

2018 Code Change Training

Virginia Statewide Fire Prevention Code

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Building Code Academy

Department of Housing
and Community Development



Agenda

- Select specific revisions resulting from SFPC Edit process
- 2018 Virginia Statewide Fire Prevention Code Significant Changes
- State changes are marked in **yellow**



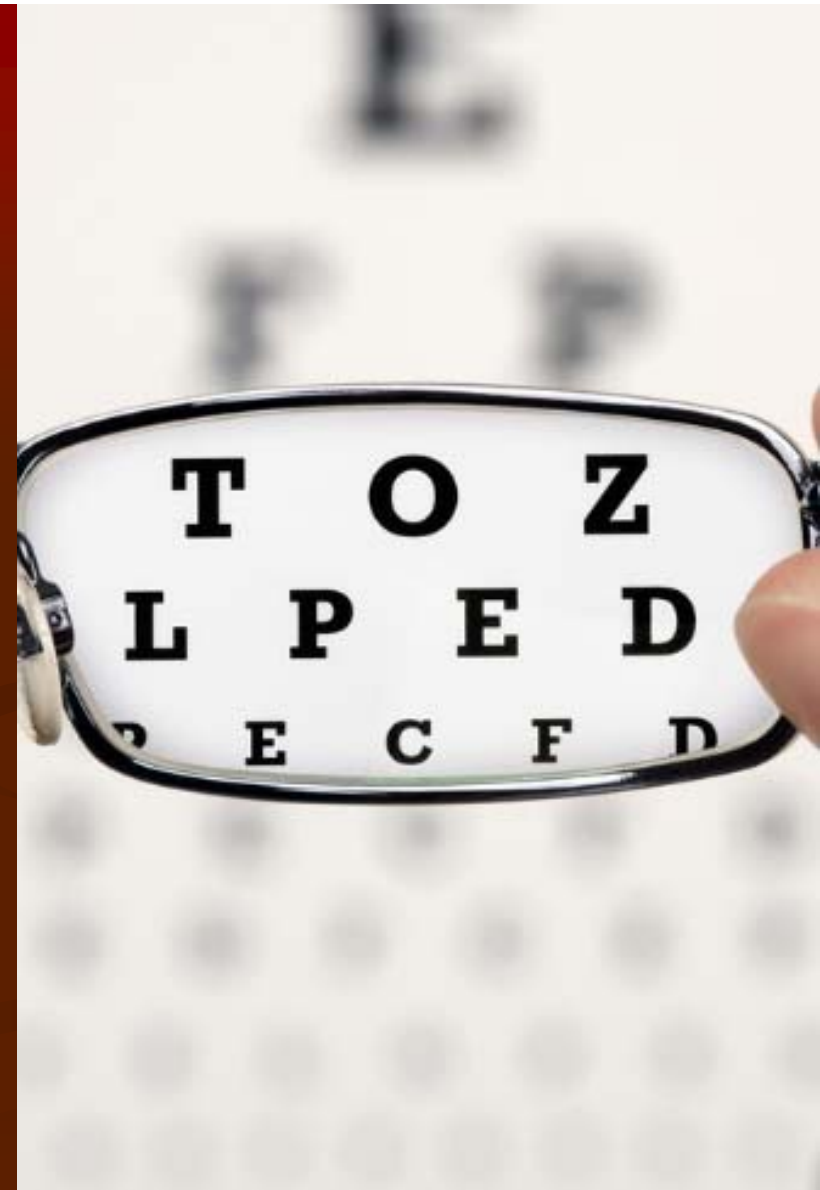
Select SFPC Edits

Notable clarifications resulting from the edit
process



Disclaimer about edits

- No technical changes resulted from edits
- Added sections reflect clarifications of previously existing provisions



101.2.1 (Scope)

- New section clarifies that the SFPC shall not require construction, modifications or installation of systems regulated by the applicable building code

101.2.2 (Scope)

- Clarifies that maintenance requirements shall not be construed as a requirement for installation
- Construction is to be maintained as installed

110.1 General (Unsafe Conditions)

- Clarifies and emphasizes that there must be a code violation in order to deem a structure unsafe
- This section grants authority but generally cannot be cited by itself as a violation

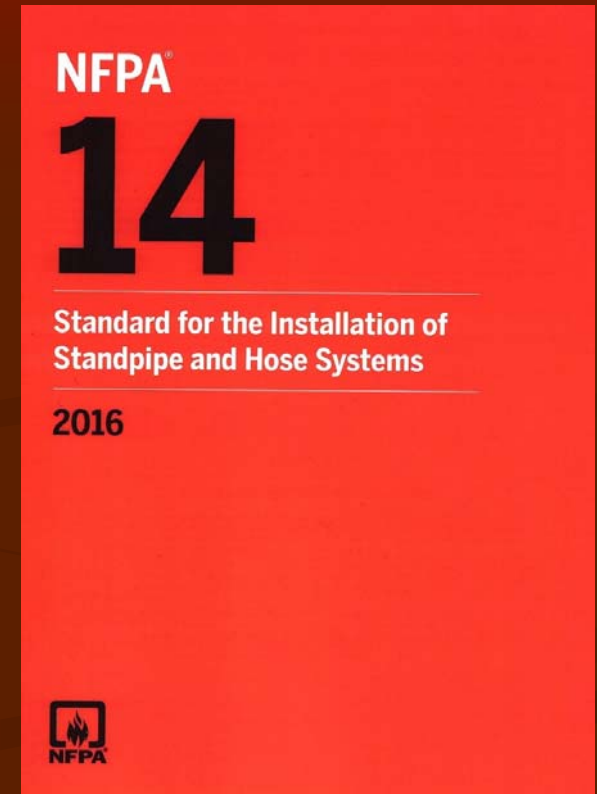


901.5.1 Occupancy

- Clarifies the building cannot be occupied until any required fire protection systems have been tested and approved by the Building Official
- BO may allow partial occupancy on case by case basis

905.5.3 Class II System

- NEW section emphasizes, clarifies NFPA 14 requirements for labeling
- Hoses are intended to be used specifically by trained personnel, not general occupants
- Fire extinguishers are designed for use by general occupants



1001.3.1 Temporary Occupant Load Determination

- NEW section allows the FO to address situations of alleged overcrowding by reestablishing a temporary occupant load until the BO can officially address the situation
- To be used in emergency situations only
- BO establishes the permanent occupant load

COUNTY OF FAIRFAX VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
LAND DEVELOPMENT SERVICES

MAXIMUMS APPROVED
VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC)
AND THE CODE OF THE COUNTY OF FAIRFAX

OCCUPANCY LOAD **49**
(Main Dining + Private Dining + Staff)

NAME: *Ken's Pizza & Subs*
ADDRESS, Tax Map: *16251 Breddock Road, Tax Map 090-2*
AREA DESIGNATION: *Entire Facility*

USBC Edition	Group (Use)	Construction Type	Sprinklers (y/n, req)	Fire Alarm (y/n, req)
2000	A-2	III	yes	yes

Evacuation (if any): *1 Exit door and gate blocked*

Date: *March 30, 2011*
By: *Dan K. Williams*
For: *Michelle Brickner*
Building Official

THIS CERTIFICATE SHALL BE POSTED IN A CONSPICUOUS LOCATION AT ALL TIMES

1031.11 Emergency Supplemental Hardware

- Part of a broader change that aligns with VCC
- New definition for ESH
- Mandates that the ESH shall be used as intended
- Grants FO authority, when in conjunction with BO and law enforcement, to revoke use and storage of ESH if utilized in a manner inconsistent with its approval

Some VCC Tables Removed from SFPC

- Building to be maintained according to figures approved by BO during construction
- Tables remain enforceable per “applicable building code” rather than SFPC



Notable 2018 VCC Tables

- 307.1 item 1 and item 2 Hazardous Materials
- 414.2.2 Design and Number of Control Areas
- 414.2.5 Max. Allowable Quantity per Control Area
- 414.5.1 Explosion Control Requirements
- 415.6.2 Detached Building Required
- 415.11.1.1.1 Quantity Limits...in Group H-5
- 428.3 Above Ground Liquid Fertilizer Storage Tanks
- 803.13 Interior Wall and Ceiling Finish...
- 1004.5 Occupant Load Factor
- VCC 413.1 --> 2018 IFC 3206.2 General Fire Protection and Life Safety Requirements

2018 VCC Table 414.2.2

[F] TABLE 414.2.2
DESIGN AND NUMBER OF CONTROL AREAS

STORY		PERCENTAGE OF THE MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA ^a	NUMBER OF CONTROL AREAS PER STORY	FIRE-RESISTANCE RATING FOR FIRE BARRIERS IN HOURS ^b
Above grade plane	Higher than 9	5	1	2
	7-9	5	2	2
	6	12.5	2	2
	5	12.5	2	2
	4	12.5	2	2
	3	50	2	1
	2	75	3	1
	1	100	4	1
Below grade plane	1	75	3	1
	2	50	2	1
	Lower than 2	Not Allowed	Not Allowed	Not Allowed

a. Percentages shall be of the maximum allowable quantity per control area shown in Tables 307.1(1) and 307.1(2), with all increases allowed in the notes to those tables.

b. Separation shall include fire barriers and horizontal assemblies as necessary to provide separation from other portions of the building.

2018 VCC 413.1 → 2018 IFC 3206.2

TABLE 3206.2
GENERAL FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS

COMMODITY CLASS	SIZE OF HIGH-PILED STORAGE AREA ^a (see Sections 3206.2 and 3206.3)	ALL STORAGE AREAS (See Sections 3206, 3207 and 3208) ^b				SOLID-PILED STORAGE, SHELF STORAGE AND PALLETIZED STORAGE (see Section 3207.3)		
		Automatic fire-extinguishing system (see Section 3206.4)	Fire detection system (see Section 3206.5)	Fire department access doors (see Section 3206.7)	Smoke and heat removal (see Section 3206.8)	Maximum pile dimension ^c (feet)	Maximum permissible storage height ^d (feet)	Maximum pile volume (cubic feet)
I-IV	0–500	Not Required ^a	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
	501–2,500	Not Required ^a	Yes ^g	Not Required	Not Required	120	40	100,000
	2,501–12,000 Open to the public	Yes	Not Required	Not Required	Not Required	120	40	400,000
	2,501–12,000 Not open to the public (Option 1)	Yes	Not Required	Not Required	Not Required	120	40	400,000
	2,501–12,000 Not open to the public (Option 2)	Not Required ^a	Yes	Yes	Yes ^{h, i}	120	30 ^e	200,000

(Table continues)

2018 SFPC Code Changes

Technical Updates





Table 107.2 Operational permit requirements - SRCFs

- New permit for AHJ's to consider about State Regulated Care Facilities
- Where licensing regulations require SFPC inspection, locality can require an operational permit

Table 107.2 Operational permit requirements - Cooking operations

- Localities authorized to require permits for cooking operations in non-assembly uses
- Ex: restaurant producing grease vapors with occ load < 50 such as fast food, deli, take-out or bakery



State Code Change



202 Cooking Tent definition

- New definition for cooking tent
- Used to be described as having sides, but now may be without sides
- Ensures fire separation applicable to cooking tents are not imposed on other tents

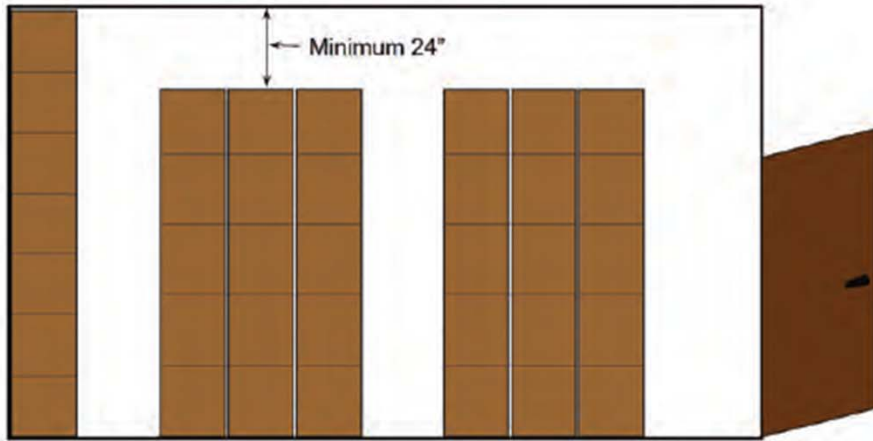


State Code Change

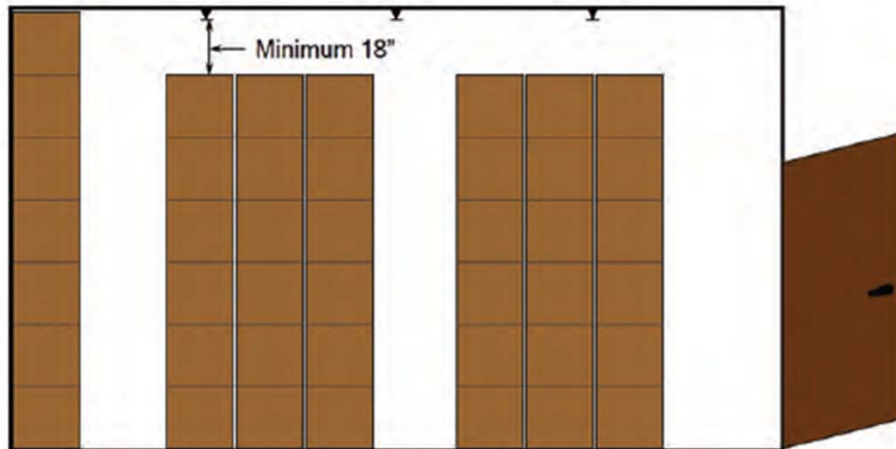


314.4 Indoor display of vehicles

- Section applies to liquid-fueled and gaseous-fueled vehicles
- FO to determine method of safeguarding vehicle regarding electrical system



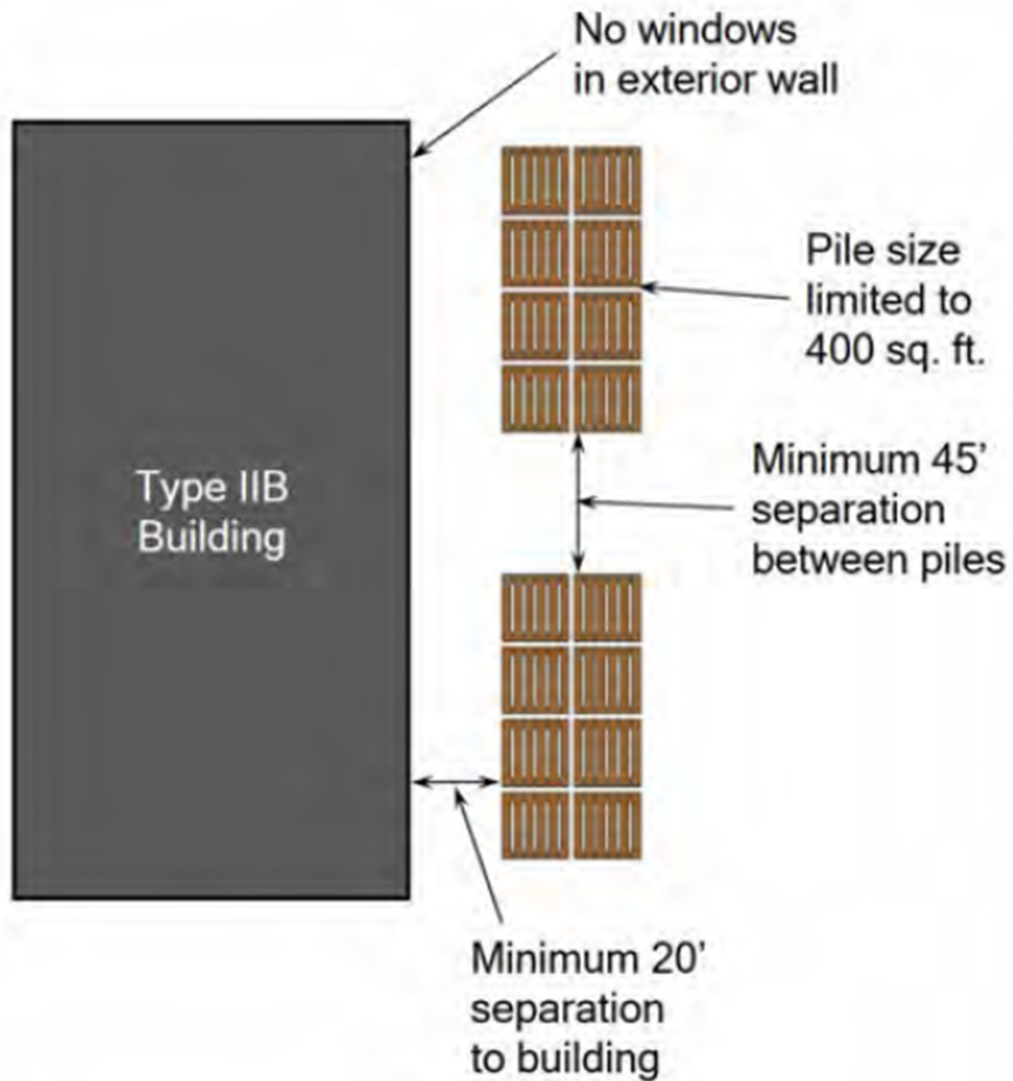
Storage in a nonsprinklered room can extend to the ceiling along the walls, but must maintain 24 inches clear to the ceiling in the remainder of the room.



Storage in a room with sprinklers can extend to the ceiling along the walls, but must maintain 18 inches clear below the fire sprinkler deflectors in the remainder of the room.

315.3.1 Ceiling clearance for indoor storage

- New exceptions allow increase in storage height against walls
- Different requirements for sprinklered and non-sprinklered



315.1; 315.7 Outdoor pallet storage

- Requirements added for height limitation and separation to buildings and property lines for outdoor storage of wood or plastic pallets

316.6; 316.6.1; 316.6.2 Structures & outdoor storage underneath high voltage transmission lines, bridges & elevated roadways

- Provisions extended to storage under bridges and elevated roadways
- Limits storage to non-combustible
- Hazardous materials prohibited



State Code Change



319.1.1, 319.1.2 Wheel chocks and separation

- New requirements related to food prep vehicles
- Wheel chocks and separation distances required



State Code Change



319.2.1 Permit authority having jurisdiction

- Clarifies the AHJ responsible for permitting mobile food prep vehicles
- The FO where the vehicle is registered is responsible





403.12.3; 403.12.3.1 Crowd managers

- Threshold for crowd managers reduced to 500 people for certain events
- Managers shall be trained



404.2.3; 406.3.4.1; 1001.4; 1010; 1031 Special emergency locking arrangements in educational occupancies

- Major change in alignment with changes to VCC
- New definition for Emergency Supplemental Hardware
- Requires coordination between BO, FO, LEO prior to approval
- Hardware installation is approved by BO
- Maintenance and use enforced by FO and potentially BMO
- Lockdown plans, training shall be approved by FO

404.2.3; 404.2.3.1; 404.2.3.2 Lockdown plans

- Updates and prescribes details for facility lockdown plans



Table 405.2 Fire and evacuation drill frequency and participation

- Sets fire evacuation drill frequency for R-2 occupancies serving communities aged 55+; added Group R SRCFs except hospice facilities



State Code Change



407.2 Safety data sheets

- Safety data sheets allowed in electronic format

State Code Change



605.13; 605.16; 605.17 Refrigerants with lower flammability hazards

- New requirements regarding safety for lower flammability refrigerant gasses



607.2 Commercial cooking operations

- Requires cooking hood operation during cooking operations, where ventillation is required by applicable building code
- FO is not authorized to require hood installation



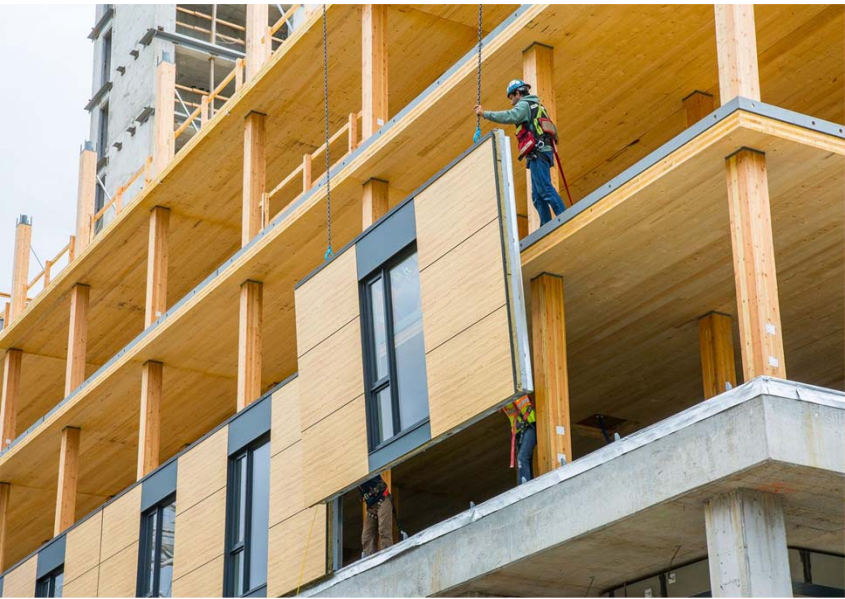
State Code Change



608.3 Nonmetallic cooking oil storage tanks

- New listing and capacity requirements for cooking oil storage
- Note Commercial Kitchen Cooking Oil Storage provisions moved from 610 → 608





701.6; 3308.9 (new) Fire safety for buildings of Types IV-A, IV-B, and IV-C construction

- Adds maintenance provisions for mass timber structures and safeguards during construction



807 Combustible decorative materials

- Clarified application of limitations on decorative combustible material
- VA amendments brought section in line with scope of SFPC





807.4 Artificial decorative vegetation

- Section also reorganized with previous change
- New exception allows a small amount of combustible decorative vegetation without testing in I-1, I-2 condition 1, R-2, R-3, and R-4, when equipped with sprinkler



SERGEY MAKHNO

901.6.2 Integrated fire protection system testing

- New requirements regarding integrated testing of systems
- Criteria added and reference to NFPA 4 for acceptance of the system as a whole



905.11 Locking Caps on Standpipe Outlets

- Authorizes FO to require locking caps on dry standpipe hose connection outlets





910.5 Maintenance of smoke and heat removal equipment

- Maintenance and testing frequency added for smoke and heat vents and mechanical smoke removal
- Smoke and heat vents shall be inspected annually and tested at least every 5 years

Q&A



Skill Check 1





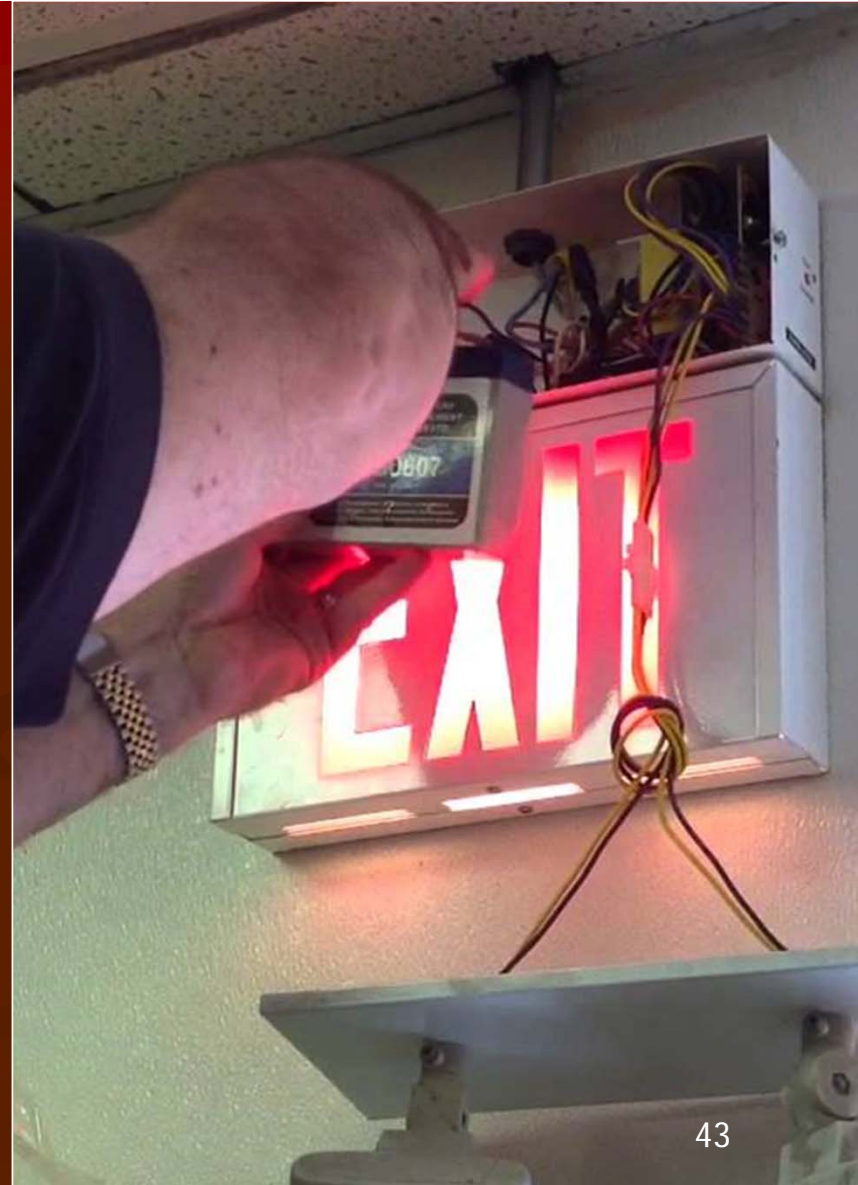
1031.4 Exit signs in existing buildings

- Exit signs shall be maintained in accordance with 1013, 1203, and the applicable building code
- VA deletes Ch. 11 as VEBC supersedes

State Code Change

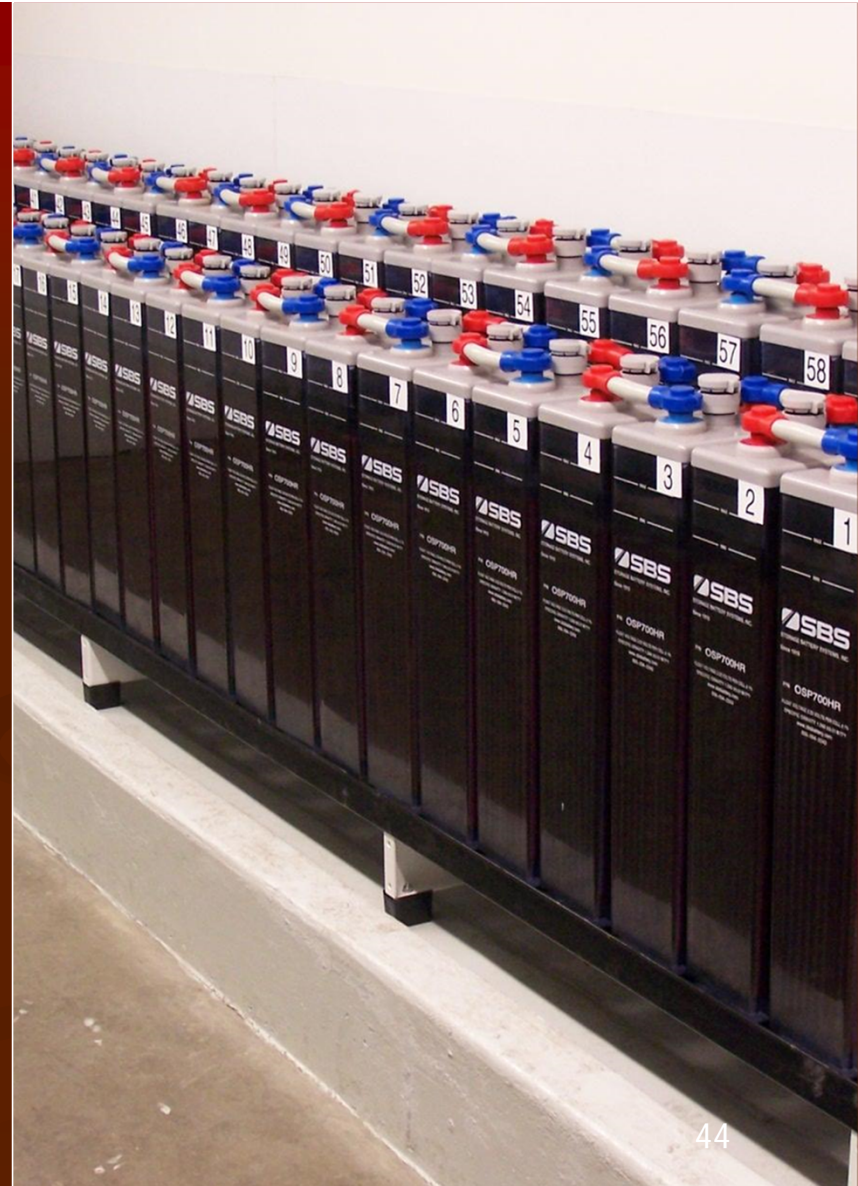
1031.10 Inspection and testing of emergency egress lighting

- Provisions relocated from Chapter 6
- Revised to allow self-diagnostics



Chapter 12 Energy systems

- New chapter for energy systems



1204.5 Rapid shutdown for solar PV power systems

- Photovoltaic systems equipped with rapid shutdown shall be labeled as such



1206.2 Stationary storage battery systems

- Provisions relocated from section 608
- Requirements added for new battery technologies and required safety systems





Chapter 22 Combustible Dust

- Added reference to NFPA 652 Standard on the Fundamentals of Combustible dust

2306.7.3.1 Protection from Vehicle Impact

- FO is authorized to require additional vehicle impact protection at fuel dispensing facilities





2309.6; 2309.6.1 Defueling of hydrogen fueled vehicles

- Requirements updated to reflect current technologies



2311.6 Repair of vehicles fueled by CNG and LNG

- Updated requirements for repairing vehicles fueled by CNG or LNG to reflect new technology



2311.8 Repair garages for vehicles fueled by lighter-than-air fuels

- Updated requirements for repairing vehicles fueled by lighter-than-air fuels to reflect new technology

2810 Outdoor storage of pallets at pallet manufacturing or recycling facilities

- New section adds requirements for outdoor pallet storage at pallet manufacturing and pallet recycling facilities



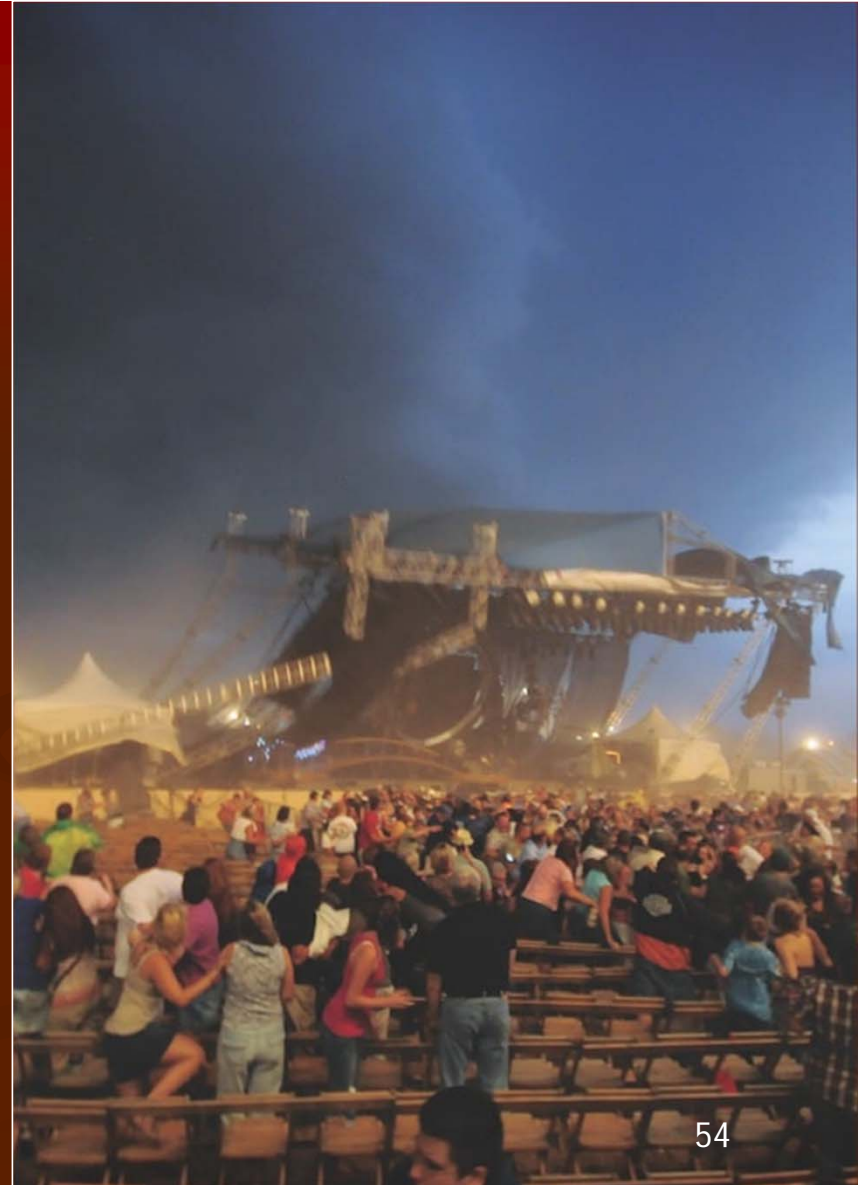
Chapter 31 Umbrella structures

- Umbrellas now regulated as tent structures



3106 Outdoor assembly events

- New section adds requirements for outdoor public gatherings
- Improves correlation between VCC and SFPC



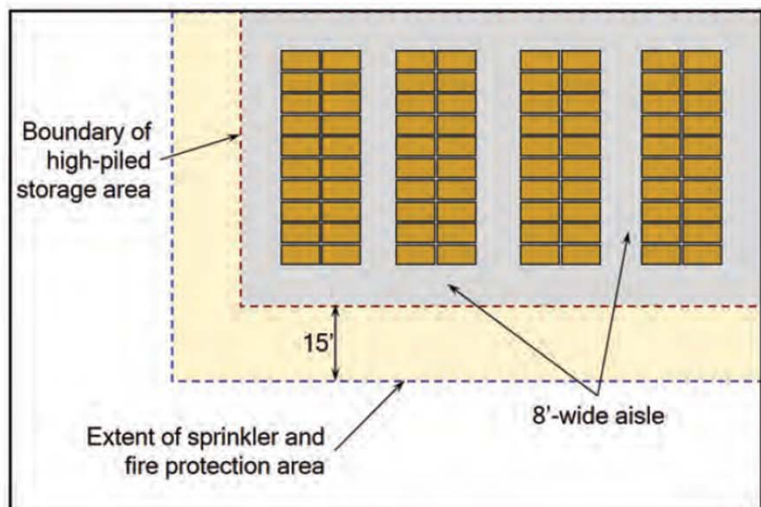
3107.12.5 Cooking tents

- All cooking tents require 20 ft fire separation, even without walls or sides

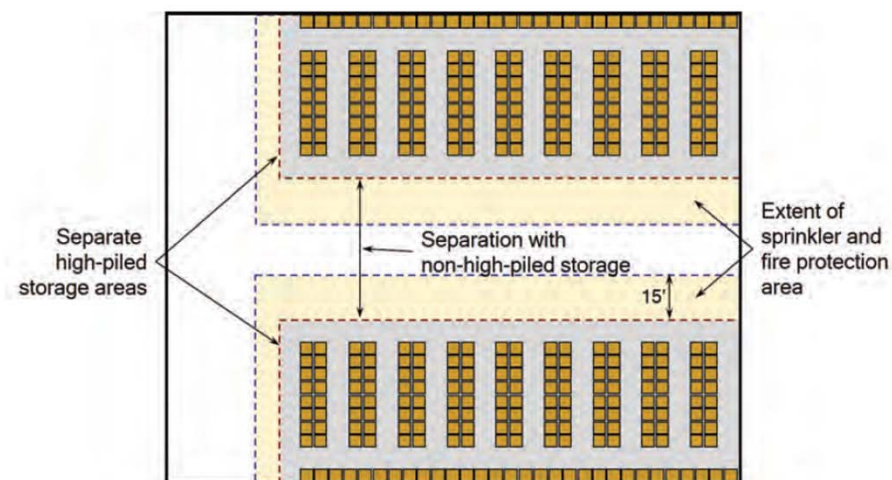


State Code Change





When determining the size of the high-piled combustible storage area, include a perimeter aisle or the distance to a wall, whichever is less.



Separating high-piled combustible storage areas by 100 feet allows each area to be considered separately.

Chapter 32 High-piled combustible storage

- Chapter updated to correlate with NFPA 13-2016
- Commodity classification criteria changed
- Adds plastic pallets and fire department access doors
- Revises separation distances



3304.5; 3308; 3309.1 Fire watch during construction and demolition

- FO allowed to require fire watch during non working hours for construction > 40ft above lowest adjacent grade
- Clarifies functions and duties of FW personnel
 - Shall be trained in use of portable fire extinguishers



Chapter 38 Higher education laboratories

- New chapter for Higher Education Laboratories
- Correlates with VCC 428 Higher Education Laboratories
- VA amends many sections to align with USBC

State Code Change



Chapter 39 Processing and extraction facilities

- New chapter regulating the extraction of oils from plant material
- VA amends some sections to align with USBC

5103.2.2 Aerosol cooking spray products

- New fire protection requirements added to address aerosol cooking spray products



5307.1; 5307.3; 5307.3.1;
5307.3.2 Liquid carbon dioxide
system for beverage dispensing

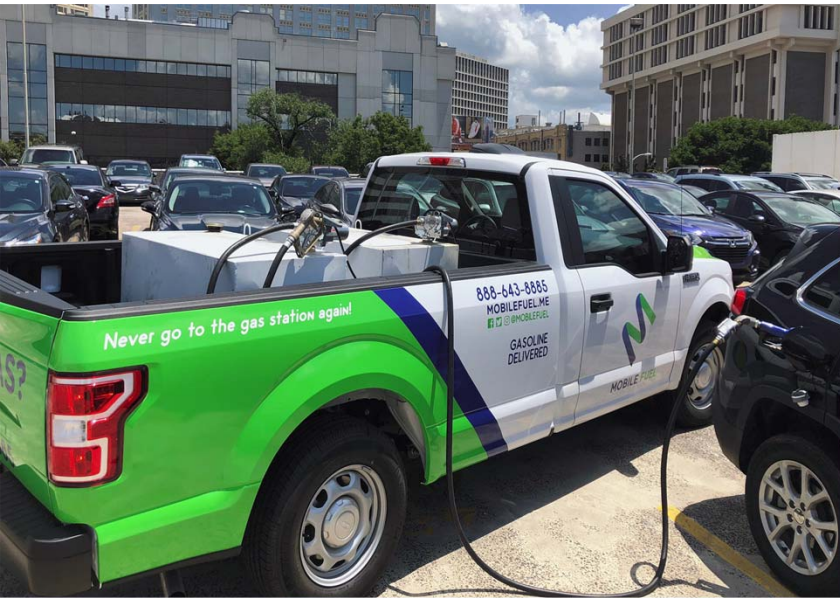
- Provisions for liquid CO₂ for beverage dispensing have been correlated with the provisions for gas detection systems



5307.4; 5307.4.1-3; 5307.4.3.1; 5307.4.4-6 Carbon dioxide enrichment systems

- Maintenance of CO₂ enrichment systems is now regulated by the SFPC when system contains > 100 lbs of CO₂, or when refill connection is remote from tank or vessel





5707 Mobile fueling operations

- On-demand mobile fueling is prohibited
- Exceptions:
 - Highway vehicles in an emergency
 - Farm vehicles and machinery
 - When in compliance with 5706.5.4.1 through 5706.5.4.5

State Code Change

Questions?



Skill Check 2

