# Fire and Life Safety Program

**LAFAYETTE FIRE DEPARTMENT**
**FIRE AND LIFE SAFETY PROGRAM**
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# Contents

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# CHAPTER 1: Fire & Life Safety Program

## Introduction

Fire safety is an issue that most of us never think about. Daily routines cause us to spend our time and energy dealing with the people and things that are right in front of us. Only if we are exposed to a tragedy *and* we have any time or energy left do we consider possible emergency situations. Even then most of us never take time to think about how a fire or other emergency could drastically affect our livelihood, our property, and even our lives. The goal of the Lafayette Fire Prevention Bureau is minimizing the loss of life and property through effective community education, proactive fire and building code enforcement, competent fire and explosion investigations, and other innovative programs. Fire Prevention education is the key to a fire-safe community. The first step is to educate ourselves to start thinking consciously about fire safety. This leads us to analyze the ways we do our work and enjoy our leisure time. Based on this analysis, we act to ensure that our environments minimize the danger of a fire or other emergencies disrupting our lives and livelihoods. Another step is learning to recognize and maintain the safety-enhancing components that are built into our environments. We offer this Fire & Life Safety Program to inform those of us who are responsible for maintaining the environments in which we live, work and play. This program will provide information about fire safety, and how to take action by teaching fire safety awareness, making our environments fire-safe, and planning ahead to deal with emergencies in a safe manner. We are confident that, by using this program, you can make a difference for yourself, your employees, visitors, and the community.

## Purpose

This program was developed to support the Fire Prevention Bureau's goal of helping individuals and organizations prevent fire incidents and achieve compliance with local and state regulations. An effective fire safety program requires sufficient resources to provide both for the education of the community in fire safety practices, and for the enforcement of the Indiana Fire Code to eliminate fire safety violations. Beyond basic life safety code compliance, fire safety should also be a primary component in the design and construction of new or renovated buildings. Equally important are the inspection, testing and maintenance of fire alarm systems, fire sprinkler systems, emergency signs and lighting, inspection of smoke detectors, and maintenance of other fire suppression equipment. Formal fire risk analysis and fire prevention programs constitute additional components of a comprehensive fire safety program.

# Application

## Fire Safety and Emergency Evacuation Plans

All of the following occupancy and use types are required to develop and maintain **Fire Safety and Emergency Evacuation Plans**:

- Group A occupancies, places where 50 or more persons gather for social, civic, or religious purposes, or for entertainment, recreation, food and/or drink consumption, or to await transportation

  Exception: Group A occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000 persons
- Group B occupancies having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge (i.e. office, banks, barber shops, post offices, and professional services)
- Group E occupancies, (i.e. kindergarten, elementary, middle, and high schools)
- Group F occupancies having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge (i.e. manufacturing facilities, factories, and bakeries)
- Group H occupancies, (i.e. facilities with high hazard manufacturing, storage, or processing)
- Group I occupancies, (i.e. hospitals, nursing homes, jails, day care facilities, etc.)
- Group R-1 occupancies, (i.e. boarding houses, hotels, motels, places where the residents are transient)
- Group R-2 college and university buildings
- Group R-4 occupancies, (i.e. residential care, assisted living facilities, etc.)
- High-rise buildings, or buildings with an occupied floor located more than 75 feet in height
- Group M buildings that have an occupant load of 500 or more persons, or more than 100 persons above or below the lowest level of exit discharge (such as retail or wholesale stores with space for more than 500 persons on ground level, or more than 100 persons above or below the lowest level of exit discharge.)
- Covered malls exceeding 50,000 square feet (4645 $m^2$) in aggregate floor area.
- Open malls exceeding 50,000 square feet (4645 $m^2$) in aggregate area within perimeter line
- Underground buildings
- Buildings with an atrium and having an occupancy in Group A, E or M

The Lafayette Fire Department also strongly recommends that Group R-2 occupancies, such as apartment buildings and boarding houses with more than 16 occupants, develop and maintain **Fire Safety and Emergency Evacuation Plans**.

## Hot Works Program

All welding, cutting, open torches and other hot work operations and equipment shall comply with the “Hot Works Permit Program”, page 88, below.

### Open Flames

Provisions for use of open flames, especially in places of assembly, are found in “Open Flames and Open Burning,” page 90, below.

### Fireworks

Rules for obtaining a permit for fireworks are found in Fireworks,” page 93, below.

**Tents and Temporary Structures**

There are special requirements for the use of tents and other temporary structures. See “Tents and Temporary Structures,” page 95, below.

## Scope

This Fire and Life Safety Program contains policies and procedures that, when implemented and maintained, will satisfy the code obligations of building owners and occupants, prevent loss of life, reduce injury and reduce property damage due to fire and other emergencies.

This plan is designed to provide guidelines for identifying, monitoring, and addressing fire safety issues in our community. Further chapters describe emergency procedures, fire safety equipment, drills, inspections, training and procedures that reduce the possibility of fires. This document is evaluated periodically and revised as needed by the Assistant Chief of Fire Prevention.
The rules, regulations, and recommendations in this manual are in conformity with codes and standards established by the National Fire Prevention Association (NFPA), the *Indiana Fire Code*, the *Indiana Building Code*, the City of Lafayette Municipal Code, and the Occupational Safety and Health Administration (OSHA).

***Disclaimer:*** *Nothing in this document shall be construed as superceding the provisions and requirements found in the appropriate above-mentioned documents, nor does adherence to the contents of this document nullify any of the provisions of the above-referenced codes and standards, or of any local, state, or federal law.*

## Responsibilities

The health and safety of employees, employers, residents, customers, students, and visitors in buildings in our community is of paramount importance to everyone working and living in our city. The concern we display for our employees, employers, building owners, residents, customers, students, and visitors mirrors the character and strength of our city. Each individual and group in the City of Lafayette is expected to perform work in a safe and healthy manner and in compliance with regulatory requirements.

### Building Owners

Building owners and their representatives are responsible for the installation, maintenance, and testing of the fire safety components of their buildings. These responsibilities are found in the Indiana Building Code, the Indiana Fire Code, which is the International Fire Code as amended,

and the City of Lafayette Municipal Code. Fire and life safety components include, but are not limited to:

- Means of egress components (exit doors, exit corridors, hallways, aisles, stairways, etc.)
- Building systems (HVAC, electrical, elevators, smoke control fans, etc.)
- Fire suppression systems (automatic sprinkler systems, commercial cooking hood suppression systems, clean agent systems, fire extinguishers, etc.)
- Fire alarm system
- Housekeeping

### Employers

The Occupational Safety and Health Administration (OSHA) requires employers to provide each employee "a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm." All employees – including managers and supervisors – play a role in achieving this goal. The Lafayette Fire Prevention Bureau requires employers and employer representatives to evaluate their workplace, work processes, and fire safety procedures.

### Maintenance/Security Personnel

Building maintenance and facility security personnel serve an important role in emergency preparedness. The facility's Building and Emergency Coordinators (see page 49, below) are typically included in this personnel. Through the Building Maintenance or Facility Security, personnel ensure their area of responsibility is safe, and that maintenance issues are reported promptly.

Monthly inspections of buildings include the following:

- Fire Extinguishers
- Exit Lights/Emergency Lights
- Fire Doors
- Stairways
- Accessible exit ways
- Fire Pumps (if provided)

Building and Emergency Coordinators prepare buildings for safe evacuation before an emergency and assist in the evacuation during an emergency.

### Employees, Residents, Customers and Visitors

Employees, residents, customers and visitors play an important part in assuring safe buildings and practices: they must do what they can to protect themselves and others within the community and respond appropriately to emergencies. Employees must avail themselves of information pertaining to the safe conduct of their work, regardless of the setting. Residents, customers, and visitors must also participate in fire and life safety programs and respect the safety of others and their own safety.

### Contractors

Contractors working in the City of Lafayette are expected to observe and abide by state and federal codes and regulations as well as policies and procedures established by the City of Lafayette.

Contractors should refer to the following sections for detailed requirements:

- "Hot Works Permit Program," page 88, below
- "Fire Protection System Impairment Procedures," page 42, below
- "Fire Safety during Construction," page 101, below

## Conclusion

Fires are many times a devastating event and a number of businesses that sustain significant fire damage **never** re-open. Therefore, preventing fires by instituting this Fire and Life Safety Program is instrumental in the success of businesses and property owners in the City of Lafayette. Even more importantly, using this program will increase the likelihood of preserving the life and health of people who work, live and play in the City of Lafayette.

The Lafayette Fire Prevention Bureau thanks you for your time and effort to make Lafayette a safer place to work, play, and live.

**If you have any questions about this program or other areas of fire safety, please contact the Lafayette Fire Prevention Bureau at (765) 807-1600. Please also check out our website at www.lafayettefire.us**

# CHAPTER 2: Fire Prevention

## Fire Prevention

Fire prevention starts with identifying fire hazards. All building occupants have a personal obligation to be aware of fire hazards and to reduce the risk of fire in our city.

Even though not all buildings are required to develop and maintain formal Fire Safety and Emergency Evacuation Plans, individuals should take responsibility for maintaining work area(s) free of fire hazards. In buildings and facilities that **do** require formal Fire Safety and Emergency Evacuation Plans, designated Building and/or Emergency Coordinators will implement the formal plans, with input from all employees and/or tenants to ensure that the plans are accurate and comprehensive.

### Elements of Fire Prevention Planning

· Develop a list of all major fire hazards
· Assure proper handling and storage procedures for hazardous materials
· Identify potential ignition sources and the means used to control them
· Develop a list of fire protection equipment available to control each major hazard
· Establish procedures to control the accumulation of flammable and combustible waste materials and the coordination of waste removal
· Establish procedures for regular inspection and maintenance of safeguards installed on heat producing equipment to prevent accidental ignition of combustible materials
· Identify, by name or job title, those employees responsible for control of fuel source hazards

In addition, the Coordinators must communicate certain information to every employee, which includes:

· Reviewing the plan with all new hires
· Reviewing with those employees assigned new job responsibilities or exposed to new hazards the parts of the fire prevention plan that are necessary for them to be able to protect themselves from potential fire hazards
· Reviewing the plan with all employees any time a change is made to the plan or the facility
· Informing each employee of the fire hazard(s) to which he or she is exposed

### Identifying Common Fire Hazards

The following is a list of common fire hazards that may be in your workplace.

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| Scrap, waste materials, dust, and trash | When these items are allowed to accumulate, the risk of fire is increased. Under the right conditions, the buildup of dust from wood, plastic, or certain metal operations can lead to a fire or explosion. |

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| Unsafe use, storage, dispensing or disposal of flammable materials | Flammable materials can be a prime source of fire and explosion. |
| Improper storage of combustible materials | Ordinary combustible materials, like paper, cardboard, wood and products made from these materials, can present a fire hazard when they are allowed to accumulate or are stored improperly. |
| Use of extension cords and multiple plug adapters | Extension cords and multiple plug adapters may only be used for temporary operations. Overloaded circuits, damaged wiring and defective switches and outlets can all lead to electrical fires. Power strips with circuit-breaker protection, and three to 20 foot cords may be used in place of residential extension cords and multiple plug adapters. Each power strip must be plugged directly into the wall outlet. The Fire Code prohibits "daisy-chaining" power strips into one another. |
| Hot work hazards | Any operation involving heated materials or open flames presents a fire hazard. *Hot Work Procedures* have been developed *and* are part of this program. |
| Inadequate machine and equipment maintenance | Machines that are not lubricated properly can overheat and start a fire. Electrical problems and equipment defects can lead to a fire. Routine inspection and maintenance of all machines and equipment can prevent fire hazards. |
| Careless smoking | Smoking is prohibited in most facilities occupied by the public. Exceptions are private residences, tobacco shops, and hotel and motel guest rooms designated as smoking rooms and outdoor places of employment. Outdoors, discarded smoking materials carelessly tossed in waste containers or into landscaping, can easily start a fire. Use approved waste containers to discard smoking materials. |
| Plastic and foam items | People using foam or plastic cups, utensils, etc. close to heat sources may not realize that these materials are combustible. Foam cups left near a coffee maker can quickly start a fire. Plastic and foam burn rapidly and give off dense, toxic black smoke. |

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| Electric space heaters | Many buildings have uneven heat distribution, causing occupants to bring electric space heaters into their work areas. Be sure portable space heaters have tip-over safety switches and that the wiring is in good condition. DO NOT place a space heater near (closer than three feet), or in contact with, combustible materials which pose a fire hazard. |
| Portable fans | Small portable fans help improve ventilation in an area. They can also pose a fire hazard if placed near combustible materials or where the blades of the fan can easily catch items. Damaged wiring and mounting portable fans in walls increase the fire risk. |
| Aerosol spray cans | Read labels of all spray cans to identify those with flammable-gas propellants. Butane and propane are the most common propellants and should never be exposed to heat or flames. |
| Materials that spontaneously combust | Oily rags or other materials soaked in oil can start a fire by themselves if placed in containers or poles where the air does not circulate. They must be submerged in water or placed in an approved air-tight container. |
| Non-compliant renovation or maintenance | Renovation or maintenance projects that do not meet the requirements of Indiana's Building or Fire Codes can result in improper egress, improper construction methods or materials, electrical hazards, and so on. Check with the Lafayette Engineering Department (Lafayette City Hall, 765-807-1050) for information regarding required permit(s) and inspections. |

## Basic Fire Prevention Strategies

After identifying the hazards in your area, take action to eliminate or control these hazards and prevent fires.

### Housekeeping

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| Accumulation of combustible materials | The accumulation of combustible materials (such as cardboard boxes, magazine/journals and paper products) is prohibited. Combustible materials must never be stored any closer than 36 inches from a heat-producing appliance or electric light. Empty trash container daily, and properly dispose of those items no longer in use to avoid stacking and accumulation on counters, top of cabinets, and desks. |

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| Storage | Store materials in such a way that they will not obstruct the fire suppression sprinkler heads. Make sure items are 18 inches away from the sprinkler heads if the room or area is protected by a fire suppression system (fire sprinklers) and 24 inches from the ceiling if there is no fire suppression system. (Exceptions to these are clearances are allowed for attached wall shelving unless located directly under sprinkler head. If wall shelving is located directly under sprinkler head, you must maintain the 18 inch clearance.) |
| Decorations | Decorations, signs and other items cannot be hung on or near the sprinkler head. |
| Blocking Fire Doors | Ensure that fire doors are unobstructed and operate freely. Never block fire doors in the open position with wedges or stoppers. These doors are to remain closed to reduce fire and smoke spread through the rest of the building. |
| Spills on Floor | Correct any condition causing leaks or drips of flammable or combustible liquids and keep floor areas free of spills. |
| Hoarding | Maintain premises free of unneeded and unnecessary combustible materials. Unused items being stockpiled or hoarded should be properly disposed of or discarded. Hoarding increases the risk of fire and possible structure damage due to increased weight loading on floors. |
| Clear Passage | Keep passageways clear of obstacles, including furniture, equipment, and storage. |

### Fire-Rated Doors and Fire-Resistant Barriers

Many buildings have walls, doors, and windows that are designed and built to prevent the spread of fire and smoke to unaffected areas. These elements, known as "passive fire protection," must be maintained in operable condition.

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| Fire-rated Doors | Fire-rated doors are generally found at any opening to a corridor, stairwell, storage room, and mechanical and/or electrical room, or other opening in a fire-rated wall. |
| | Blocking doors with wedges or other items is **NOT** permitted. Open doors allow smoke and fire to spread rapidly through a building, possibly preventing occupants from quickly evacuating during a fire emergency. Items used to illegally prop open fire doors should be confiscated when found. |

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| Magnetic Door Hold Open Devices | Magnetic door hold-open devices are permitted only if they are tied into the fire alarm system or to single-station smoke detector located in front of the door. |
| Renovation Projects | All building materials used in renovation and building projects must meet the Indiana Building Code requirements for fire-resistance, and all work must be performed in accordance with the building code requirements. |
| Firestopping | All penetrations of floors, ceilings, and/or walls are avenues for smoke and heat travel. These penetrations must be properly fire-stopped where required. This includes the replacing of ceiling tiles when disturbed for any reason. |

## Electrical Hazards

Improperly used or maintained electric equipment and circuit components are a major cause of fires, especially in commercial occupancies. The following is fire prevention information regarding electrical hazards:

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| Wiring, Switches and Plugs | Inspect all wiring, switches, and plugs. Report any damage found to maintenance personnel or have a qualified electrician make any repairs necessary. |
| Electrical Outlets | All electrical outlets, junction boxes, and electrical panels are required to have proper cover plates at all times. If a cover plate is found missing, have maintenance personnel or a qualified electrician correct the hazard. |
| Junction Boxes and Electrical Panels | Each junction box and breaker/disconnect in electrical circuit panels is required to be properly labeled advising what circuit it controls for emergency response and maintenance personnel. Labels should be permanent and legible. |
| Wet Electrical Cords | Do not use electrical cords or equipment that are damp or wet unless they are approved for such use. Do not connect or disconnect electrical cords or equipment when your hands are wet or you are standing in water. |
| Overloaded Motors or Circuits | Do not overload motors or circuits. Overloaded motors and circuits are common sources of ignition. |

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| Lighting Fixtures | Report any problems with lighting fixtures to maintenance personnel or a qualified electrician immediately. |
| Faulty Heating Elements | Faulty heating elements can be a source of fire. Report any problem with heating equipment to maintenance personnel or a qualified electrician immediately. |
| Extension Cords | The improper use of electrical extension cords is strictly prohibited. **DO NOT** use extension cords in place of permanent wiring or for extended periods. If you need electrical power and there is no outlet available, have additional outlets installed or use a power strip with circuit-breaker protection. Each power strip must be plugged directly into a wall outlet. Heavy duty, single appliance extension cords may be used for temporary use and portable appliances only, and must be plugged directly into an outlet. |
| Multiple Plug Electrical Adapters | The improper use of multiple plug electrical adapters is strictly prohibited. Remove the multiple plug adapters and install permanent electrical wall outlets or replace with power strips with circuit-breaker protection. Each power strip must be plugged directly into a wall outlet. |
| *Don't try to fix electrical problems yourself!* | Report all electrical problems immediately so that a qualified electrician can make the repairs. |

### Flammable and Combustible Materials

(See "APPENDIX A: Classes and Storage of Flammable and Combustible Liquids," page 99, below, for definitions, classifications and guidance on the storage of flammable and combustible materials.)

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| Substitution | Where possible, flammable materials should be replaced by safer, less flammable materials to reduce the risk of fires. Any substituted material should be stable, non-toxic, and should either be nonflammable or have a high flashpoint. |

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| Storage | Flammable liquids must be properly stored in work areas in order to reduce the risk of fire and prevent health hazards. Remember that the quantities that can be stored in one location are limited (see Appendix A: Classes and Storage of Flammable and Combustible Liquids." Page 99, below. Minimally, storage areas should be provided with fire extinguishers, but a fire protection system is required for any large storage area.<br><br>Hazardous Materials storage cabinets should be used where greater quantities of liquids are needed. Limits for cabinets are:<br><br>• The combined total quantity of liquids in a cabinet cannot exceed 120 gallons<br>• If stored amounts exceed the above limits, a separate inside storage room is required in accordance with the requirements found in Chapter 57 of the *International Fire Code, 2012 Edition* |
| Handling | Flammable and combustible liquids require careful handling at all times. Container should be tightly sealed when not in use, and liquids should be stored in an area where the temperature is stable to prevent a build-up of internal pressure due to vaporization. Safety cans are a good risk management tool where smaller quantities of liquids are handled. They prevent spillage and have spring-loaded safety caps that prevent vapors from escaping and act as a pressure vent if the can is engulfed in fire, preventing explosion and rocketing of the can, which could spread the fire.<br><br>Users are expected to limit the risk of a fire by reducing the quantities of liquids located outside of storage cabinets and storage areas. Quantities of flammable and combustible liquids located outside of storage cabinets/areas should be restricted to one day's supply or to what can be used during a single shift. |

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| Handling (con't) | Some Flammable liquids, such as xylene, toluene, benzene and gasoline have a tendency to accumulate a static charge. If the charge is released, a spark can be produced and ignition of vapors can result. Most non-polar solvents-they do not mix with water-have this characteristic. Polar solvents, such as acetone, other ketones and alcohols, do not usually present static charges. To prevent the buildup of static electricity, it is important to bond metal dispensing and receiving containers together before pouring, that is, each container is wired together and one container is connected to a good ground point to allow any charge that may develop to drain away safely. Due to there being no easy way to bond plastic containers, their use should be limited to smaller sizes-no more than 1 gallon (4L). |
| Ventilation | To prevent accumulation of vapors inside a flammable or combustible materials storage room or area, a continuous mechanical ventilation system must be in place. Both makeup and exhaust air openings must be arranged to provide air movement directly to the exterior of the building. Any exhaust ventilation ducts must be exclusive to the system and used for no other purposes. |
| Elimination of Ignition Sources | All nonessential ignition sources must be eliminated where flammable liquids are used or stored. The following is a list of the most common sources of ignition:<br>• Open flames from cutting and welding operations<br>• Furnaces and portable (space) heaters<br>• Matches<br>• Water heaters<br>• Sparks and arcs from electric motors, switches, and circuit breakers. These items need to be explosion-proof in areas where flammable liquids are used or stored<br>• Mechanical sparks from friction. Use non-sparking tools in these areas<br>• Proper grounding and bonding procedures must be used to eliminate static sparks when transferring flammable liquids to and from containers<br>• Smoking materials |

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| Removal of Incompatible Materials | Materials that can contribute to a flammable liquid fire should not be stored with flammable liquids. (Examples: oxidizers and organic peroxides) |
| Spills | If a spill occurs, employees should take the following actions:<br>• Limit its spread by containing the spill with suitable absorbent<br>• Minimize vapors by covering the surface of the spill with a compatible absorbent material<br>• Notify your supervisor immediately and contact the fire department for assistance<br>• Make sure all sources of ignition are shut off or controlled<br>• Begin clean-up right away |

### Compressed Gas Cylinders

Cylinders under pressure can fail under fire conditions, as well as due to mechanical break-downs. Here are ways to minimize compressed gas cylinder hazards:

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| Hazards | Compressed gas cylinders can expose users and building occupants to both chemical and physical hazards,<br>The gases in these cylinders can cause fire or explosion, may be toxic or can displace the oxygen in the area.<br>Damage to cylinders can cause the cylinder to be propelled with great force. |
| Inspection | Perform a visual inspection before you accept delivery of the cylinder from the vendor. If the cylinder appears damaged or defective, refuse delivery.<br>Routinely inspect cylinders that are in use for:<br>• Leaking regulators<br>• Physical damage to the cylinder or valves<br>• Obvious signs of defects<br>• Deep rusting<br>• Pitting |

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| Inspection (con't) | Do not use a cylinder that appears to be faulty. Take it out of service immediately and contact the vendor.<br><br>All gas cylinders must have proper labeling. Labeling must also indicate if the cylinder is full, empty, or in-service |
| Storage | Gas cylinders must be properly secured at all times to prevent tipping, falling, or rolling. They can be secured with straps or chains connected to a wall bracket or other fixed surface, or by use of a cylinder stand or cart.<br><br>Store compressed gas cylinders in a cool, dry, well-ventilated, fire resistant area. Cylinders must be stored in compatible groups, with flammables separated from oxidizers and corrosives.<br><br>Keep oxygen cylinders a minimum of 20 feet from flammable and combustible materials.<br><br>Cylinders can be separated with a barrier, such as concrete block wall, at least five feet high, having a fire rating of at least one half hour.<br><br>A gas cylinder storage area should be located where cylinders cannot be knocked over or damaged by falling objects, and must be protected from vehicular impact with concrete-filled posts.<br><br>As with any hazardous material, gas cylinders cannot be stored in public hallways or unprotected areas. Nonflammable cylinders should not be located closer than five feet and flammable cylinders no closer than 25 feet from an exit door or other openings, such as windows.<br><br>When a cylinder is not be used, the valve should be closed and the valve protector secured in place. Never store gas cylinders near radiators or other heat sources.<br><br>Bulk storage room must be specifically designed for the material being stored, otherwise quantities will be limited. |

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| Handling | Be sure to close all cylinder valves when cylinders are empty or not in use. Regulators must be removed and valve protection caps secured in place before moving cylinders.<br><br>When transporting cylinders, always use a cylinder truck or car to avoid cylinder tipping, falling, or rolling. Never roll or drag a gas cylinder. Use appropriate lifting devices, such as cradles or nets when hoisting a cylinder with a crane or derrick for vehicle transport. Lifting a gas cylinder with a magnet, sling, or by the valve protection cap can lead to disaster and is prohibited.<br><br>When opening a valve on a compressed gas cylinder, stand to one side of the regulator and open the valve slowly.<br><br>Do not attempt to repair a gas cylinder regulator; instead, call your distributor immediately. |
| Additional information | Additional information can be found in NFPA (National Fire Protection Association) 55, *Standard for the Storage, Use and Handling of Compressed and Liquidified Gases in Portable Cylinders*. |

### Fire Protection Systems

Buildings with fire protection systems are designed to be safe only if the fire protection systems are operating correctly. Out-of-service or impaired fire protection systems expose buildings and people to unintended hazards.

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| Building Fire Alarms | Not all buildings are required to be equipped with automatic or manual fire alarm systems. It is important for you to know if your building is equipped with an automatic central-station fire alarm or manual fire alarm system.<br><br>If your building is not equipped with a building fire alarm, occupants will need to communicate to others in the building by announcing "FIRE!" as they exit the building or by other means as defined in the building's Emergency Evacuation Plan. Emergency Evacuation planning is critical to all buildings with no fire alarm or detection system. |

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| Automatic Fire Alarm Systems | Automatic fire alarm systems are installed to facilitate notification of building occupants of a fire emergency. Various types of smoke and heat detectors along with manual pull-stations are linked to the alarm system; when activated, the fire alarm system sends a signal to a monitoring company or a constantly attended location, and sounds an audible and/or visual alarm within the building. |
| Manual Fire Alarm Pull Station (Red Boxes) | Manually activated pull stations are located along building exit routes. Most buildings equipped with fire alarms will have manual pull stations (red fire alarm boxes). |
| Fire Suppression Systems | Fire Suppression systems are more commonly known as "sprinkler systems". The most common type of fire suppression system uses water and is designed to control fires and/or contain the fire to the area of the fire's origin, in order to provide building occupants time to evacuate.<br><br>A common misconception is that if one sprinkler head goes off, they all go off. Fortunately, this is not the case. Automatic fire suppression sprinkler heads activate at a predetermined temperature (acting as a heat detector) on an individual basis.<br><br>Fire suppression systems are interconnected to the building fire alarm. When a sprinkler head is activated, it automatically activates the building fire alarm. |
| Other Suppression Systems | Other types of fire suppression systems include dry pipe, clean agent, and wet chemical systems. These systems are found where hazardous materials are located, in mission-critical areas (computer server rooms), in commercial kitchen exhaust systems (see next section), and in areas where freezing is a concern. |
| Commercial Kitchen Hood Exhaust System | Each existing commercial cooking appliance, such as a grill, deep fryer, or any other appliance that produces grease-laden vapors, is required to have an approved commercial kitchen exhaust hood and duct system that is protected with an automatic fire suppression system.<br><br>These systems are required to be appropriate for the hazard. A listed chemical suppression system must be used, for example, over a deep fryer using vegetable oils. |

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| Commercial Kitchen Hood Exhaust System (con't) | The sprinkler heads or nozzles within the hoods require regular maintenance and cleaning to remove deposits of residue and grease from the system. The cleaning schedule must comply with the manufacturer's recommendations and the Mechanical Code. |
| Portable Fire Extinguishers | Fire extinguishers can play an important role in the fire protection program. Their success depends upon the following conditions being met:<br>• The fire extinguisher is properly located and in working order<br>• The fire extinguisher is of the proper type for the fire that has occurred<br>• The fire is discovered while still small enough for the fire extinguisher to be effective<br>• A trained person who is ready, willing, and able to use the fire extinguisher discovers the fire<br><br>Selection of the best portable fire extinguisher for a given situation depends on the following factors:<br>• Nature of the combustibles or flammables that might be ignited<br>• Potential severity (size, intensity, and speed of travel) of any resulting fire<br>• Effectiveness of the fire extinguisher on that hazard<br>• Ease of use of the fire extinguisher<br>• Personnel available to operate the fire extinguisher and their physical abilities and emotional reaction as influenced by their training<br>• Ambient temperature conditions and other special atmospheric considerations (wind, draft, presence of fumes)<br>• Suitability of the fire extinguisher for its environment<br>• Any anticipated adverse chemical reactions between the extinguishing agent and the burning materials<br>• Any health and operational safety concerns (exposure of operators during the fire control efforts)<br>• Upkeep and maintenance requirements for the fire extinguisher<br><br>If you need assistance with determining the type and distribution of portable fire extinguishers in your work area, contact the Lafayette Fire Prevention Bureau at 765-807-1600 |

## Miscellaneous Requirements

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| Landscaping | Landscaping must not:<br>• Impede fire vehicle or emergency responder access to a building<br>• Obstruct access to fire hydrants, fire department connections or other fire sprinkler test valves or other emergency devices<br>• Obstruct or cause a tripping hazard for occupants evacuating a building to a public way<br>• Obstruct exits from doors, windows or other designated evacuation points from a building, nor obstruct the exit discharge |
| Breaches in fire or smoke rated barriers | • Holes in fire rated walls or smoke barriers will not be permitted unless the condition is allowed by Indiana Building Code<br>• Cables, equipment cords, etc. may not be placed in or run through any permitted opening in a rated fire wall or smoke barrier, such as through a door or within ventilation ductwork |
| Wood and sheet metal workshops | • All wood and metal shavings produced by the work must be cleaned and removed from the building at the end of the job, shift, or workday as appropriate<br>• All shops with machinery that produce hazardous shavings or dust must have an approved dust collection system. This system must be in operation at all times the equipment is in use |
| Washer/Clothes Dryer operations | • Empty the lint trap in clothes dryers after each load<br>• Check the area behind the washer and dryer periodically for lint or trash build-up and clean as necessary<br>• Dryer vents must exhaust to the exterior of the building |

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| Automotive and Industrial shops | At the end of the day, or as necessary:<br>• Clean up oil in all work areas to prevent hazardous build up<br>• Return all oils and flammables to their proper storage cabinets/areas<br>• Turn off all power equipment or unplug as necessary<br>• Turn off all fuel valves and power to such systems at the end of the workday<br><br>All hazardous and flammable materials (paints, thinners, etc.) must be stored in a flammable storage cabinet or room when not in use. See "Appendix A: Classes and Storage of Flammable and Combustible Liquids," page 99, below, for guidance on the storage, handling and use of flammable and combustible liquids.<br><br>Parts washers may use flammable solvents. Check the Safety Data Sheet (SDS) for the product used and follow the instructions on the SDS and the guidance in Appendix A<br><br>Spray finishing with flammable materials is only allowed in approved paint spray booths or after the review and approval of the work area and procedures by the Lafayette Fire Prevention Bureau |

### Fire and Life Safety Training

Fire and life safety training is teaching fire prevention and what to do in case of an emergency. The best way to avoid a fire is to recognize fire hazards and address them so as to reduce the hazard. Contact the Lafayette Fire Prevention Bureau or see Lafayette Fire Department's website at http://www.lafayettefire.us for more information.

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| New Employees | All new employees should receive fire and life safety training<br><br>Supervisors are required to review Emergency Evacuation and Fire Safety procedures with the new employee during the first few days of employment |
| Employees | The Lafayette Fire Department website contains information on fire and life safety procedures.<br><br>Training for targeted audiences on Fire and Life Safety, Emergency Planning, Emergency Evacuation, and portable fire extinguisher use can be arranged on request through the Lafayette Fire Prevention Bureau. |

## Portable Fire Extinguisher Training

Portable fire extinguishers are found in most buildings. When used properly, they can save lives and property by putting out a small fire or containing it until the fire department arrives. However, they are not designed to fight large or spreading fires. Training will help you to identify when to use a fire extinguisher and when escape is the more appropriate action. Below are commonly asked questions regarding portable fire extinguishers.

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| As an employee, am I expected to use these extinguishers to put out a fire before evacuating the area? | No. Employees are expected to evacuate the building, ***unless*** it is specifically part of your job description that you will attempt to control a fire. However, if you are properly trained to use a fire extinguisher and can evaluate the situation and extinguish a fire safety with no personal risk, then you may do so. The choice is yours. |
| Are certain employees required to be trained in the safe use of fire extinguishers? | Yes. The following employees are required to attend portable fire extinguisher safety training:<br>• Asphalt Kettle Attendant<br>• Those who have specific duties as fire responders as part of an Emergency Evacuation Plan<br>• Those who work in laboratories<br>• Those involved in construction and renovation work, especially those performing utility and "hot work" (e.g., welding cutting, brazing, grinding, etc.)<br>• Powered industrial truck (hi-lo) operators |
| Where can I get Portable Fire Extinguisher training? | Fire Extinguisher Training is offered by local fire extinguisher contractors (See Yellow Pages or web search under "Fire Extinguishers")<br><br>All of the above-mentioned employees that must have Fire Extinguisher training are required to attend a training session every two years. |

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| Fire is fire, right?<br><br>Aren't all fires the same? | Not at all.<br><br>There are five main classifications of portable fire extinguishers, each used for a specific type of fire:<br><br>• Class "A" for ordinary combustibles, such as wood, paper, plastic rubber, and cloth<br>• Class "B: for flammable and combustible liquids, such as gasoline, oil, grease, tar, oil-based paint, lacquer and flammable gases<br>• Class "C" for energized electrical equipment, including wiring, fuse boxes, circuit breakers, machinery and appliances<br>• Class "D" for combustible metals, such as zirconium, titanium, potassium, and magnesium<br>• Class "K" are wet chemical extinguishers designed specifically for kitchen fires involving high temperature cooking oils used for deep-frying, grilling and other types of cooking |
| Fire Extinguishers all look the same to me…are they? | No. Fire Extinguishers come in many types, sizes, shapes, and colors. The three most common types of portable fire extinguishers are:<br><br>ABC Multi-Purpose Dry Chemical, Stored Pressure Type – These are the most commonly found extinguishers and can be used on all classes of fire except combustible metals. They range in size from 2 ½ to 20 lbs., and have an effective range of 5 to 20 feet.<br><br>Water Extinguisher – These are for Class A fires only, and have an effective range of 30 to 40 feet.<br><br>Carbon Dioxide (CO2) Extinguisher – These are for small Class B or C fires only. They range in size from 5 to 20 lbs., and their effective range is 3 to 8 feet. |

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| How do I use one of these things, anyway? | If you do fight the fire, remember the word <u>PASS</u><br><br>**PULL** the pin<br><br>**AIM** the hose or nozzle at the base of the fire<br><br>**SQUEEZE** the handle to release the extinguishing agent<br><br>**SWEEP** from side to side<br><br>Keep the extinguisher aimed at the base of the fire and sweep back and forth until it appears to be out. Watch the fire area. If fire breaks out again, repeat the process. |
| Should I fight a fire? | *Before* you begin to fight a small fire (wastebasket size or smaller), make sure that:<br><br>• The building Fire Alarm has been activated and everyone has left, or is leaving the building<br>• The fire department has been called<br>• The fire is confined to a small area, such as a wastebasket, and it is not spreading beyond the immediate area<br>• Your back is to a safe and unobstructed exit to which the fire will not spread<br>• Your extinguisher is the proper size and type for the fire at hand and that you have been trained in how to use it<br><br>It is reckless to fight a fire with an extinguisher in any other circumstances. Instead, leave the area immediately, close off the area and leave the fire for the fire department. |

### Emergency Procedures Training

As you develop and maintain your Emergency Evacuation Plan, your employees must receive training on all elements of this plan upon its initiation. Thereafter, new employees must receive training when first hired. Additional training is necessary only when employees' required actions under the plan change, or when there are changes to the plan.

### Public Assembly Emergency Procedures Training for Employees and Volunteers

Employees of assembly occupancies, other than those occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000, must be trained in Emergency

Evacuation procedures and practice this training during drills. It is recommended that they be instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment, where provided. See "Fire and Life Safety Planning & Management Guide for Public Assembly Events," page 74, below, for further information.

## Fire Safety Inspections

The Fire Prevention Bureau will conduct a comprehensive fire safety inspection of all commercial buildings on a re-occurring schedule to ensure compliance with applicable fire codes. Any violations of the Fire Code are noted and the building owner/representative receives a copy of the inspection report containing the Code references of the deficient items. A follow up inspection will be scheduled at the time of the inspection if violations are noted.

### Fire Hazards in Buildings

Fire hazards can range from popcorn in a microwave oven to flammable liquids stored in a laboratory or garage. The practices and procedures discussed below are designed to reduce the potential for fires in commercial buildings by controlling combustible materials, reducing ignition sources, and ensuring that means of egress are properly maintained. See "Identifying Common Fire Hazards," page 6, above, for common fire hazards.

### Fire Safety Inspection Checklist for Existing Buildings

The following checklist represents common fire inspection components. It does not encompass all provisions of the Fire Code.

**This checklist is provided to allow building owners/representatives to correct deficiencies in their facilities prior to a Fire Department inspection.**

Please contact the Lafayette Fire Prevention Bureau at (765) 807-1600 for assistance.

**Exterior of Building**

- ☐ The address shall be sized and located so that it is readily visible from the street (4-inch high minimum). The numbers must be in contrasting color to the building color.
- ☐ Exits from the building must be clear to an open area, not blocked by parking or vegetation.
- ☐ Grounds must be clear of debris.
- ☐ Gas meter must be protected (with bumpers) if in an area where it could be damaged.
- ☐ Is there a Knox-Box (fire department key box) on the building? If so, are the correct keys inside?

**Occupant Load**

All assembly occupancies must have their maximum occupant capacity reviewed by Fire Prevention Bureau personnel. Whenever the arrangement of the space(s) changes, the capacity must be reviewed again.

- ☐ Capacity signs must be displayed at the main entrance to each space. If the facility no longer has a sign or needs a replacement, please contact the Fire Prevention Bureau at 807-1600

**Exit Doors / Door Hardware**

- ☐ In places of Public Assembly or Educational occupancies with a capacity of 50 persons or more, there must be at least two approved exits and the doors must swing in the direction of egress. The doors shall have approved panic hardware on all designated exit doors. Other locking devices are not allowed.

(EXCEPTION: In Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, **The main entry door** is permitted to be equipped with a key operated locking device from the egress side provided that the locking device is readily distinguishable as locked and a readily visible durable sign is posted on the egress side or adjacent to the door stating: **THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED.** The lettering on the sign shall be at least 1 inch high on a contrasting background.

- ☐ All doors designated as exits must have a minimum 32" clear width when fully open.

**Aisles**

- ☐ Aisles leading to an exit door shall have at least 44” of clear width.
- ☐ Aisles shall not be obstructed.
- ☐ Where tables and chairs are used, access shall be maintained to all aisles.

**Exit Signage and Emergency Lighting**

- ☐ All exits must be clearly indicated with an approved illuminated exit sign.
- ☐ To ensure continued illumination for at least 90 minutes, the exit signs and emergency lights must have a primary and a back-up power source in case of power loss. The back-up power source can be from storage batteries, an on-site generator, or the like.
- ☐ The entire exit path (including immediately outside the exit door) must be lighted at all times.

**Fire Extinguishers**

- ☐ If required, you must have the proper type of fire extinguishers. The size, type and location are determined by the hazards they are intended to protect.
- ☐ Insure all extinguishers are inspected, certified, and tagged annually by a qualified contractor.
- ☐ The contractor will advise you on the required size, type and location. You may look in the yellow pages or conduct a web search under Fire Extinguishers for a contractor.
- ☐ All fire extinguishers must be accessible and mounted with the bottom of the extinguisher a minimum of 4 inches off the floor and the handle a maximum of 60 inches above the floor.

**Compressed Gas Cylinders**

- ☐ All compressed gas cylinders in use or storage, (full or empty) shall be adequately secured to prevent falling or being knocked over. We encourage the use of chain(s) for this purpose. Rope and bungee cords have a stretch component and are subject to degradation by fire. The cylinders can also be nested together or in rack storage.

**Storage**

- ☐ Storage of combustible materials must be kept at least 24 inches from the ceiling and at least 3 feet from gas fired or heat producing appliances, e.g. furnace/water heater. Combustible or flammable liquids not in retail-size containers are prohibited from being in a public assembly building unless properly stored in an approved flammable storage cabinet. This includes fuels contained in weed trimmers, lawn mowers, snow throwers etc.

**Electrical**

- ☐ A minimum open area of 30 inches in width, 36 inches in depth and 78 inches in height in front of an electrical circuit panel is required.
- ☐ Electrical panels must be installed according to the manufacturer's recommendations and the listing of the panel.
- ☐ Panel must be mounted securely on the wall.
- ☐ Panel door must close and latch.
- ☐ All openings in panel must be covered.
- ☐ The main disconnect must be labeled.
- ☐ All junction boxes, switches, etc. must have cover plates installed.
- ☐ Extension cords may <u>not</u> be used in lieu of permanent wiring.
- ☐ All smoke detectors must be tested and installed properly

# Life Safety Systems

**Sprinkler System**

- ☐ The sprinkler system (including standpipes or fire pump) must be tested, certified and tagged annually by a licensed contractor.
- ☐ The report must be on file and a copy forwarded to Lafayette Fire Prevention Bureau upon request.
- ☐ All system components must have proper signage so that the Fire Department can determine what part of the building is served by each component.
- ☐ All control valves must be accessible with a minimum 2 feet to the sides and 3 feet in front.
- ☐ All valves must be electronically supervised and/or chained in the open position.
- ☐ Spare sprinkler box must be provided with spare sprinklers and wrench.
- ☐ Fire department connection must have caps in place.
- ☐ Nothing may be attached to any part of the sprinkler system.
- ☐ All sprinkler heads must have a minumum vertical clearance of 18 inches from any decoration, display or storage.

**Fire Alarm System**

- ☐ The fire alarm system, must be tested, certified and tagged annually by a licensed contractor.
- ☐ The report must be on file and a copy forwarded to the Lafayette Fire Prevention Bureau upon request.
- ☐ All system components must be maintained and operate properly.

**Commercial Cooking Operations**

- ☐ All non-residential cooking operations regulated by the Health Department must be properly protected with a listed hood and suppression system.
- ☐ Deep fat fryers must have a 16 inch separation (horizontal or vertical) to open flames.
- ☐ The fire suppression system must be inspected and maintained every six months.
- ☐ The report must be on file and a copy forwarded to Lafayette Fire Prevention Bureau, upon request
- ☐ **Remote Hand pull must be located properly, on the way out of the cooking area.**
- ☐ All cooking equipment and components (hoods, ducts, filters, etc.) must be free of excessive grease accumulation.
- ☐ Kitchens *utilizing deep fat or oil fryer(s)* must have a "K" class, wet chemical extinguisher and placard specifically for the fryer(s)
- ☐ **Relocating or changing of cooking appliances requires an evaluation by a qualified contractor**

**Emergency Generator**

- ☐ The emergency generator (if present) must be tested and maintained properly. Weekly operation is required.
- ☐ The generator test log must be on site.

## Fire Safety Inspection Procedures for Existing Buildings

The following are standard procedures and deviations may occur:

- Fire Inspectors will schedule an initial inspection with the owner, manager or authorized person(s) by phone, letter, email, or direct contact
- Initial Inspection: The Fire Prevention Inspector will perform the initial inspection with the owner, manager or authorized person(s) present
    - If no violations of the applicable codes are noted, the inspection is passed.
    - If violation(s) are noted, they will be identified in the inspector's report and a copy of the report with the code references will be provided to the responsible person. Correction of the violations will be required within 30 days. (depending on the severity of the safety issues), A follow-up inspection will be scheduled at this time
- Follow-up Inspection: The Fire Inspector will conduct the follow-up inspection.
    - If the violations noted in the initial inspection have been corrected, the violations are corrected on the inspection report and the inspection is passed.
    - If the violation(s) have not been corrected, they will be identified in the inspectors report and a copy provided to the responsible person, a FINE MAY BE ASSESSED at this time at the discretion of the fire inspector, and an additional follow-up inspection is scheduled. Violations not corrected by the 3rd violation will result in additional fines and any appropriate action taken to ensure compliance.

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# CHAPTER 3: Fire Safety Components in Buildings

## Means of Egress (Exiting)

### Elements of Egress

An **obvious**, **adequate**, and **unobstructed means of egress** is the basis for a safe and timely evacuation for building occupants in any emergency. The "*means of egress*" has three parts:

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| Exit Access | The exit access is the portion of a means of egress that leads to the beginning of an exit. |
| Exit | The exit is the portion of a means of egress that is separated from other areas of the building from which escape is to be made by walls, floors, doors, or other means that provide the path necessary for the occupants to proceed with reasonable safety to the exterior of the building. |
| Exit Discharge | The exit discharge is that portion of a means of egress between the termination of the exit and a public way. |

## Egress Policy

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| General | The means of egress from each part of the structure including, exits, stairways, egress doors, and any exit (panic) hardware must be maintained in a safe condition and available for immediate use and free of all obstructions. Obstructions cannot be located in a manner that interferes with fire-fighting access. Combustible materials such as paper signs and posters cannot exceed more than 10% of the total wall area.<br><br>Items located in the stairwells or that block exit doors, restrict corridors, or block access to fire emergency equipment constitute serious fire and life safety hazards and are violations of the Indiana Fire Code. |
| Stairwells and Corridors | Stairwells and corridors are intended to provide a safe and adequate means for building occupants to exit the building and for emergency personnel to access the building during an emergency. |

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| Stairwells and Corridors (cont.) | Tables, showcases, holiday decorations (Christmas trees), vending machines or other items cannot obstruct aisles, passageways or stairways during hours when the building is open to the public.<br><br>Display boards, signs, coat racks and any other movable equipment that obstructs the path of egress are prohibited. Draperies and similar hangings must be fire retardant and cannot obscure an exit.<br><br>Storage in stairwells is prohibited at all times. The Indiana Fire Code does not permit equipment, such as vending machines, to be placed in any stairwell. This is to ensure safe egress for occupants in the event of an emergency. |
| Aisles | In each room where chairs and/or tables are utilized, the arrangement needs to provide for ready egress by aisle paths and aisles to each egress door.<br><br>The minimum required width is 44 inches where serving an occupant load greater than 50, and 36 inches where serving an occupant load of 50 or less for the entire room.<br><br>Chairs, tables or other objects cannot obstruct the clear width of aisles. |
| Posting Egress Routes | Egress routes must be posted, at eye-level, where the exit path is not immediately obvious. Egress routes should be graphically illustrated (See "Emergency Evacuation Floor Plan Guidelines," page 64, below) and posted in:<br><br>· Remote areas<br>· Office suites<br>· Long hallways<br>· Rooms or areas occupied by more than 49 people<br>· Laboratories<br>· Protected corridors |

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| Egress Awareness | Building occupants should take the time to become familiar with their building. Occupants should think of an emergency scenario that would require them to evacuate, and then determine a primary and an alternative means of egress for themselves. They should also become familiar with what is going on above and below the level where they normally work. Employees should walk the halls and notice the placement of portable fire extinguishers. If the building is so equipped, notice the location of other fire protection systems, such as fire alarm system pull stations and sprinkler heads. This will certainly be time well spent. |
| Fire Lanes | Designated fire lanes must be maintained free of obstructions and vehicles to allow efficient and effective operation of fire department apparatus. Fire lanes are required to have a minimum width of 20 feet. Signs and markings designating the fire lanes must be maintained in a clean and legible condition at all times. Signs must be replaced when necessary to ensure adequate visibility. |
| Elevator Recall | Modern elevators will have elevator recall installed. This means that when a smoke detector is activated the elevator will automatically be recalled to the primary floor. Older elevators that do not have this capability should be upgraded, as funding becomes available. |

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## Fire Detection & Warning Equipment

### Fire Alarms

- **Alarm Initiation:** Manual pull-stations are located along the means of egress, usually within five feet of exit doors, to provide a means to alert occupants to a hazardous condition. To reduce malicious alarms, stations may be equipped with covers (STOPPERS).

  In buildings with sprinkler systems for fire suppression, water flowing in the sprinkler system will initiate a fire alarm in the building.

  Smoke detectors in common areas (if provided) will activate the fire alarm system.

- **Testing:** Fire alarm systems are installed, maintained, and tested by fire alarm contractors as required by *NFPA 72, National Fire Alarm Code* on an annual basis. Other tests and inspections may be required to be performed by building maintenance personnel weekly, quarterly, or semiannually in accordance with NFPA regulations. All records are to be maintained on site for a minimum of 3 years. Building owners/representatives are required to forward annual inspection reports to the Lafayette Fire Prevention Bureau upon request.

- **False Alarms**: Persons who knowingly turn in a false fire alarm (including pulling a manual pull station alarm) are liable for criminal prosecution. The City of Lafayette Municipal Ordinance, Chapter 11.03, provides for fines for excessive false fire alarms. False fire alarms caused by a contractor working in the building may incur a fine, payable by the contractor. The fine imposed for false alarms will be twenty-five dollars ($25.00) for the first three violations, fifty dollars ($50.00) for the next three succeeding violations, one hundred dollars ($100.00) for the next three succeeding violations, and two hundred dollars ($200.00) for all subsequent violations. The fine structure is based on the number of violations per calendar year.

### Single or Multiple Station Smoke Alarms

One or more device incorporating the detector, the control equipment, and the alarm-sound device in one unit, operated on a power supply either in the unit or obtained at the point of installation.

- **Locations**: Single or Multiple-station smoke alarms are required for R-2, R-3, R-4, and I-1 buildings. Smoke alarms shall be installed in the following locations: On the ceiling or wall outside each separate sleeping area, in each room used for sleeping purposes except if an I-1 is provided with smoke detectors connected to the buildings fire alarm system, In each story within the dwelling unit including the basement. When multiple smoke alarms are present, the smoke alarms are required to be interconnected. Single or Multiple Station Smoke Alarms generally do not activate a building's fire alarm system.

- Smoke alarms in new construction are required to receive their primary power from the building electrical system and be equipped with battery backup unless connected to an emergency generator.

- **Inspections**: Smoke alarms should be tested monthly and batteries replaced semi-annually to ensure proper operation.

- **Maintenance:** In order for smoke alarms to function properly, they must be periodically cleaned and tested. Dust accumulates in alarms over time and reduces the ability of the alarm to detect smoke. Simple vacuuming alarms on a regular cycle increases their useful life and reliability. Hardwired smoke alarms in apartment buildings should be cleaned and tested by an outside contractor on an annual basis, to ensure the sensing chamber and alarm circuits function properly.

- **Abuse:** Misuse, deactivation or tampering with smoke alarms is prohibited. Smoke alarms must not be covered, painted, or blocked. Nothing may be attached to the wiring of hardwired detectors.

### Smoke Detectors

Smoke detectors respond to both visible and invisible products of combustion and sense fire at the earliest practical detection stage. Smoke detectors are used for numerous fire alarm functions ranging from warning occupants to automatically closing doors.

Smoke detectors located in the halls and other public areas of apartment buildings are connected to the building alarm system.

- **Inspection and Maintenance**: An outside contractor should test smoke detectors annually.

### Heat Detectors

Heat detectors typically operate when a preset temperature has been reached or a rapid temperature change occurs.

- **Locations:** Heat detectors are frequently found in mechanical rooms, storage rooms, attics, and other normally unoccupied areas.

- **Inspection and Maintenance**: An outside contractor should test heat detectors annually.

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## Fire Suppression Equipment

The Fire and Building Codes require appropriate fire suppression systems in each building, which may include: fire extinguishers, automatic fire sprinkler systems, standpipes, and other systems. The various fire suppression systems must be inspected on a routine basis by qualified contractors. Contractors then forward a copy of the report to building owner or responsible person. It is important for the building owner/responsible person to review the report and authorize any needed repairs that may be found.

### Portable Fire Extinguishers

Portable fire extinguishers are the first line of defense against a fire. They are designed to extinguish or contain a small fire or open an escape route. Portable fire extinguishers are not designed to fight a large or spreading fire. Fire extinguishers may be used after the evacuation plan has started but only by trained personnel.

**Operation**: Fire extinguishers must only be used by persons trained in their proper use. **If you have the slightest doubt about your ability to control the fire, get out and call the fire department.**

- Never fight a fire if:
  - The fire could block your escape route
  - You are unsure of the proper operation of the extinguisher
  - You are in doubt that the extinguisher is designed for the type of fire or are large enough

- Fight the fire only if **all** of the following are true:
  - The fire department has been notified
  - The area has been evacuated
  - The fire is small and confined to its immediate area of origin (wastebasket, sofa, small appliance)
  - You have a way out and can fight the fire with your back to an exit
  - You have the proper extinguisher and know how to use it
  - You use careful judgment and can get out fast if the fire starts to spread

- To operate a fire extinguisher, recall the word **PASS**:
  - **PULL** the pin by grasping the extinguisher neck in one hand and removing the pin with the other
  - **AIM** the nozzle, hose, or horn at the base of the fire
  - **SQUEEZE** the handle to release the extinguishing agent
  - **SWEEP** from side to side at the base of the fire until it is out

**Types of fire extinguishers**: Fire extinguishers vary in type based upon the extinguishing agent they contain. Every extinguisher must be clearly labeled to show the classification of the fires for which it is effective. Water fire extinguishers must be labeled to indicate that they cannot be used on electrical fires. Pictograms show in blue the type of fire the extinguisher should be used to

fight. Fires on which the extinguisher should not be used are shown in black with a red slash through the pictogram. Extinguishers may carry labels, pictograms, or both.

- **Class A:** Class A fire extinguishers are used to extinguish fires in ordinary combustibles such as wood, paper, cloth, rubber, and plastics. Extinguishers effective against this type of fire contain water or a special chemical agent. These extinguishers should never be used on electrical, flammable liquid or combustible metal fires.

- **Class B:** Class B fire extinguishers are effective against flammable liquids and gas fires such as solvents, oil, gasoline, and grease. Dry chemical agents, wet chemical agents, carbon dioxide, and other agents are typically used. Water should **NOT** be used as an extinguishing agent for Class B fires as it will only spread a flammable liquid fire.

- **Class C:** Class C fire extinguishers are used to extinguish fires involving energized electrical equipment. Non-conducting agents such as dry chemical, carbon dioxide, or other compounds are used. Water should **NEVER** be used to extinguish an electrical fire.

- **Class D:** Class D fire extinguishers contain a special granular formulation that is effective against combustible metal fires such as sodium, potassium, magnesium, and lithium. Normal extinguishing agents must **NOT** be used against combustible metal fires because they may increase the intensity of the fire.

- **Class K:** Class K fire extinguishers use a fine wet mist consisting of an alkaline mixture, such as potassium acetate, potassium carbonate, or potassium citrate that forms a soapy foam as it is applied to the cooking oil or other substance, quenching the steam, vapors, and the fire's risk of re-ignition.

- **Class ABC.** Class ABC fire extinguishers will put out most types of fires that could start in most occupancies—wood, paper, flammable liquids, and electrical fires. These extinguishers are also known as multi-purpose extinguishers. Most extinguishers are classified as ABC

    - **Location:** Fire extinguishers are installed according to guidelines established by *Indiana Fire Code, 2014 Ed.* and appropriate NFPA standards. Spray finishing operations, automobile repair facilities, and other areas in which flammable liquids are used must have an appropriate fire extinguisher. Travel distances should normally be less than 75 feet for ordinary combustibles and 50 feet for flammable liquids.

    - **Access**: Fire extinguishers should be readily accessible and the location of the extinguisher should be clearly identified. Fire extinguishers must be mounted off the floor (at least 4 inches) and no higher than 60 inches. Extinguishers weighing more than 40 pounds should be mounted no higher than 3 feet.

    - **Inspections:** All portable fire extinguishers should be visually inspected each month, and by a certified Fire Extinguisher contractor once a year. Tags are affixed to the fire extinguisher showing the date of last inspection.

- **Training**: Training is available from fire extinguisher contractors and other Safety Training agencies. Check the listings in a phone book or online for specific contractors.

- **Maintenance**: Every fire extinguisher has a tag showing the inspection date, maintenance date, type of extinguisher, and name of the person performing the maintenance, that is attached upon completion of the routine yearly maintenance. Maintenance procedures include a thorough examination of mechanical parts, extinguishing agent and expelling means. Hydrostatic testing is performed within the time specified by the manufacturer according to NFPA 10. The fire extinguisher contractor performs the hydrostatic testing.

- **Records**: Inspection, testing, and maintenance records shall be maintained on the premises for a minimum of 3 years

- **Misuse:** Misuse of fire extinguishers is prohibited. Fire extinguishers are not to be removed from their proper locations or discharged unless there is a true fire emergency.

### Kitchen Fire Protection Systems

Kitchen systems consist of cylinders of the appropriate extinguishing agent connected by piping to discharge nozzles. The nozzles are located in the kitchen hoods over all cooking appliances, such as grills and deep fat fryers. The extinguishing agent is activated by manual activation of a pull station or discharge button, or automatic operation of heat-activated fusible links in the hood. UL 300 compliant systems use an extinguishing agent that smothers and cools the fire. The wet extinguishing agent stays in the hood area and does not spread throughout the room.

Fire suppression systems in the kitchens are required to be inspected by qualified contractors at least twice a year (semiannually). Hoods and ducts are to be cleaned regularly. Filters are to be inspected and cleaned by kitchen staff on a regular schedule. Fusible links are to be replaced at each semiannual inspection.

### Standpipes and Hose Systems

The purpose of a standpipe system is to provide hose connections inside the building, usually located in or near stairwells, for Fire Department and trained personnel use.

- **Use**: All standpipe outlets are for Fire Department use only, unless personnel are trained to use them and the hoses are inspected at least annually. Hose connections should be in readily accessible locations, clearly visible, and in good working order.

- **Inspections:** Hose connections are inspected annually as a part of the standpipe system inspection(s). Standpipes are inspected every five years for water flow by a qualified contractor. Inspection records are kept on file on site for a minimum of 3 years. The annual inspection report must be readily available upon request by the Lafayette Fire Prevention Bureau.

## Automatic Sprinkler Systems

Automatic sprinkler systems are installed in many buildings. Automatic sprinkler systems consist of a series of pipes, valves, and sprinklers that distribute water when heat activates the sprinkler heads. Most sprinkler heads activate at around 155° F. Only the heads exposed to this heat will discharge. When one or more sprinklers open due to the heat of a fire, the flow or water will activate building fire alarm system or a local alarm. Automatic sprinkler systems are extremely effective at preventing fire spread. In terms of life safety, there have been no reported cases of multiple deaths occurring in fully sprinkled buildings where the system was operating properly.

- **Inspections**: All automatic sprinkler systems are inspected as required by *NFPA 25, Standard for Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems.* Weekly, monthly, quarterly, and annually required inspections and testing are prescribed. Some of these inspections may be performed by building maintenance personnel, and others require a qualified sprinkler contractor. Each maintenance department in buildings with automatic sprinkler systems should have a copy of *NFPA 25* available for reference. Inspection reports must be maintained on file in the building for a minimum of 3 years. The annual inspection report must be readily available upon request by the Lafayette Fire Prevention Bureau.

- **Precautions**: Storage shall be maintained at least 18 inches below sprinkler heads. Sprinkler heads must be kept clean and not painted. Painted sprinklers must be replaced (they may not be cleaned). Do not block sprinkler heads. Sprinkler piping shall not be used to support any extraneous loads whatsoever (wires, cables, lights, hangers, ladders, equipment, or other materials).

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## Fire Protection System Impairment Procedures

Historically, fires in buildings that are equipped with fire protection systems occur most often when those systems are partially or totally impaired in order to perform testing or maintenance. In order to prevent these types of fires, the Fire Code and applicable NFPA standards contain procedures and recommendations for contractors to follow when such maintenance must be performed.

Fire protection systems include (but are not limited to) fire alarm systems, automatic sprinkler systems, kitchen hood suppression systems, clean agent fire suppression systems, smoke control systems, stairway pressurization systems, emergency generators, and the like.

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| Impairment Program Components | For all building with fire protection systems, an impairment coordinator must be assigned. |
| Notification | Prior to removing a system or part of a system from service, the following notifications shall be made:<br>• Fire Dispatch at (765) 807-1200<br>• Insurance company<br>• Fire Alarm company<br>• Building owner or manager<br>• All supervisors in the area to be affected by the impairment |
| Fire Protection Systems out of service | Where a fire protection system is out of service, the Lafayette Fire Department shall be notified immediately and one of the following procedures followed:<br>1. Evacuation of the building or portion of the building affected by the system out of service.<br>2. An approved fire watch. For Fire Watch procedures, see page 44, below. |
| Preplanned Impairments | Preplanned fire protection system impairments are not caused by an emergency fault in the system. As such, the impairment coordinator must authorize all impairments to the system or part of a system being disabled.<br>The impairment coordinator must verify all of the following procedures have been implemented.<br>The extent and duration of the impairment has been determined |

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| Preplanned Impairments<br><br>(cont.) | The areas or buildings affected by the impairment must be inspected and increased fire safety risks determined and addressed.<br><br>A tag system has been implemented<br><br>All necessary tools and materials have been assembled on the impairment site. |
| Emergency Impairments | Emergency impairments include but are not limited to system leakage, interruption of water supply, frozen or ruptured piping, and equipment failure (automatic sprinkler systems); power interruption, damaged equipment, and disabled control panels (fire alarm systems); power interruption, equipment failure, and other unexpected out-of-service events for all systems.<br><br>When emergency impairments occur, emergency action shall be taken to minimize potential injury and damage.<br><br>The impairment coordinator shall implement the steps outlined above for preplanned impairments |
| Restoring Systems to Service | When all impaired equipment is restored to normal working order, the impairment coordinator must verify that the following procedures have been followed:<br><br>• Any necessary inspections and tests have been conducted to verify that the affected systems are operational. The necessary inspections and tests are found in *the Indiana Fire Code 2014 Ed.* and in the appropriate NFPA standards for each type of system<br>• Supervisors have been notified that protection is restored<br>• The Fire Department has been advised that protection has been restored by contacting Fire Dispatch at 765-807-1200<br>• The building owner/manager, insurance carrier, and alarm company have been advised that protection has been restored<br>• The Impairment tag has been removed |

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| Impairment Tag | An impairment tag shall be used to indicate that a system or part of a system has been removed from service. The impairment tag should be printed on card stock and protected from moisture or other damage. See below, page 46, for a sample impairment tag. |
| Automatic Sprinkler Tags | The tag should indicate which system, or part of a system, is affected. For automatic sprinkler systems, the following items shall be tagged:<br>• Each fire Department Connection<br>This notifies the responding fire department personnel that the sprinkler system will not function as normal<br>• All system control valves for areas affected by the impairment |
| Fire Alarm System Tags | The tag should indicate which system, or part of a system, is affected. For Fire Alarm system, the following items shall be tagged:<br>• The main Fire Alarm Control Panel<br>• The main power disconnect (circuit breaker) for the Fire alarm system |
| Other Fire Protection System Tags | The tag should indicate which system, or part of a system, us affected. The following should be tagged:<br>• The main control panel<br>• The main power disconnect (circuit breaker) for the system |

## Fire Watch Procedures

| | |
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| Personnel | A fire watch consists of trained personnel who continuously patrol the affected areas.<br>Personnel should be familiar with the facilities and procedures for sounding an alarm in the event of fire.<br>During patrol of the area, the person should not only be looking for fire, but also making sure that the other fire protection features of the building, such as egress routes and passive fire protection (fire doors closed & latched), are available and functioning properly. |

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| Training | Fire watch personnel should be trained to understand the hazards involved in the site.<br><br>Fire watch personnel should be trained in the use of portable fire extinguishers if fire extinguishers are provided.<br><br>Fire watch personnel should be trained in the use of communication equipment available to sound an alarm of fire and to notify occupants (if any) of the presence of fire. |
| Equipment | Necessary equipment includes but is not limited to the following:<br><br>• Fire extinguishing equipment should be readily available<br>• Fire watch personnel should only attempt to extinguish fires that are obviously within the capacity of the equipment available.<br>• If its determined that the fire is not within the capacity of the extinguishing equipment, an alarm should be sounded immediately and a 911 call made |
| Approval(s) | All fire watch arrangements must be approved by Lafayette Fire Prevention Bureau personnel and the required documentation completed. |

## Sample Sprinkler Impairment Tag

ATTACH TO VALVE, FDC

•READ INSTRUCTIONS ON OTHER SIDE•

**SPRINKLER VALVE**

**SHUT**

THIS VALVE CONTROLS SPRINKLERS IN BUILDING(S):

| SHUT BY (SIGNATURE): | DATE: |
|---|---|

→ After valve is opened, make 50-mm (2-in.) drain test. Drop in pressure should be normal. If pressure drop is extreme and does not build up, the system is impaired and immediate investigation is necessary.

DRAIN TEST RESULTS

| STATIC PRESSURE bar (psi) | FLOWING PRESSURE bar (psi) |
|---|---|
| DRAIN TEST MADE BY (SIGNATURE) | DATE: |

**FRONT**

**Before Impairment:**

- ☐ Notify Fire Department
- ☐ Notify Building owner/Supervisors
- ☐ Shut down Hazardous Operations (Hot Work)
- ☐ No Smoking
- ☐ Portable Fire Extinguisher(s) Ready

**During Impairment:**

- ☐ Work Exclusively on Impairment Project
- ☐ No Smoking in Building
- ☐ No Unrelated Cutting or Welding(Hot Work)
- ☐ Check if Fire Watch Required

**After Impairment:**

- ☐ Perform Main Drain Test
- ☐ Notify Fire department
- ☐ Notify Building Owner/ Supervisors
- ☐ Remove Tag

**BACK**

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# CHAPTER 4: Planning

## Emergency Planning and Preparedness

### Responding to a Fire Emergency

If a fire emergency occurs, all persons have a responsibility to take immediate and appropriate action to ensure their own safety. The Emergency Response Plan will be activated and all personnel must evacuate the building.

There is no employer expectation for employees to attempt to extinguish a fire or otherwise stay in their workplace for any reason upon being notified of a fire emergency. However, a specific employee may be required to maintain critical equipment or services or to arrange for the orderly shutdown of hazardous processes. *If so, such a requirement should be written into the employee's job description.*

*(Sample signage to be displayed in public areas of buildings, such as near the entrance doors)*

**IF THERE IS A FIRE**

**SOUND THE ALARM**

If you discover or suspect a fire, sound the building fire alarm.

**LEAVE THE BUILDING**

Try to rescue other **ONLY** if you can do so safely.

Move away from the building and out of the way of the fire department.

Don't go back into the building until the fire department deems it safe.

**CALL THE FIRE/POLICE DEPARTMENT – 911**

Dial 911 or use an "emergency" phone.

Give as much information as possible to the 911 operator.

Note that Emergency Evacuation Plans, Fire Safety Plans, Emergency Evacuation Floor Plans and Fire Prevention Plans must be approved by Lafayette Fire Prevention Bureau personnel.

## Building and Emergency Coordinators

Appointing Building and Emergency Coordinators will ease the job of putting together plans and policies for your building. The listing of the responsibilities below shows that this person is the center for all planning and procedure development, and for the dissemination of the plan. Every building or facility must have a Building Coordinator and an Emergency Coordinator. In smaller facilities, one person may fulfill both roles.

Building Coordinator responsibilities include:

- Routine and special communications to building occupants regarding building services, training, and fire safety issues
- Maintenance of fire safety systems, coordination of required fire safety system inspections and tests, and maintenance of records of fire safety system inspections
- Appointing facility Emergency Coordinator(s) and alternate Building Coordinator(s) to serve in their absence
- Serve as point of contact with Fire Prevention Bureau Inspectors for building issues, including when building services or arrangements are modified
- Ensure that up-to-date keys are inside the Knox Box (fire department key box) if there is one, or that appropriate keys are available for emergency personnel responding to the facility. (If you would like information regarding a Knox Box, please contact the Fire Prevention Bureau at 765-807-1600)
- Coordination of scheduled or emergency impairments of fire protection systems (See "Fire Protection System Impairment Procedures," page 42, above)

Emergency Coordinator responsibilities include:

- Preparation and maintenance of Emergency Evacuation and Fire Safety Plans
- Appointment of floor or section fire wardens (sometimes called floor captains or floor fire marshals) and/or alternate Emergency Coordinator(s)
- Training of employees in Emergency Evacuation and Fire Safety Plans
- Scheduling, conducting and record keeping for required Fire Drills
- Communicating with personnel who have mobility impairments regarding evacuation options, places of refuge, evacuation assistants, and other pertinent evacuation issues
- The Emergency Coordinator can have other duties, such as daily policing the means of egress to prevent or remove obstructions, ensuring that all fire doors close and latch automatically, making sure that good housekeeping practices are in effect, and generally ensuring that fire safety practices are being followed.

## Emergency Evacuation Planning

No one expects an emergency or disaster to affect him or her—or the workplace. Yet the truth is that emergencies and disasters can strike anyone, anytime and anywhere. A workplace emergency is an unforeseen situation that threatens employees, residents, customers, and visitors; disrupts or shuts down part or all of a workplace or building; or causes physical or environmental damage.

Emergencies may be natural or manmade and include any of the following:

- Floods
- Hurricanes
- Tornadoes
- Fires
- Toxic gas releases
- Chemical spills
- Radiological accidents
- Explosions
- Civil disturbances
- Workplace violence resulting in bodily harm and trauma

An Emergency Evacuation Plan details the actions employers and employees must take to ensure employee safety from fire and other emergencies. Your emergency action plan should be comprehensive and address all issues specific to you and your building operations that may arise during an emergency, as well as the conditions of your worksite (e.g. are there extraordinary hazards present, does your building have a fire alarm system, etc?).

When developing your Emergency Evacuation Plan, it is a good idea to look at a wide variety of potential emergencies that could occur in your workplace. You should do a hazard assessment to determine what, if any, physical or chemical hazards in your workplace could cause or exacerbate an emergency, or impede emergency response efforts. A Hazard Assessment Checklist may be found in "Emergency Evacuation Plan Template & Hazard Assessment Checklist," page 59, below. If you have more than one worksite, each site should have an emergency action plan developed that is specific to the conditions at that site.

**At a minimum, your Emergency Evacuation Plan must include the following:**

- A preferred method for reporting fires and other emergencies
- An evacuation policy and procedure
- Emergency escape procedures and route assignments, such as floor plans, workplace maps, and areas of refuge
- Names, titles, departments and telephone numbers of individuals both within and outside your building to contact for additional information or explanation of duties and responsibilities under the emergency plan
- Procedures for employees who remain to perform or shut down critical plant operations, operate fire extinguishers, or perform other essential services that cannot be shut down for every emergency alarm before evacuation
- Rescue and medical duties for any workers designated to perform them
- You will also want to designate an assembly location and procedures to account for all employees after an evacuation

Specific elements must be included in an Emergency Evacuation Plan. This program includes a model plan to assist in the development and implementation of individualized plans. See a model

template in the section: “Emergency Evacuation Plan Template & Hazard Assessment Checklist,” page 59, below.

**Emergency planning requires 3 elements:**

| | |
|---|---|
| 1. Written Emergency Evacuation Plan | An Emergency Evacuation Plan program template is available in the section: “Emergency Evacuation Plan Template & Hazard Assessment Checklist,” page 59, below.<br><br>The template can be used as a formatted guide for developing an Emergency Evacuation Plan. |
| 2. Alarm Systems | Methods should be established for alerting workers in the event of an emergency. If an audible alarm is used, it must be distinctive from any other type of alarm used in the building. In buildings where no fire alarm system is present, a method of verbal communication must be established to notify building occupants. |
| 3. Training | All employees must be trained to assist in a safe and orderly evacuation in the event of an emergency. All those covered by the plan should be trained at the following times:<br><br>• Initially when the plan is developed<br>• Whenever an employee’s responsibilities or designated actions under the plan change<br>• Whenever the plan is changed<br>• Initially when first hired or assigned<br><br>General training for all employees should address the following:<br><br>• Individual roles and responsibilities<br>• Threats, hazards and protection from hazards<br>• Notification, warning, and communications procedures<br>• Means for locating family members in an emergency<br>• Emergency response procedures<br>• Evacuation, shelter and accountability procedures<br>• Location and use of common emergency equipment<br>• Emergency shutdown procedures |

## Fire Emergency Evacuation Procedures

Fire Emergency Evacuation procedures are a vital part of the fire safety program. Fire drills should be held to familiarize occupants with drill procedures and to make the drill a matter of

established routine. Providing well-marked exits does not ensure life safety during a fire or emergency. Exit drills are needed so that occupants will know how to make an efficient and orderly escape.

**Before a fire, occupants should:**

- Know the location of the fire alarm pull stations and how to activate them
- Know the location of two or more exits
- Know the location of and how to use fire extinguishers
- Report any tampering or malfunction of fire protection equipment to the owner or his/her representative
- Know the location of the predetermined assembly point
- Keep fire doors closed

## Residential Occupancies

Residential occupancies include hotels, motels, boarding houses, residential care facilities, assisted living facilities, and high-rise apartments or condominiums. (Nursing homes, although people live there, are classified as institutional occupancies).

- **Training**: At the beginning of each year, or when personnel changes occur, the Building Coordinator and Emergency Coordinator will assign staff to fire warden duties in a particular area/floor. The fire warden's duties and responsibilities, and evacuation routes for that particular area of the building or facility will be provided. The staff will undergo fire alert training sessions yearly. Residents will be informed of proper fire safety measures and evacuation procedures by means of signage on each room door for transient occupants, and by written yearly correspondence and/or resident meetings for assisted living and residential care facilities.

- **Drills**: The Building and Emergency Coordinators conduct fire drills in Residential Group R-1 (hotels, etc,) and R-4 occupancies (assisted living facilities, etc.) at least quarterly. The Coordinator(s) will notify the Lafayette Fire Department, the fire alarm company, the building owner, and the insurance carrier prior to the drill. Personnel will be assigned to check exits, search for stragglers, count occupants once they are outside, and to control reentry into the building. Drills will be conducted under varying conditions (e.g., blocking a fire exit) and at unexpected times to help simulate the actual conditions that may occur in a fire. Emphasis will be placed upon orderly evacuation with proper discipline rather than speed. After the drill, a meeting will be held to evaluate the drill and to solve any problems. See “Fire Drill Report Form,” page 63, below.

- **Emergency Evacuation Floor Plans**: Emergency Evacuation Floor Plans shall be posted on all floors of a Residential building. The plans should show the locations of fire exits, primary and secondary evacuation routes, and the location of portable fire extinguishers. The plans shall be conspicuously located and updated as needed by the Building Coordinator. See “Emergency Evacuation Floor Plan Guidelines,” page 64, below

**Procedures for Reporting a Fire**
If you discover or suspect a fire:

- Pull the nearest fire alarm station to alert residents
- Call the Fire/Police Department using 911
- Leave the building. (Try to rescue others ONLY if you can do so safely)
- Move away from the building and out of the way of the fire department
- Do not go back into the building until the fire department deems it safe

**Procedures for Exiting**

- Exit the building as calmly and quickly as possible using the nearest safe exit. Do not use the elevator.
- Alert all persons in your area
- Close doors on your way out, leaving doors unlocked, take a coat and shoes, and take a towel to place over your face in case of smoke
- Proceed to the assigned assembly area. Remain outside until the appropriate signal is given to re-enter.
- If all exits are blocked, go back to your room, close the door, and call 911 to report your location
- If your clothing should catch on fire, Stop, Drop, and Roll to smother the flames
- Feel the door and/or doorknob with the back of your hand before opening the door. If the door is hot, do not open it. If the door is warm, brace yourself behind the door, crouch low, and open the door slightly. If heat and/or heavy smoke are present, close the door and stay in your room. Stay low to the floor.
- When the Lafayette Fire Department arrives on scene, they will assume control of the building. All occupants must give full cooperation to the fire department.

**Emergency Procedures**

- **If you cannot safely leave the room, seal the cracks around the door with wet towels. Call 911 to report your location.**

- **Open the window a few inches for fresh air and hang a brightly colored cloth or bed sheet out the window to alert the fire department of your location. If you have a flashlight, use it to signal with at night.**

- **If smoke gets in your room, keep low and dampen a cloth with water, place it over your nose and breathe lightly through it**

- **Stay calm. Do not jump from windows above the second floor.**

### Non Residential Buildings

Commercial buildings requiring Emergency Evacuation Plans and Fire Drills are theaters, restaurants and bars, sports arenas, hospitals, high-rise buildings, day care centers, schools, malls, stores and businesses with over 500 person occupancy, or 100 persons above or below the

level of exit discharge, facilities with hazardous processes or materials storage, and buildings with atriums containing assembly, mercantile or educational occupancies.

- **Training**: The Building and/or Emergency Coordinator(s) will assign and train floor monitors and fire wardens in fire evacuation procedures for their buildings

- **Drills:** Fire drills will be conducted in buildings by the Building Coordinator. See page 59, below, for required frequency of fire drills. Also, see "Fire Drill Report Form," page 63, below.

- **Emergency Evacuation Floor Plans:** Emergency Evacuation Floor Plans for non-residential buildings will be posted at each elevator bank or in hallways, or where the evacuation route is not obvious. The plans show the locations all exits, primary and secondary evacuation routes, and portable fire extinguishers. The plans are conspicuously located and updated as necessary by the Building Coordinator. See "Emergency Evacuation Floor Plan Guidelines," page 64, below.

## Emergency Evacuation for Persons with Disabilities

The following provides a general guideline of the evacuation procedures during fire and other building emergencies for persons with disabilities. Persons with disabilities must work with their Building Coordinator to identify the primary and secondary evacuation routes from each building they use. In that regard, individuals with disabilities that may preclude them from quickly exiting from a building need to:

- Be familiar with evacuation options available to persons with disabilities
- Identify evacuation assistants who are willing to assist in case of an emergency
- Ask supervisors, the Building Coordinator or the Fire Prevention Bureau about evacuation plans for the building(s)

Most buildings have accessible exits at the ground level floor that can be used during an emergency. However, in many buildings people will need to use stairways to reach building exits. Remember that elevators cannot be used because they may not be safe to use in an emergency and, in many buildings, they are automatically recalled to the ground floor for use by firefighters in case of fire.

## Evacuation Options for Persons with Disabilities

Persons without disabilities must evacuate to the nearest exit. Persons with disabilities have three basic evacuation options, presented in order of preference:

- **Horizontal evacuation*:*** using building exits to the outside ground level or going into unaffected wings of multi-building complexes (Often this is not an option)
- **Stairway evacuation*:*** using steps to reach ground level exits from the building, with or without the aid of an evacuation assistant

- **Area of Refuge*:*** with an evacuation assistant, going to a pre-determined area of refuge away from obvious danger. The evacuation assistant(s) will then go to the building evacuation assembly point and notify the on-site emergency personnel of the location of the person with a disability. Emergency personnel will determine if further evacuation is necessary.

Often, areas of refuge are designed into enclosed stairways or other areas. Other areas of refuge include fire rated corridors or vestibules adjacent to exit stairs, and pressurized elevator lobbies. Taking a position in a rated corridor next to the stair is a good alternative to a small stair landing crowded with the other building occupants who are using the stairway for their own evacuation. The Building Coordinator should be consulted as to the possible location of areas of refuge in each building, and the Lafayette Fire Prevention Bureau at (765) 807-1600 can also assist in identifying areas of refuge.

## Disability Guidelines

Prior planning and practicing of emergency evacuation routes are important in assuring a safe evacuation.

- **Mobility Impaired**—Wheelchair**:** Persons using wheelchairs should move to a predetermined area of refuge with their evacuation assistant when the alarm sounds. The evacuation assistant should then proceed to the evacuation assembly point outside the building and tell the responding emergency officials the location of the person with a disability. If the person with a disability is alone, they should telephone emergency services at 911 with their present location and the area of refuge they are headed to, or use the communication equipment installed for that purpose in most newer buildings.

  If the stair landing is chosen as the area of refuge, please note that many buildings have relatively small stair landings, and wheelchair users are advised to wait until the heavy traffic has passed before entering the stairway, if it is safe to do so.

  Stairway evacuation of wheelchair users should be conducted by trained professionals (i.e. the fire department or other trained emergency responders). Only in situations of extreme danger should untrained people attempt to evacuate wheelchair users. Moving a wheelchair down stairs is never safe.

- **Mobility Impaired—Non-Wheelchair:** Persons with mobility impairments who are able to walk independently may be able to negotiate stairs in an emergency with minor assistance. If danger is imminent, the individual should wait until the heavy traffic has cleared before attempting the stairs, to avoid being jostled by persons trying to evacuate. If there is no immediate danger (detectable smoke, fire, or unusual odor), the person with a disability may choose to stay in a pre-determined area of refuge, until emergency personnel arrive and determine if evacuation is necessary.

- **Hearing Impaired:** Most buildings are equipped with fire alarm strobe lights. Persons with hearing impairments may not hear audio emergency alarms and will need to be alerted in case of emergencies.

Reasonable accommodations for persons with hearing impairments may be met by modifying the building fire alarm system, particularly for occupants who spend most of their day in one location. Persons needing such accommodation should contact their ADA Coordinator for assistance.

- **Visually Impaired:** Most people with a visual impairment will be familiar with their immediate surroundings and frequently traveled routes. Since the emergency evacuation route is likely different from their commonly traveled route, persons who are visually impaired may need assistance in evacuating. An evacuation assistant should offer their elbow to the individual with a visual impairment and guide him or her through the evacuation route. During the evacuation, the assistant should communicate as necessary to assure safe evacuation.

### Fire Safety Plans

Fire Safety Plans differ from Evacuation plans in that they include information regarding identification, assignment, and training of personnel to mitigate fire hazards and/or the spread of fire. Occupancies that require Emergency Evacuation Plans also require Fire Safety Plans, which include:

- Procedures for reporting a fire or other emergency
- The life safety strategy and procedures for notifying, relocating, or evacuating occupants
- Site plans showing emergency evacuation occupant assembly point(s), location of fire hydrants, and normal routes for fire department vehicle access
- Floor plans showing exits, primary and secondary evacuation routes, accessible egress routes, areas of refuge, manual fire alarm boxes, and fire alarm control panel(s)
- A list of the major fire hazards associated with the normal use and occupancy of the premises, including maintenance and housekeeping procedures
- Identification and assignment of personnel responsible for the maintenance of systems and equipment installed to prevent or control fires
- Identification and assignment of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources

See “Fire Safety Plan Template,” page 66, below.

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## Fire and other Emergency Drills

Once you have reviewed your Emergency Evacuation Plan with your employees and residents, and everyone has had the proper emergency response training as stated in the previous section, it is a good idea to hold practice drills as often as necessary to keep employees and residents prepared.

Fire drills are a vital part of a comprehensive fire safety program. Drills are held to familiarize occupants with evacuation procedures and to make the evacuation a matter of established routine. Following are fire drill frequency and participant requirements by occupancy type:

| GROUP or OCCUPANCY | FREQUENCY | PARTICIPATION |
|---|---|---|
| Group A[1] (Place of Assembly) | Quarterly | Employees |
| Group B[1] (Business) buildings having an occupant load of 500 or more persons or 100 persons above or below the lowest level of exit discharge | Annually | Employees |
| Group E (K-12 Schools) | Monthly[2] | All occupants |
| Group F (Factory) | Annually | Employees |
| Group I (Hospitals, Jails) | Quarterly on each shift | Employees[3] |
| Group R-1 (Hotels, Motels) | Quarterly on each shift | Employees |

| | | |
|---|---|---|
| Group R-2 College and university buildings | Four annually | All occupants |
| Group R-4 (Assisted Living) | Quarterly on each shift | Employees[3] |
| High-rise buildings | Annually | Employees |

[1] See "Glossary" on page105, below, for descriptions of occupancy types
[2] First drill of school year must occur within 10 days of beginning of classes. Monthly drills may be modified during months of inclement weather. A tornado or man-made drill may be substituted for a fire drill twice per semester (not in consecutive months)
[3]Fire evacuation drills in assisted living facilities shall include all residents.

A form for reporting and recording fire drills is included on the "Fire Drill Reporting Form," page 63 below. The Lafayette Fire Prevention Bureau should receive a copy of these reports upon request.

The Lafayette Fire Prevention Bureau offers assistance with training and conducting fire and other emergency drills. As a part of a facility's Emergency Plans, training exercises and drills will be conducted each year by the Building and/or Emergency Coordinator to practice the plan.

## Emergency Evacuation Plan Template &Hazard Assessment Checklist

The template beginning on the next page may be used in the development of an Emergency Evacuation Plan which conforms to the requirements of the applicable fire code and standards.

BUILDING/BUSINESS NAME & ADDRESS

**(DRAFT) EMERGENCY EVACUATION PLAN (DRAFT)**

**Policy Statement**

According to _____ (Building Name & Address) policy, employees are not required to fight fires and should evacuate the building immediately in the event of a fire. The Lafayette Fire Department has primary responsibility for managing fire emergencies, and must be notified immediately of such situations at their emergency number by calling 911. Employees may use fire extinguishers to fight small incipient-stage fires (no larger than a waste paper basket) only if they have been trained in the proper use of a fire extinguisher and are confident in their ability to cope with the hazards of a fire. In such cases, fire-fighting efforts must be terminated when it becomes obvious that there is danger of harm from smoke, heat, or flames.

**Emergency Coordinator**

Building Coordinator is:

Emergency Coordinator is:

Building and/or Emergency Coordinators should be contacted with any questions about this Emergency Evacuation Plan.

**Reporting an Emergency:**

## IF THERE IS A FIRE

**SOUND THE ALARM**

If you discover or suspect a fire, sound the building fire alarm.

**LEAVE THE BUILDING**

Try to rescue others **ONLY** if you can do so safely.

Move away from the building and out of the way of the fire department.

Don't go back into the building until the fire department deems it safe.

**CALL THE FIRE/POLICE DEPARTMENT – 911**

Dial 911 or use an "emergency" phone

Give as much information as possible to the 911 operator.

Assist anyone who may be in danger, if you can do so without endangering yourself. Exit the building in a calm manner using the stairs. **Never use elevators**. Maintain a safe distance from the building, about 50 feet, to allow ample room for emergency personnel and equipment to access the building. Remain outside the building, even if the alarm is silenced, until the fire department has given the "all clear."

You may attempt to put out the fire if you have been trained and are comfortable using a fire extinguisher. Otherwise**, evacuate immediately.** Hazardous equipment or processes should be shut down before leaving unless doing so presents a greater hazard. Remember to close all doors.

**Evacuation Procedures**
Evacuate via the nearest stairwell or street/grade level exit. After you have left the building, go to your pre-designated assembly point and remain there. At the assembly point, supervisors account for personnel and report any that are unaccounted for to the responding emergency officials.
The pre-designated assembly point for this building:

| |
|---|
| |

**During an emergency, visitors and/or customers who may not be familiar with this plan must be informed of the requirement to evacuate. Special attention should also be given to any persons with mobility impairments, especially those who are visitors or unfamiliar with the building.**

**Training**
Employees must receive training on all elements of this plan upon its initiation. Thereafter, new employees must receive training when first hired. Additional training is necessary only when an employee's required actions under the plan change, or when there are changes to the plan.

**Identified Hazard in this Workplace**
Below list any special hazards and any required special knowledge and/or training for occupants working in this building (for example, presence and operation of specialized fire suppression equipment, or the presence of hazardous materials used or stored in the building):

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**Additional Duties**
Certain persons may have additional duties under this plan. These duties may include assisting others during the evacuation, performing head counts at the assembly point, or shutting down hazardous equipment or operations. Below is a list detailing any additional duties and the person(s) responsible for performing these duties.

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The preferred method of reporting fires and other emergencies:
**Call 911.**

Emergency escape procedure:

**If safe to do so, go to the nearest stairway or exterior exit, otherwise use alternative exits, if the nearest exit is blocked. Use Emergency Evacuation Floor Plans to determine alternative exits. Areas of refuge will be _____ or enclosed stairways**

**Contact the Lafayette Fire Prevention Bureau at 765-807-1600 for questions concerning this plan.**

## Fire Drill Reporting Form

**A copy of this form must be kept on file at the facility to comply with fire code requirements.**

| | | | | | |
|---|---|---|---|---|---|
| Name of School (or other Facility | | | | | |
| Address | | | | | |
| Building Principal (or Supervisor) Email | | | | | |
| Building Principal (or Supervisor (Print Name) | | | | | |
| Assistant Principal (if applicable) | | | | | |
| # of Students or Employees | | # of Teachers | | Total | |
| Total Time to evacuate (minutes) | | | | | |
| # of Mobility Impaired | | Location(s) | | | |
| Fire Companies Participating (if any) | | | | | |
| Fire Officer(s) in Charge (if any) | | | | | |
| Remarks | | | | | |

**Signature**_____ _____

**Date**

(NOTE: This form is available in electronic form on our website: www.lafayettefire.us

## Emergency Evacuation Floor Plan Guidelines

Lafayette Fire Prevention Bureau has recommended the following guidelines for creating an evacuation floor plan for required occupancies. Following these guidelines will help make evacuation floor plans clear and easy to follow:

| | |
|---|---|
| Make your map clear | Deciding how much information to put on the evacuation map depends on key features of the building, such as how complex or large is the building layout, how far apart the exits are, and who the target audience is |
| Size the map properly | • Fill the page<br>• 8 ½ x 11 works well<br>• More information requires more space to be clear |
| Make it clear and easy to understand | Avoid clutter. The minimum amount of relevant information makes the map easier to read in an emergency.<br><br>A good rule of thumb is to read the map to find out where you are, and use it to find your way out in 5 seconds or less.<br><br>Don't overdo the color:<br><br>• Too many or colors that don't contrast can confuse a reader<br>• Use contrast, like black and white, blue and red, etc. |
| Use common symbols and include a legend | • Make symbols easy to read and identify<br>• Make arrows big enough to see easily, small enough not to crowd the drawing<br><br>These symbols are strongly recommended for use<br><br>• Fire Extinguisher<br>• Exits<br>• Arrow for primary and secondary egress routes<br>• "You are here" marker<br>• Area(s) of Refuge (for persons with mobility impairments) |
| Use common symbols and include a legend (cont.) | Optional symbols include:<br><br>• Elevators<br>• Manual Fire Alarm Pull stations<br>• Standpipes |

| | |
|---|---|
| Post the plan in a conspicuous location | • About 48-52” above floor level<br>• In a common place of travel or near a door. Elevator lobbies are a good place because most people will come into a floor that way, and people tend to exit the way they entered |
| Protect the Map | • Frame it, laminate it, or use a document protector<br>• Use a method that will securely attach it to the wall |
| Don’t forget to update | Put a plan together to keep all the maps up to date with changes in the building, such as remodeling, moving of walls or doors, or any other changes that affect exiting |
| Practice | Putting the map to use in drills will maximize the effectiveness of the map, its placement, and its features |

**Recommended symbols for Emergency Evacuation Floor Plans**

Fire Extinguisher Symbol options:

Arrow options:

Exit Sign options:


“You Are Here” options:

## Fire Safety Plan Template

The template beginning on the following page may be used in the development of a Fire Safety Plan that fulfills the requirements of the applicable fire codes and standards.

# BUILDING/BUSINESS NAME & ADDRESS

## (DRAFT) FIRE SAFETY PLAN (DRAFT)

**The following elements are required by the *Indiana Fire Code, 2014 Ed., §404.3.2*:**

1. Preferred method of reporting a fire or other emergency:

### IF THERE IS A FIRE

**SOUND THE ALARM**

If you discover or suspect a fire, sound the building fire alarm.

**LEAVE THE BUILDING**

Try to rescue others **ONLY** if you can do so safely.

Move away from the building and out of the way of the fire department.

Don't go back into the building until the fire department deems it safe.

**CALL THE FIRE/POLICE DEPARTMENT – 911**

Dial 911 or use an "emergency" phone

Give as much information as possible to the 911 operator.

2. The life safety strategy for [Building Name and/or Address] is (one of the following):

- Evacuate all occupants at the sound of alarm (appropriate for non-high rise facilities with no mobility impaired persons)
- Evacuate all occupants except persons with mobility impairments, who will be assisted to an area of refuge by the evacuation assistant(s), who will then evacuate themselves and notify emergency services of location of mobility-impaired person
- Evacuate occupants on the floor of the alarm, the floor above, and the floor below, with all others remaining in place, at the sound of alarm (high rise or large facilities)
- Evacuate occupants on the floor of the alarm, the floor above, and the floor below, with all others remaining in place, upon voice evacuation directions via the fire alarm system (requires emergency voice/alarm fire alarm system)
- Evacuate occupants on the floor of the alarm, the floor above, and the floor below, with persons with mobility impairments be assisted to areas of refuge; assistants will then evacuate and notify emergency services of location of mobility impaired person

3. Attach site plans with the following areas indicated (Contact LFD for assistance):

- Occupant's emergency assembly point
- Locations of fire hydrants
- Normal routes of fire department vehicle access

4. Attach floor plans identifying the locations of the following (See "Emergency Evacuation Floor Plan Guidelines," page 64, above):

- Exits
- Primary evacuation routes
- Secondary evacuation routes
- Accessible (Handicapped) egress routes
- Areas of refuge
- Exterior areas for assisted rescue
- Manual fire alarm boxes (pull stations)
- Portable fire extinguishers
- Fire alarm controls
- Occupant-use hose stations

5. List of Workplace Fire Hazards and Prevention Strategies

| Work Area | Fire Hazards | Prevention Strategy |
|---|---|---|
| | | |
| | | |
| | | |
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6. List of personnel responsible for maintenance of fire prevention or fire control systems and/or equipment:

| Name | Title | System and/or Equipment |
|---|---|---|
| | | |
| | | |
| | | |
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| | | |

7. List of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources:

| Name | Responsibilities |
|---|---|
| | |
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**Updating**
This plan must be updated when any building conditions or responsible personnel change. Updated plans should be submitted to the Lafayette Fire Prevention Bureau for approval.

**Training**
Employees must receive training on all elements of this plan upon its initiation. Thereafter, new employees must receive training when first hired. Additional training is necessary only when employees' required actions under the plan change, or when there are changes to the plan.

## Fire Prevention Plan

Adding the following elements to your Fire Safety Plan will result in a Fire Prevention Plan which addresses specific fire prevention personnel, activities, and responsibilities in your facility

# FIRE PREVENTION PLAN
# (BUILDING/BUSINESS NAME & ADDRESS)

**Policy Statement:** - Fire prevention starts with identifying fire hazards. All members of the community – employers, employees, contractors, customers, students and visitors – have a personal obligation to be aware of fire hazards and to reduce or eliminate the risk of fire in our building.

**Fire Prevention Plan Coordinator:** The _____ (Building/Business Name & Address) Fire Prevention Plan Coordinator is _____ (name and/or job title). This person should be contacted with any questions about this Fire Prevention Plan.

**Names and Job Titles of key personnel**:

| | | | |
|---|---|---|---|
| Name | | Name | |
| Title | | | |
| Address | | | |
| Email | | | |
| Phone | | | |

**Housekeeping**
The accumulation of flammable and combustible materials including cardboard boxes, magazines/journals and paper products, flammable liquids and any other materials that will contribute the ignition or spread of a fire must be controlled. This department's housekeeping policy includes:

_____

_____

_____

The Fire Prevention Plan will be located_____

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# CHAPTER 5: Places of Assembly

## Places of Assembly

### Definition of a Public Assembly:

Assembly occupancies include, but are not limited to, all buildings or portions of buildings used for gathering together 50 or more persons for such purposes as civic, social or religious functions; recreation, food or drink consumption or awaiting transportation, or similar uses, or that are used as a special amusement building regardless of occupant load. *(Indiana Building Code, 2014 Edition [IBC])*

Public assembly events involve various risk factors associated with having large numbers of people in one location. The primary risk factors are high occupant density, occupants that are not familiar with the building, occupants who may be impaired due to consumption of alcohol, and events held where there is limited lighting. These risks can be reduced through proper event planning and management.

All persons planning public assembly events are encouraged to contact the Lafayette Fire Prevention Bureau for information and assistance. Consultation is available by telephone, email, and meeting at the event site.

In order to comply with the requirements of the International Fire Code, it may be necessary to contact the Lafayette Fire Prevention Bureau to request approval as noted in the section, "Fire and Life Safety Planning and Management Guide for Public Assembly Events," page 74, below. Required approval and inspections must be requested as far in advance as possible, but not less than 24 hours.

Examples of assembly occupancies include auditoriums, sports arenas, lecture halls, theaters, clubs, and restaurants. All assembly areas are required to have "Capacity" signs posted near the main entrance stating the maximum allowable number of persons permitted in the space. If your facility does not have signs, or if a maximum allowable capacity has not been calculated, please contact the Lafayette Fire Prevention Bureau at 765-807-1600.

The employees or attendants of assembly occupancies must be trained in emergency evacuation procedures and practice their duties during fire drills. They must also be instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment where provided. In "live" theaters, motion picture theaters, auditoriums, and other similar assembly occupancies, an **audible announcement** must be made not more than ten minutes prior to the start of each program to notify occupants of the location of the exits to be utilized in case of fire or other emergency and any other emergency procedures unique for the assembly area. This announcement may be projected on the screen in motion picture theaters.

## Fire and Life Safety Planning and Management Guide for Public Assembly Events

**Information Contained in this Section**

| | | | | |
|---|---|---|---|---|
| Life-Safety Risks in Public Assemblies | Tents | Outdoor Spaces | Large Scale Events | Occupant Capacity |
| Exits | Set-up Plans | Special Amusement Buildings | Expositions | Exit Notice (Announcement) |
| Decorations and Theatrical Scenery | Open Flames | Performing Arts | Pyrotechnics & Fireworks | Fog Machines |
| Event Staff/Crowd Managers | Post Event Procedures | Generators | Fire Watch | Public Assembly Self-Check Form |

### Life-Safety Risks In Public Assemblies

Public assembly events involve various risk factors associated with having large numbers of people in one location. The primary risk factors are the high occupant density; occupants that are not familiar with the building, in some cases reduced lighting levels within the venue and persons under the influence of alcohol. These risks can be reduced through proper event planning and management.

The Indiana Building Code defines public assembly occupancy as follows:

*Assembly occupancies include but are not limited to, all buildings or portions of buildings used for gathering together 50 or more persons for such purposes as civic, social or religious functions; recreation, food or drink consumption or awaiting transportation.*

Examples of assembly occupancies include movie theaters, symphony and concert halls, theaters, banquet halls, nightclubs, restaurants, amusement arcades, art galleries, bowling alleys, churches, community halls, courtrooms, dance halls, exhibitions halls, funeral parlors, gymnasiums, indoor swimming pools, indoor tennis courts, lecture halls, libraries, museums, waiting areas in transportation terminals, pool and billiard parlors, and sports arenas.

| | |
|---|---|
| **Tents**<br><br>**(Over 400 square feet)** | Tents must meet most of the same requirements as buildings.<br><br>Tent material must be properly certified as flame retardant, some tents have attached labels. When labels are not attached, sponsors, promoters, or other production personnel must provide documentation that certifies that the tent material is flame retardant. Cortication must be based on *NFPA 701, Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.* Where such a certification cannot be provided, the structure must be removed immediately.<br><br>Flooring for tents must be non-combustible. Straw, hay, wood chips, mulch, or other similar combustible materials are prohibited from use as flooring in tents.<br><br>Use of open flames (including those used for cooking or warming of food) and heaters must be approved in advance by Lafayette Fire Prevention Bureau personnel.<br><br>Tent suppliers must be able to certify that tents have been erected in accordance with the manufacture's recommendations, industry standards, and code requirements. |
| **Outdoor Spaces** | Enclosed open areas must meet the same requirements as buildings. Fenced open areas must have at least one exit-or more, depending upon the number of people within the enclosure. Temporary stages and/or stands must be approved in advance by Lafayette Fire Prevention Bureau personnel. |
| **Large Scale Events** | All events intended to attract large crowds, or that have the potential to do so, must coordinated through the City of Lafayette. A Special Events permit may be required. This permit can be obtained at http://www.lafayette.in.gov/DocumentCenter/View/943 |

## Fire and Life Safety Planning and Management Information

### Occupant Capacity

Information on occupant capacities may be obtained from the Lafayette Fire Prevention Bureau. The Lafayette Fire Prevention Bureau is responsible for determining the legal capacities according to the Indiana Building Code and the International Fire Code for existing and new buildings and/or areas within buildings.

Actual capacities are determined on a case-by-case basis, based on actual measurements of the space/area in question, and the arrangement of furnishings.

In general, the following occupant load factors may be used.

| *Use* | *Minimum area per person* |
|---|---|
| Standing Room | 5 sq ft per person |
| Concentrated (concerts, dances, lectures) | 7 sq ft per person |
| Less concentrated (dining room, exhibit room) | 15 sq ft per person |
| Fixed seats | # of fixed seats |

### Exits

The number of exits (minimum 32 inches clear width) required from the room or area is based on the capacity. Generally, .2 inches of exit width is required for each occupant (.15 inches in sprinkler buildings).

| *Number of persons* | *Minimum number of exits* |
|---|---|
| 50-500 persons | 2 remote exits (minimum) |
| 501-1000 persons | 3 remote exits (minimum) |
| More than 1000 persons | 4 remote exits (minimum) |

Exits must remain unobstructed and provide clear access to the outside at all times. Wires or cables are not permitted to be placed in front of exits or on steps. All wires or cables on floors must be properly taped down or covered to avoid creating tripping hazards.

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| **Set-up Plans** | The placement of stages, sets, equipment (including wiring), and security arrangements affect the exits and access to exits. All arrangements must be approved by Lafayette Fire Prevention Bureau personnel.<br><br>Capacities are based on standard set-up plans in most buildings. The management of the respective facilities maintains these arrangements. Set-up plans for other spaces, spaces that are not routinely used for public assembly (including lobbies and atriums), or any plans that are different from existing standard plans must be reviewed in advance by Fire Prevention Bureau personnel for conformance with the Fire Code.<br><br>Assembly events with ramped or tiered floors for seating of more than 200 persons where temporary seating will be used, seats must be fastened together (ganged) in groups of at least three. |
| **Special Amusement Buildings** | Any building or portion of a building that is permanent, temporary, or mobile that is occupied for amusement, entertainment or educational purposes and is arranged such that the means of egress to an exits is not readily apparent due to visual or audio distractions is a 'special amusement building'. Examples include haunted houses and carnival amusement trailers.<br><br>Plans for special amusement assemblies must be approved by the Building and Fire Code Officials prior to opening to the public.<br><br>An Amusement and Entertainment permit is required by the Indiana Fire Marshal's Office at. https://secure.in.gov/dhs/2795.htm |
| **Expositions** | Expositions of products or other displays have a number of special requirements. Contact the Lafayette Fire Prevention Bureau for guidance on this issue. |

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| **Exit Notices (Announcements)** | Theaters. Movie theaters, auditoriums or other places of assembly used for non-continuous programs, an audible announcement must be made not more than 10 minutes prior to the beginning of the program, calling the attention of all occupants to the location of the exits.<br><br>This requirement can be met by any of the following methods:<br><br>1. Notices made orally<br>2. Notices shown on the cinema screen<br>3. Notices printed on the back of a program (by itself, in ¼ inch high letters)<br>4. Notices displayed on a fixed sign visible from all points in an assembly room |
| **Decorations and Theatrical Scenery** | All materials used for decorations and theatrical scenery, including the drop used behind stages during concerts, must be Class "A" rated for flame spread. Foamed plastics and materials must meet the requirements of the Indiana Building Code. Sponsors, promoters, or other production personnel must have documentation that certifies that the material meets this requirement. Fire Prevention Bureau personnel may ask to see these certificates prior to the start of an event. If there is no documentation to certify that the material is acceptable, the material must be removed immediately.<br><br>Decorations must not block exits or fire safety equipment, nor impede the function of the fire curtain if one is present. |
| **Open Flames** | Lafayette Fire Prevention Bureau personnel must approve open flames used during public assembly events for the purposes other than decoration and cooking (unless otherwise noted). This includes, but is not limited to, any open flame used in the course of a performance. (See "Open Flames and Open Burning", page 90, below.)<br><br>Open flames used for decoration and cooking must comply with the 4 points below. Users are required to have adequate safety precautions and are encouraged to contact Fire Prevention Bureau personnel for consultation. |

| | |
|---|---|
| **1. Cooking** | Flammable and combustible liquids used in preparation of food or beverages shall be dispensed from a 1-ounce container (or a container not exceeding 1-quart that will limit the flow of liquid to a 1-ounce serving).<br><br>The serving of flaming foods or beverages shall be done in a safe manner and shall not create high flames.<br><br>The pouring, ladling, or spooning of liquids is restricted to a maximum height of 8 inches above the receiving receptacle.<br><br>Flaming foods or beverages shall be prepared only in the immediate vicinity of the table being services. They shall not be carried or transported while flaming.<br><br>The person serving the flaming foods or beverages shall have a wet cloth towel immediately available for use in smothering the flames in the event of an emergency. |
| 2. **Candles and Decorative Devices** | Candles are prohibited in area where occupants stand, or in an aisle or exit.<br><br>In religious ceremonies, hand-held candles may be carried, when adequate safeguards have been taken in the opinion of the Fire Prevention Bureau. Hand-held candles shall not be passed from one person to another while lighted.<br><br>Candles with protected flames may be used on tables used for food service where securely supported on substantial non-combustible bases located to avoid the danger of ignition of combustible materials. |
| **3. Gas Lights** | Gas lights are allowed to be used provided adequate precautions satisfactory to the Fire Prevention Bureau have been taken to prevent ignition of combustible materials. If chimneys are used, they must be non-combustible. |

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| **4. Portable Cooking Devices** | Small portable LP gas cooking equipment (less than 2 1/2 lbs.) may be used under the following conditions:<br>• Equipment must be listed for indoor use in commercial restaurants by an approved listing agency such as Underwriters Laboratories (UL) or Factory Mutual Systems (FM)<br>• Equipment must be used in strict accordance with the manufacturer's and listing agency's instructions including replacement fuel and parts<br>• Employees working with portable butane gas stoves must be instructed on the proper use of the stoves. A trained employee must be in attendance at all times that the stoves are used by customers<br>• Portable gas stoves, when used, must be placed on noncombustible surfaces and kept clear of surrounding combustibles |
| **Performing Arts** | Small open flames used by outdoor performers, such as jugglers, are approved on a case-by-case basis. Contact the Lafayette Fire Prevention Bureau to arrange to demonstrate their safety procedures and may be required to have certificates of insurance. |
| **Pyrotechnics/ Fireworks** | The indoor and outdoor use of pyrotechnics is strictly regulated and requires proper approval and permits.<br>Indoor pyrotechnics and outdoor fireworks displays require a Fireworks Display permit from the Indiana Fire and Building Safety Division at https://myoracle.in.gov/dfbs/display/start.do |
| **Fog Machine** | The use of fog machines during a performance, dance, or other public assembly event may activate smoke detectors and/or obscure exits. Areas where fog machines are going to be used must be evaluated so that accidental activation of the fire alarm system or obscuring of exits is avoided. Contact Lafayette Fire Prevention Bureau personnel to arrange an evaluation of your proposal.<br>In some cases, smoke detectors may need to be temporarily shut down in the area where a fog machine is used. Contact the Lafayette Fire Prevention Bureaus at least 48 hours in advance of the event for an evaluation. An approved 'fire watch", (see page 44, above) during the period in which the smoke detectors are temporarily out of service may also be required. |

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| **Event Staff/ Crowd Managers** | Crowd Managers are responsible for maintaining clear exits, assuring that there is no overcrowding, initiating a fire alarm if necessary, directing occupants to exits, and providing general fire and life safety awareness. A minimum of 1 Crowd Manager is recommended for every 250 occupants. Crowd Managers may be ushers, house managers, gate personnel, security personnel, off-duty fire department personnel, police aides, or police officers. Employees or attendees of assembly occupancies must be trained in emergency evacuation procedures and instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment, where provided. |
| **Post-Event Procedures** | At least one person should be responsible for completing a post-event check. Items to check for include verifying that all smoking materials (where smoking is allowed) and open flames have been safely extinguished (where open flames are approved), unnecessary electrical equipment has been turned off, and any obviously hazardous condition has been corrected. |
| **Generators** | Generators must meet all electrical code requirements including proper grounding. All wires that may pose a tripping hazard must be covered or otherwise secured. Generators must be located so that exhaust does not enter buildings or tents |
| **Fire Watch** See page 44, above, for more detailed Fire Watch information | An approved fire watch may be required when portions of the fire protection systems in assemblies are disabled or impaired for any reason.<br><br>Fire watch personnel are to be dedicated to performing constant patrols of the area affected, with no other job responsibilities.<br><br>Fire watch personnel are to have at least one approved means for contacting the Lafayette Fire Department and activating the fire evacuation signals.<br><br>Fire watch personnel must be trained in the use of portable fire extinguishers.<br><br>While patrolling, fire watch personnel must look for dangerous practice or situations and must have the authority to immediately put a stop to them.<br><br>See page 44, above, for additional rules regarding fire watch requirements, and page 42, above, for fire protection system impairment procedures. |

| Public Assembly<br>Self-Check Form<br>Fire and Life Safety | Fire-Police-Rescue 911<br>Police Non-Emergency (765)807-1200<br>Fire Non-Emergency (765)807-1600 |
|---|---|

DATE: _____ TIME _____ LOCATION: _____

EVENT: _____ PERSON DOING CHECK: _____

Exit announcement read, displayed or posted? ☐ Yes ☐ No
*(If "no" arrange to provide the required announcement.)*

Exit doors clear and unobstructed (on both sides)? ☐ Yes ☐ No
*(If "no", remove the obstructions.)*

Exit paths clear and unobstructed all the way to outside? ☐ Yes ☐ No
*(If "no" remove the obstructions.)*

Wires placed in cord bridge or otherwise secured? ☐ Yes ☐ No
*(If "no", remove or cover the wires.)*

Aisles clear and unobstructed? ☐ Yes ☐ No
*If "no", remove the obstructions.)*

Exits lights on and unobstructed? ☐ Yes ☐ No
*If "no", replace or repair the fixture, or remove the obstructions.)*

Emergency lights on and unobstructed? ☐ Yes ☐ No
*If "no", replace or repair the fixture, or remove the obstructions.)*

Floor set-up approved? ☐ Yes ☐ No
*(If "no", contact Fire Prevention immediately.)*

Fire protection equipment unobstructed? ☐ Yes ☐ No
*(If "no", remove the obstructions from the fire alarm pull stations, fire alarm horns, bells, or speakers, and strobe lights, and fire extinguishers.)*

Decorations non-flammable? ☐ Yes ☐ No
*(If "no", remove the materials*

Use of open flames approved? ☐ Yes ☐ No
*(If "no", extinguish and do not use)*

Use of Pyrotechnics approved? ☐ Yes ☐ No
*(If "no", contact the Fire Prevention Bureau immediately*

Crowd managers in place? ☐ Yes ☐ No
*(If "no", contact the Fire Prevention Bureau or provide one crowd manager for every 250 occupants)*

Tents have proper certifications if required? ☐ Yes ☐ No ☐ N/A
- Contact the Fire Prevention Bureau for fire inspection prior to occupancy
- Flame retardant certification required on site
- Structural integrity

Post-event check completed? ☐ Yes ☐ No
*(If "no", perform post-event check.)*
- Smoking materials safely extinguished (where smoking is allowed)
- Approved open flames safely extinguished
- Unnecessary electrical equipment turned off
- No obvious hazards

## Interior Finishes and Decorations

Interior decorations are a common factor in the spread of fire. Decorations used during the holiday seasons are always a large concern. It is necessary to ensure that all decorations used meet the requirements of safety and fire resistance.

| | | |
|---|---|---|
| Interior Finish | The following are requirements to consider when planning a renovation or refinish of walls, ceilings, and floors:<br>• All new finishes must meet the minimum requirements of NFPA standards and the Indiana Building Code<br>• The Lafayette Fire Prevention Bureau is available to assist in determining the fire rating of a material<br>• Finish materials in corridors, places of assembly, and high hazard areas will be "Class A". This is the highest protection rating dealing with the flame spread and smoke production of a product or material.<br>• There is no such thing as "Fire Proof"<br>• Offices, sleeping rooms and less hazardous area may use a "Class B" or "Class C" finish | |
| Approvals | Normally, specific written approvals for holiday decorations will not be required. Written approval will be required if the decorations may interfere with any safety system or may conflict with one or more of the safety requirements in this policy. | |
| Documentation | Any decoration, whether purchased from a store, dealer, catalog, or other business, or if handmade, will require documentation acceptable to the Lafayette Fire Prevention Bureau that the materials used meet the standards of fire resistance and safety. | |
| Materials<br>(fire resistance) | All materials used in decorations must meet the minimum requirement of *NFPA 70, Standard Methods of Fire Tests for Flame Resistant Textiles and Films.* The Lafayette Fire Prevention Bureau can provide the specific requirements upon request. It is recommended that you contact the Lafayette Fire Prevention Bureau for consultation prior to purchasing or installing decoration if you are unsure of the rating. | |
| General requirements include: | Vegetation | Vegetation such as haystacks, leaves, branches, large amounts of plant cuttings, etc. may not be used in any commercial building. |

| | | |
|---|---|---|
| General requirements<br><br>(cont.) | Live holiday trees | • May not be used in any institutional Group I & R-4 occupancies<br>• May only be used in Assembly Group A, Educational Group E (Schools), Mercantile Group M (Stores), Residential Group R-1 (Hotels, etc.), and Residential Group R-2 (Apartments) occupancies with the following conditions:<br>  ○ The building is protected with an automatic sprinkler system throughout<br>  ○ A fresh cut is made at least ½ inch about the original cut<br>  ○ The tree is supported by a device that holds the tree securely, contains a 2-day supply of water, and in which the water covers at least 2 inches above the fresh cut<br>  ○ The water level is checked at least once daily<br>  ○ The tree does not obstruct means of egress<br><br>The tree must be removed from the building whenever the needles or leaves fall off readily when a branch is shaken, or if the needles are brittle and break when bent between the thumb and forefinger. The tree must be checked for dryness daily. |
| | Locations | Decorations must not be attached to , hung from, or obstruct any emergency device, including sprinkler heads and piping.<br><br>Combustible decorations must not be hung from ceilings in such a way that a fire could ignite the decorations and endanger the occupants before evacuation. Unauthorized items found during inspections will be required to be removed. |
| General | Electrical | Electrical lights, decorations, and cords must comply with the following conditions:<br><br>• The device(s) must be tested and approved by a recognized testing laboratory such as Underwriters' Laboratory (UL) or Factory Mutual (FM). The device(s) must bear the appropriate label, sticker, or tag supplied by the manufacturer.<br>• Do no use electrical decorations or cords on combustible vegetation, dry trees, curtains or any other combustible material that may be ignited by the heat or potential electrical short of the device |

| | | |
|---|---|---|
| General<br><br>(cont.) | Electrical | • Extension cords may be used-on a temporary basis only-for decorations. The cord must be plugged directly into a building receptacle, not another extension cord.<br>• Multiple electrical devices may be plugged into an approved "Power Strip" which incorporates overcurrent protection (circuit breaker), on/off switch, surge protection, and can reach the wall outlet without connecting to another "surge protector" or an extension cord. Each power strip must be plugged directly into a wall outlet. This allowance does not apply to heat producing devices, which must be plugged directly into an outlet.<br>• Electrical decorations must be turned off and should be unplugged at the end of the day or when the building will be unoccupied for an extended period<br>• Electrical decorations or cords must not be laid or taped across floors in such a way that they may cause a tripping hazard or interfere in any way with evacuation<br>• Any electrical decoration or cord that is damaged, worn, showing signs of overheating, etc. must be taken out of service and repaired or replaced |
| Amount of Decorations | Generally, the permissible amount of combustible decorative materials shall not exceed 10% of the existing wall space of an area. Additionally, the amount of decorations used will be limited by the following criteria:<br><br>• Decorations must not obstruct any corridor, exit, or safety device<br>• Decorations must not exceed the amount of combustibles that could be contained under control with a fire extinguisher<br>• No amount of any combustibles that would aid in the rapid spread of fire such that it could endanger or entrap the occupants<br><br>The amount of decorations may affect the occupant load of the area if such decorations cover any required floor area used in the calculation of the occupant load. | |

<table>
<tr><td rowspan="3">Luminaries</td><td colspan="2">Luminaries are permitted for use both in the electrical and candle versions under the following conditions:</td></tr>
<tr><td>Indoors</td><td><ul><li>Candle type luminaries will not be used indoors</li><li>Electric luminaries may be used according to the requirements of the electric section on the preceding page and the manufacturer’s instructions</li></ul></td></tr>
<tr><td>Outdoors</td><td><ul><li>Candle and/or electric luminaries are permitted outdoors</li><li>Candle types must be in approved luminary’s bag with at least 2” of sand (or like non-combustible material) in the bottom of the bag. The candle must be a size that will allow adequate space between the candle and bag, so as not to ignite the bag.</li><li>Candle types will not be placed within five (5) feet of combustible material, such as leaves or paper decorations</li><li>An individual will be designated to supervise, control, and manage the luminaries, and ensure that they are properly extinguished and properly discarded</li><li>Candles must be extinguished at the end of the night or event unless the area is supervised</li><li>Electrical luminaries must be rated for outdoor use</li><li>Electrical cords and extension cords will not be placed so as to cause a tripping or fire hazard (i.e., frayed or non-rated cords running along a path of dry leaves)</li></ul></td></tr>
</table>

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# CHAPTER 6: Permits

Permits are required for the installation of fire alarm systems, fire sprinkler systems, commercial kitchen hood fire suppression systems, paint booth fire suppression systems, public fireworks display, and any alternative fire extinguishing system.

A City of Lafayette Special Events Permit is required for any event that involves a street closure or use of applicable City of Lafayette facilities/properties. This permit application may be located at http://www.lafayette.in.gov/DocumentCenter/View/425

Additionally, an Amusement and Entertainment permit is required by the State of Indiana for all businesses conducting live music or entertainment, amusement buildings, or haunted houses. Application is available at http://www.in.gov/dhs/3552.htm

## Hot Works Program

Fire Prevention for Hot Work Operations

If not properly controlled, hot work operations present serious fire hazards that can lead to significant property damage, injury and/or loss of life. Chapter 35 of the 2014 *Indiana Fire Code* contains the requirements related to the use of welding, cutting, and all other kinds of hot works. The following is a guide to Chapter 35, and should not be construed as containing all the requirements of the Code.

Hot work permits are issued by the responsible person of the facility/business under the hot work program. This program permits personnel to oversee that hot work is conducted by trained, on-site, responsible personnel and that the required safety measures are taken to prevent fires and fire spread.

These procedures apply to all hot work performed in the City of Lafayette.

| | |
|---|---|
| Where required | Hot work shall only be conducted in areas designated or authorized by the personnel responsible for a Hot Works Program.<br><br>Hot work shall not be conducted in the following areas:<br><br>• Where the suppression system is impaired<br>• Where there is potential for flammable gases, liquids, or vapors<br>• Where there are readily ignitable materials, such as storage of large quantities of bulk sulfur, baled paper, cotton, lint, dust or loose combustible materials |

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| How to use the permit | • The Hot Work permit is issued to the person who will be welding, cutting, or performing other hot work<br>• The permit is issued only after the facility's approved person authorized to administer the Hot Works Program has inspected the work area and satisfactorily completed the inspection checklist, **BEING ABLE TO ANSWER YES TO ALL QUESTIONS**<br>• Hot work shall only be conducted in areas designated or authorized by the personnel responsible for a Hot Work Program<br>• The permit is attached to the welding equipment or other approved location.<br>• Immediately upon completion of hot work, the permit is returned to the person who authorized it and signed off<br>• This permit should be kept on file for at least 48 hours |
| Precautions for cutting, welding, or other hot work | • Use only equipment that is in good condition. Valves, regulators, hoses and torches should be thoroughly checked<br>• Secure gas cutting and welding cylinders so they will not be upset or damaged and replace protective caps on all cylinders not actually in use<br>• Use portable stands to elevate welding hose or cable off the floors areas where it can be easily damaged<br>• Carefully connect the ground clamp when using electrical or welding equipment. The ground clam should be connected as close to the work as possible so that I may be easily observed<br>• Refrain from using welding, cutting or other hot work equipment in a building where fire sprinklers are out of service<br>• Where hot work is performed close to fire sprinklers, individual sprinklers may be shielded with noncombustible barriers or damp cloth guards, which will be removed when work is completed. If hot work extends over several days, shields shall be removed at the end of each work day<br>• Special precautions shall be taken to avoid accidental operation of automatic fire detection systems. **IF ANY PART OF THE FIRE ALARM SYSTEM IS DISABLED, A FIRE WATCH IS REQUIRED** |

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| Precautions for cutting, welding, or other hot work (cont.) | • The hot work operation must not begin until the following have occurred:<br>  ○ Surrounding floors have been swept clean and, if combustible, then protected<br>  ○ Openings are protected<br>  ○ No exposed combustibles located on the opposite side of partitions, walls, ceilings or floors,<br>  ○ Check the atmosphere for combustible gases or vapors where necessary, using reliable detection equipment. |

## Open Flames and Open Burning (Bonfires, Campfires, Candles, Incense, etc.)

Open burning is defined as the burning of materials wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. Open burning does not include road flares, smudgepots and similar devices associated with safety or occupational uses typically considered open flames, recreational fires or use of portable outdoor fireplaces.

A recreational fire is defined as an outdoor fire burning materials other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, portable outdoor fireplace, barbeque grill or barbeque pit and has a total fuel area of 3 feet or less in diameter and 2 feet or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes.

### Candles in Places of Assembly

Requirements for use of open flames in Places of Assembly are found in *Indiana Fire Code, 2014 Ed., Section 308*.

| | |
|---|---|
| General | Do not locate candles, lanterns, and gas-fired heaters on or near decorative materials or similar combustible materials. |
| Candles | Candles are prohibited in areas where occupants stand, or in an aisle or exit.<br><br>In religious ceremonies, hand-held candles may be carried, when adequate safeguards have been taken in the opinion of the Fire Prevention Bureau. Hand-held candles shall not be passed from one person to another while lighted.<br><br>In restaurants and drinking establishments, candles on tables may be used when they are supported on substantial noncombustible bases and the candle flames are protected |

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| Gas Lights | Gas lights are allowed provided adequate precautions satisfactory to the Fire Prevention Bureau have been taken to prevent ignition of combustible materials. |
| Flaming Food or Beverage Preparation | Flammable and combustible liquids used in preparation of food or beverages shall be dispensed from a 1-ounce container (or a container not exceeding 1-quart that will limit the flow of liquid to a 1-ounce serving).<br><br>The serving of flaming foods or beverages shall be done in a safe manner and shall not create high flames.<br><br>The pouring, ladling, or spooning of liquids is restricted to a maximum height of 8 inches above the receiving receptacle.<br><br>Flaming foods or beverages shall be prepared only in the immediate vicinity of the table being serviced. They shall not be carried or transported while flaming.<br><br>The person servicing the flaming foods or beverages shall have a wet cloth towel immediately available for use in smothering the flames in the event of an emergency. |

### Open Flames and Burning—Indoors

An open flame indoors, particularly when such burning will activate any type of fire alarm detection or suppression system, is normally prohibited. The use of open flames in performances requires approval obtained from the Lafayette Fire Department. Approval will be contingent on review of the arrangements, inspection of the premises, and a possible demonstration of the effect. When a fire alarm or suppression system is disabled or impaired in order to use open flames, an **approved fire watch** (See page 44, above) shall be required.

### Open Burning – Outdoors

Persons conducting open burning must adhere to Indiana Fire Code, Indiana Open Burn Law, and City of Lafayette ordinance. No outdoor open burning shall be conducted in apartment or condominium complexes or properties having more than 4 dwelling units.

Burning shall be in an approved container and not be less than 15’ from a structure or combustible material.

- Container must be noncombustible that is sufficiently vented to limit smoke production and have enclosed sides and a bottom

- Only charcoal, clean untreated wood products and paper may be burned
- Burning material shall be constantly attended by a person who can extinguish the fire until the fire is extinguished
- Any conditions which could cause a fire to spread within the minimum distances of a structure shall be eliminated prior to ignition.
- The fire must be extinguished at the discretion of the Lafayette Fire Department

### Open burning—Bonfire

Bonfires are defined as an outdoor open burning fire utilized for ceremonial purposes.

Persons wishing to conduct a bonfire fire shall contact the Lafayette Fire Prevention Bureau if the pile being burnt is more than 5' x 5' x 5'.

The ceremonial bonfire requirements are:

- The maximum size of a ceremonial fire shall not exceed 10' x 10' x 10'
- Only one pile may be burned at a time
- Shall not be for disposal purposes
- The fire shall not be ignited more than 2 hours before the activity is to take place
- The fire shall not take place within 500' of any fuel storage area or pipeline.
- The fire shall not be within 50' of a structure or combustible material unless contained in a barbecue pit.
- Any conditions which could cause a fire to spread within 25' of a structure shall be eliminated prior to ignition.
- The fire must be extinguished upon conclusion of the activity.
- The fire must be extinguished at the discretion of the Lafayette Fire Department
- At the discretion of Lafayette Fire Department personnel, additional suppression equipment may be required to be present for the duration of the bonfire.

All open burning is prohibited during unfavorable meteorological conditions such as high winds, temperature inversions, air stagnation and when a pollution alert or air quality action day has been declared.

## Fireworks

### Supervised Public Display of Fireworks Permit

All public display of fireworks must have a valid permit from the Indiana Department of Homeland Security. The online application may be obtained at http://www.in.gov/dhs/3259.htm.

In addition to a valid permit, a certificate of insurance and letters of acknowledgement from all property owners in the fallout area are required to be on file with the Lafayette Fire Department. A completed Lafayette Fire Department Fireworks Display Worksheet and Fireworks Display Pre-Inspection Checklist shall be provided to the Lafayette Fire Prevention Bureau at least 24 hours in advance of the display for the purpose of scheduling an inspection of the launch site and emergency procedures of the operators.

### Retail Sale of Consumer Fireworks

All retail sales of consumer fireworks require a valid permit issued by the Indiana Department of Homeland Security. The online application may be obtained at http://www.in.gov/dhs/3340.htm

In addition to a valid IDHS permit, the retail space is subject to meeting the code requirements of the Indiana Building and Indiana Fire Code. The City of Lafayette Engineering Office provides assistance to ensure compliance by contacting 765-807-1050. Prospective tenants or property owners are recommended to contact Engineering BEFORE signing a lease.

### Use or Discharge of Consumer Fireworks

Consumer Fireworks include certain types of "1.4G" fireworks including:

(A) aerial devices which include sky rockets, missile type rockets, helicopter or aerial spinners, roman candles, mines, and shells, etc.

(B) ground audible devices, which include firecrackers, salutes, and chasers, etc.

(C) firework devices containing combinations of the effects described above.

The use or discharge of consumer fireworks are prohibited expect on the following dates and times.

- June 29, 30, July 1, 2, 3, 5, 6, 7, 8, 9

  5pm-2 hours after sunset

- July 4

  10 am-12 midnight

- December 31

  10 am-1 am on January 1

The use or discharge of fireworks can only be used at the following locations:

- At the property of the person using the fireworks
- At the property of another person who has given permission to use the fireworks
- A "Special discharge location" designated by the Fire Prevention and Building Safety Commission

The person using or discharging fireworks is responsible for ensuring the fireworks do not leave the property and fall or cause damage to any other property.

The use of sky lanterns is prohibited unless the lantern is tethered in a manner that keeps the lantern from leaving the property.

## Tents and Temporary Structures/Outdoor Cooking

Tents and similar structures present a very high potential for accidents and injuries in the case of fire or collapse. Stages and platforms also present a similar potential from collapse and falls.

Temporary tents, air-supported, air-inflated or tensioned membrane structures shall not be erected more than 30 days in a 12 month period on a single premise.

Separation is measured from tent stake to tent stake.

| | |
|---|---|
| **Scope Tents** | Scope tents are tents with an aggregate floor area of 400 square feet or smaller.<br>• The aggregate floor area is calculated for multiple scope tents unless there is 10 foot separation provided. |
| | Outdoor cooking that produces sparks or grease-laden vapors shall not be permitted within 10 feet of a scope tent. |
| | Cooking, including crockpots, grills, broilers, etc. is permitted under a scope tent with the following conditions:<br>○ Tents with sidewalls or drops shall be separated from other tents by a minimum of 10 feet.<br>○ No separation required for tents with NO sidewalls or drops |
| **Regular Tents** | Regular tents are tents larger than 400 square feet. |
| | The Lafayette Fire Department shall be notified when regular tents are erected, operated, or maintained for any purpose. |
| | A tent with an occupant load of 50 or more shall be considered a place of assembly. See "Places of Assembly" above to calculate occupant load. |
| | A detailed site and floor plan for tents with an occupant load of 50 or more shall be provided to the Lafayette Fire Department indicating the means of egress facilities, seating capacity, seating arrangement, and location and type of heating electrical equipment. |
| | A 20' wide access road shall be provided and shall extend within 150' of all portions of the structure. |

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| Regular Tents<br><br>(cont.) | Regular tents shall not be located within 20’ of lot lines, buildings, parked vehicles, internal combustion engines or other tents<br><br>• When aggregate floor area does not exceed 15,000 square feet, and no open or exposed flame cooking is operated, no separation is required.<br>• Tents do not need to be separated from buildings when ALL the following conditions are met:<br>  o Aggregate floor area of the tent does not exceed 10,000 sq. ft.<br>  o Aggregate floor area of the tent and building do not exceed the allowable floor area including increases in the Indiana Building Code<br>  o All required exiting provisions from the building and tent are in compliance, including travel distance<br>  o Fire apparatus access roads are provided in accordance with the Indiana Fire Code |
| | Tents having a single structure in excess of 15,000 sq. ft. shall be located not less than 50’ from other tents or structures as measured from the side wall of the tent, unless jointed by a corridor. Exits shall be provided at each end of such corridor. 12’ wide openings shall be provided in corridors on each side and approximately opposite each other. |
| | Tents in excess of 15,000 sq. ft. shall have an unobstructed fire break passageway or a 12’ minimum fire road free of obstructions on all sides of tent |
| | Tents shall be adequately braced and anchored to withstand the elements of weather and prevent against collapsing. Documentation of structural stability shall be provided to the Lafayette Fire Department upon request. |
| | Tents having an occupant load of 50 or more persons must have clearly marked exits signs that are lighted or self-luminous. Lighted signs must have an auxiliary power supply such as a battery back-up system. In addition, there must be a minimum of two exits, each a minimum of 72 inches wide. |
| | Exit openings from tents shall remain open during use. The openings may be covered if the coverings comply with fire code requirements. |
| | Tents using chairs for public assembly must have the chairs grouped together with minimum 44-inch aisle width. |

| | |
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| Regular Tents (cont.) | A certificate that the entire tent is constructed of flame-resistant material (or has been treated as to render it flame-resistant) according to *NFPA 701* must be made available to the Lafayette Fire Department upon request.<br><br>Tents shall have a label permanently affixed bearing the identification of size, fabric or material type. |
| | Smoking is not permitted with the structures, and approved "No Smoking" signs must be displayed |
| | No Combustible materials such as hay, straw, shavings, etc. shall be located within a tent containing assembly occupancy. |
| | Cooking with an open flame or other devices emitting flame, fire or heat or flammable or combustible liquids, gases, charcoal, or other unapproved devices shall not be permitted inside or within 10' of the tent while open to the public |
| | All Cooking in tents with sidewalls or drops require a minimum 10' separation from other tents |
| | Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 10' of a tent |
| | Fireworks shall not be used within 100' of a tent |
| | Portable LP gas containers of 500 gallons or less shall have a minimum separation between the container and any fuel-operated device of not less than 10' and shall not be located within the tent. The container shall be properly secured and safety release valve shall be pointed away from the tent |
| | Generators and other internal combustion power sources shall be separated from tents by a minimum of 20' and be isolated from the public by fencing or other enclosure. |
| | A 30' perimeter around tents shall be kept clear of combustible waste and vegetation. |
| | Tents must have a minimum of one 2A:40B:C fire extinguisher. In addition, where deep fat fryers are used, a Class K fire extinguisher will be required. |

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# APPENDIX A: Classes and Storage for Flammable and Combustible Liquids

***Flammable liquid*** means any liquid having a flashpoint below 100° F (37.8° C), except any mixture having components with flashpoints of 100° F (37.8° C) or higher, the total of which make up 99 percent or more of the total volume of the mixture. Check your Material Safety Data Sheet (MSDS) for characteristics or classification of a particular liquid.

**Flammable liquids** are divided into three classes as follows:

| | |
|---|---|
| Class IA | Liquids having flashpoints below 73° F (22.8° C) and having a boiling point below 100° F (37.8° C) |
| Class IB | Liquids having flashpoints below 73° F (22.8° C) and having a boiling point at or above 100° F (37.8° C) |
| Class IC | Liquids having flashpoints a or above 73° F (22.8° C) and having a boiling point below 100° F (37.8° C) |

***Combustible liquid*** means any liquid that will produce flammable vapors having a flashpoint at or above 100° F (37.8° C)

**Combustible liquids** are divided into two classes as follows:

| | | |
|---|---|---|
| Class II liquids | Liquids with flashpoints at or above 100° F (37.8° C) and below 140° F (60° C). | |
| Class III liquids | Liquids with flashpoints at or above 140° F (60° C) Class III liquids are subdivided into two subclasses: | |
| | Class IIIA liquids | Those with flashpoints at or above 140° (60° C) and below 200° F (93.3° C). |
| | Class IIIB liquids | Those with flashpoints at or above 200° F (93.3° C). |

When a combustible liquid is heated for use to within 30° F (16.7° C) of its flashpoint, it must be handled in accordance with the requirements for the next lower class of liquids, with Class I liquids being the most volatile. Check your MSDS sheets for characteristics or classification of a particular liquid.

## Exempt Amounts

There are certain amounts of flammable and combustible liquids stored in each *control area* that are permitted by code. These amounts are significant in that if these amounts are exceeded, then the area or building may have to be reclassified as a *Hazardous Use Group* under the Building Code.

Excessive storage also constitutes a violation of the fire code. If your storage exceeds these amounts, contact the LFD Fire Prevention Bureau.

Exempt amounts of flammable and combustible liquids per control area:

| Condition | Flammable Liquids (US gallons) | | | Combustible liquids (US gallons) | | |
|---|---|---|---|---|---|---|
| | IA | IB | IC | II | IIIA | IIIB |
| Inside; unprotected by sprinklers or cabinet | 30 | 120 | 120 | 120 | 330 | 13200 |
| Within approved cabinet; a non sprinkler-protectd structure | 60 | 240 | 240 | 240 | 660 | 26400 |
| In sprinkler protected structure; not in approved cabinet | 60 | 240 | 240 | 240 | 660 | unlimited |
| In sprinkler protected structure; in approved cabinet | 120 | 480 | 480 | 480 | 1320 | unlimited |
| Outside storage in containers per pile | 1100 | 2200 | 4400 | 8800 | 22000 | 22000 |
| Outside storage in portable tanks per pile | 2200 | 4400 | 8800 | 17600 | 44000 | 44000 |

# APPENDIX B: Fire Safety during Building Construction

The following guidelines are excerpted from the *Indiana Fire Code, 2014 Ed.* Compliance with these guidelines does not exempt any entity from required compliance with the entirety of the Code.

## Temporary Heating Equipment

Temporary heating devices such as salamanders pose a fire safety risk due to their portability and the presence of combustible building products and waste in their vicinity. Special care shall be taken when using such devices.

- Temporary heating devices shall be listed and shall be operated in accordance with their listing.

Precautions for LP-gas heaters and LP cylinders:

- Heaters for temporary heating shall be located at least 6 feet from any cylinder (except for integral heater-cylinder units)
  Blower-type and radiant-type units shall not be directed at any cylinder within 20 feet
- Clearance to combustibles from temporary heating devices shall be maintained in accordance with the labeled equipment
- Frequent checks shall be conducted to ensure proper clearance from combustibles

## General Precautions Against Fire

- Smoking shall be prohibited except in approved areas. “No Smoking” signs shall be posted on every floor. Where smoking is permitted, approved ashtrays shall be provided.
- Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container or removed from the building and properly disposed of
- Cutting, welding, grinding and other such heat-producing operations shall be done in accordance with the Lafayette Fire Department Hot Works Program guidelines

Waste disposal:

- Combustible debris shall not be accumulated within buildings
- Combustible debris, rubbish and waste material shall be removed from buildings at the end of each shift of work

### Flammable and Combustible Liquids

- Flammable and combustible liquids at construction sites shall be stored in metal containers in accordance with the Indiana Fire Code, or in other approved containers
- Ventilation shall be provided for operations involving the application of materials containing flammable solvents
- Flammable and combustible liquid storage areas shall be maintained clear of combustible materials
- Sources of ignition and smoking are prohibited in flammable and combustible liquid storage areas. Appropriate ‘No Smoking’ signs shall be posted.

## Owner's Responsibility for Fire Protection

The owner shall designate a person to be the Fire Prevention Program Superintendent who shall be responsible for the fire prevention program and ensure that it is carried out through completion of the project. The Fire Prevention Program Superintendent will be responsible for the following:

- Developing and maintaining an approved prefire plan in cooperation with the Lafayette Fire Department's Fire Prevention Bureau. The Fire Prevention Bureau shall be notified of changes affecting the use of information contained in such prefire plans.
- Training of personnel using fire protection equipment
- Determining that all fire protection equipment is maintained and serviced in accordance with the Fire Code and manufacturer's recommendations
- Supervising the permit system for hot work operations
- Coverings placed on or over fire protection devices to protect them from damage during
- construction processes shall be immediately removed upon completion of the construction processes in the room or area in which the devices are installed and at the end of each day
- Impairments of fire protections systems are followed in accordance to the Planned Impairment Procedures outlined on page 42 of this document

### Access for Fire Fighting

- Approved vehicle access for firefighting shall be provided to all construction or demolition sites
- Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections
- Vehicle access shall be provided by either temporary or permanent roads, capable of
- supporting vehicle loading (min. 76,000 pounds) in all weather conditions
- Key boxes (Knox Box) may be required

### Means of Egress

- Where a building has been constructed to a height greater than 50 feet, or four stories (and in buildings greater than 50 feet or four stories high undergoing alterations), at least one (1) temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses
- Required means of egress shall be maintained during construction, demolition, remodeling, alterations or additions to any building
- Temporary floor signs shall be provided in any stairway connecting 3 or more floors, indicating the floor number, roof access, and direction to exits

### Water Supply for Fire Protection

- An approved water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material arrives on the site

Buildings four (4) or more stories in height shall be provided with at least one (1) standpipe for use during construction. The requirements are:

- The standpipe shall be installed when the progress of construction is more than 40 feet above the lowest level of fire department access
- The standpipe shall be provided with fire department hose connections (2 ½ NFT outlets) at accessible locations adjacent to usable stairs
- The standpipe shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring
- The standpipe shall be either temporary or permanent, with or without a water supply, provided that its capacity, outlets and materials conform to the standard for fire protection standpipes

**When automatic sprinkler protection is being regularly turned off and on to facilitate connection of newly completed segments, the sprinkler control valves shall be checked at the end of each work period to ascertain that protection is in service.**

### Portable Fire Extinguishers

At least one portable fire extinguisher sized for not less than ordinary hazard shall be provided as follows:

- At each stairway on all floor levels where combustible materials have accumulated
- In every storage or construction shed
- Additional extinguishers shall be placed where special hazards exist, such as flammable and combustible storage and use areas

### Motorized Equipment

Internal-combustion-powered construction equipment shall be used in accordance with all of the following conditions:

- Equipment shall be located so that exhausts do not discharge against combustible material
- Exhausts shall be piped to the outside of the building
- Equipment shall not be refueled during operation
- Fuel for equipment shall be stored in an approved area outside of the building

# APPENDIX C: FORMS

The following forms are provided for your convenience and may be used in developing and maintaining your individual Fire and Life Safety Plans.

### Emergency Evacuation Floor Plan Guidelines

http://www.lafayette.in.gov/DocumentCenter/View/11029/Emergency-Evacuation-Floor-Plan-Guidelines

### Emergency Evacuation Plan

http://www.lafayette.in.gov/DocumentCenter/View/11030/Emergency-Evacuation-Plan

### Fire Drill Reporting Form

http://www.lafayette.in.gov/DocumentCenter/View/11031/Fire-Drill-Reporting-Form

### Fire Prevention Plan Template

http://www.lafayette.in.gov/DocumentCenter/View/11032/Fire-Prevention-Plan-Template

### Fire Safety Plan Template

http://www.lafayette.in.gov/DocumentCenter/View/11028/Fire-Safety-Plan-Template

### Fire Safety Inspection Checklist for Existing Buildings

http://www.lafayette.in.gov/DocumentCenter/View/11027/Fire-Safety-Inspection-Checklist-for-Existing-Buidilngs

### Sample Sprinkler Impairment Tag

http://www.lafayette.in.gov/DocumentCenter/View/11026/Sample-Sprinkler-Impairment-Tag

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# GLOSSARY

## Area of refuge

An area where persons unable to use stairways can remain temporarily to await instructions or assistance during emergency evacuation.

## Assembly Group A

Occupancy type for places where (more than 50) people gather for a specific purpose, whether religious, political, educational, social, or entertainment. Examples of Assembly Group A occupancies are churches, lecture halls, concert halls, social clubs, restaurants, nightclubs, dance halls, sports arenas, exhibition halls, and the like.

## Building Coordinator

Person primarily responsible for the development, implementation, and maintenance of an overall fire prevention plan, as well as ensuring all affected persons are trained in the elements of the plan. The building coordinator also has responsibility for oversight of the testing, inspection and maintenance of active fire prevention and suppression systems as well as passive fire protection measures. In smaller facilities, the same person may serve as building coordinator and **emergency coordinator**. (See page 49, above)

## Educational Group E

Occupancy type for places that provide education through the 12th grade for six persons or more. Elementary, intermediate, and high school are examples.

## Emergency Coordinator

Person primarily responsible for the development, implementation, and maintenance of fire safety and fire evacuation plans, as well as ensuring all affected persons are trained in the elements of the plan. In smaller facilities, the same person may serve as **building coordinator** and emergency coordinator. (See page 49, above)

## Emergency impairment of fire protection

Unplanned impairment of fire protection systems or equipment due to accidental or unforeseen circumstances.

## Fire Alarm System

A system of manual or automatic devices that detect a hazardous condition, receive and transmit a fire alarm signal, and notify occupants through attached audio and visual devices.

## Fire Evacuation Plan

Plan focusing primarily on procedures for the evacuation of the occupants in an emergency.

## Fire Official

The Fire Official is the Chief of the Lafayette Fire Department and/or his or her designees.

## Fire Safety Plan

Fire prevention plan focusing on understanding the overall fire protection package of the building as it relates to the building layout, the contents of the building, the means of egress system, the fire hazards, and the identification of key personnel to contact in an emergency.

## Fire Sprinkler System

A system of pipes, pumps, valves and sprinklers that automatically supply a fire suppression agent to control the growth of fire. Fire sprinkler systems are most often water-based.

## Fire Watch

Personnel responsible for patrolling areas where the fire protection systems are impaired or out of service for other reasons. Fire watch personnel must be trained in portable fire extinguisher use. (See page 44, above)

## Fireworks

Typically refers to aerial pyrotechnics set off outdoors.

## Flame effect

Open flame used in a performance with a proximate audience. Requires permit. (See page 90, above)

## Lafayette Fire Department (LFD)

Lafayette Fire Department is the authority having jurisdiction for all matters regulated under the Fire Code. (See **Fire Official**)

## Hazardous Group H

Occupancy type for places that use, produce, process, or store hazardous materials.

## High-rise

In Indiana, any building that has an occupied floor that is more than 75 feet above the lowest level of fire department vehicle access.

## Hood Suppression System

A system of pipes, nozzles, and devices that deliver a wet chemical agent to extinguish a fire associated with commercial cooking operations.

## Hot Works

Operations including cutting, welding, Thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, installation of torch-applied roof systems and the like.

## Impairment

Reduction in the capacity of fire protection equipment due to testing, maintenance or repairs. Impairments may be **preplanned** or **emergency**.

## Impairment Coordinator

The person responsible for the maintenance of a particular fire protection system. To minimize the amount of time a fire protection system is out of service, the building owner or designee is required to monitor impairment procedures. (See page 42, above)

## Indiana Building Code (IBC)

Model building code developed by the International Code Council, as amended. Applies to new buildings and renovations/remodels of existing buildings

## Indiana Fire Code

The International Fire Code 2012 edition 1st printing as amended by the Indiana Fire Prevention and Safety Commission

## Institutional Group I

Occupancy type for places where people are cared for or live in a supervised environment. Examples include nursing homes, assisted living facilities, rehab facilities, and jails.

## International Fire Code (IFC)

Fire prevention code developed by the *International Code Council*, prescribing the minimum requirements to prevent fire and explosion hazards, as well as providing for the safety of building occupants. The fire code also addresses inspection and maintenance requirements for fire protection equipment to ensure optimal active fire protection and passive fire protection measures.

## Mercantile Group M

Occupancies for the display and sale of merchandise, including keeping stocks of goods,

accessible to the public, such as department stores, drug stores, markets, gas stations, and retail and wholesale stores.

## Multiple-station smoke alarm

Two or more single-station alarm devices that are capable of interconnection such that actuation of one causes the appropriate alarm signal to operate in all interconnected alarms.

## National Fire Protection Association (NFPA)

Organization charged with creating and maintaining minimum standards and requirements for fire prevention and suppression activities, training, and equipment, as well as other life-safety codes and standards.

## Preplanned impairment of fire protection

Impairment due to planned or periodic testing and maintenance of fire protection systems or equipment.

## Pyrotechnic special effect

Typically refers to the use of fireworks designed to be used indoors for light and sound effects.

## Residential Group R-1

Occupancy type which contains sleeping units for mostly transient occupants, such as boarding houses, hotels, and motels.

## Residential Group R-4

Occupancy type for facilities for residential care or assisted living for more than five but not more than 16 persons. Examples of Residential Group R-4 facilities are group homes, halfway houses, adult foster care homes, and the like.

## Occupancy

The use to which property is put. In Building and Fire Codes, different occupancy types have different construction and planning requirements.

## Single-station smoke alarm

An assembly incorporating the detector, the control equipment and the alarm-sounding device in one unit, operated from a power supply either in the unit or obtained at the point of installation.

## Smoke Detector

A listed device that senses visible or invisible particles of combustion.

## Smoke Alarm

A single- or multiple-station alarm responsive to smoke.