

The following are the Final Florida Specific Amendments to 2015 edition of the *Fire Code*® (NFPA 1):

1.1.2 Title.

The title of this *Code* shall be NFPA 1, *Fire Code*, of the National Fire Protection Association (NFPA).

1.1.2.1 Anytime a reference is made to NFPA 1 or NFPA 101 within this code it shall be the Florida specific version of NFPA 1 and NFPA 101.

1.3.2.5 The **Florida Building Code** shall be referred to anytime a reference is made to the building code or to NFPA 220, Standard on Types of Building Construction in this Code or an adopted standard.

1.7.4 Enforcement Assistance.

Police and other enforcement agencies shall have authority to render necessary assistance in the enforcement of this *Code* when requested to do so by the AHJ.

1.7.4.1 If deemed necessary by an AHJ for a complete, accurate, and thorough firesafety plan review or inspection, the AHJ may request assistance from a building, electrical, mechanical, plumbing, or similar specialty inspector; however, nothing in this rule gives authority or jurisdiction to any person other than a firesafety inspector certified under Section 633.216, Florida Statutes, to perform firesafety inspections required by law, rule, ordinance, or code.

~~1.12.8 Permits shall be required in accordance with Table 1.12.8(a) through Table 1.12.8(d).~~

~~The authority having jurisdiction shall have the authority to require permits for the operations in Table 1.12.8(a).~~

~~**1.13 Certificates of Fitness**~~

~~**1.13.1 Authorization.**~~

~~The AHJ shall have the authority to require certificates of fitness and collect fees for individuals or companies performing any of the following activities:~~

- ~~(1) Inspection, servicing, or recharging of portable fire extinguishers~~
- ~~(2) Installation, servicing, modification, or recharging of fixed fire extinguishing systems~~
- ~~(3) Installation, servicing, or modification of fire alarm or fire communication systems~~
- ~~(4) Installation, modification, or servicing of gas or oilburning heating systems~~
- ~~(5) Chimney sweep operations~~
- ~~(6) Installation, inspection, servicing, or modification of range hood systems~~
- ~~(7) Installation or servicing of private fire service mains and their appurtenances~~
- ~~(8) Crowd management services required by the *Code*~~
- ~~(9) Utilization of pyrotechnics before a proximate audience~~
- ~~(10) Installation, modification, or maintenance of liquefied petroleum gas or liquefied natural gas tanks or systems~~
- ~~(11) Installation or modification of medical gas systems where a permit is required by Table 1.12.8(a)~~
- ~~(12) Installation, modification, or maintenance of standpipe Systems~~
- ~~(13) Installation, modification, or maintenance of automatic sprinkler systems~~
- ~~(14) Installation, modification, or maintenance of fire pumps~~
- ~~(15) Installation, modification, or maintenance of tanks, wells, or drafting points used for fire protection water supplies~~

~~1.13.2 Mandatory.~~

~~The AHJ shall require certificates of fitness and collect fees for individuals or companies performing any of the following activities:~~

- ~~(1) Use of explosive materials~~
- ~~(2) Fireworks displays involving display fireworks, 1.3G~~

~~**1.13.3** The AHJ shall be responsible for the issuance of certificates of fitness required by the AHJ.~~

~~**1.13.4** All applications for a certificate of fitness shall be filed with the AHJ on forms provided by the AHJ.~~

1.13.5 Certification of Applicant.

~~**1.13.5.1** Every individual or company applying for a certificate of fitness shall furnish to the AHJ evidence of a familiarity with applicable codes, regulations, standards, listings, guidelines, and construction and safety practices for the activity for which the certificate of fitness is issued.~~

~~**1.13.5.2*** The AHJ shall also utilize certification programs provided by national organizations acceptable to the AHJ, where available, to determine evidence of compliance with 1.13.5.1.~~

~~**1.13.5.3** The AHJ shall investigate every application for a certificate of fitness.~~

~~**1.13.5.4*** The investigation shall include an examination of the applicant's experience and training in the field of the certificate of fitness for which application has been made.~~

~~**1.13.5.5** When the AHJ determines that an applicant is not fit to receive the certificate of fitness because of the applicant's inability to comply with the provisions of this Code, the AHJ shall refuse to issue the certificate of fitness.~~

~~**1.13.5.6** If the refusal is based on the applicant's inability to pass an examination given to determine competency, the applicant shall not be permitted to apply again for the certificate of fitness within a 10-day period following the examination.~~

~~**1.13.6** Certificates of fitness shall not be transferable.~~

~~**1.13.7** Certificates of fitness shall be issued for the period of time as indicated on the certificate of fitness as determined by the AHJ, but such period of time shall not exceed 3 years.~~

~~**1.13.8** Applications for renewal of a certificate of fitness shall be filed in the same manner as an application for an original certificate.~~

~~**1.13.9** Each individual or company holding a certificate of fitness shall notify the AHJ in writing of any address change within 10 days after such change.~~

~~**1.13.10** A certificate of fitness shall be in the form of an identification card. The card shall contain the following information:~~

- ~~(1) Purpose for which the certificate of fitness is issued~~
- ~~(2) Date of expiration~~
- ~~(3) Information necessary to easily identify the individual to whom the certificate of fitness is issued~~
- ~~(4) Signature of the individual to whom the certificate of fitness is issued~~
- ~~(5) Name and signature of the AHJ or a designated representative~~
- ~~(6) Statement printed thereon in bold type the following:~~

~~THIS CERTIFICATE IS NOT AN ENDORSEMENT OF THIS INDIVIDUAL OR COMPANY BY THE
AUTHORITY HAVING JURISDICTION.~~

~~1.13.11 Any individual or company to whom a certificate of fitness has been granted shall, upon request, produce and show proper identification and the certificate of fitness to anyone for whom that individual seeks to render services or to the AHJ.~~

~~**1.13.12 Revocation or Suspension of Certificates of Fitness.**~~

~~1.13.12.1 The AHJ shall be permitted to revoke or suspend a certificate of fitness issued if any violation of this Code is found upon inspection or where any false statements or misrepresentations are submitted in the application on which the approval was based.~~

~~1.13.12.2 Revocation or suspension shall be constituted when notification is served, posted, or mailed to the address of record for the certificate holder.~~

~~1.13.12.3 Failure on the part of an individual to give such notification of a change of address required by 1.13.9 shall constitute grounds for revocation of the certificate of fitness.~~

~~1.13.12.4 Revocations or suspensions of a certificate of fitness by the AHJ are appealable to the Board of Appeals as established in Section 1.10.~~

2.2 NFPA Publications

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

- NFPA 2, *Hydrogen Technologies Code*, 2011 edition.
- NFPA 3, *Recommended Practice for Commissioning of Fire Protection and Life Safety Systems*, 2015 edition.
- NFPA 4, *Standard for Integrated Fire Protection and Life Safety System Testing*, 2015 edition.
- NFPA 10, *Standard for Portable Fire Extinguishers*, 2013 edition.
- NFPA 11, *Standard for Low-, Medium-, and High- Expansion Foam*, 2010 edition.
- NFPA 12, *Standard on Carbon Dioxide Extinguishing Systems*, 2011 edition.
- NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems*, 2009 edition.
- NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2013 edition.
- NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, 2013 edition.
- NFPA 13R, *Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies*, 2013 edition.
- NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*, 2013 edition.
- NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection*, 2012 edition.
- NFPA 16, *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems*, 2011 edition.
- NFPA 17, *Standard for Dry Chemical Extinguishing Systems*, 2013 edition.
- NFPA 17A, *Standard for Wet Chemical Extinguishing Systems*, 2013 edition.
- NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, 2013 edition.
- NFPA 22, *Standard for Water Tanks for Private Fire Protection*, 2013 edition.
- NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, 2013 edition.
- NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2014 edition.
- NFPA 30, *Flammable and Combustible Liquids Code*, 2015 edition.
- NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*, 2015 edition.
- NFPA 30B, *Code for the Manufacture and Storage of Aerosol Products*, 2015 edition.
- NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, 2011 edition.
- NFPA 32, *Standard for Drycleaning Plants*, 2011 edition.

- NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials*, 2011 edition.
- NFPA 34, *Standard for Dipping, Coating, and Printing Processes Using Flammable or Combustible Liquids*, 2011 edition.
- NFPA 35, *Standard for the Manufacture of Organic Coatings*, 2011 edition.
- NFPA 36, *Standard for Solvent Extraction Plants*, 2013 edition.
- NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines*, 2015 edition.
- NFPA 40, *Standard for the Storage and Handling of Cellulose Nitrate Film*, 2011 edition.
- NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals*, 2011 edition.
- NFPA 51, *Standard for the Design and Installation of Oxygen–Fuel Gas Systems for Welding, Cutting, and Allied Processes*, 2013 edition.
- NFPA 51A, *Standard for Acetylene Cylinder Charging Plants*, 2012 edition.
- NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, 2014 edition.
- NFPA 52, *Vehicular Gaseous Fuel Systems Code*, 2013 edition.
- NFPA 54, *National Fuel Gas Code*, 2015 edition.
- NFPA 55, *Compressed Gases and Cryogenic Fluids Code*, 2013 edition.
- NFPA 58, *Liquefied Petroleum Gas Code*, 2014 edition.
- NFPA 59, *Utility LP-Gas Plant Code*, 2015 edition.
- NFPA 59A, *Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)*, 2013 edition.
- NFPA 61, *Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities*, 2013 edition.
- NFPA 68, *Standard on Explosion Protection by Deflagration Venting*, 2013 edition.
- NFPA 69, *Standard on Explosion Prevention Systems*, 2014 edition.
- NFPA 70®, *National Electrical Code®*, 2014 edition.
- NFPA 72®, *National Fire Alarm and Signaling Code*, 2013 edition.
- NFPA 75, *Standard for the Fire Protection of Information Technology Equipment*, 2013 edition.
- NFPA 76, *Standard for the Fire Protection of Telecommunications Facilities*, 2012 edition.
- NFPA 80, *Standard for Fire Doors and Other Opening Protectives*, 2013 edition.
- NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment*, 2014 edition.
- NFPA 85, *Boiler and Combustion Systems Hazards Code*, 2011 edition.
- NFPA 86, *Standard for Ovens and Furnaces*, 2015 edition.
- NFPA 88A, *Standard for Parking Structures*, 2015 edition.
- NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, 2015 edition.
- NFPA 90B, *Standard for the Installation of Warm Air Heating and Air-Conditioning Systems*, 2015 edition.
- NFPA 91, *Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids*, 2010 edition.
- NFPA 92, *Standard for Smoke Control Systems*, 2012 edition.
- NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*, 2014 edition.
- NFPA 99, *Health Care Facilities Code*, 2015 edition.
- NFPA 101®, *Life Safety Code®*, 2015 edition.

- NFPA 102, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures*, 2011 edition.
- NFPA 105, *Standard for Smoke Door Assemblies and Other Opening Protectives*, 2013 edition.
- NFPA 110, *Standard for Emergency and Standby Power Systems*, 2013 edition.
- NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*, 2013 edition.
- NFPA 120, *Standard for Fire Prevention and Control in Coal Mines*, 2010 edition.
- NFPA 122, *Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities*, 2010 edition.
- NFPA 130, *Standard for Fixed Guideway Transit and Passenger Rail Systems*, 2014 edition.
- NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations*, 2013 edition.
- NFPA 150, *Standard on Fire and Life Safety in Animal Housing Facilities*, 2013 edition.
- NFPA 160, *Standard for the Use of Flame Effects Before an Audience*, 2011 edition.
- NFPA 170, *Standard for Fire Safety and Emergency Symbols*, 2012 edition.
- NFPA 204, *Standard for Smoke and Heat Venting*, 2012 edition.
- NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*, 2013 edition.
- ~~NFPA 220, *Standard on Types of Building Construction*, 2015 edition.~~
- NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls*, 2015 edition.
- NFPA 232, *Standard for the Protection of Records*, 2012 edition.
- NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*, 2013 edition.
- NFPA 252, *Standard Methods of Fire Tests of Door Assemblies*, 2012 edition.
- NFPA 253, *Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source*, 2011 edition.
- NFPA 257, *Standard on Fire Test for Window and Glass Block Assemblies*, 2012 edition.
- NFPA 259, *Standard Test Method for Potential Heat of Building Materials*, 2013 edition.
- NFPA 260, *Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture*, 2013 edition.
- NFPA 261, *Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes*, 2013 edition.
- NFPA 265, *Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile or Expanded Vinyl Wall Coverings on Full Height Panels and Walls*, 2011 edition.
- NFPA 286, *Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth*, 2011 edition.
- NFPA 288, *Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal in Fire Resistance-Rated Assemblies*, 2012 edition.
- NFPA 289, *Standard Method of Fire Test for Individual Fuel Packages*, 2013 edition.
- NFPA 302, *Fire Protection Standard for Pleasure and Commercial Motor Craft*, 2015 edition.
- NFPA 303, *Fire Protection Standard for Marinas and Boatyards*, 2011 edition.
- NFPA 307, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves*, 2011 edition.
- NFPA 312, *Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up*, 2011 edition.
- NFPA 318, *Standard for the Protection of Semiconductor Fabrication Facilities*, 2015 edition.

- NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair*, 2010 edition.
- NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids*, 2012 edition.
- NFPA 400, *Hazardous Materials Code*, 2013 edition.
- NFPA 407, *Standard for Aircraft Fuel Servicing*, 2012 edition.
- NFPA 408, *Standard for Aircraft Hand Portable Fire Extinguishers*, 2010 edition.
- NFPA 409, *Standard on Aircraft Hangars*, 2011 edition.
- NFPA 410, *Standard on Aircraft Maintenance*, 2010 edition.
- NFPA 415, *Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways*, 2013 edition.
- NFPA 418, *Standard for Heliports*, 2011 edition.
- NFPA 430, *Code for the Storage of Liquid and Solid Oxidizers*, 2004 edition
- ~~NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2013 edition.~~
- NFPA 484, *Standard for Combustible Metals*, 2015 edition.
- NFPA 495, *Explosive Materials Code*, 2013 edition.
- NFPA 498, *Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives*, 2013 edition.
- NFPA 501, *Standard on Manufactured Housing*, 2013 edition.
- NFPA 501A, *Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities*, 2013 edition.
- NFPA 502, *Standard for Road Tunnels, Bridges, and Other Limited Access Highways*, 2014 edition.
- NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations*, 2013 edition.
- NFPA 551, *Guide for the Evaluation of Fire Risk Assessments*, 2016 edition.
- NFPA 601, *Standard for Security Services in Fire Loss Prevention*, 2010 edition.
- NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, 2013 edition.
- NFPA 655, *Standard for Prevention of Sulfur Fires and Explosions*, 2012 edition.
- NFPA 664, *Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities*, 2012 edition.
- NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*, 2010 edition.
- NFPA 703, *Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials*, 2015 edition.
- NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*, 2012 edition.
- NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment*, 2015 edition.
- NFPA 750, *Standard on Water Mist Fire Protection Systems*, 2015 edition.
- NFPA 780, *Standard for the Installation of Lightning Protection Systems*, 2014 edition.
- NFPA 801, *Standard for Fire Protection for Facilities Handling Radioactive Materials*, 2013 edition.
- NFPA 909, *Code for the Protection of Cultural Resource Properties — Museums, Libraries, and Places of Worship*, 2013 edition.
- NFPA 914, *Code for Fire Protection of Historic Structures*, 2010 edition.

- ~~NFPA 1031, *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*, 2014 edition.~~
- NFPA 1122, *Code for Model Rocketry*, 2013 edition.
- NFPA 1123, *Code for Fireworks Display*, 2010 edition.
- NFPA 1124, *Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles*, 2006 edition.
- NFPA 1125, *Code for the Manufacture of Model Rocket and High Power Rocket Motors*, 2012 edition.
- NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience*, 2011 edition.
- NFPA 1127, *Code for High Power Rocketry*, 2013 edition.
- NFPA 1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting*, 2012 edition.
- NFPA 1144, *Standard for Reducing Structure Ignition Hazards from Wildland Fire*, 2013 edition.
- NFPA 1192, *Standard on Recreational Vehicles*, 2015 edition.
- NFPA 1194, *Standard for Recreational Vehicle Parks and Campgrounds*, 2014 edition.
- NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*, 2016 edition.
- NFPA 1963, *Standard for Fire Hose Connections*, 2014 edition.
- NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems*, 2012 edition.
- NFPA 2010, *Standard for Fixed Aerosol Fire Extinguishing Systems*, 2010 edition.
- NFPA 2113, *Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire*, 2012 edition.
- ~~NFPA 5000[®], *Building Construction and Safety Code*[®], 2012 edition.~~

2.3.21 Other Publications.

Webster's Third New International Dictionary of the English Language, Unabridged
Merriam-Webster's Collegiate Dictionary, 11th edition

2.4 References for Extracts in Mandatory Sections

- NFPA 10, *Standard for Portable Fire Extinguishers*, 2013 edition.
- NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2013 edition.
- NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*, 2013 edition.
- NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, 2013 edition.
- NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2014 edition.
- NFPA 30, *Flammable and Combustible Liquids Code*, 2015 edition.
- NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*, 2015 edition.
- NFPA 30B, *Code for the Manufacture and Storage of Aerosol Products*, 2015 edition.
- NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, 2011 edition.
- NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials*, 2011 edition.
- NFPA 34, *Standard for Dipping, Coating, and Printing Processes Using Flammable or Combustible Liquids*, 2011 edition.
- NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals*, 2011 edition.
- NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, 2014 edition.
- NFPA 52, *Vehicular Gaseous Fuel Systems Code*, 2013 edition.

- NFPA 55, *Compressed Gases and Cryogenic Fluids Code*, 2013 edition.
- NFPA 58, *Liquefied Petroleum Gas Code*, 2014 edition.
- NFPA 59A, *Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)*, 2013 edition.
- NFPA 61, *Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities*, 2013 edition.
- NFPA 68, *Standard on Explosion Protection by Deflagration Venting*, 2013 edition.
- NFPA 69, *Standard on Explosion Prevention Systems*, 2014 edition.
- NFPA 70®, *National Electrical Code®*, 2014 edition.
- NFPA 72®, *National Fire Alarm and Signaling Code*, 2013 edition.
- NFPA 80, *Standard for Fire Doors and Other Opening Protectives*, 2013 edition.
- NFPA 88A, *Standard for Parking Structures*, 2015 edition.
- NFPA 90A, *Standard for the Installation of Air- Conditioning and Ventilating Systems*, 2015 edition.
- NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*, 2014 edition.
- NFPA 101®, *Life Safety Code®*, 2015 edition.
- NFPA 102, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures*, 2011 edition.
- NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations*, 2013 edition.
- NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*, 2013 edition.
- ~~NFPA 220, *Standard on Types of Building Construction*, 2015 edition.~~
- NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*, 2013 edition.
- NFPA 303, *Fire Protection Standard for Marinas and Boatyards*, 2011 edition.
- NFPA 307, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves*, 2011 edition.
- NFPA 312, *Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up*, 2011 edition.
- NFPA 318, *Standard for the Protection of Semiconductor Fabrication Facilities*, 2015 edition.
- NFPA 400, *Hazardous Materials Code*, 2013 edition.
- NFPA 402, *Guide for Aircraft Rescue and Fire-Fighting Operations*, 2013 edition.
- NFPA 407, *Standard for Aircraft Fuel Servicing*, 2012 edition.
- NFPA 415, *Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways*, 2013 edition.
- NFPA 418, *Standard for Heliports*, 2011 edition.
- ~~NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2013 edition.~~
- NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, 2013 edition.
- NFPA 805, *Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants*, 2010 edition.
- NFPA 914, *Code for Fire Protection of Historic Structures*, 2010 edition.
- ~~NFPA 1031, *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*, 2014 edition.~~

- NFPA 1124, Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles, 2006 edition.
- ~~NFPA 1141, Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas, 2012 edition.~~
- NFPA 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire, 2013 edition.
- ~~NFPA 5000®, Building Construction and Safety Code®, 2015 edition.~~

3.1 General

The definitions contained in this chapter shall apply to the terms used in this *Code*. Where terms are not defined in this chapter or within another chapter, they shall be defined using ~~their ordinarily accepted meanings within the context in which they are used. Merriam Webster's Collegiate Dictionary, 11th edition,~~ shall be the source for the ordinarily accepted meaning the definition within the Florida Building Code.

3.1.1 Where terms are not defined in this chapter, within another chapter, or the Florida Building Code, they shall be defined using their ordinarily accepted meanings within the context in which they are used. Webster's Third New International Dictionary of the English Language, Unabridged, shall be a source for ordinarily accepted meaning.

3.3.278 Consumer Fireworks. See 3.3.282

3.3.279 Consumer Fireworks Retail Sales Area. The portion of a consumer fireworks retail sales facility or store, including the immediately adjacent aisles, where consumer fireworks are located for the purpose of retail display and sale to the public.

3.3.280 Consumer Fireworks Retail Sales Facility (CFRS Facility). A permanent or temporary building or structure, CFRS stand, tent, canopy, or membrane structure that is used primarily for the retail display and sale of consumer fireworks to the public.

3.3.281* Consumer Fireworks Retail Sales (CFRS) Stand. A temporary or permanent building or structure that has a floor area not greater than 800 ft² (74 m²), other than tents, canopies, or membrane structures, that is used primarily for the retail display and sale of consumer fireworks to the public.

3.3.282* Fireworks. Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, deflagration, or detonation, and that meets the definition of *Consumer Fireworks* or *Display Fireworks* as set forth in this *Code*.

3.3.282.1* Consumer Fireworks. Small fireworks devices containing restricted amounts of pyrotechnic composition, designed primarily to produce visible or audible effects by combustion, that comply with the construction, chemical composition, and labeling regulations of the U.S. Consumer Product Safety Commission (CPSC), as set forth in CPSC 16 CFR 1500 and 1507, 49 CFR 172, and APA Standard 87-1, *Standard for the Construction and Approval for Transportation of Fireworks, Novelties, and Theatrical Pyrotechnics*.

3.3.282.2* Display Fireworks. Large fireworks devices that are explosive materials intended for use in fireworks displays and designed to produce visible or audible effects by combustion, deflagration, or detonation, as set forth in CPSC 16 CFR 1500 and 1507, 49 CFR 172, and APA Standard 87-1, *Standard for the Construction and Approval for Transportation of Fireworks, Novelties, and Theatrical Pyrotechnics*.

3.3.283* Covered Fuses. A fuse or designed point of ignition that is protected against accidental ignition by contact with a spark, smoldering items, or small open flame.

3.3.284* Packaged Fireworks Merchandise. A consumer fireworks device or group of consumer fireworks devices that has been packaged within an unperforated container or packaging material by the manufacturer, distributor, or seller for retail display and sale as a unit.

6.1.14.1.3* Where incidental to another occupancy, areas used as follows shall be permitted to be considered part of the predominant occupancy and shall be subject to the provisions of this *Code* and NFPA 101 that apply to the predominant occupancy:

- (1) Mercantile, business, industrial, or storage use
- (2) * Nonresidential use with an occupant load fewer than that established by Section 6.1 for the occupancy threshold [**101:6.1.14.1.3**]
- (3) Portions of buildings used as accessory offices or for customary non-hazardous uses necessary for transacting the principal business in storage and industrial occupancies need not be separated from the principal use.
- (4) Industrial occupancies producing, using, or storing low hazard products in accordance with Subdivision 6.2.2 need not be separated by fire-resistant construction from the occupancies to which they are accessory.

6.1.14.1.3.1 Incidental use areas shall be separated as required by Table 509 of the Florida Building Code where Table 509 permits an automatic fire-extinguishing system without a fire barrier, the incidental use area shall be separated by construction capable of resisting the passage of smoke.

6.1.14.1.4 The following accessory occupancies shall not be required to be separated from the primary occupancy as required in 6.1.14.4:

- (1) A kitchen in an assembly occupancy does not constitute a mixed occupancy.
- (2) Accessory uses in industrial and storage occupancies as otherwise provided in 6.1.14.1.3(1)
- (3) Rooms or spaces used for customary storage of non-hazardous materials in assembly, business, educational, industrial, mercantile, hotel and dormitory, and apartment occupancies which in aggregate do not exceed 10% of the major floor area in which they are located. Protection from hazards shall be as otherwise provided in the specific occupancy chapter.

6.1.14.4 Separated Occupancies.

6.1.14.4.5 One-story or two-story structures that are less than 10,000 square feet, whose occupancy is defined in the Florida Building Code and the Florida Fire Prevention Code as business or mercantile, the authority having jurisdiction shall enforce the wall fire-rating provisions for occupancy separation as defined in the Florida Building Code.

Table 6.1.14.4.1 Footnote:

*Where the building is two stories or less in height and the total building square footage is less than 10,000 square feet, no separation is required.

10.10.6 Cooking Equipment

10.10.6.1 For other than one- and two-family dwellings, no hibachi, grill, or other similar devices used for cooking, heating, or any other purpose shall be used or kindled on any balcony, under any overhanging portion, or within 10 ft (3 m) of any structure.

10.10.6.1.1 Listed electric portable, tabletop grills, not to exceed 200 square inches of cooking surface, or other similar apparatus shall be permitted.

10.11 Fire Protection Markings

10.11.1 Premises Identification.

10.11.1.1* New and existing buildings shall have approved address numbers placed in a position to be plainly legible and visible from the street or road fronting the property.

10.11.1.2 Address numbers shall contrast with their background.

10.11.1.3 Address numbers shall be arabic numerals or alphabet letters.

10.11.1.4 Numerals shall be not less than three inches in height for residential buildings, structures, or portions thereof, and at least six inches in height for all other buildings, structures, or portions thereof.

10.11.1.5 Where address identification is required by the AHJ on other elevations of buildings, structures, or portions thereof, such numbers shall be not less than three inches in height for residential and at least six inches in height for all other buildings, structures, or portions thereof.

13.3.2.6.5 Sprinklers shall be installed under roofs, canopies, porte-cocheres, balconies, decks, or similar projections greater than 2 ft (0.6 m) wide over areas where combustibles are stored.

13.3.2.6.5.1 The requirement of 13.3.2.6.5 may be omitted if the separation of roofs, canopies, porte-cocheres, balconies, decks, or similar projections are a minimum of 5 ft (1.5 m) from the sprinklered building. This provision is effective for new construction projects only.

13.3.2.7 New Assembly Occupancies.

13.3.2.7.1 ~~The~~ Where the occupant load exceeds 100, the following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 13.3.1.2:

- (1) Dance halls
- (2) Discotheques
- (3) Nightclubs
- (4) Assembly occupancies with festival seating

13.3.2.8 Existing Assembly Occupancies.

13.3.2.8.1 Where the occupant load exceeds ~~100~~ 300, the following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with NFPA 13:

- (1) Dance halls
- (2) Discotheques
- (3) Nightclubs
- (4) Assembly occupancies with festival seating [**101**: 13.3.5.1]

13.3.2.20 One- and Two-Family Dwellings.

13.3.2.20.1 ~~All new one- and two-family dwellings shall be protected throughout by an approved automatic sprinkler system in accordance with 13.3.2.20.2. [**101**:24.3.5.1]~~

13.3.2.26 High-Rise Buildings.

13.3.2.26 High-Rise Buildings.

13.3.2.26.1 New high-rise buildings shall be protected throughout by an approved automatic sprinkler system in accordance with Section 13.3.

13.3.2.26.2* Existing high-rise buildings shall be protected throughout by an approved automatic sprinkler system in accordance with this chapter and 13.3.2.26.2.1 through 13.3.2.26.2.3.

13.3.2.26.2.1 Each building owner shall, within 180 days of receiving notice, file an intent to comply with this regulation with the AHJ for approval.

13.3.2.26.2.2 The AHJ shall review and respond to the intent- to-comply submittal within 60 days of receipt.

13.3.2.26.2.3 The entire high-rise apartment building that is a condominium shall be required to be protected by an approved automatic sprinkler system by an approved automatic sprinkler system within 12 years of adoption of this Code December 31, 2019 or comply with the requirement of FFPC 101: Chapter 31.

13.3.2.26.2.4 All existing high-rise apartment buildings that are condominiums shall be subject to the provisions of Section 718.111 and 718.112, Florida Statutes, which shall supercede the requirement for an approved automatic sprinkler system.

13.3.2.26.2.5 All existing high-rise apartment buildings that are cooperatives shall be subject to the provisions of Section 719.1055, Florida Statutes, which shall supercede the requirements for an approved automatic sprinkler system.

14.4.3 Impediments to Egress.

Any device or alarm installed to restrict the improper use of a means of egress shall be designed and installed so that it cannot, even in case of failure, impede or prevent emergency use of such means of egress unless otherwise provided in 14.5.3 and Chapters 18, 19, 22, and 23 of NFPA 101. [101:7.1.9]

14.4.4 There shall be no storage above any component of the means of egress unless it is on a separate floor, mezzanine, or engineered and approved platform constructed in accordance with the Florida Building Code.

16.4.3 Fire Protection During Construction. This sub-section shall apply to both commercial and residential developments.

16.4.3.1.3* Where underground water mains and hydrants are to be provided, they shall be installed, completed, and in service prior to commencing construction work on any structure. [241:8.7.2.3]

16.4.3.1.3.1 Completion of the water mains and hydrants may be on an alternate schedule approved by the AHJ.

16.9 Rubberized Asphalt Melters for Roof Deck Systems

16.9.1 General.

16.9.1 The provisions of Section 16.8 shall apply to any type of fully enclosed chassis-mounted or portable Rubberized Asphalt Melter using indirect heating of a mix of asphalt and inert material for application on roofs decks.

16.9.1.1 Rubberized Asphalt Melter. (Melter) Portable equipment used for the heating of rubberized asphalt material. The term applies only if both the material being heated is a mix of asphalt and inert material and if an indirect method of heating is used.

16.9.1.2 Indirect heating refers to an independent fully enclosed oil system that transfers heat from a burner to oil around the outside of a material vat which then heats the rubberized material. There is no direct burner or flame impingement on the material vat with indirect heating. Temperature rise in the material vat is gradual and controlled.

16.9.2 Permits. Permits, where required, shall comply with Section 1.12.

16.9.2.1 Permits for the operation of a Rubberized Asphalt Melter on a roof deck shall not be deemed a permit for torches or burners. Any use of torches or burners will require a separate permit.

16.9.3 Rubberized Asphalt Melter Location. The melter shall be located and operated in a controlled area. The area shall be identified by the use of traffic cones, barriers, and other suitable means as designated by the AHJ.

16.9.3.1 Melters shall be permitted to be located and operated on roof decks.

16.9.3.2 The design load of the roof deck shall be capable of supporting the weight of the melter when loaded to capacity with rubberized asphalt material. The design load of the roof deck shall be as determined on building drawings or by a design professional acceptable to the AHJ.

16.9.3.3 Melters shall be chocked in place on the roof deck at locations identified by the design professional and acceptable to the AHJ.

16.9.3.4 Rubberized Asphalt Cakes for use in Melters shall be located on the roof at a location agreed upon by the design professional and the AHJ.

16.9.3.5 Rubberized Asphalt Melters shall not be located inside of any building.

16.9.4 Exits.

16.9.4.1 Melters shall not block exits or a means of egress or escape to an exit.

16.9.4.2 Melters shall not be closer than 10 ft. from exits.

16.9.5 Fire Extinguishers.

16.9.5.1 Two approved 4-A:40-B:C fire extinguishers shall be provided and maintained within 25 ft. of the melter.

16.9.5.1.1 A minimum of one approved 4-A:40-B:C fire extinguisher shall be provided in close proximity to the roofing material application.

16.9.5.2 Each worker shall be instructed on the proper use of fire extinguishers and in the event of a fire to turn off all Melter engines and burners and notify the fire department.

16.9.6 Melter Operation.

16.9.6.1 Melters shall be operated according to manufacturer instructions. Melters shall operate using integral control systems that include temperature controls for the diesel fired burner, the oil system, and the material vat.

16.9.6.1.1 The diesel burner shall fire into an oil jacketed tank for uniform transfer. There shall be no open flame devices on rubberized asphalt melters.

16.9.6.1.2 All melters shall have Melter lids permanently attached. The Melter lids shall be kept closed at all times, except to add rubberized asphalt membrane cakes to the melter, in order to control the temperature of the melter and limit the production of smoke and fumes.

16.9.6.1.3 The property representative shall be familiar with the roof application process and shall assist the roofing contractor in identifying air intakes into the building and coordinating shut off and resupply of fresh air into the building. This may include temporarily covering air intakes so as to make them smoke and odor proof.

16.9.6.2 Rubberized Asphalt Melter Supervision.

16.9.6.2.1 An operating melter shall be attended by an employee who is knowledgeable and solely dedicated to the operation of the equipment and associated hazards.

16.9.6.2.2 The employee shall be within 25 ft. of the melter and shall have the melter within sight.

16.9.6.2.3 The employee shall remain in the area of the melter for a minimum of one-hour after the device is shut down.

16.9.6.2.4 The roofing contractor shall have the capability to immediately notify the fire department of an emergency on the site.

16.9.6.2.5 Copies of Material Safety Data Sheets and Rubberized Asphalt Melter manufacturer manuals shall be readily accessible on the job site.

16.9.6.3 Construction.

16.9.6.3.1 The materials and methods of construction of melters shall be acceptable to the AHJ.

16.9.6.3.2 Loading doors shall be designed as a safety door integral to the tank and shall be provided with handles that allow rubberized asphalt cakes to be lowered into the tank without operator exposure to the vat material.

16.9.6.3.3 All melters shall have an approved, working visible temperature gauge that indicate the temperature of the rubberized material being heated and the temperature of the oil system heating the material vat.

16.9.6.3.4 The Melter shall have limit switches that prevent the material vat from heating beyond 400 degrees F.

16.9.6.4 Fuel System.

16.9.6.4.1 Fuel containers shall be constructed and approved for the use for which they were designed. Melter fuel tanks shall be attached to the frame of the Melter.

16.9.6.4.2 Melters shall be diesel fuel or electrically powered.

16.9.6.4.3 Portable fuel tanks shall not be utilized to power Melters.

16.9.6.4.4 Diesel tanks and engines integral to Melters shall be maintained in accordance with manufacturer instructions.

16.9.6.4.5 Refueling of diesel tanks shall be performed when the melter is off.

16.9.6.4.5.1 A refueling and spill prevention plan acceptable to the AHJ shall be utilized.

16.9.6.4.5.2 Refueling shall be conducted using approved safety cans.

16.9.6.4.6 No open flames shall be present within 20 feet of the refueling operation.

16.9.6.5 Maintenance.

16.9.5.1 Melters and all integral working parts shall be in good working condition and shall be maintained free of excessive residue.

16.9.6.6 Minimum Requirements.

16.9.6.6.1 Melters shall be operated as a complete unit as designed and built by the manufacturer. Field changes that override controls or safety features shall not be permitted.

16.9.6.6.2 Material vats on Melters shall have a capacity of 230 gallons or less. Material vats shall be a permanent integral part of the Melter unit.

16.9.6.6.3 The Melter chassis shall be substantially constructed and capable of carrying the load imposed upon it whether it is standing still or being transported.

18.2.3.2 Access to Building.

18.2.3.2.1 A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building.

18.2.3.2.1.1 Where a one- or two-family dwelling, or townhouse, is protected with an approved automatic sprinkler system that is installed in accordance with NFPA 13D or NFPA 13R, as applicable, the distance in 18.2.3.2.1 shall be permitted to be increased to 150 ft (46 m).

18.2.3.2.1.2 When required by the authority having jurisdiction, road(s) or parking lots providing access to the main entrance door(s) shall be considered access roads and shall comply with the requirements of 18.2.3.4.1.1 and 18.2.3.4.1.2.

18.2.3.5 Marking of Fire Apparatus Access Road.

18.2.3.5.1 Where required by the AHJ, approved signs, approved roadway surface markings, or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof or both.

18.2.3.5.2 A marked fire apparatus access road shall also be known as a fire lane.

18.2.3.5.3 Fire lanes shall be marked with signs that are readily visible to the street with the wording, "NO PARKING FIRE LANE BY ORDER OF THE FIRE DEPARTMENT" or similar wording. Such signs shall be 12 in by 18 in. with a white background and red letters and shall be a maximum of seven feet in height from the

roadway to the bottom part of the sign. The signs shall be within sight of the traffic flow and be a maximum of 60 feet apart.

18.4 Fire Flow Requirements for Buildings

18.4.1.3 Sections 18.3 and 18.4 shall be considered a recommendation for construction of one and two-family dwellings located on in-fill lots in existing neighborhoods and subdivisions.

18.5.7 Clear Space Around Hydrants

18.5.7.1 A 36 in. (914 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.

18.5.7.2 A clear space of not less than 60 in. (1524 mm) shall be provided in front of each hydrant connection having a diameter greater than 2 ½ in. (64 mm).

18.5.7.2.1 Existing, previously approved hydrant installations shall be permitted to have clear spaces less than 60 inches.

50.5.6 Cleaning of Exhaust Systems

50.5.6.1* If upon inspection, the exhaust system is found to be contaminated with deposits from grease-laden vapors, the contaminated portions of the exhaust system shall be cleaned by a properly trained qualified, and certified person(s) acceptable to the AHJ, or through the use of an automated exhaust cleaning system installed in the exhaust system and acceptable to the AHJ.

50.7 Mobile and Temporary Cooking Operations

50.7.1 General

50.7.1.1 Mobile and temporary cooking operations shall comply with Section 50.7.1 and the applicable section for the type of cooking being performed.

50.7.1.2 Where required by the AHJ, permits shall be required for the location, design, construction and operation of mobile and temporary cooking operations.

50.7.1.3 Portable Fire Extinguishers

50.7.1.3.1 Portable fire extinguishers shall be provided per NFPA 96 for cooking operations.

50.7.1.3.2 A minimum of one 2A:10BC portable fire extinguisher shall be provided when a generator or other fuel fired appliance is used.

50.7.1.3.3 When wood or charcoal is being used, a minimum of one 2A portable fire extinguisher or an approved hose line shall be provided.

50.7.1.4 Mobile or temporary cooking operations shall be separated from buildings or structures, combustibles, materials, vehicle and other cooking operations by a minimum of 3 ft (1 m).

50.7.1.5 Tents

50.7.1.5.1 Mobile or temporary cooking shall not take place within tents occupied by the public.

50.7.1.5.2 Tents shall comply with NFPA 102.

50.7.1.5.3 Seating for the public shall not be located within any mobile or temporary cooking vehicle.

50.7.1.6 Mobile or temporary cooking operations shall not block fire department access roads, fire lanes, fire hydrants or other fire protection devices and equipment.

50.7.1.7 Communications. A method of communication to emergency personnel shall be accessible to all employees.

50.7.1.8 Training

50.7.1.8.1 Prior to performing mobile or temporary cooking operations, workers shall be trained in emergency response procedures including:

(a) proper use of portable fire extinguishers and extinguishing systems

- (b) proper method of shutting off fuel sources
- (c) proper procedure for notifying the local fire department
- (d) proper refueling
- (e) how to perform leak detection
- (f) fuel properties

50.7.1.8.2 Refresher training shall be provided every year.

50.7.1.8.3 Initial and refresher training shall be documented and made available to the AHJ upon request.

50.7.1.9 Internal Combustion Power Sources

50.7.1.9.1 Electric generator and internal combustion power sources used for mobile or temporary cooking shall comply with this section.

50.7.1.9.2 Fueling. Fuel tanks shall be of adequate capacity to permit uninterrupted operation during normal operating hours.

50.7.1.9.2.1 Mobile cooking operations licensed by the Florida Department of Business and Professional Regulation prior to the adoption of this Code are exempt from this requirement. However, if there are any alterations, modifications, and/or replacements to the generator, the fuel tank shall be brought into compliance with 50.7.1.9.2.

50.7.1.9.3 Refueling. Refueling shall be conducted only when not in use.

50.7.1.9.3.1 Generators designed for refueling during use (while operating) are exempt from 50.7.1.9.3. Refueling during use shall follow the manufacturer procedures for such refueling.

50.7.1.9.4 Protection. Internal combustion power sources shall be isolated from contact with the public by either physical guards, fencing, or an enclosure.

50.7.1.9.5 Fueling from a container shall be permitted when the engine is shut down and engine surface temperature is below the autoignition temperature of the fuel.

50.7.1.9.6 Portable generators shall be positioned so that the exhaust is directed as follows:

- (1) At least 5 ft (1.5 m) in any direction away from any openings or air intakes and means of egress
- (2) Away from any building
- (3) Away from any mobile or temporary cooking vehicle or operation

50.7.1.10 Where applicable, electrical appliances, fixtures, equipment or wiring shall comply with NFPA 70.

50.7.1.11 Charcoal/wood burning

50.7.1.11.1 Mobile or temporary cooking operations that utilize wood or charcoals shall comply with NFPA 96 Section 14.9

50.7.1.11.2 An approved carbon monoxide detector shall be installed where mobile cooking operations are performed in an enclosed area.

50.7.2 Mobile Cooking

50.7.2.1 Mobile cooking operations and equipment shall comply with NFPA 96, 50.7.1 and this section.

50.7.2.2 LP-Gas Systems

50.7.2.2.1 Cylinders shall be secured in an upright position to prevent tipping over.

50.7.2.2.2 Gas systems on mobile cooking vehicles shall comply with NFPA 58 and this section.

50.7.2.3 Leak Detection

50.7.2.3.1 Gas systems shall be inspected prior to each use by a worker trained in accordance with 50.7.1.8 training.

50.7.2.3.2 Leak detection testing shall be documented and available to AHJ upon request.

50.7.2.3.3 Where a gas detection system has been installed, it shall be tested every month.

50.7.2.3.4 Leak detection shall be performed every time a new connection or a change in cylinder is made to any gas system.

50.7.2.4 LP-Gas Systems on Vehicles (Other Than Engine Fuel Systems)

50.7.2.4.1 Application. Section 50.7.2.4 shall apply to the following:

- (1) Non-engine fuel systems on all vehicles.
- (2) Installations served by exchangeable (removable) cylinder systems and by permanently mouthed containers.

50.7.2.4.2 Non Application. Section 50.7.2.4 shall not apply to the following:

- (1) Systems installed on mobile homes.
- (2) Systems installed on recreational vehicles.
- (3) Cargo tank vehicles, including trailers and semitrailers, and similar units used to transport LP-Gas as cargo, which are covered by Chapter 9.
- (4) LP-Gas engine fuel systems on the vehicles, which are covered by Chapter 11 of NFPA 58.

50.7.2.4.3 Container Installation Requirements.

50.7.2.4.3.1 Containers shall comply with 50.7.2.4.3.1 (A) through 50.7.2.4.3.1 (D)

(A) ASME mobile containers shall be in accordance with one of the following:

- (1) A MAWP of 312 psig (2.2 MPag) or higher where installed in enclosed spaces of vehicles.
- (2) A MAWP of 312 psig (2.2 MPag) or higher where installed on passenger vehicles.
- (3) A MAWP of 250 psig (1.7 MPag) or higher for containers where installed on the exterior of non-passenger vehicles.

(B) LP-Gas fuel containers used on passenger-carrying vehicles shall not exceed 200 gal (0.8 m³) aggregate water capacity.

(C) The capacity of individual LP-Gas containers on highway vehicles shall be in accordance with Table 50.7.2.4.3.1(C).

Table 50.7.2.4.3.1(C) Maximum Capacities of Individual LP-Gas Containers Installed on LP-Gas Highway Vehicles

Vehicle	Maximum Container Water Capacity	
	gal	m ³
Passenger vehicle	200	0.8
Nonpassenger vehicle	200	1.1
Food serving vehicle	100	1.3
Cargo tank vehicle	Not limited by this code	

Table 50.7.2.4.3.1(C)

Maximum Capacities of Individual LP-Gas Containers Installed on LP-Gas Highway Vehicles

(D) Containers designed for stationary service only and not in compliance with the container appurtenance protection requirements of 5.2.6 of NFPA 58 shall not be used.

50.7.2.4.3.2 ASME containers and cylinders utilized for the purposes covered by Section 50.7.2.4 shall not be installed, transported, or stored (even temporarily) inside any vehicle covered by Section 50.7.2.4, except for ASME containers installed in accordance with 50.7.2.4.3.4(I), chapter 9, or DOT regulations.

50.7.2.4.3.3 The LP-Gas supply system, including the containers, shall be installed either on the outside of the vehicle or in a recess or cabinet vapor-tight to the inside of the vehicle but accessible from and vented to the outside, with the vents located near the top and bottom of the enclosure and 3 ft (1m) horizontally away from any opening into the vehicle below the level of the vents.

50.7.2.4.3.4 Containers shall be mounted securely on the vehicle or within the enclosing recess or cabinet.

- (A) Containers shall be installed with road clearance in accordance with 11.8.3 of NFPA 58.
- (B) Fuel containers shall be mounted to prevent jarring loose and slipping or rotating, and the fastenings shall be designed and constructed to withstand, without permanent visible deformation, static loading in any direction equal to four times the weight of the container filled with fuel.

(C) Where containers are mounted within a vehicle housing, the securing of the housing to the vehicle shall comply with this provision. Any removable portions of the housing or cabinet shall be secured while in transit.

(D) Field welding on containers shall be limited to attachments to non-pressure parts such as saddle plates, wear plates, or brackets applied by the container manufacturer.

(E) All container valves, appurtenances, and connections shall be protected to prevent damage from accidental contact with stationary objects; from loose objects, stones, mud, or ice thrown up from the ground or floor; and from damage due to overturn or similar vehicle accident.

(F) Permanently mounted ASME containers shall be located on the vehicle to provide the protection specified in 50.7.2.4.3.4(E).

(G) Cylinders shall have permanent protection for cylinder valves and connections.

(H) Where cylinders are located on the outside of a vehicle, weather protection shall be provided.

(I) Containers mounted on the interior of passenger-carrying vehicles shall be installed in compliance with Section 11.9 of NFPA 58. Pressure relief valve installations for such containers shall comply with 11.8.5 of NFPA 58.

50.7.2.4.4 Installation of Container Appurtenances.

50.7.2.4.4.1 Container appurtenances shall be installed in accordance with the following:

(1) Pressure relief valve installation of ASME containers installed in the interior of vehicles complying with Section 11.9 of NFPA 58 shall comply with 11.8.5 of NFPA 58.

(2) Pressure relief valve installations on ASME containers installed on the outside of vehicles shall comply with 11.8.5 of NFPA 58 and 50.7.2.4.3.3.

(3) Main shutoff valves on containers for liquid and vapor shall be readily accessible.

(4) Cylinders shall be designed to be filled in either the vertical or horizontal position, or if they are the universal type, they are permitted to be filled in either position.

(5) All container inlets, outlets, or valves installed in container inlets or outlets, except pressure relief devices and gauging devices, shall be labeled to designate whether they communicate with the vapor or liquid space.

(6) Containers from which only vapor is to be withdrawn shall be installed and equipped with connections to minimize the possibility of the accidental withdrawal of liquid.

50.7.2.4.4.2 Regulators shall be installed in accordance with 6.8.2 of NFPA 58 and 50.7.2.4.4.2(A) through 50.7.2.4.4.2(E).

(A) Regulators shall be installed with the pressure relief vent opening pointing vertically downward to allow for drainage of moisture collected on the diaphragm of the regulator.

(B) Regulators not installed in compartments shall be equipped with a durable cover designed to protect the regulator vent opening from sleet, snow, freezing rain, ice, mud, and wheel spray.

(C) If vehicle-mounted regulators are installed at or below the floor level, they shall be installed in a compartment that provides protection against the weather and wheel spray.

(D) Regulator compartments shall comply with the following:

(1) The compartment shall be of sufficient size to allow tool operation for connection to and replacement of the regulator(s).

(2) The compartment shall be vapor-tight to the interior of the vehicle.

(3) The compartment shall have 1 in.² (650 mm²) minimum vent opening to the exterior located within 1 in. (25 mm) of the bottom of the compartment.

(4) The compartment shall not contain flame or spark-producing equipment.

(E) A regulator vent outlet shall be at least 2 in. (51 mm) above the compartment vent opening.

50.7.2.4.5 Piping

50.7.2.4.5.1 Piping shall be installed in accordance with 6.9.3 of NFPA 58 and 50.7.2.4.5.1(A) through 50.7.2.4.5.1(M).

- (A) Steel tubing shall have a minimum wall thickness of 0.049 in. (1.2 mm).
- (B) A flexible connector shall be installed between the regulator outlet and the fixed piping system to protect against expansion, contraction, jarring, and vibration strains.
- (C) Flexibility shall be provided in the piping between a cylinder and the gas piping system or regulator.
- (D) Flexible connectors shall be installed in accordance with 6.9.6 of NFPA 58.
- (E) Flexible connectors longer than the length allowed in the code, or fuel lines that incorporate hose, shall be used on where approved.
- (F) The fixed piping system shall be designed, installed, supported, and secured to minimize the possibility of damage due to vibration, strains, or wear and to preclude any loosening while in transit.
- (G) Piping shall be installed in a protected location.
- (H) Where piping is installed outside the vehicle, it shall be installed as follows:
 - (1) Piping shall be under the vehicle and below any insulation or false bottom.
 - (2) Fastening or other protection shall be installed to prevent damage due to vibration or abrasion.
 - (3) At each point where piping passes through sheet metal or a structural member, a rubber grommet or equivalent protection shall be installed to prevent chafing.
- (I) Gas piping shall be installed to enter the vehicle through the floor directly beneath or adjacent to the appliance served.
- (J) If a branch line is installed, the tee connection shall be located in the main gas line under the floor and outside the vehicle.
- (K) Exposed parts of the fixed piping system either shall be of corrosion-resistant material or shall be coated or protected to minimize exterior corrosion.
- (L) Hydrostatic relief valves shall be installed in isolated sections of liquid piping as provide in Section 6.13 of FNPA 58.
- (M) Piping systems, including hose, shall be pressure tested and proven free of leaks in accordance with Section 6.14 of NFPA 58.
- (N) Piping installations completed by a licensed installer prior to the adoption of this Code, may be approved by the AHJ.

50.7.2.4.5.2 There shall be no fuel connection between a tractor and trailer or other vehicle units.

50.7.2.4.6 Equipment Installation. Equipment shall be installed in accordance with Section 6.18 of NFPA 58, 50.7.2.4.6.1, and 50.7.2.4.6.2.

50.7.2.4.6.1 Installation shall be made in accordance with manufacturer's recommendations and, in the case of approved equipment, as provided in the approval.

50.7.2.4.6.2 Equipment installed on vehicles shall be protected against vehicular damage as provided for container appurtenances and connections in 50.7.2.4.3.4(E).

50.7.2.4.7 Appliance Installation on Vehicles

50.7.2.4.7.1 Subsection 50.7.2.4.7 shall apply to the installation of all appliances on vehicles. It shall not apply to engines.

50.7.2.4.7.2 All appliances covered by 50.7.2.4.7 installed on vehicles shall be approved.

50.7.2.4.7.3 Where the device or appliance, such as a cargo heater or cooler, is designed to be in operation while the vehicle is in transit, means, such as an excess-flow valve, to stop the flow of gas in the event of a line break shall be installed.

50.7.2.4.7.4 Gas-fired heating appliances shall be equipped with shutoffs in accordance with 5.20.7(A) of NFPA 58, except for portable heaters used with cylinders having a maximum water capacity of 2.7 lb (1.2 kg), portable torches, melting pots, and tar kettles.

50.7.2.4.7.5 Gas-fired heating appliances, other than ranges and illuminating appliances installed on vehicles intended for human occupancy, shall be designed or installed to provide for a complete separation of the combustion system from the atmosphere inside the vehicle.

50.7.2.4.7.6* Where unvented-type heaters that are designed to protect cargo are used on vehicles not intended for human occupancy, provisions shall be made to provide air from the outside for combustion and dispose of the products of combustion to the outside.

50.7.2.4.7.7 Appliances installed in the cargo space of a vehicle shall be readily accessible whether the vehicle is loaded or empty.

50.7.2.4.7.8 Appliances shall be constructed or otherwise protected to minimize possible damage or impaired operation due to cargo shifting or handling.

50.7.2.4.7.9 Appliances shall be located so that a fire at any appliance will not block egress of persons from the vehicle.

50.7.2.4.7.10 A permanent caution plate shall be affixed to either the appliance or the vehicle outside of any enclosure, shall be adjacent to the container(s), and shall include the following instructions:

CAUTION:

- (1) Be sure all appliance valves are closed before opening container valve.
- (2) Connections at the appliances, regulators, and containers shall be checked periodically for leaks with soapy water or its equivalent.
- (3) Never use a match or flame to check for leaks.
- (4) Container valves shall be closed when equipment is not in use.

50.7.2.4.7.11 Gas-fired heating appliances and water heaters shall be equipped with automatic devices designed to shut off the flow of gas to the main burner and the pilot in the event the pilot flame is extinguished.

50.7.2.4.8 General Precautions.

50.7.2.4.8.1 Mobile units including mobile kitchens and catering vehicles that contain hot plates and other cooking equipment shall be provided with at least one approved portable fire extinguisher rated in accordance with NFPA 10, Standard for Portable Fire Extinguishers, at not less than 10-BC.

50.7.2.4.8.2 Where fire extinguishers have more than one letter classification, they shall be considered as meeting the requirements of each letter class.

50.7.2.4.9 Parking, Servicing, and Repair.

50.7.2.4.9.1 Where vehicles with LP-Gas fuel systems used for purposes other than propulsion are parked, serviced, or repaired inside buildings, the requirements of 50.7.2.4.9.2 through 50.7.2.4.9.4 shall apply.

50.7.2.4.9.2 The fuel system shall be leak-free, and the container(s) shall not be filled beyond the limits specified in Chapter 7 of NFPA 58.

50.7.2.4.9.3 The container shutoff valve shall be closed, except that the container shutoff valve shall not be required to be closed when fuel is required for test or repair.

50.7.2.4.9.4 The vehicle shall not be parked near sources of heat, open flames, or similar sources of ignition, or near unventilated pits.

50.7.2.4.9.5 Vehicles having containers with water capacities larger than 300 gal (1.1 m³) shall comply with the requirements of Section 9.7 of NFPA 58.

50.7.2.4.10 Containers shall be designed, fabricated, tested, and marked (or stamped) in accordance with the regulations of the U.S. Department of Transportation (DOT); the ASME Code, Section VIII, "Rules for the Construction of Unfired Pressure Vessels"; or the API-ASME Code for Unfired Pressure Vessels for Petroleum Liquids and Gases, except for UG-125 through UG-136.

- (A) Used containers constructed to specification of the Association of American Railroads shall not be installed.

(B) Adherence to applicable ASME Code case interpretations and addenda that have been adopted and published by ASME 180 calendar days prior to the effective date of this code shall be considered as compliant with the ASME Code.

(C) Where containers fabricated to earlier editions of regulations, rules, or codes listed in 5.2.1.1 of NFPA 58, and of the Interstate Commerce Commission (ICC) Rules for Construction of Unfired Pressure Vessels, prior to April 1, 1967, are used, the requirements of Section 1.4 of NFPA 58 shall apply.

50.7.2.4.10.1 Containers that show excessive denting, bulging, gouging, or corrosion shall be removed from service.

50.7.2.4.11 Where a hose or swivel-type piping is used for liquid transfer, it shall be protected as follows:

(1) An emergency shutoff valve shall be installed at the railroad tank car end of the hose or swivel-type piping where flow into or out of the railroad tank car is possible.

(2) An emergency shutoff valve or a backflow check valve shall be installed on the railroad tank car end of the hose or swivel-type piping where flow is only into the railroad tank car.

(3)* Where a facility hose is used at a LP-Gas bulk plant or industrial plant to transfer LP-Gas liquid from a cargo tank vehicle in non-metered service to a bulk plant or industrial plant, the facility hose or the facility shall be equipped with an emergency discharge control system that provides a means to shut down the flow of LP-Gas caused by the complete separation of the facility hose within 20 seconds and without the need for human intervention.

50.7.2.4.11.1 After installation or modification, piping systems (including hose) shall be proven free of leaks by performing a pressure test at not less than the normal operating pressure.

50.7.2.4.12 General Location of Cylinders.

50.7.2.4.12.1 Cylinders in storage shall be located to minimize exposure to excessive temperature rises, physical damage, or tampering.

50.7.2.4.12.2 Cylinders in storage having individual water capacity greater than 2.7 lb (1.1 kg) [nominal 1 lb (0.45 kg) LP-Gas capacity] shall be positioned so that the pressure relief valve is in direct communication with the vapor space of the cylinder.

50.7.2.4.12.3 Cylinders stored in buildings in accordance with Section 8.3 of NFPA 58 shall not be located near exits, near stairways, or in areas normally used, or intended to be used, for the safe egress of occupants.

50.7.2.4.12.4 If empty cylinders that have been in LP-Gas service are stored indoors, they shall be considered as full cylinders for the purposes of determining the maximum quantities of LP-Gas permitted by 8.3.1, 8.3.2.1, and 8.3.3.1 of NFPA 58.

50.7.2.4.12.5 Cylinders shall not be stored on roofs.

50.7.2.4.13 Protection of Valves on Cylinders in Storage.

50.7.2.4.13.1 Cylinder valves shall be protected as required by 5.2.6.1 and 7.2.2.5 of NFPA 58.

50.7.2.4.13.2 Screw-on-type caps or collars shall be in place on all cylinders stored, regardless of whether they are full, partially full, or empty, and cylinder outlet valves shall be closed.

50.7.2.4.13.3 Valve outlets on cylinders less than 108 lb (49 kg) water capacity [nominal 45 lb (20 kg) propane capacity] shall be plugged, capped, or sealed in accordance with 7.2.2.5 of NFPA 58.

50.7.2.4.14 Transportation of Cylinders.

50.7.2.4.14.1 Cylinders having an individual water capacity not exceeding 1000 lb (454 kg) [nominal 420 lb (191 kg) propane capacity], when filled with LP-Gas, shall be transported in accordance with the requirements of Section 9.3 of NFPA 58.

50.7.2.4.14.2 Cylinders shall be constructed as provided in Section 5.2 of NFPA 58 and equipped in accordance with Section 5.7 of NFPA 58 for transportation as cylinders.

50.7.2.4.14.3 The quantity of LP-Gas in cylinders shall be in accordance with Chapter 7 of NFPA 58.

50.7.2.4.14.4 Cylinder valves shall comply with the following:

- (1) Valves of cylinders shall be protected in accordance with 5.2.6.1 of NFPA 58.
- (2) Screw-on-type protecting caps or collars shall be secured in place.
- (3) The provisions of 7.2.2.5 of NFPA 58 shall apply.

50.7.2.4.14.5 The cargo space of the vehicle shall be isolated from the driver's compartment, the engine, and the engine's exhaust system.

(A) Open-bodied vehicles shall be considered to be in compliance with this provision.

(B) Closed-bodied vehicles having separate cargo, driver, and engine compartments shall be considered to be in compliance with this provision.

(C) Closed-bodied vehicles, such as passenger cars, vans, and station wagons, shall not be used for transporting more than 215 lb (98 kg) water capacity [nominal 90 lb (41 kg) propane capacity], but not more than 108 lb (49 kg) water capacity [nominal 45 lb (20 kg) propane capacity] per cylinder, unless the driver and engine compartments are separated from the cargo space by a vaportight partition that contains no means of access to the cargo space.

50.7.2.4.14.6 Cylinders and their appurtenances shall be determined to be leak-free before being loaded into vehicles.

50.7.2.4.14.7 Cylinders shall be loaded into vehicles with flat floors or equipped with racks for holding cylinders.

50.7.2.4.14.8 Cylinders shall be fastened in position to minimize the possibility of movement, tipping, and physical damage.

50.7.2.4.14.9 Cylinders being transported by vehicles shall be positioned in accordance with Table 50.7.2.4.14.9.

Table 50.7.2.4.14.9 Orientation of Cylinders on Vehicles

Propane Capacity of Cylinder		Open Vehicles	Enclosed Space of Vehicles
Lb	kg		
≤45	≤20	Any position. Relief valve in communication with the vapor space.	Any position. Relief valve in communication with the vapor space.
>45	>20		
≤42	≤19	Any position. Relief valve in communication with the vapor space.	Any position. Relief valve in communication with the vapor space.
>42	>19		

50.7.2.4.14.10 Vehicles transporting cylinders where the total weight is more than 1000 lb (454 kg), including the weight of the LP-Gas and the cylinders, shall be placarded as required by DOT regulations or state law.

50.7.3 Temporary Cooking

50.7.3.1 Temporary cooking operations and equipment shall comply with NFPA 96, 50.7.1 and this section.

50.7.3.2 Temporary cooking equipment and installations shall comply with NFPA 58.

50.7.3.3 Deep fat fryers, fry-o-laters, or other appliances having combustible liquids heated by LP Gas, solid fuels or electricity shall be protected by an approved hood fire suppression system, or other approved means of extinguishment in the event of fire.

50.7.3.4 Mobile cooking operations licensed by the Florida Department of Business and Professional Regulation prior to the adoption of this Code shall not be required to comply with the provisions of 50.7.3 until January 1, 2020.

50.7.4 A battery powered audible flammable / combustible gas detector shall be installed in all enclosed compartments where gas appliances, piping or cylinders are present.

63.3.1.2 Insulated Liquid Carbon Dioxide Systems. ~~Insulated liquid carbon dioxide systems shall be in accordance with Chapter 13 of NFPA 55.~~

63.3.1.2.1 Small Insulated Liquid Carbon Dioxide Outdoor Systems

63.3.1.2.1.1 Container systems located in enclosed spaces shall be in accordance with Section 13.2 of NFPA 55.

63.3.1.2.1.1.1 Aboveground outdoor locations shall not be required to be provided with a gas detection and alarm system in accordance with 13.2.2 of NFPA 55 where the system is unenclosed.

63.3.1.2.1.1.1.1 To be considered unenclosed, enclosures constructed to limit access or otherwise provide a visual or architectural barrier for the installation shall be constructed with the requirements in Section 6.6 of NFPA 55 for weather protection or with the following:

(1) The enclosure shall be constructed without a roof or overhead cover.

(2) Supports and walls shall not obstruct more than three sides nor more than 75 percent of the perimeter of the storage or use area, with 25 percent of the perimeter being open to the atmosphere.

63.3.1.2.1.1.1.2 Enclosures that do not meet the requirements of 63.3.1.2.1.1.1 shall be permitted when constructed in accordance with the following:

(1) The enclosure shall be constructed without a roof or overhead cover.

(2) Continuous mechanical exhaust ventilation shall be provided.

63.3.1.2.1.1.1.2.1 Where mechanical exhaust ventilation is provided, it shall be in accordance with the following:

(1) The exhaust system shall be installed in accordance with the requirements of the mechanical code.

(2) The exhaust system shall be designed to consider the density of the potential vapors released with exhaust taken from a point within 12 in. (305 mm) of the floor.

(3) The location of both the exhaust and the inlet air openings shall be designed to provide air movement across all portions of the enclosure to prevent the accumulation of vapors.

(4) The rate of exhaust ventilation shall be not less than 1 scf/ min/ ft² (0.028 Nm³/ min/ m²) of floor area within the enclosure.

63.3.1.2.2 Large Indoor Insulated Liquid Carbon Dioxide Systems. (Reserved)

63.3.1.2.3 Large Outdoor Insulated Liquid Carbon Dioxide Systems.

63.3.1.2.3.1 Location. Outdoor stationary large insulated liquid carbon dioxide systems shall be located in accordance with Table 63.3.1.2.3.1.

63.3.1.2.3.1.1 Point-of-Fill Connections. Point-of-fill connections serving stationary containers filled by mobile transport equipment shall not be positioned closer to exposures than the minimum distances in Table 63.3.1.2.3.1.

63.3.1.2.3.2 Fire Barriers. A 2-hour fire barrier wall shall be permitted in lieu of the distances specified by Table 63.3.1.2.3.1 when in accordance with the provisions of 63.3.1.2.3.2.1 through 63.3.1.2.3.2.4.

63.3.1.2.3.2.1 The fire barrier wall shall be without openings or penetrations.

63.3.1.2.3.2.1.1 Penetrations of the fire barrier wall by conduit or piping shall be permitted provided that the penetration is protected with a firestop system in accordance with the building code.

63.3.1.2.3.2.2 The fire barrier wall shall be either an independent structure or the exterior wall of the building adjacent to the storage system.

63.3.1.2.3.2.3 The fire barrier wall shall be located not less than 5 ft (1.5 m) from any exposure.

63.3.1.2.3.2.4 The fire barrier wall shall not have more than two sides at approximately 90 degree (1.57 rad) directions or not more than three sides with connecting angles of approximately 135 degrees (2.36 rad).

Table 63.3.1.2.3.1 Minimum Separation Distance Between Outdoor Stationary Large Insulated Liquid Carbon Dioxide Containers and Exposures

<u>Exposure</u>	<u>Minimum Distance</u>	
	<u>ft</u>	<u>m</u>
(1) <u>Buildings, regardless of construction type</u>	<u>2</u>	<u>0.6</u>
(2) <u>Wall openings other than building exits</u>	<u>2</u>	<u>0.6</u>
(3) <u>Air intakes</u>	<u>10</u>	<u>3.1</u>
(4) <u>Property lines</u>	<u>5</u>	<u>1.5</u>
(5) <u>Places of public assembly (assembly occupancies)</u>	<u>50</u>	<u>15</u>
(6) <u>Nonambulatory patient areas</u>	<u>50</u>	<u>15</u>
(7) <u>Combustible materials (e.g., paper, leaves, weeds, dry grass, debris)</u>	<u>15</u>	<u>4.5</u>
(8) <u>Incompatible hazardous materials</u>	<u>20</u>	<u>6.1</u>
(9) <u>Building exits</u>	<u>10</u>	<u>3.1</u>

63.3.1.2.4 Carbon Dioxide Beverage Systems.

63.3.1.2.4.1 General. Systems with more than 100 lb (45 kg) of carbon dioxide used in beverage dispensing applications shall comply with 63.3.1.2.4.2 through 63.3.1.2.4.4.

63.3.1.2.4.2 Equipment. The storage, use, and handling of carbon dioxide shall be in accordance with Chapters 1 through 7 of NFPA 55 and the requirements of this chapter, as applicable.

63.3.1.2.4.3 Protection from Damage. Carbon dioxide system storage tanks, cylinders, piping, and fittings shall be installed so they are protected from damage by occupants or equipment during normal facility operations.

63.3.1.2.4.4 Required protection. Carbon dioxide storage tanks, cylinders, piping, and equipment located indoors, in rooms, and other areas where a leak of carbon dioxide can collect shall be provided with either ventilation in accordance with 63.3.1.2.4.4.1 or an emergency alarm system in accordance with 63.3.1.2.4.4.2.

63.3.1.2.4.4.1 Ventilation. Mechanical ventilation shall be in accordance with the *Florida Mechanical Code* and shall comply with all of the following:

- (1) Mechanical ventilation in a room or area shall be at a rate of not less than 1 ft³/ min/ ft² (0.00508 m³ /s/ m²).
- (2) Exhaust shall be taken from a point within 12 in. (305 mm) of the floor.
- (3) The ventilation system shall be designed to operate with a negative pressure in relation to the surrounding area.

63.3.1.2.4.4.2 Emergency Alarm System. Emergency alarm systems shall comply with all of the following:

- (1) Areas where carbon dioxide can accumulate, continuous gas detection shall be provided.
- (2) The system shall be capable of detecting and notifying the building occupants of a gas release of carbon dioxide at, or in excess of the Time-Weighted Average-Permissible Exposure Limit (TWA-PEL) published by the Occupational Safety and Health Administration (OSHA) and

the Threshold Limit Value-Short Term Exposure Limit (TLV[®]-STEL) as published by the American Conference of Governmental Industrial Hygienists (ACGIH). More conservative set points shall be permitted to be used.

(3) The emergency alarm system activation shall initiate a local alarm within the room or area in which the system is installed.

65.10 Sale, Handling, and Storage of Consumer Fireworks.

65.10.1* Applicability.

65.10.1.1* General Requirements. Retail sales of consumer fireworks in both new and existing buildings, structures, and facilities shall comply with the requirements of this section unless otherwise indicated.

65.10.1.1.1 New Facilities.

65.10.1.1.1.1 For the purpose of applying the requirements of this section, the following consumer fireworks retail sales (CFRS) facilities and stores shall be considered to be new:

(1) Permanent CFRS facilities and stores that are not initially occupied until after the effective date of this Code, unless plans are submitted and accepted for review, plans have been approved for construction, or a building permit has been issued prior to the effective date of this Code

(2) Permanent CFRS facilities and stores constructed prior to the effective date of this Code and in which the retail sales of consumer fireworks have not been conducted either seasonally or year-round within one year prior to the effective date of this Code

(3) Temporary CFRS facilities and stores

65.10.1.1.1.2 In a store where the area of the retail sales floor occupied by the retail displays of consumer fireworks is increased after the effective date of this Code, such that the area exceeds the limits to be specified in 65.10.5.1.1(1), the building shall be considered to be a new CFRS facility.

65.10.1.1.2 Existing Facilities. For the purpose of applying the requirements of Section 65.10, CFRS facilities and stores not considered to be new as specified in 65.10.1.1.1 shall be considered to be existing.

65.10.1.1.3 Minimum Requirements. Existing life safety features that do not meet the requirements for new buildings but that exceed the requirements for existing buildings shall not be further diminished.

65.10.1.1.4 Modernization or Renovation. Any alteration or any installation of new equipment shall meet, as nearly as practicable, the requirements for new construction.

65.10.1.1.4.1 Only the altered, renovated, or modernized portion of an existing building, system, or individual component shall be required to meet the provisions of this Code that are applicable to new construction.

65.10.1.1.4.2 If the alteration, renovation, or modernization adversely impacts required life safety features, additional upgrading shall be required.

65.10.1.1.4.3 Except where another provision of this Code exempts a previously approved feature from a requirement, the resulting feature shall not be less than that required for existing buildings.

65.10.1.2 Facility Classification. The requirements of this section shall apply to the following:

(1) Permanent buildings and structures, including the following:

_____ (a) Stores

_____ (b) CFRS facilities

(2) Temporary facilities, including the following:

_____ (a) CFRS stands

_____ (b) Tents

_____ (c) Canopies

_____ (d) Membrane structures

65.10.2 Special Limits for Retail Sales of Consumer Fireworks.

65.10.2.1 Retail sales of consumer fireworks, including their related storage and display for sale of such fireworks, shall be in accordance with this *Code*.

65.10.2.2 Retail sales of consumer fireworks shall be limited to mercantile occupancies defined in 3.3.190.9 and NFPA 101.

65.10.2.3 Any building or structure used for the retail sales of consumer fireworks, including their related storage, shall comply with Section 20.12 and NFPA 101 for mercantile occupancies, except as provided in this *Code*.

65.10.2.4 Retail sales of display fireworks and pyrotechnic articles, including the related storage and display for sale of such fireworks and articles, shall be prohibited at a CFRS facility or store.

65.10.2.5 Retail sales of certain explosive devices prohibited by the *Child Safety Act of 1966*, including the related storage and display for sale of such devices, shall be prohibited at a CFRS facility or store.

65.10.2.6 The retail sales of pest control devices, including their related storage and display for sale, shall be prohibited at a CFRS facility or store.

65.10.2.7 The retail sales of fireworks that do not comply with the regulation of the U.S. Consumer Product Safety Commission as set forth in 16 CFR 1500 and 1507 and the regulations of the U.S. Department of Transportation as set forth in 49 CFR 100 to 178, including their related storage and display for sale, shall be prohibited.

65.10.3 General Requirements for All Retail Sales.

65.10.3.1 Exempt Amounts.

65.10.3.1.1 The requirements of this section shall not apply to CFRS facilities or stores where the consumer fireworks are in packages and where the total quantity of consumer fireworks on hand does not exceed 125 lb (net) [56.8 kg] of pyrotechnic composition or, in a building protected throughout with an approved automatic sprinkler system installed in accordance with Section 13.3, 250 lb (net) [113.6 kg] of pyrotechnic composition.

65.10.3.1.2 Where the actual weight of the pyrotechnic composition of consumer fireworks is not known, 25 percent of the gross weight of the consumer fireworks, including packaging, shall be permitted to be used to determine the weight of the pyrotechnic composition.

65.10.3.2* Permits. Where required by state or local laws, ordinances, or regulations, a permit for the following shall be obtained:

- (1) Construction, erection, or operation of the following:
 - (a) Permanent building or structure
 - (b) Temporary structure such as a stand, tent, or canopy used for the purpose of the retail display or sale of consumer fireworks to the public
- (2) Storage of consumer fireworks in connection with the retail display or sale of consumer fireworks to the public.

65.10.3.3 Plans. Plans for facilities other than stands and tents shall include the following:

- (1) Minimum distances from the following:
 - (a) Public ways
 - (b) Buildings
 - (c) Other CFRS facilities
 - (d) Motor vehicles fuel-dispensing station dispensers
 - (e) Retail propane-dispensing station dispensers
 - (f) Flammable and combustible liquid aboveground tank storage
 - (g) Flammable gas and flammable liquefied gas bulk aboveground storage and dispensing areas within 300 ft (91.5 m) of the facility used for the retail sales of consumer fireworks
- (2) Vehicle access and parking areas
- (3) Location and type of portable fire extinguishers

(4) Floor plan and layout of storage and displays to indicate compliance with this chapter and applicable state or local laws, ordinances, or regulations

(5) Means of egress

(6) Construction details

65.10.3.4* Fire Department Access. Any portion of an exterior wall of a building, sidewall of a tent, or other defined perimeter of a CFRS facility or store shall be accessible within 150 ft (45.7 m) of a public way or an approved fire apparatus access.

65.10.3.5 Construction of Buildings and Structures. Consumer fireworks shall only be permitted to be sold at retail in any of the following buildings or structures, provided that any new building or structure does not exceed one story in height:

(1) Permanent buildings or structures constructed in accordance with the building code enforced by the AHJ

(2) Tents, canopies, or temporary membrane structures complying with NFPA 102, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures*

(3) Temporary structures constructed in accordance with this chapter

(4) Temporary CFRS stands greater than 800 ft² (74 m²) in area that also meet the requirements for a permanent structure

(5) Vehicles, such as vans, buses, trailers, recreational vehicles, motor homes, travel trailers, trucks, and automobiles, complying with the applicable requirements for CFRS stands

65.10.3.6 An automatic sprinkler system designed and installed in accordance with Section 13.3 and NFPA 13 shall be provided throughout permanent CFRS facilities and stores in which CFRS are conducted in the following buildings:

(1) New buildings greater than 6000 ft² (557.2 m²) in area

(2) Existing buildings greater than 7500 ft² (694 m²) in area

65.10.3.6.1 Door and window openings in the fire barrier wall shall be protected by self-closing fire doors or fixed fire windows having a fire protection rating of not less than 1 hour and shall be installed in accordance with Section 12.4 and NFPA 80, *Standard for Fire Doors and Other Opening Protectives*.

65.10.3.6.3 Every CFRS facility and store shall have no fewer than two portable fire extinguishers with a minimum rating of 2A, at least one of which shall be of the pressurized water type.

65.10.3.7 Storage Rooms. Storage rooms containing consumer fireworks in a new permanent CFRS facility or store shall be protected with an automatic sprinkler system installed in accordance with Section 13.3 and NFPA 13 or separated from the retail sales area by a fire barrier having a fire resistance rating of not less than 1 hour.

65.10.3.7.1 Consumer fireworks, except for sparklers, novelties, and trick noisemakers as defined in Section 791.01(4)(b) and (c), F.S., stored in a building that is also used for other purposes shall be stored in a room or area used exclusively for the storage of consumer fireworks.

65.10.3.7.2 When approved by the AHJ, noncombustible materials shall be permitted to be stored in the same room or area with consumer fireworks.

65.10.3.7.3 Sparklers shall be stored or kept for sale in accordance with Section 791.055, F.S.

65.10.3.8 Portable Fire Extinguishers.

65.10.3.8.1 Specification. Portable fire extinguishers shall be provided as required for extra (high) hazard occupancy in accordance with Section 13.6 and NFPA 10.

65.10.3.8.2 Extinguisher Type. Where more than one portable fire extinguisher is required, at least one fire extinguisher shall be of the multipurpose dry chemical type if the facility is provided with electrical power.

65.10.3.8.3 Location. Portable fire extinguishers for permanent consumer fireworks retail sales facilities and stores shall be located so that the maximum distance of travel required to reach an extinguisher from any point does not exceed 75 ft (23 m), as specified in NFPA 10.

65.10.3.9 Fire Alarms. A fire alarm system shall be provided as required by Section 13.7 and NFPA 101.

65.10.3.10 Smoke Control.

65.10.3.10.1 Smoke and heat vents designed and installed in accordance with NFPA 204, *Standard for Smoke and Heat Venting*, shall be provided in the CFRS area of new permanent CFRS facilities or stores where the ceiling height is less than 10 ft (3.05 m) and the travel distance to reach an exit is greater than 25 ft (7.6 m).

65.10.3.10.2 The smoke and heat vents required by 65.10.3.10.1 shall be automatically activated by a smoke detection system installed throughout the CFRS area in accordance with NFPA 72.

65.10.3.11 No Smoking Signs.

65.10.3.11.1 Smoking shall not be permitted inside or within 50 ft (15.5 m) of the CFRS area.

65.10.3.11.2 At least one sign that reads as follows, in letters at least 2 in. (51 mm) high on a contrasting background, shall be conspicuously posted at each entrance or within 10 ft (3.05 m) of every aisle directly serving the CFRS area in a store:

 FIREWORKS – NO SMOKING

65.10.3.12 Distance from Bulk Dispensing and Bulk Storage.

65.10.3.12.1 CFRS facilities and stores shall not be located within 50 ft (15.2 m) of the following:

- (1) Retail propane-dispensing station dispensers
- (2) Aboveground storage tanks for flammable or combustible liquid, flammable gas, or flammable liquefied gas
- (3) Compressed natural gas-dispensing station dispensers

65.10.3.12.2 New CFRS facilities and stores, existing CFRS stands and tents, and temporary CFRS facilities shall not be located within 50 ft (15.2 m) of motor vehicle fuel-dispensing station dispensers.

65.10.3.12.3 Existing CFRS facilities, other than CFRS stands, tents, and temporary facilities, and existing stores shall not be located within 25 ft (7.6 m) of motor vehicle fuel-dispensing station dispensers.

65.10.3.12.4 Fuel tanks on vehicles or other motorized equipment shall not be considered bulk storage.

65.10.3.12.5 Fuel storage for generators shall be in accordance with 65.10.4.9.2.

65.10.3.12.6 CFRS areas and storage areas shall not be located within 300 ft (91.2 m) of any aboveground bulk storage or bulk dispensing areas for the following:

- (1) Flammable or combustible liquid
- (2) Flammable gas
- (3) Flammable liquefied gas

65.10.3.13* Fire Safety and Evacuation Plan. For a CFRS facility or store, an approved fire safety and evacuation plan shall be prepared in writing and maintained current.

65.10.3.14 Means of Egress.

65.10.3.14.1 Number of Exits.

65.10.3.14.1.1 The minimum number of exits provide from the retail sales area shall be not less than three or as determined in accordance with Chapter 14 and NFPA 101, whichever number is greater.

65.10.3.14.1.2 Required means of egress from the retail sales area shall not be allowed to pass through storage rooms.

65.10.3.14.2 Egress Travel Distance. Exits provided for the retail sales area of tents, membrane structures, canopies, and permanent CFRS facilities, including Class C stores, shall be located so that the maximum egress travel distance, measured from the most remote point to an exit along the natural and unobstructed path of egress travel, does not exceed 75 ft (22.9 m).

65.10.3.14.3 Aisles. Aisles serving as a portion of the exit access in CFRS areas shall comply with this paragraph.

65.10.3.14.3.1 Aisle Width.

65.10.3.14.3.1.1 Aisles shall have a minimum clear width of 48 in. (1.2 m).

65.10.3.14.3.1.2 The required width of aisles shall be maintained unobstructed at all times the facility is occupied by the public.

65.10.3.14.3.2 Aisle Arrangements.

65.10.3.14.3.2.1 Not less than one aisle shall be provided and arranged so that travel along the aisle leads directly to an exit.

65.10.3.14.3.2.2 Other required exits shall be located at, or within 10 ft (3.05 m) of, the end of an aisle or a cross-aisle.

65.10.3.14.3.2.3 Aisles shall terminate at an exit, another aisle, or a cross-aisle.

65.10.3.14.3.2.4 Dead-end aisles shall be prohibited.

65.10.3.14.3.2.5 Where more than one aisle is provided, not less than one cross-aisle shall have an unobstructed connection with every aisle, other than cross-aisles.

65.10.3.14.3.2.6 Cross-aisle connections shall be provided for each aisle at intervals not greater than 40 ft (15.2 m) as measured along the aisle.

65.10.3.14.3.2.7 Where cross-aisles are required, not less than one cross-aisle shall have at least one end terminate at, or within 10 ft (3.05 m) of, an exit.

65.10.3.14.4 Doors and Doorways. Doors and doorways used in the means of egress shall comply with this paragraph.

65.10.3.14.4.1 Egress doors shall not be less than 36 in. (910 mm) in width [providing a minimum of 32 in. (813 mm) clear width].

65.10.3.14.4.2 Every egress door that has a latching device shall be provided with panic hardware complying with Chapter 14 and NFPA 101.

65.10.3.14.4.3 Means of egress doors shall be of the side-hinge swinging type and shall be arranged to swing in the direction of egress travel.

65.10.3.14.5 Exit Signs.

65.10.3.14.5.1 Exits shall be marked by an approved exit sign in accordance with Section 14.14 and NFPA 101.

65.10.3.14.5.2 Exit signs shall be required to be self-luminous or internally or externally illuminated.

65.10.3.14.6 Emergency Lighting.

65.10.3.14.6.1 The means of egress, including the exit discharge, shall be illuminated whenever the facility is occupied in accordance with Section 14.12 and NFPA 101.

65.10.3.14.6.2 Emergency lighting shall be provided for CFRS facilities and stores and shall comply with Section 14.13 and NFPA 101.

65.10.3.15* Retail Sales Displays.

65.10.3.15.1 General. The requirements of this section shall apply only to CFRS areas, unless otherwise specifically indicated.

65.10.3.15.2* Height of Sales Displays. To provide for visual access of the retail sales area by the employees and customers, partitions, counters, shelving, cases, and similar space dividers shall not exceed 6 ft (1.8 m) in height above the floor surface inside the perimeter of the retail sales area.

65.10.3.15.2.1 Merchandise on display or located on shelves or counters or other fixtures shall not be displayed to a height greater than 6 ft (1.8 m) above the floor surface within the CFRS area.

65.10.3.15.2.2 Where located along the perimeter of the consumer fireworks retail sales area, the maximum height of sales displays shall be limited to 12 ft (3.66 m).

65.10.3.15.3* Flame Breaks.

65.10.3.15.3.1 Where continuous displays of consumer fireworks are located on shelving, cases, counters, and similar display fixtures, a flame break shall be provided so that the maximum distance between flame breaks does not exceed 16 ft (4.9 m) where measured along the length of the display.

65.10.3.15.3.2 The flame break shall extend as follows:

(1) From the display surface to not less than 6 in. (150 mm) above the full height of the displayed merchandise or to the underside of the display surface directly above

(2) For the full depth of the displayed merchandise

65.10.3.15.3.3* Where packaged fireworks merchandise is displayed on the same level as individual unpackaged fireworks devices, the flame break required in 65.10.3.15.3.1 shall not be required where both of the following criteria are met:

(1) The length of the display level containing individual unpackaged fireworks devices is interrupted by packaged fireworks merchandise, or open space, or any combination thereof, having a continuous length of not less than 8 ft (2.4m)

(2) The distance between flame breaks does not exceed 32 ft (9.8 m).

65.10.3.15.3.4 Where a merchandise display level contains packaged fireworks merchandise, such merchandise shall be permitted to be displayed in a continuous length on the same level, where the display does not exceed 32 ft (9.8 m) without the flame break required in 65.10.3.15.3.1.

65.10.3.15.3.5 An aisle having a minimum width of 48 in. (1.2 m) shall be permitted to substitute for the flame break required in 65.10.3.15.3.1.

65.10.3.15.3.6 Where displays of merchandise face aisles that run along both long sides of the display fixtures or display surface, a flame break shall be installed lengthwise between the abutting display fixtures or along the approximate longitudinal centerline of the display surface so as to separate the merchandise facing one of the aisles from the merchandise that abuts it facing the other aisle.

65.10.3.15.3.7 Freestanding display racks, pallets, tables, or bins containing packaged fireworks merchandise shall be permitted without flame breaks, provided the dimensions of the area occupied by the fireworks merchandise do not exceed 4 ft (1.2 m) in width, 8 ft (2.4 m) in length, and 6 ft (1.8 m) in height, and the displayed fireworks merchandise is separated from other displays of merchandise by aisles having a minimum clear width of 4 ft (1.2 m).

65.10.3.15.3.8 Where both of the facing vertical surfaces of the abutting display fixtures are constructed of perforated hardboard panels not less than ¼ in. (6 mm) thick that are separated from each other by an open space not less than 1 ½ in. (38 mm) wide, a flame break specified in 65.10.3.15.3.6 shall not be required.

65.10.3.15.4 Shelving.

65.10.3.15.4.1 Shelving or other surfaces used to support fireworks display merchandise shall be permitted to have not more than 10 percent of the area of the shelf contain holes or other openings.

65.10.3.15.4.2 The 10 percent limitation on the area of holes or other openings in the shelf used to support fireworks display merchandise shall not be applicable under the following conditions:

(1) Where both of the facing vertical surfaces of the abutting display fixtures are constructed of perforated hardboard panels not less than ¼ in. (6 mm) thick and separated from each other by an open space not less than 1 ½ in. (38 mm) wide

(2) Where such merchandise is suspended from or fastened to the shelf or surface or is displayed as packaged merchandise on the surface or in bins.

65.10.3.15.4.3 Flame breaks and solid display surfaces shall not be required for packaged fireworks merchandise displayed in bins or display racks or on pallets or tables located at the end of a row of display fixtures where the following conditions are met:

(1) Such end displays are separated from the ends of the display fixtures by an open space not less than 3 in. (76 mm) wide.

(2) The fireworks merchandise occupies an area having dimensions not greater than the width of the end of the row of display fixtures and a depth not greater than 36 in.

(3) The minimum required widths of the adjacent aisles are maintained, but in no case is the aisle width less than 48 in. (1.2 m).

65.10.3.15.5 Covered Fuses.

65.10.3.15.5.1 Only consumer fireworks meeting the criteria for covered fuses as defined in 3.3.81 or as described in 65.10.3.15.5.2 shall be permitted where the retail sales of consumer fireworks are conducted.

65.10.3.15.5.2 A consumer fireworks device shall be considered as having a covered fuse if the fireworks device is contained within a packaged arrangement, container, or wrapper that is arranged and configured such that the fuse of the fireworks device cannot be touched directly by a person handling the fireworks without the person having to puncture or tear the packaging or wrapper, unseal or break open a package or container, or otherwise damage or destroy the packaging material, wrapping, or container within which the fireworks are contained.

65.10.3.15.6* **Aerial Devices.** Aerial devices shall be packaged and displayed for sale in a manner that will limit travel distance of ejected pyrotechnic components if ignition of the fireworks occurs.

65.10.3.15.7* **Horizontal Barriers.** Combustible materials and merchandise shall not be stored directly above the consumer fireworks in retail sales displays unless a horizontal barrier is installed directly above the consumer fireworks as prescribed in 7.4.2.2.2.5 of NFPA 430.

65.10.3.16 **Electrical Equipment.** All electrical wiring shall be in accordance with NFPA 70.

65.10.3.17 **Heating Equipment.**

65.10.3.17.1 Heating units shall be listed and shall be used in accordance with their listing.

65.10.3.17.2 Temporary heating sources shall have tip-over and temperature-overheat protection.

65.10.3.17.3 Open-flame and exposed-element heating devices shall be prohibited.

65.10.3.18 **Portable Generators.**

65.10.3.18.1 Class II and Class III combustible liquid generator fuel shall be limited to not more than 5 gal (18.9 L).

65.10.3.18.2 Portable generators shall be permitted to use Class I flammable liquids as fuel, provided the quantity of such fuel is limited to 2 gal (7.6 L).

65.10.3.19 **Operations.**

65.10.3.19.1 **General.** Means of egress, including but not limited to aisles, doors, and exit discharge, shall be clear at all times when the facility or the building is occupied.

65.10.3.19.2 **Distances from Entrances and Exits.**

65.10.3.19.2.1 No consumer fireworks shall be displayed for sale or stored within 5 ft (1.5 m) of any public entrance in an enclosed building or structure.

65.10.3.19.2.2 No consumer fireworks shall be displayed for sale or stored within 2 ft (0.6 m) of any exit or private entrance in an enclosed building or structure.

65.10.3.19.3 **Security.**

65.10.3.19.3.1 CFRS facilities and stores shall be secured when unoccupied and not open for business, unless fireworks are not kept in the facility during such times.

65.10.3.19.3.2 The fireworks displayed or stored in a CFRS facility or store shall be allowed to be removed and transferred to a temporary storage structure or location.

65.10.3.19.4 Fireworks shall not be ignited, discharged, or otherwise used within 300 ft (91.5 m) of a CFRS facility or store.

65.10.3.20 **Display and Handling.** Not less than 50 percent of the available floor area within the retail sales area shall be open space that is unoccupied by retail displays and used only for aisles and cross-aisles.

65.10.3.21* **Housekeeping.**

65.10.3.21.1 CFRS areas and storage rooms shall be kept free of accumulations of debris and rubbish.

65.10.3.21.2 Any loose pyrotechnic composition shall be removed immediately.

65.10.3.21.3 Vacuum cleaners or other mechanical cleaning devices shall not be used.

65.10.3.21.4 Brooms, brushes, and dustpans used to sweep up any loose powder or dust shall be made of nonsparking materials.

65.10.3.21.5 Consumer fireworks devices that are damaged shall be removed and not offered for sale.

65.10.3.21.6 Damaged consumer fireworks shall be permitted to be returned to the dealer or shall be disposed of according to the manufacturer's instructions.

65.10.3.22* Training. All personnel handling consumer fireworks shall receive safety training related to the performance of their duties.

65.10.3.23 Under the Influence. Any person selling consumer fireworks shall not knowingly sell consumer fireworks to any person who is obviously under the influence of alcohol or drugs.

65.10.3.24 Records.

65.10.3.24.1 Records shall be maintained on available inventory on the premise.

65.10.3.24.2 Records shall be made available to the AHJ upon request.

65.10.4 Consumer Fireworks Retail Sales (CFRS) Facility Requirements.

65.10.4.1 Plan. Where required, plans for CFRS facilities shall be submitted to the AHJ with the permit application.

65.10.4.2 Site Plan. The site plan for tents shall show the location of the tent on the site and indicate the minimum separation distances required by 65.10.4.7.

65.10.4.3 Construction Materials. The following construction materials requirements shall apply to new permanent CFRS facilities in jurisdictions that have not adopted a local building code:

(1) Buildings having an area up to and including 8000 ft² (743 m²) shall be permitted to be constructed of any approved construction materials.

(2) Buildings having an area greater than 8000 ft² (743 m²) shall be constructed in accordance with one of the following:

(a) Buildings shall be constructed of noncombustible or limited-combustible materials.

(b) Buildings with exterior walls having a fire resistance rating of not less than 2 hours shall be permitted to have the roof decking and its supporting structure and interior partitions constructed of combustible materials.

(3) Roof coverings for any building shall have a minimum rating of Class C as determined in accordance with NFPA 256, *Standard Methods of Fire Tests of Roof Coverings*.

65.10.4.4 Multiple-Tenant Buildings.

65.10.4.4.1 Where new CFRS facilities are located in a building containing other tenants, the CFRS facility shall be separated from the other tenants by fire barriers having no openings and a fire resistance rating of not less than 2 hours.

65.10.4.4.2 Where the new CFRS facility is protected per Section 13.3 and NFPA 13, the fire resistance rating of the fire barrier required by 65.10.4.4.1 shall be permitted to be not less than 1 hour.

65.10.4.4.3 Any penetrations of the fire barrier shall be protected in accordance with NFPA 101.

65.10.4.5 Fire Protection.

65.10.4.5.1 Automatic Sprinkler System Alarm. Any waterflow alarm device shall be arranged to activate audible and visual alarms throughout the CFRS facility in accordance with Section 13.7 and NFPA 72.

65.10.4.5.2 Portable Fire Extinguishers. Portable fire extinguishers for temporary CFRS facilities shall be installed and located so that the maximum distance of travel required to reach an extinguisher from any point does not exceed 35 ft (10.6 m).

65.10.4.5.3 Public Notification. In permanent CFRS facilities greater than 3000 ft² (278.6 m²) in area, a public address system or a means for manually activating audible and visible alarm indicating devices located throughout the facility in accordance with Section 13.7 and NFPA 72 shall be provided at a constantly attended location when the CFRS facility is occupied.

65.10.4.6 Site Requirements.

65.10.4.6.1 Clearance to Combustibles. The area located within 30 ft (9 m) of a CFRS facility shall be kept free of accumulated dry grass, dry brush, and combustible debris.

65.10.4.6.2 Parking. No motor vehicle or trailer used for the storage of consumer fireworks shall be parked within 10 ft (3 m) of a CFRS facility, except when delivering, loading, or unloading fireworks or other merchandise and materials used, stored, or displayed for sale in the facility.

65.10.4.6.3 Fireworks Discharge. At least one sign that reads as follows, in letters at least 4 in. (102 mm) high on a contrasting background, shall be conspicuously posted on the exterior of each side of the CFRS facility:

NO FIREWORKS DISCHARGE
WITHIN 300 FEET

65.10.4.7 Separation Distances.

65.10.4.7.1 Permanent Facilities.

65.10.4.7.1.1 New Facilities. New permanent consumer fireworks retail sales facilities shall be separated from adjacent buildings and structures in accordance with Table 65.10.4.7.1.1.

TABLE 65.10.4.7.1.1 Separation Distances Between New Permanent Buildings and Structures

Separation Distances		Exterior Wall Fire Resistance Rating (hr)	Exterior Wall Opening Protection Rating (hr)
ft	m		
< 10	< 3.05	2	1½
≥ 10 to < 60	≥ 3.05 to < 18.3	1	¾
≥ 60	≥ 18.3	0	0

[1124: Table 7.4.7.1.1]

65.10.4.7.1.2 Existing Facilities. Existing permanent CFRS facilities shall be separated from adjacent permanent buildings and structures by not less than 10 ft (3.05 m) or shall be separated by a wall with a 1-hour fire resistance rating.

65.10.4.7.2 Temporary Facilities. Temporary CFRS facilities shall be located as specified in Table 65.10.4.7.2.

TABLE 65.10.4.7.2 Temporary CFRS Facilities — Minimum Separation Distances

	Buildings		Combustibles ^a		Tents ^b		Vehicle Parking		Stands ^c		Storage of Consumer Fireworks	
	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m
Tents ^b	20	6.1	20	6.1	20	6.1	10	3.05	20	6.1	20	6.1
Stands ^c	20	6.1	10	3.05	20	6.1	10	3.05	5 ^d	1.5 ^d	20	6.1

^aThe required clearances to combustibles shall also comply with 65.10.4.6.1.

^bTents refers to temporary retail sales of consumer fireworks in tents, canopies, and membrane structures.

^cStands refers to temporary CFRS stands.

^dWhere stands are separated from each other by less than 20 ft (6.1 m), the aggregate area of such stands shall not exceed 800 ft² (74 m²). [1124: Table 7.4.7.2]

65.10.4.8 Means of Egress.

65.10.4.8.1 General.

65.10.4.8.1.1 Means of egress in CFRS facilities shall comply with the applicable requirements of Chapter 14 and NFPA 101, as modified by 65.10.3.14 and 65.10.4.8.

65.10.4.8.1.2* Means of egress in tents and membrane structures used for retail sales of consumer fireworks shall also comply with NFPA 102, as modified by 65.10.3.14 and 65.10.4.8.

65.10.4.8.2 The evacuation plan shall be posted in a conspicuous location that is accessible to the public as well as to persons employed or otherwise working in the CFRS facility.

65.10.4.8.3 Exit signs shall not be required to be illuminated in tents that are not open for business after dusk.

65.10.4.8.4 Emergency lighting shall not be required in tents that are not open for business after dusk.

65.10.4.8.5 Exit openings from tents shall have a clear opening width of not less than 44 in. (1100 mm).

65.10.4.9 Source of Ignition.

65.10.4.9.1 Temporary Electrical Equipment. Battery-powered equipment, electrical equipment, and electrical cords that are used in conjunction with a CFRS facility area shall be listed and shall be used in accordance with their listing.

65.10.4.9.1.1 Temporary wiring installed in a temporary structure, including tents and canopies, shall comply with NFPA 70.

65.10.4.9.1.2 Where temporary electrical conductors are placed on top of an outdoor surface to connect the permanent power source to the temporary CFRS facility's temporary electrical system, the conductors shall be provided with physical protection against damage caused by pedestrian or vehicular traffic.

65.10.4.9.2 Portable Generators.

65.10.4.9.2.1 Portable generators supplying power to CFRS facilities shall use only Class II or Class III combustible liquid fuels.

65.10.4.9.2.2 Portable generators shall be located not less than 20 ft (6.1 m) from the CFRS facility.

65.10.4.9.2.3 Generator fuels shall not be stored less than 20 ft (6.1 m) from the CFRS facility.

65.10.4.9.2.4* Where the generator fuel storage is located not less than 50 ft (15.2 m) from the CFRS facility, the quantity of such fuel shall not be limited by 65.10.3.18.

65.10.4.9.3 Cooking Equipment.

65.10.4.9.3.1 Cooking equipment of any type shall not be permitted within 20 ft (6.1 m) of tents, canopies, or membrane structures used for the storage or sale of consumer fireworks.

65.10.4.9.3.2 Open flame cooking equipment of any type shall not be allowed within 50 ft (15.2 m) of tents, canopies, or membrane structures used for the storage or sale of consumer fireworks.

65.10.4.10 Quantity Limitations. The floor area occupied by the retail displays of consumer fireworks in permanent CFRS facilities shall not exceed 40 percent of the available floor area within the retail sales area.

65.10.4.11 Flame Breaks. In CFRS facilities, the longitudinal flame break required in 65.10.3.15.3.6 shall not be required where the display fixture or surface is adjacent to an aisle that is not used for public egress.

65.10.5 Stores.

65.10.5.1 General.

65.10.5.1.1* For the purpose of this chapter, stores in which retail sales of consumer fireworks are conducted shall not be considered CFRS facilities as defined in 3.3.72 where both of the following conditions exist:

- (1) The area of the retail sales floor occupied by the retail displays of consumer fireworks does not exceed 25 percent of the area of the retail sales floor in the building or 600 ft² (55.5 m²), whichever is less.

(2) The consumer fireworks are displayed and sold in a manner approved by the AHJ and comply with the applicable provisions of this code, federal and state law, and local ordinances.

65.10.5.1.2 Consumer fireworks displayed for sale in stores shall comply with the following:

(1) Such fireworks shall be under the visual supervision of a store employee or other responsible party while the store is open to the public.

(2) Such fireworks shall be packaged fireworks merchandise.

(3)* Such fireworks shall be packaged and displayed for sale in a manner that will limit travel distance of ejected pyrotechnical components if ignition of the fireworks occurs.

(4) Where consumer fireworks meeting the descriptions of C.3.1.2 or C.3.1.3 of NFPA 1124 for aerial devices and audible ground devices, respectively, are sold, such devices shall be displayed for sale in an area of the store that is physically separated from the rest of the store in a manner that restricts the entry by the public, and the area of the store shall be provided with not less than two means of egress, so located that there is no common path of travel and the distance to reach an egress point from the area does not exceed 35 ft (10.7 m).

65.10.5.2 Egress. Means of egress in stores shall comply with Chapter 14 and NFPA 101, unless otherwise specified in 65.10.3.14.

65.10.5.3 Storage Rooms. Storage rooms containing consumer fireworks in a new permanent store shall be protected with an automatic sprinkler system installed in accordance with Section 13.3 and NFPA 13 or separated from the retail sales area by a fire barrier having a fire resistance rating of not less than 1 hour.

65.10.5.3.1 Door and window openings in the fire barrier wall shall be protected by self-closing fire doors or fixed fire windows having a fire protection rating of not less than 1 hour and shall be installed in accordance with Section 12.4 and NFPA 80.

65.10.5.3.2 Any other openings or penetrations in the fire barrier wall shall be protected in accordance with NFPA 101.

65.10.5.4 Alarm Notification. In Class B stores, a public address system or a means for manually activating audible and visible alarm indicating devices located throughout the facility in accordance with Section 13.7 and NFPA 72 shall be provided at a constantly attended location when the store is occupied.

65.10.5.5 Flame breaks shall be allowed to be omitted in stores protected throughout with an automatic sprinkler system installed in accordance with Section 13.3 and NFPA 13.

65.10.6 Stands.

65.10.6.1 Site Plan. The site plan for stands shall show the location of the stand on the site and indicate the minimum separation distances required by 65.10.4.7.

65.10.6.2 Temporary Stands.

65.10.6.2.1 Portable Fire Extinguisher. Temporary CFRS stands of less than 200 ft² (18.6 m²) shall be required to have only one portable fire extinguisher.

65.10.6.2.2 Fire Safety and Evacuation Plan. An approved fire safety and evacuation plan shall not be required for temporary CFRS stands.

65.10.6.2.3 Means of Egress.

65.10.6.2.3.1 Retail sales areas within temporary CFRS stands shall have a minimum of two exits.

65.10.6.2.3.2 Exits provided for temporary fireworks retail sales stands shall be located such that the maximum egress travel distance as measured from the most remote point to an exit along the natural and unobstructed path of egress travel does not exceed 35 ft (10.6 m).

65.10.6.2.3.3 Customers shall not be permitted inside a temporary CFRS stand unless it complies with the means of egress requirements in 65.10.3.14.

65.10.6.2.3.4 Exit signs shall not be required to be illuminated in stands that are not open for business after dusk, or in temporary CFRS stands where the interior is not accessible to the public.

65.10.6.2.3.5 Emergency lighting shall not be required in stands that are not open for business after dusk or for temporary CFRS stands where the interior is not accessible to the public.

65.10.6.3 Minimum Separation Distances. Temporary CFRS stands shall be separated from adjacent buildings and structures in accordance with Table 65.10.4.7.2.

65.10.6.4 Stands Not Open to the Public.

65.10.6.4.1 Minimum Clear Width of Aisles. In temporary CFRS stands where the interior is not accessible to the public, the minimum clear width of the aisle shall be permitted to be not less than 28 in. (710 mm).

65.10.6.4.2 Egress Doors.

65.10.6.4.2.1 Egress doors provided for temporary CFRS stands where the interior is not accessible to the public shall be permitted to be not less than 28 in. (710 mm) in width.

65.10.6.4.2.2 For temporary CFRS stands where the interior is not accessible to the public, latching devices on doors shall be permitted without panic hardware.

65.10.6.4.3 Storage. In temporary CFRS stands where the interior is not accessible to the public, the maximum height of sales displays shall be limited to 8 ft (2.44 m).

65.10.6.4.4 Flame Breaks. Temporary CFRS stands where the interior is not accessible to the public shall not be required comply with 65.10.3.15.3.

65.10.6.4.5 Covered Fuses. Individual consumer fireworks items displayed for sale in temporary CFRS stands where the interior is not accessible to the public shall not be required to have covered fuses.

65.10.6.4.6 Sales Display. The following shall apply to the sales display of consumer fireworks in temporary CFRS stands that do not allow access to the interior of the stand by the public:

- (1) Consumer fireworks shall be displayed in a manner that prevents the fireworks from being handled by persons other than those operating, supervising, or working in the temporary CFRS stand.
- (2) The handling requirements of 65.10.6.4.6(1) shall not apply to packaged assortments, boxes, or similarly packaged containers of one or more items, regardless of type.

Annex A

A.3.3.281 Consumer Fireworks Retail Sales (CFRS) Stand. Stands can include, but are not limited to, small buildings, plywood or sheet metal structures, manufactured buildings, semitrailers, trailers, shipping containers, or similar structures or facilities.

A.3.3.282 Fireworks. Toy caps for use in toy pistols, toy canes, toy guns, and novelties and trick noisemakers are not considered to be fireworks (*see Annex C of NFPA 1124*). The regulations referred to limit the explosive content of each toy cap to not more than an average of 0.25 gr (16.2 mg). Also, each package containing such caps has to be labeled to indicate the maximum explosive content per cap. For information on the use of model rockets and model rocket motors, see NFPA 1122. For information on the use of high power rockets and high power rocket motors, see NFPA 1127. Model rockets, model rocket motors, high power rockets, and high power rocket motors designed, sold, and used for the purpose propelling recoverable aero models are not considered to be fireworks.

A.3.3.282.1 Consumer Fireworks. Consumer fireworks are normally classified as Explosives, 1.4 G and described as Fireworks, UN 0336 by the U.S. Department of Transportation (U.S. DOT) (*see Annex C of NFPA 1124*). Some small devices designed to produce audible effects are included, such as whistling devices, ground devices containing 0.8 gr (50 mg) or less of explosive composition (salute powder), and aerial devices containing 2 gr (130 mg) or less of explosive composition (salute powder) per explosive unit. Consumer fireworks that comply with the construction, chemical composition, and labeling regulations of the U.S. DOT for fireworks, 49 CFR 172, and the U.S. Consumer Product Safety

Commission (CPSC) as set forth in CPSC 16 CFR 1500 and 1507, are not considered to be explosive materials for purposes of this Code.

A.3.3.282.2 Display Fireworks. Display fireworks are described as Fireworks, UN0335 and are classed as Explosives, 1.3G by the U.S. Department of Transportation (U.S. DOT). (See Annex C of NFPA 1124.)

Display fireworks include, but are not limited to, the following:

- (1) Salutes or firecrackers containing more than 2 gr (130 mg) of explosive composition (salute powder)
- (2) Aerial shells containing more than 2.1 oz (60 g) of total pyrotechnic and explosive composition
- (3) Other display pieces that exceed the limits for classification as consumer fireworks

Such fireworks are also described as fireworks, 49 CFR 172 by the U.S. DOT.

A.3.3.283 Covered Fuses. The purpose of the covered fuse is to minimize the accidental ignition of fireworks in a retail display by a lighted cigarette or a match, a cigarette lighter, or similar small open flame, as well as to reduce the potential for the rapid involvement of fireworks in, and the subsequent acceleration of, a fire originating within the retail display of consumer fireworks.

Protection of the fuse can be provided by means of tape covering the exposed (ignitable) end of a safety fuse or by covering the fuse or the entire fireworks device or group of fireworks devices with paper, plastic, cardboard, paperboard, or similar or equivalent materials.

Examples of covered fuses of fireworks devices include those contained within packaged assortments, multi-item packages, and similar retail merchandise arrangements that are displayed within unopened and unperforated containers so that they are not exposed to view, or they are covered with, or are contained within, plastic wrap, paper, paperboard, cardboard, or other types of wrapping or packaging materials designed to prevent the fuses from coming into direct contact with an ignition source.

A.3.284 Packaged Fireworks Merchandise. Packaged fireworks merchandise is generally fireworks items or groups of fireworks items that have been packaged by the manufacturer or distributor before they are offered for sale to the consumer. The packaging arrangement completely encapsulates the fireworks item or items within paperboard, cardboard, plastic wrap, or similar materials or combinations of materials. Such encapsulations ensures that a person must puncture, tear, unseal, or break open the package or otherwise damage or destroy the packaging materials in order to gain access to, and directly handle, each individual fireworks item to expose its fuse.

A.65.10.1 The content of Section 65.10 has been extensively reorganized in order to provide all the requirements for a specific facility or store type to appear in one section. To facilitate use of this section for those familiar with the 2003 Code, a guide to this reorganization has been provided in Annex H of NFPA 1124.

A.65.10.1.1 To assist the user of this Code in determining whether a CFRS facility or store is new or existing for the purpose of applying this Code, Table A.65.10.1.1 has been provided.

TABLE A.65.10.1.1 Applicability of Section 65.10 to New and Existing CFRS Facilities and Stores

Venue Type	Application
Temporary stand – seasonal	New
Temporary tent – seasonal	New
Temporary facility – seasonal	New
Temporary stores (including bulk retail) – seasonal	New
Permanent stand*	
– Year round	Existing
– Seasonal	Existing
Permanent stand [†]	
– Year round	New
– Seasonal	New
Permanent tent*	
– Year round	Existing
– Seasonal	Existing
Permanent tent [†]	
– Year round	New
– Seasonal	New
Permanent CFRS facility*	
– Year round	Existing
– Seasonal	Existing
Permanent CFRS facility [†]	
– Year round	New
– Seasonal	New
Permanent store*	
– Year round	Existing
– Seasonal	Existing
Permanent store [†]	
– Year round	New
– Seasonal	New

Note: Change in display or exit layout can require new permit based on local requirements.

* Sales conducted within 1 year prior to the effective date.

[†] Sales not conducted within 1 year prior to the effective date.

CFRS facility – consumer fireworks retail sales facility

[1124: Table A.7.1.1]

A.65.10.2.2 This requirement is not intended to preclude the retail sales of consumer fireworks in occupancies that might be classified as Group H High Hazard (Hazardous) by a building code.

A.65.10.3.2 Specific information and requirements for permits can be found in Section 1.12 for those jurisdictions that have not adopted a building code or fire code.

A.65.10.3.4 See A.6.6 of NFPA 1124.

A.65.10.3.13 Fire safety and evacuation plans should be prepared by the owner or operator of the consumer fireworks retail sales facility or store in consultation with the AHJ.

A.65.10.3.14.3.2 The purpose of 65.10.3.14.3.1.1 is to ensure that a readily available path of travel is provided to reach the required exits and that such travel can occur under emergency conditions without significant impedance by the aisle arrangement. In fact, cross-aisles are required to facilitate access to alternate aisle system in a CFRS facility is shown in Figure A.65.10.3.14.3.2.

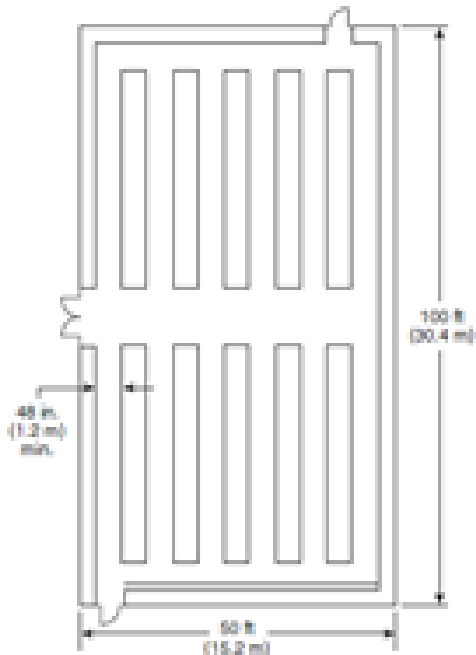


FIGURE A.65.10.3.14.3.2 Typical Design for Exit Access Aisle System in CFRS Facility. (1124: Figure A.7.3.14.3.2)

A.65.10.3.15 Consumer fireworks sealed in packaging meeting U.S. DOT standards for shipping would not be considered to be on display.

A.65.10.3.15.2 The ability to view the entire retail sales area is important for several reasons. For employees, such visibility allows easier supervision of the customers and helps to minimize the possibility of malicious mischief, such as the willful setting of fires in the fireworks merchandise displays. It also allows employees to quickly observe and respond to an incipient fire condition. Response might include the following:

- (1) Evacuation of the occupants
- (2) Notification of the local fire department
- (3) Initiation of a fire attack using the fire extinguishers in the facility, provided that the fire is still small enough

For the customers, such visibility allows them also to quickly see a developing fire condition and react accordingly. Exits and their corresponding paths of travel are more easily observed, thus minimizing panic and facilitating evacuation in a timely manner. Full visibility can be easily achieved by keeping the height of displays and displayed merchandise within the retail sales area below adult eye level. Where displays located around the perimeter of the retail sales area do not impact the ability to view the area, it is not necessary to limit their height. However, if it is desirable to have higher displays of merchandise within the retail sales area, equivalent means of achieving full visibility should be employed, such as the use of unobstructed surveillance mirrors strategically located throughout the sales area or the addition of more employees who can walk the sales floor and monitor the customers.

A.65.10.3.15.3 Flame breaks can be constructed of any of the following:

- (1) Sheet steel
- (2) Sheet aluminum not less than 0.010 in. (0.25 mm) thick
- (3) Hardboard not less than 1/8 in. (3 mm) thick
- (4) Gypsum board not less than 3/8 in. (10 mm) thick
- (5) Wood panels not less than 1/8 in. (3 mm) thick

- (6) Plywood not less than ¼ in. (6 mm) thick
- (7) Particleboard not less than ¼ in. (6 mm) thick
- (8) Cement fiberboard
- (9) Plastic laminate not less than 1/8 in. (3 mm) thick
- (10) Safety glass not less than 1/8 in. (3 mm) thick
- (11) Other approved material

Where installed within a retail display fixture containing consumer fireworks, the flame break should impede or retard the rapid spread of an incipient fire involving the fireworks and their packaging materials as any of the following occurs:

- (1) The fire progresses along a display level or shelf.
- (2) The fire attacks another display level or shelf above.
- (3) The fire attacks another display fixture abutting the display fixture of origin.

As a result of installing flame breaks to impede fire spread, the quantity and rate of smoke production can be retarded as well. Thus, flame breaks can provide the building occupants with additional time to react to an incipient fire and safely evacuate the building. See Figure A.65.10.3.15.3.

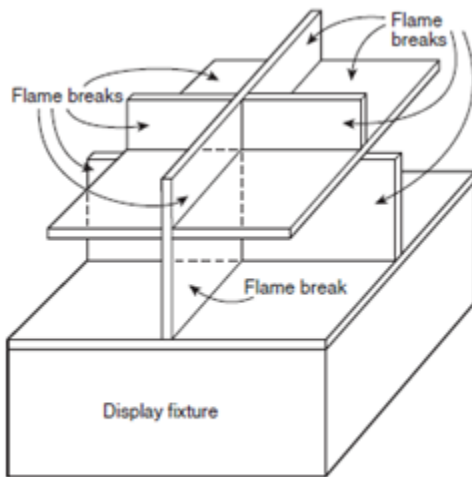


FIGURE A.65.10.3.15.3 *Flame Break Design. [1124:Figure A.7.3.15.3]*

A.65.10.3.15.3.3 The purpose of specifying packaged fireworks merchandise is to permit such merchandise to be used in longer lengths of displays of consumer fireworks without the installation of a flame break. It is presumed that packaged fireworks merchandise does not readily ignite when exposed to a fire developing within the retail display area merchandise and does not readily contribute to or accelerate a fire that might spread along the surface of a display. See Figure A.65.10.3.15.3.3. Since the purpose of a flame break is to slow down the rapid spread of a fire involving a retail display of consumer fireworks to allow occupants time to react and evacuate the immediate area, properly packaged fireworks merchandise can also serve the purpose of a flame break. For a description of packaged fireworks merchandise, see A.3.3.283 Covered Fuse.

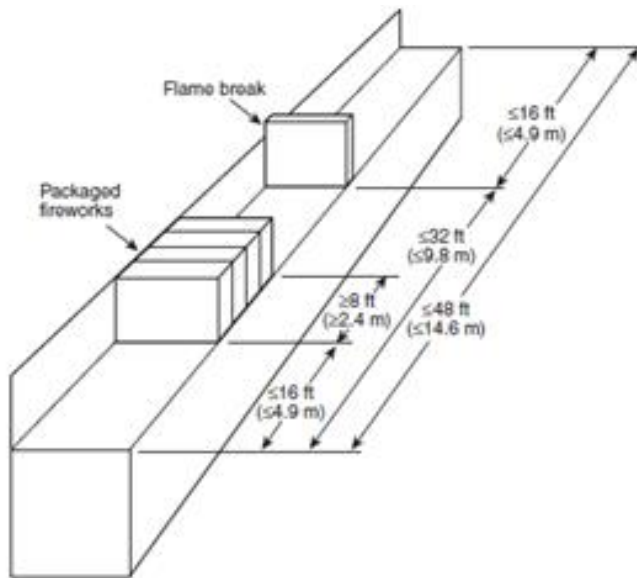


FIGURE A.65.10.3.15.3.3 *Packaged Fireworks Merchandise and Flame Break Requirements. [1124:Figure A.7.3.15.3.3]*

A.65.10.3.15.6 This paragraph describes performance criteria for how aerial devices, which are described in C.3.1.2 of NFPA 1124, are to be packaged, displayed, and restrained as needed, depending upon the device and the manner in which it is packaged and displayed. Thus, upon ignition by a fire in the retail sales display area containing devices, the resultant effect of the ejection of pyrotechnic components will be reasonably limited so as not to pose an undue threat to evacuating occupants or to cause rapid spread of the fire to areas remote from the immediate area of the fire.

The method and manner of packaging and displaying aerial devices have been demonstrated to be effective in accomplishing the intent of this section. This performance criterion could also be met by enclosing consumer fireworks within bins. The packaging material itself can be designed to contain the consumer fireworks. The placement and arrangement of the aerial devices within the packages or within bins or on shelves are also important factors. Other containment methods include fastening aerial devices together, restraining their movement with packaging materials, or placing aerial devices or packages of aerial devices within racks, containers, holders, or other structures.

A.65.10.3.15.7 Arrangement of horizontal plywood barriers should be as shown in Figure A.65.10.3.15.7.

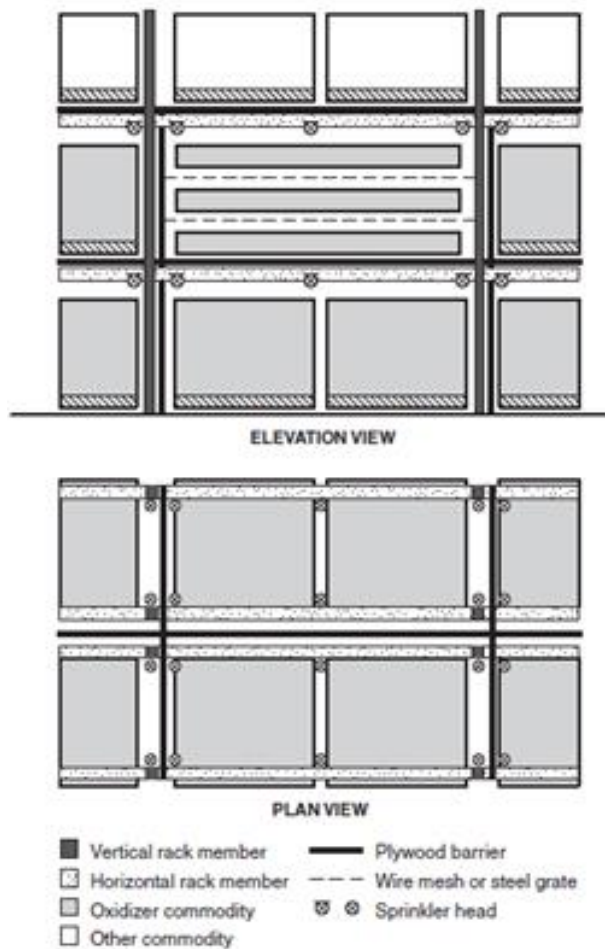


FIGURE A.65.10.3.15.7 Arrangement of Horizontal Barrier Separating Combustible Materials and Consumer Fireworks. [1124:Figure A.7.3.15.7]

A.65.10.3.21 Refer to Material Safety Data Sheet (MSDS) for additional information.

A.65.10.3.22 Training might be required by the U.S. Department of Transportation or the Occupational Safety and Health Administration as applicable for the purpose of being employed in the operation of a CFRS or storage facility.

A.65.10.4.8.1.2 NFPA 102 has been referenced for the purpose of determining the requirements for the means of egress in tents and membrane structures except as modified by 65.10.3.14 of this *Code* for special requirements for the retail sales of consumer fireworks. It should be noted that although Section 9.7 of NFPA 102 permits fireworks in any tent or temporary membrane structure, the intent is to prohibit the use, discharge, or ignition of fireworks within the tent or temporary membrane structure because unauthorized open flames are also prohibited in the same section. See Section 7.4 of NFPA 1124. Consumer fireworks in and of themselves do not pose an unusual fire hazard when they are stored or placed on display for retail sales within a tent or temporary membrane structure unless they are actually ignited or discharged. Section 65.10 in this *Code* contains several provisions that specifically deal with how fireworks can be safely displayed or stored in tents or temporary membrane structures for the purpose of selling them at retail. Those requirements are an effort to minimize the fire hazard associated with such fireworks.

A.65.10.4.9.2.4 See NFPA 30 for the separation distances.

A.65.10.5.1.1 Preliminary results of recent full scale fire tests indicate that automatic sprinkler systems designed for an Ordinary Hazard, Group 2 occupancy in accordance with NFPA 13 might be suitable for protecting retail displays of consumer fireworks where the ceiling height does not exceed 10 ft (3.1 m) and might also be adequate for ceiling heights up to 16 ft (4.9 m). This implies that there might be a need to design the sprinkler system in new buildings for an Extra Hazard, Group 1 occupancy for ceiling heights greater than 16 ft (4.9 m). For existing buildings, existing sprinkler systems designed for an Ordinary Hazard, Group 2 occupancy should suffice. Until such time as additional fire testing is completed and more conclusive design criteria can be verified, designers of automatic sprinkler systems for areas where retail sales of consumer fireworks are located might want to consider these design criteria. For additional information contact the American Pyrotechnic Association (APA), PO Box 30438, Bethesda, MD 20824.

A.65.10.5.1.2(3) This item describes performance criteria for how consumer fireworks displayed for sale in stores are to be packaged and displayed and restrained as needed, depending upon the device and the manner in which it is packaged and displayed. Thus, upon ignition by a fire in the retail sales display area containing consumer fireworks, the resultant effect of the ejection of pyrotechnic components will be reasonably limited so as not to pose an undue threat to evacuating occupants or to cause rapid spread of the fire to areas remote from the immediate area of the fire. The method and manner of packaging and displaying consumer fireworks have been demonstrated to be effective in accomplishing the intent of this section. The performance criteria might also be met by enclosing consumer fireworks within bins. The packaging material itself can be designed to contain the consumer fireworks. The placement and arrangement of the consumer fireworks within the packages or within bins or on shelves are also important factors. Other containment methods include fastening consumer fireworks together, restraining their movement with packaging materials, or placing consumer fireworks or packages of consumer fireworks within racks, containers, holders, or other structures.