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UTAH EDITION

SCERE INSPECTOR'S GUIDE

DEVELOPED BY: UTAH FIRE AND RESCUE ACADEMY

H-RH



Based on the 2021 International Fire Code®



2021 International Fire Code Utah Edition Guidebook

By: Mike Owens

The Utah modifications to the 2021 International Fire Code are shown on the first 43 pages of this guidebook and are not annotated in the main body of the guidebook. These changes to Title 15A State Construction and Fire Codes Act were approved by the Utah Legislature during the 2023 General Session. Text in red indicates additions and changes to the Fire Code and NFPA Documents. Sections that have been deleted by the state of Utah are not indicated.

The Utah Fire & Rescue Academy and Utah Valley University produced this guidebook in partnership with the International Code Council (ICC). We wish to thank Mike Owens, Park City Fire District Fire Marshal for his dedication to create the Utah and ICC versions of this guidebook. The Utah version is distributed by UFRA and the Utah State Fire Marshal as a public service to the fire departments of Utah and the communities they protect.

For information, copies, or comments, contact: Marc McElreath Utah Fire & Rescue Academy MarcM@uvu.edu

53-7-221 Exception from the Utah Fireworks Act.

- (1) Sections 53-7-220 through 53-7-225 do not apply to class A, class B, and class C explosives that are not for use in Utah, but are manufactured, stored, warehoused, or in transit for destinations outside of Utah.
- (2) Sections 53-7-220 through 53-7-225 do not supersede Section 23-13-7, regarding use of fireworks and explosives by the Division of Wildlife Resources and federal game agents.
- (3) Section 53-7-225 does not supersede Section 65A-8-212 regarding the authority of the state forester to close hazardous areas.

53-7-225 Times for sale and discharge of fireworks – Criminal penalty – Permissible closure of certain areas – Maps and signage.

(1) Except as provided in Section 53-7-221, this section supersedes any other code provision regarding the cell or discharge of fireworks.

- (2) A person may sell class C common state approved explosives in the state as follows:
 - (a) beginning on June 24 and ending on July 25;
 - (b) beginning on December 29 and ending on December 31; and
 - (c) two days before and on Chinese New Year's eve.
- (3) A person may not discharge class C common state approved explosives in the state except as follows:
 - (a) between the hours of 11:00 a.m. and 11:00 p.m., except that on July 4 and July 24, the hours are 11:00 AM to midnight:
 - (i) beginning on July 2 and ending on July 5; and
 - (ii) beginning on July 22 and ending on July 25;
 - (b)
- beginning at 11 a.m. on December 21 and ending at 1 a.m. on the following day; or
- (ii) if New Year's eve is on a Sunday and the county, municipality, or metro township determines to celebrate New Year's eve on the prior Saturday, then person may discharge class C common state approved explosives on that prior Saturday within the county, municipality, or metro township;
- (c) between the hours of 11 a.m. and 11 p.m. on January 1; and
- (d) beginning at 11 a.m. on the Chinese New Year's eve and ending at 1 a.m. on the following day.
- (4) A person is guilty of an infraction, punishable by a fine of up to \$1,000, if the person discharges a class C common state approved explosive:
 - (a) outside the legal discharge dates and times described in Subsection (3); or
 - (b) in an area in which fireworks are prohibited under Subsection 15A-5-202.5(1)(b).
- (5)
- (a) except as provided in Subsection (5)(b) or (c), a county, a municipality, a metro township, or the state forester may not prohibit a person from discharging class C common state approved explosives during the permitted periods described in Subsection (3).
- (b)
- (i) as used in this Subsection (5)(b), "negligent discharge":
 - (A) means the improper use and discharge of a class C common state approved explosive;

And

- (B) does not include the date or location of discharge or the type of explosive used.
- (ii) a municipality or metro township may prohibit:
 - (A) the discharge of class C common state approved explosives in certain areas with hazardous environmental conditions, in accordance with Subsection 15A-5-202.5(1)(b); or

- (B) the negligent discharge of class C common state approved explosives.
- (iii) a county may prohibit the negligent discharge of class C common state approved explosives.
- (c) the state forester may prohibit the discharge of class C common state approved explosives as provided in Subsection 15A-5-202.5(1)(b) or Section 65A-8-212.
- (6) If a municipal legislative body, the state forester, or a metro township legislative body provided a map to a county identifying an area in which the discharge of fireworks is prohibited due to a historical hazardous environmental condition under Subsection 15A-5-202.5(1)(b), the county shall, before June 1 of that same year:
 - (a) create a county-wide map, based on each map the county has received, indicating each area within the county in which fireworks are prohibited under Subsection 15A-5-202.5(1)(b);
 - (b) provide the map described in Subsection (6)(a) to:
 - (i) each retailer that sells fireworks within the county; and
 - (ii) the state fire marshal; and
 - (c) public the map on the county's website.
- (7) A retailer that sells fireworks shall display:
 - (a) a sign that:
 - (i) is clearly visible to the general public in a prominent location near the point of sale;
 - (ii) indicates the legal discharge dates and times described in Subsection (3); and
 - (iii) indicates the criminal charge and fine associated with discharge:
 - (A) outside the legal dates and times described in Subsection (3); and
 - (B) within an area in which fireworks are prohibited under Subsection 15A-5-202.5(1)(b); and
 - (b) the map that the county provides, in accordance with Subsection (6)(b).

15A-5-103. Nationally recognized codes incorporated by reference.

The following codes are incorporated by reference into the State Fire Code:

- (1) The International Fire Code, 2021 edition, excluding appendices, as issued by the International Code Council, Inc., except as amended by Part 2, Statewide Amendments and Additions to International Fire Code Incorporated as Part of State Fire Code;
- (2) National Fire Protection Association, NFPA 1, Chapter 38, Marijuana Growing, Processing, and Extraction Facilities, 2018 edition;
- (3) National Fire Protection Association, NFPA 54, National Fuel Gas Code, 2021 edition; and
- (4) National Fire Protection Association, NFPA 58, Liquefied Petroleum Gas Code, 2023 edition.

15A-5-202. Amendments and addition to IFC related to administration, permits, definitions, and general and emergency planning.

102.5 Application of residential code. If a structure is designed and constructed in accordance with the International Residential Code, the provisions of this code apply only as follows:

- 1. The construction and design provisions of this code apply only to premises identification, fire apparatus access, fire hydrants and water supplies, and construction permits required by Section 105.7.
- This code does not supersede the land use, subdivision, or development standards established by a local jurisdiction.
- 3. The administrative, operational, and maintenance provisions of this code apply.

For development regulated by a local jurisdiction's land use authority, the fire code official's interpretation of this code is subject to the advisory opinion process described in Utah Code, Section 13-43-205, and to a land use appeal authority appointed under Utah Code Section 10-9a-701 or 17-27a-701.

102.9 Matters not provided for. Requirements that are essential for the public safety of an existing or proposed activity, building or structure, or for the safety of the occupants thereof, which are not specifically provided for by this code, shall be determined by the fire code official on an emergency basis if:

- (a) the facts known to the fire code official show that an immediate and significant danger to the public health, safety, or welfare exists; and
- (b) the threat requires immediate action by the fire code official.

102.9.1 Limitation of emergency order. In issuing its emergency order, the fire code official shall:

- (a) limit the order to require only the action necessary to prevent or avoid the danger to the public health, safety or welfare; and
- (b) give immediate notice to the persons who are required to comply with the order, that includes a brief statement of the reasons for the fire code official's order.

102.9.2 Right to appeal emergency order. If the emergency ordered issued under this section will result in the continued infringement or impairment of any legal right or interest of any party, the party shall have a right to appeal the fire code official 's order in accordance with IFC, Chapter 1, Section 109.

105.5.18. Flammable and combustible liquids. Amended to add the following section:

12. The owner of an underground tank that is out of service for longer than one year shall receive a Temporary Closure Notice from the Department of Environmental Quality and a copy shall be given to the AHJ.

106.1 Submittals. Construction documents and supporting data shall be submitted in two or more sets with each application for a permit and in such form and detail as required by the fire code official. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Fire sprinkler system layout shall be prepared and submitted by a person certified by the National Institute for Certification in Engineering Technologies at level III or IV in Water-Based System Layout. Fire alarm system layout shall be prepared and submitted by the national Institute for Certification in engineering Technologies at level III or IV in Fire Alarm Systems.

111.5 Notice of right to appeal. At the time a fire code official makes an order, decision, or determination that relates to the application or interpretation of this chapter, the fire code official shall inform the person affected by the order, decision, or determination of the person's right to appeal under this section. Upon request, the fire code official shall provide a person affected by an order, decision, or determination that relates to the application or interpretation of this chapter a written notice that describes the person's right to appeal under this section.

202 General Definitions

AMBULATORY SURGICAL CENTER. A building or portion of a building licensed by the Department of Health where procedures are performed that may render patients incapable of self preservation where care is less than 24 hours. See Utah Administrative Code, R432-13, Freestanding Ambulatory Surgical Center Construction Rule.

ASSISTED LIVING FACILITY, RESIDENTIAL TREATMENT AND SUPPORT. A residential facility that provides a group living environment for four or more residents licensed by the Department of Health and Human Services and provides a protected living arrangement for ambulatory, non-restrained persons who are capable of achieving mobility sufficient to exit the facility without the physical assistance of another person.

ASSISTED LIVING FACILTY, TYPE I. A residential facility licensed by the Department of Health and Human Services that provides a protected living arrangement, assistance with activities of daily living and social care to two or more ambulatory, non-restrained persons who are capable of mobility sufficient to exit the facility without the assistance of another person.

ASSISTED LIVING FACILITY, TYPE II. A residential facility licensed by the Department of Health and Human Services that provides an array of coordinated supportive personal and health care services to two or residents who are:

- A. Physically disabled but able to direct his or her own care; or
- B. Cognitively impaired or physically disabled but able to evacuate from the facility, or to a zone or area of safety, with the physical assistance of one person.

Subcategories are:

ASSISTED LVIING FACILITY, LIMITED CAPACITY: A Type I or Type II assisted living facility having two to five residents.

ASSISTED LIVING FACILITY, SMALL: A Type I or Type II assisted living facility having six to sixteen residents.

ASSISTED LIVING FACILITY, LARGE: A Type I or Type II assisted living facility having more than sixteen residents.

CHILD CARE FACILITY. A facility where care and supervision is provided for four or more children for less than 24 hours a day and for direct or indirect compensation in place of care ordinarily provided in their home."

Group E, Child Care Facilities. This group includes buildings and structures or portions thereof occupied by four or more children 2 years of age or older who receive educational, supervision, child care services or personal care services for fewer than 24 hours per day. See Section 429, Day Care, for special requirements for day care.

- Within Places of Religious Worship. Rooms and spaces within places of religious worship providing such day care during religious functions shall be classified as part of the primary occupancy.
- **Four or Fewer Children.** A facility having four or fewer children receiving such day care shall be classified as part of the primary occupancy. **Four or Fewer Children in a Dwelling Unit.** A facility such as the above

within a dwelling unit and having four or fewer children receiving such day care shall be classified as a Group R-3 occupancy or shall comply with the International Residential Code.

Child Day Care – Residential Child Care Certificate or a License. Areas used for child day care purposes with a residential child care certificate, as described in Utah Administrative Code, R430-50, Residential Certificate Child Care, or a residential child care license, as described in Utah Administrative Code, R430-90, Licensed Family Child Care, may be located in Group R-2 or R-3 occupancy as provided in the International Building Code, Sections 310.3 and 310.4, or shall comply with the International Residential Code, Section R101.2.

Child Care Centers. Each of the following areas may be classified as accessory occupancies, if the area complies with the International Building Code, Section 508.2:

- 1. Hourly child care center, as described in Utah Administrative Code, R381-60, Hourly Child Care Centers;
- Child care centers, ad described in Utah Administrative Code, R381-1000, Child Care Centers;
- 3. Out-of-school-time programs, as described in Utah Administrative Code, R381-70 Out of School Time Child Care Programs; and
- 4. Commercial preschools, as described in Utah Administrative Code, R381-40, Commercial Preschool Programs."

Institutional Group I-1. Institutional Group I-1 occupancy shall include buildings, structures or portions thereof for more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care. Buildings of Group I-1 shall be classified as one of the occupancy conditions indicated below and shall comply with Section 420 of the *International Building Code*. This group shall include, but not be limited to, the following:

Alcohol and drug centers Assisted living facilities Type-I Large and Type-II Small, see the International Building Code, Section 308.2.5 Congregate care facilities Group homes Halfway houses Residential board and care facilities Residential board and custodial care facilities Social rehabilitation facilities

Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care who, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

Condition 2. This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.

Five or fewer persons receiving custodial care. A facility with five or fewer persons receiving custodial care shall be classified as Group R-3 or shall comply with the *International Residential Code.*

Institutional Group I-2. Institutional Group I-2 occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than four persons who are incapable of self-preservation. This group shall include, but not be limited to the following:

Assisted living facilities, Type-II Large, see Section 308.3.3 Child care facilities Foster care facilities Detoxification facilities Hospitals Nursing homes (both intermediate care facilities and skilled nursing facilities) Psychiatric hospitals

Assisted Living Facilities. A Type I, Large assisted living facility is classified as occupancy Group I-1, Condition 1. A Type II, Small assisted living facility is classified as occupancy Group I-1, Condition 2. See Section 202 for definitions.

Institutional Group I-4, day care facilities. Institutional Group I-4 shall include buildings and structures occupied by more than five persons of any age who receive custodial care for less than 24 hours by persons other than parents or guardians; relatives by blood, marriage, or adoption; and in a place other than the home of the person being cared for. This group shall include but not be limited to, the following:

Adult day care Child day care

Classification as Group E. A child day care facility that provides care for five or more but not more than 100 children under two years of age, where the rooms in which the children are cared for are located on a level of exit discharge serving such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as a Group E. See the International Building Code, Section 429 for special requirements for Day Care.

Four or Fewer Persons Receiving Care. A facility having four or fewer persons receiving custodial care shall be classified as part of the primary occupancy. See the International Building Code, Section 429, for special requirements for Day Care.

Four or Fewer Persons Receiving Care in a Dwelling Unit. A facility such as the above within a dwelling unit and having four or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the International Residential Code. See the International Building Code, Section 429, for special requirements for Day Care."

Residential Group R-3. Residential Group R-3 occupancies and single family dwellings complying with the *International Residential Code* where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4, or I occupancies, including:

Assisted Living Facilities, Type-I, limited capacity, see Section 310.5.3

Buildings that do not contain more than two dwellings Care facilities, other than child care, that provide accommodations for five or fewer persons receiving care Congregate living facilities (nontransient) with 16 or fewer occupants Boarding houses (nontransient) Convents Dormitories Fraternities and sororities Monasteries Congregate living facilities (transient) with 10 or fewer occupants Boarding houses (transient) Lodging houses (transient) with five or fewer guest rooms and 10 or fewer occupants

Care Facilities within a Dwelling. Care facilities, other than child care, for five or fewer persons receiving care that are within a single family dwelling are permitted to comply with the *International Residential Code*. See the *International Building Code*, Section 429, for special requirements for Child Day Care."

Child Care. Areas used for child care purposes may be located in a residential dwelling unit when all of the following conditions are met:

- 1. Compliance with Utah Administrative Code, 710-8, Day Care Rules, as enacted under the Authority of the Utah Fire Prevention Board;
- Use is approved by the Utah Department of Health under the authority of Utah Code, Title 26, Chapter 39, Utah Child Licensing Act, and in any of the following categories:
 - 1.1 Utah Administrative Code, R430-50, Residential Certificate Child Care; or
 - 1.2 Utah Administrative Code, R430-90, Licensed Family Child Care; and
 - 1.3 Compliance with all zoning regulations of the local regulator.

Assisted Living Facilities. Type I assisted living facilities with two to five residents are Limited Capacity facilities classified as a Residential Group R-3 occupancy or are permitted to comply with the International Residential Code. See Section 202 for definitions.

Residential Group R-4. Residential Group R-4 shall include buildings, structures, or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive custodial care. Buildings of Group R-4 shall be classified as one of the occupancy conditions indicated below. This group shall include, but not be limited to, the following:

Alcohol and drug centers

Assisted living facilities Type II Limited Capacity and Type I Small, see R-4 Assisted Living Facility Occupancy Groups Congregate care facilities Group homes Halfway houses Residential board and care facilities Social rehabilitation facilities

Group R-4-Assisted Living Facility Occupancy Groups. The

following occupancy groups shall apply to Assisted Living Facilities: Type II Assisted Living Facilities with two to five residents are Limited Capacity Facilities classified as a Residential Group R-4, Condition 2 occupancy. Type I assisted living facilities with six to sixteen residents are Small

Type I assisted living facilities with six to sixteen residents are Small Facilities classified as Residential Group R-4, Condition 1 occupancies. See Section 202 for definitions.

304.1.2 Vegetation. Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the *owner* or occupant of the premises. Vegetation clearance requirements in wildland-urban interface areas shall be in accordance with Utah Administrative Code, R652-122-1300, Minimum Standards for County Wildland Fire Ordinance.

310.8 Hazardous environmental conditions.

- 1. When the fire code official determines that existing or historical hazardous environmental conditions necessitate controlled use of any ignition source, including fireworks, lighters, matches, sky lanterns, and smoking materials, any of the following may occur:
 - 1.1 If the existing or historical hazardous environmental conditions exist in a municipality, the legislative body of the municipality may prohibit the ignition or use of an ignition source in:
 - 1.1.1 mountainous, brush-covered, forest-covered, or dry grasscovered areas;
 - 1.1.2 within 200 feet of waterways, trails, canyons, washes, ravines, or similar areas;
 - 1.1.3 the wildland urban interface area, which means the line, area, or zone where structures or other human development or intermingle with undeveloped wildland or land being used for an agricultural purpose; or
 - 1.1.4 a limited area outside the hazardous areas described in this paragraph 1.1 to facilitate readily identifiable closed area, in accordance with paragraph 2.
 - 1.2 If the existing or historical hazardous environmental conditions exist in an unincorporated area, the state forester may prohibit the

ignition or use of an ignition source in all or part of the areas described in paragraph 1.1 that are within the unincorporated area, after consulting with the county fire code official who has jurisdiction over that area.

- 1.3 If the existing or historical hazardous environmental conditions exist in a metro township created under Title 10, Chapter 2a, Part 4, Incorporation of Metro Townships and Unincorporated Islands in a County of the First Class on and after May 12, 2015, the metro township legislative body may prohibit the or use of an ignition source in all or part of the areas described in paragraph 1.1 that are within the township.
- 2. If a municipal legislative body, the state forester, or a metro township legislative body closes an area to the discharge of fireworks under paragraph 1, the legislative body or state forester shall:
 - 2.1 designate the closed area along readily identifiable features like major roadways, waterways, or geographic features;
 - 2.2 ensure that the boundary of the designated closed area is as close as is practical to the defined hazardous area, provided that the closed area may include areas outside of the hazardous area to facilitate a readily identifiable line; and
 - 2.3 identify the closed area through a written description or map that is readily available to the public.
- 3. A municipal legislative body, the state forester, or a metro township legislative body may close a defined area to the discharge of fireworks due to a historical hazardous environmental condition under paragraph 1 if the legislative body or state forester:
 - 3.1 makes a finding that the historical hazardous environmental condition has existed in the defined area before July 1 of at least two of the preceding five years;
 - 3.2 produces a map indicating the boundaries, in accordance with paragraph 2, of the defined area described; and
 - 3.3 before May 1 of each year the defined area is closed, provides the map described in paragraph 3.2 to the county in which the defined area is located.
- 4. A municipal legislative body, the state forester, or a metro township legislative body may not close an area to the discharge of fireworks due to a historical hazardous environmental condition unless the legislative body or state forester provides a map, in accordance with paragraph 3."

311.1.1 Abandoned premises. Buildings, structures and premises for which an *owner* cannot be identified or located by dispatch of a certificate of mailing to the last known or registered address, which persistently or repeatedly become unprotected or unsecured, which have been occupied by unauthorized persons or for illegal purposes, or which present a danger of structural collapse

or fire spread to adjacent properties shall be considered to be abandoned, declared unsafe and abated by demolition or rehabilitation in accordance with the *International Building Code*.

311.5 Placards. Any vacant or abandoned buildings or structures determined to be unsafe pursuant to Section 114 of this code relating to structural or interior hazards may be marked as required by Sections 311.5.1 through 311.5.5

401.3.1.1 Special Education Classrooms. Special education classrooms may shelter in place, or delay evacuation when all of the following conditions are met:

- 401.3.1.1.1 There is no visible flame or evidence of products of combustion (smoke).
- 401.3.1.1.2 The building is completely protected by an approved fire sprinkler system.
- 401.3.1.1.3 The building is completely protected by an approved fire alarm system.
- 401.3.1.1.4 The classroom has a minimum of one approved exit that discharges directly to the exterior.
- 401.3.1.1.5 The classroom has been approved to shelter in place by the fire code official.

401.3.3 Delayed notification. A person shall not, by verbal or written directive, require any delay in the reporting of a fire to the fire department.

Exception: Group E Occupancies. Teachers may delay evacuation upon fire alarm activation for up to 60 seconds when all of the following conditions are met:

- A. There is no visible flame or evidence of products of combustion (smoke)
- B. The building is protected throughout by an approved fire sprinkler system.
- C. The building is protected throughout by an approved fire alarm system.
- D. Students are in the safe zone of the room lined up and prepared for immediate evacuation."

403.9.2.1 College and university buildings and fraternity and sorority houses. College and university buildings, including fraternity and sorority houses, shall prepare an approved fire safety and evacuation plan, in accordance with Section 404.

Group R-2 college and university buildings, including fraternity and sorority houses, shall comply with Sections 403.9.2.1.1 and 403.9.2.1.2.

Table 405.3 Fire and Evacuation Drill Frequency andParticipation.

Footnotes:

- c. Secondary schools in Group E occupancies shall have an emergency evacuation drill conducted at least every two months, to a total of four emergency evacuation drills during the nine-month school year. The first emergency evacuation drill shall be conducted within 10 school days after the beginning of classes. The third emergency evacuation drill, weather permitting, shall be conducted 10 school days after the beginning of the next calendar year. The second and fourth emergency evacuation drills may be substituted by a security or safety drill to include shelter in place, earthquake drill, or lock down for violence. If inclement weather causes a secondary school to miss the 10-day deadline for the third emergency evacuation drill for fire as soon as practicable after the missed deadline.
- d. In Group E occupancies, excluding secondary schools, if the AJH approves, the monthly required emergency evacuation drill can be substituted by a security or safety drill to include shelter in place, earthquake drill, or lock down for violence. The routine emergency evacuation drill must be conducted at least every other drill.
- e. A-3 occupancies in academic buildings of institutions of higher learning are required to have one emergency evacuation drill per year, provided the following conditions are met:
 - A. The building has a fire alarm system in accordance with Section 907.2.
 - B. The rooms classified as assembly shall have fire safety floor plans as required in Subsection 404.2.2(4) posted.
 - C. The building is not classified a high-rise building.
 - D. The building does not contain hazardous materials over the allowable quantities by code.

501.5 Access grade and fire flow. An authority having jurisdiction over a structure being built in accordance with the requirements of the International Residential Code as adopted in the State Construction Code, may require an automatic fire sprinkler system for the structure only by ordinance and only if any of the following conditions exist:

- 1. The structure
 - A. is located in an urban-wildland interface area as provided in the Utah Wildland Urban Interface Code adopted as a construction code under the State Construction Code; and
 - B. does not me the requirements described in Utah Code, Subsection 65A-8-203(4)(a) and Utah Administrative Code, R652-

122-1300, Minimum Standards for County Wildland Fire Ordinance;

- 2. The structure is in an area where a public water distribution system with fire hydrants does not exist as required in Utah Administrative Code, R309-550-5, Water Main Design;
- The only fire apparatus access road has a grade greater than 10% for more than 500 continual feet;
- 4. The total floor area of all floor levels within the exterior walls of the dwelling unit exceeds 10,000 square feet; or
- 5. The total floor area of all floor levels within the exterior walls of the dwelling unit is double the average of the total floor area of all floor levels of unsprinklered homes in the subdivision that are no larger than 10,000 square feet.

Exception

A single family dwelling does not require a fire sprinkler system if the dwelling:

- A. Is located outside the wildland urban interface;
- B. Is built in a one-lot subdivision; and
- C. Has 50 feet of defensible space on all sides that limits the propensity of fire spreading from the dwelling to another property.

506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official, after consultation with the building owner, may require a key box to be installed in an approved location. The key box shall contain keys to gain necessary access as required by the fire code official. For each fire jurisdiction that has at least one building with a required key box, the fire jurisdiction shall adopt an ordinance, resolution, or other operating rule or policy that creates a process to ensure that each key to each key box is properly accounted for and secure.

507.1.1 Isolated one- and two-family dwellings. Fire flow may be reduced for an isolated one- and two-family dwelling when the authority having jurisdiction over the dwelling determines that the development of a full fire-flow requirement is impractical.

507.1.2 Pre-existing subdivision lots. The requirements for a preexisting subdivision lot shall not exceed the requirements described in Section 501.5 **507.5.1 Where required.** Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an *approved* route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the *fire code official*.

Exceptions:

- 1. For Group R-3 and Group U occupancies the distance requirement shall be 600 feet (183 m).
- For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).
- 3. One interior and one detached accessory dwelling on a single residential lot.

510.1 Emergency responder communication coverage in new buildings. When required by the *fire code official, approved* in-building, two-way emergency responder communication coverage for emergency responders shall be provided in all new buildings. In-building, two-way emergency responder communication coverage within the building shall be based on the existing coverage levels of the public safety communication systems utilized by the jurisdiction, measured at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

604.6.1 Elevator key location. Firefighter service keys shall be kept in a "Supra-Stor-a-key" elevator key box or similar box with corresponding key system that is adjacent to the elevator for immediate use by the fire department. The key box shall contain one key for each elevator, one key for lobby control, and any other keys necessary for emergency service. The elevator key box shall be accessed using a 6049 numbered key.

606.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of the *International Mechanical Code* and NFPA 96.

606.2 Where required. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors.

Exceptions:

1. Factory-built commercial exhaust hoods that are *listed* and *labeled* in accordance with UL 710, and installed in accordance with Section 304.1 of the *International Mechanical Code*, shall not be required to

comply with Sections 507.1.5, 507.2.3, 507.2.5, 507.2.8, 507.3.1, 507.3.3, 507.4 and 507.5 of the *International Mechanical Code*.

- 2. Factory-built commercial cooking recirculating systems that are listed and labeled in accordance with UL 710B, and installed in accordance with Section 304.1 of the International Mechanical Code, shall not be required to comply with Sections 507.1.5, 507.2.3, 507.2.5, 507.2.8, 507.3.1, 507.3.3, 507.4 and 507.5 of the *International Mechanical Code*. Spaces in which such systems are located shall be considered to be kitchens and shall be ventilated in accordance with Table 403.3.1.1 of the International Mechanical Code. For the purpose of determining the floor area required to be ventilated, each individual appliance shall be considered as occupying not less than 100 square feet (9.3 square meters).
- Where cooking appliances are equipped with integral down-draft exhaust systems and such appliances and exhaust systems are listed and labeled for the application in accordance with NFPA 96, a hood shall not be required at or above them.
- 4. A Type I hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5 mg/cubic meter or less of grease when tested at an exhaust flow rate of 500 cfm (0.236 cubic meters per second) in accordance with UL 710B.
- 5. A Type 1 hood is not required for a cooking appliance in a microenterprise home kitchen, as that term is defined in Utah Code, Section 26-15c-102, for which the operator obtains a permit in accordance with Utah Code, Title 26, Chapter 15c, Microenterprise Home Kitchen Act.

705.2 Inspection and maintenance. Opening protectives in fireresistance-rated assemblies shall be inspected and maintained in accordance with NFPA 80. Opening protectives in smoke barriers shall be inspected and maintained in accordance with NFPA 80 and NFPA 105. Openings in smoke partitions shall be inspected and maintained in accordance with NFPA 105. Fire doors and smoke and draft control doors shall not be blocked, obstructed, or otherwise made inoperable. Fusible links shall be replaced promptly whenever fused or damaged. Opening protectives and smoke and draft control doors shall not be modified.

Exception: In Group E Occupancies, where the corridor serves an occupant load greater than 30 and the building does not have an automatic fire sprinkler system installed, the door closers may be of the friction hold-open type on classrooms' doors with a rating of 20 minutes or less only.

901.4.7 Pump and Riser Room Size.

- **901.4.7.1** Fire pump rooms and automatic sprinkler system riser rooms shall be designed with adequate space for all installed equipment necessary for the installation and to provide sufficient working room around the stationary equipment. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspection, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly and not less than the following minimum elements:
 - **901.4.7.1.1** A minimum clear and unobstructed distance of 12 inches shall be provided from the installed equipment to the elements of permanent construction.
 - **901.4.7.1.2** A minimum clear and unobstructed distance of 12 inches shall be provided between all other installed equipment and appliances.
 - **901.4.7.1.3** A clear and unobstructed width of 36 inches shall be provided in front of all installed equipment and appliances, to allow for inspection, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire resistance-rated assembly.

901.4.7.2 Fire Pump Room. Fire pumps and controllers shall be provided with ready access. Fire pump rooms shall be provided with doors and an unobstructed passageway large enough to allow for the removal of the largest piece of equipment. The passageway shall have a clear width not less than 72 inches. Openings into the room shall be clear and unobstructed, with doors swinging in the outward direction from the fire pump room and the opening providing a clear width of not less than 68 inches and a clear height of the door opening shall not be less than 80 inches. The door shall be permitted to be locked provided that the key is available at all times and located in a Key Box in accordance with IFC, Section 506.

901.4.7.3 Automatic Sprinkler Riser Room. Automatic sprinkler system risers shall be provided with ready access. Automatic sprinkler system riser rooms shall be provided with doors and an unobstructed passageway large enough to allow for the removal of the largest piece of equipment. The passageway shall have a clear width no less than 36 inches. Openings into the room shall be clear and unobstructed, with doors swinging in the outward direction from the riser room and the opening providing a clear width of not less than 32 inches and a clear height of the door opening shall not be less than 80 inches. The door shall be permitted to be locked provided that the key is available at all times and located in a Key Box in accordance with IFC, Section 506.

901.4.7.4 Marking on Access Doors. Access doors for automatic sprinkler system riser rooms and fire pump rooms shall be labeled with an approved sign. The lettering shall be in contrasting color to the background. Letters shall have a minimum height of 2 inches (51 mm) with a minimum stroke of 3/8 inch (10 mm).

901.4.7.5 Environment. Automatic sprinkler system riser rooms and fire pump rooms shall be maintained at a temperature of not less than 40 degrees F (4 degrees C). Heating units shall be permanently installed.

901.4.7.6 Lighting. Permanently installed artificial illumination shall be provided in the automatic sprinkler system riser rooms and fire pump rooms.

903.2.1.2 Group A-2. An *automatic sprinkler system* shall be provided throughout stories containing Group A-2 occupancies and throughout all stories from the Group A-2 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

- 1. The fire area exceeds 5,000 square feet (464 square meters).
- 2. The fire area has an occupant load of 100 or more.
- 3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
- 4. An automatic fire sprinkler system shall be provided through Group A-2 occupancies where indoor pyrotechnics are used.

903.2.2 Ambulatory care facilities. An *automatic sprinkler system* shall be installed throughout the building containing an ambulatory care facility where either of the following conditions exist at any time:

- 1. Four or more care recipients are incapable of self-preservation.
- 2. One or more care recipients that are incapable of self-preservation are location at other than the *level of exit discharge* serving such a facility.

Exception: Floors classified as an open parking garage are not required to be sprinklered.

903.2.4 Group F-1. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

- 1. A Group F-1 *fire area* exceeds 12,000 square feet (1115 square meters).
- 2. A Group F-1 *fire area* is located more than three stories above the lowest level of fire department vehicle access.
- 3. The combined area of all Group F-1 *fire areas* on all floors, including any *mezzanines*, exceeds 24,000 square feet (2230 square meters).

903.2.7 Group M. An *automatic sprinkler system* shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

- 1. A Group M *fire area* exceeds 12,000 square feet (1115 square meters).
- 2. A Group M fire area is located more than three stories above the lowest level of fire department vehicle access.
- 3. The combined area of all Group M *fire areas* on all floors, including any *mezzanines*, exceeds 24,000 square feet (2230 square meters).

903.2.8 Group R. An *automatic sprinkler system* installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R *fire area*.

Exceptions:

- 1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) constructed in accordance with the International Residential Code for One- and Two-Family Dwellings.
- Single story Group R-1 occupancies with fire areas not more than 2,000 square feet that contain no installed plumbing or heating, where no cooking occurs, and constructed of Type I-A, I-B, II-A, or II-B construction.
- Group R-4 fire areas not more than 4,500 gross square feet and not containing more than 16 residents, provided the building is equipped throughout with an approved fire alarm system that is interconnected and receives its primary power from the building wiring and a commercial power system.

903.2.9 Group S-1. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exits:

- 1. A Group S-1 *fire area* exceeds 12,000 square feet (1115 square meters).
- 2. A Group S-1 *fire area* is located more than three stories above the lowest level of fire department vehicle access.
- 3. The combined area of all Group S-1 *fire areas* on all floors, including any *mezzanines*, exceeds 24,000 square feet (2230 square meters).
- A Group S-1 fire area used for the storage of commercial motor vehicles where the fire area exceeds 5,000 square feet (464 square meters).

903.3.1.2 NFPA 13R sprinkler systems. Automatic sprinkler systems in Group R occupancies shall be permitted to be installed throughout in accordance with NFPA 13R where the Group R occupancy meets all of the following conditions:

- 1. Four stories or less above grade plane.
- 2. The floor level of the highest story is 40 feet (12,192 mm) or less above the lowest level of fire department vehicle access.
- 3. The floor level of the lowest story is 40 feet (12,192 mm) or less below the lowest level of fire department vehicle access.

The number of stories of Group R occupancies constructed in accordance with Sections 510.2 and 510.4 of the *International Building Code* shall be measured from *grade plane*.

903.3.1.2.3 Attics. Attic protection shall be provided as follows:

- 1. Attics that are used or intended for living purposes or storage shall be protected by an *automatic sprinkler system*.
- Where fuel-fired equipment is installed in an unsprinklered attic, not fewer than one quick-response intermediate temperature sprinkler shall be installed above the equipment.
- 3. Where located in a building of Type III, Type IV or Type V construction designed in accordance with Section 510.2 or 510.4 of the *International Building Code*, attics not required by Item 1 to have sprinklers shall comply with one of the following if the roof assembly is located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access needed to meet the provisions in Section 503:
 - 3.1. Provide automatic sprinkler system protection.
 - 3.2. Construct the attic using noncombustible materials.
 - 3.3. Construct the attic using fire-retardant-treated wood complying
 - with Section 2303.2 of the International Building Code.
 - 3.4. Fill the attic with noncombustible insulation.

The height of the roof assembly shall be determined by measuring the distance from the lowest required fire vehicle access road surface adjacent to the building to the eave of the highest pitched roof, the intersection of the highest roof to the exterior wall, or the top of the highest parapet, whichever yields the greatest distance. For the purpose of this measurement, required fire vehicle access roads shall include only those roads that are necessary for compliance with Section 503.

- 4. Group R-4, Condition 2 occupancy attics not required by Item 1 to have sprinklers shall comply with one of the following:
 - 4.1 Provide automatic sprinkler system protection.
 - 4.2 Provide a heat detection system throughout the attic that is arranged to activate the building fire alarm system.
 - 4.3 Construct the attic using noncombustible materials.
 - 4.4 Construct the attic using fire-retardant-treated wood complying with Section 2303.2 of the International Building Code.
 - 4.5 Fill the attic with noncombustible insulation.

Exception: Sprinkler protection in attics is not required in buildings that are not required to be sprinklered by another section of this code.

903.3.5 Water supplies. Water supplies for *automatic sprinkler systems* shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the *International Plumbing Code* and as amended in the State Construction Code. For connections to public waterworks systems, the water supply test used for design of *fire protection systems* shall be adjusted to account for seasonal and daily pressure fluctuations based on information from the water supply authority and as *approved* by the *fire code official*.

903.5.1 Tag and information. A tag shall be attached to the riser indicating the date the antifreeze solution was tested. The tag shall also indicate the type and concentration of antifreeze solution by volume with which the system is filled, the name of the contractor that tested the antifreeze solution, the contractor's license number, and a warning to test the concentration of the antifreeze solutions at yearly intervals.

904.13.5.2 Extinguishing system service. Automatic fireextinguishing system shall be serviced no less frequently than every six months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the *fire code official* upon completion.

Exception: Automatic fire extinguishing systems located in occupancies where usage is limited and less than six consecutive months may be serviced annually if the annual service is conducted immediately before the period of usage, and approval is received from the AHJ

905.3.9 Open parking garages. Open parking garages shall be equipped with an approved Class I manual standpipe system when fire department access is not provided for firefighting operations to within 150 feet of all portions of the open parking garage as measured from the approved fire department vehicle access. Class I manual standpipe shall be accessible throughout the parking garage such that all portions of the parking structure are protected within 150 feet of a hose connection.

Exception: Open parking garages equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

905.12 Existing buildings. - Deleted

906.1 Where required. Portable fire extinguishers shall be installed in all of the following locations:

1. In new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

Exceptions:

- In Group R-2 occupancies, portable fire extinguishers shall be required only in locations specified in Items 2 through 6 where each dwelling unit is provided with a portable fire extinguisher having a minimum rating of 1-A:10-B:C.
- 2. In Group E occupancies, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.
- 3. In storage areas of Group S occupancies where forklift, powered industrial truck or powered cart operators are the primary occupants, fixed extinguishers, as specified in NFPA 10, shall not be required where in accordance with all of the following:
 - 3.1 Use of vehicle-mounted extinguishers shall be *approved* by the *fire code official*.
 - 3.2 Each vehicle shall be equipped with a 10-pound, 40A:80B:C extinguisher affixed to the vehicle using a mounting bracket approved by the extinguisher manufacturer or the *fire code* official for vehicular use.
 - 3.3 Not less than two spare extinguishers of equal or greater rating shall be available on-site to replace a discharged extinguisher.
 - 3.4 Vehicle operators shall be trained in the proper operation, use and inspection of extinguishers.
 - 3.5 Inspections of vehicle-mounted extinguishers shall be performed daily.
- Within 30 feet (9144 mm) distance of travel from commercial cooking equipment and from domestic cooking equipment in Group I-1; I-2, Condition 1; and R-2 college dormitory occupancies.
- 3. In areas where *flammable* or *combustible liquids* are stored, used or dispensed.
- 4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3316.1.
- 5. Where required by the sections indicated in Table 906.1.
- Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.

Exception: Portable fire extinguishers are not required at normally unmanned Group U occupancy buildings or structures where a portable fire extinguisher suitable to the hazard of the location is provided on the vehicle of visiting personnel.

907.2.3 Group E. A manual fire alarm system that initiates the occupant notification signal using an emergency voice/alarm communication system that meets the requirements of Section 907.5.2.2, or a manual fire alarm system that

initiates an approved audible and visual occupant notification signal that meets the requirements of Sections 907.5.2.1, 907.5.2.1.1, 907.5.2.1.2, and 907.5.2.3, and is installed in accordance with Section 907.6, and with rules made by the Utah Fire Prevention Board in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, shall be installed in Group E occupancies. Where automatic fire sprinkler systems or smoke detectors are installed, the fire sprinkler systems and smoke detectors shall be connected to the building fire alarm system.

Exception:

- 1. A manual fire alarm system shall not be required in Group E occupancies with an occupant load of 50 or less.
- 2. Manual fire alarm boxes shall not be required in Group E occupancies where all of the following apply:
 - 2.1 Interior corridors are protected by smoke detectors.
 - 2.2 Auditoriums, cafeterias, gymnasiums and similar areas are protected by *heat detectors* or other *approved* detection devices.
 - 2.3 Shops and laboratories involving dusts or vapors are protected by heat detectors or other approved detection devices.
 - 2.4 Manual activation is provided from a normally occupied location.
- Manual fire alarm boxes shall not be required in Group E occupancies where all of the following apply:
 - 3.1 The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.
 - 3.2 The fire alarm system will activate on sprinkler water flow.
 - 3.3 Manual activation is provided from a normally occupied location.

907.2.3.1 Automatic detection devices that detect smoke shall be installed throughout all corridors and spaces open to the corridor at the maximum prescribed spacing of thirty feet on center and no more than fifteen feet from the walls or smoke detectors shall be installed as required in NFPA, Standard 72, Section 17.7.

907.2.3.2 Where structures are not protected or are partially protected with an automatic fire sprinkler system, approved automatic smoke detectors shall be installed in accordance with the complete coverage requirements of NFPA, Standard 72

907.2.3.3 An approved key plan drawing and operating instructions shall be posted at the main fire alarm panel which displays the location of all alarm zones and if applicable, device addresses.

907.2.3.4 The main panel shall be located in a normally attended area such as the main office or lobby. Location of the main panel other than as stated above, shall require the review and authorization of the State Fire Marshal Division. Where location as required above is not possible, an electronically supervised

remote annunciator from the main panel shall be located in a supervised area of the building. The remote annunciator shall visually indicate system power status, alarms for each zone, and give both visual and audible indication of trouble conditions in the system. All indicators on both the main panel and remote annunciator shall be adequately labeled.

907.2.3.5 All system wiring shall be as follows:

- (A) the initiating device circuit shall be designated and installed Class A as defined in NFPA standard 72.
- (B) The notification appliance circuits shall be designated and installed Class A as defined in NFPA Standard 72.
- (C) Signaling line circuits shall be designated and installed Class A loop as defined in NFPA Standard 72.

907.2.3.6 Fan Shutdown shall be as follows:

- (A) Fan shut down shall be as required in the *International Mechanical Code*, Chapter 6, Section 606.
- (B) Duct detectors required by the *International Mechanical Code* shall be interconnected and compatible with the fire alarm system.

907.5.2.3.4 Special Education Classrooms. Visible and audible alarm notification appliances in Special Education classrooms may be replaced with a solid red light when approved by the *fire code official*.

907.8 Inspection, testing and maintenance. The maintenance and testing schedules and procedures for fire alarm and fire detection systems shall be in accordance with sections 907.8.1 through 907.8.4 and NFPA 72. Records of inspection, testing and maintenance shall be maintained. Increases in nuisance alarms shall require the fire alarm system to be tested for sensitivity fire alarm systems that continue after sensitivity testing with unwarranted nuisance alarms shall be replaced as directed by the AHJ.

915.2.3 Group E Occupancies. Carbon monoxide detectors shall be installed in the following areas within Group E occupancies:

- (1) Boiler rooms, furnace rooms, and similar rooms, or in adjacent areas where carbon monoxide is likely to spread. (The installation of carbon monoxide detectors in boiler rooms and furnace rooms may cause a false alarm problem. Locating these detectors in adjacent spaces where the carbon monoxide is likely to spread may be a better option.)
- (2) Home economics rooms with gas appliances.
- (3) School kitchens with gas appliances. (Commercial kitchens).
- (4) Art rooms and other areas with a gas kiln or open flame.
- (5) Gas rooftop units, and other carbon monoxide producing HVAC units, one per zone. (The zone shall be the area covered by the HVAC unit.)
- (6) In areas with gas wall units.

- (7) In areas with a gas water heater or boiler.
- (8) Areas with a forge or foundry.
- (9) Metal shop or auto shop areas or in adjacent areas where carbon monoxide is likely to spread. (The installation of carbon monoxide detectors in metal shop or auto shop areas may cause a false alarm problem period locating these detectors in adjacent spaces, i.e. classrooms or corridors, where the carbon monoxide is likely to spread from these spaces may be a better option.)
- (10) Labs with open flame.
- (11) HVAC units drawing outside air that could be contaminated with carbon monoxide.
- (12) Other areas with an open flame or fuel fired appliance.

915.2.3.1 Carbon monoxide alarm signals shall be automatically transmitted to an on-site location that is staffed by school personnel.

Exception: Carbon monoxide alarm signals shall not be required to be automatically transmitted to an onsite location that is staffed by school personnel in Group E occupancies with an occupant load of 30 or less.

915.7 Carbon Monoxide Systems in Group E Occupancies.

Carbon monoxide systems may be part of a fire alarm system or standalone system.

915.7.1 Power and Wiring.

915.7.1.1 Power. Carbon monoxide detection system shall require a primary and secondary power source.

915.7.1.2 Wiring. Class "A" wiring is required when the carbon monoxide system is part of, or connected to, a fire alarm system. Standalone carbon monoxide detection systems may use Class "B" wiring. All wiring shall be Class "A" or "B".

915.7.2 Equipment Shut Down. Equipment and appliances that are producing carbon monoxide shall be shut down automatically in the zone involved upon carbon monoxide system activation.

915.7.3 Notification.

915.7.3.1 Local Alarm. Each occupied space shall sound an audible alarm when detecting carbon monoxide at a level in excess of 70 ppm for one hour.

915.7.3.2 General Alarm. A blue strobe, visual alarm, is required in a normally occupied location, similar to the administrative offices, when carbon monoxide is detected in the facility in excess of 70 ppm for one hour.

915.7.3.2.1 The general alarm shall require a manual reset following an alarm activation.

915.7.3.3 Digital Notification. Portable carbon monoxide detectors, with digital readout indicating parts per million of carbon monoxide, in a space to determine the level of hazard in a given space.

915.7.3.4 Monitoring. System monitoring is not required. If the system is monitored, the signal should be a supervisory signal indicating carbon monoxide.

915.7.3.5 Inspection.

915.7.3.5.1 The carbon monoxide detection system shall be tested in the presence of a Deputy or Special Deputy of the State Fire Marshal Division the Deputy shall require "spot testing" of the system and its components.

915.7.3.5.2 Before requesting final inspection and approval, the installing contractor shall test each component of the system and issue a statement of compliance, in writing, to the State Fire Marshal Division that the carbon monoxide detection system has been installed in accordance with the approved plans and has been tested in accordance with the manufacturer's specifications, and the appropriate installation standard.

915.7.3.5.3 Systems shall be tagged with the State approved tag for fire alarm systems, upon final approval and shall be inspected and tagged annually by an individual certified as a Master Fire Alarm Technician, by the State Fire Marshal Division.

915.7.3.6 Evacuation. The affected area within Group E Occupancies shall be evacuated when carbon monoxide is detected at a level in excess of 70 ppm for one hour in that area.

1010.2.13.1 Delayed egress locking system. The delayed egress locking system shall be installed and operated in accordance with all of the following:

- The delay electronics of the delayed egress locking system shall deactivate upon actuation of the *automatic sprinkler system* or automatic fire detection system, allowing immediate, free egress.
- The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.
- The delayed egress locking system shall have the capability of being deactivated at the *fire command center* and other *approved* locations.
- 4. An attempt to egress shall initiate an irreversible process that shall allow such egress and not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than three seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only.

Exception: Where *approved*, a delay of not more than 30 seconds is permitted on a delayed egress door.

 The egress path from any point shall not pass through more than one delayed egress locking system.

Exceptions:

- 1. In Group I-1, Condition 2, Group I-2 or I-3 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided that the combined delay does not exceed 30 seconds.
- 2. In Group I-1, Condition I or Group I-4 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided that the combined delay does not exceed 30 seconds and the building is equipped throughout with an *automatic sprinkler system* in accordance with section 903.3.1.1.
- 6. A sign should be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware:

Exceptions: Where *approved*, in Group I occupancies, the installation of a sign is not required where care recipients who, because of clinical needs, require restraint or containment as part of the function of the treatment area.

- 6.1. For doors that swing in the direction of egress, the sign shall read: "PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS."
- 6.2. For doors that swing in the opposite direction of egress, the sign shall read: "PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS."
- 6.3. The sign shall comply with the visual character requirements in ICC A117.1.
- 7. Emergency lighting shall be provided on the egress side of the door.
- 8. The delayed egress locking system units shall be *listed* in accordance with UL 294
- 9. The secure area or unit with delayed egress locks shall be located at the level of exit discharge in Type V construction.

1010.2.14 Controlled egress doors Groups I-1 and I-2. Electric

locking systems, including electromechanical locking systems and electromagnetic locking systems, shall be permitted to be locked in the means of egress in Group I-1 or I-2 occupancies where the clinical needs of persons receiving care require their containment. Controlled egress doors shall be permitted in such occupancies where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with all of the following:

- 1. The door locks shall unlock on actuation of *the automatic sprinkler system* or automatic smoke detection system.
- 2. The door lock shall unlock on loss of power controlling the lock or lock mechanism.
- The door locking system shall be installed to have the capability of being unlocked by a switch located at *the fire command center*, a nursing station or other approved location. The switch shall directly break power to the lock.
- A building occupant shall not be required to pass through more than one door equipped with a controlled egress locking system before entering an *exit*.
- 5. The procedures for unlocking the doors should be described and *approved* as part of the emergency planning and preparedness required by Chapter 4.
- 6. All clinical staff shall have the keys, codes or other means necessary to operate the locking systems.
- 7. Emergency lighting shall be provided at the door.
- 8. The door locking system units shall be *listed* in accordance with UL 294.
- 9. The secure area or unit with special egress locks shall be located at the level of exit discharge in Type V construction.

1011.5.2 Riser height and tread depth. Riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. The riser heights shall be measured vertically between the *nosings* of adjacent treads or between the landing and the adjacent tread. Rectangular tread depths shall be 11 inches (279 mm) minimum measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's *nosing. Winder* treads shall have a minimum tread depth of 11 inches (279 mm) between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's *nosing. Winder* treads shall have a minimum tread depth of 10 inches (254 mm) within the clear width of the *stair*.

Exceptions:

- 1. Spiral stairways in accordance with section 1011.10.
- Stairways connecting stepped aisles to cross aisles or concourses shall be permitted to use the riser/tread dimension in section 1030.14.2.
- 3. In Group R-3 occupancies, within dwelling units in Group R02 occupancies, and in Group U occupancies that are accessory to a Group R-3 occupancy, or accessory to individual dwelling units in Group R-2 occupancies, the maximum riser height shall be 8 inches (203 mm) and the minimum tread depth shall be 9 inches (229 mm). The minimum winder tread depth at the walk line shall be 10 inches (254 mm), and the minimum winder tread depth shall be 6 inches (152mm). A nosing not less than 0.75 inch (19.1 mm) but not more

than 1.25 inches (302 mm) shall be provided on stairways with solid risers by the depth tread is less than 10 inches (254 mm).

- 4. See Section 503.1 of the *International Existing Building Code* for the replacement of existing *stairways*.
- 5. In Group I-3 facilities, *stairways* providing access to guard towers, observation stations and control rooms, not more than 250 square feet (23 square meters) in area, shall be permitted to have a maximum riser height of eight inches (203 mm) and a minimum tread depth of 9 inches (229 mm).

1011.11 Handrails. Flights of stairways shall have handrails on each side and shall comply with Section 1014. Where glass is used to provide the *handrail*, the *handrail* shall comply with section 2407 of the *International Building Code*.

Exceptions:

- 1. *Flights* of *stairways* within *dwelling units* and flights of *spiral stairways* are permitted to have a handrail on one side only.
- Decks, patios and walkways that have a single change in elevation where the landing depth on each side of the change of elevation is greater than what is required for a landing do not require *handrails*.
- 3. In Group R-3 occupancies, a change in elevation consisting of a single riser at the entrance or egress door does not require *handrails*.
- Changes in room elevations of three or fewer risers within dwelling units and sleeping units in Group R-2 and R-3 do not require handrails.
- 5. Where a platform lift is in a stationary position and the floor of the platform lift serves as an upper landing of a *stairway*, *handrails* shall not be required on the *stairway*, provided that all of the following criteria are met:
 - 5.1. The stairway contains not more than two risers.
 - 5.2. A handhold, positioned horizontally or vertically, is located on one side of the *stairway* adjacent to the top landing.
 - 5.3. The handhold is located not less than 34 inches (864 mm) and not more than 42 inches (1067 mm) above the bottom landing of the *stairway*.
 - 5.4. The handhold gripping surface complies with Section 1014.3 and is not less than 4.5 inches (114 mm) in length.
- In occupancies in Group R-3, as applicable in Section 1014 and in occupancies in Group U, which are accessory to an occupancy in group R-3, as applicable in Section 1014, handrails shall be provided on at least one side of stairways consisting of four or more risers.

1032.2.1 Security devices and egress locks. Security devices affecting *means of egress* shall be subject to approval of the fire and building code official. Security devices and locking arrangements in the *means of egress* that restrict, control or delay egress shall be installed and maintained as required by this chapter.

1103.2 Emergency Responder Communication Coverage in

Existing Buildings. When required by the *fire code official* existing buildings other than Group R-3, that do not have *approved* in-building, two-way emergency response communication coverage for emergency responders in the building based on existing coverage levels of the public safety communication systems, shall be equipped with such coverage according to one of the following:

- 1. Where an existing wired communication system cannot be repaired or is being replaced, or where not *approved* in accordance with Section 510.1, Exception 1.
- 2. Within a time frame established by the adopting authority.

Exception: Where it is determined by the *fire code official* that the inbuilding, two-way emergency responder communication coverage system is not needed.

1103.5.1 Group A-2. An automatic fire sprinkler system shall be provided throughout existing Group A-2 occupancies where indoor pyrotechnics are used.

1103.5.4 High-rise buildings. Where Appendix M has been adopted, existing high-rise buildings that do not have a previously *approved* fire sprinkler system shall be equipped with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1 where any of the following conditions apply:

- 1. The high-rise building has an occupied floor located more than 120 feet above the lowest level of fire department vehicle access.
- 2. The high-rise building has occupied floors located more than 75 feet (22,860 mm) and not more than 120 feet (36,576 mm) above the lowest level of fire department vehicle access, and the building does not have at least two interior exit stairways complying with Sections 1104.10 that are separated from the building interior by fire assemblies having a fire-resistance rating of not less than 2 hours with opening protection in accordance with Table 716.1(2) of the *International Building Code*.
- 3. The high-rise building has occupied floors located more than 75 feet (22,860 mm) and note more than 120 feet (36,576 mm) above the lowest level of fire department vehicle access, and the building does not have a fire alarm system that includes smoke detection in mechanical equipment, electrical, transformer, telephone equipment and similar rooms; corridors; elevator lobbies; and at doors penetrating interior exit stairway enclosures. Building owners shall file a compliance schedule with the fire code official not later than 365 days after receipt of a written notice. The compliance schedule shall not exceed 12 years for completion of the automatic sprinkler system retrofit.

1103.6 - Deleted

1103.7 Fire Alarm Systems. The following shall have an approved fire alarm system installed in accordance with Utah Administrative Code, R710-4, Buildings Under the Jurisdiction of the Utah Fire Prevention Board:

- 1. A building with an occupant load of 300 or more persons that is owned or operated by the State;
- 2. a building with an occupant load of 300 or more persons that is owned or operated by an institution of higher education; and
- 3. a building with an occupant load of 50 or more persons that is owned or operated by a school district, private school, or charter school.

Exception: the requirements of this section do not apply to a building designated as an Institutional Group I (as defined in IFC 202) occupancy.

1103.7.1 Group E - Deleted

1103.7.2 Group I-1 - Deleted

1103.7.3 Group I-2 - Deleted

1103.7.4 Group I-3 - Deleted

1103.7.5 Group R-1 and all subsections - Deleted

1103.7.6 Group R-2 - Deleted

1103.9 Carbon monoxide detection. Existing Groups E, I-1, I-2, I-4 and R occupancies shall be equipped with carbon monoxide detection in accordance with Section 915.

1205.2.1 Solar photovoltaic systems for Group R-3 and buildings constructed in accordance with IRC. Solar

photovoltaic systems for Group R-3 buildings shall comply with Sections 1205.2.1.1 through 1205.2.3.

Exceptions:

- 1. These requirements shall not apply to roofs with slopes of 2 units vertical in 12 units horizontal (16.7-percent slope) or less.
- Reduction in pathways and clear access width are permitted where a rational approach has been used and the reduction is warranted and approved by the Fire Code Official.

1205.3.1 Perimeter pathways. There shall be a minimum three foot wide (914 mm) clear perimeter around the edges of the roof. The solar

installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

- 1. The pathway shall be over areas capable of supporting the live load of fire fighters access the roof.
- The centerline axis pathways shall be provided in both axis of the roof. Centerline axis pathways shall run where the roof structure is capable of supporting the live load of fire fighters accessing the roof.
- Smoke and heat vents required by Section 910.2.1 or 910.2.2 shall be provided with a clear pathway width of not less than three feet (914 mm) to the vents.
- 4. Access to roof area required by Section 504.3 or 1011.12 shall be provided with a clear pathway width of not less than three feet (914 mm) around access opening and at least three feet (914 mm) clear pathway to parapet or roof edge.

1205.3.2 Smoke ventilation. The solar installation shall be designed to meet the following requirements:

- 1. Arrays shall be no greater than 150 feet (45,720 mm) by 150 feet (45,720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.
- 2. Smoke ventilation options between array sections shall be one of the following:
 - 2.1 A pathway six feet (1829 mm) or greater in width.
 - 2.2 A pathway three feet (914 mm) or greater in width bordering roof skylights or smoke and heat vents when required by Section 910.2.1 or Section 910.2.2.
 - 2.3 Smoke and heat vents designed for remote operation using devices that can be connected to the vent by mechanical, electrical, or any other suitable means, protected as necessary to remain operable for the design period. Controls for remote operation shall be located in a control panel, clearly identified and located in an approved location.
- 3. Where gravity-operated dropout smoke and heat vents occur, a pathway three feet (914 mm) or greater in width on not fewer than one side.

3311.1 Required access.

3311.1.1 Approved vehicle access. Approved vehicle access for firefighting shall be provided as described in Chapter 5 of this code to all construction or demolition sites.

3311.2 Fire department connections. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections.

3311.1.3 Type of access. Vehicle access shall be provided by either temporary or permanent roads.

3311.1.3.1 Temporary road requirements. Temporary roads shall be constructed with a minimum of site specific required structural fill for permanent roads and road base, or other approved material complying with local standards.

3311.1.3.2 Reports. Compaction reports may be required. An engineer's review and certification of a temporary fire department access road is not required.

3311.1.3.3 Local jurisdictions. If an improvement completion assurance has been posted in accordance with section 10-9a-604.5, a local jurisdiction may not require permanent roads or asphalt or concrete on temporary roads, before final approval of the structure served by the road.

3311.1.4 Maintenance. Temporary roads shall be maintained until permanent fire apparatus access roads are available.

3311.1.5 Timeline. Temporary or permanent fire department access roads shall be functional before construction above the foundation begins and before an appreciable amount of combustion construction materials are on site.

3311.2 Key boxes - Deleted

Table 5003.1.1(1) – Apply footnote d to Explosives, Storage, Solid Pounds.

5601.1.3 Fireworks. The possession, manufacture, storage, sell, handling and use of fireworks are prohibited.

Exceptions:

- 1. Storage and handling of fireworks as allowed in section 5604.
- 2. Manufacture, assembly and testing of fireworks as allowed in section 5605.
- 3. The use of fireworks for fireworks displays as allowed in section 5608.
- 4. The possession, storage, sell, handling and use of specific types of division 1.4G fireworks where allowed by applicable laws, ordinances and regulations, provided that such fireworks and facilities comply with the 2006 edition of NFPA 1124, CPSC 16 CFR parts 1500 and 1507,

and DOTn 49 CFR parts 100-185, as applicable for consumer fireworks. The use of fireworks for display and retail sales is allowed as set forth in Utah Code, Title 53, Chapter 7, Utah Fire Prevention and Safety Act, Sections 53-7-220 through 53-7-225; Utah Code, Title 11, Chapter 3, County and Municipal Fireworks Act; Utah Administrative Code, R710-2; and the State Fire Code.

5701.4 Permits. Permits shall be required as set forth in sections 105.5 and 105.6. The owner of an underground tank that is out of service for longer than one year shall receive a Temporary Closure Notice from the Department of Environmental Quality, a copy shall be given to the AHJ.

5706.1 General. This section shall cover the provisions for special

operations that include, but are not limited to, storage, use, dispensing, mixing or handling of *flammable* and *combustible liquids*. The following special operations shall be in accordance with sections 5701, 5703, 5704 and 5705, except as provided in section 5706.

- 1. Storage and dispensing of flammable and combustible liquids on farms and construction sites.
- 2. Well drilling and operating.
- 3. Bulk plants or terminals.
- Bulk transfer and process transfer operations utilizing tank vehicles and tank cars.
- 5. Tank vehicles and tank vehicle operation.
- 6. Refineries.
- 7. Vapor recovery and vapor-processing systems.
- 8. Sites approved by the AHJ.

5706.2 Storage and dispensing of flammable and combustible liquids on farms and construction sites.

Permanent and temporary storage and dispensing of Class I and II liquids for private use on farms and rural areas and at construction sites, earth-moving projects, gravel pits or borrow pits, and sites approved by the AHJ shall be in accordance with sections 5706.2.1 through 5706.2.8.1.

6101.2 Permits. Permits should be required as set forth in sections 105.5 and 105.6 and the adopted LP-Gas rules.

Distributors shall not fill an LP-Gas container for which a permit is required unless a permit for installation has been issued for that location by the .

6103.1 General. LP-Gas equipment shall be installed in accordance with NFPA 54, in NFPA 58, the adopted LP-Gas rules, and the International Fuel Gas Code, except as otherwise provided in this chapter.

Table 6104.3 – Change the heading "Minimum separation between LP-Gas containers and buildings, public ways(g) or lot lines of adjoining property that can be built on" to "Minimum separation between LP-Gas containers and buildings, or lot lines of adjoining property that can be built on."

Table 6109.12. Change "5" to "10" in the column labeled "Doorway or opening to a building with two or more means of egress" and the row labeled "721-2,500."

6109.15.1 Automated cylinder exchange stations. Cylinder exchange stations that include an automated vending system for exchanging cylinders shall comply with the following additional requirements:

- 1. The vending system shall only permit access to a single cylinder per individual transaction.
- 2. Cabinets storing cylinders shall be designed such that cylinders can only be placed inside when they are oriented in the upright position.
- Devices operating door releases for access to stored cylinders shall be permitted to be pneumatic, mechanical or electronically be powered.
- Electrical equipment inside of a cabinet storing cylinders, including but not limited to electronics associated with vending operations, shall comply with requirements for Class I, Division 2, equipment in accordance with NFPA 70.
- 5. A manual override control shall be permitted for use by authorized personnel. On newly installed cylinder exchange stations, the vending system shall not be capable of returning to automatic operation after a manual override until the system has been inspected and reset by authorized personnel.
- 6. Inspections shall be conducted by authorized personnel to verify that all cylinders are secured, access doors are closed and the station has no visible damage or obvious defects that necessitate placing the station out of service. The frequency of inspections shall be as specified by the *fire code official*.

6110.1 Removed from service. LP-Gas containers whose use has been discontinued for more than one year or longer as allowed by the AHJ shall comply with all of the following:

- 1. Be disconnected from appliance piping.
- 2. Have LP-gas container outlets, except relief valves, closed or plugged.
- 3. Be positioned with the relief valve in direct communication with the LPgas container vapor space.

6110.2 - Deleted

Utah Code Modifications
Amendments and additions to NFPA related to National Fire Alarm and Signaling Code

NFPA 72 10.5.1.3 Personnel shall provide documentation of their qualifications by one or more of the following:

- 1. Registration, licensing or certification by a state or local authority
- 2. Certification by the National Institute for Certification in Engineering Technologies at Level III or IV in fire alarm systems
- 3. Manufacturer's certification for the specific type and brand of system provided

NFPA 72 10.5.3.1 Inspection Personnel. Service personnel shall be qualified and experienced in the inspection, testing and maintenance of fire alarm systems. Qualified personnel shall meet the certification requirements stated in rule made by the Utah Fire Prevention Board in accordance with Title 63G, Chapter 3, Utah Administrative Rule Making Act.

NFPA 72 10.12.2 When an occupant notification alarm signal deactivation means is actuated, both audible and visual notification appliances shall be simultaneously deactivated. When approved by the AHJ, the audible notification appliances may be deactivated during the investigation mode to prevent unauthorized reentry into the building.

NFPA 72 18.1.1.1 The fire code official may modify the requirements of this chapter in areas of educational occupancies used exclusively for special education students.

Amendments and additions to NFPA related to Automatic Fire Sprinkler Systems.

NFPA 13 16.9.11.5 System Subdivision – Floor/Zone Control Valves. Individual floor/zone control valves shall be used at the riser at each floor for connections to piping serving floor areas in excess of 5000 square feet.

NFPA 13 16.11.2.1.1 Single Tenant Occupancies. When a fire alarm system is not required by IFC, Section 907.2, an approved audible/visual waterflow alarm (horn/strobe) shall be provided in the interior of the building, in a normally occupied location, to alert the occupants of the fire sprinkler system activation.

NFPA 13 16.11.2.1.2 Multi-Tenant Occupancies. When a fire alarm system is not required by IFC, Section 907.2, an approved audible/visual waterflow alarm (horn/strobe) shall be provided in the interior of each tenant

space, in a normally occupied location, to alert the occupants of the fire sprinkler system activation.

NFPA 13 16.11.2.1.3 Exterior Waterflow Alarm. An approved audible/visual waterflow alarm (horn/strobe) shall be provided on the exterior of the building in a location approved by the AHJ.

NFPA 13D 7.6.1 Exterior Waterflow Alarm. When an alarm initiating device is included, an approved audible/visual water flow alarm (horn/strobe) shall be provided on the exterior of the building in a location approved by the AHJ.

NFPA 13D 7.6.2 Interior Waterflow Alarm. When an alarm initiating device is included, an interior fire alarm notification appliance is also required to sound throughout the dwelling. An approved audible sprinkler flow alarm to alert the occupants of the dwelling in a normally occupied location when the flow switch is activated must be provided.

NFPA 13R 6.8.11 Floor/Zone Control Valves. Individual floor/zone control valves shall be used at the riser at each floor for connections to piping serving floor areas in excess of 5,000 square feet or arranged in a manner acceptable to the AHJ.

NFPA 13R 6.16.1.1 Local Waterflow Alarms. When a fire alarm system is not required by IFC, Section 907.2, an approved notification appliance indicating waterflow shall be provided in the interior of each residential unit/tenant space, in a normally occupied location, to alert the occupants of the fire sprinkler system activation.

NFPA 13R 6.16.1.2 Exterior Waterflow Alarm. An approved audible/visual waterflow alarm (horn/strobe) shall be provided on the exterior of the building in a location approved by the AHJ.

NFPA 25 5.3.4.4.1 For system antifreeze installed prior to July 1, 2023, listed antifreeze shall not be required, where all of the following conditions are met:

- 1. the concentration of the antifreeze solution shall be limited to 30% propylene glycol by volume or 38% glycerin by volume.
- 2. Antifreeze systems with concentrations in excess of 30% but are not more than 40% propylene glycol by volume and 38% but are not more than 50% glycerin by volume shall be permitted based on an approved deterministic risk assessment prepared by a qualified person approved by the authority having jurisdiction.

Fire and Life Safety Inspection Report

| Inspection Date: | Business Phone: | |
|--------------------|-----------------|---|
| Business Name: | | |
| Business Address: | Suite: | _ |
| Emergency Contact: | | |
| Phone: | Email: | _ |

| | # | Violation | |
|------------------|---|--|--|
| | ACCESSS | | |
| | 1 | Maintain fire lane free of obstructions | |
| | 2 | Provide address numbering which is visible from the street | |
| | 3 | Provide/update key box for fire district access | |
| | | EXITING | |
| | 4 | Remove obstructions at exits, doors, aisles, corridors, stairways, | |
| | 5 | Evit door to open without a key or any openial knowledge or offert | |
| | 5 | Exit door to open without a key of any special knowledge of enort | |
| | 7 | Provide sign over main exit door (s) | |
| | / Q | Repair non-operable exit door nardware | |
| | 0 | Remove obstructions from attice under fleer and conceeled analysis | |
| | 9 | Remove storage from attic, under noor and concealed spaces | |
| | 10 | hardware | |
| | 11 | Provide/maintain exit sign/emergency lighting | |
| | | FIRE EXTINGUISHERS | |
| | 12 | Have fire extinguisher serviced and tagged | |
| | 13 | Provide/mount fire extinguisher as indicated | |
| | 14 | Provide a clear access to fire extinguisher | |
| | 15 | Post a sign indicating fire extinguisher location | |
| | | FIRE PROTECTION SYSTEMS | |
| | 16 | Replace missing escutcheons | |
| | 17 | Replace damaged, corroded, or painted sprinkler heads/Fire | |
| | | Department Connection (FDC) Caps | |
| | 18 | Secure all system control valves in the open position | |
| | 19 | Provide annual certification for sprinkler/standpipe system | |
| | 20 | Provide sprinkler coverage in unprotected areas | |
| | 21 | Provide spare sprinkler heads and/or compatible wrench | |
| | 22 | Hood and duct extinguishing system to be serviced and tagged | |
| | 23 | Remove grease from hood, duct, and filters (keep clean) | |
| | | FIRE ALARM SYSTEMS | |
| | 24 | Maintain, repair, inspect and/or test fire alarm system | |
| FIRE SEPARATIONS | | | |
| | 25 Repair holes in required fire resistive construction | | |
| | 26 | Provide/repair self or automatic closing fire rated assemblies | |

| | # | Violation |
|---------------|----|---|
| ELECTRICAL | | |
| | 27 | Discontinue use of extension cords |
| | 28 | Install permanent wiring for fixed or stationary appliances |
| | 29 | Provide cover plates for all junction boxes |
| | 30 | Provide cover plates for light switches and outlets |
| | 31 | Remove exposed wiring or protect in approved conduit |
| | 32 | Provide a clear workspace at all electrical panels (30" in width, 36" in depth, and 78" in height) |
| | 33 | Labeling of electrical rooms and breakers |
| | 34 | Provide covers for open breakers in electrical panels |
| | | FLAMMABLE LIQUIDS – COMPRESSED GASSES |
| | 35 | Provide flammable liquid storage cabinet or reduce storage |
| | 36 | Remove all fueled vehicles or equipment from buildings |
| | 37 | Secure compressed gas cylinders/identify gas in container |
| | | STORAGE - HOUSEKEEPING |
| | 38 | Arrange storage in an orderly manner to provide access/egress |
| | 39 | Remove combustible storage from dedicated boiler, mechanical, electrical rooms; exits, stair enclosures |
| | 40 | Reduce storage to 24" below ceiling or 18" below sprinkler heads |
| | 41 | Provide approved metal container for oily rag storage |
| | 42 | Remove waste & rubbish material from the premises daily |
| | 43 | Keep dumpster 5' away from building |
| | 44 | Maintain appropriate clearance from ignition sources |
| MISCELLANEOUS | | |
| | 45 | Other violations noted in comments |

| # | Comments | Cleared |
|---|----------|---------|
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Thank you for allowing us to inspect your business. The purpose of this inspection is to ensure that the residents and visitors of our jurisdiction have a safe place to do business. More information about each violation can be found on the following pages or by calling our office. If a re-inspection is necessary, it will be performed no sooner than:

| Fire Sprinkler Service Date | 5 Year Service Date |
|--|---|
| Fire Alarm Service Date | Fire Extinguisher Service Date |
| Kitchen Hood Service Date | Kitchen Hood Cleaning Date |
| Po Inspection Data | |
| | Poturn |
| | Keturn |
| After 3 rd follow-up, all further inspe | Return ctions will result in an additional inspection fee. |

Inspector Name and Title/Station:

Signature of Recipient.

Signature of Inspector:

| Viol. | Explanation |
|-------|--|
| 1 | Fire lanes shall be free of all obstruction for a clear width of 20 feet |
| | around the building (IFC 503) |
| 2 | Building addresses must be visible from the street with a contrasting |
| | background (IFC 505) |
| 3 | Where key boxes are provided, they must contain updated keys and |
| | codes (IFC 506) |
| 4 | Pathways for exits must be cleared of all obstructions (1032.2); |
| - | including snow and ice (IFC 1032.3) |
| 5 | All exit doors must be able to be used without any special knowledge |
| 6 | OF tools (IFC 1010.2) |
| 0 | Appropriate signs must be posted adjacent to doors with deadbold |
| | |
| 7 | Exit hardware on doors must be in working order (IEC 1032.2) |
| 8 | Doors that are part of a fire barrier may not be held open except when |
| Ũ | the mechanism is part of an automatic fire detection system (IFC |
| | 701.3) |
| 9 | Attics, crawl spaces, under stairs, and concealed spaces may not be |
| | used for storage unless they are built with fire-resistive construction |
| | with self-closing hardware or have automatic sprinklers installed (IFC |
| | 315.3.4) |
| 10 | Doors with panic hardware may not be locked with locks or latches |
| | (IFC 1010.2.9) |
| 11 | Exit signs must remain illuminated and visible at all times (IFC 1013). |
| | Emergency illumination devices must be in working order (IFC 1008) |
| 12 | Fire extinguishers must be serviced annually (IFC 906) |
| 13 | Fire extinguishers must be mounted and visible (IFC 906) |
| 14 | Fire extinguishers may not be blocked form view or access (IFC 906) |
| 15 | The location of fire extinguishers must be identified by obvious |
| 10 | Signage (IFC 906) |
| 10 | Maintain fire sprinkler system components (NFPA 13; NFPA 25; IFC |
| 17 | Automatic sprinkler heads and EDC caps must be in good repair and |
| | may only be painted by the manufacturer (IFC 912: NEPA 13) |
| 18 | All values must be locked or constantly monitored to ensure that the |
| | valve is in the open position (IFC 903.4) |
| 19 | Sprinkler and standpipe systems must be inspected at least once a |
| - | year (IFC 901.6) |
| 20 | Sprinkler systems must provide coverage to all areas unless special |
| | exceptions are allowed (IFC 903.3) |

| Viol. | Explanation |
|-------|--|
| 21 | Spare sprinkler heads and a sprinkler wrench must be provided at all times (NFPA 13) |
| 22 | Hood and duct systems must be serviced at least once every six months (IFC 606) |
| 23 | Hoods, ducts, and filters must be kept clean and free of grease (IFC 606) |
| 24 | Fire alarm systems must be inspected at least once a year and must be in working order (IFC 907.8) |
| 25 | Fire resistive construction must not have gaps where fire or smoke may cross the fire barrier (IFC 703) |
| 26 | Fire rated assemblies must be fully functional at all times (IFC 703) |
| 27 | Extension cords may only be used for temporary purposes and should be unplugged at the outlet when not in use (IFC 603.6) |
| 28 | Grounded or polarized power taps are acceptable (IFC 603.5). Stationary and fixed appliances must be connected to permanent wiring (IFC 601) |
| 29 | Open junction boxes and open wiring splices shall be prohibited (IFC 603.2.2) |
| 30 | Approved coverage shall be provided for all switch and electrical outlet boxes (IFC 603.2.2) |
| 31 | exposed wiring is not allowed. All wiring must be in an approved conduit (IFC 603.1.1) |
| 32 | A working space of not less than 30" wide x 36" deep x 72" high shall be provided in front of electrical service equipment. If the equipment is more than 30" wide, the workspace shall be the width of the equipment (IFC 603.4) |
| 33 | Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating ELECTRICAL ROOM (IFC 603.4.1) |
| 34 | Approved covers shall be provided for electrical boxes (IFC 603.2.2) |
| 35 | Quantities of flammable and combustible liquids in excess of 10 gallons shall be stored in liquid storage cabinets (IFC 5704.3.4.4) |
| 36 | Fueled equipment (including portable generators, portable cooking equipment, lawn care equipment, and motorcycles) shall not be stored, operated, or repaired within a building (IFC 313.1) |
| 37 | Compressed gas containers cylinders tanks and systems shall be marked (IFC 5303.4); shall be secured against accidental dislodgement and accessed by unauthorized personnel (IFC 5303.5.3) |
| 38 | Storage shall be orderly and stacks shall be stable (IFC 315.3) |
| 39 | Combustible storage shall not be stored in boiler rooms, mechanical rooms, electrical rooms, exits, or stair enclosures (IFC 315.3.3) |

| Viol. | Explanation |
|-------|---|
| 40 | Storage shall be maintained 2 feet or more below the ceiling in non- sprinklered areas, or at least 18 inches below sprinkler head deflectors (IFC 315.3.1) |
| 41 | Material susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed container (IFC 304.3.1) |
| 42 | Rubbish and waste must not be allowed to accumulate in buildings or structures or upon premises (IFC 304.1) |
| 43 | Dumpsters shall not be stored in buildings or placed within five feet of buildings or roof eve lines (IFC 304.3.3) |
| 44 | Storage of combustible materials shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur (IFC 315.3) |

FIRE INSPECTOR'S GUIDE

Based on the 2021 International Fire Code®



FIRE INSPECTOR'S GUIDE Based on the 2021 International Fire Code®

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PREFACE

This Fire Inspector's Guide, based on the 2021 International Fire Code, is intended to be used by individuals conducting basic fire prevention inspections. This guide has been developed as a quick reference for fire inspectors because comprehensive knowledge of the entire fire code and its application at every inspection may not be possible for every user.

Inspectors should familiarize themselves with the *International Fire Code*® (IFC) and the *International Building Code*® (IBC). These documents constitute the authority upon which fire inspections are based and are the basis for the information contained in this guide.

History continues to confirm that properly installed and maintained fire detection and suppression systems have a significant potential for reducing loss of life and property from fire. Not only does this Inspector's Guide focus on fire protection systems but also offers a well-organized reference for identifying conditions that can interrupt or slow means of egress, firefighter response and access to the site, and proper storage and handling of common hazardous materials found in many occupancies. All of these and other hazards are regulated by the IFC to ensure the safety of building occupants and emergency responders.

This guide was compiled by Mike Owens of the Utah Fire & Rescue Academy and the Park City Fire District, Park City, UT with assistance provided by Lori Marshall of the Utah Fire & Rescue Academy.

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ADMINISTRATION

Change of use or occupancy. A change of occupancy shall not be made unless the use or occupancy is made to comply with the requirements of this code and the *International Existing Building Code*.

Exception: Where approved by the fire code official, a change of occupancy shall be permitted without complying with the requirements of this code and the *International Existing Building Code*, provided that the new or proposed use or occupancy is less hazardous, based on life and fire risk, than the existing use or occupancy.

Application of building code.The design and
construction of new structures shall comply with the IBC,
and any alterations, additions, changes in use or changes
in structures required by this code, which are within the
scope of the IBC, shall be made in accordance therewith.102.4

Application of residential code. Where structures are designed and constructed in accordance with the IRC, the provisions of this code shall apply as follows:

- Construction and design provisions: Provisions of this code pertaining to the exterior of the structure shall apply including, but not limited to, premises identification, fire apparatus access and water supplies. Where interior or exterior systems or devices are installed, construction permits required by section 105.6 of this code (IFC) shall also apply.
- 2. Administrative, operational and maintenance provisions: Administrative, operational and maintenance provisions of this code shall apply.

ADMINISTRATION

102.3

102.5

Conflicting provisions. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

Duties and Powers. The fire code official is hereby authorized to enforce the provisions of this code. The fire code official shall have the authority to render interpretations of this code, and to adopt policies, procedures, rules and regulations in order to clarify the application of its provisions. Such interpretations, policies, procedures, rules and regulations shall be in compliance with the intent and purpose of this code. Such policies, procedures, rules and regulations shall not have the effect of waiving requirements specifically provided for in this code.

Right of entry. Whenever it is necessary to make an inspection to enforce the provisions of the IFC, or whenever the fire code official has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code which make the building or premises unsafe, dangerous or hazardous, the fire code official shall have the authority to enter the building or premises at all <u>reasonable</u> times to inspect or to perform the duties imposed upon the fire code official by this code.

Identification. The fire code official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

Inspections. The fire code official shall keep a record of each inspection made, including notices and orders issued, showing the findings and disposition of each.

102.10

Fire investigations. The fire code official, the fire department or other responsible authority shall have the authority to investigate the cause, origin and circumstances of any fire, explosion or other hazardous condition. Information that could be related to trade secrets or processes shall not be made part of the public record except as directed by a court of law.

PERMITS

Permits required. Any property owner or authorized agent who intends to conduct an operation or business, or install or modify systems and equipment which are regulated by this code, or to cause any such work to be done, shall first make application to the fire code official and obtain the required permit.

Types of permits. There are two permit types: 105.1.2

Operational permit: allows the applicant to conduct an operation or a business for which a permit are required by Section 105.6 for either a prescribed period, or until renewed or revoked.

<u>Construction permit:</u> allows the applicant to install or modify systems and equipment for which a permit is required by Section 105.7.

Inspection authorized. Before a new operational permit is approved, the fire code official is authorized to inspect the receptacles, vehicles, buildings, devices, premises, storage spaces or areas to be used to determine compliance with this code or any operational constraints required.

Time limitation of application. An application for a permit for any proposed work or operation shall be deemed to have been abandoned 180 days after the date of filing.

Expiration-Operational Permit. Operational permits **105.3.1** shall remain in effect until reissued, renewed or revoked, or for such a period of time as specified in the permit.

Expiration-Construction Permit. Construction permits shall automatically become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced.

Occupancy prohibited before approval. The building or structure shall not be occupied prior to the fire code official issuing a permit and conducting associated inspections indicating the applicable provisions of this code have been met.

Posting the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official.

Fire protection system shop drawings. Shop drawings **106.2.1** for the fire protections system(s) shall be submitted to indicate compliance with this code and the construction documents and shall be approved prior to the start of installation.

Required Operational Permits 105.5

| 1. | Additive manufacturing: To conduct operations regulated by Section 320.3. | 105.5.1 |
|----|---|---------|
| 2. | Aerosol products: To manufacture, store or handle | 105.5.2 |
| 3. | Amusement buildings: To operate | 105.5.3 |
| 4. | Aviation facilities: Service and repair, or aircraft fueling vehicles. | 105.5.4 |
| 5. | Carnivals and fairs: To conduct a carnival or fair | 105.5.5 |
| 6. | Cellulose nitrate film: To store, handle or use in an "A" Occ. | 105.5.6 |

| 7. | Combustible dust-producing operations: To | 105.5.7 |
|---------|---|--------------------|
| 8. 9 | Combustible fibers: To store or handle >100 cu. ft. | 105.5.8 105.5.9 |
| 0. | Table 105.6.8 | 100.0.0 |
| 10. | Covered and open mall buildings: Kiosks, displays or open flame in the mall | 105.5.10 |
| 11. | Cryogenic fluids: To produce, store or transport on site | 105.5.11 |
| 12. | Cutting and welding: To conduct cutting or welding | 105.5.12 |
| 13. | Dry cleaning plants: To engage in the business of | 105.5.13 |
| 14. | Energy storage systems: To operate storage systems regulated by Section 1207 | 105.5.14 |
| 15. | Exhibits and trade shows: To operate | 105.5.15 |
| 16. | Explosives: To manufacture, storage, handle, sale or use of any quantity | 105.5.16 |
| 17. | Fire hydrants and valves: To use or operate | 105.5.17 |
| 18. | Flammable and combustible liquids: To store, handle or use Class I liquids >5 gallons inside a building or >10 gallons outside a building. See conditions | 105.5.18 |
| 19. | Floor finishing: To finish or surface >350 sq. ft. with Class I or Class II liquids | 105.5.19 |
| 20. | Fruit and crop ripening: To conduct with ethylene gas | 105.5.20 |
| 21. | Fumigation and insecticidal fogging: To operate a business of fumigation | 105.5.21 |
| 22. | Hazardous materials: To store, transport on site, dispense, use or handle or handle hazardous materials in excess of the amounts listed in Table 105.6.20. | 105.5.22 |
| 23. | HPM materials: To store, handle or use | 105.5.23 |
| 24. | High-piled storage: To conduct >500 sq. ft. | 105.5.24 |
| 25. | Hot work operations: Welding, cutting or roofing; or hot work in a wildfire risk area | 105.5.25 |
| 26. | Industrial ovens: To operate | 105.5.26 |
| 27. | Lumber yards and woodworking plants: To store >100,000 bd. ft. | 105.5.27 |
| 28. | Liquid or gas-fueled vehicles: To display or operate in a Group A occupancy | 105.5.28 |

| 29. | LP-gas: Storage and use, or operation of cargo tankers that transport | 105.5.29 |
|-------------------|---|----------------------------------|
| 30. 31. 32. | Magnesium: To melt, cast, heat treat or grind >10 lbs. Misc. combustible storage: To store >2,500 cu. ft. Mobile food preparation vehicles: Vehicles | 105.5.30 105.5.31 105.5.32 |
| | equipped with appliances that produce smoke or grease-laden vapors. | |
| 33. | Motor fuel-dispensing facilities: To operate automotive, marine or fleet motor fuel-dispensing facilities | 105.5.33 |
| 34. | Open burning: To kindle or maintain an open fire. Exception: Recreational fires | 105.5.34 |
| 35. | Open flames and torches: Use of torch to remove paint or to use open flame device in a wildfire risk area | 105.5.35 |
| 36. | Open flames and candles: Use of in connection with assembly areas, dining areas of restaurants or drinking establishments | 105.5.36 |
| 37. | Organic coating: To produce >1 gallon per day | 105.5.37 |
| 38. | Outdoor assembly event: Outdoor assembly event where planned attendance > 1,000 persons. | 105.5.38 |
| 39. | Places of assembly: To operate a place of assembly | 105.5.39 |
| 40. | Plant extraction systems: To use plant extraction systems. | 105.5.40 |
| 41. | Private fire hydrants: To use or remove from service | 105.5.41 |
| 42. | Pyrotechnic special effects material: To use or handle | 105.5.42 |
| 43. | Pyroxylin plastics: To store or handle > 25 lbs. | 105.5.43 |
| 44. | Refrigeration equipment: To operate | 105.5.44 |
| 45. | Repair garages and motor fuel-dispensing facilities: To operate | 105.5.45 |
| 46. | Rooftop heliports: To operate | 105.5.46 |
| 47. | Spraying or dipping: To conduct utilizing flammable or combustible liquids or combustible powders | 105.5.47 |
| 48. | Storage of scrap tires and tire byproducts: >2,500 cu. ft. | 105.5.48 |
| 49. | Temporary membrane structures and tents: To operate a temporary air-supported membrane structure, temporary stage canopy or tent having an area >400 sq. ft., see exceptions | 105.5.49 |
| 50. | Tire-rebuilding plants: To operate | 105.5.50 |
| | | |

| 51. | Waste handling: To operate a wrecking yard, | 105.5.51 |
|-----|---|----------|
| 52. | Wood products: To store wood chips, lumber or plywood >200 cu. ft. | 105.5.52 |
| | Required Construction Permits | 105.6 |
| 1. | Automatic fire-extinguishing systems: To install or modify. Maintenance is exempt | 105.6.1 |
| 2. | Compressed gases: To install, repair damage to, abandon, remove, place temporarily out of service or close or substantially modify a system | 105.6.2 |
| 3. | Cryogenic fluids: To install or alter an outdoor stationary cryogenic fluid storage system | 105.6.3 |
| 4. | Emergency responder radio coverage system: To install or modify an emergency responder radio coverage system and related equipment | 105.6.4 |
| 5. | Energy storage systems: To install systems regulated by Section 1207 | 105.6.5 |
| 6. | Fire alarm and detection system and related equipment: For installation of or modification to | 105.6.6 |
| 7. | Fire pumps and related equipment: To install or modify | 105.6.7 |
| 8. | Flammable and combustible liquids: To install, repair or modify a pipeline or construct or alter tank vehicles. To install, alter, remove, abandon or dispose of tank | 105.6.8 |
| 9. | Fuel cell power systems: To install stationary fuel cell power systems. | 105.6.9 |
| 10. | Gas detection systems: Installation of or modification to gas detection systems. | 105.6.10 |
| 11. | Gates and barricades across fire apparatus access roads: To install or modify a gate or barricade across a fire apparatus access road | 105.6.11 |
| 12. | Hazardous materials: To install, repair damage to, abandon remove place temporarily out of service | 105.6.12 |
| 13. | High-piled combustible storage: Installation of or modification to a structure > 500 ft ² , including aisles, for high-piled combustible storage. | 105.6.13 |

| 14. | Industrial ovens: To install industrial ovens covered by Chapter 30. | 105.6.14 |
|------------|--|----------------------|
| 15. | LP-gas: To install or modify an LP-gas system. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit. | 105.6.15 |
| 16. | Motor vehicle repair rooms and booths: To install or modify a motor vehicle repair room or booth. | 105.6.16 |
| 17. | Plant extraction systems: Installation of or modification to plant extraction systems. | 105.6.17 |
| 18. | Private fire hydrants: To install or modify private fire hydrants. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit. | 105.6.18 |
| 19. | Smoke control or smoke exhaust systems: To install or modify a smoke control or smoke exhaust system. Maintenance performed in accordance with this code is not considered to be an alteration and does not require a permit. | 105.6.19 |
| 20. | Solar photovoltaic power systems: To install or modify a solar photovoltaic power system. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit. | 105.6.20 |
| 21. | Special event structure: To erect and take down a temporary special event structure. | 105.6.21 |
| 22. | Spraying or dipping: To install or modify a spray room or spray booth. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit. | 105.6.22 |
| 23. 24. | Standpipe systems: To install or modify Temporary membrane structures and tents: To erect an air-supported temporary membrane structure, temporary stage canopy or a tent having an area >400 sq. ft. See exceptions | 105.6.23 105.6.24 |

108 Inspection authority: The fire code official is authorized to enter and examine any building, structure, marine vessel, vehicle or premise for the purpose of enforcing the IFC. 108.1 MAINTENANCE 109

Test and inspection records (Recordkeeping). Required 109.3 test and inspection records shall be available to the fire code

test and inspection records shall be available to the fire code official at all times or such records as the fire code official designates shall be filed with the fire code official.

Overcrowding. Overcrowding or admittance of any person beyond the approved capacity of a building or a portion thereof shall not be allowed. The fire code official, upon finding any overcrowding conditions or obstructions in aisles, passageways or other means of egress, or upon finding any condition which constitutes a life safety hazard, shall be authorized to cause the event to be stopped until such condition or obstruction is corrected.

VIOLATIONS ¹¹²

Owner/occupant responsibility. Corrections and abatement of violations of this code shall be the responsibility of the owner or the owner's authorized agent. Where an occupant creates, or allows to be created, hazardous conditions in violation of this code, the occupant shall be held responsible for the abatement of such hazardous conditions.

Violations & Unsafe Buildings

Notice of violation. When the fire code official finds a building, premises, vehicle, storage facility or outdoor area that is in violation of this code, the fire code official is authorized to prepare a written notice of violation describing the conditions deemed unsafe and, when compliance is not immediate, specifying a time for re-inspection.

UNSAFE STRUCTURES OR EQUIPMENT

Unsafe conditions. Structures or existing equipment that are or hereafter become unsafe or deficient because of inadequate means of egress, inadequate light and ventilation, or that constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. A vacant structure which is not secured against unauthorized entry shall be deemed unsafe.

Notice. If an unsafe condition is found, the fire code official shall serve on the owner of the structure or the owner's authorized agent a written notice that describes the condition deemed unsafe and specifies the required repairs or improvements to be made to abate the unsafe condition, or requires the unsafe structure to be demolished within a stipulated time. Such notice shall require the person thus notified to declare immediately to the fire code official acceptance or rejection of the terms of the order.

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DEFINITIONS

ACCESSIBLE ROUTE: A continuous, unobstructed path that complies with Chapter 11 of the IBC.

ACTIVE REMITTING DEVICE: Any type of circuit component that requires an AC or DC power source with the ability to electrically control electron flow and/or amplification of the RF signal, including but not limited to signal boosters, repeaters, bidirectional amplifiers and fiber-distributed antenna systems.

<u>ADDITIVE MANUFACTURING</u>: A process of joining materials to make objects from 3D model data, usually layer upon layer, sometimes referred to as 3D printing.

AGENT: A person who shall have charge, care or control of any structure as owner, or agent of the owner. Any such person representing the actual owner shall be bound to comply with the provisions of this code to the same extent as if that person was the owner.

AISLE: An unenclosed exit access component that defines and provides a path of egress travel.

<u>ALTERATION</u>: Any construction or renovation to an existing structure other than a repair or addition.

AMBULATORY CARE FACILITY: Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less-than-24-hour basis to persons who are rendered incapable of self-preservation by the services provided or staff has accepted responsibility for care recipients already incapable.

APPROVED: Acceptable to the fire code official.

<u>ATRIUM</u>: An opening connecting two or more stories other than enclosed stairways, elevators, hoistways, escalators, plumbing, electrical, airconditioning or other equipment, which is closed at the top and not defined as a mall.

<u>AUTOMATIC FIRE-EXTINGUISHING SYSTEM:</u> An approved system of devices and equipment which automatically detects a fire and discharges an approved fire-extinguishing agent onto or in the area of a fire.

AUTOMATIC SMOKE DETECTION SYSTEM: A fire alarm system that has initiation devices that utilize smoke detectors for protection of an area such as a room or space with detectors to provide early warning of fire.

AUTOMATIC SPRINKLER SYSTEM: A sprinkler system, for fire protection purposes, is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply.

DEFINITIONS

AUTOMATIC WATER MIST SYSTEM. A system consisting of a water supply, a pressure source and a distribution piping system with attached nozzles which, at or above a minimum operating pressure, defined by its listing, discharges water in fine droplets meeting the requirements of NFPA 750 for the purpose of the control, suppression or extinguishment of a fire. Such systems include wet-pipe, dry pipe and pre-action types. The systems are designed as engineered, pre-engineered, local-application or total flooding systems.

BASEMENT: A story that is not a story above grade plane.

BOARDING HOUSE: A building arranged or used for lodging for compensation, with or without meals, and not occupied as a single-family unit.

BONFIRE: An outdoor fire utilized for ceremonial purposes.

CANOPY: A structure or architectural projection of rigid construction

over which a covering is attached that provides weather protection, identity or decoration, and may be structurally independent or supported by attachment to a building on one end and by not less than one stanchion on the outer end.

CHANGE OF OCCUPANCY: Either of the following shall be considered as a change of occupancy where this code requires a greater degree of safety, accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure:

1. Any change in the occupancy classification of a building or structure.

2. Any change in the purpose of, or a change in the level of activity within, a building or structure.

<u>CLINIC, OUTPATIENT:</u> Buildings or portions thereof used to provide medical care on a less-than-24-hour basis to persons who are not rendered incapable of self-preservation by the services provided.

COMMERCIAL COOKING APPLIANCES: Appliances used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers; upright broilers; griddles; broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (char-broilers); ovens; barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food service establishment shall include any building or portion thereof used for the preparation and serving of food.

<u>COMMON PATH OF EGRESS TRAVEL</u>: That portion of exit access travel distance measured from the most remote point of each room, area or space to that point where the occupants have separate and distinct access to two exits or exit access doorways.

CONSTANTLY ATTENDED LOCATION: A designated location at a facility staffed by trained personnel on a continuous basis where alarm or supervisory signals are monitored and facilities are provided for notification of fire department or other emergency services.

<u>CONTROL AREA</u>: Spaces within a building where quantities of hazardous materials not exceeding the maximum allowable quantities per control area are stored, dispensed, used or handled.

<u>CORRIDOR</u>: An enclosed exit access component that defines and provides a path of egress travel.

<u>COURT:</u> An open, uncovered space, unobstructed to the sky, bounded on three or more sides by exterior building walls or other enclosing devices.

COVERED MALL BUILDING. A single building enclosing a number of tenants and occupants such as retail stores, drinking and dining establishments, entertainment and amusement facilities, passenger transportation terminals, offices, and other similar uses wherein two or more tenants have a main entrance into one or more malls. Anchor buildings shall not be considered as a part of the covered mall building. The term "covered mall building" shall include open mall buildings as defined below.

Mall. A roofed or covered common pedestrian area within a covered mall building that serves as access for two or more tenants and not to exceed three levels that are open to each other. The term "mall" shall include open malls as defined below.

Open mall. An unroofed common pedestrian way serving a number of tenants not exceeding three levels. Circulation at levels above grade shall be permitted to include open exterior balconies leading to exits discharging at grade.

Open mall building. Several structures housing a number of tenants such as retail stores, drinking and dining establishments, entertainment and amusement facilities, offices, and other similar uses wherein two or more tenants have a main entrance into one or more open malls. Anchor buildings are not considered as a part of the open mall building.

<u>CRITICAL AREAS</u>: Areas that are designated for the highest level of emergency responder radio coverage including but not limited to areas such as exit stairs, exit passageways, elevator lobbies, fire protection equipment room and control valve locations, and fire command centers.

DECORATIVE MATERIALS: All materials applied over the building interior finish for decorative, acoustical or other effect including, but not limited to, curtains, draperies, fabrics, streamers and all other materials utilized for

DEFINITIONS

decorative effect including, but not limited to, bulletin boards, artwork, posters, photographs, paintings, batting, cloth, cotton, hay, stalks, straw, vines, leaves, trees, moss and similar items, foam plastics and materials containing foam plastics. Decorative materials do not include wall coverings, ceiling coverings, floor coverings, ordinary window shades, interior finish and materials 0.025 inch (0.64 mm) or less in thickness applied directly to and adhering tightly to a substrate.

DELIVERED AUDIO QUALITY (DAQ): A measure of audio quality over a transmission medium. This metric is often used to quantify the quality of audio heard over a radio system

DETOXIFICATION FACILITIES: Facilities that provide treatment for substance abuse serving care recipients who are incapable of self-preservation or who are harmful to themselves or others.

DISPENSING: is the pouring or transferring of any material from a container, tank or similar vessel whereby vapors, dusts, fumes, mists or gases are liberated to the atmosphere.

DORMITORY: A space in a building where group sleeping accommodations are provided in one room, or in a series of closely associated rooms, for persons not members of the same family group, under joint occupancy and single management, as in college dormitories or fraternity houses.

DRY CLEANING: The process of removing dirt, grease, paints and other stains from such items as wearing apparel, textiles, fabrics and rugs by use of nonaqueous liquids (solvents).

DRY CLEANING PLANT: A facility in which dry cleaning and associated operations are conducted, including the office, receiving area and storage rooms.

<u>DRY CLEANING ROOM</u>: An occupiable space within a building used for performing dry cleaning operations, the installation of solvent-handling equipment or the storage of dry cleaning solvents.

DWELLING: A building that contains one or two dwelling units used, intended or designed to be used, rented, leased, let or hired out to be occupied for living purposes. See IBC

<u>DWELLING UNIT</u>: A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

<u>EMERGENCY ALARM SYSTEM</u>: A system to provide indication and warning of emergency situations involving hazardous materials.

EMERGENCY EVACUATION DRILL: An exercise performed to train staff and occupants and to evaluate their efficiency and effectiveness in carrying out emergency evacuation procedures. **EMERGENCY SHUTOFF VALVE:** A valve designed to shut off the flow of gases or liquids.

<u>EMERGENCY VOICE/ALARM COMMUNICATIONS</u>: Dedicated manual or automatic facilities for originating and distributing voice instructions, as well as alert and evacuation signals pertaining to a fire emergency, to the occupants of a building.

ENERGY STORAGE SYSTEM (ESS): One or more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time.

EXISTING: Buildings, facilities or conditions that are already in existence, constructed or officially authorized prior to the adoption of this code.

EXIT: That portion of a means of egress system between the exit access and the exit discharge or public way. Exit components include exterior exit doors at the level of exit discharge, interior exit stairways and ramps, exit passageways, exterior exit stairways and ramps and horizontal exits.

EXIT ACCESS: That portion of a means of egress system that leads from any occupied portion of a building or structure to an exit.

EXIT DISCHARGE: That portion of a means of egress system between the termination of an exit and a public way.

FACILITY: A building or use in a fixed location including exterior storage areas for flammable and combustible substances and hazardous materials, piers, wharves, tank farms and similar uses. This term includes recreational vehicles, mobile home and manufactured housing parks, sales and storage lots.

FAIL-SAFE: A design condition incorporating a feature for automatically counteracting the effect of an anticipated possible source of failure; also, a design condition eliminating or mitigating a hazardous condition by compensating automatically for a failure or malfunction.

<u>FIRE ALARM</u>: The giving, signaling or transmission to any public fire station, or company or to any officer or employee there of, whether by telephone, spoken word or otherwise, of information to the effect that there is a fire at or near the place indicated.

<u>FIRE ALARM SIGNAL</u>: A signal initiated by a fire alarm initiating device such as a manual fire alarm box, automatic fire detector, waterflow switch or other device whose activation is indicative of the presence of a fire or fire signature.

<u>FIRE ALARM SYSTEM</u>: 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.

DEFINITIONS

FIRE APPARATUS ACCESS ROAD: A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and access roadway.

FIRE CHIEF: The chief officer of the fire department serving the jurisdiction, or a duly authorized representative.

FIRE CODE OFFICIAL: The fire chief or other designated authority charged with the administration and enforcement of the code, or a duly authorized representative.

FIRE DEPARTMENT MASTER KEY: A limited issue key of special or controlled design to be carried by fire department officials in command which will open key boxes on specified properties.

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.

FIRE EXIT HARDWARE: Panic hardware that is listed for use on fire door assemblies.

FIRE LANE: A road or other passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus.

FIRE WATCH: A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department.

<u>GROUP HOME:</u> A facility for social rehabilitation, substance abuse or mental health problems that contains a group housing arrangement that provides custodial care but does not provide medical care.

HAZARDOUS MATERIALS: Those chemicals or substances which are physical hazards or health hazards as defined and classified in this chapter, whether the materials are in usable or waste condition.

<u>HAZARDOUS PRODUCTION MATERIAL (HPM)</u>: A solid, liquid or gas associated with semiconductor manufacturing that has a degree-of-hazard rating in health, flammability or instability of Class 3 or 4 as ranked by NFPA 704 and which is used directly in research, laboratory or production processes which have, as their end product, materials that are not hazardous. **HIGH-PILED COMBUSTIBLE STORAGE:** Storage of combustible materials in closely packed piles or combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12 feet in height. High-piled combustible storage may also include certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets and similar commodities, where the top of storage is greater than 6 feet in height.

<u>HIGH-PILED STORAGE AREA</u>: An area within a building which is designated, intended, proposed or actually used for high-piled combustible storage, including operating aisles.

HOOD: An air-intake device used to capture by entrapment, impingement, adhesion or similar means, grease and similar contaminants before they enter a duct system.

Type-I. A kitchen hood for collecting and removing grease vapors and smoke.

Type-II. A general kitchen hood for collecting and removing steam vapor, heat, odors and products of combustion.

HOSPITALS AND PSYCHIATRIC HOSPITALS: Facilities that provide care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of inpatient care recipients that are incapable of selfpreservation.

HOT WORK: Operations including cutting, welding, Thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, installation of torch-applied roof systems or any other similar activity.

INCAPABLE OF SELF-PRESERVATION: Persons who, because of age, physical limitations, mental limitations, chemical dependency, or medical treatment cannot respond as an individual to an emergency situation.

<u>KEY BOX:</u> A secure device with a lock operable only by a fire department master key, and containing building entry keys and other keys that may be required for access in an emergency.

LIFE SAFETY SYSTEMS: Systems, devices and equipment that enhance or facilitate evacuation, smoke control, compartmentation and/or isolation.

LIQUID STORAGE ROOM: A room classified as a Group H-3 occupancy used for the storage of flammable or combustible liquids in a closed condition.

LIQUID STORAGE WAREHOUSE: A building classified as a Group H-2 or H-3 occupancy used for the storage of flammable or combustible liquids in a closed condition.

LISTED: Equipment, materials, products or services included in a list published by an organization acceptable to the fire code official and

DEFINITIONS

concerned with evaluation of products or services that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose.

MEANS OF EGRESS: A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge.

NURSING HOMES: Facilities that provide care, including both intermediate care facilities and skilled nursing facilities, where any of the persons are incapable of self-preservation.

OCCUPANCY: Is the purpose for which a building or part thereof is used or intended to be used. See pages 20-28 of IFC.

OCCUPANT LOAD: The number of persons for which the means of egress of a building or portion thereof is designed.

OUTDOOR ASSEMBLY EVENT: An outdoor gathering of persons for any purpose.

OVERCROWDING: A condition that exists when either there are more people in a building, structure or portion thereof than have been authorized or posted by the fire code official, or when the fire code official determines that a threat exists to the safety of the occupants due to persons sitting and/or standing in locations that may obstruct or impede the use of aisles, passages, corridors, stairways, exits or other components of the means of egress.

<u>PANIC HARDWARE:</u> A door-latching assembly incorporating a device that releases the latch upon the application of a force in the direction of egress travel.

PERSONAL CARE SERVICE: The care of persons who do not require medical care. Personal care involves responsibility for the safety of the persons while inside the building.

PHYSICAL HAZARD: A chemical for which there is evidence that it is a combustible liquid, cryogenic fluid, explosive, flammable (solid, liquid or gas), organic peroxide (solid or liquid), oxidizer (solid or liquid), oxidizing gas, pyrophoric (solid, liquid or gas), unstable (reactive) material (solid, liquid or gas) or water-reactive material (solid or liquid).

<u>PUBLIC WAY</u>: A street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet.

<u>RAMP</u>: A walking surface that has a running slope steeper than one unit vertical in 20 units horizontal (5% slope).

RECREATIONAL FIRE: An outdoor fire burning materials other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, barbecue grill or barbecue pit and has a total fuel area of 3' or less in diameter and 2' or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes.

<u>RELIGIOUS WORSHIP, PLACE OF:</u> A building or portion thereof intended for the performance of religious services.

<u>REMOTELY</u> LOCATED, MANUALLY ACTIVATED SHUTDOWN <u>CONTROL:</u> A control system that is designed to initiate shutdown of the flow of gases or liquids that is manually activated from a point located some distance from the delivery system.

<u>REPAIR GARAGE</u>: A building, structure or portion thereof used for servicing or repairing motor vehicles.

<u>RUBBISH (TRASH)</u>: Combustible and noncombustible waste materials, including residue from the burning of coal, wood, coke or other combustible material, paper, rags, cartons, tin cans, metals, mineral matter, glass crockery, dust and discarded refrigerators, and heating, cooking or incinerator-type appliances.

SAFETY CAN: An approved container of not more than 5-gallon capacity having a spring-closing lid and spout cover so designed that it will relieve internal pressure when subjected to fire exposure.

<u>SELF-CLOSING</u>: As applied to a fire door or other opening, means equipped with an approved device that will ensure closing after having been opened.

SELF-SERVICE MOTOR FUEL DISPENSING FACILITY: That portion of a motor fuel dispensing facility where liquid motor fuels are dispensed from fixed approved dispensing equipment into the fuel tanks of motor vehicles by persons other than a motor fuel-dispensing facility attendant.

SLEEPING UNIT: A single unit providing rooms or spaces for one or more persons that includes permanent provisions for sleeping and can include provisions for living, eating and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a dwelling unit are not sleeping units.

DEFINITIONS

<u>SMOKE ALARM</u>: A single or multiple-station alarm responsive to smoke and not connected to a system.

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.

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.

<u>SMOKE DETECTOR</u>: A listed device that senses visible or invisible particles of combustion.

SPRAY BOOTH: A mechanically ventilated appliance of varying dimensions and construction provided to enclose or accommodate a spraying operation and to confine and limit the escape of spray vapor and residue and to exhaust it safely.

SPRAY ROOM: Is a room designed to accommodate spraying operations constructed in accordance with the IBC and separated from the remainder of the building by a minimum 1-hour fire barrier.

SPRAYING ŠPÁCE: An area in which dangerous quantities of flammable vapors or combustible residues, dusts or deposits are present due to the operation of spraying processes. The fire code official is authorized to define the limits of the spraying space in any specific case.

STAIR: A change in elevation, consisting of one or more risers.

STAIRWAY: One or more flights of stairs, either exterior or interior, with the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one level to another.

STANDPIPE SYSTEM, CLASSES OF: Classes are as follows:

Class I system. A system providing $2\frac{1}{2}$ " hose connections to supply water for use by fire departments and those trained in handling heavy fire streams.

Class II system. A system providing $1\frac{1}{2}$ " hose stations to supply water for use primarily by the building occupants or by the fire department during initial response.

Class III system. A system providing $1\frac{1}{2}$ " hose stations to supply water for use by building occupants and $2\frac{1}{2}$ " hose connections to supply a larger volume of water for use by fire departments and those trained in handling heavy fire streams.

STANDPIPE, TYPES OF: Types are as follows:

Automatic dry. A dry standpipe system, normally filled with pressurized air, that is arranged through the use of a device, such as a dry pipe valve, to admit water into the system piping automatically upon the opening of a hose valve. The water supply for an automatic dry standpipe system shall be capable of supplying the system demand.

Automatic wet. A wet standpipe system that has a water supply that is capable of supplying the system demand automatically.

Manual dry. A dry standpipe system that does not have a permanent water supply attached to the system. Manual dry standpipe systems require water from a fire department pumper to be pumped into the system through the fire department connection in order to supply the system demand.

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

Semiautomatic dry. A dry standpipe system that is arranged through the use of a device, such as a deluge valve, to admit water into the system piping upon activation of a remote control device located at a hose connection. A remote control activation device shall be provided at each hose connection. The water supply for a semiautomatic dry standpipe system shall be capable of supplying the system demand.

TANK: A vessel containing more than 60 gallons.

TENT: A structure, enclosure, umbrella structure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported in any manner except by air or the contents it protects.

TOWNHOUSE: A single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from the foundation to roof and with open space on at least two sides.

GROUP A1 OCCUPANCY

Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption; or awaiting transportation.

Small buildings and tenant spaces. A building or tenant space used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy.

Small assembly spaces. The following rooms and spaces shall not be classified as assembly occupancies:

1. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

2. A room or space used for assembly purposes that is less than 750 square feet in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

Associated with Group E occupancies. A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy.

Accessory with places of religious worship. Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100 per room or space are not considered separate occupancies.

Assembly Group A-1. Assembly uses, usually with fixed seating, intended for the production and viewing of performing arts or motion pictures including, but not limited to:

- Motion picture theaters
- Symphony and concert halls
- Television and radio studios admitting an audience
- Theaters

EXITS (A1)

- It shall be unlawful to alter a building or structure in a 1001.2 Α manner that will reduce the number of exits or the capacity of the means of egress to less than required by the IFC.
- Β. The path of egress travel along a means of egress 1003.6 shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of earess component except projections permitted by Chapter 10.
- C. The minimum width or required capacity of a means 1003.6 of egress system shall not be diminished along the path of egress travel.
- Every room or space that is an assembly occupancy D 1004.9 shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space, for the intended configurations. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.
- Minimum of four exits required for more than 1,000 E. occupant load.
- F. Minimum of three exits required for 501-1000 occupant load.
- Minimum of two exits required for 1-500 occupant G. load.
- Η. Where two exits, exit access doorways, exit access stairways or ramps are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit doors or exit access doorways. Interlocking or scissor stairs shall be counted as one exit stairway. See exceptions.

Table 1006.3.3 Table 1006.3.3 Table 1006.3.1 1007.1.1
GROUP A-1 OCCUPANCY

The means of egress serving a room or space shall I. 1008.2 be illuminated at all times that the room or space is occupied. See exceptions. The power supply for means of egress illumination J. 1008.3 shall normally be provided by the premises' electrical supply. Κ. In the event of a power supply failure in rooms and 1008 3 1 spaces that require two or more exits or access to emergency electrical system exits. shall an automatically illuminate all the aisles, corridors and exit access stairways and ramps. In the event of power supply failure, in buildings that Ι. 1008.3.2 require two or more exits or access to exits, an emergency electrical system shall automatically illuminate all of the interior exit access stairways and ramps, interior and exterior exit stairways and ramps, exit passageways, vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.2 and exterior landings as required by Section 1010.1.5 for exit doorways that lead directly to the exit discharge. In the event of a power supply failure, an emergency Μ. 1008.3.3 electrical system shall automatically illuminate all electrical equipment rooms, fire command centers, fire pump rooms, generator rooms, public restrooms greater than 300 square feet in size. The emergency power system shall provide power for N. 1008.3.4 a duration of not less than 90 minutes. Exit doorways shall not be less than 32 inches in clear О. 1010.1.1 width and 80 inches in height. Doors shall swing in the direction of egress travel 1010.1.2.1 Ρ. where serving an occupant load of 50 or more. Egress doors shall be readily openable from the 1010.2 Q. egress side without the use of a key or special knowledge or effort. See exceptions. R. Manually operated flush bolts or surface bolts on exit 1010.2.5 doors are not permitted. See exceptions. Each door in a means of egress from an A-1 S. 1010.2.9 occupancy having an occupant load of 50 or more shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware. See exceptions

T. The electric locks on sensor-released doors located in a means of egress in buildings and entrance doors to tenant spaces in occupancies are permitted where installed and operated in accordance with all of the following criteria:

(1) The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors and shall cause the electric locking system to unlock.

(2) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

(3) Loss of power to the lock or locking system shall automatically unlock the electric locks.

(4) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches vertically above the floor and within 5 feet of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—independent of other electronics—and the electric lock shall remain unlocked for not less than 30 seconds.

(5) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

(6) Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(7) Emergency lighting shall be provided on the egress side of the door.

(8) The door locking system units shall be listed in accordance with UL 294.

- U. In the event of a power failure, power-operated exit doors shall be capable of being fully opened manually. The force required to open these doors shall not exceed 50 lbs to set the door in motion.
- V. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is within 100-feet or the listed viewing distance of the sign, whichever is less, from the nearest visible exit sign.
- W. Exit signs shall be internally or externally illuminated **1013.3** at all times.
- X. The word "EXIT" shall be in high contrast with the background and shall be clearly discernible when the means of exit sign illumination is or is not energized. If a chevron directional indicator is provided as part of the exit sign, the construction shall be such that the direction of the chevron directional indicator cannot be readily changed.
- Y. Exit signs shall be illuminated at all times. To ensure continued illumination for duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. See exceptions.
- Z. The width of corridors shall be determined by the occupant load but such width shall not be less than 44", or 36" when required occupant load is less than 50.
- AA. Minimum corridor width shall be not less than 24 inches for access to and utilization of electrical, mechanical or plumbing systems or equipment.
 Table 1020.3

FIRE PROTECTION SYSTEMS (A1)

| 109.3 901.6.3 | Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years and made available to the fire |
|------------------|--|
| 507.5.5 | A 3' clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved. |
| 901.6 | Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. |
| 901.6 NFPA 25 | Painted sprinklers or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. |
| 903.4 | All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit. See exceptions |
| 904.2.2 | Required Type I commercial kitchen exhaust hood and duct systems shall be protected by an approved automatic fire-extinguishing system. |
| 904.13.1 | A manual actuation device shall be located at or near a means of egress from the cooking area a minimum of 10' and a maximum of 20' from the kitchen exhaust system. The manual actuation device shall be installed not more than 48", nor less than 42" above the floor and shall clearly identify the hazard protected. The manual actuation shall require a maximum force of 40 pounds and a maximum movement of 14" to actuate the fire suppression system. |
| 904.13.2 | The actuation of commercial cooking equipment fire suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual |
| 904.13.5 | Automatic fire extinguishing systems for commercial |

 Automatic fire extinguishing systems for commercial **904.13.5** cooking equipment shall be serviced at least every 6 months and after activation of the system. Inspection

GROUP A-1 OCCUPANCY

shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion.

- J. Commercial cooking equipment fusible links and 904.13.5.3 automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions. Not required for components with frangible bulbs.
- K. Cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher provided within 30' travel distance of commercial-type cooking equipment.
 906.1 Item 2
- L. See Table 906.1 for portable fire extinguisher requirements base on building and equipment use. M. Portable fire extinguishers shall be serviced annually 906.2
- M. Portable fire extinguishers shall be serviced annually and shall have a current service tag attached.
- N. One 2A fire extinguisher per 6,000 sq.ft. in light hazard (offices) and one 2A per 3,000 sq. ft. in an ordinary hazard. Maximum travel distance to a fire extinguisher is 75 feet.
- Solid fuel cooking appliances whether or not under a hood, with fireboxes 5 cu. ft. or less in volume shall have a minimum 2.5-gallon or two 1.5-gallon Class K wet chemical portable fire extinguishers
- P. Deep fat fryers shall have a listed Class K portable fire **906.4.2** extinguishers as follows:

1. For up to four fryers having a maximum cooking medium capacity of 80 pounds each: one Class K portable fire extinguisher of a minimum 1.5-gallon.

2. For every additional group of four fryers having a maximum cooking medium capacity of 80 pounds each: one additional Class K portable fire extinguisher of a minimum 1.5-gallon capacity shall be provided.

3. For individual fryers exceeding 6 sq. ft. in surface area: Class K portable fire extinguishers shall be installed in accordance with the extinguisher manufacturer's recommendations.

Q. Fire extinguishers shall be located in conspicuous

906.5

locations where they will have ready access and be immediately available for use.

- Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers.
- S. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied.
 906.7
- T. Portable fire extinguishers having a gross weight not exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor. Extinguishers having a gross weight exceeding 40 pounds shall be installed so that its top is not more than 3.5' above the floor.
 906.9.1
 906.9.2
- A manual fire alarm system that activates the U. 907.2.1 occupant notification system shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more, or where the Group A occupant load is more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707.3.10 of the IBC shall be considered as a single occupancy for the purposes applying this section. Portions of Group E of occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.
- V. An emergency voice/alarm communication system is **907.2.1.1** required when the occupant load of the Group A occupancy is 1,000 or more.
- W. The building owner shall be responsible to maintain the fire and life safety systems in an operable condition at all times.

HOUSEKEEPING (A1)

A. Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be

GROUP A-1 OCCUPANCY

cut down and removed by the owner or occupant of the premises.

- Β. Materials susceptible to spontaneous ignition, such 304.3.1 as oily rags, shall be stored in a listed disposal container. Contents shall be removed and disposed of dailv.
- Combustible waste containers larger than 40 gallons C. 304.3.2 shall have lids and must be made of metal or approved combustible material.
- D. Dumpsters and containers with an individual capacity 304.3.3 of 1.5 cubic yards or more shall not be stored in buildings or placed within 5' of combustible walls, openings, or under roof eave lines. Dumpsters are permitted to be stored in buildings protected by approved automatic sprinkler systems or buildings of Type I or IIA construction.
- Approved access shall be provided and maintained Ε. 509.2 for all fire protection system equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible.
- Liquid or gas fueled vehicles, boats, aircraft or other F. 314.4 motorcraft, shall not be located indoors except as follows: 1. The engine starting system is made inoperable or batteries are disconnected except where the fire code official requires that the batteries remain connected to maintain safety features. 2. Fuel in tanks does not to exceed 1/4 tank or 5 gallons (whichever is least). 3. Fuel tanks and fill openings are closed and sealed to prevent tampering. 4. other motorcraft Vehicles. aircraft. boats or equipment are not fueled or defueled within the buildina.
- G. Storage of materials in buildings shall be orderly and 315.3 stacks shall be stable.
- Storage shall be separated from heaters or heating H. 315.3 devices by distance or shielding so that ignition cannot occur.

| I. | Storage shall be maintained 2-feet or more below the ceiling in non-sprinklered areas of buildings. | 315.3.1 |
|------|--|---------------------------------|
| J. | Storage shall be maintained a minimum of 18" below sprinkler deflectors in sprinklered areas of buildings | 315.3.1 |
| K. | Combustible materials shall not be stored in exits or enclosures for stairways and ramps | 315.3.2 |
| L. | Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers. | 315.3.3 |
| М. | Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire- resistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists. Exceptions: Areas protected by approved automatic | 315.3.4 |
| N. | sprinkler systems. Portable unvented fuel-fired heating equipment shall | 605.5 |
| | be prohibited in Group A occupancies. | |
| 0. | A Type I hood shall be installed at or above all commercial food cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors. | 606.2 |
| Ρ. | Hoods, grease-removal devices, fans, ducts and other appurtenances shall be inspected at intervals specified in Table 606.3.3.1 or as approved by the fire code official. Inspections shall be recorded. | 606.3.3.1 Table 606.3.3.1 |
| Q. | Hoods, grease-removal devices, fans, ducts and other appurtenances shall be cleaned when inspection shows accumulation of grease. Hood shall be tagged after cleaning. | 606.3.3.2 |
| FI F | CTRICAL (A1) | |
| A. | Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. | 603.2.2 |

B. A working space of not less than 30" in width, 36" in **603.4**

GROUP A-1 OCCUPANCY

depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment.

C. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM".

- D. Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.
- Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NFPA 70 shall be prohibited.
- F. Relocatable power taps shall be listed in accordance **603.5.1** with UL 1363.
- G. Relocatable power taps shall be directly connected to a permanently installed receptacle except when approved in Group A Occupancies, not more than five relocatable power taps may be connected together or to an extension cord for temporary use to supply power to electric equipment.
- H. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage.
- I. Extension cords shall not be a substitute for **603.6** permanent wiring.
- J. Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact.
- K. Extension cords shall be used only with portable **603.6** appliances.
- L. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. 603.6.1
- M. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance.
 603.6.1

| N. | The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. | 603.6.2 |
|----|--|------------------|
| О. | Extension cords shall be maintained in good condition without splices, deterioration or damage. | 603.6.3 |
| Ρ. | Extension cords shall be grounded when serving grounded portable appliances. | 603.6.4 |
| Q. | Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. | 603.7 |
| R. | Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70. | 603.8 |
| S. | Temporary wiring attached to a structure shall be protected from physical damage and supported on insulators spaced not more than 10 feet apart. | 603.8.1 |
| Т. | Portable generators shall be listed for use in the condition and method that they are being used. Portable generators shall be used in accordance with manufacturer's instructions. | 1204.2 1204.3 |
| U. | A listed portable fire extinguisher with a minimum rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator | 1204.10 |

MISCELLANEOUS (A1)

Refer to the Permits section for required Group A-1 permits.

- An operational permit is required to use open flames Α. 105.5.36 or candles in connection with assembly areas, dining 308.3 areas of restaurants or drinking establishments.
- An operational permit is required to operate a place Β. 105.5.39 of assembly.
- An approved fire safety and evacuation plan shall be C. 403.2

GROUP A-1 OCCUPANCY

prepared and maintained, other than those occupancies used exclusively for purposes of religious worship with an occupant load less than 2,000. The plan shall be reviewed or updated annually. Employees shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation. The plan shall be made available to the fire department upon request.

- D. Emergency evacuation drills shall be conducted in Group A occupancies quarterly by all employees. Maintain records.
 E. Fire apparatus access roads shall have an
- E. Fire apparatus access roads shall have an unobstructed width of not less than 20' and an unobstructed vertical clearance of not less than 13' 6".
- F. Fire apparatus access roads shall not be obstructed **503.4** in any manner, including the parking of vehicles.
- G. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.
- H. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access.
- The building shall have approved communication coverage for emergency responders within the building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building.
 510.2 1103.2

HAZARDOUS MATERIALS (A1)

A. An operational permit is required to store, handle or use hazardous materials in excess of the quantities listed in Table 105.5.22.

- B. The storage or use of portable outdoor gas-fired heating appliances is prohibited in any of the following locations: (1) Inside of any occupancy when connected to the fuel gas container. (2) Inside of tents, canopies and membrane structures. (3) On exterior balconies, except when allowed in Section 6.22 of NFPA 58.
- C. Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon or any amount of compressed gases. Separation to be accomplished by one of the four methods in Section 5003.9.8.
- D. Shelf storage of flammable and combustible liquids **5704.3.3.5.3** shall be orderly.
- E. Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers.
- F. Except for cylinders of non-liquefied compressed gases not exceeding a capacity of 250 cu.ft. or liquefied gases not exceeding a capacity of 40 pounds each at normal temperature and pressure (NTP) used for maintenance purposes, patient care or operation of equipment, shall not be stored or used in Group A occupancies.
- G. Toxic and highly toxic compressed gases shall not be stored or used within Group A occupancies, except for cylinders not exceeding 20 cu.ft. at normal temperature and pressure (NTP) are allowed within gas cabinets or fume hoods.
- Portable LP-gas containers shall not be used or stored in a basement, pit, above-grade underfloor space or similar location where heavier-than-air gas might collect.
 6103.2.1.1
 6109.7
- I. Portable LP-gas containers are allowed to be used **6103.2.1.5** temporarily for demonstrations and public

GROUP A-1 OCCUPANCY

exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20-feet.

- Where approved, listed LP-gas commercial food 6103.2.1.7 J. service appliances are allowed to be used for foodpreparation within restaurants and in attended commercial food-catering operations.
- Κ. Idle LP-Gas cylinders shall be stored outside of 6109.12 buildings in accordance with Table 6109.12

FIRE PROTECTION (A1)

- Damaged materials used to protect penetrations, Α. 703.2 joints, or voids shall be replaced or restored with 704.2 materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered.
- Β. Fire doors and smoke barrier doors shall not be 705.2 blocked or obstructed or otherwise made inoperable. 705.2
- Fire door assemblies shall not be modified. C.
- D Hold-open devices and automatic door closers, 705 2 3 where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position.
- E. Swinging fire doors shall close from the full open 705.2.4 position and latch automatically. NOTE: The door closer must exert enough force to close and latch the door from any partially open position.
- F. Horizontal and vertical sliding and rolling fire doors 705.2.6 shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained.
- Natural cut trees shall be prohibited in Group A G. 806.1.1 occupancies unless protected by an automatic sprinkler system.
- decorative Η. Combustible materials. 807.1 other than decorative vegetation, shall comply with IFC Sections 807.2 through 807.5.6.

Assembly occupancies shall include the following:

A2 Assembly uses intended for food and/or drink consumption including, but not limited to: banquet halls, casinos (gaming areas), nightclubs, restaurants, cafeterias and similar dining facilities (including associated commercial kitchens), taverns and bars.

A3 Assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to: amusement arcades, art galleries, bowling alleys, community halls, courtrooms, dance halls (not including food or drink consumption), exhibition halls, funeral parlors, greenhouses with public access for the conservation and exhibition of plants, gymnasiums (without spectator seating), indoor swimming pools (without spectator seating), libraries, museums, places of religious worship, pool and billiard parlors and waiting areas in transportation terminals.

A4 Assembly uses intended for viewing of indoor sporting events and activities with spectator seating including, but not limited to: arenas, skating rinks, swimming pools and tennis courts.

A5 Assembly uses intended for participation in or viewing outdoor activities including, but not limited to: amusement park structures, bleachers, grandstands and stadiums.

EXITS (A2-A5)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.
- B. The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10.

- C. The minimum width or required capacity of a means of egress system shall not be diminished along the path of egress travel.
- Every room or space that is an assembly D. occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.
- Minimum of four exits required for more than E. 1,000 occupant load.
- Minimum of three exits required for 501-1000 F. occupant load.
- Minimum of two exits required for 1-500 occupant G. load.
- Occupants on first story or basement with only Η. one exit and occupant load is 49 or less are allowed one exit, provided the common path of travel is 75 feet or less. See requirements.
- Where two exits, exit access doorways, exit L. access stairways or ramps are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit doors or exit access doorways. Interlocking or scissor stairs shall be counted as one exit stairway. See exceptions.
- The means of egress serving a room or space 1008.2 J. shall be illuminated at all times that the room or space is occupied. See exceptions.
- The power supply for means of egress illumination Κ. 1008.3 shall normally be provided by the premises' electrical supply.
- In the event of a power supply failure in rooms and L. 1008.3.1 spaces that require two or more exits or access to exits. an emergency electrical system shall

1003.6

1004.9

Table

1006.3.3 Table

1006.3.3

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1006.3.3

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automatically illuminate all the aisles, corridors and exit access stairways and ramps.

- M. The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 2702 of the IBC.
- N. Exit doorways shall not be less than 32 inches in **1010.1.1** clear width and 80 inches in height.
- O. Doors shall swing in the direction of egress travel **1010.1.2.1** where serving an occupant load of 50 or more.
- P. The forces to unlatch doors shall comply with the following: 1. Where door hardware operates by push or pull, the operational force to unlatch the door shall not exceed 15 pounds. 2. Where door hardware operates by rotation, the operational force to unlatch the door shall not exceed 28 inch-pounds.
- Q. The force to open doors shall comply with the following: 1. For interior swinging egress doors that are manually operated, other than doors that are required to be fire rated, the force for pushing or pulling open the door shall not exceed 5 pounds. 2. For other swinging doors, sliding doors or folding doors, and doors required to be fire rated, the door shall require not more than a 30-pound force to be set in motion and shall move to a full-open position when subjected to not more than a 15-pound force.
- R. In the event of a power failure, power-operated exit doors shall be capable of being fully opened manually. The force required to set these doors in motion shall not exceed 50 lbs.
- S. Door operations: Except as specifically permitted **1010.2** in section 1010.2, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.
- T. Locks and Latches: Occupant load of 300 or less, and in places of religious worship, the main Item 3

exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
3.1. The locking device is readily distinguishable as locked;
3.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1" high on a contrasting background.
3.3. The use of the key-operated locking device is

revocable by the fire code official for due cause.

- U. Manually operated flush bolts or surface bolts on **1010.2.5** exit doors are not permitted. **See exceptions.**
- V. Swinging doors serving rooms or spaces with an occupant load of 50 or more shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware.
- W. Where panic or fire exit hardware is installed, it shall comply with the following: 1. Panic hardware shall be listed in accordance with UL 305; 2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3. The actuating portion of the releasing device shall extend at least ½ of the door leaf width; and 4. The maximum unlatching force shall not exceed 15 pounds.

X. The electric locks on sensor-released doors located in a means of egress in buildings and entrance doors to tenant spaces in occupancies are permitted where installed and operated in accordance with all of the following criteria:

(1) The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors and shall cause the electric locking system to unlock.

(2) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

(3) Loss of power to the lock or locking system shall automatically unlock the electric locks.

1010.2.12

(4) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches vertically above the floor and within 5 feet of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—independent of other electronics—and the electric lock shall remain unlocked for not less than 30 seconds.

(5) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

(6) Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(7) Emergency lighting shall be provided on the egress side of the door.

(8) The door locking system units shall be listed in accordance with UL 294.

- Y. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Exit sign placement shall be such that any point in an exit access corridor or exit passageway is within 100-feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.
- Z. Main exterior exit doors or gates that are obviously and clearly identifiable as exits need not have exit signs where approved by the fire code official. 1013.1 Exception 2
- AA. Exit signs shall be internally or externally **1013.3** illuminated at all times.
- AB. The word "EXIT" shall be in high contrast with the background and shall be clearly discernible when **1013.6.1**

the means of exit sign illumination is or is not energized. If a chevron directional indicator is provided as part of the exit sign, the construction shall be such that the direction of the chevron directional indicator cannot be readily changed.

- Exit signs shall be illuminated at all times. To AC. ensure continued illumination for duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. See exceptions.
- Egress shall not pass through kitchens, storage AD. 1016.2 rooms, closets or spaces used for similar Item 5 purposes.
- AF. The width of corridors shall be determined by the Table occupant load but such width shall not be less 1020.3 than 44", or 36" when required occupants load less than 50.
- AF. Access to and utilization of mechanical, plumbing Table systems or electrical systems or equipment, must 1020.3 be provided with a minimum corridor width of not less than 24"
- Minimum Aisle Width: The minimum clear AG. width for aisles shall comply with one of the followina:

1. 48" for stepped aisles having seating on each side, or 36" where the stepped aisles serve less than 50 seats.

2. 36" for stepped aisles having seating on only one side, or 23" between an aisle stair handrail and seating where a stepped aisle does not serve more than five rows on one side.

3. 23" between a stepped aisle handrail or guard and seating where the stepped aisle is subdivided by a mid-aisle handrail.

4. 42" for level or ramped aisles having seating on both sides, except: (1) 36" where the aisle serves less than 50 seats, or (2) 30" where the aisle does not serve more than 14 seats.

1013.6.3

1030.9.1

5. 36" for level or ramped aisles having seating on only one side, except 30" where the aisle serves fewer than 15 seats and does not serve as part of an accessible route.

FIRE PROTECTION SYSTEMS (A2-A5)

| 109.3 | Records of all system inspections, tests and | Α. |
|----------|--|----|
| 901.6.3 | maintenance shall be maintained on the premises for a minimum of 3 years and made available to the fire code official upon request. Show proof | |
| 507.5.5 | A 3-foot clear space shall be maintained around | В. |
| | the circumference of fire hydrants except as | |
| | otherwise required or approved. | - |
| 901.6 | Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times | C. |
| 901.6 | Painted sprinklers or cover plates are prohibited | D. |
| NFPA 25 | unless painted at the factory. They cannot be cleaned of paint They must be replaced | 2. |
| 903.4 | All valves controlling the water supply for | E. |
| | automatic sprinkler systems, pumps, tanks, water | |
| | levels and temperatures, critical air pressures and | |
| | water-flow switches on all sprinkler systems shall | |
| | be electrically supervised by a listed fire alarm | |
| 904 2 2 | Required Type I commercial kitchen exhaust hood | F |
| 504.2.2 | and duct systems shall be protected by an | ۰. |
| | approved automatic fire-extinguishing system. | |
| 904.13.1 | A manual actuation device shall be located at or | G. |
| | near a means of egress from the cooking area a | |
| | minimum of 10-feet and a maximum of 20-feet | |
| | from the kitchen exhaust system. The manual | |
| | actuation device shall be installed not more than | |
| | 40, 101 less than 42 above the hoor and shall | |
| | actuation shall require a maximum force of 40 | |
| | pounds and a maximum movement of 14" to | |

GROUP A-2 to A-5 OCCUPANCIES

actuate the fire suppression system.

- The actuation of commercial cooking equipment Η. 904.13.2 fire suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.
- I. Automatic fire extinguishing systems of 904 13 5 2 commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion.
- J. Commercial cooking equipment fusible links and 904.13.5.3 automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions. Not required for components with frangible bulbs.
- Κ. See Table 906.1 for portable fire extinguisher requirements base on building and equipment use.
- A Class K rated portable fire extinguisher shall be L. located within 30 feet distance of travel from commercial cooking equipment.
- Fire extinguishers shall be serviced annually and Μ. shall have a current service tag attached.
- One 2A fire extinguisher per 6,000 sg. ft. in light N. hazard (offices) and one 2A per 3,000 sq. ft. in an ordinary hazard. The maximum travel distance to a fire extinguisher is 75 feet.
- Solid fuel cooking appliances whether or not under О. a hood, with fireboxes 5 cu. ft. or less in volume shall have a minimum 2.5-gallon or two 1.5-gallon Class K wet chemical portable fire extinguishers
- Deep fat frvers shall have a listed Class K portable Ρ. 906.4.2 fire extinguishers as follows:

1. For up to four fryers having a maximum cooking medium capacity of 80 pounds each: one Class K portable fire extinguisher of a minimum 1.5-gallon. 2. For every additional group of four fryers having a maximum cooking medium capacity of 80 pounds each: one additional Class K portable fire extinguisher of a minimum 1.5-gallon capacity

Table 906.1

906.1

Item 2

906.2

NFPA 10 Table

906.3(1)

906.4.1

extinguisher of a minimum 1.5-gallon capacity shall be provided.

3. For individual fryers exceeding 6 sq. ft. in surface area: Class K portable fire extinguishers shall be installed in accordance with the extinguisher manufacturer's recommendations.

- Q. Fire extinguishers shall be located in conspicuous **906.5** and readily available locations immediately available for use.
- Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers.
- S. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied.
 906.7
- T. Portable fire extinguishers having a gross weight not exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor. **906.9.1**
- U. Extinguishers having a gross weight exceeding 40 **906.9.2** pounds shall be installed so that its top is not more than 3.5' above the floor.
- A manual fire alarm system that activates the V. 907.2.1 occupant notification system shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more, or where the Group A occupant load is more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707.3.10 of the IBC shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.
- W. An emergency voice/alarm communication system is required when the occupant load of the Group A occupancy is 1,000 or more.

Χ. The building owner shall be responsible to 907.8.4 maintain the fire and life safety systems in an operable condition at all times.

HOUSEKEEPING (A2-A5)

- Weeds, grass, vines or other growth that is Α. 304.1.2 capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises.
- Β. Materials susceptible to spontaneous ignition, 304.3.1 such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily.
- Combustible waste containers larger than 40 C. 304.3.2 gallons shall have lids and must be made of metal or approved combustible material.
- Dumpsters and containers with an individual D. capacity of 1.5 cubic yards or more shall not be stored in buildings or placed within 5-feet of combustible walls, openings or combustible roof eave lines. Exceptions: 1. Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. 2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10-feet from other buildings and used exclusively for dumpster or container storage.
- Liquid or gas fueled vehicles, aircraft, boats or E. other motorcraft, shall not be located indoors except as follows: 1. The engine starting system is made inoperable or batteries are disconnected except where the fire code official requires that the batteries remain connected to maintain safety features, 2. Fuel in tanks does not exceed 1/4 tank or 5 gallons (whichever is least). 3. Fuel tanks and fill openings are closed and sealed to prevent tampering. 4. Vehicles, aircraft, boats or other motorcraft equipment are not fueled or defueled within the building.

304.3.3

314.4

| F. | Storage of in buildings shall be orderly and stacks shall be stable. | 315.3 |
|----|--|---------|
| G. | Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. | 315.3 |
| H. | Storage shall be maintained 2-feet or more below the ceiling in non-sprinklered areas of buildings. | 315.3.1 |
| I. | Storage shall be maintained a minimum of 18" below sprinkler deflectors in sprinklered areas of buildings. | 315.3.1 |
| J. | Combustible materials shall not be stored in exits or enclosures for stairways and ramps | 315.3.2 |
| K. | Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers. | 315.3.3 |
| L. | Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire- resistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists. Exceptions: Areas protected by approved automatic sprinkler systems | 315.3.4 |
| M. | Outside Storage: Outside storage of combustible materials shall not be located within 10-feet of a lot line. Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist. | 315.4 |
| N. | Approved access shall be provided and maintained for all fire protection system equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed | 509.2 |

or kept in such a manner that would prevent such equipment from being readily accessible.

- Hoods, grease-removal devices, fans, ducts and other appurtenances shall be inspected at intervals specified in Table 606.3.3.1 or as approved by the fire code official. Inspections shall be completed by qualified individuals.
 606.3.3.1
- P. Records of hood inspections shall state the individual and company performing the inspection, a description of the inspection and when the inspection took place. Records for cleanings shall state the individual and company performing the cleaning and when the cleaning took place. Such records shall be completed after each inspection or cleaning, maintained on the premises for a minimum of three years and be copied to the fire code official upon request.
- Q. Automatic fire extinguishing systems protecting commercial cooking systems shall be serviced as required in Section 904.13.5.
 606.3.4
- R. Portable unvented fuel-fired heating equipment **605.5** shall be prohibited inside Group A occupancies.
- S. A Type I hood shall be installed at or above all commercial food cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors. 606.2

ELECTRICAL (A2-A5)

- A. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes.
- B. A working space of not less than 30" in width, 36" in depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment.
- C. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM".

| D. | Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident. | 603.4.1 |
|----|---|---------|
| E. | Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NFPA 70 shall be prohibited. | 603.5 |
| F. | Relocatable power taps shall be listed in accordance with UL 1363. | 603.5.1 |
| G. | Relocatable power taps shall be directly connected to a permanently installed receptacle except when approved in Group A Occupancies, not more than five relocatable power taps may be connected together or to an extension cord for temporary use to supply power to electric equipment. | 603.5.2 |
| H. | Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage. | 603.5.3 |
| I. | Extension cords shall not be a substitute for permanent wiring. | 603.6 |
| J. | Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. | 603.6 |
| K. | Extension cords shall be used only with portable appliances. | 603.6 |
| L. | Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. | 603.6.1 |
| M. | Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance | 603.6.1 |
| N. | The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord | 603.6.2 |
| Ο. | Extension cords shall be maintained in good condition without splices, deterioration or damage. | 603.6.3 |

| Ρ. | Extension cords shall be grounded when serving | 603.6.4 |
|-------|--|------------|
| Q. | Electrical motors shall be maintained free from | 603.7 |
| | excessive accumulations of oil, dirt, waste and | |
| R. | Temporary wiring for electrical power and lighting | 603.8 |
| | installations is allowed for a period not to exceed 90 | |
| | days. Temporary wiring methods shall meet the applicable provisions of NEPA 70 Exception : | |
| | Temporary wiring for electrical power and lighting | |
| | installations is allowed during periods of | |
| | buildings, structures, equipment or similar activities | |
| | so long as the installations comply with NFPA 70. | |
| S. | lemporary wiring attached to a structure shall be protected from physical damage and supported on | 603.8.1 |
| | insulators spaced not more than 10 feet apart. | |
| Т. | Rooms containing electrical equipment rated 800 | 1010.2.9.2 |
| | switching devices or control devices and where the | |
| | exit or exit access door is less than 25 feet from the | |
| | equipment working space as required by NFPA 70, such doors shall not be provided with a latch or lock | |
| | other than panic hardware or fire exit hardware. The | |
| | doors shall swing in the direction of egress travel | 1204.2 |
| 0. | condition and method that they are being used. | 1204.2 |
| | Portable generators shall be used in accordance | |
| V | A listed portable fire extinguisher with a minimum | 1204 10 |
| ۷. | rating of 2-A:20-B:C shall be provided within 50 feet | 1204.10 |
| | of the portable generator | |
| MIC | | |
| 14112 | GELLANEOUJ (AZ-AJ) | |

Refer to the Permits section for required Group A permits.

- A. An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments.
 105.5.36 308.3
- B. An operational permit is required to operate a place **105.5.39** of assembly.

- C. An approved fire safety and evacuation plan shall be 403.2 and maintained. other than 404.3 prepared those occupancies used exclusively for purposes of 404 4 religious worship with an occupant load less than 406.2 2,000. The plan shall be reviewed or updated annually. Employees shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation. The plan shall be made available to the fire department upon request 405.3
- Emergency evacuation drills shall be conducted in Group A occupancies quarterly by all employees. Must keep records.
- E. Fire apparatus access roads shall have an unobstructed width of not less than 20-feet, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13' 6".
- F. Fire apparatus access roads shall not be obstructed **503.4** in any manner, including the parking of vehicles.
- G. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.
- H. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access.
- The building shall have approved communication coverage for emergency responders within the building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building.
 510.2 1103.2
- Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or

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Table

405.3

503.2.1

exit access doorway from the room or space, and maintained by the owner.

HAZARDOUS MATERIALS (A2-A5)

- A. An operational permit is required to store, handle or use hazardous materials in excess of the quantities listed in Table 105.5.22.
- B. The storage or use of portable outdoor gas-fired heating appliances is prohibited in any of the following locations: (1) Inside of any occupancy when connected to the fuel gas container. (2) Inside of tents, canopies and membrane structures. (3) On exterior balconies, except when allowed in Section 6.22 of NFPA 58.
- C. Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon or any amount of compressed gases. Separation to be accomplished by one of the four methods in Section 5003.9.8.
- D. Shelf storage of flammable and combustible liquids **5704.3.3.5.3** shall be orderly.
- E. Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers.
- F. Except for cylinders of non-liquefied compressed flammable gases not exceeding a capacity of 250 cubic feet or liquefied gases not exceeding a capacity of 40 pounds each at normal temperature and pressure (NTP) used for maintenance purposes, patient care or operation of equipment, shall not be stored or used in Group A occupancies.
- G. Toxic and highly toxic compressed gases shall not be stored or used within Group A occupancies, except 6004.1.1.1

for cylinders not exceeding 20 cu. ft. at normal temperature and pressure (NTP) are allowed within gas cabinets or fume hoods.

- Portable LP-gas containers shall not be used or H. 6103.2.1.1 stored in a basement, pit, above-grade underfloor 6109.7 space or similar location where heavier-than-air gas might collect.
- Portable LP-gas containers are allowed to be used L 6103.2.1.5 demonstrations temporarily for and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20-feet.
- Where approved, listed LP-gas commercial food J. 6103.2.1.7 service appliances are allowed to be used for food preparation within restaurants and in attended commercial food catering operations.
- Idle LP-Gas cylinders shall be stored outside of K. 6109.12 buildings in accordance with Table 6109.12.

FIRE PROTECTION (A2-A5)

- Damaged materials used to protect penetrations, Α. 703.2 ioints, or voids shall be replaced or restored with 704.2 materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered
- Β. Fire doors and smoke barrier doors shall not be 705.2 blocked or obstructed or otherwise made inoperable. 705.2
- Fire door assemblies shall not be modified. C.
- When openings are required to be protected, 705.2 D opening protectives shall be maintained self-closing or automatic-closing.
- Hold-open devices and automatic door closers, F 705 2 3 where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position.

- F. Swinging fire doors shall close from the full open position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position.
- G. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and be available.
- H. Natural cut trees shall be prohibited in Group A occupancies unless protected by an automatic sprinkler system.
- I. Combustible decorative materials, other than decorative vegetation, shall comply with IFC Sections 807.2 through 807.5.6.

Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

- Airport traffic control towers
- Ambulatory care facilities
- Animal hospitals, kennels and pounds
- Banks
- Barber and beauty shops
- Car wash
- Civic administration
- Clinic-outpatient
- Dry cleaning and laundries: pick-up and delivery stations and self-service
- Educational occupancies for students above the 12th grade
- Electronic data processing
- Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities not more than 2,500 sq. ft. in area
- Laboratories: testing and research
- Motor vehicle showrooms
- Post offices
- Print shops
- Professional services (architects, attorneys, dentists, physicians, engineers, etc.)
- Radio and television stations
- Telephone exchanges
- Training and skill development not within a school or academic program.

EXITS (B)

A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.

GROUP B OCCUPANCY

| 1003.6 | The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10. | B. |
|-------------------------------|--|----|
| 1003.6 | The minimum width or required capacity of a means of egress system shall not be diminished along the path of egress travel | C. |
| 1006.2.1 Table 1006.2.1 | Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance of exceeds the value in Table 1006.2.1 or the occupant load is 50 or more | D. |
| Table 1006.2.1 | Common Path of Egress Travel: Occ Load \leq 30 without fire sprinklers – 100-feet. Occ Load $>$ 30 without fire sprinklers – 75-feet. With fire sprinklers –100-feet. | E. |
| 1008.2 | The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. | F. |
| 1008.2.3 | Illumination shall be provided along the path of travel for the exit discharge from each exit to the public way | G. |
| 1008.3.1 | In the event of a power supply failure in rooms and spaces that require two or more exits or access to exits, an emergency electrical system shall automatically illuminate all the aisles, corridors and exit access stairways and ramps. | H. |
| 1008.3.2 | In the event of power supply failure, in buildings that require two or more exits or access to exits, an emergency electrical system shall automatically illuminate all of the interior exit access stairways and ramps, interior and exterior exit stairways and ramps, exit passageways, vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.2 and exterior landings as required by Section 1010.1.5 for exit doorways that lead directly to the exit discharge. | Ι. |

| J. | In the event of a power supply failure, an emergency electrical system shall automatically illuminate all electrical equipment rooms, fire command centers, fire pump rooms, generator rooms, public restrooms greater than 300 square feet in size | 1008.3.3 |
|----|--|--------------------|
| K. | The emergency power system shall provide power for a duration of not less than 90 minutes. | 1008.3.4 |
| L. | Exit doorways shall not be less than 32 inches in clear width and 80 inches in height. | 1010.1.1 |
| M. | Doors shall swing in the direction of exit travel where serving an occupant load of 50 or more. | 1010.1.2.1 |
| N. | Except as specifically permitted in Section 1010.2, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort | 1010.2 |
| Ο. | Main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided: 3.1. The locking device is readily distinguishable as locked; 3.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1-inch high on a contrasting background; and 3.3. The use of the key-operated locking device is | 1010.2.4 Item 3 |
| P. | Manually operated flush bolts or surface bolts on | 1010.2.5 |
| Q. | Where panic or fire exit hardware is installed, it shall comply with the following: 1. Panic hardware shall be listed in accordance with UL 305; 2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3. The actuating portion of the releasing device shall extend at least ½ of the door leaf width; and 4. The maximum unlatching force shall not exceed 15 pounds. | 1010.2.9.3 |

R. The electric locks on sensor-released doors located in a means of egress in buildings and entrance doors to tenant spaces in occupancies are permitted where installed and operated in accordance with all of the following criteria:

(1) The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors and shall cause the electric locking system to unlock.

(2) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

(3) Loss of power to the lock or locking system shall automatically unlock the electric locks.

(4) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches vertically above the floor and within 5 feet of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—independent of other electronics—and the electric lock shall remain unlocked for not less than 30 seconds.

(5) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

(6) Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(7) Emergency lighting shall be provided on the egress side of the door.

(8) The door locking system units shall be listed in accordance with UL 294.

1010.2.12

S. Delayed egress locking system shall be installed and operated in accordance with all of the following:

> The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate, free egress.
> The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.

> (3) The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.

> (4) An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only. (Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door)

(5) The egress path from any point shall not pass through more than one delayed egress locking system.

(6) A sign shall be provided on the door and shall be located above and within 12 inches of the door exit hardware:

6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

1010.2.13.1
6.3 The sign shall comply with the visual character requirements in ICC A117.1. (7) Emergency lighting shall be provided on the egress side of the door. (8) The delayed egress locking system units shall be listed in accordance with UL 294. Exits and exit access doors shall be marked by an Т. 1013.1 approved exit sign readily visible from any direction of egress travel. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100-feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign. U. Exit signs are required in rooms or areas which 1013.1 require two or more exits. Main exterior exit doors Exception or gates that are obvious and clearly identifiable as 1&2 exits need not have exit signs where approved by the fire code official. V. Exit signs shall be internally or externally 1013.3 illuminated at all times. Egress shall not pass through kitchens, storage W. 1016.2 rooms, closets or spaces used for Item 5 similar purposes. Minimum clear aisle width shall be determined by Χ. 1018.3 Section 1005.1 for the occupant load served, but 1020.3 shall not be less than the values in Table 1020.3 Table 1020.3 Y. Exits shall be continuous from the point of entry 1022.1 into the exit to the exit discharge. Ζ. discharge shall provide Exit direct and 1028.5 а unobstructed access to a public way. The power supply for means of egress illumination AA. 1008.3 shall normally be provided by the premises electrical supply.

FIRE PROTECTION SYSTEMS (B)

| 507.5.5 | A 3-feet clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved. | A. |
|------------------|--|----|
| 901.4 NFPA 25 | Painted sprinklers or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint They must be replaced | В. |
| 901.6 | Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. | C. |
| 901.6.3 | Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained. | D. |
| 901.6.3.1 | Initial records shall include the name of the installation contractor, type of components installed, manufacturer of the components, location and number of components installed per floor. Records shall also include the manufacturers' operation and maintenance instruction manuals. Such records shall be maintained for the life of the installation | E. |
| 903.4 | All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit. See exceptions. | F. |
| 904.2.2 | Required Type I commercial kitchen exhaust hood and duct systems shall be protected by an approved automatic fire-extinguishing system. | G. |
| 904.13.1 | A manual actuation device shall be located at or near a means of egress from the cooking area a minimum of 10' and a maximum of 20' from the kitchen exhaust system. The manual actuation device shall be installed not more than 48", nor less than 42" above the floor and shall clearly identify the hazard protected. The manual actuation shall require a maximum force of 40 pounds and a maximum movement of 14" to actuate the fire suppression system. | H. |

| I. | The actuation of commercial cooking equipment fire suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual. | 904.13.2 |
|----|--|-----------------------------|
| J. | Automatic fire extinguishing systems for commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion. | 904.13.5.2 |
| K. | Commercial cooking equipment fusible links and automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions. Not required for components with frangible bulbs. | 904.13.5.3 |
| L. | Fire extinguishers shall be serviced annually and shall have a current service tag attached. | 906.2 901.6.1 NEPA 10 |
| M. | See Table 906.1 for portable fire extinguisher requirements based on building and equipment use | Table 906.1 |
| N. | Cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher provided within 30-feet travel distance of commercial-type cooking equipment. | 906.1 Item 2 |
| Ο. | One 2A fire extinguisher per 6,000 sq. ft. in light hazard (offices) and one 2A per 3,000 sq. ft. in an ordinary hazard. | Table 906.3(1) |
| Ρ. | Maximum travel distance to a fire extinguisher is 75'. | Table 906.3(1) |
| Q. | Solid fuel cooking appliances whether or not under a hood, with fireboxes 5 cu.ft. or less in volume shall have a minimum 2.5-gallon or two 1.5-gallon Class K wet chemical portable fire extinguishers. | 906.4.1 |
| R. | Deep fat fryers shall have a listed Class K portable fire extinguishers as follows: 1. For up to four fryers having a maximum cooking | 906.4.2 |

medium capacity of 80 pounds each: one Class K portable fire extinguisher of a minimum 1.5-gallon. 2. For every additional group of four fryers having a maximum cooking medium capacity of 80 pounds each: one additional Class K portable fire extinguisher of a minimum 1.5-gallon capacity shall be provided.

3. For individual fryers exceeding 6 sq. ft. in surface area: Class K portable fire extinguishers shall be installed in accordance with the extinguisher manufacturer's recommendations.

- S. Fire extinguishers shall be located in conspicuous **906.5** locations where they will be readily accessible and immediately available for use.
- T. Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers.
- U. Hand-held portable fire extinguishers, not housed **906.7** in cabinets, shall be installed on hangers or brackets supplied.
- V. Portable fire extinguishers having a gross weight not exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor. Extinguishers having a gross weight exceeding 40 pounds shall be installed so that its top is not more than 3.5' above the floor.
- W The building owner shall be responsible to maintain 907.8.4 and emergency voice/alarm the fire alarm communication systems in an operable condition at all times. Service personnel shall meet the gualification requirements NFPA 72 for of inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained.

HOUSEKEEPING (B)

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| A. | Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises. | 304.1.2 |
| В. | Storage of in buildings shall be orderly and stacks shall be stable. | 315.3 |
| C. | Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. | 315.3 |
| D. | Storage shall be maintained 2-feet or more below the ceiling in non-sprinklered areas of buildings | 315.3.1 |
| E. | Storage shall be maintained a minimum of 18" below sprinkler deflectors in sprinklered areas of buildings. | 315.3.1 |
| F. | Combustible materials shall not be stored in exits or enclosures for stairways and ramps. | 315.3.2 |
| G. | Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers. | 315.3.3 |
| H. | Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire- resistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists. Exceptions: Areas protected by approved automatic sprinkler systems | 315.3.4 |
| I. | Outside Storage: Outside storage of combustible materials shall not be located within 10-feet of a lot line. Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist. | 315.4 |
| | | |

- J. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily.
- K. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material.
- L. Dumpsters and containers with an individual capacity of 1.5 cubic yards or more shall not be stored in buildings or placed within 5' of combustible walls, openings or combustible roof eave lines. **Exceptions:** 1. Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. 2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10-feet from other buildings and used exclusively for dumpster or container storage.
- M. Liquid or gas fueled vehicles, aircraft, boats or other motorcraft, shall not be located indoors except as follows: (1) The engine starting system is made inoperable or batteries are disconnected except where the fire code official requires that the batteries remain connected to maintain safety features. (2) Fuel in tanks does not to exceed 1/4 tank or 5 gallons (whichever is least). (3) Fuel tanks and fill openings are closed and sealed to prevent tampering. (4) Vehicles, aircraft, boats or other motorcraft equipment are not fueled or defueled within the building.
- N. Laundry carts with an individual capacity of 1 cubic yard (200 gallons) or more used in laundries shall be constructed of noncombustible material or materials, having a peak rate of heat release not exceeding 300kW/m² at a flux of 50kW/m² when tested in accordance with the requirements in ASTM E 1354. This provision does not apply when the building is protected by a NFPA 13 compliant automatic sprinkler system and laundry carts in coin-operated laundries.

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314.4

318.1

304.3.1

304.3.2

304.3.3

- O. Hoods, grease-removal devices, fans, ducts and other appurtenances shall be cleaned at intervals as required by Sections 606.3.3.1 through 606.3.3.3.
- P. Hoods, grease-removal devices, fans, ducts and other appurtenances shall be inspected at intervals specified in Table 606.3.3.1 or as approved by the fire code official. Inspections shall be completed by qualified individuals.
 606.3.3.1

ELECTRICAL (B)

- A. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes.
 B. A working space of not less than 30" in width. 36" 603.4
- B. A working space of not less than 30" in width, 36" in depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment.
- C. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM". 603.4.1
- D. Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.
- E. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NFPA 70 shall be prohibited.
- F. Relocatable power taps shall be listed in **603.5.1** accordance with UL 1363.
- G. Relocatable power taps shall be directly connected to a permanently installed receptacle except when approved in meeting rooms in Group B Occupancies, not more than five relocatable power taps may be connected together or to an extension cord for temporary use to supply power to electric equipment.

606.3.3

coverings, or be subject to environmental or physical damage. Extension cords shall not be a substitute for I. 603.6 permanent wiring. Extension cords shall not be affixed to structures. J. 603 6 extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. κ Extension cords shall be used only with portable 603.6 appliances. Extension cords shall only be plugged directly into L. 603.6.1 an approved receptacle, power tap, or multiplug adapter. M. Except for approved multiplug extension cords, 603.6.1 each extension cord shall serve only one portable appliance. N. The ampacity of the extension cords shall not be 603.6.2 less than the rated capacity of the portable appliance supplied by the cord. Extension cords shall be maintained in good 0 603.6.3 condition without splices, deterioration or damage. Ρ. Extension cords shall be grounded when serving 603.6.4 grounded portable appliances. Q. Electrical motors shall be maintained free from 603.7 excessive accumulations of oil, dirt, waste and debris. Temporary wiring for electrical power and lighting R. 603.8 installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations allowed periods is durina of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70.

Relocatable power taps shall not extend through

ceilings, floors, under doors or floor

GROUP B OCCUPANCY

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walls.

603.5.3

S. Temporary wiring attached to a structure shall be 603.8.1 protected from physical damage and supported on insulators spaced not more than 10 feet apart. Portable generators shall be listed for use in the Τ. 1204.2 condition and method that they are being used. 1204.3 Portable generators shall be used in accordance with manufacturer's instructions. U. A listed portable fire extinguisher with a minimum 1204.10 rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator **MISCELLANEOUS (B)** Refer to the Permits section for required permits. Α An approved fire safety and evacuation plan shall 403.3 be prepared and maintained for Group B buildings 403.10.2 having an occupant load of 500 or more persons or 404.3 more than 100 persons above or below the lowest 406.2 level of exit discharge, and for high-rise buildings. An approved fire safety and evacuation plan shall be prepared and maintained. The plan shall be reviewed or updated annually. Employees shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation. Emergency evacuation drills shall be conducted in B 405.3 Group B occupancies annually by all employees. Table Must keep records. 405.3 C. Fire apparatus access roads shall have an 503.2.1 unobstructed width of not less than 20-feet. exclusive of shoulders, except for approved security gates in accordance with Section 503.6. and an unobstructed vertical clearance of not less than 13' 6". Fire apparatus access roads shall not be obstructed D 503.4 in any manner, including the parking of vehicles. New and existing buildings shall have approved E. 505.1 address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.

| F. | Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access | 506.1 |
|----|---|-----------------|
| G. | The building shall have approved communication coverage for emergency responders within the building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building. | 510.2 1103.2 |
| H. | The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained | 907.8.4 |
| I. | Existing buildings with occupied floors located more than 50-feet above the lowest level of fire department access or more than 50-feet below the highest level of fire department access shall be equipped with standpipes. | 1103.6.1 |
| J. | Existing buildings with helistops or heliports more than 30 feet above the lowest level of fire department access shall be equipped with standpipes. | 1103.6.2 |
| K. | Existing stairways shall be marked with stairway floor number signs in accordance with Section 1023.9. | 1104.24 |
| L. | Existing high-rise buildings shall be provided with luminous egress path markings in accordance with Section 1025, except for open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program. | 1104.25 |

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HAZARDOUS MATERIALS (B)

Refer to the Permits section for required permits.

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. See exceptions.
- B. Visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and aboveground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.
- C. Rooms or cabinets containing compressed gases 5003.5.1 shall be labeled: COMPRESSED GAS when in quantities requiring a permit.
- Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon. Separation to be accomplished by one of the four methods in this section.
- E. Shelf storage of flammable and combustible liquids **5704.3.3.5.3** shall be orderly.
- F. Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers.
- G. Except for cylinders of non-liquefied compressed flammable gases not exceeding a capacity of 250 cubic feet or liquefied gases not exceeding a capacity of 40 pounds each at normal temperature and pressure (NTP) used for maintenance purposes, patient care or operation of equipment, shall not be stored or used in offices in Group B occupancies.

- H. Portable LP-gas containers shall not be stored or used in a basement, pit, above-grade underfloor space or similar location where heavier-than-air gas might collect.
 6103.2.1.1
 6109.7
- Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20-feet.
- J. Where approved, listed LP-gas commercial food service appliances are allowed to be used for foodpreparation within restaurants and in attended commercial food catering operations in accordance with the International Fuel Gas Code, the International Mechanical Code and NFPA 58.
- K. Idle LP-Gas cylinders shall be stored outside of **6109.12** buildings in accordance with Table 6109.12.

FIRE AND SMOKE PROTECTION (B)

- A. Damaged materials used to protect penetrations, joints, or voids shall be replaced or restored with materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered.
 703.2
 703.2
 704.2
- B. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable.
 705.2
- C. Fire door assemblies shall not be modified.
- D. Hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position.
- E. Swinging fire doors shall close from the full open position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position.

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705.2

- F. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained.
- G. Where required when the building was originally permitted and constructed, spray fire-resistant materials and intumescent fire-resistant materials shall be visually inspected to verify that the materials do not exhibit exposure to the substrate.

Educational Group E. Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade. **REMEMBER: Educational uses above the 12th grade are a Group B Occupancy.**

Accessory to Places of Worship: Religious educational rooms and religious auditoriums, which are accessory to places of religious worship in accordance with Section 508.3.1 of the IBC and have occupant loads of less than 100 per room or space shall be classified as Group A-3 occupancies.

Group E, Day Care Facilities: This group includes buildings and structures or portions thereof occupied by more than five children older than 2-1/2 years of age who receive educational, supervision or personal care services for less than 24 hours per day.

Group E - Within Places Of Worship: Rooms and spaces within places of worship providing such care during religious functions shall be classified as part of the primary occupancy.

Group E - Five or Fewer Children: A facility having five or fewer children receiving such care shall be classified as part of the primary occupancy.

Group E - Five or Fewer Children in a Dwelling Unit: A facility such as the above within a dwelling unit and having five or fewer children receiving such care shall be classified as a Group R-3 occupancy or shall comply with the IRC.

EXITS (E)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.
- B. The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in

Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10. C. The minimum width or required capacity of a means 1003.6 of egress system shall not be diminished along the path of earess travel. Two exits or exit access doorways from any space D. 1006.2.1 shall be provided where the design occupant load or Table the common path of egress travel distance of 1006.2.1 exceeds the value in Table 1006.2.1 or the occupant load is 50 or more. **Common Path of Egress Travel:** Ε. Table Occ Load \leq 30 without fire sprinklers – 75'. 1006.2.1 Occ Load > 30 without fire sprinklers -75'. With fire sprinklers - 75'. F. The means of egress, including the exit discharge, 1008.2 shall be illuminated at all times the building space served by the means of egress is occupied. Illumination shall be provided along the path of travel 1008.2.3 G. for the exit discharge from each exit to the public wav. Η. The power supply for means of egress illumination 1008.3 shall normally be provided by the premises electrical supply. In the event of a power supply failure in rooms and L. 1008.3.1 spaces that require two or more exits or access to emergency electrical system exits. an shall automatically illuminate all the aisles, corridors and exit access stairways and ramps. J. In the event of power supply failure, in buildings that 1008.3.2 require two or more exits or access to exits, an emergency electrical system shall automatically illuminate all of the interior exit access stairways and ramps, interior and exterior exit stairways and ramps, exit passageways, vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.2 and exterior landings as required by Section 1010.1.5 for exit doorways that lead directly to the exit discharge.

| 1008.3.3 | In the event of a power supply failure, an emergency electrical system shall automatically illuminate all electrical equipment rooms, fire command centers, fire pump rooms, generator rooms, public restrooms | K. |
|------------|---|----|
| 1008.3.4 | The emergency power system shall provide power for a duration of not less than 90 minutes | L. |
| 1010.1.1 | Exit doorways shall not be less than 32 inches in clear width and 80 inches in height. | M. |
| 1010.1.2.1 | Doors shall swing in the direction of exit travel where serving an occupant load of 50 or more. | N. |
| 1010.2 | Except as specifically permitted in Section 1010.2, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. | 0. |
| 1010.2.5 | Manually operated flush bolts or surface bolts on exit doors are not permitted. See exceptions. | Ρ. |
| 1010.2.9 | Doors serving rooms or spaces with an occupant load of 50 or more in an E occupancy shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware. | Q. |
| 1010.2.9.3 | Where panic or fire exit hardware is installed, it shall comply with the following: 1. Panic hardware shall be listed in accordance with UL 305; 2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3. The actuating portion of the releasing device shall extend at least ½ of the door leaf width; and 4. The maximum unlatching force shall not exceed 15 pounds. | R. |
| 1010.2.12 | The electric locks on sensor-released doors located in a means of egress in buildings and entrance doors to tenant spaces in occupancies are permitted where installed and operated in accordance with all of the following criteria: (1) The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors and shall cause the electric locking system to unlock. (2) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor. | S. |

(3) Loss of power to the lock or locking system shall automatically unlock the electric locks.

(4) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches vertically above the floor and within 5 feet of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—independent of other electronics—and the electric lock shall remain unlocked for not less than 30 seconds.

(5) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

(6) Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(7) Emergency lighting shall be provided on the egress side of the door.

(8) The door locking system units shall be listed in accordance with UL 294.

- T. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100-feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.
- U. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit doors or gates that are obvious and clearly identifiable as exits need not have exit signs where approved by the fire code official.

1013.1 Exception 1 & 2

| V. | Exit signs shall be internally or externally illuminated | 1013.3 |
|---------|--|------------------|
| W. | Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes. | 1016.2 Item 5 |
| Х. | Minimum clear aisle width shall be determined by | 1018.3 |
| | shall not be less than the values in Table 1020.3. | Table |
| Y. | Group E having a required capacity of 100 or more | 1020.3 Table |
| 7. | shall have a corridor no less than 72". Exits shall be continuous from the point of entry into | 1020.3 1022.1 |
| ^ ^ | the exit to the exit discharge. | 1029 5 |
| AA. | unobstructed access to a public way. | 1020.5 |
| FIRE | E PROTECTION SYSTEMS (E) | |
| Α. | Painted sprinklers or cover plates are prohibited unless painted at the factory. They cannot be | 901.4 NFPA 25 |
| - | cleaned of paint. They must be replaced. | 004.0 |
| В. | be maintained in an operative condition at all times. | 901.6 |
| C. | Records of all system inspections, tests and maintenance required by the referenced standards | 901.6.3 |
| D. | Initial records shall include the name of the | 901.6.3.1 |
| | installation contractor, type of components installed, manufacturer of the components, location and | |
| | number of components installed per floor. Records shall also include the manufacturers' operation and | |
| | maintenance instruction manuals. Such records shall | |
| E. | All valves controlling the water supply for automatic | 903.4 |
| | sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow | |
| | switches on all sprinkler systems shall be electrically | |
| | exceptions. | |
| F. | Required Type I commercial kitchen exhaust hood and duct systems shall be protected by an approved | 904.2.2 |
| | automatic fire-extinguishing system. | |
| | | |

- G. A manual actuation device shall be located at or near 904.13.1 a means of egress from the cooking area a minimum of 10' and a maximum of 20' from the kitchen exhaust system. The manual actuation device shall be installed not more than 48", nor less than 42" above the floor and shall clearly identify the hazard protected. The manual actuation shall require a maximum force of 40 pounds and a maximum movement of 14" to actuate the fire suppression svstem.
- Η. The actuation of commercial cooking equipment fire 904.13.2 suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.
- I. Automatic fire extinguishing systems for commercial 904.13.5.2 cooking equipment shall be serviced at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion.
- J. Commercial cooking equipment fusible links and 904.13.5.3 automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions. Not for reauired components with frangible bulbs.
- K. See Table 906.1 for portable fire extinguisher Table requirements base on building and equipment use. 906.1
- Cooking equipment involving solid fuels or vegetable Γ. 906.1 or animal oils and fats shall be protected by a Class Item 2 K rated portable fire extinguisher provided within 30feet travel distance of commercial-type cooking equipment.
- Μ. Fire extinguishers shall be serviced annually and shall have a current service tag attached.
- One 2A fire extinguisher per 6,000 sg. ft. in light N. hazard (offices) and one 2A per 3,000 sq. ft. in an ordinary hazard.
- Fire extinguishers shall be serviced annually and О. 906.2

- 906.2 **NFPA 10** Table

906.3(1)

| P. | shall have a current service tag attached. Maximum travel distance to a fire extinguisher is 75 feet. | NFPA 10 Table 906.3(1) |
|-----------|--|------------------------------|
| Q. | Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. | 906.5 |
| R. | Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers. | 906.6 |
| S. | Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. | 906.7 |
| Т. | Portable fire extinguishers having a gross weight not exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor. Extinguishers having a gross weight exceeding 40 pounds shall be installed so that its top is not more than 3.5' above the floor. | 906.9.1 906.9.2 |
| U. | A 3-feet clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved. | 507.5.5 |
| V. | The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained. | 907.8.4 |
| HOL A. | JSEKEEPING (E) Weeds, grass, vines or other growth that is capable | 304.1.2 |

- of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises. B Materials susceptible to spontaneous ignition, such
- B. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal

container. (Self-closing lids) Contents shall be removed and disposed of daily.

- C. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material.
- D. Dumpsters and containers with an individual capacity 304.3.3 of 1.5 cubic yards or more shall not be stored in buildings or placed within 5' of combustible walls, combustible openinas or roof eave lines Exceptions: (1) Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. (2) Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10-feet from other buildings and used exclusively for dumpster or container storage.
- E. Storage of in buildings shall be orderly and stacks **315.3** shall be stable.
- F. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. **315.3**
- G. Storage shall be maintained 2-feet or more below the **315.3.1** ceiling in non-sprinklered areas of buildings.
- H. Storage shall be maintained a minimum of 18" below sprinkler deflectors in sprinklered areas of buildings.
- I. Combustible materials shall not be stored in exits or enclosures for stairways and ramps. 315.3.2
- J. Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers.
 315.3.3
- K. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fireresistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists.

Exceptions: Areas protected by approved automatic sprinkler systems.

304.3.2

materials shall not be located within 10-feet of a lot line Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist. Approved access shall be provided and maintained М 509.2 for all fire protection system equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible. N. Portable unvented fuel-fired heating equipment shall 605.5 be prohibited in Group E occupancies. Hoods, grease-removal devices, fans, ducts and О. 606.3.3 other appurtenances shall be cleaned at intervals as required by Sections 606.3.3.1 through 606.3.3.3. Hoods, grease-removal devices, fans, ducts and Ρ. 606.3.3.1 other appurtenances shall be inspected at intervals Table specified in Table 606.3.3.1 or as approved by the fire 606.3.3.1 code official. Inspections shall be completed by qualified individuals. Clothing and personal effects shall not be stored in 807.5.2.1 Q. corridors and lobbies, unless (1) Corridors are protected by an approved NFPA 13 automatic sprinkler system, (2) Corridors are protected by an approved fire alarm system, or (3) Storage is in metal lockers, provided the minimum required egress width is maintained. R. Artwork and teaching materials shall be limited on the 807.5.2.2 walls of corridors to not more than 20% of the wall area. S. Artwork and teaching materials shall be limited on 807.5.2.3 walls of classrooms to not more than 50% of the specific wall area to which they are attached.

Outside Storage: Outside storage of combustible

L.

GROUP E OCCUPANCY

315.4

ELECTRICAL (E)

- A. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes.
- B. A working space of not less than 30" in width, 36" in depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment.
- C. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM".
- D. Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.
- Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NFPA 70 shall be prohibited.
- F. Relocatable power taps shall be listed in accordance **603.5.1** with UL 1363.
- G. Relocatable power taps shall be directly connected **603.5.2** to a permanently installed receptacle.
- H. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage.
- I. Extension cords shall not be a substitute for **603.6** permanent wiring.
- J. Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact.
- K. Extension cords shall be used only with portable **603.6** appliances.
- L. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. 603.6.1
- M. Except for approved multiplug extension cords, each 603.6.1

extension cord shall serve only one portable appliance.

- N. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord.
 603.6.2
- O. Extension cords shall be maintained in good **603.6.3** condition without splices, deterioration or damage.
- P. Extension cords shall be grounded when serving 603.6.4 grounded portable appliances.
- Q. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris.
 603.7
- R. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70.
- S. Temporary wiring attached to a structure shall be protected from physical damage and supported on insulators spaced not more than 10 feet apart.

MISCELLANEOUS (E)

Refer to the Permits section for required permits.

- A. An approved fire safety and evacuation plan shall be prepared and maintained for Group E occupancies and buildings. An approved fire safety and evacuation plan shall be prepared and maintained. The plan shall be reviewed or updated annually. Employees shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation.
 B. An approved fire safety and evacuation plan in 403.4
- B. An approved fire safety and evacuation plan in accordance with Section 404 shall be prepared and maintained for Group E occupancies and for buildings containing both a Group E occupancy and an atrium.

- C. The first emergency evacuation drill of each school **403.4.1** year shall be conducted within 10 days of the beginning of classes.
- D. Emergency evacuation drills shall be conducted at different hours of the day or evening, during the changing of classes, when the school is at assembly, during the recess or gymnastic periods, or during other times to avoid distinction between drills and actual fires.
- E. Outdoor assembly areas shall be designated and shall be located a safe distance from the building being evacuated so as to avoid interference with fire department operations. The assembly areas shall be arranged to keep each class separate to provide accountability of all individuals.
- F. Emergency evacuation drills shall be conducted in Group E occupancies monthly by all occupants. Must keep records.
 G. Fire apparatus access roads shall have an
- G. Fire apparatus access roads shall have an unobstructed width of not less than 20-feet, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13' 6".
- H. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles.
 I. New and existing buildings shall have approved 505.1
- New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.
- J. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access.
- K. The building shall have approved communication coverage for emergency responders within the building based upon the existing coverage level of
 510.2
 1103.2

the public safety communication systems of the jurisdiction at the exterior of the building.

- The building owner shall be responsible to maintain 907.8.4 L. alarm and emergency voice/alarm the fire communication systems in an operable condition at times. Service personnel shall meet all the gualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained.
- M. Existing buildings with occupied floors located more than 50-feet above the lowest level of fire department access or more than 50-feet below the highest level of fire department access shall be equipped with standpipes having occupied floors more than 50' above.
- N. Existing stairways shall be marked with stairway floor **1104.24** number signs in accordance with Section 1023.9.
- O. Existing high-rise buildings shall be provided with luminous egress path markings in accordance with Section 1025, except for open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program.
- P. Portable generators shall be listed for use in the condition and method that they are being used. Portable generators shall be used in accordance with manufacturer's instructions.
 1204.2
 1204.3
- Q. A listed portable fire extinguisher with a minimum rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator

HAZARDOUS MATERIALS (E)

Refer to the Permits section for required permits.

- A. An operational permit is required to store, handle, or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. See exceptions.
- B. Visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and aboveground

tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.

- C. Rooms or cabinets containing compressed gases 5003.5.1 shall be labeled: COMPRESSED GAS when in quantities requiring a permit.
- D. Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon. Separation to be accomplished by one of the four methods in this section.
- E. Shelf storage of flammable and combustible liquids **5704.3.3.5.3** shall be orderly.
- F. Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers.
- G. Toxic and highly toxic compressed gases shall not be stored or used within Group E occupancies, except for cylinders not exceeding 20 cu.ft. at normal temperature and pressure (NTP) are allowed within gas cabinets or fume hoods.
- H. Portable LP-gas containers shall not be stored or used in a basement, pit, above-grade underfloor space or similar location where heavier-than-air gas might collect.
 6103.2.1.1 6109.7
- I. Portable LP-gas containers are allowed to be used 6103.2.1.4 for research and experimentation. Such containers shall not be used in classrooms. Such containers shall not exceed a 50-pound water capacity in occupancies used for educational purposes and shall 12-pound water not exceed а capacity in occupancies used for institutional purposes. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20-feet.

| J. | Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20-feet | 6103.2.1.5 |
|----------|---|------------------|
| K. | Where approved, listed LP-gas commercial food service appliances are allowed to be used for food- preparation within restaurants and in attended commercial food catering operations in accordance with the International Fuel Gas Code, the International Mechanical Code and NEPA 58 | 6103.2.1.7 |
| L. | Idle LP-Gas cylinders shall be stored outside of buildings in accordance with Table 6109.12. | 6109.12 |
| FIRE | E AND SMOKE PROTECTION (E) | |
| A. | Damaged materials used to protect penetrations, joints, or voids shall be replaced or restored with materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered. | 703.2 704.2 |
| В. | Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. | 705.2 |
| C. D. | Fire door assemblies shall not be modified. Hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service, the door shall remain in the closed position | 705.2 705.2.3 |
| E. | Swinging fire doors shall close from the full open position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position | 705.2.4 |
| F. | Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained. | 705.2.6 |
| G. | Where required when the building was originally permitted and constructed, spray fire-resistant | 708.1 |
| GRC | OUP E OCCUPANCY | 87 |

materials and intumescent fire-resistant materials shall be visually inspected to verify that the materials do not exhibit exposure to the substrate.

- Natural cut trees shall be prohibited in Group E H. 806.1.1 occupancies unless protected by an approved automatic sprinkler system.
- Curtains, draperies, fabric hangings and other similar L. combustible decorative materials suspended from walls or ceilings shall comply with Section 807.4 and shall not exceed 10% of the specific wall or ceiling area to which they are attached.

Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered interior finish, shall comply with Section 803 and shall not be considered decorative materials or furnishings. See exceptions.

J. A manual fire alarm system is required to be installed 1103.7.1 in existing Group E occupancies in accordance with Section 907.2.3, except for buildings with a maximum area of 1.000 square feet that contains a single classroom that is located no closer than 50' from another building, or when the occupant load is less than 50 occupants.

807.2

Factory Industrial Group F occupancy includes, among others, the use of a building or structure, or a portion thereof, for assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair or processing operations that are not classified as a Group H hazards or Group S storage occupancy.

Group F-1 Moderate-hazard occupancy. Factory industrial uses which are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:

- Aircraft manufacturing
- Appliances
- Athletic equipment
- Automobiles and other motor vehicles
- Bakeries
- Beverages (>16% alcohol)
- Bicycles
- Boats
- Brooms or brushes
- Business machines
- Cameras and photo equipment
- Canvas or similar fabric
- Carpet and rugs (includes cleaning)
- Clothing
- Construction and agricultural machinery
- Disinfectants
- Dry cleaning and dyeing
- Electronics
- Engines (includes rebuilding)
- Electric generation plants
- Food processing and

commercial kitchens not associated with restaurants, cafeterias and similar dining facilities more than 2,500 sq. ft. in area.

- Furniture
- Hemp products
- Jute products
- Laundries
- Leather products
- Machinery
- Metals
- Millwork (sash and door)
- Motion picture and television filming (without spectators)
- Musical instruments
- · Optical goods
- · Paper mills or products
- Photographic film
- Plastic products
- Printing or publishing
- Refuse incineration
- Shoes
- Soaps and detergent
- Textiles

GROUP F OCCUPANCIES

- Tobacco
- Trailers
- Upholstering
- Group F-2 Low Hazard Occupancy. Factory industrial uses that involve the fabrication or manufacturing of noncombustible materials which during finishing, packing or processing do not involve a significant fire hazard, shall be classified as F-2 occupancies and shall include, but not be limited to, the following:
- Beverages; ≤16% alcohol content
- · Glass products

and assembly)

Metal products (fabrication

- Gypsum
- Ice

- Brick and masonry
- Ceramic products
- Foundries

EXITS (F) Α

It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. The path of egress travel along a means of egress Β. 1003.6 shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10. C. The minimum width or required capacity of a means 1003.6 of egress system shall not be diminished along the path of egress travel. Two exits or exit access doorways from any space D. 1006.2.1 shall be provided where the design occupant load or Table the common path of egress travel distance exceeds 1006 2 1 the value in Table 1006.2.1 or the occupant load is 50 or more. E. **Common Path of Egress Travel:** Table Occ Load \leq 30 without fire sprinklers – 75-feet. 1006.2.1 Occ Load > 30 without fire sprinklers - 75-feet. With fire sprinklers - 100-feet.

- Wood: distillation
- Woodworking (cabinet)

1001.2

| 1008.2 | The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied | F. |
|--------------------|---|----|
| 1008.2.3 | Illumination shall be provided along the path of travel for the exit discharge from each exit to the public way | G. |
| 1010.2.4 Item 3 | Main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided: 3.1. The locking device is readily distinguishable as locked: | H. |
| | 3.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1-inch high on a contrasting background; and 3.3. The use of the key-operated locking device is | |
| 1008.3 | revocable by the fire code official for due cause. The power supply for means of egress illumination shall normally be provided by the premises electrical supply | I. |
| 1008.3.1 | In the event of a power supply failure in rooms and spaces that require two or more exits or access to exits, an emergency electrical system shall automatically illuminate all the aisles, corridors and exit access stairways and ramps. | J. |
| 1008.3.2 | In the event of power supply failure, in buildings that require two or more exits or access to exits, an emergency electrical system shall automatically illuminate all of the interior exit access stairways and ramps, interior and exterior exit stairways and ramps, exit passageways, vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.2 and exterior landings as required by Section 1010.1.5 for exit doorways that lead directly to the exit discharge | K. |
| 1008.3.3 | In the event of a power supply failure, an emergency electrical system shall automatically illuminate all electrical equipment rooms, fire command centers, | L. |

fire pump rooms, generator rooms, public restrooms greater than 300 square feet in size. М The emergency power system shall provide power 1008.3.4 for a duration of not less than 90 minutes. Exit doorways shall not be less than 32 inches in N. 1010.1.1 clear width and 80 inches in height. Except as specifically permitted in Section 1010.2, О. 1010.2 egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. Main exterior door or doors are permitted to be Ρ. 1010.2.4 equipped with key-operated locking devices from the Item 3 egress side provided: 3.1. The locking device is readily distinguishable as locked: 3.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1-inch high on a contrasting background; and 3.3. The use of the key-operated locking device is revocable by the fire code official for due cause. Manually operated flush bolts or surface bolts on exit Q. 1010.2.5 doors are not permitted. See exceptions. Where panic or fire exit hardware is installed, it shall R. 1010.2.9.3 comply with the following: 1. Panic hardware shall be listed in accordance with UL 305; 2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3. The actuating portion of the releasing device shall extend at least 1/2 of the door leaf width; and 4. The maximum unlatching force shall not exceed 15 pounds. The electric locks on sensor-released doors located S. 1010.2.12 in a means of egress in buildings and entrance doors to tenant spaces in occupancies are permitted where installed and operated in accordance with all of the following criteria: (1) The sensor shall be installed on the egress side,

arranged to detect an occupant approaching the doors and shall cause the electric locking system to unlock. 92

(2) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

(3) Loss of power to the lock or locking system shall automatically unlock the electric locks.

(4) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches vertically above the floor and within 5 feet of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—independent of other electronics—and the electric lock shall remain unlocked for not less than 30 seconds.

(5) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

(6) Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(7) Emergency lighting shall be provided on the egress side of the door.

(8) The door locking system units shall be listed in accordance with UL 294.

T. Delayed egress locking system shall be installed and **1010.2.13.1** operated in accordance with all of the following:

(1) The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate, free egress.

(2) The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.

GROUP F OCCUPANCIES

(3) The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.

(4) An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by

manual means only. (Where approved, a delay of not more than 30 seconds is permitted on a

delayed egress door)

(5) The egress path from any point shall not pass through more than one delayed egress locking system.

(6) A sign shall be provided on the door and shall be located above and within 12 inches of the door exit hardware:

6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.3 The sign shall comply with the visual character requirements in ICC A117.1.

(7) Emergency lighting shall be provided on the egress side of the door.

(8) The delayed egress locking system units shall be listed in accordance with UL 294.

U. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100-feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

1013.1

| V. | Exit signs are required in rooms or areas which require two or more exits. Main exterior exit doors or gates that are obvious and clearly identifiable as exits need not have exit signs where approved by the fire code official. | 1013.1 Exception 1 & 2 |
|------|---|-------------------------------------|
| W. | Exit signs shall be internally or externally illuminated at all times. | 1013.3 |
| Х. | Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes. | 1016.2 Item 5 |
| Y. | Minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than the values in Table 1020.3. | 1018.3 1020.3 Table 1020.3 |
| Z. | Corridors are required to be at least 44 inches in width. Exceptions: access to and utilization of mechanical, plumbing or electrical systems equipment may be 24 inches wide. Corridors within a dwelling unit and corridors serving an occupant load of less than 50 may be 36 inches wide. | Table 1020.3 |
| AA. | The required capacity of corridors shall be determined as specified in Section 1005.1, but the minimum width shall be not less than that specified in Table 1020.3. | 1020.3 Table 1020.3 |
| AB. | Exits shall be continuous from the point of entry into the exit to the exit discharge. | 1022.1 |
| FIRE | PROTECTION SYSTEMS (F) | |
| A. | Battery-charging areas shall be provided with a fire extinguisher having a minimum 4-A:20-B:C rating within 20-feet of the battery charger. | 309.5 |
| В. | A 3-foot clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved | 507.5.5 |
| C. | Painted sprinklers or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint They must be replaced | 901.4 NFPA 13 |
| D. | Life safety systems shall be maintained in an operative condition at all times. | 901.6 |
| E. | Records of all system inspections, tests and | 901.6.3 |
maintenance required by the referenced standards shall be maintained.

- F. All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit. See exceptions.
- G. Required Type I commercial kitchen exhaust hood and duct systems shall be protected by an approved automatic fire-extinguishing system.
- H. A manual actuation device shall be located at or near a means of egress from the cooking area a minimum of 10' and a maximum of 20' from the kitchen exhaust system. The manual actuation device shall be installed not more than 48", nor less than 42" above the floor and shall clearly identify the hazard protected. The manual actuation shall require a maximum force of 40 pounds and a maximum movement of 14" to actuate the fire suppression system.
- The actuation of commercial cooking equipment fire suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.
- J. Automatic fire extinguishing systems for commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion.
- K. Commercial cooking equipment fusible links and automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions. Not required for components with frangible bulbs.
- L. See Table 906.1 for additional required portable fire **Table** extinguishers. **906.1**

| 906.1 Item 2 | Cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher provided within 30- feet travel distance of commercial-type cooking equipment | M. |
|------------------------------|--|----|
| 906.2 | Fire extinguishers shall be serviced annually and | N. |
| NFPA 10 Table 906.3(1) | shall have a current service tag attached. One 2A fire extinguisher per 6,000 sq. ft. in light hazard (offices) and one 2A per 3,000 sq. ft. in an ordinary hazard. | 0. |
| Table 906.3(1) | Maximum travel distance to a fire extinguisher is 75'. | Ρ. |
| 906.5 | Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. | Q. |
| 906.6 | Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers | R. |
| 906.7 | Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied | S. |
| 906.9.1 | Portable fire extinguishers having a gross weight not exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor. Extinguishers | Т. |
| 906.9.2 | having a gross weight exceeding 40 pounds shall be installed so that its top is not more than 3.5' above the floor. | |
| 907.8.4 | The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained. | U. |
| 3504.2.6 | A minimum of one portable fire extinguisher with a minimum of 2-A: 20-B:C rating is required to be within 30-feet of welding area. | V. |

HOUSEKEEPING (F)

- A. Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises.
 B. Outside Storage: Outside storage of combustible 315.4
- B. Outside Storage: Outside storage of combustible **315.4** materials shall not be located within 10-feet of a lot line.

Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist.

- C. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily.
- D. Combustible waste containers larger than 40 gallons 304.3.2 shall have lids and must be made of metal or approved combustible material.
- E. Dumpsters and containers with an individual capacity of 1.5 cubic yards or more shall not be stored in buildings or placed within 5-feet of combustible walls, openings or combustible roof eave lines. Exceptions: (1) Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. (2) Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10-feet from other buildings and used exclusively for dumpster or container storage.
- F. Storage of in buildings shall be orderly and stacks **315.3** shall be stable.
- G. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur.
 315.3
- H. Storage shall be maintained 2-feet or more below the ceiling in non-sprinklered areas of buildings. **315.3.1**

| 315.3.1 | Storage shall be maintained a minimum of 18" below sprinkler deflectors in sprinklered areas of buildings |
|---------------------------------|--|
| 315.3.2 | J. Combustible materials shall not be stored in exits or enclosures for stairways and ramps |
| 315.3.3 | Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers. |
| 315.3.4 | L. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire- resistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists. Exceptions: Areas protected by approved automatic sprinkler systems. |
| 318.1 | M. Laundry carts with an individual capacity of 1 cubic yard (200 gallons) or more used in laundries shall be constructed of noncombustible material or materials, having a peak rate of heat release not exceeding 300kW/m ² at a flux of 50kW/m ² when tested in accordance with the requirements in ASTM E 1354. This provision does not apply when the building is protected by a NFPA 13 compliant automatic sprinkler system and laundry carts in coin-operated laundries. |
| 509.2 | N. Approved access shall be provided and maintained for all fire protection system equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible. |
| 606.3.3 | O. Hoods, grease-removal devices, fans, ducts and other appurtenances shall be cleaned at intervals as required by Sections 606.3.3.1 through 606.3.3.3 |
| 606.3.3.1 Table 606.3.3.1 | P. Commercial kitchen hoods, grease-removal devices, fans, ducts and other appurtenances shall be inspected at intervals specified in Table 606.3.3.1 or |
| | |

be completed by qualified individuals. Lint and debris shall not be allowed to accumulate in 610.1.2 Q. lint traps, mechanical and heating, and exhaust duct systems of clothes dryers. **ELECTRICAL (F)** Open junction boxes and open wiring splices shall be Α. 603.2.2 prohibited. Approved covers shall be provided for all switch and outlet boxes. A working space of not less than 30" in width, 36" in Β. 603.4 depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment. Doors into electrical control panel rooms shall be C. 603.4.1 marked with a plainly visible and legible sign stating "ELECTRICAL ROOM". Disconnecting means for each service, feeder or D. 603.4.1 branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident. Multiplug adapters, such as cube adapters, unfused F 603.5 plug strips or any other device not complying with the NFPA 70 shall be prohibited. Relocatable power taps shall be listed in accordance F. 603.5.1 with UL 1363. Relocatable power taps shall be directly connected 603.5.2 G. to a permanently installed receptacle. Relocatable power taps shall not extend through H. 603.5.3 walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage. I. Extension cords shall not be a substitute for 603.6 permanent wiring.

as approved by the fire code official. Inspections shall

J. Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact.

- K. Extension cords shall be used only with portable **603.6** appliances.
- L. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. 603.6.1
- M. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance.
 603.6.1
- N. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord.
 603.6.2
- O. Extension cords shall be maintained in good **603.6.3** condition without splices, deterioration or damage.
- P. Extension cords shall be grounded when serving **603.6.4** grounded portable appliances.
- Q. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris.
- R. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70.
- S. Temporary wiring attached to a structure shall be protected from physical damage and supported on insulators spaced not more than 10 feet apart.
- T. Portable generators shall be listed for use in the condition and method that they are being used. Portable generators shall be used in accordance with manufacturer's instructions.
 1204.2
 1204.3
- U. A listed portable fire extinguisher with a minimum rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator

MISCELLANEOUS (F)

Refer to the Permits section for required permits.

- A. Powered industrial trucks and similar equipment including, but not limited to, floor scrubbers and floor buffers, shall be operated and maintained in accordance with Section 309.2 through 309.6.
 B. Battery chargers shall be of an approved type. 309.3
- B. Battery chargers shall be of an approved type. Combustible storage shall be kept a minimum of 3' from battery chargers. Battery charging shall not be conducted in areas accessible to the public.
- C. Ventilation shall be provided in an approved manner **309.4** in battery-charging areas to prevent a dangerous accumulation of flammable gases.
- Battery charging areas shall be provided with a fire extinguisher having a minimum 4-A:20-B:C rating within 20-feet of the battery charger.
- E. Powered industrial trucks using liquid fuel, LP-gas or hydrogen shall be refueled outside of buildings or in areas specifically approved for that purpose. Fixed fuel dispensing equipment and associated fueling operations shall be in accordance with Chapter 23. Other fuel dispensing equipment and operations, including cylinder exchange for LP-gas-fueled vehicles, shall be in accordance with Chapter 57 for flammable and combustible liquids or Chapter 61 for LP-gas.
 309.6
- F. Repairs to fuel systems, electrical systems and repairs utilizing open flame or welding shall be done in approved locations outside of buildings or in areas specifically approved for that purpose.
- G. An approved fire safety and evacuation plan shall be prepared and maintained for where the occupancy has an occupant load of 500 or more persons, has more than 100 persons above or below the lowest level of exit discharge, pallet manufacturing and recycling facilities as required by Section 2810 and for high-rise buildings. Employees shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation.
 403.6
 403.11.2
 404.3
 406.2

309.7

| H. | Emergency evacuation drills shall be conducted in Group F occupancies annually by all employees. Must keep records. | 405.2 Table 405.2 |
|---|--|-------------------------|
| I. | Fire apparatus access roads shall have an unobstructed width of not less than 20-feet and an unobstructed vertical clearance of not less than 13' 6". | 503.2.1 |
| J. | Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. | 503.4 |
| K. | New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. | 505.1 |
| L. | Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire- fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access. | 506.1 |
| M. | The building shall have approved communication coverage for emergency responders within the building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building. | 510.2 1103.2 |
| N. | The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained. | 907.8.4 |
| HAZARDOUS MATERIALS (F) Refer to the Permits section for required permits. | | |

A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. See exceptions.

105.5.22

- B. Visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and aboveground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.
- C. Rooms or cabinets containing compressed gases 5003.5.1 shall be labeled: COMPRESSED GAS when in quantities requiring a permit.
- D. Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon. Separation to be accomplished by one of the four methods in this section.
- E. Shelf storage of flammable and combustible liquids **5704.3.3.5.3** shall be orderly.
- F. Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers.
- G. Portable LP-gas containers shall not be stored or used in a basement, pit, above-grade underfloor space or similar location where heavier-than-air gas might collect.
 6103.2.1.1
 6109.7
- H. Idle LP-Gas cylinders shall be stored outside of **6109.12** buildings in accordance with Table 6109.12.

FIRE AND SMOKE PROTECTION (F)

| Α. | Damaged materials used to protect penetrations, | 703.2 |
|----|---|---------|
| | materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered. | 704.2 |
| В. | Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. | 705.2 |
| C. | Fire door assemblies shall not be modified. | 705.2 |
| D. | Swinging fire doors shall close from the full open position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position. | 705.2.4 |
| E. | Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained. | 705.2.6 |
| F. | Where required when the building was originally permitted and constructed, spray fire-resistant materials and intumescent fire-resistant materials shall be visually inspected to verify that the materials do not exhibit exposure to the substrate. | 708.1 |

High-Hazard Group H Occupancy High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard. Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5. Hazardous materials stored or used on top of roofs or canopies shall be classified as outdoor storage or use and shall comply with this code. See many exceptions.

High-hazard Group H-1 buildings and structures which contain materials that pose a detonation (explosion) hazard.

High-hazard Group H-2 buildings and structures which contain materials that pose a deflagration hazard or a hazard from accelerated burning.

High-hazard Group H-3 buildings and structures which contain materials that readily support combustion or pose a physical hazard.

High-hazard Group H-4 buildings and structures which contain materials that are health hazards.

High-hazard Group H-5 semiconductor fabrication facilities and comparable research and development areas in which hazardous production materials (HPM) are used and the aggregate quantity of materials is in excess of those listed in Tables 5003.1.1(1) and 5003.1.1(2).

EXITS (H)

A. The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10.

| В. | The minimum width or required capacity of a means of egress system shall not be diminished along the path of egress travel. | 1003.6 |
|----|---|-------------------------------|
| C. | Two exits or exit access doorways from any space when: | Table 1006.2.1 |
| | H-1, H-2, H-3 occupant capacity is 3 or more. H-4, H-5 occupant capacity is 10 or more. | |
| D. | Common Path of Egress Travel: H1, H2, H3 – 25-feet H4 and H5 – 75-feet | 1006.2.1 Table 1006.2.1 |
| E. | NFPA 13 automatic sprinkler system is required. The means of egress, including the exit discharge, shall be illuminated at all times the building space | 1008.2 |
| F. | served by the means of egress is occupied. Exit doorways shall not be less than 32 inches in clear width and 80 inches in height. | 1010.1.1 |
| G. | Doors shall swing in the direction of egress travel where serving the occupants of a Group H | 1010.1.2.1 |
| H. | Except as specifically permitted in Section 1010.2, egress doors shall be readily openable from the egress side without the use of a key or special | 1010.2 |
| I. | Swinging doors serving a Group H occupancy shall not be provided with a latch or lock unless it is panic bardware or fire exit bardware | 1010.2.9 |
| J. | Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100-feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign. | 1013.1 |
| K. | Exit signs are required in rooms or areas which require two or more exits. Main exterior exit doors or gates that are obviously and clearly identifiable as exits need not have exit signs where approved by the fire code official | 1013.1 Exception 1 & 2 |
| L. | Exit signs shall be internally or externally illuminated at all times. | 1013.3 |

Μ.

N.

1016.2

Item 2

1018.3

1020.3

| | shall not be less than the values in Table 1020.3. | Table 1020.3 |
|------|--|------------------|
| 0. | Maximum travel distance within the exit access portion of the building to an exit: H-1=75'; H-2=100'; H-3=150'; H-4=175'; H-5=200' | Table 1017.2 |
| Ρ. | NFPA 13 automatic sprinkler system is required. Exits shall be continuous from the point of entry into | 1022.1 |
| Q. | Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide a direct path of egress travel to grade. The exit discharge shall not reenter a building. | 1028.2 |
| FIRE | PROTECTION SYSTEMS (H) | |
| Α. | A 3-feet clear space shall be maintained around the circumference of fire hydrants. | 507.5.5 |
| В. | Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. | 901.4 NFPA 25 |
| C. | Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times | 901.6 |
| D. | Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained | 901.6.3 |
| E. | Initial records shall include the name of the installation contractor, type of components installed, manufacturer of the components, location and number of components installed per floor. Records shall also include the manufacturers' operation and maintenance instruction manuals. Such records shall be maintained for the life of the installation | 901.6.3.1 |
| F. | All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically | 903.4 |

Means of egress are not prohibited through adjoining

or intervening rooms or spaces in a Group H. Minimum clear aisle width shall be determined by

Section 1005.1 for the occupant load served, but

supervised by a listed fire alarm control unit. See exceptions.

- Cooking equipment involving solid fuels or vegetable G. 906.1 or animal oils and fats shall be protected by a Class Item 2 K rated portable fire extinguisher provided within 30feet travel distance of commercial-type cooking equipment. Table
- See Table 906.1 for portable fire extinguisher H. requirements base on building and equipment use.
- I. Fire extinguishers shall be serviced annually and shall have a current service tag attached.
- One 2A fire extinguisher per 6,000 sg. ft. in light J. hazard (offices) and one 2A per 3,000 sg. ft. in an 906.3(1) ordinary hazard. Maximum travel distance to a fire extinguisher is 75 feet
- K. Fire extinguishers shall be located in conspicuous 906.5 locations where they will be readily accessible and immediately available for use.
- Ι. Portable fire extinguishers shall not be obstructed or 906.6 obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers.
- M. Hand-held portable fire extinguishers, not housed in 906.7 cabinets, shall be installed on hangers or brackets supplied.
- N Portable fire extinguishers having a gross weight not 906.9.1 exceeding 40 pounds shall be installed so that its top 906.9.2 is not more than 5' above the floor. Extinguishers having a gross weight exceeding 40 pounds shall be installed so that its top is not more than 3.5' above the floor.
- The building owner shall be responsible for ensuring О. 907.8.4 that the fire and life safety systems are maintained in an operable condition at all times.
- Ρ. Emergency alarms for the detection and notification 908.1 of an emergency condition in Group H occupancies shall be provided as required in Chapter 50.
- Emergency alarms for notification of an emergency Q. 908.2 condition in an HPM facility shall be provided as

GROUP H OCCUPANCIES

906.1

906.2

Table

NFPA 10

required by Section 2703.12 in H-5 occupancies.

- R. A gas detection system complying with Section 916 shall be provided for HPM gases where the physiological warning threshold level of the gas is at a higher level than the accepted permissible exposure limit (PEL) for the gas and for flammable gases in accordance with Sections 2703.13.1 through 2703.13.2.2.
- S. Storage and use of highly toxic and toxic compressed **6004.1** gases shall comply with Section 6004.

HOUSEKEEPING (H)

- Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises.
- B. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily.
 304.3.1
- C. Combustible waste containers larger than 40 gallons **304.3.2** shall have lids and must be made of metal or approved combustible material.
- Dumpsters and containers with an individual capacity of 1.5 cubic yards or more shall not be stored in buildings or placed within 5-feet of combustible walls, openings or combustible roof eave lines.
 Exceptions: (1) Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. (2) Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10-feet from other buildings and used exclusively for dumpster or container storage.
- E. Liquid or gas fueled vehicles, aircraft, boats or other motorcraft, shall not be located indoors except as follows: 1. The engine starting system is made inoperable or batteries are disconnected except where the fire code official requires that the batteries

remain connected to maintain safety features. 2. Fuel in tanks does not exceed 1/4 tank or 5 gallons (whichever is least). 3. Fuel tanks and fill openings are closed and sealed to prevent tampering. 4. Vehicles, aircraft, boats or other motorcraft equipment are not fueled or defueled within the building.

- F. Storage of materials in buildings shall be orderly and **315.3** stacks shall be stable.
- G. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur.
 315.3
- H. Storage shall be maintained 2-feet or more below the ceiling in non-sprinklered areas of buildings. **315.3.1**
- I. Storage shall be maintained a minimum of 18" below **315.3.1** sprinkler deflectors in sprinklered areas of buildings.
- J. Combustible materials shall not be stored in exits or enclosures for stairways and ramps. 315.3.2
- K. Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers.
- Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fireresistance-rated construction.
 315.3.4

Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists.

Exceptions: Areas protected by approved automatic sprinkler systems.

 M. Outside Storage: Outside storage of combustible materials shall not be located within 10-feet of a lot line.
 315.4

Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist.

 N. Approved access shall be provided and maintained for all fire protection system equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible.

ELECTRICAL (H)

- A. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes.
- B. A working space of not less than 30" in width, 36" in depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment.
- C. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM".
- D. Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.
- E. Relocatable power taps shall be listed in accordance **603.5.1** with UL 1363.
- F. Relocatable power taps shall be directly connected **603.5.2** to a permanently installed receptacle.
- G. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage.
- H. Extension cords shall not be a substitute for **603.6** permanent wiring.
- Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact.

| J. | Extension cords shall be used only with portable appliances. | 603.6 |
|----|--|------------------|
| K. | Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. | 603.6.1 |
| L. | Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. | 603.6.1 |
| M. | The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. | 603.6.2 |
| N. | Extension cords shall be maintained in good | 603.6.3 |
| 0. | Extension cords shall be grounded when serving grounded portable appliances. | 603.6.4 |
| P. | Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NEPA 70 shall be prohibited | 603.5 |
| Q. | Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. | 603.7 |
| R. | Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70. | 603.8 |
| S. | Temporary wiring attached to a structure shall be protected from physical damage and supported on insulators spaced not more than 10 feet apart. | 603.8.1 |
| Т. | Portable generators shall be listed for use in the condition and method that they are being used. Portable generators shall be used in accordance with manufacturer's instructions. | 1204.2 1204.3 |
| U. | A listed portable fire extinguisher with a minimum rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator | 1204.10 |

MISCELLANEOUS (H)

Refer to the Permits section for required permits.

- An approved fire safety and evacuation plan shall be Α. 403.6 prepared and maintained for Group H occupancies. 404.3 The plan shall be reviewed or updated annually. 406.2 Employees shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation.
- Hazardous materials subject to Β. permits under 407.1 Section 5001.5 when located on the premises shall have the following:
- Safety Data Sheets (SDS) shall be provided for all C. 407.2 hazardous materials on the premises.
- Individual containers of hazardous materials, cartons D. 407.3 packages shall be marked or labeled in or accordance with applicable federal regulations. Buildings, rooms and spaces containing hazardous materials shall be identified by hazard warning signs.
- Persons responsible for the operation of areas in F which hazardous materials are stored, dispensed, handled or used shall be familiar with the chemical nature of the materials and the appropriate mitigating actions necessary in the event of a fire, leak or spill. Responsible persons shall be designated and trained to be liaison personnel for the fire department. These persons shall aid the fire department in preplanning emergency responses and identification of the locations where hazardous materials are located. and shall have access to MSDS and be knowledgeable in the site emergency response procedures.
- F. A Hazardous Materials Inventory Statement (HMIS) 407.5 shall be provided for each application for a permit shall when required by the fire code official. 407.6
- A Hazardous Materials Management Plan (HMMP) G. shall be provided for each application for a permit when required by the fire code official. Similar plans required by other regulations are also acceptable to satisfy this requirement.

114

407.4

L Fire apparatus access roads shall have 503.2.1 an unobstructed width of not less than 20-feet and an unobstructed vertical clearance of not less than 13' 6". Fire apparatus access roads shall not be obstructed 503.4 J. in any manner, including the parking of vehicles. K. New and existing buildings shall have approved 505.1 address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. L. Where access to or within a structure or an area is 506.1 restricted because of secured openings or where immediate access is necessary for life-saving or firefighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access. The building shall have approved communication M. 510.2 coverage for emergency responders within the 1103 2 building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building. The building owner shall be responsible to maintain 907.8.4 N. the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the gualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained. О. Existing buildings with occupied floors located more 1103.6.1 than 50-feet above the lowest level of fire department

access or more than 50-feet below the highest level

The permit holder or applicant shall submit a facility

closure plan to terminate storage, dispensing,

handling or use of hazardous materials.

of fire department access.

Η.

407.7

HAZARDOUS MATERIALS (H) Refer to the Permits section for required permits.

| 105.5.22 | An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. See exceptions | A. |
|------------|---|----|
| 5003.4 | Safety Data Sheets (MSDS) shall be readily available on the premises for hazardous materials regulated by Chapter 50. When a hazardous substance is developed in a laboratory, available information shall be documented. | B. |
| 5003.5 | Exception: Designated hazardous waste. Visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and aboveground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official | C. |
| 5003.5.1 | Individual containers, cartons or packages shall be conspicuously marked or labeled in an approved manner | D. |
| 5003.5.1 | Rooms or cabinets containing compressed gases shall be labeled: COMPRESSED GAS when in quantities requiring a permit | E. |
| 5003.6 | Signs and markings required by Sections 5003.5 and 5003.5.1 shall not be obscured or removed, shall be in English as a primary language or in symbols allowed by this code, shall be durable, and the size, color and lettering shall be approved | F. |
| 5003.7.2 | Open flames and high-temperature devices shall not be used in a manner which creates a hazardous condition and shall be listed for use with the hazardous materials stored or used | G. |
| 5003.9.1.1 | Responsible persons shall be designated and trained to be liaison personnel to the fire department. These persons shall aid the fire department in preplanning emergency responses and identifying the locations where hazardous materials are located and shall have access to Safety Data Sheets and be | H. |

knowledgeable in the site's emergency response procedures.

- Incompatible materials in storage and storage of L 5003.9.8 materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon. Separation to be accomplished by one of the four methods in this section.
- Shelf storage of flammable and combustible liquids 5704.3.3.5.3 J. shall be orderly.
- Quantities of flammable and combustible liquids in Κ. 5704.3.4.4 excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 callons are allowed to be stored outside of a cabinet when in approved containers.
- Portable LP-gas containers shall not be stored or L. 6103.2.1.1 used in a basement, pit, above-grade underfloor 6109.7 space or similar location where heavier-than-air gas might collect.
- Idle LP-Gas cylinders shall be stored outside of Μ. 6109.12 buildings in accordance with Table 6109.12.

FIRE AND SMOKE PROTECTION (H)

- Damaged materials used to protect penetrations, Α. 703.2 joints, or voids shall be replaced or restored with 704 2 materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered
- B. Fire doors and smoke barrier doors shall not be 705.2 blocked or obstructed or otherwise made inoperable. 705.2
- C. Fire door assemblies shall not be modified.
- Hold-open devices and automatic door closers, 705.2.3 D. where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position.
- Hold-open devices and automatic door closers, E. 705.2.3 where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position.

- F. Swinging fire doors shall close from the full open position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position.
- G. Smoke-activated doors shall be maintained to selfclose or automatically close upon detection of smoke. Existing fusible-link-type automatic doorclosing devlces are permitted if the fusible link rating does not exceed 135°F.
- H. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained.
- Where required when the building was originally permitted and constructed, spray fire-resistant materials and intumescent fire-resistant materials shall be visually inspected to verify that the materials do not exhibit exposure to the substrate.

Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which care or supervision is provided to persons who are or are not capable of self-preservation without physical assistance or in which persons are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

Institutional Group I-1: Institutional Group I-1 occupancy shall include buildings, structures or portions thereof for more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care. Buildings of Group I-1 shall be classified as one of the occupancy conditions indicated below. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Group homes
- Halfway houses
- Residential board and care facilities
- Residential board and custodial care facilities
- Social rehabilitation facilities

Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care who, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

Condition 2. This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.

Six to 16 persons receiving custodial care: A facility housing not fewer than six and not more than 16 persons receiving custodial care shall be classified as Group R-4.

Five or fewer persons receiving custodial care:

A facility with five or fewer persons receiving custodial care shall be

classified as Group R-3 or shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with NFPA 13D or IRC Section P2904.

Institutional Group I-2: This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

- Foster care facilities
- Detoxification facilities
- Hospitals
- Nursing homes
- Psychiatric hospitals

Buildings of Group I-2 shall be classified as one of the following occupancy conditions:

Condition 1. This occupancy condition shall include facilities that provide nursing and medical care but do not provide emergency care, surgery, obstetrics, or in-patient stabilization units for psychiatric or detoxification, including, but not limited to, nursing homes and foster care facilities.

Condition 2. This occupancy condition shall include facilities that provide nursing and medical care and could provide emergency care, surgery, obstetrics, or inpatient stabilization units for psychiatric or detoxification, including, but not limited to:

Hospitals.

Five or fewer persons receiving medical care: A facility with five or fewer persons receiving medical care shall be classified as Group R-3 or shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with NFPA 13D or IRC Section P2904.

Institutional Group I-3: This occupancy shall include buildings and structures which are inhabited by more than five persons who are under restraint or security. A Group I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

- Correctional centers
- Detention centers
- Jails
- Prerelease centers
- Prisons
- Reformatories

Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated below:

Condition 1: This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and other spaces where access or occupancy is permitted to the exterior via means of egress without restraint. A Condition 1 facility is permitted to be constructed as Group R.

Condition 2: This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. Egress to the exterior is impeded by locked exits.

Condition 3: This occupancy condition shall include buildings in which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual sleeping units and group activity spaces, where egress is impeded by remote-controlled release of means of egress from such smoke compartment to another smoke compartment.

Condition 4: This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Remote-controlled release is provided to permit movement from sleeping units, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

Condition 5: This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Staff-controlled manual release is provided to permit movement from sleeping units, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

Institutional Group I-4, Day Care Facilities: This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for less than 24 hours by persons other than parents or guardians, relatives by blood, marriage, or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

- Adult day care
- Child day care

Classification as Group E: A child day care facility that provides care for more than five but no more than 100 children 2 1/2 years or less of age, where the rooms in which the children are cared for are located on a level of exit discharge serving such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

Within a place of religious worship: Rooms and spaces within places of religious worship providing such care during religious functions shall be classified as part of the primary occupancy.

Five or fewer occupants receiving care: A facility having five or fewer persons receiving custodial care shall be classified as part of the primary occupancy.

Five or fewer occupants receiving care in a dwelling unit: A facility such as the above within a dwelling unit and having five or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the International Residential Code.

EXITS (I)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.
- B. The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10.

| C. | The minimum width or required capacity of a means of egress system shall not be diminished along the path of egress travel. | 1003.6 |
|----|--|-------------------------------|
| D. | Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the value in Table 1006.2.1 or the occupant load is 10 or more. | 1006.2.1 Table 1006.2.1 |
| E. | Common Path of Egress Travel: I-1, I-2, I-4: With fire sprinklers – 75-feet. (Not Permitted Without Fire Sprinklers) I-3: With fire sprinklers – 100-feet. (Not Permitted Without Fire Sprinklers) | Table 1006.2.1 |
| F. | The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. | 1008.2 |
| G. | Illumination shall be provided along the path of travel for the exit discharge from each exit to the public way. | 1008.2.3 |
| H. | Exit doorways shall not be less than 32 inches in clear width and 80 inches in height. The minimum width does not apply to interior egress doors in I-1 Occupancies. | 1010.1.1 |
| I. | Group I-2 occupancies used for the movement of beds shall provide a clear width not less than 41-1/2 inches. | 1010.1.1 |
| J. | Door openings to resident sleeping units in Group I- 3 occupancies shall have a clear width of not less than 28". | 1010.1.1 Exception 2 |
| K. | Doors shall swing in the direction of exit travel where serving an occupant load of 50 or more. | 1010.1.2.1 |
| L. | Locking Arrangements in Buildings Within Correctional Facilities: In buildings within correctional and detention facilities, doors in means of egress serving rooms or spaces occupied by persons whose movements are controlled for security reasons shall be permitted to be locked where equipped with egress control devices that shall unlock manually and by not less than one of | 1010.1.9.11 |

the following means: (1) Activation of an automatic sprinkler system installed in accordance with NFPA 13. (2) Activation of an approved manual fire alarm box. (3) A signal from a constantly attended location.

- M. Locks and Latches: Locks and latches shall be permitted to prevent operation of doors in places of detention or restraint.
- N. Where a pair of doors serves patient care rooms in Group I-2 occupancies, self-latching edge- or surface-mounted bolts are permitted on the inactive leaf provided that the inactive leaf is not needed to meet egress capacity requirements and the inactive leaf shall not contain doorknobs, panic bars or similar operating hardware.
- Controlled Egress Doors in Groups I-1 and I-2: О. locking systems, including Electric electromechanical locking systems and electromagnetic locking systems, shall be permitted to be locked in the means of egress in Group I-1 or I-2 occupancies where the clinical needs of persons receiving care require their containment. Controlled egress doors shall be permitted in such occupancies where the building is equipped throughout with an NFPA 13 automatic sprinkler system or an approved automatic smoke or heat detection system, provided that the doors are installed and operate in accordance with all of the following:

1. The door locks shall unlock upon actuation of the automatic sprinkler system or automatic fire detection system.

2. The door locks shall unlock upon loss of power controlling the lock or lock mechanism.

3. The door locking system shall be installed to have the capability of being unlocked by a switch located at the fire command center, a nursing station or other approved location. The switch shall directly break power to the lock.

4. A building occupant shall not be required to pass through more than one door equipped with a controlled egress locking system before entering an exit. 1010.1.9.3 Item 1

1010.1.9.5 Exception 5

1010.1.9.7

5. The procedures for unlocking the doors shall be described and approved as part of the emergency planning and preparedness required by Chapter 4.

6. All clinical staff shall have the keys, codes or other means necessary to operate the locking systems.

7. Emergency lighting shall be provided at the door.

8. The door locking system units shall be listed in accordance with UL 294.

Exceptions:

1. Items 1 through 4 shall not apply to doors to areas occupied by persons who, because of clinical needs, require restraint or containment as part of the function of a psychiatric treatment area.

2. Items 1 through 4 shall not apply to doors to areas where a listed egress control system is utilized to reduce the risk of child abduction from nursery and obstetric areas of a Group I-2 hospital.

- Except as specifically permitted in Section 1010.2, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.
- Q. In Group I-1, Condition 2 and Group I-2 occupancies where the clinical needs of persons receiving care require containment or where persons receiving care pose a security threat, doors can be locked if clinical staff can open doors at all times.
- R. Manually operated flush bolts or surface bolts on **1010.2.5** exit doors are not permitted. **See exceptions.**
- S. Where panic or fire exit hardware is installed, it shall comply with the following: 1. Panic hardware shall be listed in accordance with UL 305; 2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3. The actuating portion of the releasing device shall extend at least ½ of the door leaf width; and 4. The maximum unlatching force shall not exceed 15 pounds.
- T. Delayed egress locking system shall be installed **1010.2.13.1** and operated in accordance with all of the following:

(1) The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate, free egress.

(2) The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.

(3) The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.

(4) An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only. (Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door)

(5) The egress path from any point shall not pass through more than one delayed egress locking system.

(6) A sign shall be provided on the door and shall be located above and within 12 inches of the door exit hardware:

6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.3 The sign shall comply with the visual character requirements in ICC A117.1.

(7) Emergency lighting shall be provided on the egress side of the door.

(8) The delayed egress locking system units shall be listed in accordance with UL 294.

Sensor Release of Electrically Locked Egress Doors I-1, I-2, I-4: The electric locks on sensorreleased doors located in a means of egress in buildings and entrance doors to tenant spaces in occupancies are permitted where installed and operated in accordance with all of the following criteria:

(1) The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors and shall cause the electric locking system to unlock.

(2) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

(3) Loss of power to the lock or locking system shall automatically unlock the electric locks.

(4) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches vertically above the floor and within 5 feet of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—independent of other electronics— and the electric lock shall remain unlocked for not less than 30 seconds.

(5) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.
(6) Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(7) The door locking system units shall be listed in accordance with UL 294.

- U. Exits and exit access doors shall be marked by an 1013.1 approved exit sign readily visible from any direction of egress travel. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100-feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.
- Exit signs are required in rooms or areas which V. require two or more exits. Main exterior exit doors or gates that are obvious and clearly identifiable as exits need not have exit signs where approved by the fire code official. Exits are not required in davrooms, sleeping rooms or dormitories in Group I-3 Occupancies
- Exit signs shall be internally or externally illuminated W. 1013.3 at all times.
- Egress shall not pass through kitchens, storage Χ. rooms, closets or spaces used for similar purposes.
- Minimum clear aisle width shall be determined by Υ. Section 1005.1 for the occupant load served, but shall not be less than the values in Table 1020.3.
- Ζ. Corridors shall he fire-resistance rated in accordance with Table 1020.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 of the IBC for fire partitions and building is required to be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.
 - I-1 1 hour

I-2 – 0 hour - See IBC Sections 407.2 and 407.3.

I-3 – 1 hour - For reduction in fire-resistance rating, see Section 408.8 of the IBC.

- I-4 0 hour
- AA Group I-2: Fire-resistance rating for corridors in Group I-2 occupancies shall comply with IBC Sections 407.2 and 407.3.
- The minimum width or required capacity of corridors AB shall be unobstructed. Exception: Encroachments complying with Section 1005.7.

Table 1020.1, Footnote a 1020.3

1013.1 Exceptions

1, 2, & 4

1016.2.(5)

Item 5

1018.3

1020.3

Table 1020.3

1020.1

AC Corridors must be at least 96 inches wide in areas Table used for bed movement, 72 inches wide in corridors 1020.3 having an occupant load of 100 or more and in corridors serving stretcher traffic, 36 inches wide in dwelling units and in areas with an occupant load of less than 50, 24 inches wide in corridors providing access to and utilization of mechanical, plumbing, or electrical equipment, and 44 inches wide in all other locations. AD Exits shall be continuous from the point of entry into 1022.1 the exit to the exit discharge. Exits shall discharge directly to the exterior of the AE 1028.2 building. The exit discharge shall be at grade or shall provide a direct path of egress travel to grade. The exit discharge shall not reenter a buildina.

FIRE PROTECTION SYSTEMS (I)

- Α. A 3-feet clear space shall be maintained around the 507.5.5 circumference of fire hydrants except as otherwise required or approved. Painted sprinklers or cover plates are prohibited Β. 901.4 unless painted at the factory. They cannot be **NFPA 25** cleaned of paint. They must be replaced. Fire detection, alarm and extinguishing systems C. 901.6 shall be maintained in an operative condition at all times
- D. Records of all system inspections, tests and **901.6.3** maintenance required by the referenced standards shall be maintained.
- E. Initial records shall include the name of the installation contractor, type of components installed, manufacturer of the components, location and number of components installed per floor. Records shall also include the manufacturers' operation and maintenance instruction manuals. Such records shall be maintained for the life of the installation.
- F. An automatic sprinkler system shall be provided **903.2.6** throughout buildings with a Group I fire area.

- All valves controlling the water supply for automatic G. 903.4 sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow sprinkler systems shall switches on all be electrically supervised by a listed fire alarm control unit. See exceptions.
- Required Type I commercial kitchen exhaust hood Η. 904.2.2 and duct systems shall be protected by an approved automatic fire-extinguishing system.
- I. A manual actuation device shall be located at or 904.13.1 near a means of egress from the cooking area a minimum of 10' and a maximum of 20' from the kitchen exhaust system. The manual actuation device shall be installed not more than 48", nor less than 42" above the floor and shall clearly identify the hazard protected. The manual actuation shall require a maximum force of 40 pounds and a maximum movement of 14" to actuate the fire suppression system.
- J. The actuation of commercial cooking equipment fire 904 13 2 suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.
- K. 904 13 5 2 extinguishing Automatic fire systems for commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Inspection shall be by gualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion.
- Ι. Commercial cooking equipment fusible links and 904.13.5.3 automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions. Not reauired for components with francible bulbs.
- equipment involving solid fuels M. Cookina 906.1 or vegetable or animal oils and fats shall be protected Item 2 by a Class K rated portable fire extinguisher

provided within 30-feet travel distance of commercial-type cooking equipment.

- See Table 906.1 for portable fire extinguisher N Table requirements base on building and equipment use. 906.1 Fire extinguishers shall be serviced annually and О. 906.2 shall have a current service tag attached. **NFPA 10** One 2A fire extinguisher per 6,000 sq. ft. in light Ρ. Table hazard (offices) and one 2A per 3,000 sq. ft. in an 906.3(1) ordinary hazard. Maximum travel distance to a fire extinguisher is 75 feet. Q. Fire extinguishers shall be located in conspicuous 906.5 locations where they will be readily accessible and immediately available for use. Portable fire extinguishers shall not be obstructed R. 906.6 or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers. S. Hand-held portable fire extinguishers, not housed in 906.7 cabinets, shall be installed on hangers or brackets supplied. Τ. Portable fire extinguishers having a gross weight 906.9.1 not exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor. U. Extinguishers having a gross weight exceeding 40 906.9.2 pounds shall be installed so that its top is not more than 3.5' above the floor A manual fire alarm system that activates the V 907.2.6 occupant notification system shall be installed in Group I occupancies. See exceptions and special requirements Group I-1, I-2, and 1-3 for
- occupancies. W. Single- and multiple-station smoke alarms shall be **907.2.6** installed in accordance with Section 907.2.11.
- An automatic smoke detection system shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens of Group I-1 occupancies. The system shall be activated in accordance with Section 907.5.
 907.2.6.1 1103.7.2
Exceptions: 1. In Group I-1, Condition 1 occupancies, smoke detection in habitable spaces is not required where the facility is equipped throughout with an NFPA 13R automatic sprinkler system. 2. Smoke detection is not required for exterior balconies.

Y. Group I-2 – Condition 1: Automatic smoke detection shall be installed in corridors in Group I-2 Condition 1 facilities and spaces permitted to be open to the corridors by Section 407.2 of the IBC. The system shall be activated in accordance with Section 907.4. Group I-2 Condition 2 occupancies shall be equipped with an automatic smoke detection system as required in Section 407 of the IBC.

Exceptions:

1. Corridor smoke detection is not required in smoke compartments that contain sleeping units where such units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the corridor side of each sleeping unit and shall provide an audible and visual alarm at the care providers' station attending each unit.

2. Corridor smoke detection is not required in smoke compartments that contain sleeping units where sleeping unit doors are equipped with automatic door-closing devices with integral smoke detectors on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.

- Z. Group I-3: Group I-3 occupancies shall be equipped with a manual fire alarm system and automatic smoke detection system installed for alerting staff.
- AA. System Initiation: Actuation of an automatic fireextinguishing system, automatic sprinkler system, a manual fire alarm box or a fire detector shall initiate an approved fire alarm signal which automatically notifies staff.

907.2.6.2

907.2.6.3

- AB. **Manual Fire Alarm Boxes:** Manual fire alarm boxes are not required to be located in accordance with Section 907.4.2 where the fire alarm boxes are provided at staff-attended locations having direct supervision over areas where manual fire alarm boxes have been omitted. Manual fire alarm boxes are allowed to be locked in areas occupied by detainees, provided that staff members are present within the subject area and have keys readily available to operate the manual fire alarm boxes.
- AC. Automatic Smoke Detection System: An automatic smoke detection system shall be installed throughout resident housing areas, including sleeping units and contiguous day rooms, group activity spaces and other common spaces normally open to residents.

Exceptions:

1. Other approved smoke detection arrangements providing equivalent protection, including, but not limited to, placing detectors in exhaust ducts from cells or behind protective guards listed for the purpose, are allowed when necessary to prevent damage or tampering.

2. Sleeping units in Use Conditions 2 and 3 as described in Section 308 of the IBC.

3. Smoke detectors are not required in sleeping units with four or fewer occupants in smoke compartments that are equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.

- AD. The building owner shall be responsible to maintain and emergency voice/alarm the fire alarm communication systems in an operable condition at all times. Service personnel shall meet the requirements gualification of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained.
- AE. An automatic sprinkler system installed in 1103.5.2 accordance with NFPA 13 shall be provided 1105.9

907.2.6.3.2

907.2.6.3.3

907.8.4

throughout the floor containing the Group I-2 fire area. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, on all floors between the Group I-2 occupancy fire area and the level of exit discharge, the level of exit discharge, and all floors below the level of exit discharge. **Exception:** Floors classified as an open parking garage are not required to be sprinklered.

- AF. In addition to the requirements of Section 1103.5.2, existing buildings of Group I-2, Condition 2 occupancy shall be equipped throughout with an approved automatic sprinkler system in accordance with NFPA 13. The automatic sprinkler system shall be installed as established by the adopting ordinance.
 1103.5.3 1103.5.3 1105.9 1103.5.4 1105.9 1103.5.3 1105.9
- AG. Existing buildings with occupied floors located more than 50-feet above the lowest level of fire department access or more than 50-feet below the highest level of fire department access shall be equipped with standpipes.
- AH. Existing buildings with helistops or heliports more than 30 feet above the lowest level of fire department access shall be equipped with standpipes.
- Al. An automatic fire alarm system shall be installed in **1103.7.2** existing Group I-1 facilities in accordance with Section 907.2.6.1.

Exception: Where each sleeping room has a means of egress door opening directly to an exterior egress balcony that leads directly to the exits in accordance with Section 1021, and the building is not more than three stories in height.

- AJ. Group I-2: An automatic fire alarm system shall be installed in existing Group I-2 occupancies in accordance with Section 1105.10.
- AK. Group I-3: An automatic and manual fire alarm system shall be installed in existing Group I-3 occupancies in accordance with Section 907.2.6.3.

HOUSEKEEPING (I)

| A. | Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises | 304.1.2 |
|----|--|---------|
| В. | Storage of materials in buildings shall be orderly and stacks shall be stable | 315.3 |
| C. | Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. | 315.3 |
| D. | Storage shall be maintained 2-feet or more below the ceiling in non-sprinklered areas of buildings. | 315.3.1 |
| E. | Storage shall be maintained a minimum of 18" below sprinkler deflectors in sprinklered areas of buildings. | 315.3.1 |
| F. | Combustible materials shall not be stored in exits or enclosures for stairways and ramps. | 315.3.2 |
| G. | Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers. | 315.3.3 |
| H. | Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire- resistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists. Exceptions: Areas protected by approved automatic sprinkler systems. | 315.3.4 |
| I. | Outside Storage: Outside storage of combustible materials shall not be located within 10-feet of a lot line. | 315.4 |
| | Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist. | |
| J. | Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal | 304.3.1 |

GROUP I OCCUPANCIES

container. (Self-closing lids) Contents shall be removed and disposed of daily.

- K. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material.
- Ι. Dumpsters and containers with an individual capacity of 1.5 cubic vards or more shall not be stored in buildings or placed within 5' of combustible walls, openinas or combustible roof eave lines. Exceptions: 1. Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. 2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10-feet from other buildings and used exclusively for dumpster or container storage.
- Liquid or gas fueled vehicles, boats, aircraft or other Μ. motorcraft, shall not be located indoors except as follows: 1. The engine starting system is made inoperable or batteries are disconnected except where the fire code official requires that the batteries remain connected to maintain safety features. 2. Fuel in tanks does not exceed 1/4 tank or 5 gallons (whichever is least). 3. Fuel tanks and fill openings are closed and sealed to prevent tampering. 4. Vehicles, aircraft, boats other motorcraft or equipment are not fueled or defueled within the building.
- N. Laundry carts with an individual capacity of 1 cubic yard (200 gallons) or more used in laundries shall be constructed of noncombustible material or materials, having a peak rate of heat release not exceeding 300kW/m² at a flux of 50kW/m² when tested in accordance with the requirements in ASTM E 1354. This provision does not apply when the building is protected by a NFPA 13 compliant automatic sprinkler system and laundry carts in coin-operated laundries.
- O. Approved access shall be provided and maintained **509.2** for all fire protection system equipment to permit

304.3.3

304.3.2

314.4

318.1

immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible.

- P. Commercial kitchen hoods, grease-removal devices, fans, ducts and other appurtenances shall be inspected at intervals specified in Table 606.3.3.1 or as approved by the fire code official. Inspections shall be completed by qualified individuals.
 606.3.3.1
- Q. Commercial kitchen hoods, grease-removal devices, fans, ducts and other appurtenances shall be cleaned at intervals as required by Sections 606.3.3.1 through 606.3.3.3.

ELECTRICAL (I)

- A. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes.
- B. A working space of not less than 30" in width, 36" in depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment.
- C. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM".
- D. Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.
- Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NFPA 70 shall be prohibited.
- F. Relocatable power taps shall be listed in accordance **603.5.1** with UL 1363.
- G In Group I-2 Condition 1 and Condition 2 **603.5.1.1** occupancies and ambulatory care facilities,

GROUP I OCCUPANCIES

| H. Relocatable power taps shall be directly connected to a permanently installed receptacle. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage. J. Extension cords shall not be a substitute for permanent wiring. K. Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. L. Extension cords shall be used only with portable appliances. M. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. N. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. O. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. P. Extension cords shall be maintained in good condition without splices, deterioration or damage. Q. Extension cords shall be maintained in good condition without splices. R. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | | care-related electrical equipment in the patient care vicinity, as defined by NFPA 99, shall be listed in accordance with UL 1363A or UL 60601-1 | |
|---|---------|---|----|
| Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage. Extension cords shall not be a substitute for permanent wiring. Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. Extension cords shall be maintained in good condition without splices, deterioration or damage. Extension cords shall be maintained free from excessive accumulations of oil, dirt, waste and debris. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.5.2 | Relocatable power taps shall be directly connected to a permanently installed receptacle. | H. |
| J. Extension cords shall not be a substitute for permanent wiring. K. Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. L. Extension cords shall be used only with portable appliances. M. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. N. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. O. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. P. Extension cords shall be maintained in good condition without splices, deterioration or damage. Q. Extension cords shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.5.3 | Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage. | I. |
| K. Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. L. Extension cords shall be used only with portable appliances. M. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. N. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. O. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. P. Extension cords shall be maintained in good condition without splices, deterioration or damage. Q. Extension cords shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.6 | Extension cords shall not be a substitute for permanent wiring. | J. |
| L. Extension cords shall be used only with portable appliances. M. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. N. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. O. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. P. Extension cords shall be maintained in good condition without splices, deterioration or damage. Q. Extension cords shall be grounded when serving grounded portable appliances. R. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.6 | Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. | K. |
| M. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. N. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. O. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. P. Extension cords shall be maintained in good condition without splices, deterioration or damage. Q. Extension cords shall be grounded when serving grounded portable appliances. R. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.6 | Extension cords shall be used only with portable appliances. | L. |
| N. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. O. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. P. Extension cords shall be maintained in good condition without splices, deterioration or damage. Q. Extension cords shall be grounded when serving grounded portable appliances. R. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.6.1 | Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. | M. |
| O. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. P. Extension cords shall be maintained in good condition without splices, deterioration or damage. Q. Extension cords shall be grounded when serving grounded portable appliances. R. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.6.1 | Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. | N. |
| P. Extension cords shall be maintained in good condition without splices, deterioration or damage. Q. Extension cords shall be grounded when serving grounded portable appliances. R. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.6.2 | The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. | 0. |
| Q. Extension cords shall be grounded when serving grounded portable appliances. R. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.6.3 | Extension cords shall be maintained in good condition without splices, deterioration or damage. | P. |
| R. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.6.4 | Extension cords shall be grounded when serving grounded portable appliances. | Q. |
| S. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | 603.7 | Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. | R. |
| | 603.8 | Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of | S. |

buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70.

- T. Temporary wiring attached to a structure shall be protected from physical damage and supported on insulators spaced not more than 10 feet apart.
- U. Portable generators shall be listed for use in the condition and method that they are being used.
 Portable generators shall be used in accordance with manufacturer's instructions.
- V. A listed portable fire extinguisher with a minimum rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator

MISCELLANEOUS (I)

Refer to the Permits section for required permits.

- A. An approved fire safety and evacuation plan shall be prepared and maintained for Group I Occupancies, and for high-rise buildings. An approved fire safety and evacuation plan shall be prepared and maintained. The plan shall be reviewed with staff. Staff shall receive training in the contents of fire safety and evacuation plans and their duties as part of new staff orientation.
 403.7.1
 403.7.2
 403.7.2
 403.7.2
 403.7.1
- B. Emergency evacuation drills shall be conducted in Group I occupancies quarterly by all employees. Must keep records.
 C. Fire apparatus access roads shall have an
- C. Fire apparatus access roads shall have an unobstructed width of not less than 20-feet and an unobstructed vertical clearance of not less than 13' 6".
- D. Fire apparatus access roads shall not be obstructed **503.4** in any manner, including the parking of vehicles.
- E. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.
- F. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-

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fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access.

- G. The building shall have approved communication coverage for emergency responders within the building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building.
 510.2
 1103.2
- H. Natural cut trees shall be prohibited in Group I-1, I-2, 806.1.1
 I-3, and I-4 occupancies. No Exception for Automatic Sprinklers.
- The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained.
- J. Existing buildings with occupied floors located more than 50-feet above the lowest level of fire department access or more than 50-feet below the highest level of fire department access shall be equipped with standpipes.
- K. Existing stairways shall be marked in accordance **1104.24** with Section 1023.9.
- L. Existing high-rise buildings shall be provided with luminous egress path markings in accordance with Section 1025, except for open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program.

HAZARDOUS MATERIALS (I)

Refer to the Permits section for required permits.

A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. See exceptions.

Safety Data Sheets (SDS) shall be readily available Β. 5003.4 on the premises for hazardous materials regulated by this chapter. When a hazardous substance is developed in a laboratory, available information shall be documented. Exception: Designated hazardous waste. Visible hazard identification signs as specified in C. 5003.5 NFPA 704 for the specific material contained shall be placed on stationary containers and aboveground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official. D. Rooms or cabinets containing compressed gases 5003.5.1 shall be labeled: COMPRESSED GAS when in quantities requiring a permit. Signs and markings required by Sections 5003.5 and E. 5003.6 5003.5.1 shall not be obscured or removed, shall be in English as a primary language or in symbols allowed by this code, shall be durable, and the size. color and lettering shall be approved. F Incompatible materials in storage and storage of 5003.9.8 materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon. Separation to be accomplished by one of the four methods in this section. Shelf storage of flammable and combustible liquids 5704.3.3.5.3 G. shall be orderly. Quantities of flammable and combustible liquids in 5704.3.4.4 H. excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers. Except for cylinders of non-liquefied compressed L 5803.1.1 flammable gases not exceeding a capacity of 250 cubic feet or liquefied gases not exceeding a capacity

GROUP I OCCUPANCIES

of 40 pounds each at normal temperature and pressure (NTP) used for maintenance purposes, patient care or operation of equipment, shall not be stored or used in offices in Group B occupancies.

- J. Medical gas system supply cylinders shall be located in medical gas storage rooms or gas cabinets as set forth in Section 5306.
- K. Portable LP-gas containers shall not be stored or used in a basement, pit, above-grade underfloor space or similar location where heavier-than-air gas might collect.
 6103.2.1.1
 6109.7
- L. Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20-feet.
- M. Use for Food Preparation: Where approved, listed LP-gas commercial food service appliances are allowed to be used for food-preparation within restaurants and in attended commercial food catering operations in accordance with the International Fuel Gas Code, the International Mechanical Code and NFPA 58.
- N. Toxic and highly toxic compressed gases shall not be stored or used within Group I occupancies, except for cylinders not exceeding 20 cubic feet at normal temperature and pressure (NTP) are allowed within gas cabinets or fume hoods.
- O. Idle LP-Gas cylinders shall be stored outside of **6109.12** buildings in accordance with Table 6109.12.
- P. The storage and use of liquid oxygen (LOX) in I-1, I-4, and home health care occupancies shall comply with Sections 6306.2 through 6306.6, or shall be stored and used accordance with Chapter 50. Home health care shall meet the IFC quantity limits, container construction and location, and hazard identification requirements.

FIRE AND SMOKE PROTECTION (I)

| A. | Damaged materials used to protect penetrations, joints, or voids shall be replaced or restored with materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered. | 703.2 704.2 |
|----|---|----------------|
| В. | Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. | 705.2 |
| C. | Fire door assemblies shall not be modified. | 705.2 |
| D. | Hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position. | 705.2.3 |
| E. | Swinging fire doors shall close from the full open position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position. | 705.2.4 |
| F. | Smoke-activated doors shall be maintained to self- close or automatically close upon detection of smoke. Existing fusible-link-type automatic door-closing devlces are permitted if the fusible link rating does not exceed 135°F. | 705.2.5 |
| G. | Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained. | 705.2.6 |
| H. | Where required when the building was originally permitted and constructed, spray fire-resistant materials and intumescent fire-resistant materials shall be visually inspected to verify that the materials do not exhibit exposure to the substrate. | 708.1 |

GROUP M OCCUPANCY

Mercantile Group M. Mercantile Group M occupancy includes, among others, the use of a building or structure or a portion thereof, for the display and sale of merchandise, and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to, the following:

- Department stores
- Drug stores
- Markets
- Motor fuel-dispensing facilities
- Retail or wholesale stores
- Sales rooms

EXITS (M)

- Fixtures and displays of goods for sale to the public shall be arranged so as to maintain free, immediate and unobstructed access to exits as required by Chapter 10.
 314.2
- B. The display of highly combustible goods, including but not limited to fireworks, flammable or combustible liquids, liquefied flammable gases, oxidizing materials, pyroxylin plastics and agricultural goods, in main exit access aisles, corridors, covered and open malls, or within 5-feet of entrances to exits and exterior exit doors is prohibited when a fire involving such goods would rapidly prevent or obstruct egress.
- C. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.
- D. The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10.

| E. | The minimum width or required capacity of a means of egress system shall not be diminished | 1003.6 |
|-----|--|----------|
| F | Two exits or exit access doorways from any space | 1006 2 1 |
| •• | shall be provided where the design occupant load | Table |
| | or the common path of egress travel distance of | 1006.2.1 |
| | exceeds the value in Table 1006.2.1 or the | |
| ~ | occupant load is 50 or more. | |
| G. | Common Path of Egress Travel: | Table |
| | Occ Load \leq 30 without fire sprinklers – 75-feet. | 1006.2.1 |
| | Occ Load > 30 without fire sprinklers – 75-feet. | |
| | With fire sprinklers – 75-reet. | 4000.0 |
| н. | I ne means of egress, including the exit discharge, | 1008.2 |
| | shall be illuminated at all times the building space | |
| | Served by the means of egress is occupied. | 1000 2 2 |
| 1. | travel for the exit discharge from each exit to the | 1000.2.3 |
| | public way. | |
| J. | The power supply for means of egress illumination | 1008.3 |
| | shall normally be provided by the premises | |
| ĸ | electrical supply. | 4000 2 4 |
| n. | In the event of a power supply failure in rooms and | 1000.3.1 |
| | spaces that require two of more exits of access to | |
| | automatically illuminate all the aisles corridors and | |
| | evit access stairways and ramps | |
| ı I | In the event of nower supply failure in buildings | 1008 3 2 |
| L. | that require two or more exits or access to exits an | 1000.0.2 |
| | emergency electrical system shall automatically | |
| | illuminate all of the interior exit access stairways | |
| | and ramps, interior and exterior exit stairways and | |
| | ramps, exit passageways, vestibules and areas on | |
| | the level of discharge used for exit discharge in | |
| | accordance with Section 1028.2 and exterior | |
| | landings as required by Section 1010.1.5 for exit | |
| | doorways that lead directly to the exit discharge. | |
| M. | In the event of a power supply failure, an | 1008.3.3 |
| | emergency electrical system shall automatically | |
| | illuminate all electrical equipment rooms, fire | |
| | command centers, fire pump rooms, generator | |

GROUP M OCCUPANCY

rooms, public restrooms greater than 300 square feet in size. N. The emergency power system shall provide power 1008.3.4 for a duration of not less than 90 minutes. О. Exit doorways shall not be less than 32 inches in 1010.1.1 clear width and 80 inches in height. Doors shall swing in the direction of exit travel Ρ. 1010.1.2.1 where serving an occupant load of 50 or more. Except as specifically permitted in Section 1010.2, Q. 1010.2 egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. Main exterior door or doors are permitted to be R. 1010.2.4 equipped with key-operated locking devices from Item 3 the earess side provided: 3.1. The locking device is readily distinguishable as locked: 3.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1-inch high on a contrasting background; and 3.3. The use of the key-operated locking device is revocable by the fire code official for due cause. S. Manually operated flush bolts or surface bolts on 1010.2.5 exit doors are not permitted. See exceptions. Т. Where panic or fire exit hardware is installed, it 1010.2.9.3 shall comply with the following: 1. Panic hardware shall be listed in accordance with UL 305: 2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3. The actuating portion of the releasing device shall extend at least 1/2 of the door leaf width: and 4. The maximum unlatching force shall not exceed 15 pounds. U. Delayed egress locking system shall be installed 1010.2.13.1 and operated in accordance with all of the following: (1) The delay electronics of the delayed egress

(1) The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate, free egress. (2) The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.

(3) The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.

(4) An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only. (Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door)

(5) The egress path from any point shall not pass through more than one delayed egress locking system.

(6) A sign shall be provided on the door and shall be located above and within 12 inches of the door exit hardware:

6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.3 The sign shall comply with the visual character requirements in ICC A117.1.

(7) Emergency lighting shall be provided on the egress side of the door.

(8) The delayed egress locking system units shall be listed in accordance with UL 294.

V. Horizontal sliding or vertical security grilles are

GROUP M OCCUPANCY

1010.3.4

permitted at the main exit and shall be openable from the inside without the use of a key or special knowledge or effort during periods that the space is occupied. The grilles shall remain secured in the full-open position during the period of occupancy by the general public. Where two or more exits or access to exits are required, not more than one-half of the exits or exit access doorways shall be equipped with horizontal sliding or vertical security arilles.

- W. Exits and exit access doors shall be marked by an 1013.1 approved exit sign readily visible from any direction of egress travel. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100-feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.
- Exit signs are required in rooms or areas which Χ. 1013.1 require two or more exits. Main exterior exit doors Exceptions or gates that are obviously and clearly identifiable as exits need not have exit signs where approved by the fire code official.
- Υ. Exit signs shall internally or externally 1013.3 be illuminated at all times.
- Egress shall not pass through kitchens, storage Z. 1016.2 rooms, closets or spaces used for similar purposes. Item 5
- AA. Minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall be not less than that required for corridors by Section 1020.3.

Exception: Nonpublic aisles serving less than 50 people and not required to be accessible by IBC Chapter 11 need not exceed 28-inches in width.

An aisle accessway shall be provided on at least AB. one side of each element within the merchandise pad. The minimum clear width for an aisle accessway not required to be accessible shall be 30". The required clear width of the aisle accessway shall be measured perpendicular to the elements and merchandise within the merchandise 148

1018.4

1018.3

1&2

pad. The 30" minimum clear width shall be maintained to provide a path to an adjacent aisle or aisle accessway. The common path of egress travel shall not exceed 30' from any point in the merchandise pad. **Exception:** For areas serving not more than 50 occupants, the common path of egress travel shall not exceed 75 feet.

- AC. Corridors are required to be at least 44 inches in width. Exceptions: access to and utilization of mechanical, plumbing or electrical systems equipment may be 24 inches wide. Corridors serving an occupant load of less than 50 may be 36 inches wide.
- AD. The minimum width or required capacity of corridors shall be unobstructed. Exception: Encroachments complying with Section 1005.7
- AE. Exits shall be continuous from the point of entry into **1022.1** the exit to the exit discharge.
- AF. Exit discharge shall provide a direct and **1028.5** unobstructed access to a public way.

FIRE PROTECTION SYSTEMS (M)

| A 3' clear space shall be maintained around the circumference of fire hydrants except as otherwise |
|---|
| required or approved. |
| Painted sprinkler heads or cover plates are |
| prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced |
| Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. |
| Fire extinguishers shall be serviced annually and shall have a current service tag attached. |
| Perords of all system inspections tests and |
| |

- E. Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained.
- F. Initial records shall include the name of the **901.6.3.1** installation contractor, type of components installed, manufacturer of the components, location and

GROUP M OCCUPANCY

number of components installed per floor. Records shall also include the manufacturers' operation and maintenance instruction manuals. Such records shall be maintained for the life of the installation.

- G. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where a Group M fire area exceeds 12,000 square feet, a Group M fire area is located more than three stories above grade plane, or the combined area of all Group M fire areas on all floors, including mezzanines, exceeds 24,000 square feet.
- H. An automatic sprinkler system shall be provided as required in Chapter 32 in all buildings of Group M where storage of merchandise is in high-piled or rack storage arrays.
- An automatic sprinkler system shall be provided throughout a Group M fire area where the area used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet.
- J. All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit. See exceptions.
- K. Required Type I commercial kitchen exhaust hood and duct systems shall be protected by an approved automatic fire-extinguishing system.
- A manual actuation device shall be located at or near a means of egress from the cooking area a minimum of 10' and a maximum of 20' from the kitchen exhaust system. The manual actuation device shall be installed not more than 48", nor less than 42" above the floor and shall clearly identify the hazard protected. The manual actuation shall require a maximum force of 40 pounds and a maximum movement of 14" to actuate the fire suppression system.
- M. The actuation of commercial cooking equipment fire **904.13.2** suppression systems shall automatically shut down

903.2.7

the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.

- N. Automatic fire extinguishing systems for commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion.
- O. Commercial cooking equipment fusible links and **904.13.5.3** automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions. Not required for components with frangible bulbs.
- P. One 2A fire extinguisher per 6,000 sq. ft. in light hazard (offices) and one 2A per 3,000 sq. ft. in an ordinary hazard. Maximum travel distance to a fire extinguisher is 75 feet
- Q. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use.
 906.5
- Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers.
- S. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied.
 906.7
- T. Portable fire extinguishers having a gross weight not exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor.
 906.9.1
- U. Extinguishers having a gross weight exceeding 40 pounds shall be installed so that its top is not more than 3.5' above the floor.
- V. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group M occupancies where the combined Group M occupant

GROUP M OCCUPANCY

load of all floors is 500 or more persons or the Group M occupant load is more than 100 persons above or below the lowest level of exit discharge. **Exceptions:** (1) A manual fire alarm system is not required in covered or open mall buildings complying with Section 402 of the IBC.

(2) Manual fire alarm boxes are not required where the building is equipped throughout with an NFPA 13 automatic sprinkler system and the occupant notification appliances will automatically activate throughout the notification zones upon sprinkler water flow.

- W. During times that the building is occupied, the initiation of a signal from a manual fire alarm box or from a water flow switch shall not be required to activate the alarm notification appliances when an alarm signal is activated at a constantly attended location from which evacuation instructions shall be initiated over an emergency voice/alarm communication system installed in accordance with Section 907.5.2.2.
- X. The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times.
 907.8.4

HOUSEKEEPING (M)

- Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises.
 304.1.2
- B. Storage of materials in buildings shall be orderly and stacks shall be stable.
 315.3
- C. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. 315.3
- D. Storage shall be maintained 2-feet or more below the ceiling in non-sprinklered areas of buildings. **315.3.1**
- E. Storage shall be maintained a minimum of 18" below 315.3.1

sprinkler deflectors in sprinklered areas of buildings. F. Combustible materials shall not be stored in exits or 315.3.2 enclosures for stairways and ramps. G. Combustible material shall not be stored in boiler 315.3.3 mechanical rooms, electrical equipment rooms. rooms or in fire command centers. Η. Attic, under-floor and concealed spaces used for 315.3.4 storage of combustible materials shall be protected on the storage side as required for 1-hour fireresistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists. Exceptions: Areas protected by approved automatic sprinkler systems. Outside Storage: Outside storage of combustible I. 315.4 materials shall not be located within 10-feet of a lot line Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist. Materials susceptible to spontaneous ignition, such 304 3 1 J. as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily. Combustible waste containers larger than 40 gallons K. 304.3.2 shall have lids and must be made of metal or approved combustible material. Dumpsters and containers with an individual capacity L. 304.3.3 of 1.5 cubic yards or more shall not be stored in buildings or placed within 5' of combustible walls. combustible openinas or roof eave lines. Exceptions: (1) Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. (2) Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction. located not less than 10' from other

GROUP M OCCUPANCY

buildings and used exclusively for dumpster or container storage.

- M. Liquid or gas fueled vehicles, boats, aircraft or other motorcraft, shall not be located indoors except as follows: 1. The engine starting system is made inoperable or batteries are disconnected except where the fire code official requires that the batteries remain connected to maintain safety features. 2. Fuel in tanks does not to exceed 1/4 tank or 5 gallons (whichever is least). 3. Fuel tanks and fill openings are closed and sealed to prevent tampering. 4. aircraft. boats Vehicles. or other motorcraft equipment are not fueled or defueled within the building.
- Laundry carts with an individual capacity of 1 cubic N. vard or more used in laundries shall be constructed of noncombustible material or materials, having a peak rate of heat release not exceeding 300kW/m² at a flux of 50kW/m² when tested in accordance with the requirements in ASTM E 1354. This provision does not apply when the building is protected by a NFPA 13 compliant automatic sprinkler system and laundry carts in coin-operated laundries.
- О. Approved access shall be provided and maintained for all fire protection system equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible.
- Commercial kitchen hoods, grease-removal devices, Ρ. 606.3.3 fans, ducts and other appurtenances shall be cleaned at intervals as required by Sections 606.3.3.1 through 606.3.3.3.
- Commercial kitchen hoods, grease-removal devices, Q. 606.3.3.1 fans, ducts and other appurtenances shall be Table inspected at intervals specified in Table 606.3.3.1 or 606.3.3.1 as approved by the fire code official. Inspections shall be completed by qualified individuals.

318.1

509.2

ELECTRICAL (M)

| 603.2.2 | Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. | Α. |
|---------|--|----|
| 603.4 | A working space of not less than 30" in width, 36" in depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment. | В. |
| 603.4.1 | Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM". | C. |
| 603.4.1 | Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident. | D. |
| 603.5 | Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NFPA 70 shall be prohibited. | E. |
| 603.5.1 | Relocatable power taps shall be listed in accordance with UL 1363. | F. |
| 603.5.2 | Relocatable power taps shall be directly connected to a permanently installed receptacle. | G |
| 603.5.3 | Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage. | H. |
| 603.6 | Extension cords shall not be a substitute for permanent wiring. | I. |
| 603.6 | Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. | J. |
| 603.6 | Extension cords shall be used only with portable appliances. | K. |
| 603.6.1 | Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. | L. |
| 603.6.1 | Except for approved multiplug extension cords, each | Μ |

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extension cord shall serve only one portable appliance.

- N. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord.
 603.6.2
- O. Extension cords shall be maintained in good **603.6.3** condition without splices, deterioration or damage.
- P. Extension cords shall be grounded when serving **603.6.4** grounded portable appliances.
- Q. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris.
 603.7
- Temporary wiring for electrical power and lighting R. 603.8 installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting allowed installations is durina periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70.
- S. Temporary wiring attached to a structure shall be protected from physical damage and supported on insulators spaced not more than 10 feet apart.
- T. Portable generators shall be listed for use in the condition and method that they are being used. Portable generators shall be used in accordance with manufacturer's instructions.
 1204.2
 1204.3
- U. A listed portable fire extinguisher with a minimum rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator

MISCELLANEOUS (M)

Refer to the Permits section for required permits.

- A. Powered industrial trucks and similar equipment including, but not limited to, floor scrubbers and floor buffers, shall be operated and maintained in accordance with Section 309.2 through 309.6.
- B. Battery chargers shall be of an approved type. 309.3

Combustible storage shall be kept a minimum of 3' from battery chargers. Battery charging shall not be conducted in areas accessible to the public.

- C. Ventilation shall be provided in an approved manner in battery-charging areas to prevent a dangerous accumulation of flammable gases. **309.4**
- Battery charging areas shall be provided with a fire extinguisher having a minimum 4-A:20-B:C rating within 20-feet of the battery charger.
 309.5
- E. Powered industrial trucks using liquid fuel, LP-gas or hydrogen shall be refueled outside of buildings or in areas specifically approved for that purpose. Fixed fuel dispensing equipment and associated fueling operations shall be in accordance with Chapter 23. Other fuel dispensing equipment and operations, including cylinder exchange for LP-gas-fueled vehicles, shall be in accordance with Chapter 57 for flammable and combustible liquids or Chapter 61 for LP-gas.
 309.6
- F. Repairs to fuel systems, electrical systems and repairs utilizing open flame or welding shall be done in approved locations outside of buildings or in areas specifically approved for that purpose.
- An approved fire safety and evacuation plan shall be G. 403.9 prepared and maintained for Group M buildings 403.11.2 having an occupant load of 500 or more persons or 404 more than 100 persons above or below the lowest 405 level of exit discharge, and for high-rise buildings. An 406 approved fire safety and evacuation plan shall be prepared and maintained. The plan shall be reviewed updated annually. Employees shall receive or training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation.
- H. Fire apparatus access roads shall have an unobstructed width of not less than 20-feet and an unobstructed vertical clearance of not less than 13' 6".
- I. Fire apparatus access roads shall not be obstructed **503.4** in any manner, including the parking of vehicles.

GROUP M OCCUPANCY

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- J. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.
- K. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or firefighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access.
- L. The building shall have approved communication coverage for emergency responders within the building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building.
 510.2
 1103.2
- M. The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained.
- N. Existing buildings with occupied floors located more than 50-feet above the lowest level of fire department access or more than 50-feet below the highest level of fire department access shall be equipped with standpipes.
- O. Existing stairways shall be marked with stairway floor **1104.24** number signs in accordance with Section 1023.9.
- P. Existing high-rise buildings shall be provided with luminous egress path markings in accordance with Section 1025, except for open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program.

506.1

HAZARDOUS MATERIALS (M)

Refer to the Permits section for required permits.

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. See exceptions.
- B. Safety Data Sheets (SDS) shall be readily available on the premises for hazardous materials regulated by this chapter. When a hazardous substance is developed in a laboratory, available information shall be documented.

Exception: Designated hazardous waste.

- C. Buildings storing hazardous materials in quantities **5003.5** that exceed the permit amount must display placards.
- D. Visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and aboveground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.
- E. Individual containers, cartons or packages shall be conspicuously marked or labeled in an approved manner.
- F. Rooms or cabinets containing compressed gases shall be labeled: COMPRESSED GAS when in quantities requiring a permit.
- G. Signs and markings required by Sections 5003.5 and 5003.5.1 shall not be obscured or removed, shall be in English as a primary language or in symbols allowed by this code, shall be durable, and the size, color and lettering shall be approved.
- H. Hazardous Materials in Group M Display and Storage Areas: Hazardous materials located in Group M occupancies shall be in accordance with Sections 5003.8.3.5.1 (nonflammable solids and nonflammable and noncombustible liquids), 5003.8.3.5.2 (flammable and combustible liquids) and 5003.8.3.5.3 (aerosols).

- Hazardous materials storage cabinets shall be clearly identified in an approved manner with red letters on a contrasting background to read: HAZARDOUS— KEEP FIRE AWAY.
- J. Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon. Separation to be accomplished by one of the four methods in this section.
- K. Shelf storage of flammable and combustible liquids shall be orderly.
- L. Group M occupancy wholesale and retail sales uses, **5704.3.4.1** indoor storage of flammable and combustible liquids shall not exceed the maximum allowable quantities per control area indicated in Table 5003.1.1(1).
- M. Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers.
- N. Portable LP-gas containers shall not be stored or used in a basement, pit, above-grade underfloor space or similar location where heavier-than-air gas might collect.
 6103.2.1.1 6109.7
- O. Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20-feet.
- P. Where approved, listed LP-gas commercial food service appliances are allowed to be used for foodpreparation within restaurants and in attended commercial food catering operations in accordance with the International Fuel Gas Code, the International Mechanical Code and NFPA 58.
- Q. Idle LP-Gas cylinders shall be stored outside of **6109.12** buildings in accordance with Table 6109.12.

5704.

3.3.5.3

FIRE AND SMOKE PROTECTION (M)

| A. | Damaged materials used to protect penetrations, joints, or voids shall be replaced or restored with materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered. | 703.2 704.2 |
|----|---|----------------|
| В. | Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. | 705.2 |
| C. | Fire door assemblies shall not be modified. | 705.2 |
| D. | Hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position. | 705.2.3 |
| E. | Swinging fire doors shall close from the full open position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position. | 705.2.4 |
| F. | Smoke-activated doors shall be maintained to self- close or automatically close upon detection of smoke. Existing fusible-link-type automatic door- closing devices are permitted if the fusible link rating does not exceed 135°F. | 705.2.5 |
| G. | Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained. | 705.2.6 |
| H. | Where required when the building was originally permitted and constructed, spray fire-resistant materials and intumescent fire-resistant materials shall be visually inspected to verify that the materials do not exhibit exposure to the substrate. | 708.1 |

GROUP R OCCUPANCIES

Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the International Residential Code in accordance with Section 101.2 of the International Building Code. Residential occupancies shall include the following:

Group R-1 Residential occupancies containing sleeping units where the occupants are primarily transient in nature, including:

- Boarding houses (transient) with more than 10 occupants
- Congregate living facilities (transient) with more than 10 occupants
- Hotels (transient)
- Motels (transient)

Group R-2 Residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature, including:

- Apartment houses
- Boarding houses (nontransient) with more than 16 occupants
- Congregate living facilities (nontransient) with more than 16 occupants
- Convents
- Dormitories
- Fraternities and sororities
- Hotels (nontransient)
- Live/work units
- Monasteries
- Motels (nontransient)
- Vacation timeshare properties

Group R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

- Boarding houses (nontransient) with 16 or fewer occupants
- Boarding houses (transient) with 10 or fewer occupants
- Buildings that do not contain more than two dwelling units

- Care facilities that provide accommodations for five or fewer persons receiving care
- Congregate living facilities (nontransient) with 16 or fewer occupants
- Congregate living facilities (transient) with 10 or fewer occupants
- Lodging houses with 5 or fewer guest rooms

Care Facilities Within A Dwelling: Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the IRC provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 (NFPA 13D) or Section P2904 of the IRC.

Lodging Houses: Owner-occupied lodging houses with five or fewer guest rooms and 10 or fewer total occupants shall be permitted to be constructed in accordance with the IRC.

Group R-4 This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive custodial care. Buildings of Group R-4 shall be classified as one of the occupancy conditions indicated below. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Group homes
- Halfway houses
- Residential board and care facilities
- Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in the IBC.

Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

GROUP R OCCUPANCIES

Condition 2. This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.

EXITS (R)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.
- B. The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10.
- C. The minimum width or required capacity of a means of egress system shall not be diminished along the path of egress travel.
- D. Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1.
- E. R-3 and R-4: Where 1006.2.2.6 Groups Group R-3 occupancies are permitted by Section 903.2.8 to be protected by an automatic sprinkler system installed in accordance with Section 903.3.1.3 (NFPA 13D), the exit access travel distance for Group R-3 shall be not more than 125-feet. Where Group R-4 occupancies are permitted by Section 903.2.8 to be protected by an automatic sprinkler system installed in accordance with Section 903.3.1.3 (NFPA 13D), the exit access travel distance for Group R-4 shall be not more than 75-feet. 1008.2
- F. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied.

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| G. | The means of egress in dwelling units and sleeping units in Groups R-1, R-2 and R-3 are not required to | 1008.2 Exception |
|----|---|----------------------------|
| H. | Illumination shall be provided along the path of travel for the exit discharge from each exit to the public | 1008.2.3 |
| I. | way. Exit doorways shall not be less than 32 inches in clear width and 80 inches in height. | 1010.1.1 |
| J. | In other than Accessible, Type A or Type B units, the minimum required door width does not apply to interior egress doors. | 1010.1.1 Exception |
| K. | Doors shall swing in the direction of exit travel where serving an occupant load of 50 or more. | 0 1010.1.2.1 |
| L. | Except as specifically permitted in Section 1010.2, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. | 1010.2 |
| M. | Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. | 1010.2.4 Exception 5 |
| N. | Manually operated flush bolts or surface bolts on exit doors are not permitted. See exceptions. | 1010.2.5 |
| 0. | Where panic or fire exit hardware is installed, it shall comply with the following: 1. Panic hardware shall be listed in accordance with UL 305; 2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3. The actuating portion of the releasing device shall extend at least ½ of the door leaf width; and 4. The maximum unlatching force shall not exceed 15 pounds. | 1010.2.9.3 |
| P. | The electric locks on sensor-released doors located in a means of egress in buildings and entrance doors to tenant spaces in occupancies are permitted where installed and operated in accordance with all of the following criteria: | 1010.2.12 |

(1) The sensor shall be installed on the egress side, arranged to detect an occupant approaching the

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doors and shall cause the electric locking system to unlock.

(2) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

(3) Loss of power to the lock or locking system shall automatically unlock the electric locks.

(4) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches vertically above the floor and within 5-feet of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—independent of other electronics—and the electric lock shall remain unlocked for not less than 30 seconds.

(5) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

(6) Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(7) Emergency lighting shall be provided on the egress side of the door.

 $(\tilde{8})$ The door locking system units shall be listed in accordance with UL 294.

- Q. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit doors or gates that are obviously and clearly identifiable as exits need not have exit signs where approved by the fire code official. Exit signs are not required in individual sleeping units or dwelling units in Group R-1, R-2 or R-3 Occupancies.
- R. Where exit signs are required in Group R-1 occupancies by Section 1013.1, additional low-level exit signs shall be provided in all areas serving guest

1013.1 Exception 1, 2 & 3 rooms in Group R-1 occupancies and shall comply with Section 1013.5. The bottom of the sign shall be not less than 10-inches nor more than 18-inches above the floor level. The sign shall be flush mounted to the door or wall. Where mounted on the wall, the edge of the sign shall be within 4-inches of the door frame on the latch side.

- S. Exit signs shall be internally or externally illuminated **1013.3** at all times.
- T. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes.
 Exception 1: Means of egress are not prohibited through a kitchen area serving adjoining rooms constituting part of the same dwelling unit or sleeping unit.
 1016.2.(5) Item 5 Exception 1
- U. Minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than the values in Table 1020.3. Table 1020.3
- V. Corridors are required to be at least 44 inches in width. Exceptions: access to and utilization of mechanical, plumbing or electrical systems equipment may be 24 inches wide. Corridors serving an occupant load of less than 50 and corridors within a dwelling unit may be 36 inches wide.
- W. The minimum width or required capacity of corridors shall be unobstructed. Exception: Encroachments complying with Section 1005.7.
- X. Exits shall be continuous from the point of entry into **1022.1** the exit to the exit discharge.
- Y. Exit discharge shall provide a direct and **1028.5** unobstructed access to a public way.

FIRE PROTECTION SYSTEMS (R)

- A. A 3-feet clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved. 507.5.5
- B. Painted sprinkler heads or cover plates are 901.4 prohibited unless painted at the factory. They cannot NFPA 25 be cleaned of paint. They must be replaced.

GROUP R OCCUPANCIES
| C. | Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. | 901.6 |
|----|--|-----------------------------|
| D. | Fire extinguishers shall be serviced annually and shall have a current service tag attached. | 901.6.1 906.2 NFPA 10 |
| E. | Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained. | 901.6.3 |
| F. | Initial records shall include the name of the installation contractor, type of components installed, manufacturer of the components, location and number of components installed per floor. Records shall also include the manufacturers' operation and maintenance instruction manuals. Such records shall be maintained for the life of the installation | 901.6.3.1 |
| G. | An automatic sprinkler system shall be provided throughout all buildings with a Group R fire area. | 903.2.8 |
| H. | An automatic sprinkler system installed in accordance with NFPA 13D shall be permitted in Group R-3 occupancies | 903.2.8.1 |
| I. | An automatic sprinkler system installed in accordance with NFPA 13D shall be permitted in Group R-4 Condition 1 occupancies | 903.2.8.2 |
| J. | An automatic sprinkler system installed in accordance with NFPA 13R shall be permitted in Group R-4. Condition 2 occurancies | 903.2.8.3 |
| K. | An automatic sprinkler system installed in accordance with NFPA 13D shall be permitted in care facilities with 5 or fewer individuals in a single- family dwelling | 903.2.8.4 |
| L. | All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit. See | 903.4 |
| M. | Required Type I commercial kitchen exhaust hood and duct systems shall be protected by an approved automatic fire-extinguishing system. | 904.2.2 |

- N. A manual actuation device shall be located at or near a means of egress from the cooking area a minimum of 10' and a maximum of 20' from the kitchen exhaust system. The manual actuation device shall be installed not more than 48", nor less than 42" above the floor and shall clearly identify the hazard protected. The manual actuation shall require a maximum force of 40 pounds and a maximum movement of 14" to actuate the fire suppression system.
 On the extent of the ex
- O. The actuation of commercial cooking equipment fire suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.
- P. Automatic fire extinguishing systems for commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion.
- Q. Commercial cooking equipment fusible links and automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions. Not required for components with frangible bulbs.
- R. Cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher provided within 30-feet travel distance of commercial-type cooking equipment.
 906.1 Item 2
- S. See Table 906.1 for portable fire extinguisher **Table** requirements base on building and equipment use **906.1**
- T. One 2A fire extinguisher per 6,000 sq. ft. in light hazard (offices) and one 2A per 3,000 sq. ft. in an ordinary hazard.
 Maximum travel distance to a fire extinguisher is 75 feet.

Fire extinguishers shall be located in conspicuous U. 906.5 locations where they will be readily accessible and immediately available for use. Portable fire extinguishers shall not be obstructed or V. 906.6 obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers. Hand-held portable fire extinguishers, not housed in W 906.7 cabinets, shall be installed on hangers or brackets supplied. Х. Portable fire extinguishers having a gross weight not 906.9.1 exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor. Extinguishers having a gross weight exceeding 40 pounds shall be 906.9.2 installed so that its top is not more than 3.5' above the floor. Where more than one smoke alarm is required to be Υ. 907.2.11.5 installed within an individual dwelling unit or sleeping 1103.8.2 unit in Group R-1, R-2, R-3 or R-4, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Z. The building owner shall be responsible to maintain 907.8.4 the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the gualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained AA. A fire alarm system and smoke alarms shall be 1103.7.5 installed in existing Group R-1. A manual fire alarm system that activates the AB. 1103.7.5.1 occupant notification system shall be installed in existing Group R-1 hotels and motels more than one story or with more than 20 sleeping units. See exceptions. AC. An automatic or manual fire alarm system that 1103.7.6 activates the occupant notification system shall be

installed in existing Group R-2 occupancies more

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than three stories in height or with more than 16 dwelling or sleeping units. See exceptions.

- AD. Single-and multiple-station smoke alarms shall be **1103.8** installed in existing Group R occupancies.
- AE. Existing Group R occupancies shall be equipped with carbon monoxide detection in accordance with Section 915, except that the carbon monoxide alarms shall be allowed to be solely battery operated.

HOUSEKEEPING (R)

- Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises.
 304.1.2
- B. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily.
 304.3.1
- C. Combustible waste containers larger than 40 gallons **304.3.2** shall have lids and must be made of metal or approved combustible material.
- Dumpsters and containers with an individual capacity 304.3.3 D of 1.5 cubic yards or more shall not be stored in buildings or placed within 5' of combustible walls, openinas or combustible roof eave lines. Exceptions: (1) Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. (2) Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction. located not less than 10-feet from other buildings and used exclusively for dumpster or container storage.
- E. Liquid or gas fueled vehicles, boats, aircraft or other motorcraft, shall not be located indoors except as follows: 1. The engine starting system is made inoperable or batteries are disconnected except where the fire code official requires that the batteries remain connected to maintain safety features. 2.

Fuel in tanks does not exceed 1/4 tank or 5 gallons (whichever is least). 3. Fuel tanks and fill openings are closed and sealed to prevent tampering. 4. Vehicles, aircraft, boats or other motorcraft equipment are not fueled or defueled within the building.

- F. Storage of materials in buildings shall be orderly and 315.3 stacks shall be stable.
- G. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur.
 315.3
- H. Storage shall be maintained 2-feet or more below the **315.3.1** ceiling in non-sprinklered areas of buildings.
- I. Storage shall be maintained a minimum of 18" below **315.3.1** sprinkler deflectors in sprinklered areas of buildings.
- J. Combustible materials shall not be stored in exits or a15.3.2 enclosures for stairways and ramps.
- K. Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers.
 315.3.3
- L. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fireresistance-rated construction.

Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists.

Exceptions: Areas protected by approved automatic sprinkler systems and Group R-3 occupancies.

M. Outside Storage: Outside storage of combustible materials shall not be located within 10-feet of a lot line.

Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist.

N. Laundry carts with an individual capacity of 1 cubic yard or more used in laundries shall be constructed

315.4

315.3.4

318.1

of noncombustible material or materials, having a peak rate of heat release not exceeding 300kW/m² at a flux of 50kW/m² when tested in accordance with the requirements in ASTM E 1354. This provision does not apply when the building is protected by a NFPA 13 compliant automatic sprinkler system and laundry carts in coin-operated laundries.

- Approved access shall be provided and maintained for all fire protection system equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible.
- P. Commercial kitchen hoods, grease-removal devices, fans, ducts and other appurtenances shall be cleaned at intervals as required by Sections 606.3.3.1 through 606.3.3.3.
- Q. Commercial kitchen hoods, grease-removal devices, fans, ducts and other appurtenances shall be inspected at intervals specified in Table 606.3.3.1 or as approved by the fire code official. Inspections shall be completed by qualified individuals.
 606.3.3.1 Table 606.3.3.1 or
- R. Lint and debris shall not be allowed to accumulate in lint traps, mechanical and heating, and exhaust duct systems of clothes dryers.
 610.1.2

ELECTRICAL (R)

- A. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes.
 603.2.2
- B. A working space of not less than 30" in width, 36" in depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment.
- C. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM".

| D. | Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident | 603.4.1 |
|----|--|---------|
| E. | Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NFPA 70 shall be prohibited. | 603.5 |
| F. | Relocatable power taps shall be listed in accordance with UL 1363. | 603.5.1 |
| G. | Relocatable power taps shall be directly connected to a permanently installed receptacle. | 603.5.2 |
| H. | Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage. | 603.5.3 |
| I. | Extension cords shall not be a substitute for | 603.6 |
| J. | Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact | 603.6 |
| K. | Extension cords shall be used only with portable appliances | 603.6 |
| L. | Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. | 603.6.1 |
| M. | Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. | 603.6.1 |
| N. | The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. | 603.6.2 |
| Ο. | Extension cords shall be maintained in good | 603.6.3 |
| Ρ. | Extension cords shall be grounded when serving grounded portable appliances | 603.6.4 |
| Q. | Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. | 603.7 |

days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed durina periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70. S. Temporary wiring attached to a structure shall be 603.8.1 protected from physical damage and supported on insulators spaced not more than 10 feet apart. Portable generators shall be listed for use in the Τ. 1204.2 condition and method that they are being used. 1204.3 Portable generators shall be used in accordance with manufacturer's instructions. A listed portable fire extinguisher with a minimum U. 1204.10 rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator **MISCELLANEOUS (R)** Refer to the Permits section for required permits. An approved fire safety and evacuation plan shall be Α 403.9.1 prepared and maintained for Group R-1, R-2 College 403.9.2 and University Buildings and R-4. An approved fire 403.9.3 safety and evacuation plan shall be prepared and maintained. The plan shall be reviewed or updated annually. Employees shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation. In Group R-1 occupancies, a diagram depicting two B. 403.9.1.1 evacuation routes shall be posted on or immediately adjacent to every required egress door from each hotel, motel or dormitory sleeping unit. C. In Group R-2 occupancies, each tenant shall be 403 9 2 2 3 given a copy of the emergency guide prior to

Temporary wiring for electrical power and lighting

installations is allowed for a period not to exceed 90

R.

occupancy. D. An approved fire safety and evacuation plan shall be **404.2** prepared and maintained.

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603.8

- Employees in Group R-1 occupancies shall be E. 405.3 trained in the fire emergency procedures described Table in the fire evacuation and fire safety plans. Fire and 405.3 evacuation drills are required quarterly and on each shift.
- F. All occupants in Group R-2 occupancies shall be 405.3 trained in the fire emergency procedures described Table in the fire evacuation and fire safety plans. Training 405.3 is four times annually.
- All occupants in Group R-4 occupancies shall be G. 405.3 trained in the fire emergency procedures described Table in the fire evacuation and fire safety plans. Training 405.3 is semiannually on each shift. Actual exiting from 405.2 emergency escape and rescue opening shall not be Exception required. 406.2
- Employees shall receive training in the contents of Η. fire safety and evacuation plans and their duties as part of new employee orientation and at least annually thereafter.
- Fire apparatus access roads shall have an I. unobstructed width of not less than 20-feet. exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13' 6'.
- Fire apparatus access roads shall not be obstructed J. 503.4 in any manner, including the parking of vehicles. 505.1
- New and existing buildings shall have approved K. address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.
- Where access to or within a structure or an area is L. 506.1 restricted because of secured openings or where immediate access is necessary for life-saving or firefighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access.
- The building shall have approved communication M. 510.2 coverage for emergency responders within the 1103.2

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3

503.2.1

building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building.

- N. The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained.
- O. Existing buildings with occupied floors located more than 50-feet above the lowest level of fire department access or more than 50-feet below the highest level of fire department access shall be equipped with standpipes.
- P. Existing stairways shall be marked with stairway floor number signs in accordance with Section 1023.9.
- Q. Existing R-1 high-rise buildings shall be provided with luminous egress path markings in accordance with Section 1025, except for open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program.

HAZARDOUS MATERIALS (R)

Refer to the Permits section for required permits.

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. See exceptions.
- B. Safety Data Sheets (SDS) shall be readily available on the premises for hazardous materials regulated by this chapter. When a hazardous substance is developed in a laboratory, available information shall be documented.

Exception: Designated hazardous waste.

C. Buildings storing hazardous materials in quantities **5003.5** that exceed the permit amount must display placards.

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907.8.4

- D. Visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and aboveground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.
- E. Individual containers, cartons or packages shall be conspicuously marked or labeled in an approved manner.
 5003.5.1
- F. Rooms or cabinets containing compressed gases 5003.5.1 shall be labeled: COMPRESSED GAS when in quantities requiring a permit.
- G. Signs and markings required by Sections 5003.5 and 5003.5.1 shall not be obscured or removed, shall be in English as a primary language or in symbols allowed by this code, shall be durable, and the size, color and lettering shall be approved.
- Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon. Separation to be accomplished by one of the four methods in this section.
- I. Shelf storage of flammable and combustible liquids **5704.3.3.5.3** shall be orderly.
- J. Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers.
- K. Except for cylinders of non-liquefied compressed flammable gases not exceeding a capacity of 250 cubic feet or liquefied gases not exceeding a capacity of 40 pounds each at normal temperature and pressure (NTP) used for maintenance purposes, patient care or operation of equipment, shall not be stored or used in offices in Group B occupancies.

- L. Toxic and highly toxic compressed gases shall not be **6004.1.1.2** stored or used within Group R occupancies.
- M. Portable LP-gas containers shall not be stored or used in a basement, pit, above-grade underfloor space or similar location where heavier-than-air gas might collect.
 6103.2.1.1 6109.7
- N. Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20'.
- O. Use for Food Preparation. Where approved, listed LP-gas commercial food service appliances are allowed to be used for food-preparation within restaurants and in attended commercial food catering operations in accordance with the International Fuel Gas Code, the International Mechanical Code and NFPA 58.
- P. Idle LP-Gas cylinders shall be stored outside of **6109.12** buildings in accordance with Table 6109.12.
- Q. The storage and use of liquid oxygen (LOX) in home health care occupancies shall comply with Sections 6306.2 through 6306.6, or shall be stored and used accordance with Chapter 50.
- R. Containers of liquid oxygen in home health care shall be in accordance with Sections 6306.3.1 through 6306.3.6.3.

FIRE AND SMOKE PROTECTION (R)

- A. Damaged materials used to protect penetrations, joints, or voids shall be replaced or restored with materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered.
 703.2
 704.2
- B. Fire doors and smoke barrier doors shall not be **705.2** blocked or obstructed or otherwise made inoperable.

C. Fire door assemblies shall not be modified. 705.2 705.2.3 D Hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position. E. Swinging fire doors shall close from the full open 705.2.4 position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position. F. Smoke-activated doors shall be maintained to self-705.2.5 close or automatically close upon detection of Existing fusible-link-type automatic doorsmoke. closing devices are permitted if the fusible link rating does not exceed 135°F. G. Horizontal and vertical sliding and rolling fire doors 705.2.6 shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained. Where required when the building was originally H. 708.1 permitted and constructed, spray fire-resistant materials and intumescent fire-resistant materials shall be visually inspected to verify that the materials do not exhibit exposure to the substrate.

Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

Accessory Storage Spaces: A room or space used for storage purposes that is less than 100 sq. ft. in area and accessory to another occupancy shall be classified as part of that occupancy. The aggregate area of such rooms or spaces shall not exceed the allowable area limits of IBC Section 508.2.

Group S-1 Moderate-hazard storage. Buildings occupied for storage uses which are not classified as Group S-2 including, but not limited to, storage of the following:

- Aerosols, Levels 2 and 3
- Aircraft hangar
- Bags; cloth, burlap and paper
- Bamboos and rattan
- Baskets
- Belting; canvas and leather
- · Books and paper in rolls
- · Boots and shoes
- Buttons, including cloth covered, pearl or bone
- Cardboard and cardboard boxes
- Clothing, woolen wearing apparel
- Cordage
- Dry boat storage (indoor)
- Furniture

- Furs
- Glues, mucilage, pastes and size
- Grains
- · Horns and combs
- Linoleum
- Lumber
- Motor vehicle repair garages
- · Photo engravings
- Resilient flooring
- Silks
- Soaps
- Sugar
- · Tires, bulk storage of
- Tobacco, cigars, cigarettes
- Upholstery and mattresses
- Wax candles

Group S-2 Low-hazard storage. Includes, among others, buildings used for the storage of noncombustible materials, such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products may have a negligible amount of plastic trim such as knobs, handles, or film wrapping. Storage uses include, but are not limited to, storage of the following:

- Asbestos,
- Beverages ≤16% alcohol in metal, glass or ceramic containers
- · Cement in bags
- · Chalk and crayons
- Dairy products in nonwaxed coated paper
- Dry cell batteries
- · Electrical coils and motors
- · Empty cans
- Frozen foods
- · Food products
- Food in noncombustible containers
- Fresh fruits and vegetables in nonplastic trays
- Frozen foods
- Glass
- Gypsum board

- Glass bottles, empty or filled, noncombustible contents
- Ivory
- Inert pigments
- Meats
- · Metal cabinets
- Metal desks with plastic tops and trim
- Metal parts
- Metals
- Mirrors
- Oil-filled distribution transformers
- Parking garages (open or enclosed)
- · Porcelain and pottery
- Stoves
- Talc and soapstone
- · Washers and dryers

EXITS (S)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.
- B. The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in Chapter 10. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by Chapter 10.
- C. The minimum width or required capacity of a means of egress system shall not be diminished along the path of egress travel.
- D. Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds
 1006.2.1 1006.2.1

the value in Table 1006.2.1 or the occupant load is 29 or more.

| E. | Common Path of Egress Travel: Occ Load \leq 30 without fire sprinklers – 100' Occ Load > 30 without fire sprinklers – 75'. With fire sprinklers – 100' | Table 1006.2.1 |
|----|---|-------------------|
| F. | Vehicle ramps shall not be considered as required exits unless pedestrian facilities are provided. | 1006.2.2.5 |
| G. | The means of egress serving a room or space shall be illuminated at all times that the room or space is | 1008.2 |
| H. | Illumination shall be provided along the path of travel for the exit discharge from each exit to the public | 1008.2.3 |
| I. | way. The power supply for means of egress illumination shall normally be provided by the premises electrical | 1008.3 |
| J. | In the event of a power supply failure in rooms and spaces that require two or more exits or access to exits, an emergency electrical system shall automatically illuminate all the aisles, corridors and evit access stainways and ramps | 1008.3.1 |
| K. | In the event of power supply failure, in buildings that require two or more exits or access to exits, an emergency electrical system shall automatically illuminate all of the interior exit access stairways and ramps, interior and exterior exit stairways and ramps, exit passageways, vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.2 and exterior landings as required by Section 1010.1.5 for exit doorways that lead directly to the exit discharge | 1008.3.2 |
| L. | In the event of a power supply failure, an emergency electrical system shall automatically illuminate all electrical equipment rooms, fire command centers, fire pump rooms, generator rooms, public restrooms oreater than 300 square feet in size. | 1008.3.3 |
| M. | The emergency power system shall provide power for a duration of not less than 90 minutes. | 1008.3.4 |

- Exit doorways shall not be less than 32 inches in N. clear width and 80 inches in height. Doors shall swing in the direction of exit travel where О. 1010.1.2.1 serving an occupant load of 50 or more. Main exterior door or doors are permitted to be Ρ. 1010.2.4 equipped with key-operated locking devices from the Item 3 earess side provided: 3.1. The locking device is readily distinguishable as locked: 3.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1-inch high on a contrasting background; and 3.3. The use of the key-operated locking device is revocable by the fire code official for due cause. Manually operated flush bolts or surface bolts on exit Q. 1010.2.5 doors are not permitted. See exceptions. R. Where panic or fire exit hardware is installed, it shall 1010.2.9.3 comply with the following: 1. Panic hardware shall be listed in accordance with UL 305; 2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3. The actuating portion of the releasing device shall extend at least 1/2 of the door leaf width: and 4. The maximum unlatching force shall not exceed 15 pounds. S. Delayed egress locking system shall be installed and 1010.2.13.1 operated in accordance with all of the following: (1) The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate, free egress. (2) The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free earess. (3) The delayed egress locking system shall have the capability of being deactivated at the fire
 - command center and other approved locations.
 - (4) An attempt to egress shall initiate an irreversible

6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6.3 The sign shall comply with the visual character requirements in ICC A117.1.

(7) Emergency lighting shall be provided on the eqress side of the door.

process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only. (Where approved, a delay of not more than 30 seconds is permitted on a delayed egress

(5) The egress path from any point shall not pass through more than one delayed egress locking

(6) A sign shall be provided on the door and shall be located above and within 12 inches of the door exit

(8) The delayed egress locking system units shall be listed in accordance with UL 294.

- T. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100-feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.
- U. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit doors or gates that are obviously and clearly identifiable as 1 & 2

GROUP S OCCUPANCIES

door)

system.

hardware:

1013.1

exits need not have exit signs where approved by the fire code official. Exit signs shall be internally or externally illuminated V. 1013.3 at all times. W. Egress shall not pass through kitchens, storage 1016.2 rooms, closets or spaces used for similar purposes. Item 5 Minimum clear aisle width shall be determined by 1018.3 Х. Section 1005.1 for the occupant load served, but 1020.3 shall not be less than the values in Table 1020.3. Table 1020.3 Υ. Corridors are required to be at least 44 inches in Table Exceptions: access to and utilization of 1020.3 width. plumbina or electrical systems mechanical. equipment may be 24 inches wide. Corridors serving an occupant load of less than 50 and corridors within a dwelling unit may be 36 inches wide. Ζ. The reauired width of corridors shall be 1020.4 unobstructed. Exits shall be continuous from the point of entry into AA. 1022.1 the exit to the exit discharge. discharge shall provide direct and AB. Exit а 1028.5 unobstructed access to a public way. FIRE PROTECTION SYSTEMS (S) Battery charging areas for industrial trucks shall be 309.5

Α. provided with a minimum 4-A:20-B:C rated fire extinguisher within 20-feet of battery charger. A 3-feet clear space shall be maintained around the Β. 507.5.5 circumference of fire hydrants except as otherwise required or approved. Painted sprinklers or cover plates are prohibited C. 901.4 unless painted at the factory. They cannot be cleaned **NFPA 25** of paint. They must be replaced. Fire detection, alarm and extinguishing systems shall D. 901.6 be maintained in an operative condition at all times. Fire extinguishers shall be serviced annually and Ε. 901.6.1 shall have a current service tag attached. 906.2 **NFPA 10**

| F. | Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained. | 901.6.3 |
|----|---|-------------------|
| G. | Initial records shall include the name of the installation contractor, type of components installed, manufacturer of the components, location and number of components installed per floor. Records shall also include the manufacturers' operation and maintenance instruction manuals. Such records shall be maintained for the life of the installation. | 901.6.3.1 |
| H. | All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit. See exceptions. | 903.4 |
| Ι. | Cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher provided within 30- feet travel distance of commercial-type cooking equipment. | 906.1 Item 2 |
| J. | See Table 906.1 for portable fire extinguisher | Table |
| K. | One 2A fire extinguisher per 6,000 sq. ft. in light hazard (offices) and one 2A per 3,000 sq. ft. in an ordinary hazard. | Table 906.3(1) |
| L. | Maximum travel distance to a fire extinguisher is 75'. | Table 906.3(1) |
| M. | Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. | 906.5 |
| N. | Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the location of extinguishers | 906.6 |
| Ο. | Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. | 906.7 |

- P. Portable fire extinguishers having a gross weight not exceeding 40 pounds shall be installed so that its top is not more than 5' above the floor.
- Q. Extinguishers having a gross weight exceeding 40 pounds shall be installed so that its top is not more than 3.5' above the floor.
- R. The building owner shall be responsible to maintain the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for inspection, testing and maintenance of such systems. Records of inspection, testing and maintenance shall be maintained.
- S. Motor fuel-dispensing facilities require a 2-A: 20-B: C **2305.5** fire extinguisher within 75-feet of the pumps, dispensers or storage tank fill-pipe openings.
- T. Flue spaces required by Table 3208.3 above the first tier of storage in single-, double- or multiple-row rack storage installations shall, where required by the fire code official, be equipped with approved devices. Such devices shall not be removed or modified.
- U. A minimum of one 2-A:20-B:C shall be provided with ready access within 30-feet of the location where hot work is performed. **3504.2.6**

HOUSEKEEPING (S)

- Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises.
- B. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily.
- C. Combustible waste containers larger than 40 gallons **304.3.2** shall have lids and must be made of metal or approved combustible material.
- Dumpsters and containers with an individual capacity of 1.5 cubic yards or more shall not be stored in

buildings or placed within 5' of combustible walls, openings or combustible roof eave lines. **Exceptions:** (1) Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout. (2) Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10' from other buildings and used exclusively for dumpster or container storage.

- E. Storage of materials in buildings shall be orderly and 315.3 stacks shall be stable.
- F. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur.
 315.3
- G. Storage shall be maintained 2-feet or more below the ceiling in non-sprinklered areas of buildings. **315.3.1**
- H. Storage shall be maintained a minimum of 18" below 315.3.1 sprinkler deflectors in sprinklered areas of buildings.
- I. Combustible materials shall not be stored in exits or enclosures for stairways and ramps. 315.3.2
- J. Combustible material shall not be stored in boiler 315.3.3 rooms, mechanical rooms, electrical equipment rooms or in fire command centers.
- K. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fireresistance-rated construction.

Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1-3/4" in thickness. Storage shall not be placed on exposed joists.

Exceptions: Areas protected by approved automatic sprinkler systems.

L. Outside Storage: Outside storage of combustible materials shall not be located within 10-feet of a lot line. 315.4

Exceptions: 1. The separation distance is allowed to be reduced to 3-feet for storage not exceeding 6-feet in height. 2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist.

ELECTRICAL (S)603.2.2A.Open junction boxes and open wiring splices shall

| | be prohibited. Approved covers shall be provided for all switch and outlet boxes. | |
|---------|---|----|
| 603.4 | A working space of not less than 30" in width, 36" in depth and 78" in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30", the working space shall not be less than the width of the equipment. | B |
| 603.4.1 | Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "ELECTRICAL ROOM" . | C |
| 603.4.1 | Disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident. | C |
| 603.5 | Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the NFPA 70 shall be prohibited. | E |
| 603.5.1 | Relocatable power taps shall be listed in accordance with UL 1363. | F |
| 603.5.2 | Relocatable power taps shall be directly connected to a permanently installed receptacle. | G |
| 603.5.3 | Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage. | F |
| 603.6 | Extension cords shall not be a substitute for permanent wiring. | ١. |
| 603.6 | Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. | J |
| 603.6 | Extension cords shall be used only with portable appliances. | K |

| L. | Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. | 603.6.1 |
|----|--|------------------|
| M. | Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. | 603.6.1 |
| N. | The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. | 603.6.2 |
| Ο. | Extension cords shall be maintained in good condition without splices, deterioration or damage. | 603.6.3 |
| Ρ. | Extension cords shall be grounded when serving grounded portable appliances. | 603.6.4 |
| Q. | Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. | 603.7 |
| R. | Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70. Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities so long as the installations comply with NFPA 70. | 603.8 |
| S. | Temporary wiring attached to a structure shall be protected from physical damage and supported on insulators spaced not more than 10 feet apart. | 603.8.1 |
| Т. | Portable generators shall be listed for use in the condition and method that they are being used. Portable generators shall be used in accordance with manufacturer's instructions. | 1204.2 1204.3 |
| U. | A listed portable fire extinguisher with a minimum rating of 2-A:20-B:C shall be provided within 50 feet of the portable generator | 1204.10 |

MISCELLANEOUS (S)

Refer to the Permits section for required permits.

- Powered industrial trucks and similar equipment Α. 309.1 including, but not limited to, floor scrubbers and floor buffers, shall be operated and maintained in accordance with Section 309.2 through 309.6. Battery chargers shall be of an approved type. Β. 309.3 Combustible storage shall be kept a minimum of 3' from battery chargers. Battery charging shall not be conducted in areas accessible to the public. Ventilation shall be provided in an approved manner C. 309.4 in battery-charging areas to prevent a dangerous accumulation of flammable gases. Battery charging areas shall be provided with a fire D. 309.5 extinguisher having a minimum 4-A:20-B:C rating within 20-feet of the battery charger. Powered industrial trucks using liquid fuel. LP-gas E. 309.6 or hydrogen shall be refueled outside of buildings or in areas specifically approved for that purpose. Fixed fuel dispensing equipment and associated fueling operations shall be in accordance with Chapter 23. Other fuel dispensing equipment and operations, including cylinder exchange for LP-gasfueled vehicles, shall be in accordance with Chapter 57 for flammable and combustible liquids or Chapter 61 for LP-gas. Repairs to fuel systems, electrical systems and F. 309.7 repairs utilizing open flame or welding shall be done in approved locations outside of buildings or in areas specifically approved for that purpose. Fire apparatus access roads shall have G. 503.2.1 an unobstructed width of not less than 20-feet and an unobstructed vertical clearance of not less than 13'
- 6".
 H. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles.
 503.4
- New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.

- J. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location and shall contain keys to gain necessary access.
- K. The building shall have approved communication coverage for emergency responders within the building based upon the existing coverage level of the public safety communication systems of the jurisdiction at the exterior of the building.
- The building owner shall be responsible to maintain 907.8.4 L. the fire alarm and emergency voice/alarm communication systems in an operable condition at all times. Service personnel shall meet the reauirements NFPA 72 for gualification of inspection, testing and maintenance of such of inspection, testing systems. Records and maintenance shall be maintained.
- M. Existing buildings with occupied floors located more than 50-feet above the lowest level of fire department access or more than 50-feet below the highest level of fire department access shall be equipped with standpipes.

HAZARDOUS MATERIALS (S)

Refer to the Permits section for required permits.

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. See exceptions
- B. Safety Data Sheets (SDS) shall be readily available on the premises for hazardous materials regulated by this chapter. When a hazardous substance is developed in a laboratory, available information shall be documented.

Exception: Designated hazardous waste.

C. Buildings storing hazardous materials in quantities 5003.5 that exceed the permit amount must display placards.

- D. Visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and aboveground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.
- E. Individual containers, cartons or packages shall be conspicuously marked or labeled in an approved manner.
- F. Rooms or cabinets containing compressed gases 5003.5.1 shall be labeled: COMPRESSED GAS when in quantities requiring a permit.
- G. Signs and markings required by Sections 5003.5 and 5003.5.1 shall not be obscured or removed, shall be in English as a primary language or in symbols allowed by this code, shall be durable, and the size, color and lettering shall be approved.
- H. Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated when the stored materials are in containers having a capacity of more than 5 pounds or 0.5 gallon. Separation to be accomplished by one of the four methods in this section.
- The aggregate quantity of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored in a single control area of a Group S occupancy, is allowed to exceed the maximum allowable quantity per control area indicated in Section 5003.1 when in accordance with Sections 5003.11.1 through 5003.11.3.11.
- J. The aggregate amount of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored and displayed within a single control area shall not exceed the amounts set forth in Table 5003.11.1.
- K. Storage and display of hazardous materials shall be in accordance with Sections 5003.11.3.1 through 5003.11.3.10.

| L. | Shelf storage of flammable and combustible liquids | 5704.3.3.5.3 |
|------|---|----------------------|
| M. | Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets. Quantities not exceeding 10 gallons are allowed to be stored outside of a cabinet when in approved containers | 5704.3.4.4 |
| N. | Portable LP-gas containers shall not be stored or used in a basement, pit or similar location where heavier-than-air gas might collect. | 6103.2.1.1 6109.7 |
| Ο. | Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20-feet | 6103.2.1.5 |
| P. | Where approved, listed LP-gas commercial food service appliances are allowed to be used for food- preparation within restaurants and in attended commercial food catering operations in accordance with the International Fuel Gas Code, the International Mechanical Code and NEPA 58 | 6103.2.1.7 |
| Q. | Idle LP-Gas cylinders shall be stored outside of buildings in accordance with Table 6109.12. | 6109.12 |
| FIRE | E AND SMOKE PROTECTION (S) | |
| A. | Damaged materials used to protect penetrations, joints, or voids shall be replaced or restored with materials that meet or exceed the requirements when the assembly was constructed, remodeled, or altered. | 703.2 704.2 |
| В. | Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. | 705.2 |
| C. | Fire door assemblies shall not be modified. | 705.2 |

Fire door assemblies shall not be modified. C.

- D. Hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position.
- E. Swinging fire doors shall close from the full open position and latch automatically. NOTE: The door closer shall exert enough force to close and latch the door from any partially open position.
- F. Smoke-activated doors shall be maintained to selfclose or automatically close upon detection of smoke. Existing fusible-link-type automatic doorclosing devices are permitted if the fusible link rating does not exceed 135°F.
- G. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. Records of inspections and testing shall be maintained.
- H. Where required when the building was originally permitted and constructed, spray fire-resistant materials and intumescent fire-resistant materials shall be visually inspected to verify that the materials do not exhibit exposure to the substrate.

GROUP U OCCUPANCY

Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

- Agricultural building
- Aircraft hangar accessory to a one or two-family residence
- Barns
- Carports
- Communication equipment structures with a gross floor area of less than 1,500 sq.ft.
- Fences over 6' high

- Grain silos, accessory to a residential occupancy
- Greenhouses
- Livestock shelters
- Private garages
- Retaining walls
- Sheds
- Stables
- Tanks
- Towers

MISCELLANEOUS (U)

| 507.5.4 | Unobstructed access to fire hydrants shall be maintained at all times. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants. | A. |
|-------------------------------|--|----------|
| 507.5.5 | A 3' clear space shall be maintained around the circumference of fire hydrants, except as otherwise required or approved. | В. |
| 507.5.6 | Where fire hydrants are subject to impact by a motor vehicle, guard posts or other approved means shall comply with Section 312. | C. |
| 906.1 Table 1006.3.4(2) | No requirement for portable fire extinguisher. Only one exit required up to 49 occupant load. | D. E. |
| 6004.1.1.1 | Toxic and highly toxic compressed gases shall not be stored or used in U occupancies. Exception: Cylinders not exceeding 20 cu. ft. are allowed within gas cabinets or fume hoods. | F. |

COMMON HAZARDS BY OCCUPANCY

The following are commonly violated hazards particular to different occupancies.

MULTI-UNIT RESIDENCES

- 1. Blocked exits (1003.6 & 1032.3)
- 2. Fire extinguishers not serviced or missing (906.2 and NFPA 10)
- 3. Storage of combustibles in exits, exit enclosure or stairways (315.3.2)
- 4. Cluttered attic, garage, under stairs, heating room (315.3.4)
- 5. Lack of (and/or not visible) exit signs (1013.1)
- 6. Lack of visible address (505.1)
- 7. Combustibles stored next to water heater or furnace (315.3.3)
- 8. Lack of emergency vehicle access to building (503.1.1 & 503.4)
- 9. Fire protection equipment not working or serviced (901.6)
- 10. R-2, R-3, and I-1 occupancies, a smoke alarm required in each sleeping unit (907.2.11.2 & 1103.8)
- 11. Fire safety evacuation plan (R-4) proof of staff training (405.6)
- 12. Stairway doors blocked open (705.2)
- 13. Smoke detectors in motels for operation (901.6)
- 14. Water valves to sprinklers. Must be open (901.6)
- 15. Flammable liquids storage (5704.3.3.5.3)
- 16. Painted sprinkler heads (901.4 & NFPA 25)
- 17. Fire and evacuation plan required (R-1 hotel, motel, dorm) (403.9)

PLACES OF ASSEMBLY

- 1. Blocked exits (1003.6 & 1032.3)
- 2. No exit sign; exit lights out (1013.1, 1013.3, 1104.3, 1104.4 & 1104.5)
- 3. Doors locked during hours of occupancy (1010.2.4)
- 4. Overcrowded, no occupant load sign posted (1004.9 and 109.6)
- 5. Tables and/or chairs in exit paths (1003.6 & 1032.6)
- Fire extinguisher not serviced or nonexistent (901.6, 906.2 & NFPA 10)
- 7. Candles on tables in unsafe holders (permit required) (105.5.36 & 308.2)
- 8. Extension cords and other electrical problems (603.5 & 603.6)
- 9. Draperies shall not be placed over exit doors (1032.6)
- 10. Decorations, draperies shall be fire retardant treated (807.3)
- 11. Smoking areas (310.2)

- 12. Combustible materials shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or fire command centers (315.3.3)
- 13. Lack of panic hardware and/or door hard to open (1010.2.9)
- 14. No emergency lighting or not tested (1008.2, 1104.4 & 1104.5)
- 15. Fire alarm testing, or record of testing (907.8)
- 16. Commercial kitchen extinguishing systems not tested (606.3 & 901.6)
- 17. Grease accumulation on filters and/or in ducts (606.3.3.2)
- 18. Locks and latches on exit doors (1010.2.4)
- 19. Painted sprinkler heads (901.6 & NFPA 25)
- 20. Lack of visible address (505.1)

RESTAURANTS

- 1. Grease accumulation on filters and/or in ducts (606.3.3.2)
- 2. Hood system not serviced, nonexistent (606.2, 606.3, 904.13 & 904.13.5)
- 3. Exiting problems the same as assembly occupancy. See above
- 4. Decorations, curtains, draperies shall be fire retardant treated (807.3 & NFPA 701)
- 5. Fire extinguisher not serviced or nonexistent (901.6, 906.2 and NFPA 10)
- Combustible materials shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or fire command centers (315.3.3)
- 7. Extension cords and other electrical problems (603.1, 603.5 & 603.6)
- 8. Lack of exit signs or exit sign lighting not working (1013.1 & 1013.3)
- 9. Draperies shall not be placed over exit doors (1032.6)
- 10. Tables and/or chairs in exit paths (1003.6 & 1032.6)
- 11. Illegal locks on egress doors (1010.2.10 1010.2.4 & 1010.2.9)
- 12. Permit required for candles (105.5.36)
- 13. Emergency lighting missing or not tested (1008.1, 1008.3, 1104.4 & 1104.5)
- 14. Storage in exit path or tables blocking exit door (1003.6, 1032.6 and 1104.23)
- 15. No Occupant Load signs posted (1004.9)
- 16. Seating exceeds the posted Occupant Load signs (109.6)
- 17. Painted sprinkler heads (901.6 & NFPA 25)
- 18. Flaming food or beverage preparation (308.1.4 & 308.1.8)

COMMON HAZARDS BY OCCUPANCY

WAREHOUSES

- 1. Fire protection equipment not in service (901.6 & 901.7)
- 2. Fire doors shall not be blocked (704.3)
- 3. Obstructions in means of egress (1003.6, 1032.3)
- 4. Lack of visible address (505.1)
- 5. Misuse of extension cords (603.5, 603.6.1 & 603.6)
- 6. Flammable liquid storage (5704.3.3.5.3)
- 7. Storage of oily rags; spontaneous ignition, (304.3.1)
- 8. Combustible rubbish and waste material (304.1)
- 9. Lack of exit signs or exit sign lighting not working (1013.1 & 1013.3)
- 10. No storage in front of electrical panel (603.4)
- 11. Storage must be a minimum of 18" below sprinkler heads (315.3.1)
- 12. Lack of emergency vehicle access to building (503.1 & 503.4)
- 13. Propane or gasoline operated fork lift trucks (309)
- 14. Separation and isolation of hazardous materials (5003.9.8)
- 15. Paint and chemical storage must be orderly (5704.3.3.5.3)
- 16. Painted sprinkler heads (901.6 & NFPA 25)
- 17. An operational permit is required for high-piled storage (105.5.24)
- Battery charging areas shall be provided with a minimum 4-A:20-B:C rated fire extinguisher within 20' of battery charger (309.5)

HOSPITALS

- 1. Fire protection equipment not serviced (901.6 & 901.7)
- 2. Misuse of extension cords (603.5, 603.6.1 & 603.6)
- 3. Smoking areas (310.2)
- 4. Cafeteria hazards hood protection (904.13 & 606.2)
- 5. Obstructions in means of egress (1003.6, 1032.6)
- 6. Employee evacuation and fire safety training (406)
- 7. No storage in front of electrical panel (603.4)
- 8. Emergency generator not tested (1203.4 & 1203.5)
- 9. Unobstructed access to fire hydrants (507.5.4 and 507.5.5)
- 10. Lack of visible address (505.1)
- 11. Storage of combustibles shall be orderly (315.3)
- 12. Combustibles too close to heating equipment (315.3 & 315.3.3)
- 13. Storage must be a minimum of 18" below sprinkler heads (315.3.1)
- Proof of emergency evacuation drills quarterly for employees only (405 & 406)
- 15. Emergency lighting not tested (1008.1 & 1008.3)
- 16. Lack of emergency vehicle access to building (503.1 & 503.4)
- 17. Exits used for storage (315.3.2)

- 18. Lack of fire drills and records proving such (405.6)
- 19. Lack of exit signs or exit sign lighting not working (1013.1 & 1013.3)
- 20. Bed storage in exits or corridors (1032.3.1)
- 21. Fire doors shall close and latch (705.2.4)
- 22. Painted sprinkler heads (901.6 & NFPA 25)
- 23. Cafeteria hazards, grease filters, (606 & 904.13)
- 24. Door hold-open devices and closers not working (705.2.3)

OFFICE BUILDINGS

- 1. Blocked and/or obstructed egress doors (1003.6 & 1032.3)
- 2. Misuse of extension cords (603.6)
- 3. Extinguishers not serviced or missing (901.6, 906.2 & NFPA 10)
- 4. Lack of visible address (505.1)
- 5. Storage of combustibles (304.3 & 315.3)
- 6. Storage below sprinkler heads (315.3.1)
- 7. Combustibles too close to heating equipment (315.3 & 315.3.3)
- 8. Improper storage of flammable liquids (5704.3.3.5.3)
- 9. Lack of proper maintenance and/or testing of fire systems (901.6)
- 10. Blocked sprinkler heads (901.6)
- 11. Painted sprinkler heads (901.6 & NFPA 25)

MANUFACTURING

- 1. Lack of emergency vehicle access to building (503.1.1)
- 2. Misuse of extension cords (603.6)
- 3. Hazard identification signs (placard) (5003.5)
- 4. Chemical storage shall be identified in red letters (5003.8.7.2)
- 5. Compressed gas cylinders shall be secured (5303.5.3)
- 6. Blocked and/or obstructed egress doors (1003.6 & 1032.3)
- 7. Fire protection equipment not serviced (901.6)
- 8. Private fire hydrants flow test and maintenance annually (507.5.3)
- 9. Combustible materials storage in mechanical, electrical equipment rooms, boiler rooms or fire command centers (315.3.3)
- 10. Smoking prohibited areas not defined (310)
- 11. Inadequate aisles and exits (1003.6, 1032 and 1104.23)
- 12. Storage of combustible materials in buildings (315.4)
- 13. Outside storage of combustibles shall not be located within 10' of the property line (315.4)
- 14. Combustibles too close to heating equipment (315.3.3)
- 15. Spontaneous ignition, oily rags (304.3.1)

COMMON HAZARDS BY OCCUPANCY

COMMON HAZARDS BY OCCUPANCY

- 16. Paint spraying requires an operational permit (105.5.47)
- 17. Dip tank covers shall be kept closed when not in use. (2405.3.4.3)
- 18. Paint and chemical storage must be orderly (5704.3.3.5.3)
- 19. High-piled storage requires an operational permit (105.5.24)
- 20. Welding or hot work requires an operational permit (105.5.24)
- 21. Inadequate exhausting of flammable vapors (2404.7)
- 22. Storage of combustibles rubbish or debris (304.3)
- 23. Blocked sprinkler heads (901.6)
- 24. Painted sprinkler heads (901.6 and NFPA 25)
- 25. No visible address on the building (505.1)
- Battery charging areas shall be provided with a minimum 4-A:20-B:C rated fire extinguisher within 20' of battery charger (309.5)

SCHOOLS

- 1. Blocked or chained exits (1003.6)
- 2. Blocked sprinkler heads (901.6)
- 3. Exit lights not functioning (1008.2 & 1013.3)
- 4. Fire extinguishers not maintained/missing (901.6, 906.2 & NFPA 10)
- 5. Unobstructed access to fire hydrants at all times (507.5.4)
- 6. Flammable liquids storage must be orderly (5704.3.3.5.3)
- 7. Private fire hydrants flow test and maintenance annually (507.5.3)
- 8. Excessive combustibles storage (315.3)
- 9. Lack of fire drills and/or documentation (405.3)
- 10. Non-flame-retardant drapes in auditorium (807.3 & NFPA 701)
- 11. Extension cords used for permanent appliances (603.6)
- 12. Combustibles near heating equipment (315.3)
- 13. Lack of visible address (505.1)
- 14. Spray painting in shops and illegal/unapproved booths (2404.2)
- 15. Storage of oily rags (304.3.1)
- 16. Permit for welding and hot work hazards (105.5.24)
- 17. Lack of emergency vehicle access to building (503.1)
- 18. Fire protection equipment not in service (901.6 & 901.7)
- 19. Recommend key box with master key(s) (506.1)
- 20. Cafeteria hazards, grease filters, (606 and 904.13)
- 21. Fire alarm testing and documentation (907.8.4)
- 22. Painted sprinkler heads (901.6 & NFPA 25)

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