ILLINOIS INSTITUTE OF TECHNOLOGY SAFETY POLICY COMMITTEE

Life Safety Inspection Policy

Approved: October 10, 2005

Reviewed: March 4, 2024

TABLE OF CONTENTS

1. PURPOSE

This Policy provides guidance on establishing and maintaining a life safety management program in order to provide a fire-safe, functional and effective environment for staff, occupants and visitors.

2. SCOPE

Several federal laws and regulations exist which govern fire safety. State and local governing agencies also establish fire codes, which affect our campus. OSHA is responsible for establishing the standards and publishing the regulations on fire safety. OSHA requires all employers to provide proper exits, fire-fighting equipment and training to prevent fire deaths and injuries in the workplace. Many OSHA standards are based on recommendations of the National Fire Protection Associations (NFPA).

3. DEFINITIONS

See Appendix A.

4. RESPONSIBILITIES –PERFORMANCE MONITORING

The Department of Facilities and the Building Monitors Committee will establish, implement and maintain a program or programs of Life Safety Inspection consistent with the following:

4.1. The Life Safety Inspection should include provisions for ongoing monitoring of the Inspecting, preventive maintenance and testing of applicable equipment.

4.2. The Department of Facilities is responsible for inspection, testing and maintenance of the safety equipment and alterations or additions to the equipment and for providing access to components of the equipment that require inspection, testing or maintenance; the Building Monitors Committee, in conjunction with the Department of Facilities, is responsible for inspection, testing and maintenance of buildings and alterations and additions thereto.

4.3. Establishing an inspection, testing and maintenance program that encompasses the relevant areas of NFPA Codes and related regulatory requirements.

4.4. Maintaining all documentation and records of inspections, testing and maintenance. Records should indicate the procedure performed (e.g., inspection, test or maintenance), the organization that performed the work, the results and the date.

4.5. Ensuring compliance all applicable Codes.

5. PROCEDURES

As the Department of Facilities works to establish its program or programs of Life Safety Inspection, it should follow the following procedures.

A. Contact the Authority having Jurisdiction to determine if NFPA Codes and standards comply with localregulations.

B. Research and obtain any standards related to requirements from accreditation organizations or insurance carriers.

C. Establish an inventory of all fire protection and extinguishing systems components and equipment.

D. Maintenance, Inspections andTesting

5. D.1. Inspection, testing or maintenance should be done by a contractor only under a written contract. Service personnel must be qualified and experienced in the inspection, testing and maintenance of fire alarm systems.

5.D.2. Fire equipment should be cleaned periodically, depending on conditions, to remove any accumulation of dust and dirt that could adversely affect the device and appliance performance.

5.D.3. When a major component or subsystem is rebuilt or replaced, the subsystem should be tested in accordance with the original acceptance test required for that subsystem.

5.D.4. Any abnormality observed during inspection or testing should be reported promptly to the Department of Facilities or Facility Supervisor.

6. RECORDKEEPING REQUIREMENTS

A. Records and Reports

6.A.l. Records of inspections, tests and maintenance of each life safety system and its components will be made available to the inspecting agency (OSHA) upon request. Typical records include, but are not limited to:

6.A.1.1. Shop drawings
6.A.1.2. As built installation drawings
6.A.1.3. Original acceptance test records
6.A.1.4. Manufacturer's maintenancebulletins
6.A.1.5. Operation and maintenance manuals
6.A.1.6. Inspection reports

6.A.1.7. Test reports (flow, drain, and pump tests; and trip tests of dry pipe, deluge, and pre-action valves)

6.A.2. Records will indicate the procedure performed (e.g., inspection, test or maintenance), the organization that performed the work, the results, and the date.

6.A.3. Original records should be retained for the life of the system. Subsequent records will be retained for a period of one year after the next inspection or maintenance required by the standard.

7. APPENDIX – DEFINITIONS AND BLANK FORMS

The following appendices, which are attached to this Policy, are hereby incorporated into and made a part of this policy as if fully set forth herein.

A. Definitions
B. Sample Fire Hazard Survey
C. Sample Fire Hazard Log
D. Sample Fire Equipment Inventory

8. APPROVAL

The IIT Safety Committee has reviewed and recommend the adoption of this Policy on July 18, 2005, and this Life Safety Inspection Policy is approved and effective this 10th day of October 2005. The Safety Committee will review the contents, implementation and effectiveness of this Policy no less than annually (but as often as necessary) to ensure that it meets all required legal and regulatory requirements and is adequately providing a safe and healthful environment for IIT faculty, employees and students. Any modification to this Policy have been reviewed and approved, and effective as of the date noted on the cover page.

By: /s/

Allan S. Myerson, Provost and Senior Vice President

By: /s/

John P. Collins, Vice President for Business & Administration

APPENDIX A
DEFINITIONS

Alarm. A warning of fire danger.

Alarm Signal. A signal indicating an emergency requiring immediate action, such as a signal indicative of fire.

Alternate Power Source. One or more generator sets, or battery systems where permitted, intended to provide power during the interruption of the normal electrical service; or the public utility electrical service intended to provide power during interruption of service normally provided by the generating facilities on the premises.

Annunciator. A unit containing one or more indicator lamps, alphanumeric displays or other equivalent means in which each indication provides status information about a circuit, condition or location.

ANSI/ASME. An American National Standards Institute publication, sponsored and published by the American Society of Mechanical Engineers.

Antifreeze System. A wet pipe system employing automatic sprinklers attached to a piping system containing an antifreeze solution and connected to a water supply. The antifreeze solution is discharged, followed by water, immediately upon operation of sprinklers opened by heat from a fire.

Approved. Acceptable to the authority having jurisdiction.

Authority Having Jurisdiction (AHJ). The organization, agency, entity, office, or individual responsible for approving equipment, an installation or a procedure.

Automatic Fire Extinguishing System. Any system designed and installed to detect a fire and subsequently discharge an extinguishing agent without the necessity of human intervention.

Automatic Extinguishing System Supervisory Device. A device that responds to abnormal conditions that could affect the proper operation of an automatic sprinkler system or other fire extinguishing system or suppression system, including, but not limited to, control valves; pressure levels; liquid agent levels and temperatures; pump power and running, engine temperature and over speed; and room temperature.

Automatic Fire Detector. A device designed to detect the presence of a fire signature and to initiate action. Automatic fire detectors are classified as follows:

- Automatic Fire Extinguishing or Suppression System Operation Detector. Adevice that automatically detects the operation of a fire extinguishing or suppression system by means appropriate to the system employed.

- Fire-Gas Detector. A device that detects gases produced by a fire.

- Heat Detector. A fire detector that senses heat produced by burning substances. Heat is the energy produced by combustion that causes substances to rise in temperature.

- Smoke Detector. A device that detects visible or invisible particles of combustion.

Automatic Standpipe System. A standpipe system that is attached to a water supply capable of supplying thesystem demand at all limes and that requires no action other than opening a hose valve to provide water at hose connections.

Carbon Dioxide. A colorless, odorless, electrically nonconductive inert gas that is a suitable medium for extinguishing Class B and Class C fires. Carbon dioxide gas is 1 1/2 times heavier than air.

Certification of Personnel. A formal program of related instruction and testing as provided by a recognized organization or the authority having jurisdiction.

CFR. The Code of Federal Regulations of the United States Government.

Classes of Fires

- Class A Fires. Fires in ordinary combustible materials, such as wood, cloth, paper, rubber, and manyplastics.

- Class B Fires. Fires in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases.

- Class C Fires. Fires that involve energized electrical equipment where the electrical non-conductivity of the extinguishing media is of importance. (When electrical equipment is de-energized, fire extinguishers for Class A or Class B fires can be used safely.)

- Class D Fires. Fires in combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium.

- Class K Fires. Fires in cooking appliances that involve combustible cooking media, such as vegetable or animal oils and fats.

Code. A standard that is an extensive compilation of provisions covering broad subject matter or that is suitable for adoption into law independently of other codes and standards.

Coded. An audible or visible signal conveying several discreet bits or units of information. Notification signal examples are numbered strokes of an impact-type appliance and numbered flashes of a visible appliance.

Combined Standpipe and Sprinkler System. A system where the water piping services both 2½ inch (63.5-mm) outlets for fire department use and outlets for automatic sprinklers.

Compartmentation. The division of a structure into fire zones and smoke zones using fire and smoke barrier walls, floors, ceilings and doors.

Control Valve. A valve used to control the water supply system.

Damper. A valve or plate within a duct or its terminal components for controlling draft or the flow of gases, including air.

Deluge System. A system employing open sprinklers attached to a piping system and connected to a water supply through a valve that is opened by the operation of a detection system installed in the same areas as the sprinklers. When this valve opens, water flows into the piping system and discharges from ail sprinklers attached thereto.

Dedicated Smoke Control Systems. Systems that are intended for the purpose of smoke control only. They are separate systems of air moving and distribution equipment that do not function under normal building operating conditions. Upon activation, these systems operate specifically to perform the smoke control function.

Disaster. Within the context of this Policy, a disaster is defined as any unusual occurrence or unforeseen situation that seriously overtaxes or threatens to seriously overtax the routine capabilities of a health care facility.

DOT. The U.S. Department of Transportation.

Double-Insulated Appliances. Appliances having an insulation system comprising both basic insulation necessary for the functioning of the appliance and for basic protection against electric shock and supplementary insulation. The supplementary insulation is independent insulation provided in addition to the basic insulation to ensure protection against electric shock in case of failure of the basic insulation.

Dry Barrel Hydrant. (Frost-proof hydrant). This is the most common type of hydrant; it has a control valve below the frost line between the foot-piece and the barrel. A drain is located at the bottom of the barrel above the control valve seat for proper drainage after operation.

Dry Chemical. Various mixtures of finely divided solid particles additionally supplemented with special treatments to provide resistance to packing and moisture absorption (caking) and to promote proper flow characteristics. These agents are designed for extinguishment of Class A and Class B fires. They are nonconductors and are approved for use on energized electrical Class C fires.

Dry Pipe System. A system employing automatic sprinklers attached to a piping system containing air or nitrogen under pressure, the release of which (as from the opening of a sprinkler) allows the water pressure to open a valve known as a dry pipe valve. The water then flows into the piping system and out the opened sprinklers.

Dry Powder. Solid materials in powder or granular form designed to extinguish Class D combustible metal fires by crusting, smothering or heat-transferring means.

Dry Standpipe System. A system arranged as follows:

(a) Includes devices to admit water to the system automatically by opening a hose valve;
(b) Admits water to the system through manual operation of remote control devices located at each hose station; or
(c) Has no permanent water supply -- A filled standpipe having a small water supply connection to keep the piping filled by requiring water to be pumped into the system should be considered to be a dry standpipe.

Ducts (or Duct System). A continuous passageway for the transmission of air and vapors that, in addition to the containment components themselves, might include duel fittings, dampers, plenums and/or other items or air-handling equipment.

Educational Occupancies. Educational occupancies include all buildings or portions of buildings used for educational purposes through the twelfth grade by six or more persons for four or more hours per day or more than 12 hours per week. Educational occupancies include Academies, Nursery schools and Kindergarten schools.

Emergency. A fire, explosion, or hazardous condition that poses an immediate threat to the safety of life or damage to property.

- External Emergency. An emergency situation which occurs outside the facility which may impact on a facility's ability to keep operating. These include extremes of weather, loss of power, civil disturbances, terrorism, urban or wild land fires, commercial transportation accidents, hazardous material releases, or evacuation of neighboring facilities.

- Internal Emergency. An emergency limited in scope to a specific facility. The surrounding infrastructure remains intact and available as a resource.

Emergency Management (Preparedness). The act of developing procedures and plans to create effective preparedness, mitigation, response, and recovery during a disaster affecting a facility.

Existing. That which is already in existence on the date when an edition of the Code goes into effect.

Exit. That portion of a means of egress that is separated from ail other spaces of the building or structure by construction or equipment to provide a protected way of travel to the exit discharge. In its simplest form, an exit is a doorway or door opening directly to the exterior at grade. Otherwise, it must provide a protected path of travel.

- Horizontal Exit. A way of passage from one building to an area of refuge in another building on approximately the same level, or a way of passage through or around a fire barrier to an area of refuge on approximately the same level in the same building (i.e., from one fire compartment to another) that affords safety from

fire and smoke originating from the area of incidence and areas communicating therewith (NFPA 101:5-1.2).

- Vertical Exit. A way of passage from one building to an area of refuge in another building on different levels, or a way of passage through or around a fire barrier to an area of refuge on a different level in the same building (i.e., from one fire compartment up or down to another) that affords safety from fire and smoke originating from the area of incidence and areas communicating therewith.

Exit Access. That portion of a means of egress that leads to an exit (NFPA 101:3-2).

Exit Discharge. That portion of a means of egress between the termination of an exit and a public way (NFPA 1 0 1 : 3 -2).

Exit Plan. A plan for the emergency evacuation of the premises.

Evacuation. The withdrawal of occupants from a building. Evacuation does not include relocation of occupants within a building.

Fire Alarm Signal. A signal initiated by a fire alarm-initiating device such as a manual fire alarm box, automatic fire detector, water flow switch or other device whose activation is indicative of the presence of a fire or fire signature.

Fire Alarm System. A system or portion of a combination system consisting of components and circuits arranged to monitor and annunciate the status of fire alarm or supervisory signal-initiating devices and to initiate the appropriate response to those signals.

Fire Barrier. A continuous membrane, either vertical or horizontal, such as a wall or floor assembly that is designed and constructed with a specified fire resistance rating to limit the spread of fire and that also will restrict the movement of smoke. Such barriers might have protected openings.

Fire Barrier Wall. A wall assembly complying with the requirements of NFPA 221, Standard for Fire Walls and Fire Barrier Walls, having a fire resistance rating of 4 hours.

Fire Compartment. A space, within a building, that is enclosed by fire barriers on all sides, including the top and bottom (NFPA 101:3-2).

Fire Door. The door component of a fire door assembly.

Fire Door Assembly. Any combination of a fire door, frame, hardware and other accessories that together provide a specific degree of fire protection to the opening. (NFPA 80:1-4)

Fire Hazard. Any situation, process, material or condition that, on the basis of applicable data, may cause a fire or explosion or provide a ready fuel supply to augment the spread or intensity of the fire or explosion and that poses a threat to life or property.

Fire Hydrant. A valved connection on a water supply system having one or more outlets used to supply hose and fire department pumpers with water.

Fire Protection Rating. The designation indicating the duration of the fire test exposure to which a fire door assembly or fire window assembly was exposed and successfully met ail the acceptance criteria as determined in accordance with NFPA 252, Standard Methods of Fire Tests of Door Assemblies, or NFPA 257, Standard on Fire Test for Window and Glass Black Assemblies, respectively.

Fire Protection System. Any fire alarm device or system or fire extinguishing device or system, or combination thereof, designed and installed for detecting, controlling, or extinguishing a fire or otherwise alerting occupants, the fire department, or bath that a fire has occurred.

Fire Pump. A pump supplying water at the flow and pressure required by water-based fire protection systems.

Fire Rating. The classification indicating in time (hours) the ability of a structure or component to withstand fire conditions.

Fire Resistance Rating. A relative value in minutes or hours assigned to materials or assemblies that have withstood a fire exposure as established in accordance with NFPA 251, Standard Methods of Tests of Fire

Fire Retardants. Liquids, solids or gases that tend to inhibit combustion when applied on, mixed in or combined with combustible materials.

Flame Resistant. The property of a material that passes the small-scale test in NFPA 701, Standard Methods of Tests for Flame-Resistant Textiles and Films.

Flammable. An adjective describing easy ignition, intense burning and rapid rate of flame spread during combustion. It is also used as a noun to mean a flammable substance.

Fire Watch. Assigning personnel to be in an area for the express purpose of notifying the fire department of an emergency, preventing a fire from occurring, extinguishing small fires or protecting the public from fire or life safety dangers addressed in this Code.

Foam-Water Spray System. A special system pipe connected to a source of foam concentrate and to a water supply and equipped with foam-water spray nozzles for fire protection agent discharge (i.e., foam followed by water or in reverse order) and for distribution over the area to be protected.

Foam-Water Sprinkler System. A special system pipe connected to a source of foam concentrate and to a water supply and equipped with appropriate discharge devices for fire protection agent discharge and for distribution over the area to be protected.

Fusible Link. A form of fixed temperature heat detecting device sometimes employed to restrain the operation of an electrical or mechanical control until its designed temperature is reached. Such devices are to be replaced following each operation.

Grease Removal Devices. A system of components designed for and intended to process vapors, gases and/or air as it is drawn through such devices by collecting the airborne grease particles and concentrating them for further action at some future time, leaving the exiting air with a lower amount of combustible

Hazard of Contents.

- Low (Light) Hazard. Low hazard contents will be classified as those of such low combustibility that no self-propagating fire therein can occur. (NFPA 101:4-2.2.2). Light hazard occupancies are locations where the total amount of Class A combustible materials, including furnishings, decorations, and contents, is of minor quantity. This classification anticipates that the majority of content items will be either noncombustible or so arranged that a fire is not likely to spread rapidly. Small amounts of Class B flammables used for duplicating machines, art departments, and so forth, are included, provided that they are kept in closed containers and safely stored.

- Ordinary (Moderate) Hazard. Ordinary hazard contents will be classified as those that are likely to burn with moderate rapidity or to give off a considerable volume of smoke (NFPA 101:4-2.2.3). Ordinary hazard occupancies are locations where the total amount of Class A Combustibles and Class B Flammables are present in greater amounts than expected under light (low) hazard occupancies. These occupancies could consist of dining areas, parking garages, workshop or support service areas of light (low) hazard occupancies.

- High Hazard. High hazard contents will be classified as those that are likely to burn with extreme rapidity or from which explosions are likely (NFPA 101:4-2.2.4).

Hazardous Area. Those areas of structures or buildings posing a degree of hazard greater than that normal to the general occupancy of a building or structure, such as those areas used for the storage or use of combustibles or flammables; toxic, noxious or corrosive materials; or heat-producing appliances.

High Limit Control. An operating device installed in and serving as an integral component of a deep fat fryer. Its purpose is the secondary limitation of temperature allowed by the cooking operation and, if that temperature is exceeded, the automatic interruption of the thermal energy input.

Hydrostatic Testing. Pressure testing of the extinguisher to verify its strength against unwanted rupture.

Impairment. Any shutdown of a system or portion thereof.

Inspection, Testing, and Maintenance Service. A service program provided by a qualified contractor or owner's representative in which all components unique to the property's systems are inspected and tested at the required times and necessary maintenance is provided. This program includes logging and retention of relevant records.

Interior Floor Finish Classification. (Based on NFPA 255, Standard Method of Test of Surface Burning Characteristics of Building Materials)

- Class I Interior Floor Finish. Critical radiant flux minimum of 0.45 W/sq cm as determined by the test described in NFPA 101: 6-5.6.1.

- Class II Interior Floor Finish. Critical radiant flux minimum of 0.22 W/sq cm as determined by the test described in NFA 101: 6-5.6.1.

Interior Wall or Ceiling Finish Classifications. (Based on NFPA 255, Standard Method of Test of Surface Burning Characteristics of Building Materials)

- Class A Interior Wall and Ceiling Finish. Flame spread 0-25; smoke development 0-450. Includes any material classified at 25 or less on the flame spread test scale and 450 or less on the smoke test scale. Any element thereof, when so tested, should not continue to propagate fire.

- Class B Interior Wall and Ceiling Finish. Flame spread 26-75; smoke development 0-450. Includes any material classified at more than 25 but not more than 75 on the flame spread test scale and 450 or less on the smoke test scale.

- Class C Interior Wall and Ceiling Finish. Flame spread 76-200; smoke development 0-450. Includes any material classified at more than 75 but not more than 200 on the flame spread test scale and 450 or less on the smoke test scale.

Jurisdiction. Any governmental unit or political division or subdivision, including, but not limited to, township, city, village, county, borough, state, commonwealth, province, freehold, district, or territory, that has adopted this Code under due legislative authority.

Labeled. Equipment or materials to which has been attached a label, symbol or other identifying mark of an organization that is acceptable to the Authority Having Jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

Laboratory. A building, space, room or group of rooms intended to serve activities involving procedures for investigation, diagnosis or treatment in which flammable, combustible or oxidizing materials are to be used.

Latching Device. A spring-loaded latch bolt or a gravity-operated steel bar that, after release

by physical action, returns to its operating position and automatically engages the strike plate when it is returned to the closed position.

Life Safety. Fire safety and prevention.

Life Safety Code. NFPA 101.Code for Safety to Life from Fire in Buildings and Structures.

Means of Egress. A continuous and unobstructed way of travel from any point in a building or structure to a public way consisting of three separate and distinct parts: (a) the exit access, (b) the exit, and (c) the exit discharge (NFPA 101:5-1.2).

Means of Escape. A way out of a building or structure that does not conform to the strict definition of means of egress but does provide an alternate way out (NFPA 101:3-2).

Main Drain. The primary drain connection located on the system riser and also is utilized as a flow test connection.

Maintenance. Repair service, including periodic inspections and tests, required to keep a fire system and its component parts in an operative condition at all times, together with replacement of the system or its components when they become undependable or inoperable for any reason.

Manual-Dry. A manual-dry standpipe system is a dry standpipe system that does not have a permanent water supply attached to the system. Manual-dry standpipe systems need water from a fire department pumper (or the like) to be pumped into the system through the fire department connection in order to supply the system demand.

Manual Standpipe System. A standpipe system that relies exclusively on a fire department connection to supply the system demand.

Manual-Wet. A manual-wet standpipe system is a wet standpipe system connected to a small water supply for the purpose of maintaining water within the system but does not have a water supply capable of delivering the system demand attached to the system. Manual-wet standpipe systems need water from a fire department pumper (or the like) to be pumped into the system in order to supply the system demand.

Nitrogen. An element that, at atmospheric temperatures and pressures, exists as a clear, colorless, and tasteless gas; it comprises approximately four-fifths of the earth's atmosphere.

National Fire Protection Association (NFPA). An independent, voluntary membership, non-profit organization that issues codes, standards, guides, and recommendations pertaining to fire safety.

National Fire Codes. Codes and standards developed by the NFPA.

Noncombustible Material. A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat.

Nonflammable. An adjective describing a substance that will not bum under the conditions set forth in the definition of flame resistant.

Occupational Safety and Health Administration (OSHA). The branch of the Department of Labor responsible for occupational safety and health standards and regulations.

Occupancy. The purpose for which a building or portion thereof is used or intended to be used. (NFPA 101:3-2)

Occupant Load. The total number of persons that might occupy a building or portion thereof at any one time. (NFPA 101:3-2).

Plenum. An air compartment or chamber to which one or more ducts are connected and that forms part of an air distribution system.

Portable Fire Extinguisher. A portable device, carried or on wheels and operated by hand, containing an extinguishing agent that can be expelled under pressure for the purpose of suppressing or extinguishing fire.

Power Supply. A source of electrical operating power including the circuits and terminations connecting it to the dependent system components.

Primary Battery (Dry Cell). A non-rechargeable battery requiring periodic replacement.

Risers. The vertical pipes connecting the system main line(s) with the branch lines on the various levels of the facility.

Recharging. The replacement of the extinguishing agent (also includes the expellant for certain types of fire extinguishers).

Semiautomatic Standpipe System. A standpipe system that is attached to a water supply capable of supplying the system demand at all times and that requires activation of a control device to provide water at hose connections.

Smoke Alarm. A single or multiple station alarm responsive to smoke.

Smoke Barrier. A continuous membrane, either vertical or horizontal, such as a wall, floor or ceiling assembly, which is designed and constructed to restrict the movement of smoke. A smoke barrier might or might not have a fire resistance rating. Such barriers might have protected openings (NFPA 101:3-2).

Smoke Compartment. A smoke compartment is a space within a building enclosed by smoke barriers on all sides, including the top and bottom (NFPA 101:3-2).

Sprinkler System. An integrated system of underground and overhead piping designed for fire protection purposes and designed in accordance with fire protection engineering standards. The installation includes one or more automatic water supplies. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a

building, structure or area, generally overhead. Sprinklers are attached to the piping in a systematic pattern. The valve controlling each system riser is located in the system riser or its supply piping. Each sprinkler system riser includes a device for actuating an alarm when the system is in operation. The system usually is activated by heat from a fire and discharges water over the fire area.

Standpipe. The riser portion of the system piping that delivers the water supply for hose connections and sprinklers on combined systems, vertically from floor to floor.

Standpipe System. An arrangement of piping, valves, hose connections and allied equipment installed in a building or structure, with the hose connections located in such a manner that water can be discharged in streams or spray patterns through attached hoses and nozzles, for the purpose of extinguishing a fire, thereby protecting a building or structure and its contents in addition to protecting the occupants. This is accomplished by means of connections to water supply systems or by means of pumps, tanks, and other equipment necessary to provide an adequate supply of water to the hose connections (NFPA 14:1-4).

System. Several items of equipment assembled, grouped or otherwise interconnected for the accomplishment of a purpose or function.

Standard. A document indicating requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Non• mandatory provisions shall be located in an appendix, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

Supervision. A means of monitoring system status and indicating abnormal conditions.

Supervising Station. A facility that receives signals and at which personnel are in attendance at all times to respond to these signals.

Water-Type Fire Extinguisher. A water-type fire extinguisher contains water-based agents, such as water, antifreeze, and loaded stream.

Wet Barrel Hydrant. A type of hydrant that sometimes is used where there is no danger of freezing weather. Each outlet on a wet barrel hydrant is provided with a valved outlet threaded for fire hose.

Wet Chemical. Wet chemicals include, but are not limited to, aqueous solutions of potassium acetate, potassium carbonate, potassium citrate or combinations of these materials.

Wet Pipe System. A sprinkler system employing automatic sprinklers attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by heat from a fire.

Wet Standpipe. A standpipe system having piping containing water at all times.

Wheeled Fire Extinguisher. A portable fire extinguisher equipped with a carriage and

wheels intended to be transported to the fire by one person.

Zone. A defined area within the protected premises. A zone can define an area from which a signal can be received, an area to which a signal can be sent, or an area in which a form of control can be executed.

APPENDIX B
SAMPLE FIRE HAZARD SURVEY

THIS CHECKLIST IS NOT INTENDED TO BE ALL INCLUSIVE. IT SHOULD BE USED TO AUGMENT THE CHECKLIST FROM (SEE SPECIFIC APPLICABLE LIST) AND INCLUDES A.DDITIONAL ITEMS NOT COVERED THEREIN. THIS FORM SHOULD BE ADAPTED FOR SPECIFIC USE.

Facility_____Building_____Date_____
Floor_____Wing _____
Inspector_____
Inspector _____

1. BUILDING

Occupancy____ (Enter number)

Mark ail that are applicable

Students	High
Rise	
Residents	Windowless
Underground	Other

No	Yes	Compartmentation
		Wedges are not being use to hold doors open
		Fire door rating tag on doors and frames and not painted over
		Doors operate correctly

No	Yes	Fire Exits
		Panic /fire hardware where required
		Door opens easily
		Corridor and aisles of sufficient size
		Rescue window in each classroom
		There are no mirrors adjacent to any exit, which would cause confusion.

II. HAZARDOUS AREAS

No	Yes	Kitchen
		Extinguishing system installed and working
		No odor of gas
		Exhaust hood protected and working
		Are hood, exhaust duels and fans free of grease
		Gas shutoff valve(s) identified
		No flammable solvents/cleaning aids used to clean exhaust
		Are interlocks between extinguishing systems and gas shutoffs, fan controls, etc. installed and working.

No	Yes	Maintenance Shop
		Properly protected
		Fire Protection Equipment Working
		Chemicals in approved containers
		Chemicals properly stored
		Gases properly stored
		ls gasoline properly stored
		ls trash emptied daily
		Flammable chemicals stored in fire-resistant cabinet
		Only approved safety cans used for gas/diesel fuels (Self-closing lids, flame screens, ine1t system)

No	Yes	Laboratories
		Properly protected
		Fire Protection Equipment Working
		Chemicals properly stored
		Chemicals in approved containers

No	Yes	Laundry
		Are lint traps cleaned
		ls the exhaust system cleaned regularly
		No odor of gas.

Ill. SERVICES

Electricity ___ Gas ___ Water ___
Elevators: Yes _ No _ Type: Freight _ Passenger _ Other _
Heat Type: Gas___Oil ___ Coal ___ Other ___
Emergency Generators: Yes___No __, Number ___

No	Yes	
		Service is in good working order
		Elevator has Recall System
		Sprinklers in elevator shafts
		Elevator has Fire Service Control for Fire Department use.

IV. EQUIPMENT

No	Yes	Emergency Lights
		Battery or emergency power backup
		Working
		Properly illuminate egress paths
		Not damaged

No	Yes	Exit Signs
		Battery or emergency power backup
		Working
		Two working light bulbs and continuously illuminated
		Not damaged
		Properly oriented in corridors and stairways
		Proper directional arrows if needed

No	Yes	Fire Alarms/Pull Stations/Strobe Lights
		Audible or visible
		Working
		Not damaged or painted over
		Not obstructed
		Securely mounted

No	Yes	Heat/Smoke Detectors/Alarms
		Not Painted over
		Working
		Not Damaged
		Installed in living areas and sleeping rooms

No	Yes	Fire Extinguishers
		Proper type for hazard
		Mounted properly on hangers, brackets, or in cabinets
		Inspected monthly and maintained annually
		Properly charged
		Not Damaged
		Cabinets clean and unobstructed
		Conspicuously located and readily accessible (access free and clear)
		Durable tag showing maintenance inspections
		Appropriate fire class decals
		Present and not missing

No	Yes	Hose Stations
		Working
		Not damaged
		Inspected and tested weekly/monthly
		Not obstructed

No	Yes	Emergency Generators (if used in fire protection or alarm systems)
		Working
		Not damaged
		Inspected and tested weekly/monthly
		Load tested monthly
		Exhaust system has no leakage
		Fuel tanks 2/3 full (diesel)
		Batteries are working
		Battery terminals are clean and tight

No	Yes	Fire Pumps
		Working
		Not damaged
		Inspected weekly
		Tested under no-flow conditions weekly

No	Yes	Dry or wet chemical extinguishing systems
		Working
		The systems is in its proper location
		The manual actuators are unobstructed
		The tamper indicators and seals are intact
		The maintenance tag or certificate is in place
		The systems shows no physical damage or condition that might prevent operation
		The pressure gauges (s), if provided, is in operable range
		Inspected monthly
		The nozzle blow off caps, where provided, are intact and undamaged
		The hazard has not changed

V. SPRINKLERS

Type: Sprinkler___ Halon ___ CO2 ___ Standpipe ___
Water Spray ___ Foam___ Dry Chemical ___
Wet Chemical ___ Other ___
Coverage: Building___Partial _

No	Yes	
		Working
		Sprinkler heads not painted, corroded or heavily laden with dirt.
		Nothing stored within 18” of head
		Not damaged
		Sprinkler heads in janitor closets
		At least 6 spare sprinkler heads with wrench maintained for each installed system.
		Inspected monthly and annually

VI. DOORS (Not Fire Exits)

No	Yes	Exterior doors and Interior doors
		Doors close and latch
		Doors not held open with wedges
		Not damaged

VII. STANDPIPE AND ROSE SYSTEMS

No	Yes	
		Cabinets proper size for hose
		Used only for fire equipment
		Marked with conspicuous sign reading: "Fire Hose"
		Easy access (not over 6 feet off floor)
		Hose connection on "dry" standpipe labeled "Dry Standpipe for Fire Department Use Only"

VIII. HOUSEKEEPING

No	Yes	
		Areas clean, free of clutter and free of excessive combustibles
		Smoking regulated
		Smoking area has noncombustible ashtrays
		No Evidence of Smoking in non-smoking areas
		Artificial trees are “flame resistant”
		Clothing is not stored in corridor
		Wastebasket/containers are noncombustible
		No electrical cords under carpets:

IX. PROCEDURES

No	Yes	
		Fire Drills conducted as frequently as required.
		Meeting places established
		Written Life Safe plan
		Available to employees

X. STAFF KNOWLEDGE

No	Yes	
		Does personnel/staff know evacuation techniques?
		Does personnel/staff know evacuation plan?
		Does personnel/staff know evacuation routes?
		Does the personnel/staff know how to report a fire?
		Does the personnel/staff know the location of the nearest pull station?
		Does the personnel/staff know the location of the nearest fire extinguisher?
		Does the personnel/staff know the smoking policy?

APPENDIX C
SAMPLE FIRE HAZARD LOG

MAJOR FIRE HAZARD	POTENTIAL STORAGE/HANDLING	IGNITION SOURCE	CONTROL PROCEDURES	FIRE PROTECTION
Flammable chemicals in maintenance shop	Stored in fire cabinet inside maintenance shop. Supervisor Director, and guard have only keys	Welding tools, power tools	Shop is cleaned daily, cabinet is kept closed and locked at end of shift; security guard checks shop and cabinet during his/her rounds	Sprinklers, heat/Smoke detectors, security rounds and two fire extinguishers

APPENDIX D
SAMPLE FIRE EQUIPMENT INVENTORY

Annual Fire Extinguisher Inspection

Alumni Hall

July 2005

			Size & Type							Year	Last	M – 6 Year Maintenance	
	Inv#	Location	CO2	WP	ABC	BC	HA	D	Made BY	Made	Test	T – 12 Year	Notes
1	19586	SE Hall 2nd Flr			10				General	1986	1998T		
2	19727	Rm 203			10				General	1990	2002T		
3	13487	Rm 202			10				General	1978	2003T		
4	13489	Rm 210			10				General	1973	2002M		
5	13488	Rm 209			10				General	1973	2002M		
6	19585	W Corridor 2nd Flr			10				General	1986	2003M		
7	13476	Rm 101			10				PvroChem	1981	1999M		
8	19587	E Stairwell Lobby			10				General	1985	2003M		
9	19707	Rm 114					9		General	1985	2002M		
10	19706	Rm 118			10				General	1988	2000T	Missing?	
11	19584	W Stairwell Lobby			10				General	1985	2003M		
12	13480	Rm 119					9		PvroChem	1979	2003T		
13	20425	Basement			10				General	1992	1998M		
14	20424	Basement			20				General	1993	1999M		
15	19708	Rm 217					9		General	1989	2002T		
16	20418	Rm 203A	5						Kidde	1982	2000		
17	20417	Rm 201A	5						Kidde	1965	2000		
18	50398	Rm 116			10				Badaer	2002			
19	50399	Rm 117			10				Badaer	2002			