



MIAMI-DADE FIRE RESCUE

Fire Safety Handbook

for Multi-Residential Buildings



MDFR Public Education

Contents

Introduction.....	1
Chapter 1 Common Fire Hazards.....	2
Chapter 2 Fire Safety Planning.....	7
Chapter 3 Fire Safety Inspections.....	11

Introduction

Between 2017-2022 Miami-Dade Fire Rescue (MDFR) responded to an average of 165 multi-residential building fires per year. The cost in property damage reached several million dollars. Modern high-rise residential buildings are fireproof, constructed of concrete and steel, and fully protected with automatic fire sprinkler systems. As a result, residents are actually safer from fire than they would be in a conventional single-family home without sprinklers. Older condominium buildings are also fireproof but are commonly not protected by fire sprinklers. Although high-rise buildings are fireproof, their contents, such as furniture, are combustible and when burning, produce toxic smoke. Most injuries in fires are the result of smoke inhalation, not burns.

Fire is almost always unexpected. Preparing for it shouldn't be. Responding to a fire requires quick decisions and fast actions in settings that can be loud, smoky, dark, and hot. The dense nature of apartment living allows for the spread of smoke, heat, and fire. You should learn and practice an escape plan twice a year. Families should know at least two ways out of their building. Choose a meeting place outside a safe distance from the building, where everyone should meet once they've escaped. Lives and property can be saved by being prepared before fire strikes.

This publication was developed to assist multi-residential property managers, owners, and homeowners associations in their fire safety efforts. This handbook will provide:

- Information to inform staff and tenants about home fire prevention and safety.
- Recommendations for training and preparing staff and tenants.
- Overview of what to expect from the Fire Department inspection process.

CHAPTER 1

Common Home Fire Hazards

In a typical year, MDRR responds to around 165 fires in multi-residential buildings. 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.

Cooking Safety for Residents:

In the United States, cooking is the leading cause of home fires and home fire injuries. Over 33% of all fires in multi-residential buildings started in the kitchen. The majority of these fires began from food left unattended on the stove. The most common materials ignited are grease, oils, and flammable items such as plastic bags and paper products left on or near the stove.



Safety Precautions for Residents

- Do not leave the stove unattended when cooking. A serious fire can start in seconds.
- Keep the stove and oven clean. Do not allow grease to build up.



- If a fire starts in a pan, turn off the stove and carefully cover the pan with a lid or another pan. Do not throw water on the fire!
 - Keep children and pets away from the stove while cooking.
 - Keep items that can catch fire – such as dish towels, and bags at least three feet away from the stovetop.
 - Keep loose-fitting clothing away from hot burners.
- Use all cooking equipment according to the manufacturer's directions. Don't alter stovetops, burners, or backsplashes.
 - Never use the stove or oven to heat your home. Use all cooking equipment according to the manufacturer's directions. Don't alter stovetops, burners, or backsplashes

Smoking Safety for Residents

Smoking materials causes 5% of reported home fires, 23% of home fire deaths, 10% of home fire injuries, and 6% of the direct property damage. One out of four fatal victims of smoking material fires is not the smoker whose cigarette started the fire (NFPA 2013).

Safety Precautions for Residents



- Never smoke in bed or when feeling drowsy.
- Use deep ashtrays and soak ashes in water before disposal.
- Don't leave cigarettes, cigars or pipes unattended. Put out all smoking materials before you walk away.
- Don't leave matches or lighters where children can reach them.

Candle Safety for Residents

From 2015-2019 United States Fire Departments responded to an estimated 7,400 home structure fires that were started by candles per year. These fires caused an annual of 90 deaths, 670 injuries and \$291 million in direct property damage.

Safety Precautions for Residents

- Always keep burning candles within sight. Extinguish all candles when leaving a room or before going to sleep.
- Always use a candleholder specifically designed for candle use. The holder should be heat-resistant, sturdy and large enough to contain any drips or melted wax.
- Place lighted candles where they won't be knocked over by children, pets or anyone else.
- Keep burning candles away from items that can catch on fire such as furniture, drapes, bedding, carpets, books, paper, etc.



Clothes Dryer Safety for Residents

According to the NFPA from 2010-2014 United States fire departments responded to an estimated average of 15,970 home structure fires involving clothes dryers or washing machines each year. Failure to remove lint is the leading factor contributing to clothes dryer fires in apartment buildings.

Safety Precautions for Residents

- Always remove lint from the trap before using the clothes dryer.
- Regularly check dryer exhaust vent hoses behind the dryer for lint build-up and cleaning. Bends and lint buildup in hoses can block airflow.
- Never put rubber, plastic, foam, or any materials that have contact with flammable liquids in the dryer even if previously washed.
- Never leave a dryer running while sleeping or when out of the home.



Outdoor Grilling Safety for Residents

In South Florida, we can grill outdoors year-round. The leading ignition factors in grill fires are a mechanical failure or malfunction, combustibles placed too close to the heat, and cooking left on the grill unattended.

Safety Precautions for Residents



- NEVER use grills on balconies
- 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.
- 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.
- Set up your grill in an open area at least 10 feet away from buildings, overhead combustible surfaces, dry leaves and brush.
- LP gas BBQ precaution. If the grill does not ignite, shut off the flow of gas and wait 5 minutes for the gas to dissipate.

Heating Safety for Residents

Heaters are the second leading cause of fires in residential buildings. Fortunately, in South Florida they are used sparingly. As would be expected, most heating related fires occur during those brief cold days that we may have. Fires caused by furniture, bedding, and other materials occur when a heater is placed too closely to them.

Safety Precautions for Residents

- Do not put anything close to any type of heater.
- Never use an extension cord with a portable heater. Plug the heater directly into a wall outlet.
- Make sure your portable heater is tested by an independent testing laboratory and has an automatic shut off feature if it tips over.
- Turn portable heaters off before leaving the room or before going to bed.
- Never permit any item to drape across heaters.
- Inspect the portable heater before using it.



Arson Safety for Residents

Arson is a crime that can happen at any time, any day of the year. The following steps will help keep apartment buildings from being the target of an arson crime.

Safety Precautions for Residents

- Lock doors and windows of your home and garage.
- Clean up wastepaper, long grass, weeds, litter, or anything that can burn from around buildings.
- Clear carport areas of anything that could fuel a fire.
- Do not allow dumpsters to become overfilled. Arrange for additional dumpsters or take refuse to transfer stations, if required.



- Locate commercial dumpsters and recycling bins at least five feet away from combustible walls and openings of roof eave lines. Use only metal or metal lined receptacles.
- Place locks on commercial dumpsters, if possible.
- Trim shrubbery away from doors and windows to improve visibility.
- Leave your indoor and outdoor lighting on during hours of darkness.

E-Bike, E-Scooter and Hoover Board Safety

The popularity of electric bikes, electric scooters, and hover boards has taken off over the past few years. Most of these operate using lithium-ion batteries, that if not used correctly, or if damaged, those batteries can catch on fire or explode. No matter how or why you use any of these modes of getting around, there are important safety tips to keep in mind.

Safety Precautions for Residents

- Only purchase and use devices, batteries, and charging equipment that is listed by a nationally recognized testing lab and labeled accordingly.
- Always follow the instructions from the manufacturer.
- Only use the battery and the charger that was designed for and came with the device.
- Do not keep charging the device or device battery after it is fully charged.
- Only charge one device or device battery at a time to prevent overloading the circuit.
- Keep batteries at room temperature when possible. Do not charge them at temperatures below 32 F or above 105 F.
- Do not store batteries in direct sunlight or inside hot vehicles and keep them away from children and liquids.
- Store e-bikes, e-scooters, hover boards, and batteries away from exit doors and anything that can get hot or catch fire.
- Only have device repairs performed by a qualified professional.
- Do not put lithium-ion batteries in the trash. Recycling is always the best option. Take the batteries to a battery recycling location or contact the local waste department for disposal instructions.
- If a battery overheats, emits an odor, changes shape or color, leaks, or makes noises you should call 911.
- Don't charge while sleeping



CHAPTER 2

Fire Safety Planning

Staff Training

If your building has 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 in order to combat any fears or rumors.

Reporting

Any fire alarm must be treated as a real emergency and needs to be reported 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 9-1-1 from a safe telephone 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 telephone 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 provides information as to where the alarm is initiated, building staff may be able to investigate the source. The 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 the 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 9-1-1 as soon as possible.

If building staff determines that a fire alarm is false prior to the fire department's arrival, they should call 9-1-1 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. Miami-Dade Fire Rescue (MDFR) will investigate all fire alarms.

Conducting Fire Drills

Staff fire drills are intended to test staff readiness and response to a fire emergency situation. 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 evacuation procedures.
- The drill for your building should include sounding the fire alarm. If your building fire alarm is monitored, notify the monitoring company of the drill immediately prior to its occurrence. Remember to contact the monitoring company again when the drill is completed. There is no need to notify 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 each person conducting the drill, and other information pertinent to the drill.
- 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.



Another recommendation is to keep records of the fire drills and include the following information:

1. Identity of the person conducting the drill
2. Date and time of the drill
3. Notification method used
4. Staff members on duty and participating
5. Number of occupants participating
6. Special conditions simulated
7. Problems encountered and corrective actions taken
8. Time required to evacuate

Alternate Fire Evacuation for Residents

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 who remain in their units should keep their doors and windows shut. Residents should also understand that it is safer for them to remain inside the apartment rather than await further evacuation assistance from their balconies. If they feel they are in jeopardy, residents should use their telephone to call 9-1-1 to report their location and request immediate help. 9-1-1 operators will give you further instructions and advise firefighters of your unit number.

- **Do not use elevators to evacuate, you could be trapped in a stalled elevator car.** Additionally, elevators will automatically be called to the lobby by the fire alarm system or by firefighters. As a result, elevators will not be available for evacuation.

Shelter in Place Guidelines for Residents

- **Keep the door to the unit 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
- **If smoke or fire enters your unit, call 9-1-1 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

Things to consider

- Do not use elevators to evacuate; you could be trapped in a stalled elevator car. Additionally, elevators will automatically be called to the lobby by the fire alarm system or by firefighters. As a result, elevators will not be available for evacuation.
- Evacuation of high-rise buildings can be a lengthy process. Occupants may have to climb down several flights of stairs and they may be exposed to harsh conditions
- 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 alarm panel of residents who plan to stay in their units. This roster is then provided to the firefighters upon their arrival.



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.

CHAPTER 3

Fire Safety Inspections

Emphasis Areas for Apartment Inspections

MDFR inspects buildings annually to help ensure certain fire and life safety requirements are being met. The primary goal of the inspection program is to identify and remove potential fire safety hazards in a building's public areas.

To prepare for inspections, apartment managers should be aware of the following 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

- 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 by an individual certified to do so.
- If your building requires a tenant fire hose, the required hose, and controlling nozzle must be in place and accessible.

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, and standpipes. Fire extinguishers.
- The person testing the systems must be certified.



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.

Code Violations

- Inspectors who find any fire hazard or safety issues during an inspection is required to issue a Notice of Code Violation form clearly indicating items to be corrected. Inspectors will typically follow up with additional inspections of the property to monitor what progress, if any, has been made to resolve the issues. If the problem is not corrected within the specified time frame, the Fire Marshall's Office will be notified to assist with corrective action.

