UAB

The University of Alabama at Birmingham®

Environmental Health and Safety

Fire & Life Safety Program

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The University of Alabama at Birmingham (UAB) Fire & Life Safety (FLS)

1.0 Introduction

Fire and life safety at the University of Alabama at Birmingham (UAB) is governed by federal, state, and local, standards including university policies and university standard operating guidelines. The Authority Having Jurisdiction (AHJ) for fire and life safety at UAB is the City of Birmingham's Fire Marshal's Office. The Department of Environmental Health and Safety (EH&S), Campus Safety Division, is responsible for fire prevention implementation, systems inspections, and program oversight. However, everyone, whether faculty, staff, students, or visitors shares a role in fire and life safety on campus.

UAB is committed to providing a safe environment for building occupants and emergency response personnel.

Fire and life safety at UAB involves numerous activities, programs, and procedures to help ensure that our campus is a safe place to work, live, and play. These program areas include fire prevention, emergency preparedness, preplanning, education, and response. The following information is provided as a general guideline for activities associated with fire and life safety.

1.1 Applicable Codes & Standards

The City of Birmingham's Fire Marshal's Office and UAB have adopted the National Fire Protection Association Life Safety Code©, the International Fire Code©, and all referenced codes and standards as the primary guide for fire and life safety. It is important to note that this code is not all-inclusive, and that other codes and standards may also apply. Some of these include, but are not limited to:

International Building Code (IBC)

International Fire Code (IFC)

National Fire Protection Association (NFPA)

International Mechanical Code (IMC)

Americans with Disabilities Act (ADA)

Occupational Safety and Health Administration (OSHA)

1.2 Disclaimer

The information provided in this document is not a substitute for training or experience.

UAB and the authors of these standards assume no liability for any individual's use or reliance upon any material contained or referenced herein. The material contained in this manual may not be the most current.

2.0 Automated External Defibrillators (AEDs)

An AED is a portable, user-friendly medical device designed to treat cardiac arrest by delivering an electric shock to the heart to restore a normal rhythm. It analyzes the heart's rhythm and, if needed, delivers a shock through the chest to the heart.

3.0 Emergency Action Plan (EAP)

Every building at UAB is required to have an EAP. Each Building Administrator is responsible for developing and maintaining a comprehensive plan for emergencies that may occur in their buildings. The best way to develop this plan is to form an implementation committee with members from each building floor and each department. A typical EAP will generally include, but are not limited to, the following procedures:

Building specific emergency contacts.

Bomb threats.

Loss of electrical power.

Loss of communication.

Active shooter.

Inclement weather.

Fire prevention and building evacuation.

Medical emergency.

Chemical safety.

Guidelines for the evacuation of people with special needs.

Accident/Injury reporting procedures.

For further assistance in developing your EAP, please contact Campus Safety at 205-934-2487. Campus Safety has developed an EAP template that is available upon request.

4.0 Fire Evacuation Drills

To ensure that building occupants are prepared for an emergency evacuation, drills must be conducted on a regular basis. Evacuation drills may be used to vacate a building for several reasons such as fires, gas leaks, chemical spills, bomb threats or other similar emergencies and emphasis should be placed on orderly evacuation rather than on speed.

These drills should involve all occupants. Everyone is required to leave the building when the fire alarm sounds. A person may be exempt from an evacuation drill if it causes undue hardship (e.g., interrupt an experiment or procedure that cannot be halted); however, exemptions are strongly discouraged without permission.

Occupants should close (not lock) doors as they leave the work area, provided this does not violate security procedures. Items that require security may be placed in a locking file cabinet or desk drawer on the way out.

Floor captains should check all rooms and close doors on their way out.

All building occupants should gather at the predetermined location. This location should be away from the building to prevent injury to the occupants from and to not interfere with emergency responders.

Floor captains should take a "head count" to determine if all occupants have left the building.

Upon completion of the drill, an evaluation of the drill shall be conducted and filed with EH&S to identify any areas of improvement and to document the drill.

5.0 Fire Detection and Notification

Most buildings on UAB's campus are equipped with automatic fire detection devices and/or notification systems. These systems are monitored by the UAB Police Communications Center, which is staffed twenty-four hours a day, seven days a week. These systems utilize several different types of detection devices including heat, flame and smoke detectors, relays from suppression/extinguishing systems, and manual pull stations that manually activate the notification system.

5.1 Fire Detection Devices

Heat Detectors: Heat detectors respond to the convection energy in hot smoke and fire gases. Heat detectors are normally located in laboratories, mechanical rooms, storage areas, break rooms, and areas that could produce high levels of dust, steam, or other airborne particles.

Smoke Detectors: Smoke detectors respond to the solid and liquid aerosols produced by a fire. Since smoke detectors cannot distinguish between smoke particles and other particles such as steam, personnel must be aware of detector locations and be considerate when working around them. Smoke detectors are normally found in exit corridors, office areas, assembly areas, and sleeping areas.

Flame Detectors: Flame detectors respond to the presence of a flame. Flame detectors may be found in specific areas, such as chemical storage rooms where a fire will develop rapidly, and the hazard is greater than is expected in normal locations within buildings. These devices are commonly used in conjunction with a fire extinguishing system.

5.2 Notification Devices

Manual Pull Stations: Manual pull stations, when activated, will initiate the building's fire alarm notification system. Pull stations are generally located near exit stairways, building exits, or in corridors. Occupants should be familiar with the location of these devices should they need to initiate a building evacuation. A minimum of 36" clearance must be maintained around manual pull stations. In general, *the activation of a manual pull station does not activate the sprinkler system.*

5.3 Building Notification

The building notification system may consist of horns, bells, speakers, strobes, or a combination of these devices. It is important to maintain a clear line of sight to any of these devices to ensure they can be seen and/or heard.

6.0 Fire Doors

Fire doors serve as a barrier to limit the spread of fire and restrict the movement of smoke. Unless these doors are held open and released by the building fire alarm system, fire doors shall remain closed. Do not tamper with fire doors or block them with equipment, potted plants, furniture, door stops, etc.

Fire doors are normally located in stairwells, corridors, and other areas required by code. The door, door frame, locking mechanism, and closure are components that make up a rated fire door assembly. A fire door rating indicates how long the door assembly can withstand heat. Doors may be rated as low as twenty minutes and as high as three hours. All fire doors will have a label affixed to the door indicating the manufacturer, rating, serial number of the door, and other pertinent information. It is important to not remove, paint, or in any way damage or destroy the label.

For your safety and to maintain the integrity of fire doors there are several important items to remember:

Know which doors are fire doors and keep them closed to protect building occupants and exit paths from fire and smoke.

Never block a fire door with a non-approved closure device such as a door stop, blocks of wood, or a potted plant.

For fire doors with approved closure devices, ensure that objects near the door can impede the closure.

Never alter a fire door or assembly in any way. Simple alterations such as changing the lock or installing a window can lessen or completely void the fire rating of the door.

Doors to offices, laboratories, and classrooms help act as smoke barriers regardless of their fire rating. Keep these doors closed whenever the room is unoccupied.

A closed door is the best way to protect your path to safety from the spread of smoke and fire.

7.0 Fire Extinguishers

Fire extinguishers, when used properly, play a vital role in containing and/or extinguishing small fires. Portable fire extinguishers are designed to be used on small, contained fires, by properly trained individuals. Lives could be saved, and property damage reduced when fire extinguishers are used correctly.

Know the location of the closest extinguisher. A quick response is crucial to effectively extinguish a fire. By code, fire extinguishers are located within 75 feet from any location within a UAB building. Therefore, you should not have to travel farther than 75 feet to access an extinguisher. This distance may be reduced in labs and other high-hazard areas. It is important that extinguishers be conspicuously located, in view, and where they are readily accessible and available for use in the event of a fire.

7.1 Classifications

There are five classifications for fires. These are:

Class A: Fires involving ordinary combustibles, such as paper, wood, plastic, cloth, and trash.

Class B: Fires that involve flammable or combustible liquids, such as gasoline, solvents, oil, paint, and thinners.

Class C: Fires that involve energized electrical equipment or appliances.

Class D: Fires involving flammable metals, such as magnesium and sodium.

Class K: Fires that involve cooking media, such as vegetable oils.

There is a fire extinguisher designed for each type of fire. Some extinguishers can be used on more than one type of fire.

Class A extinguishers are to be used only for Class A fires. This extinguisher contains only water and compressed air and is not to be used on B, C, D, or K fires.

Carbon Dioxide extinguishers are recommended for Class B and C fires. Halon or other similar type fire extinguishers are also rated to be used on B and C fires.

Dry Chemical extinguishers come in two types. One type is rated for B-C fires, and the other is rated for A-B-C fires. The A-B-C or multipurpose extinguisher is the most common extinguisher used at UAB.

Class D extinguishers are specialized to be used only on flammable metals. Never attempt to extinguish a Class D fire with anything other than a CLASS D extinguisher.

Class K extinguishers are designed to be used on flammable cooking oils. They are to be used in conjunction with a commercial fire suppression system.

No extinguisher is designed to be used on all types of fires. It is important to know your fire extinguisher and its limitations.

7.2 Inspection and Maintenance

Campus Maintenance is responsible for the regular inspection of fire extinguishers. They also service extinguishers that have been used. Once used, fire extinguishers must be serviced or replaced. If an extinguisher has been used, is missing, needs to be relocated, or any other type of service, contact Campus Maintenance for assistance at 205-934-9675.

7.3 Usage

Portable fire extinguishers are located throughout buildings across the campus. They are installed according to National Fire Protection Association codes and standards. Extinguishers are readily accessible in hallways, near exits, and in areas containing high fire hazards. Never block access to an extinguisher.

To use a fire extinguisher, remember **PASS**:

Pull the ring pin (held in place by a plastic seal) to "un-lock" the operating lever.

Aim the nozzle at the base of the fire.

Squeeze the lever completely.

Sweep the extinguishing agent from side to side until the fire is extinguished.

The normal operating distance of different extinguishers will vary considerably. A dry chemical extinguisher will have a discharge range of 8-10 feet, while a Carbon Dioxide extinguisher may only reach 5-6 feet.

Remember:

Only attempt to extinguish small, contained fires. No larger than a trashcan.

Make sure you are properly trained, and capable of fighting the fire.

Be certain that you have the correct extinguisher for the type of fire.

Always keep a clear, unobstructed exit.

Know two ways out of a room if possible.

Never tum your back on a fire.

Fires may re-ignite, so be prepared.

7.4 Training

Learn how to use a fire extinguisher before an emergency occurs. EH&S provides training in the use of portable fire extinguishers. Participants will learn about the different types of extinguishers, and how to use each type. Make sure you have the correct extinguisher for the type of fire to be extinguished. All extinguishers have a label that states what type of fire they can be used on, and this will be explained to further assist occupants in selecting the proper type of extinguisher.

8.0 Fire and Life Safety Inspections (Hazard Surveillance)

Fire and life safety inspections, also referred to as an ALSI (Annual Life Safety Inspection), are conducted at least annually in UAB buildings and facilities. The goal of these inspections is to identify potentially unsafe practices and conditions in UAB buildings and facilities. EH&S will notify the Building Administrator or Facility Coordinator to schedule the inspection. The Campus Maintenance General Mechanic for the building being inspected may accompany the Campus Safety Inspector as needed.

Common inspection criteria included in these inspections are:

Access to and identification of the facility for emergency responders.

Location of and access to emergency notification and suppression systems.

Fire extinguisher location, operation, and current inspections.

Means of egress and verifying that egress components are unobstructed and are in proper working condition (stairwells, corridors, fire doors, etc.).

Emergency exit lighting and emergency exit sign operation and location.

Electrical safety (extension cords, power strips, etc.).

Storage of materials (24" from the ceiling, 18" from sprinkler heads).

General housekeeping (accumulation of materials may contribute to a fire hazard.)

Presence of ignition sources.

Flammable and combustible storage.

Cylinder use and storage.

Mechanical room storage.

Upon completion of the inspection, a report is generated and submitted to the Building Administrator or Facility Coordinator and Campus Maintenance Supervisor. Designated personnel shall take the necessary actions to remediate all discrepancies annotated in the inspection.

In addition to regular facility fire and life safety inspections, EH&S conducts inspections in our residence halls, food facilities, and maintenance spaces. Residence hall inspections are conducted during the first weeks of the fall semester and a second time during the spring or summer semester.

9.0 Fire Prevention

Fire safety is everyone's responsibility. You are your office's best fire inspector. The following information will provide ways you can help prevent fires.

Fire prevention starts with good housekeeping. Loose paper, trash, and other combustible items such as cardboard boxes are fuel sources for fires. If these combustible items are stored properly the risk of fire can be greatly reduced. Here are some things to be mindful of when it comes to combustible items:

Never store items within 24 inches of the ceiling in buildings/facilities not equipped with a sprinkler system.

If you have sprinkler heads in your building/facility, maintain at least 18 inches of clearance below the sprinkler heads.

Keep combustible items away from electrical sources as they produce heat and/or sparks.

Keep quantities of combustible items to a minimum.

Never store combustible items in an exit corridor or any items in a stair enclosure.

Flammable and combustible materials are stored in approved cabinets, or containers.

Mechanical, electrical, and other similar rooms shall not be used for storage.

9.1 Fire Reporting

If you discover a fire in a facility on campus you should locate and activate the nearest manual pull station to initiate a building evacuation.

Dial 205-934-3535 or 911 to report the fire and provide information such as the building/facility name, number, address, and room number if known. If possible, provide other pertinent information such as the type of fire, injuries, or other information requested by the emergency operator.

If you are trained in the proper use of a portable fire extinguisher, and are not in immediate danger, you may attempt to extinguish the fire.

Also, assist any physically disabled occupants on upper floors to an approved shelter-in-place location such as a fire/smoke-rated stairwell.

9.2 Fire Suppression

UAB uses various types of fire suppression equipment including portable fire extinguishers, water sprinklers, special gas extinguishing systems, cooking hood systems, and fire hose/standpipe systems. The following sections discuss each type of fire suppression equipment.

9.3 Sprinkler Systems

The purpose of a water sprinkler system is to contain and minimize the spread of a fire, but it is often successful in extinguishing fires. Sprinkler heads are activated by heat. Generally, if one is activated not all the sprinklers in a building will be discharged. Only certain specialized sprinkler systems are connected to smoke detectors or manual pull stations.

To ensure that sprinklers are effective in the event of a fire:

Maintain a minimum of 18 inches of clearance below the sprinkler head. This includes any equipment or stored items.

Do not hang drapes, curtains, tarps, etc. that will interfere with the spray pattern of the sprinkler.

Never attach or hang anything from sprinkler piping or sprinkler heads.

Do not paint or damage sprinkler heads in any manner.

9.4 Fire Extinguishing Systems

Special work areas such as computer server rooms or bulk chemical storage rooms may contain specialized gaseous fire extinguishing systems such as carbon dioxide (CO2), FE 13, FM 200, or Halon 1301 in lieu of a water-based fire suppression system. These systems work by displacing the oxygen in the room to a level that will no longer support a fire. To ensure that the system operates as designed, the area or room(s) protected must have its structural integrity preserved to maintain the required concentration level of the gas. There should be no penetrations through walls, ceilings, or floors and doors should be kept in the closed position.

Once a system is activated, the low level of oxygen is also dangerous to humans. Caution should be used when working in areas where these oxygen-depriving extinguishing agents are used. Manually operated systems, such as a pull-station or push button, should have signs posted indicating it will activate the agent. Do not enter a room that has discharged an oxygen-depriving agent until it has been ventilated, and appropriate tests of the atmosphere have verified it is safe to enter.

9.5 Fire Hoses and Standpipe Systems

A standpipe system is an arrangement of piping, valves, hose connections, and equipment installed in a building or structure for the purpose of manually extinguishing a fire. Fire hose cabinets are in several buildings near or in the exit stairwells and corridors. UAB safety regulations state that employees should only attempt to extinguish a fire with a portable fire extinguisher. Local fire department responders will use the standpipe system in the event of a fire in a building. Access to these systems shall not be blocked and kept free of foreign objects.

9.6 Open Flames

The use of candles, incense burners, and oil lamps is strictly prohibited by UAB faculty, staff, students, and visitors.

Candles, incense burners, oil lamps, or other personal items that have open flames or that smolder, are prohibited in all campus buildings including work areas (individual or group), conference rooms, restrooms, etc. This restriction applies to such items regardless of whether the item has been lit. Wax warmers may be used as intended by the manufacturer and in accordance with the manufacturer's directions but shall never be used unattended.

The use of candles does not apply to such devices used in the course and scope of university or agency sponsored research or activities necessary to conduct business operations. If the burning of a candle(s) is permitted under the above-mentioned exemption, the candle must be in a glass or similar container and kept away from combustible materials.

Students living in residence halls are governed by similar but separate rules as set forth by Student Housing.

9.7 Combustible Storage

One of the most common violations of general fire safety is improper or excessive storage of combustible materials. By storing excess combustible materials, you not only increase the potential for having a fire but also increase the potential severity of a fire. To reduce the hazards associated with combustible storage, please review the following:

Never store combustible materials in hallways, corridors, stairwells, or mechanical rooms.

In non-sprinkler buildings when stacking combustible materials, leave at least 24 inches from the top of the storage to the ceiling.

In sprinkled buildings when stacking combustible materials, leave at least 18 inches of clearance from the top of the storage to the ceiling.

Keep only what you need. Throw away any unneeded combustible materials.

Purchase materials in the smallest volumes necessary.

At work locations, keep only those chemicals that are needed for the present task.

Do not let hazardous waste accumulate.

Store products, including waste, in the proper locations.

Keep flammable materials separate from other processes and storage areas.

10.0 Compressed Gas Cylinders

Use and storage of compressed gas cylinders of all shapes and sizes are used throughout the campus for tasks such as welding and research. There are two types of hazards associated with the use, storage, and handling of compressed gas cylinders: the chemical hazard associated with the cylinder contents (corrosive, toxic, flammable, etc.) and the physical hazards represented by the presence of a high-pressure vessel in the spaces they are stored. Some cylinders can be pressurized up to 2,200 pounds per square inch (psi). If the cylinder is improperly secured and falls so that the valve is damaged, it can release the stored pressure through a hole no bigger than a pencil. This creates a very dangerous and destructive missile.

UAB mandates that the following guidelines shall be adhered to:

All compressed gas cylinders are required to be clearly labeled as to the contents and any associated hazards. Deteriorated or corroded labels must be replaced.

All cylinders without adequate labeling to identify contents shall be labeled as "Contents Unknown" and returned to the supplier. Color coding is not a reliable method of determining content.

Compressed gas cylinders shall be transported on wheeled carts equipped with straps or chains to secure the cylinder to the cart. Rolling or dragging cylinders is not recommended due to the possibility of damage to the cylinder and injury to personnel.

Cylinder valve protection caps shall always remain in place other than when cylinders are connected for use and secured.

All compressed gas cylinders must be secured upright and in place to prevent falling by using approved chains, straps, stands, or carts. When delivering new cylinders, if the cylinder cannot be safely secured using an approved method the delivery personnel SHALL NOT deliver the cylinder.

The delivery personnel may not leave tanks unsecured at any time. Tanks must not be left unsecured at the delivery truck or on the truck lift gate.

It is the responsibility of the users of the compressed gas cylinders to connect and disconnect cylinders for pickup and delivery. Delivery personnel shall not connect or disconnect cylinders.

Cylinders not required for current use should be stored outside of the work area in a protected, fenced, outdoor storage area. If stored indoors, cylinders should be stored in well- ventilated areas away from sources of heat and ignition. The area must be secured from unauthorized access with appropriate signage on the outside to inform emergency personnel of potential hazards. Storage rooms must meet the code requirements of the NFPA 55 Standard for Storage, Use, and Handling of Compressed and Liquefied Gases in Portable Containers.

Cylinders shall not be stored in corridors.

Automatic pressure regulators or reducing valves shall be used on all gas cylinders to maintain a uniform gas supply at the correct pressure. Only regulators listed by agencies such as Underwriters Laboratories® or Factory Mutual should be used. Use only the appropriate, designated regulator for the specific gas to be used.

Regulators for oxygen or fuel gas cylinders shall be equipped with a high-pressure (cylinder pressure) and a low-pressure (delivery pressure) gauge, a flow control valve, and a delivery adjustment screw.

Do not use oil around oxygen gauges, valves, or connectors. Follow the supplier's recommendations for cleaning the cylinder outlet fittings and openings.

Close the cylinder valve when the equipment is not in use or unattended overnight.

Cylinders containing toxic or flammable gases must be stored in an approved storage area. The use of the smallest possible cylinder of toxic or flammable gases is recommended.

Cylinders containing oxidizing gases, such as oxygen and nitrous oxide, shall be stored separately from flammable gases or liquids in accordance with NFPA 55 Standard for Storage, Use, and Handling of Compressed and Liquefied Gases in Portable Containers.

Empty cylinders shall be identified and stored separately from full or partially full cylinders.

Compressed gas cylinders shall be used only for their intended purposes.

10.1 Liquefied Petroleum Gas (LPG)

Most locations on campus are not appropriate for the use and storage of LPG products. EH&S must be contacted for consultation and approval prior to the use of any LPG product at UAB.

The State of Alabama LPG Board regulates the sale and use of LPG, including butane and propane. In addition, the Liquefied Petroleum Gas Code (NFPA 58) provides regulations on the use of LPG as well. These regulations govern several types of LPG-powered equipment and procedures which include forklifts, floor buffers, cooking/heating equipment, and laboratory equipment.

Exhaust fumes may contain carbon monoxide which presents a health hazard. Exhaust can also create smoke which may activate a smoke detector. Take special precautions to ensure adequate ventilation when using these machines/equipment indoors.

Because LPG is extremely flammable, it is a fire hazard. Do not store LPG near heat, flame, or other ignition sources. Do not leave portable LPG containers larger than 16 oz. in a building overnight. Portable LPG containers and LPG equipment shall be stored outside in a storage area that is at least 25 feet away from other buildings, combustible materials, roadways, railroads, pipelines, utility lines, and the property line. This storage area should prevent unauthorized entry and have a portable fire extinguisher within 25 feet.

When using portable LPG containers, the requirements listed below shall be adhered to:

Inspect containers for excessive denting, bulging, gouging, and corrosion and check hoses for cracks and deterioration; containers displaying any of these signs shall be removed from service.

Label all containers as Flammable and as LP-Gas, Propane, or Butane.

Cylinders shall be located to minimize exposure to excessive heat and physical damage.

Cylinders shall be stored away from exits, stairways, or areas normally used or intended for the use of egress for occupants.

Quantities more than this amount shall be stored outside in a lockable ventilated enclosure of metal exterior construction; protection against vehicle impact shall be provided.

10.2 LPG Powered Industrial Trucks

Use of LPG Use of LPG-powered industrial trucks shall follow the guideline for containers in the previous section, in addition to the following:

LPG cylinders shall be refueled outdoors.

The number of cylinders on an industrial truck shall not exceed 2.

The size of a cylinder on an individual truck shall not exceed 45 pounds.

Cylinder pressure relief valve discharge shall be directed upward within 45 degrees of vertical and shall not impinge on the cylinder, exhaust system, or any other part of the truck.

The discharge opening shall be provided with a protective cover.

Trucks shall not be parked or left unattended without the cylinder shut-off valve being in the closed position.

Do not park the truck near areas of excessive heat or near sources of ignition.

11.0 Construction and Renovation

All proposed construction, structural changes, or any change affecting egress from a space within a building at UAB, must be reviewed and approved by the City of Birmingham and Campus Safety. EH&S has issued the following procedures for construction and renovation projects:

Campus Safety shall review all blueprints for construction and renovation projects that will take place on the campus.

Campus Safety shall attend all Preconstruction Conference (PCC) meetings to address safety concerns and Interim Life Safety Measures (ILSM) for the project.

Campus Safety will issue any permits needed for the project such as:

Hot Work.

Interim Life Safety Measures (ILSM).

Live Work.

Fire/Smoke Wall Penetration.

Fire Watch.

Campus Safety shall attend Owner, Architect, Contractor, (OAC) meetings as needed to address fire and life safety concerns during the project.

Campus Safety shall conduct periodic inspections during renovations and construction projects.

When an ILSM permit is issued (AHJ issued permits supersede all other requirements), the following requirements, but not limited to, shall be followed:

All egress routes must be maintained. If egress routes must be obstructed, Campus Safety shall be contacted, and an alternate route shall be implemented with all necessary signage in place. The Building Administrator will be notified and will inform occupants regarding blocked routes and directions to alternate routes.

If the alarm and/or sprinkler systems are shut down for any period, Campus Safety and Birmingham Fire Dispatch must be notified. A Fire Watch permit will be issued by Campus Safety. All Fire Watch requirements shall be followed and log entries maintained. All documents will be submitted to Campus Safety upon the completion of Fire Watch requirements.

Fire extinguishers shall be provided and maintained during the project. The no smoking policy shall be enforced at all times. All combustible loads must be kept to a minimum. Good housekeeping shall be enforced. All dust control measures (e.g., partitions, walk-off mats, HEPA filtration units) shall be maintained for the duration of the project.

12.0 Decorations

When decorating your area, the following requirements shall be adhered to:

Never hang anything from fire sprinkler piping or heads.

No decoration or lighting shall be hung from the ceiling. This can lead to fire spread, inhibit the proper operation of the sprinkler systems (If equipped) and lead to entanglement hazards during an emergency.

Any electric light set used must bear the Underwriters' Laboratories (UL) label.

Use no more than three sets of lights per strand. Do not overload electrical outlets. Use only one UL-labeled electrical cord. If additional outlets are needed, utilize a surge protector rather than extension cords and multi-plug adapters.

Protect wires from damage. Do not run wires under the carpet, through doorways, or across aisles or corridors. Do not place wires where they will be walked on. Do not use nails or tacks to hang wires. The use of approved cable crossings is permitted.

Never obstruct fire alarm devices such as pull stations.

Any combustible decorations such as curtains or drapes must be fire-resistant material.

Never obstruct an exit or the visibility of exit signs.

Never staple or tack light strings.

Decorations shall not be placed in exit corridors or stairways.

Ceilings shall not be covered by decorative materials. No more than 30% of a wall shall be covered by decorative materials.

Holiday decorations are often fire hazards if not utilized properly. Follow these guidelines to maintain fire safety during the holidays:

Do not use live-cut Christmas trees in UAB buildings. Use a fire-resistant artificial tree.

Do not place holiday decorations where they may block emergency egress routes (e.g., stairways, corridors). Only use decorations that are fire-retardant.

Practice good housekeeping by minimizing paper and other combustible decorations.

Avoid using extension cords. If you must use an extension cord, use a heavy gauge cord, and place it in plain view. Make sure the cord does not pose a tripping hazard.

Do not light candles or use other decorations with open flames.

Decorations or advertisements should never be placed on the exterior of a UAB building. Decorations/advertisements shall be self-supporting and be placed as far away from buildings as possible. Utility equipment such as telephone poles, guywires, fire hydrants, gas or electric meters, or building service entrance wiring connections shall not be used to support, as part of, or obstructed by decorations. Ground anchoring should be avoided to protect utilities.

13.0 Electrical Safety

Electrical safety refers to the practices and procedures aimed at minimizing the risks of electrical injuries or fatalities. This involves using safe equipment, proper training, adhering to regulations, and maintaining equipment to prevent electric shock, fires, and other hazards.

13.1 Extension Cords and Power-Strips

Many times, it is necessary to use extension cords or power strips (surge protectors) to reach a work area or to provide additional outlets. It is important not to overload outlets, protect cords, and follow the manufacturer's recommendation. Additionally, the following guidelines shall be adhered to while utilizing these items:

Extension cords are for temporary use (defined as an 8-hour workday or less).

Unplug and properly store cords when not in use.

Install permanent code-compliant wiring for long-term use.

Extension cords or power strips must be plugged directly into a wall receptacle – “daisy chaining” of extension cords, power strips, or any combination thereof is forbidden.

Extension cords may be used for portable equipment.

Extension cords and power strips should be examined regularly for damage and removed from service if the damage is found. No taping or splicing allowed.

Extension cords and power strips shall be listed as FM or UL and should be equipped with over-current protection.

Extension cords shall not be run above the ceiling or under the carpet or other similar materials.

Extension cords must be placed so as not to cause a trip hazard.

Extension cords or power strips should not be used inside fume hoods.

Extension cords should be 16 gauge or heavier, insulation must be adequate and for the intended purpose.

Extension cords must be three prongs with proper grounding utilized.

The recommended length of extension cords is no more than 100 feet.

13.2 Electrical Panels

Blocking electrical panels that house circuit breakers are in violation of OSHA regulations and NFPA codes. These regulations require accessibility to the front of electrical panels to have a minimum of three feet of clearance and a minimum width to be the width of the equipment or 2.5 feet, whichever is greater. This ensures that in the event of an electrical emergency access to the circuit breakers is maintained.

Having up-to-date directories of circuit breakers also saves time during an emergency when power must be removed.

All panels that have had a knockout removed in the panel shall either be filled with a circuit breaker or an electrical panel blank. No use of tape or any other means of cover-up unless approved by the National Electrical Code or NFPA 70.

Electrical panels contain multiple junctions of live wires and other components, and they are required to always be accessible. Panels are also required to have a "dead front," per 29 CFR 1910.305(d). NFPA 70 describes a dead front as an area of the panel "without live parts exposed to a person on the operating side of the equipment". All live components must be covered in this way so that anyone using the circuit breaker is safe from electric shock. Electrical panel boxes in commercial buildings should be locked and accessible by trained personnel only.

An approved Lockout/Tagout program must be used if the panel is to be de-energized for service to a building service, equipment, or machine.

13.3 Space Heaters

Some general guidelines to remember when using space heaters are:

Always use appliances that are UL or FM labeled.

Space heaters shall never be left unattended.

Only electric space heaters may be used.

Portable space heaters are prohibited in sleeping quarters.

Portable space heaters used shall be limited to devices where the heating element is limited to not more than 212°F (100°C), and to devices equipped with a safety "tip-over" switch which disconnects power if the device tips over.

Space heaters shall be unplugged when not in use.

A minimum of 36" should be maintained from any combustible materials.

Adequate space should be provided around space heaters to allow for air circulation.

Space heaters should be plugged directly into wall receptacles and not into power strips.

Perform frequent inspections of the electrical cord for damage and to ensure a tight connection of the cord to the receptacle.

If the heater begins to spark or produce an electrical smell, turn the power off immediately and discontinue using the appliance.

Space heaters shall never be used in rooms with flammable gases.

14.0 Emergency Access and Egress

Emergency access and egress are critical during an emergency. Timing and quick response are essential to save lives and property. Effective emergency access ensures that fire trucks can reach a building. Unobstructed emergency egress ensures that building occupants can exit a building to safety.

Emergency access helps ensure that facilities and equipment always remain available and unobstructed to ensure effective fire detection, evacuation, suppression, and response.

Emergency egress is defined as a continuous and unobstructed way to travel from any point in a public building to a public way. A means of egress may include horizontal and vertical travel routes, including adjoining rooms, doors, hallways, corridors, passageways, balconies, ramps, stairs, enclosures, lobbies, courts, and yards.

14.1 Corridors, Stairways, and Exits

An exit corridor and/or stairway is a pedestrian pathway that allows direct access to the outside of a building and/or allows access to a building entrance and subsequent pathways to the outside of a building. An exit corridor is the quickest, easiest, and most direct pathway for leaving a building. Because exit corridors or passageways are the primary means of egress during an emergency, employees must follow the safety guidelines outlined in this section.

Follow these guidelines to promote safe evacuation in corridors, stairways, and exits:

Keep all means of egress clean, clutter-free, and unobstructed.

Do not place hazardous materials or equipment in areas that are used for evacuation.

Do not use corridors or stairways for storage or office/laboratory operations.

Do not place locks, chains, or other devices that can defeat or obstruct an exit without prior written permission from EH&S.

Corridors may not be used as an extension of the office or laboratory.

15.0 Flammable and Combustible Liquids

Flammable liquids are those that ignite easily, while combustible liquids require more heat to ignite. A key factor is their flash point, the lowest temperature at which a liquid produces enough vapor to ignite when exposed to a spark. The flash point is the main factor used to classify a liquid as flammable or combustible.

Flammable liquids have a flash point below 100°F (37.8°C). This means they can ignite easily under normal conditions.

Combustible liquids have a flash point at or above 100°F (37.8°C). They require a higher temperature to ignite.

Flammable liquids are classified based on their flash point and boiling point, with flash point being the minimum temperature at which a liquid gives off enough vapor to ignite in the presence of an ignition source.

NFPA Classification:

Class I: Flammable liquids with flashpoints below 100°F (37.8°C).

Class IA: Flashpoints below 73°F (22.8°C) and boiling points below 100°F (37.8°C).

Class IB: Flashpoints below 73°F (22.8°C) and boiling points at or above 100°F (37.8°C).

Class IC: Flashpoints at or above 73°F (22.8°C) and below 100°F (37.8°C).

Class II: Combustible liquids with flashpoints at or above 100°F (37.8°C) and below 140°F (60°C).

Class IIIA: Combustible liquids with flashpoints at or above 140°F (60°C) and below 200°F (93.3°C).

Class IIIB: Combustible liquids with flashpoints at or above 200°F (93.3°C).

You can identify if you are working with flammable or combustible materials by referencing the flash point on the product label or Safety Data Sheet (SDS).

When working with these materials, precautions should be taken to prevent the ignition of flammable vapors by sources such as open flames, hot surfaces, radiant heat, smoking, cutting and welding, sparks, and static electricity.

Ensure you are in a well-ventilated and/or exhausted area to allow dangerous vapors to dissipate or escape the area. Only acceptable containers that meet the requirements outlined in the flammable and combustible liquids code published by the NFPA should be used with flammable and combustible liquids.

The allowable size of these containers is dependent upon the class of liquid and the container type and is specified in the flammable and combustible liquids code (NFPA 30).

Flammable and combustible liquids should be stored inside a flammable liquid storage cabinet with an aggregate amount of liquid stored in an individual storage cabinet not to exceed 120 gallons.

16.0 Generators

Follow manufacturer recommendations and specifications for the unit being utilized. Checks should be conducted in accordance with manufacturer specifications to include any cracks, dents, or corrosion to the body of the unit.

Ensure that the cords and wires on the generator are not frayed or exposed. Use only cords and components that are listed and approved for the intended use and load. Outdoor locations must be 3-pronged and grounded. All equipment must bear a listing mark from an approved UL testing laboratory.

Regularly check the generator for any fuel leaks. Hot fueling is not permitted. Check that the generator is off and cool before attempting to refuel. Label the fuel clearly and store it in a cool location away from people and other combustible materials. Fuel storage is not permitted under tents or inside university facilities.

Carbon monoxide, an odorless, tasteless, and colorless gas, starves the body of oxygen, causing nausea, headaches, and even death. To avoid exposing anyone to carbon monoxide poising, position the generator and its exhaust system away from where people will assemble. Never operate a generator indoors, under tents, or in enclosed spaces.

Generators must be placed away from people. A barrier should be placed around the generator to prevent thermal bums from heated parts, while not obstructing egress. Cord management is extremely important to avoid trip hazards. Clear a wide pathway to the generator to prevent falls.

Water easily carries electrical currents. Check that the generator is positioned in a dry location. Do not operate the generator during wet weather of any kind.

17.0 No-Smoking Policy

The use of tobacco and smoking-related products is prohibited in all buildings, facilities, and spaces (including covered walkways and covered parking) that are owned, rented, or leased by UAB.

As an institution dedicated to the preservation of health and the prevention of disease, it is important for UAB to provide the means for protecting the health of its faculty, staff, students, patients, and visitors from the hazards associated with tobacco and smoking-related products used within the confines of university buildings and facilities. This policy complements other restrictions in place for tobacco and smoking-related products enacted by applicable law, regulation, or ordinance.

This policy applies to all individuals, including but not limited to students, faculty, staff, patients, visitors, vendors, and contractors, physically located on campus or other properties controlled by UAB. UAB Medicine components maintain separate non-smoking policies applicable to buildings, facilities, and spaces under their control.

For purposes of this policy, tobacco and smoking-related products are defined as any type of tobacco product or product intended to mimic tobacco products or the smoking or vaping of any other substance. This includes but is not limited to cigarettes, cigars, cigarillos, smokeless tobacco, electronic cigarettes, pipes, bidis, and hookahs. This does not include nicotine gum or patches.

Use of tobacco or smoking-related products is prohibited within all buildings, facilities, vehicles, and spaces (including covered walkways, covered parking, parking lots, commons, parks, and campus greens) that are owned, rented, leased, or otherwise controlled by UAB and otherwise in accordance with city ordinance.

Exceptions to this policy may be made under the following conditions:

For research involving smoking with approval of the Vice President for Research.

For theatrical productions requiring use of tobacco and/or smoking related products with approval of the provost.

Confirmed violations of this policy will result in appropriate consequences commensurate with the offense, up to and including dismissal from academic programs or termination of employment, appointment, or other relationships with UAB.

The Vice President for Financial Affairs and Administration is responsible for overall procedures to implement this policy.

Appendix A

Record of Reviews and Changes		
Date	**Comments**	**Name**
19MAY2025	Full manual formatting and development.	C.M. Ham, Sr.