Ordinance No. 2023-04

An Ordinance of the City of Harrisburg, South Dakota, Adopting The 2021 International Fire Code.

The 2021 International Fire Code, published by the International Code Council, together with Appendixes B and D, Index and Amendments, and additions thereto as provided in this subchapter is hereby adopted, and shall constitute the Fire Prevention Code of the City of Harrisburg, SD. A printed copy of the 2021 International Fire Code, with Appendixes B and D, Index and Amendments, and additions thereto shall be filed with the city finance officer.

Amendments, Additions, and Deletions by the City of Harrisburg to the 2021 International Fire Code.

The following sections and subsections of the 2021 *International Fire Code* adopted in this subchapter shall be amended, added, or deleted as follows. All other sections and subsections of the 2021 *International Fire Code* shall remain the same.

- **101.1 Title.** These regulations shall be known as the Fire Code of the City of Harrisburg, SD, hereinafter referred to as *this fire code*.
- **101.2.1 Appendices.** Provisions in the appendices shall not apply unless specifically adopted. The following appendices are adopted:

Appendix B: Fire-Flow Requirements for Buildings

Appendix D: Fire Apparatus Access Roads

- **102.7** Referenced codes and standards. The codes and standards referenced in this code shall be the most recent edition published of those that are listed in Chapter 80 and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference and further regulated in Sections 102.7.1 and 102.7.2. Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall apply.
- **103.1 General.** The division of fire prevention is established. The city shall designate a person as the code official. The function of the division shall be the implementation, administration, and enforcement of the provisions of this fire code.

The Fire Code adopted pursuant to Section 1 shall be enforced by the building official or the fire chief of the recognized Harrisburg Community Fire Department in Harrisburg, SD.

The building official or fire chief shall have the power to modify any of the provisions of this fire code upon application in writing by the owner or lessee of any premises, or their duly authorized agent, whenever there are practical difficulties in the manner of carrying out the strict letter of this code; provided however, the spirit of the code shall be observed, public safety secured, and substantial justice done. The particulars of such modification when granted or allowed and the decision of the building official and fire chief thereon shall be entered upon the records of the fire department and a signed copy shall be furnished the applicant and the building official.

Whenever the building official or fire chief shall disapprove an application or refuse to grant a license or permit applied for, or when it is claimed the provisions of this fire code

do not apply or that the true intent and meaning of this fire code has been misconstrued or wrongly interpreted, the applicant may appeal the decision of the building official or fire chief to the city council within thirty days from the date of the decision.

- **103.2 Appointment.** Not adopted by the city.
- **103.3** Inspectors and fire protection engineer. For this fire code, "code official" also means inspectors and fire protection engineer assigned to the fire prevention division for the purpose of fire code enforcement.
- 103.4 Liability. The chief and other individuals charged by the chief with the control of extinguishment of any fire, the enforcement of this code, or any other official duties, acting in good faith and without malice in the discharge of their duties, shall not thereby be rendered personally liable for any damage that may occur to persons or property as a result of any act or by reason of any act or omission in the discharge of their duties. Any suit brought against the chief or such individuals because of such an act or omission performed in the enforcement of any provision of such codes or other pertinent laws or ordinances implemented through the enforcement of this code or enforced by the code enforcement agency, such chief or employee shall be afforded all the protection provided by the City's insurance pool, immunities, and any immunities and defenses provided by other applicable state and federal laws.

This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the code enforcement agency or its parent jurisdiction be held as assuming any such liability by reason of the inspections authorized by this code or any permits or certificates issued under this code.

- **104.1 General.** The City may enforce the provisions of this fire code, render interpretations of this fire code, and adopt policies, procedures, rules, and regulations to clarify the application of its provisions. Such interpretations, policies, procedures, rules, and regulations shall comply with the intent and purpose of this fire code and shall not have the effect of waiving requirements specifically provided for in this fire code.
- **104.11.3** Systems and devices. No person shall render a system or device inoperative during an emergency unless by direction of the fire chief or fire department official in charge of the incident. No person shall tamper with, interfere with, or impair in any way any public or private fire alarm system or apparatus, wire or equipment of any kind belonging to, or in any way connected to the fire department or the fire alarm system.

Section 105 Licenses and Permits

- **105.1 General.** Operational licenses, construction permits, and event permits shall be in accordance with Section 105.
- **105.1.1** Licenses and permits required. Any property owner or authorized agent who intends to conduct an operation or business or install or modify systems and equipment which is regulated by this code, or cause any such work to be done, shall first make application to the code official and obtain the required license or permit.
- **105.1.2** Types of operational licenses, construction permits, and event permits. There three types of licenses/permits:
 - Operational license. An operational license allows the applicant to conduct an operation or a business for which a license is required by Section 105.5 until

- renewed or revoked.
- 2. Construction permit. A construction permit allows the applicant to install or modify systems and equipment for which a permit is required by Section 105.6.
- 3. Event permit. An event permit allows an applicant to install or use a product or device or conduct an operation for which a permit is required by Section 105.8.
- **105.2 Application.** Application for licenses or permits required by this fire code shall be made to the code official in such form and detail as prescribed by the code official. Applications for licenses or permits shall be accompanied by such plans as prescribed by the code official.
- **105.2.1 Refusal to issue licenses or permits.** If the application for a license or permit describes a use that does not conform to the requirements of this fire code and other pertinent laws and ordinances, the code official shall not issue a license or permit but shall return the application to the applicant with the refusal to issue such license or permit. Such refusal shall, when requested, be in writing and shall contain the reasons for refusal.
- **105.2.2 Inspection authorized.** Before a new operational license or permit is approved, the code official is authorized to inspect the receptacles, vehicles, buildings, devices, premises, storage spaces, or areas to be used to determine compliance with this fire code or any operational constraints required.
- **105.2.3 Time limitation of application.** An application for an operational license or permit for any proposed work or operation shall be deemed to have been abandoned six months after the date of filing, unless such application has been diligently prosecuted or a permit has been issued; except that the code official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each if there is reasonable cause.
- **105.2.4 Action on application.** The code official shall examine or cause to be examined applications for operational licenses, permits and amendments within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the code official shall reject such application in writing, stating the reasons therefor. If the code official is satisfied with the proposed work or if the operation conforms to the requirements of this code and applicable laws and ordinances, the code official shall issue a permit as soon as practicable.
- **105.2.5** Fee schedule. Fees for licenses and permits shall be by city resolution.
- **105.2.6 Increased fee.** When work for which a permit is required by this fire code commenced without obtaining the required permit, the fee as specified in Section 105.2.5 shall be doubled. The payment of the increased fee shall not relieve any person or firm from completely complying with all applicable sections of this fire code for said work.
- 105.3 Conditions of an operational license or permit. An operational license or permit shall constitute permission to maintain, store, or handle materials; or to conduct processes which produce conditions hazardous to life or property; or to install equipment utilized in connection with such activities; or to install or modify any fire protection system or equipment or any other construction, equipment installation, or modification in accordance with the provisions of this fire code where a permit is required by Sections 105.5, 105.6, [and] 105.8. Such permission shall not be construed as authority to violate, cancel, or set aside any of the provisions of this fire code or other applicable regulations or laws of the jurisdiction.

- 105.3.1 Expiration. A construction permit shall remain in effect until reissued, renewed, or revoked or for such a period as specified in the 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. Before such work recommences, a new permit shall be first obtained and the fee, if any, shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year. Permits are not transferable and any change in occupancy, operation, tenancy, or ownership shall require that a new permit be issued.
- **105.3.5 Posting the license or permit.** Issued licenses and permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the code official.
- **105.3.6 Compliance with code.** The issuance or granting of a license or permit shall not be construed to be a license or permit for, or an approval of, any violation of any of the provisions of this fire code or of any other ordinance of the jurisdiction. Licenses or permits presumed to give authority to violate or cancel the provisions of this fire code or other ordinances of the jurisdiction shall not be valid. The issuance of a license or permit based on construction documents and other data shall not prevent the code official from requiring the correction of errors in the construction documents and other data. Any addition to or alteration of approved construction documents shall be approved in advance by the code official, as evidenced by the issuance of a new or amended permit.
- **105.3.7 Information on the license or permit.** The code official shall issue all licenses or permits required by this fire code on an approved form furnished for that purpose. The license or permit shall contain a general description of the operation or occupancy and its location, and any other information required by the code official. Issued licenses or permits shall bear the signature of the code official.
- **105.3.9 Electronic submittal of documents.** Submittal of as-built construction documents for building fire protection systems shall be provided within ten days of final acceptance testing. Documents shall be in an approved electronic format.
- **105.4 Revocation.** The code official may revoke an operational license or permit issued under the provisions of this fire code when it is found by inspection or otherwise that there has been a false statement or misrepresentation as to the material facts in the application or construction documents on which the permit or approval was based including, but not limited to, any one of the following:
 - 1. The license or permit is used for a location or establishment other than that for which it was issued.
 - 2. The license or permit is used for a condition or activity other than that listed in the permit.
 - 3. Conditions and limitations set forth in the license or permit have been violated.
 - 4. There have been any false statements or misrepresentations as to the material fact in the application for the license or permit or plans submitted or a condition of the permit.
 - 5. The license or permit is used by a different person or firm than the name for which

- it was issued.
- The licensee or permittee failed, refused, or neglected to comply with orders or notices duly served in accordance with the provisions of this fire code within the time provided therein.
- 7. The license or permit was issued in error or in violation of an ordinance, regulation, or this fire code.
- **105.5** Required operational licenses and/or permits. The code official may issue operational licenses and/or permits for the operations set forth in Sections 105.5.1 through 105.5.52.
- 105.5.1 Additive manufacturing. No license or permit required.
- 105.5.2 Aerosol products, aerosol cooking spray products, and plastic aerosol 3 products. No license or permit required.
- 105.5.3 Amusement buildings. No license or permit required.
- **105.5.4 Aviation facilities.** An operational license is required to use a Group H or Group S occupancy for aircraft servicing or repair and aircraft fuel-servicing vehicles.
- 105.5.5 Carnivals and fairs. No license or permit required.
- 105.5.6 Cellulose nitrate film. No license or permit required.
- **105.5.7 Combustible dust-producing operations.** An operational license is required to operate a grain elevator, flour starch mill, feed mill, or a plant pulverizing aluminum, coal, cocoa, magnesium, spices or sugar, or other operations producing combustible dusts as defined in Chapter 2 of this fire code.
- 105.5.8 Combustible fibers. No license or permit required.
- **105.5.9 Compressed gases.** No license or permit required. Associated Table 105.5.9 shall be utilized where referenced for application of other provisions of this fire code.
- 105.5.10 Covered and open mall buildings. No license or permit required.
- **105.5.11 Cryogenic fluids.** No license or permit required. Associated Table 105.5.11 shall be utilized where referenced for application of other provisions of this fire code.
- 105.5.12 Cutting and welding. No license or permit required.
- **105.5.13 Dry cleaning plants.** An operational license is required to engage in the business of dry cleaning or to change to a more hazardous cleaning solvent used in existing dry-cleaning equipment.
- 105.5.14 Energy storage solutions. Not adopted by the city.
- 105.5.15 Exhibits and trade shows. No license or permit required.
- **105.16 Explosives.** An operational license is required for the manufacture, storage, handling, sale, or use of any quantity of explosives, explosive material, fireworks, or pyrotechnic special effects within the scope of Chapter 56 of this fire code.
 - **Exception:** Storage in Group R-3 occupancies of smokeless propellant, black powder, and small arms primers for personal use, not for resale, and in accordance with Section 5606.
- **105.5.17 Fire hydrants and valves.** No license or permit required.

105.5.18 Flammable and combustible liquids. An operational license is required:

- 1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOT), nor does it apply to piping systems.
- 2. To store, handle, or use more than 5 gallons (19 L) of Class I liquids in a building or more than 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:
 - 2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant, or mobile heating plant, unless such storage, in the opinion of the code official, would cause an unsafe condition.
 - 2.2. The storage or use of paints, oils, varnishes, or similar flammable mixtures when such liquids are stored for maintenance, painting, or similar purposes for a period of not more than 30 days.
- 3. To store, handle, or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.
- 4. To store, handle, or use Class IIIB liquids in tanks or portable tanks for fueling motor vehicles at motor fuel-dispensing facilities or where connected to fuel-burning equipment.

Exception: Fuel oil and used motor oil used for space heating or water heating.

- 5. To remove Class I or II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes.
- 6. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries, and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed, or used.
- 7. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or combustible liquid tank.
- 8. To change the type of contents stored in a flammable or combustible liquid tank to a material that poses a greater hazard than that for which the tank was designed and constructed.
- 9. To manufacture, process, blend, or refine flammable or combustible liquids.
- 10. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental, or manufacturing establishments.
- 11. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles, marine craft, and other special equipment at

commercial, industrial, governmental, or manufacturing establishments.

105.5.19 Floor finishing. An operational permit is required for floor finishing or surfacing operations exceeding 350 square feet (33 m²) using Class I or Class II liquids.

105.5.20 Fruit and crop ripening. An operational license is required to operate a fruit- or crop-ripening facility or conduct a fruit-ripening process using ethylene gas.

105.5.21 Fumigation and insecticidal fogging. No license or permit required.

105.5.22 Hazardous materials. No license or permit required.

105.5.23 HPM facilities. No license or permit required.

105.5.24 High-piled storage. No license or permit required.

105.5.25 Hot work operations. No license or permit required.

105.5.26 Industrial ovens. No license or permit required.

105.5.27 Lumber yards and woodworking plants. An operational license is required for the storage or processing of lumber exceeding 100,000 board feet $(8,333 \text{ ft}^3)$ (236 m^3) .

105.5.28 Liquid- or gas-fueled vehicles or equipment in assembly buildings. No license or permit required.

105.5.29 LP gas. An operational license is required for:

1. Storage and use of LP gas.

Exception: A permit is not required for individual containers with a 500-gallon (1,893 L) water capacity or less serving occupancies in Group R-3.

2. Operation of cargo tankers that transport LP gas.

105.5.30 Magnesium. No license or permit required.

105.5.31 Miscellaneous combustible storage. No license or permit required.

105.5.32 Mobile food preparation vehicles. A permit is required for mobile food preparation vehicles with appliances that produce smoke or grease laden vapors.

105.5.33 Motor fuel-dispensing facilities. An operational license is required for the operation of automotive, marine, and fleet motor fuel-dispensing facilities.

105.5.34 Open burning. An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road, or other public or private ground. Instructions and stipulations of the permit shall be adhered to.

Exception: Recreational fires.

105.5.35 Open flames and torches. No license or permit required.

105.5.36 Open flames and candles. See Section 105.8 for permit requirements.

105.5.37 Organic coatings. No license or permit required.

105.5.38 Outdoor places of assembly. No license or permit required.

- 105.5.39 Places of assembly. No license or permit required.
- **105.5.40 Plant extraction systems.** An operational license is required to use plant extraction systems.
- **105.5.41 Private fire hydrants.** No license or permit required.
- **105.5.42 Pyrotechnic special effects material.** See Section 105.8.1 for permit requirements.
- 105.5.43 Pyroxylin plastics. No license or permit required.
- 105.5.44 Refrigeration equipment. No license or permit required.
- **105.5.45** Repair garages and motor fuel dispensing facilities. An operational license is required for the operation of repair garages.
- **105.5.46 Rooftop heliports.** An operational license is required for the operation of a rooftop heliport.
- **105.5.47 Spraying or dipping.** An operational license is required to conduct a spraying or dipping operation utilizing flammable or combustible liquids or the application of combustible powders regulated by Chapter 24 of this fire code.
- 105.5.48 Storage of scrap tires and tire byproducts. No license or permit required.
- **105.5.49 Temporary membrane structures and tents.** See Section 105.6.24 for construction permit requirements.
- **105.5.50 Tire-rebuilding plants.** An operational license is required for the operation and maintenance of a tire-rebuilding plant.
- 105.5.51 Waste handling. No license or permit required.
- 105.5.52 Wood products. No license or permit required.
- **105.6 Required construction permits.** The fire code official is authorized to issue construction permits for work as set forth in Sections 105.6.1 through 105.630.24.
- **105.6.1** Automatic fire-extinguishing systems. A construction permit is required for installation of or modification to an automatic fire-extinguishing system. Maintenance performed in accordance with this fire code is not considered a modification and does not require a permit.
- **105.6.2 Compressed gases.** No license or permit required.
- **105.6.3 Cryogenic fluids.** No license or permit required.
- **105.6.4** Emergency responder radio coverage system. A construction permit is required for installation or modification of emergency responder radio coverage systems and related equipment. Maintenance performed in accordance with this code is not considered to be a modification and does not require a construction permit.
- **105.6.5** Energy storage systems. No license or permit required.
- **105.6.6** Fire alarm and detection systems and related equipment. A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment. Maintenance performed in accordance with this fire code is not considered a modification and does not require a permit.

105.6.7 Fire pumps and related equipment. A construction permit is required for installation of or modification to fire pumps and related fuel tanks, jockey pumps, controllers, and generators. Maintenance performed in accordance with this fire code is not considered a modification and does not require a permit.

105.6.8 Flammable and combustible liquids. A construction permit is required:

- 1. To install, repair, or modify a pipeline for the transportation of flammable or combustible liquids.
- 2. To install, construct, or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries, and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed, or used.
- 3. To install, alter, remove, abandon, place temporarily out of service, or otherwise dispose of a flammable or combustible liquid tank.
- 105.6.9 Fuel cell power systems. No license or permit required.
- 105.6.10 Gas detection systems. No license or permit required.
- **105.6.11 Gates and barricades across fire apparatus access roads.** No license or permit required.
- 105.6.12 Hazardous materials. No license or permit required.
- 105.6.13 High piled combustible storage. No license or permit required.
- 105.6.14 Industrial ovens. No license or permit required.
- **105.6.15 LP gas.** A construction permit is required for installation of or modification to an LP gas system.
- **105.6.16 Motor vehicle repair rooms and booths.** No license or permit required.
- 105.6.17 Plant extraction systems. No license or permit required.
- 105.6.18 Private fire hydrants. No license or permit required.
- **105.6.19 Smoke control or smoke exhaust system.** No license or permit required.
- **105.6.20 Solar photovoltaic power systems.** A construction permit is required to install or modify solar photovoltaic power systems. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.
- **105.6.21 Special event structure.** Temporary structures must be permitted following Section 105.6.24.
- **105.6.22 Spraying or dipping.** A construction permit is required to install or modify a spray room, dip tank, or booth.
- **105.6.23 Standpipe systems.** A construction permit is required for the installation, modification, or removal from service of a standpipe system. Maintenance performed in accordance with this fire code is not considered a

modification and does not require a permit.

105.6.24 Temporary membrane structures and tents. A construction permit is required to erect an air-supported temporary membrane structure or a tent having an area more than 1,000 square feet (92 m²). The owner of the temporary membrane structure, or their representative, shall acquire the construction permit prior to the placement of the structure.

Exceptions:

- 1. Tents used exclusively for recreational camping purposes.
- 2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.
- 3. Tents and awnings open on all sides which comply with all the following:
 - 3.1 Individual tents shall have a maximum size of 1,000 square feet (92 m^2). The aggregate area of multiple canopies placed side by side without a fire break clearance of not less than 12 feet (3,658 mm) shall not exceed 1,000 square feet (92 m^2) total.
 - 3.2 A minimum clearance of 12 feet (3,658 mm) to structures and other tents shall be maintained.

105.8 Required event permits.

- **105.8.1 Pyrotechnic displays and open flame demonstrations.** An event permit is required for all pyrotechnic displays or for open flames during a theatrical or concert performance.
- **105.8.2 Blasting.** A permit is required for blasting or use of explosives during a construction project.
- **105.8.3 Hazardous stand-by.** An event permit is required for hazardous situations stand-by. These include events where use of flammable liquids or gases are used as part of an entertainment or performance, where crowds are anticipated to or beyond occupancy limits, or major events where public safety is of concern or exiting may be compromised (see article 9, assembly and special events).
- **111.1 General.** The process to appeal items relating to interpretation and application of this fire code is in the Municipal Ordinances of the City of Harrisburg, South Dakota.
- **112.4 Violation penalties.** Any person who violates a provision of this fire code or fails to comply with any of its requirements or who erects, installs, alters, repairs, or does work in violation of the approved construction documents or directive of the code official, or of a permit or certificate used under provisions of this fire code, is guilty of a city ordinance violation, punishable by the provisions of the Municipal Ordinances of the City of Harrisburg, South Dakota.
- **113.4 Failure to comply.** Any person who continues any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine as specified in the Municipal Ordinances of the City of Harrisburg, South Dakota.
- 307.4.3 Portable outdoor fireplaces. Portable outdoor fireplaces shall be used in

accordance with the manufacturer's instructions and shall not be operated within 15 feet (4,572 mm) of a structure or combustible material.

- 308.1.4 Open-flame cooking devices. Not adopted by the city.
- 312.2 Posts. Guard posts shall comply with all the following requirements:
 - Constructed of steel not less than 4 inches (102 mm) in diameter and concrete filled.
 - 2. Spaced not more than 4 feet (1,219 mm) between posts on center.
 - 3. Set not less than 4 feet (1,219 mm) deep in a concrete footing of not less than a 15-inch (381 mm) diameter.
 - 4. Set with the top of the posts not less than 3 feet (914 mm) aboveground.
 - 5. Located not less than 3 feet (914 mm) from the protected object.

315.2 Permit required (Not adopted by the city).

315.3.3 Equipment rooms. Combustible material shall not be stored in boiler rooms, mechanical rooms, or electrical equipment rooms.

Exception:

Fire sprinkler-protected mechanical rooms meeting all the following:

- 1. Containing no fuel-fired or electric heat-producing equipment other than that used exclusively for conditioning the mechanical space.
- 2. Containing entirely ducted (non-plenum) air-handling equipment.
- Storage shall be kept a minimum of 4 feet (1,219 mm) away, or per manufacturer's specified clearance, where greater, from all portions of equipment and shall not hinder ready access to equipment servicing areas or controls.
- Required clearances shall be permanently marked in an approved manner upon the floor surrounding the equipment such as to make prohibited storage areas plainly visible.
- **505.1** Address identification. New and existing buildings shall be provided with approved address numbers or letters. Each character shall be not less than 4 inches (102 mm) in height and not less than 0.5 inch (12.7 mm) in width. They shall be installed on a contrasting background and be plainly visible from the street or road fronting the property. When required by the code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Multibuilding campus/complex developments addressed on private or public streets shall be provided with signage at the entrance to the campus/complex indicative of the address ranges within. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole, or other approved sign or means shall be used to identify the structure. Address identification shall be maintained.

Section 503

Fire Apparatus Access Roads

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1 through 503.1.3.

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building, or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exceptions:

- 1. The fire code official is authorized to increase the dimension of 150 feet to a maximum of 200 feet where any of the following conditions occur:
- 2. Where approved by the fire code official, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

503.1.2 Additional access. The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by conditions of terrain, climatic conditions, or other factors that could limit access.

901.7 Systems out of service. Where a required fire protection system is out of service, the fire department and the code official shall be notified immediately and, where required by the code official, the building shall either be evacuated, or an approved fire watch shall be provided for all occupants left unprotected by the shutdown until the fire protection system has been returned to service. Practices requiring fire protection (i.e., spray finishing, mixing/dispensing of flammable and hazardous liquids, etc.) shall be discontinued until fire protection system(s) are restored.

Where utilized, fire watches shall be provided with at least one approved means for notification of the fire department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires.

Fire watches associated with an impaired fire protection system, and all costs associated with providing the fire watch, shall be the responsibility of the property owner or responsible party. Where an owner or responsible party cannot be contacted or is unable to respond to the location within 60 minutes of notification, the Harrisburg Community Fire Department will provide personnel for fire watch duties until such time the owner/responsible party contact and/or response occurs. The fire watch provided by the Harrisburg Community Fire Department shall be billable to the owner or responsible party at \$75.00 per fire inspector, unless otherwise stipulated in this subsection. Notwithstanding the previous sentence, the owner or responsible party will be billed at the rate of a Step 12 fire inspector. Billing shall be on a per-hour basis, or fraction thereof, with a 2-hour minimum charge.

902.1 Definitions. The following words and terms in addition to the defined terms already incorporated by reference in Section 91.016 of this code, shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

[F] 903.2.6 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

Exceptions:

- 1. An automatic sprinkler system installed in accordance with Section 903.3.1.1 is required in Group I-1 Condition 1 or 2 facilities.
- 2. An automatic sprinkler system is not required where Group I-4-day care facilities are at the level of exit discharge and where every room where care is provided has not fewer than one exterior exit door.
- 3. In buildings where Group I-4-day care is provided on levels other than the level of exit discharge, an automatic sprinkler system in accordance with Section 903.3.1.1 shall be installed on the entire floor where care is provided, all floors between the level of care and the level of exit discharge, and all floors below the level of exit discharge other than areas classified as an open parking garage.
- **[F] 903.2.8 Group R.** An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with Group R-1 and R-4 fire areas and Group R-2 multifamily residences having six or more dwelling units.
- **[F] 903.2.10 Group S-2 parking garages.** An automatic sprinkler system shall be provided throughout buildings classified as parking garages where any of the following conditions exist:
 - 1. Where the fire area of the enclosed parking garage in accordance with Section 406.6 exceeds 12,000 square feet (1,115 m²).
 - 2. Where the enclosed parking garage in accordance with Section 406.6 is located beneath other groups.

Exception: Enclosed parking garages located between Group R-3 occupancies.

- **[F] 903.3.1.1.1 Exempt locations.** Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from a room merely because it is damp, of fire-resistance-rated construction, or contains electrical equipment.
 - 1. A room where the application of water, or flame and water, constitutes a serious life or fire hazard.
 - 2. A room or space where sprinklers are considered undesirable because of the nature of the contents, where approved by the fire code official. Such rooms shall be separated from the remainder of the building by fire barrier walls and horizontal assemblies having a fire-resistance rating of not less than two hours.
 - 3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than two hours.
 - 4. Rooms or areas that are of noncombustible construction with noncombustible

contents.

- 5. Fire service access elevator machine rooms and machinery spaces.
- 6. Machine rooms, machinery spaces, control rooms, and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008.

[F] 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 the following conditions:

- 1. Four stories or fewer above grade plane.
- 2. The floor level of the highest story is 60 feet (18,288 mm) or less above the lowest level of fire department vehicle access.
- 3. The floor level of the lowest story is 60 feet (18,288 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 shall be measured from grade plane.

- **[F] 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 plumbing 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.
- **[F] 904.13.2 System interconnection.** The actuation of the fire suppression system shall automatically shut down the fuel and/or electrical power supply to the cooking equipment and all electrical receptacles located beneath the hood. The fuel and electrical supply reset shall be manual.
- **907.2.1.1** System initiation in Group A occupancies with an occupant load of 1,000 or more. Activation of the fire alarm in Group A occupancies with an occupant load of 1,000 or more shall initiate a signal using an emergency voice/alarm communications system in accordance with Section 907.5.2.2.

- 1. Group A-3 occupancies used for religious worship.
- 2. Where approved, the prerecorded announcement is allowed to be manually deactivated for a period, not to exceed three minutes, for the sole purpose of allowing a live voice announcement from an approved, constantly attended location.
- **907.2.2 Group B.** A manual fire alarm system shall be installed in Group B occupancies where one of the following conditions exists:
 - 1. The combined Group B occupant load of all floors is 500 or more.
 - 2. The Group B occupant load is more than 100 persons above or below the lowest

level of exit discharge.

- 3. The fire area contains a Group B ambulatory health care facility.
- 4. The Group B fire area has more than two occupied levels.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

907.2.6.2 Group I-2. An automatic smoke detection system 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. 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.

Exceptions: Corridor smoke detection is not required in smoke compartments that contain patient sleeping rooms where patient sleeping units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the corridor side of each patient sleeping unit and an audible and visual alarm at the nursing station attending each unit. Smoke detectors installed as part of an intelligent or addressable fire alarm system capable of annunciation of room origin at a constantly attended location shall be acceptable.

907.2.8.2 Automatic smoke detection system. An automatic smoke detection system that activates the occupant notification system in accordance with 907.5 shall be installed throughout all interior corridors serving sleeping units and at the top of each enclosed stairwell.

Exception: An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

[F] 907.2.8.4 Heat detectors. Heat detectors shall be installed in each attic subdivision or similar areas not otherwise covered by an automatic fire-extinguishing system.

- 1. Heat detection is not required in areas protected by an automatic fireextinguishing system installed in accordance with Section 903.3.1.1 or in addition to the requirements of Section 903.3.1.2.
- 2. Heat detectors are not required where the fire partitions extend into and through the interstitial attic space.
- **907.2.9 Group R-2.** Fire alarm systems and smoke alarms shall be installed in Group R-2 occupancies, as required in Sections 907.2.9.1 through 907.2.9.5.
- **907.2.9.1 Manual and automatic fire alarm system.** A manual and automatic fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-2 where any of the following conditions

apply:

- 1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge.
- 2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit: or
- 3. The building contains more than 16 dwelling units or sleeping units; or
- 4. The building contains four or more dwelling units or sleeping units above the level of exit discharge.

Exceptions:

- 1. A fire alarm system is not required in buildings not more than two stories in height where all dwelling units or sleeping units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least 1-hour fire partitions and each dwelling unit or sleeping unit has an exit directly to a public way, exit court, or yard.
- 2. Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and the occupant notification appliances will automatically activate throughout the notification zones upon a sprinkler water flow.
- 3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1026.6, Exception 4.
- **907.2.9.4 Smoke Detectors.** Automatic smoke detection shall be provided in each enclosed stairway and all exit corridors.
- **907.2.9.5 Heat detectors.** Automatic heat detectors shall be installed in each attic subdivision, any attached garages and similar areas not otherwise covered by an automatic fire-extinguishing system.

Exceptions:

- 1. Automatic heat detection is not required in areas protected by an automatic fire-extinguishing system installed in accordance with Section 903.3.1.1 or in addition to the requirements of Section 903.3.1.2.
- 2. Automatic heat detectors are not required where the fire partitions extend into and through the interstitial attic space.

[F] 907.2.12.1.2 Duct smoke detection. Duct smoke detectors complying with Section 907.3.1 shall be located as follows:

1. In the main return air and exhaust air plenum of each air-conditioning system

- having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m³/s). Such detectors shall be in a serviceable area downstream of the last duct inlet.
- At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air- conditioning system. In Group R-1 and R-2 occupancies, a smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm (2.4 m³/s) and serving not more than 10 airinlet openings.
- 3. Duct smoke detectors installed more than 10 feet above a finished floor, above a ceiling, or on a rooftop shall be installed with remote test/indicators in an approved location below and in proximity to the unit served.
- **[F] 907.5 Occupant notification.** Occupant notification by fire alarms shall be in accordance with Sections 907.5.1 through 907.5.2.3.3. Occupant notification by smoke alarms in Group R-1 occupancies shall comply with Section 907.5.2.1.3.2.
- **[F] 907.5.2.1.3 Audible signal frequency in Group R-1 sleeping rooms.** Audible signal frequency in Group R-1 occupancies shall be in accordance with Sections 907.5.2.1.3.1 and 907.5.2.1.3.2.
- **[F] 907.5.2.1.3.1 Fire alarm system signal.** In sleeping rooms of Group R-1 occupancies, the audible alarm activated by a fire alarm system shall be a 520-Hz low-frequency signal complying with NFPA 72.
- **[F] 907.5.2.1.3.2 Smoke alarm signal in sleeping rooms.** In sleeping rooms of Group R-1 occupancies that are required by Section 907.2.8 or 907.2.9 to have a fire alarm system, the audible alarm signal activated by single- or multiple-station smoke alarms in the dwelling unit or sleeping unit shall be a 520-Hz signal complying with NFPA 72. Where a sleeping room smoke alarm is unable to produce a 520-Hz signal, the 520-Hz alarm signal shall be provided by a listed notification appliance or a smoke detector with an integral 520-Hz sounder.
- **912.2.1 Visible location.** Fire department connections shall be located on the street side of buildings, fully visible, and recognizable from the street or nearest point of fire department vehicle access or as otherwise approved by the code official. A weather-rated horn/strobe connected to the fire detection or sprinkler system shall be located not lower than 8 feet above the fire department connection and within 10 feet horizontally of the connection. The weather-rated horn/strobe must be visible from the fire lane or street.
- **1005.3.1 Stairways.** The capacity, in inches (mm), of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.3 inch (7.6 mm) per occupant. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story.

Exceptions:

 Facilities with smoke-protected assembly seating shall be permitted to use the capacity factors in Table 1029.6.2 indicated for stepped aisles for exit access or exit stairways where the entire path for means of egress from the seating to the exit discharge is provided with a smoke control system

- complying with Section 909.
- 2. Facilities with outdoor smoke-protected assembly seating shall be permitted to the capacity factors in Section 1029.6.3 indicated for stepped aisles for exit access or exit stairways where the entire path for means of egress from the seating to the exit discharge is open to the outdoors.

1005.3.2 Other egress components. The capacity, in inches (mm), of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant.

Exceptions:

- Facilities with smoke-protected assembly seating shall be permitted to use the capacity factors in Table 1029.6.2 indicated for level or ramped aisles for means of egress components other than stairways where the entire path for means of egress from the seating to the exit discharge is provided with a smoke control system complying with Section 909.
- Facilities with outdoor smoke-protected assembly seating shall be permitted to the capacity factors in Section 1029.6.3 indicated for level or ramped aisles for means of egress components other than stairways where the entire path for means of egress from the seating to the exit discharge is open to the outdoors.
- 1007.1.1 Two exits or exit access doorways. Where two exits, exit access doorways, exit access stairways or ramps, or any combination thereof, including the exit access, are required from any portion of the exit access, they 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 them. Interlocking or scissor stairways shall be counted as one exit stairway.

- Where interior exit stairways or ramps are interconnected by a 1-hour fireresistance-rated corridor conforming to the requirements of Section 1020, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
- 2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served.
- 1007.1.2 Three or more exits or exit access doorways. Where access to three or more exits is required, not less than two exit or exit access doorways including the exit access shall be arranged in accordance with the provisions of Section 1007.1.1. Additional required exit or exit access doorways shall be arranged a reasonable distance apart so that if one becomes blocked, the others will be available.
- **1010.1.7 Thresholds.** Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height above the finished floor or landing for sliding doors serving dwelling units or 1/2 inch (12.7 mm) above the finished floor or landing for other doors. Raised thresholds

and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50 percent slope).

Exceptions:

- 1. In occupancy Group R-2 or R-3, threshold heights for sliding and side hinged exterior doors shall be permitted to be up to 8 inches (203 mm) in height if all the following apply:
 - 1.1 The door is not part of the required means of egress.
 - 1.2 The door is not part of an accessible route as required by Chapter 11.
 - 1.3 The door is not part of an accessible unit, Type A unit or Type B unit.

1010.1.9.4 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exist:

- 1. Places of detention or restraint.
- 2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M, and S, in places of religious worship, and exterior decks allowed to have one exit where the exit access from the deck extends back into the building, the main door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - 2.1 The locking device is readily distinguishable as locked.
 - 2.2 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 (25 mm) high on a contrasting background.
 - 2.3 The use of the key-operated locking device is revocable by the building official for due cause.
- 3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts does not have a doorknob or surface-mounted hardware.
- 4. 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.
- 5. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

1011.5.2 Riser height and tread depth. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. The riser height shall be measured vertically between the nosing's of adjacent treads. 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 at the intersections with the walk line and 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.
- 2. Stairways connecting stepped aisles to cross aisles or concourses shall be permitted to use the riser/tread dimension in Section 1029.14.2.
- 3. In Group R-3 occupancies, within dwelling units in Group R-2 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), the minimum tread depth shall be 10 inches (254 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 (152 mm). A nosing projection not less than 3/4 inch (19.1 mm), but not more than 1 1/4 inches (32 mm), shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
- 4. See Section 403.1 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 m²) in area shall be permitted to have a maximum riser height of 8 inches (203 mm) and a minimum tread depth of 9 inches (229 mm).

1015.4 Opening limitations. Required guards shall not have openings that allow passage of a sphere 5 inches (127 mm) in diameter from the walking surface to the required guard height.

- 1. The triangular openings at the open sides of a stair, formed by the riser, tread, and bottom rail shall not allow passage of a sphere 6 inches (152 mm) in diameter.
- 2. At elevated walking surfaces for access to and use of electrical, mechanical, or plumbing systems or equipment, guards shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.
- 3. In areas that are not open to the public within occupancies in Group B, I-3, F, H, M, or S, and for alternating tread devices and ships ladders, guards shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.
- 4. In assembly seating areas, guards required at the end of aisles in accordance with Section 1029.16.4 shall not have openings that allow passage of a sphere 5 inches (127 mm) in diameter up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) to 42 inches (1,067 mm) above the adjacent walking surfaces, guards shall not have openings that allow passage of a sphere 8 inches (203 mm) in diameter.
- 5. Within individual dwelling units and sleeping units in Group R-2 and R-3 occupancies, guards on the open sides of stairs shall not have openings that allow passage of a sphere 5 inches (127 mm) in diameter.

1020.4 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6,096 mm) in length.

- 1. In Group I-3 of Condition 2, 3, or 4, the dead end in a corridor shall not exceed 50 feet (15,240 mm).
- In occupancies in Groups B, E, F, M, R-1, R-2, S, and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15,240 mm).
- 3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.
- **1023.8 Discharge identification.** An interior exit stairway and ramp shall not continue below its level of exit discharge unless an approved barrier or a directional exit sign is provided at the level of exit discharge to prevent persons from unintentionally continuing into levels below. Directional exit signs shall be provided as specified in Section 1013.
- **1031.3.2 Minimum size.** Emergency escape and rescue openings shall have a minimum net clear opening of 5.0 square feet (0.46 m^2) .
- **1031.3.3 Maximum height from floor.** Emergency escape and rescue openings shall have the bottom of the clear opening not greater than 48 inches (1,219 mm) measured from the floor.
- 1031.5.2 Ladders or steps. Window wells with a vertical depth of more than 48 inches (1,219 mm) shall be equipped with an approved permanently affixed ladder or steps. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall, and shall be spaced not more than 18 inches (457 mm) on center (o.c.) vertically for the full height of the window well. The ladder or steps shall not encroach into the required dimensions of the window well by more than 6 inches (152 mm). The ladder or steps shall not be obstructed by the emergency escape and rescue opening. Ladders or steps required by this section are exempt from the stairway requirements of Section 1011.
- 1104.25 Egress path markings. Not adopted by the city.
- **2001.3 Operational license.** For operational licenses to operate aircraft-refueling vehicles, application of flammable or combustible finishes, and hot work, see Section 105.5.
- **2101.2** Operational license required. An operational license shall be required as set forth in Section 105.5.
- **2201.2** Operational license. An operational license shall be required for combustible dust- producing operations as set forth in Section 105.5.
- **2301.2 Operational license.** An operational license shall be required as set forth in Section 105.5.
- 2304.3 Unattended self-service stations. Unattended self-service stations shall be

limited to private or corporate fleet vehicle service stations and shall comply with Sections 2304.3.1 through 2304.3.5.

2306.2 Method of storage. Approved methods of storage for Class I, II, and IIIA liquid fuels at motor fuel-dispensing facilities shall be in accordance with Sections 2306.2.1 through 2306.2.5. Double-walled underground storage tanks shall be used.

Exception: Above-ground storage tanks shall be acceptable as an alternative where engineering analysis has determined the use of underground storage tanks impractical or not feasible. Where approved, above-ground storage tanks shall be listed in accordance with UL 2085.

2306.2.1.1 Inventory control for underground tanks. Accurate daily inventory records shall be maintained and reconciled on underground fuel storage tanks for indication of leakage from tanks and piping. The records shall be kept at the premises or made available for inspection by the fire code official within 24 hours of a written or verbal request and shall include records for each product showing daily reconciliation between sales, use, receipts, and inventory on hand. Where there is more than one system consisting of tanks serving separate pumps or dispensers for a product, the reconciliation shall be ascertained separately for each tank system. A consistent or accidental loss of product shall be immediately reported to the fire code official.

2307.4 Location of dispensing operations and equipment. In addition to the requirements of Section 2306.7, the point of transfer for dispensing operations shall be 25 feet (7,620 mm) or more from buildings having combustible exterior wall surfaces, buildings having noncombustible exterior wall surfaces that are not part of a one-hour fire-resistance-rated assembly, or buildings having combustible overhangs, lot lines of property which could be built on, public streets, or sidewalks and railroads and at least 10 feet (3,048 mm) from driveways and buildings having noncombustible exterior wall surfaces that are part of a fire-resistance-rated assembly having a rating of one-hour or more.

Exception: The point of transfer for dispensing operations need not be separated from canopies that are constructed in accordance with the *International Building Code* and which provide weather protection for the dispensing equipment.

LP gas containers shall be in accordance with Chapter 61. LP gas storage and dispensing equipment shall be located outdoors and in accordance with Section 2306.7. Like dispensing systems shall be separated by a minimum of 20 feet and a minimum of 50 feet from systems dispensing other liquid or gaseous motor vehicle fuels.

2308.3 Location of dispensing operations and equipment. Compression, storage, and dispensing equipment shall be located aboveground, outside. Like dispensing systems shall be separated by a minimum of 20 feet and a minimum of 50 feet from systems dispensing other liquid or gaseous motor vehicle fuels.

Exceptions:

1. Compression, storage, or dispensing equipment shall be allowed in buildings of noncombustible construction, as set forth in the *International Building Code*, which are unenclosed for three quarters or more of the perimeter.

- 2. Compression, storage, and dispensing equipment shall be allowed indoors in accordance with Chapter 53.
- **2309.3.1** Location of dispensing operations and equipment. Generation, compression, storage, and dispensing equipment shall be in accordance with Sections 2309.3.1.1 through 2309.3.1.5.5. Like dispensing systems shall be separated by a minimum of 20 feet and a minimum of 50 feet from systems dispensing other liquid or gaseous motor vehicle fuels.
- **2401.3 Operational licenses.** Operational licenses shall be required as set forth in Sections 105.5 and 105.6.
- **2501.2 Operational license.** An operational license shall be required as set forth in Section 105.5.
- **2801.2 Operational license.** An operational license shall be required as set forth in Section 105.5.
- **3103.2 Approval required.** Tents and membrane structures having an area more than 1,000 square feet (93 m²) shall not be erected, operated, or maintained for any purpose without first obtaining a permit and approval from the code official.

- 1. Tents used exclusively for recreational camping purposes.
- 2. Tents open on all sides which comply with all the following:
 - 2.1 Individual tents having a maximum size of 1,000 square feet (93 m²).
 - 2.2 The aggregate area of multiple tents placed side by side without a fire break clearance of 12 feet (3,658 mm), not exceeding 1,000 square feet (93m2) total.
 - 2.3 A minimum clearance of 12 feet (3,658 mm) to all structures and other tents.
- **3103.5 Use period.** Temporary tents, air- supported, air-inflated, or tensioned membrane structures shall not be erected for a period of more than 180 days within a 12-month period on a single premise.
- **3105.2** Approval. Temporary stage canopies more than 1,000 square feet (93 m^2) shall not be erected, operated, or maintained for any purpose without first obtaining approval and a permit from the fire code official.
- **3105.5 Required documents.** The following documents shall be submitted to the fire code official for review before a permit is approved:
 - 1. Construction documents: Construction documents shall be prepared in accordance with the *International Building Code* by a registered design professional. Construction documents shall include:
 - 1.1 A summary sheet showing the building code used, design criteria, loads, and support reactions.
 - 1.2 Detailed construction and installation drawings.
 - 1.3 Design calculations.
 - 1.4 Operating limits of the structure explicitly outlined by the registered

design professional including environmental conditions and physical forces.

- 1.5 Effects of additive elements such as video walls, supported scenery, audio equipment, vertical and horizontal coverings.
- 1.6 Means for adequate stability including specific requirements for guying and cross-bracing, ground anchors, or ballast for different ground conditions.

3106.4.7 Combustible refuse. Combustible refuse shall be kept in noncombustible containers with tight-fitting or self- closing lids. Combustible refuse shall be removed from the event site at regular intervals to prevent an unsafe accumulation within the event site.

3206.11 Signage. Signage in conformance with Exhibits A, B, or C below shall be posted indicating the maximum storage height in accordance with the following:

- 1. In buildings capable of but not used for high-pile storage, signage shall be posted to indicate storage height to a maximum of 12 feet (6 feet where high-hazard commodities are stored).
- 2. Buildings designed for high-pile storage shall post signage at the designed storage height based on engineering analysis considering commodity classification, storage arrangement, and required fire protection designed storage height.

3206.12 Location of signs. Signs shall be mounted at the storage limitation height, at 50 feet on center intervals on all walls starting 25 feet from any corner, on columns, and/or on racking at approximate 50-foot intervals. Signs shall be visibly located and designed in accordance with the following as determined by commodity classification, storage height, and/or sprinkler design requirements:

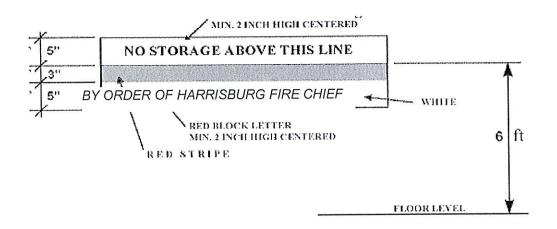


Exhibit A: High hazard commodity posting requirement.

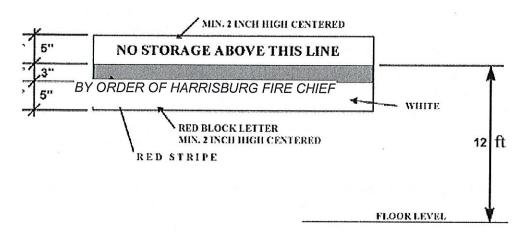


Exhibit B: Class I-IV commodity storage height limitations

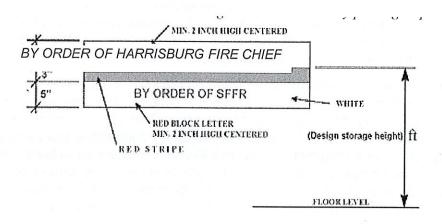


Exhibit C: Engineered design height limitations.

- **3401.2 Operational license required.** An operational license shall be required as set forth in Section 105.5.
- **5601.2** Operational license required. An operational license shall be required as set forth in Section 105.5 and regulated in accordance with this section.
- **5601.2.2** Sale and retail display. No person shall construct a retail display nor offer for sale explosives, explosive materials, or fireworks within the city limits of the city of Sioux Falls.

Exception: Existing locations. Nothing in this article shall be construed to prohibit any licensed South Dakota fireworks wholesaler in business as of January 1, 1982, to store or sell at wholesale at the then existing location.

- **5701.4 Operational licenses and permits.** Operational licenses and permits shall be required as set forth in Sections 105.5 and 105.6.
- 5703.4 Spill control and secondary containment. Where required, rooms, buildings,

or areas used for storage, dispensing, use, mixing, or handling Class I, II, and IIIA liquids shall be provided with spill control and secondary containment in accordance with Section 5004.2. Spill control and secondary containment shall meet the requirements of applicable South Dakota Administrative Rules.

- **5703.6.5 Protection from corrosion and galvanic action.** Where subject to external corrosion, piping, related fluid- handling components, and supports for both underground and aboveground applications shall be fabricated from noncorrosive materials and coated or provided with corrosion protection. Dissimilar metallic parts that promote galvanic action shall not be joined. Cathodic protection systems shall meet the requirements of applicable South Dakota Administrative Rules.
- **5704.2.7.5.8 Overfill prevention.** An approved means or method in accordance with Section 5704.2.9.7.5 and applicable South Dakota Administrative Rules shall be provided to prevent the overfill of all Class I, II, and IIIA liquid storage tanks.
- **5704.2.8.3 Secondary containment.** Vaults shall be liquid-tight and there shall be no backfill around the tank or within the vault. Vault impermeability ratings shall be in accordance with applicable South Dakota Administrative Rules. The vault floor shall drain to a sump. For premanufactured vaults, liquid tightness shall be certified as part of the listing provided by a nationally recognized testing laboratory. For field-erected vaults, liquid tightness shall be certified in an approved manner.
- **5704.2.9.5** Above-ground tanks inside of buildings. Tanks storing Class I, II, and IIIA liquids inside buildings shall be equipped with a device or other means to prevent overflow into the building including, but not limited to, a float valve, a preset meter on the fill line, a valve actuated by the weight of the tank's contents, a low head pump which is incapable of producing overflow, or a liquid-tight overflow pipe at least one pipe size larger than the fill pipe and discharging by gravity back to the outside source of liquid or to an approved location. Aboveground tanks exceeding the exempt amounts shall be in a special enclosure as defined in Section 5704.2.9.5.1 or in an H-2 room as defined in the *International Building Code*.
- **5704.2.9.7.3 Secondary containment.** Protected aboveground tanks shall be provided with secondary containment, drainage control, or diking in accordance with Section 5704.2 and applicable South Dakota Administrative Rules. A means shall be provided to establish the integrity of the secondary containment in accordance with NFPA 30.
- **5704.2.9.7.5 Overfill prevention.** Protected aboveground tanks shall not be filled more than 95 percent of their capacity. Overfill protection must also be consistent with applicable South Dakota Administrative Rules.
- **5704.2.10 Drainage and diking.** The area surrounding a tank or group of tanks shall be provided with drainage control or shall be diked to prevent accidental discharge of liquid from endangering adjacent tanks, adjoining property, or reaching waterways. Diking must also meet the requirements of applicable South Dakota Administrative Rules.

Exceptions:

 The code official is authorized to alter or waive these requirements based on a technical report which demonstrates that such tank or group of tanks does not constitute a hazard to other tanks, waterways, or adjoining property, after consideration of special features such as topographical

- conditions, nature of occupancy, and proximity to buildings on the same or adjacent property, capacity, and construction of proposed tanks and character of liquids to be stored, and nature and quantity of private and public fire protection provided.
- 2. Drainage control and diking is not required for listed secondary containment tanks.
- **5704.2.10.1 Volumetric capacity.** The volumetric capacity of the diked area shall not be less than 110 percent of the greatest amount of liquid that can be released from the largest tank within the diked area. The capacity of the diked area enclosing more than one tank shall be calculated by deducting the volume of the tanks other than the largest tank below the height of the dike.
- **5704.2.11 Underground tanks.** Underground storage of flammable and combustible liquids in tanks shall comply with Section 5704.2 and Sections 5704.2.11.1 through 5704.2.11.4.2 and shall be double walled.
- **5704.2.11.2 Depth and cover.** Excavation for underground storage tanks shall be made with due care to avoid the undermining of the foundations of existing structures. Underground tanks shall be set on firm foundations and surrounded with at least 6 inches (152 mm) of noncorrosive inert material, such as clean sand or in accordance with manufacturer's recommended practice, whichever is greater.
- **5704.2.11.3 Overfill protection and prevention systems.** Fill pipes shall be equipped with a spill container and an overfill prevention system in accordance with NFPA 30 and applicable South Dakota Administrative Rules.
- **5704.2.11.4 Leak prevention.** Leak prevention for underground tanks shall comply with Sections 5704.2.11.4.1 and 5704.2.11.4.2 and applicable South Dakota Administrative Rules
- **5704.2.11.4.1 Inventory control.** Daily inventory records shall be maintained for underground storage tank systems. Such systems shall be in accordance with applicable South Dakota Administrative Rules.
- **5704.2.11.4.2 Leak detection.** Underground storage tank systems shall be provided with an approved method of leak detection from any component of the system that is designed and installed in accordance with NFPA 30 and applicable South Dakota Administrative Rules.
- **5704.2.13.1.2 Out of service for 90 days.** Underground tanks not used for a period of 90 days shall be safeguarded in accordance with all the following or be removed in accordance with Section 5704.2.14:
 - 1. Flammable or combustible liquids shall be removed from the tank.
 - 2. All piping, including fill line, gauge opening, vapor return, and pump connection, shall be capped or plugged and secured from tampering.
 - 3. Vent lines shall remain open and be maintained in accordance with Sections 5704.2.7.3 and 5704.2.7.4.
 - 4. Prior to reuse, tanks and piping systems out of service for greater than 90 days

shall be tested for tightness by an approved method.

5704.2.13.1.4 Tanks abandoned in place. Tanks must be removed from the ground unless there is documentation by a professional approved by the fire code official that such removal would be impractical. Tanks abandoned in place shall be abandoned as follows:

- 1. Flammable and combustible liquids shall be removed from the tank and connected piping.
- 2. The suction, inlet, gauge, vapor return, and vapor lines shall be disconnected.
- 3. The tank shall be filled completely with an approved, inert solid material.

Exception: Residential heating oil tanks of 1,100 gallons (4,164 L) or less, provided the fill line is permanently removed to a point below grade to prevent refilling of the tank.

- 4. Remaining underground piping shall be capped or plugged.
- 5. A record of tank size, location, and date of abandonment shall be retained.
- 6. All exterior above-grade fill piping shall be permanently removed when tanks are abandoned or removed.

6101.2 Operational licenses and permits. Operational licenses and/or permits shall be required as set forth in Sections 105.5 and 105.6. 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 code official.

D103.6.3 Emergency access route signage. Where temporary emergency access roads are required, signage shall be posted following Figure D103.6.3.



Figure D103.6.1

D103.6.4 Subdivision roadway widths. All subdivision private roadways must meet 28-foot road width as specified in Chapter 157 and Engineering Design Standards.

D107.3 Temporary emergency access roads. Temporary access roads for emergency response use only shall meet the following:

- 1. A minimum of 6 inches of gravel (or other approved material) compacted to 95 percent compaction, capable of all- weather travel.
- 2. Roads shall be a minimum of 20 feet unobstructed width.

- 3. Access/entrance to the road may be controlled via a secured chain or gate at points of entry and at connection to an interior intersecting roadway.
- 4. Fire lane signage, in accordance with IFC Appendix 'D', shall be posted to prohibit vehicle blockage of access roadway entry/exit points.
- 5. Road maintenance, including grading/scraping to maintain a navigable surface and required snow removal, shall be performed as needed to always ensure availability. Maintenance shall be the sole responsibility of the developer.
- 6. Failure to maintain a functional driving surface will require the temporary access road to be paved in accordance with the requirements of the City of Crooks Engineering Design Standards. This is not a substitute for a second permanent approved fire apparatus access road as required by code.

City of Harrisburg

Finance Officer

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