetation, potted plants, landscaping, peat moss, dried grasses, mulch, leaves or other similar materials—they can easily catch fire.
- ◆ Avoid false alarms - do not smoke near the smoke detector in your unit or any other smoke detector such as in common areas or the garage



Note: *Property owners and managers can choose to make their entire buildings smoke-free. Some choose to apply the rule to portions of the building or the entire property. No-smoking rules are permitted under both federal and Michigan laws, even in assisted housing.*

Candle Safety for Residents

More than half of all candle fires start when combustible materials (such as drapes, clothing and bedding) are too close to the candle. December is the peak month for candle fires, and roughly, one-third of all candle fires start in the bedroom.

Safety precautions for residents

- ◆ Never leave a candle burning unattended.
- ◆ Extinguish all candles when leaving a room or before going to sleep.
- ◆ When using candles, place them in sturdy, safe candleholders that will not burn or tip over. Place lighted candles where they will not be knocked over by children, pets, anyone, or anything else.
- ◆ Keep burning candles at least 12 inches from items that can burn such as furniture, drapes, bedding, carpets, books, paper, etc.



Candle fire

Grilling Safety for Residents

Most grill fires occur during the summer months. According to an NFPA study (2017-2021), more than one-quarter of grill structure fires started on an exterior balcony or open porch. The leading ignition factors in grill fires are mechanical failure or malfunction, combustibles placed too close to the heat and cooking left on the grill unattended (USFA 2010).

Safety precautions for residents

- ◆ Place the grill in an open area, out from under eaves and overhanging branches, and at least three feet away from things that can catch fire including your building, deck rails, and vegetation or furniture. (*Follow manufacturer instructions where the specific distance they require is different from this general advice*) Never leave gas or charcoal grills unattended while cooking.
- ◆ Always use your grill outdoors and never barbecue in an enclosed area because carbon monoxide can accumulate and be deadly.
- ◆ For gas grills, make certain the hose connection is tight and check the hoses for leaks. Turn the grill and fuel cylinder off immediately after grilling.
- ◆ For charcoal grills, avoid adding lighter fluid after the coals have been lit.
- ◆ Always place coals in a metal container with a tight lid after they have cooled for 48 hours. Clean your grill after each use. This will remove grease that can start a fire.
- ◆ Have a fire extinguisher nearby and visible.



Horst Insurance

Note: current local Fire Codes regulate the outdoor use of grills in multifamily homes, apartments and condominiums.

Clothes Dryer Safety for Residents

Each year in the U.S., thousands of clothes dryer fires are reported in residential buildings. Failure to clean the lint is the leading cause of clothes dryer fires in apartment buildings. (NFPA 2017)

Safety precautions for residents

- ♦ Always remove lint from trap before using the clothes dryer.
- ♦ Never put rubber, plastic, foam or any materials that were in contact with flammable liquids in the dryer, even if previously washed.
- ♦ Turn off the dryer if you leave home or when you go to bed.
- ♦ Do not use the dryer without a lint filter.
- ♦ Do not overload your dryer.
- ♦ Once a year, or more often if you notice that it is taking longer than normal for your clothes to dry, clean lint out of the vent pipe or have a dryer lint removal service do it for you.



Remove lint from trap



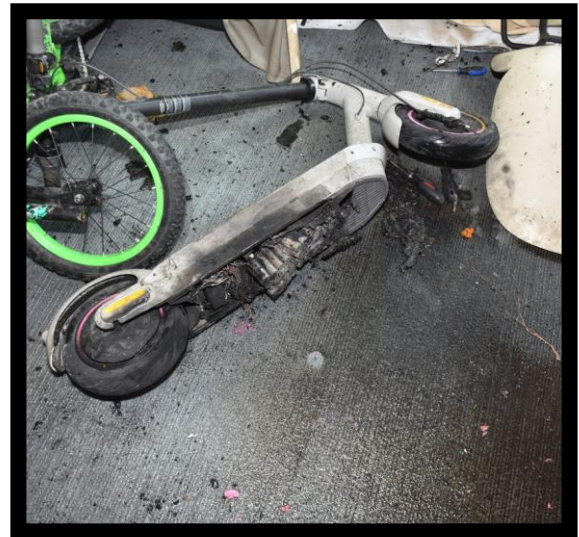
Clothes dryer fire

Lithium-ion Battery Safety for Residents

Lithium-ion batteries power many portable electronic devices, including mobile phones, laptop computers, electric scooters and electric bicycles. These batteries are small and powerful but when used incorrectly, they can overheat, catch fire or explode.

How to be safe:

- ◆ Only use chargers and cables that came with the device.
- ◆ Do not charge a device while sleeping.
- ◆ Do not charge a device under pillows, on a bed or on a sofa.
- ◆ Do not continue to charge the battery once it is fully charged.
- ◆ Do not charge or leave electric bikes or scooters near your doors.
- ◆ Do not place lithium-ion batteries in direct sunlight or keep them in hot vehicles.
- ◆ Stop using the battery if it shows signs of swelling, physical damage or malfunctions.
- ◆ Never throw a battery in the trash.



Lithium-ion battery fire



Do not charge a device while sleeping

How to respond:

- ◆ Stop using the device if you notice an odor, change in color, too much heat, and change in shape, leaking or odd noises.
- ◆ If it is safe to do so, move the device outside and place in a metal container with lid (metal garbage can or pot).
- ◆ If a fire starts, immediately leave the area, close the door as you exit and call 911.

CHAPTER 2

Requirements for Fire Emergency Guides

The International Fire Code sets minimum emergency planning and preparedness standards for multi-residential buildings. The Fire Emergency Guide is one requirement with which all apartment owners and managers should be familiar.

Fire Emergency Guides:

Section 403.9.2.2 of the 2021 International Fire Code requires owners or managers of rental properties with three or more units provide staff and residents with evacuation plans and information about the fire protection equipment in the building.



In case of fire, use the stairs.

The Fire Emergency Guide should include:

- ◆ Location, function and use of fire protection equipment and appliances, including fire alarm systems, smoke alarms and portable fire extinguishers.
- ◆ Emergency evacuation routes from each apartment using the stairs, not elevators.
- ◆ Location of outside assembly area for building occupants.
- ◆ Instructions for those tenants unable to evacuate the building using stairwells.

The Fire Emergency Guide should reflect the needs of building residents and the specifics of the building. The building owner or manager should review and update the guide at least once a year. **A copy of the plans should be given to each tenant when they move in and whenever changes are made.**

As a minimum, the Fire Emergency Guide should contain the following:

1. Location of manual pull fire alarms
2. Location of portable fire extinguishers
3. Location of Smoke/CO alarms
4. Exit routes from each apartment using the stairs, not elevators
5. Location of outside assembly area for building occupants
6. Instructions for those tenants unable to evacuate the building using stairwells



High-Rise buildings may be required to have additional fire emergency requirements

Fire Emergency Guide - SAMPLE

(Insert name of building)

This is a draft guide. Your guide should reflect the needs of building residents and the specifics of your building and its alarm system.

Building fire safety equipment

The building is equipped with smoke alarms and a fire sprinkler system.

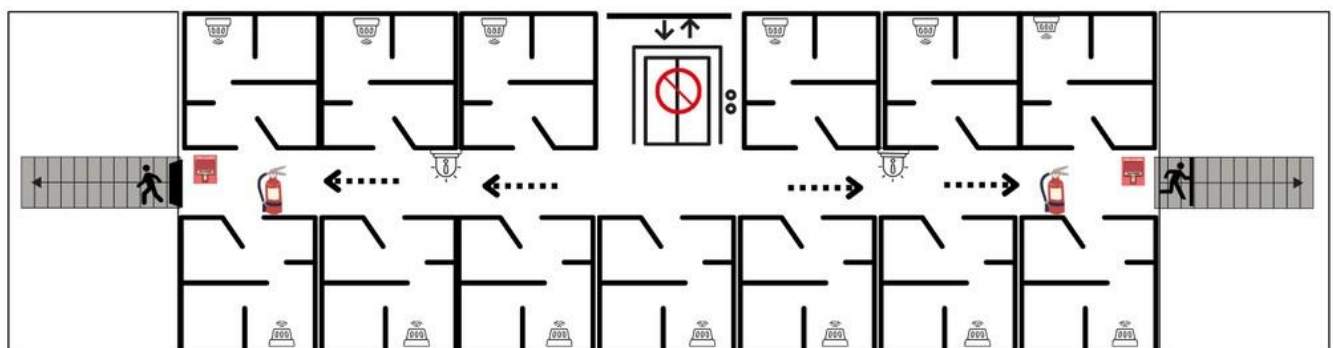
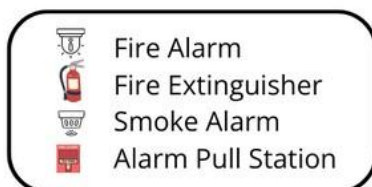
Portable fire extinguishers are located on every level next to each exit, and fire alarm pull stations are located next to each exit stairwell.

If you encounter smoke or fire, or if you hear the building's fire alarm going off, quickly take these steps to ensure a safe evacuation of the building:

- Leave your unit as quickly as possible, closing the front door as you go.
- If you have observed smoke or fire, pull the fire alarm next to the stairwell.
- Use the stairs, not the elevators, to evacuate the building.
- Once outside, move away from the building to the designated meeting place. Do not congregate in the lobby. The meeting place is on the NE corner of the parking lot.
- Once you have left the building, do not go back into the building for any reason until the fire department has given permission to reenter.
- If you encounter smoke or fire outside of your apartment and you are unable to exit using the stairs, stay in your unit. Keep your door and windows closed. Use towels or clothing to block openings around doors or vents where smoke might enter. Call 911 if smoke enters your unit or if you feel in danger. Do not wait on a balcony or in a bathroom.

Sample fire emergency guide

Floor 3



CHAPTER 3

Fire Safety Planning for Building Managers

Staff training

If your building has regular staff members, it is important that they have an understanding of their role in a fire emergency. Training should be provided for any tasks they may need to perform during a fire emergency. Particular attention should be paid to the following areas.

Prevention

Educate all employees as to the specific hazards in their working environment and how to prevent fires while conducting their assigned duties. Employee awareness can prevent fires and protect residents.

Evacuation

Staff members may be expected to manage the evacuation of the building during a fire emergency. Employees who are asked to fulfill this task must understand the building's evacuation plan for both ambulatory and non-ambulatory residents. Staff members should know evacuation routes, areas of refuge, shelter-in-place procedures and where the outside meeting place is located. Once residents are outside, it is important to keep them informed to alleviate any fears.

Building staff should be able to provide the following to fire department personnel:

- ◆ Location of the fire alarm panel
- ◆ Access keys
- ◆ Details about the fire if known — such as floor, unit number, presence of smoke
- ◆ Status of the building's evacuation, if known
- ◆ Location of residents needing assistance to evacuate. Is there a list kept of those identified as needing evacuation assistance? Consider keeping a list at the fire alarm panel for firefighters to access.



Fire alarm panel

Reporting

If you see smoke or flames, you must report this to the fire department, even if a central station monitoring company provides service to the building. One staff member should be assigned the responsibility of calling 911 from a safe place whenever the building alarm activates or a fire is reported. The caller should be prepared to provide information as it is requested by the dispatcher and should be able to stay on the phone until instructed to hang up. A staff member should also be ready to meet the fire department on the address side of the building.

Investigation

If the building's fire alarm panel indicates where the alarm is initiated - **if safe to do so** - building staff may investigate the source. Investigation does not eliminate the need to report the alarm to the fire department. Anyone assigned to investigate a fire alarm must understand the danger of fire and know how to operate a portable fire extinguisher. **Any information regarding the source of the fire alarm should be reported in a call to 911 as soon as possible.**

Note: Please help prevent false alarms

If building staff determine that a fire alarm is false prior to the fire department's arrival, they should immediately call 911 and relay the information to the dispatcher. The dispatcher will notify the responding fire companies that a false alarm has been reported. One fire company will arrive to verify that the alarm is false. The Jackson Fire Department will investigate all fire alarms. The building alarm may not be silenced without permission of the fire department.



Fire alarm

Conducting fire drills

Staff fire drills are intended to test staff readiness and response to a fire emergency. It is important that staff fully understands their role in case of a fire alarm. Fire drills should replicate as closely as possible the activity expected in an actual emergency. This can be simulated by holding drills at unexpected times and under varying circumstances. In addition, fire drills should include a review of the plan and execution of assigned staff duties.

The following suggestions are provided to assist with the planning of staff fire drills

- ◆ Prior to any drill, staff should be familiar with the building emergency plan and the details of their responsibilities. Encourage staff to discuss their concerns regarding the evacuation procedures.
- ◆ The drill for your building should include sounding the fire alarm. There is no need to notify the fire department but the monitoring company is required to be notified. We do monitor and participate in fire drills upon request and in accordance with staffing requirements.
- ◆ If you plan to set off the building fire alarm for the fire drill, notify the fire alarm company that monitors your alarm system before setting off the alarm and right after you conduct the drill. This will avoid a 911 emergency response from the fire department.
- ◆ Keep a fire drill logbook to record fire drill activity. Records should include the date and time of each drill, the name of the person conducting the drill and other information pertinent to the drill, such as:
 - a. Identity of the person conducting the drill
 - b. Date and time of the drill
 - c. Notification method used
 - d. Staff members on duty and participating
 - e. Number of occupants participating
 - f. Special conditions simulated
 - g. Problems encountered and corrective actions taken
 - h. Time required to evacuate
- ◆ It is also recommended that you notify residents that the audible alarms will be sounded for the staff fire drill and invite them to participate.



Emergency Plan

Fire Safety Planning

Alternate fire evacuation - sheltering in place

For those residents unable to use stairs to evacuate, the safest response to a fire emergency may be to remain in their apartments. As long as the fire is not in the individual apartment, that unit is an area of refuge. An area of refuge provides protection from smoke and flames. Residents must be instructed that if they choose to stay in their units, their doors and windows must remain shut. Residents should also understand that it is safer for them to remain inside the apartment rather their balconies. If they feel they are in danger, residents should call 911 to report their location and request immediate help.

Residents who choose to stay in their units should be identified to the responding firefighters immediately upon their arrival. One way this can be done is by maintaining a roster at the fire alarm panel of residents who plan to stay in their rooms. This roster is then provided to the firefighters upon their arrival.

Shelter in place guidelines for residents

- ◆ Keep the door to the room closed. A closed door is a barrier to smoke.
- ◆ Use towels or clothing to block openings around doors or vents where smoke might enter.
- ◆ Place a signal in the window. The signal can be anything that will call attention to your location.
- ◆ **Call 911 immediately** to report your location. Stay low to the floor to breathe the best air. Put a wet cloth over your mouth or nose.
- ◆ It is advisable to keep windows and balcony sliders closed. Smoke from the outside of the building can enter through open windows. Breaking windows may put you at greater risk of smoke entering from the outside and will hamper rescue efforts below.



Shelter in place

Window security bars

If windows have security bars, it is important that residents understand how to open them for evacuation. Serious incidents have occurred where people have been trapped and died in fires because the security bars were permanently fixed or did not have quick release devices.

Every resident should understand and practice how to properly operate locked or barred windows and doors. Locked or barred doors should operate quickly and easily. Windows and doors with security bars should have quick-release devices to allow them to be opened immediately in an emergency. If the security bars are permanently fixed or do not have quick release devices, they should be replaced or retrofitted with release devices which meet International Fire/Housing/Building Code requirements.



Locked or barred doors should operate quickly and easily

Carbon monoxide (CO) alarm requirements

State law and the Fire/Housing/Building codes require building owners to have CO alarms installed in all residential rental units, including rental homes, apartments and condominiums. The only exception to this requirement is Residential Group R-2 buildings (this includes apartments and condominiums) when those occupancies do not contain a fuel-burning appliance, fuel-burning fireplace or an attached garage



Carbon monoxide alarms should be installed.

CHAPTER 4

Fire Safety Items

Emergency access

- ◆ The property's street address should be clearly marked and visible from the street. Fire lanes must remain clear for
- ◆ emergency vehicles at all times. A congested parking lot can impede proper access to fire hydrants and fire lanes. A ladder truck can be eight-to nine-feet wide and up to 50-feet long.
- ◆ Fire department hose connections must have clear access and be free of vegetation.



Fire extinguishing equipment

- ◆ Each floor, parking garage and basement should have 2A fire extinguishers.
- ◆ Extinguishers must be installed in identified locations on normal routes of travel and be accessible within 75 feet from any place on the floor. Fire extinguishers must be annually inspected and serviced.



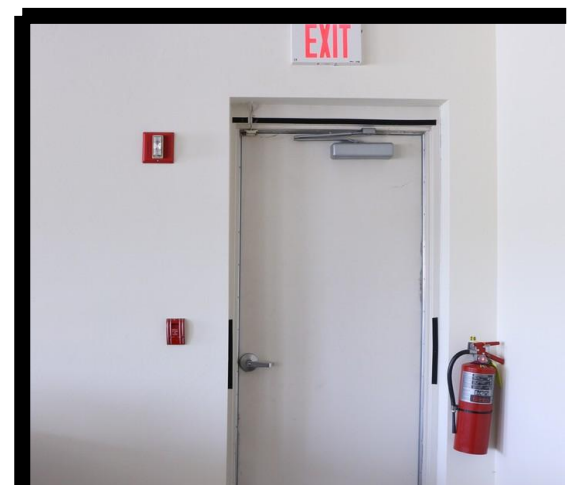
Fire and life safety systems

Required fire and life safety systems require confidence testing on an established schedule. This includes items like the fire alarm, sprinkler systems, standpipes and fire extinguishers. They must be tagged to show their most recent test date as well as test status (such as passed or deficient).

- ◆ The person testing the systems must be certified and licensed.

Exits

- ◆ Exit signs must be clearly visible and in working order.
- ◆ Exit ways must be free of obstructions and lit in hours of darkness.
- ◆ Fire doors must close freely and completely when released. Fire doors must never be blocked open.
- ◆ Stairwells must be kept clear and not used for storage. Storing combustibles under stairs is prohibited.



Preventing Building “False” Alarms

Jackson Fire responds to hundreds of preventable or “false” alarms annually, resulting in unnecessary dispatches of fire units. Building residents report ignoring fire alarms, putting them at danger when a real emergency occurs.

What is a preventable fire alarm?

- Any activation of a fire alarm system that results in a fire response by Jackson Fire when no fire danger exists.

This includes malfunctions, unintentional activations (e.g. cooking smoke that sets off the building alarm) and intentional activations (e.g. pulling the alarm when no fire exists).

Tenant education tips to reduce preventable alarms

Cooking is one of the leading causes of unwanted fire alarms.

Teach residents to:

- Never leave food cooking on the stove unattended
- Use hood fans when cooking
- Clear cooking smoke by turning on a fan and opening a window
- do not open the door to the hallway

Smoking is another common cause of preventable alarms.

- Post no smoking signs near smoke detectors in common areas or exterior areas.



Covered alarm pull station

Simple fire alarm system or detector upgrades to reduce preventable alarms

- Consider installing or adding automatic stove shut off devices.
- Install approved protective covers over manual pull stations to prevent malicious or accidental activations.
- Consider relocating smoke detectors as permitted in the fire code or replacing older devices with newer alarms.
- Make sure in-unit smoke detectors are updated and in service especially they are wired trigger a building-wide alarm. Consider replacing smoke detectors with heat detectors in smoking areas where allowed.

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