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## CODE CORNER

### ABOUT CODE CORNER

CCFS would like to remind you to check with your local “Authority Having Jurisdiction (AHJ)” for questions and opinions concerning your local Fire and Building Codes. The information contained in this article is supplied as a courtesy by the International Code Council (ICC) and is based on the International Fire and Building Codes and their respective commentaries. Your local codes or ordinances may vary.

## IFC – Chapter Three General Requirements

### SECTION 301 GENERAL

**301.1 Scope.** The provisions of this chapter shall govern the occupancy and maintenance of all structures and premises for precautions against fire and the spread of fire and general requirements of fire safety.

∩ *The requirements of Chapter 3 prescribe fire safety precautions for conditions that are likely to cause or contribute to the spread of fire in any building or structure or on any premises, regardless of occupancy.*

**301.2 Permits.** Permits shall be required as set forth in Section 105.6 for the activities or uses regulated by Sections 306, 307, 308 and 315.

∩ *Issuing permits gives the fire code official an opportunity to carefully evaluate and regulate hazardous operations. Applicants for permits should be required to demonstrate that their operations comply with the intent of the code before the permit is issued. See the commentary to Section 105.6 for a general discussion of operations requiring an operational permit.*

### SECTION 302 DEFINITIONS

**302.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

∩ *Definitions of terms can help in the understanding and application of the code requirements. The purpose for including those definitions that are associated with the subject matter of this chapter is to provide more convenient access to them without having to refer back to Chapter 2. It is important to emphasize that these terms are not exclusively related to this chapter but are applicable everywhere the term is used in the code. For convenience, these terms are also listed in Chapter 2 with a cross reference to this section. The use and application of all defined terms, including those defined in this section, are set forth in Section 201.*

**BONFIRE.** An outdoor fire utilized for ceremonial purposes.

∩ *Bonfires are usually very large and are associated with a crowd activity. Failure to follow good safety practices with these fires can lead to serious injuries and property damage.*

**HI-BOY.** A cart used to transport hot roofing materials on a roof.

⌘ *A hi-boy, also known as a hot carrier, is a wheeled tank used on the roof deck to move hot asphalt around the work area. Hi-boys are available in either insulated or non-insulated models, and typically hold either 30 or 55 gallons (114 or 208 L).*

**HIGH-VOLTAGE TRANSMISSION LINE.** An electrical power transmission line operating at or above 66 kilovolts.

⌘ *High-voltage transmission lines are used to carry large amounts of electrical power (66,000 volts or more) over long distances, usually from a main power generation station to main substations, because the line losses are much smaller than with lower-voltage lines. They may also be used for electric power transmission from one central station to another for load sharing. The term “high voltage transmission line” as used in the context of the code is referring only to overhead conductors which are made of either copper or aluminum. In other contexts, the term could include underground lines as well.*

**OPEN BURNING.** The burning of materials wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. Open burning does not include road flares, smudge pots and similar devices associated with safety or occupational uses typically considered open flames, *recreational fires* or use of portable outdoor fireplaces. For the purpose of this definition, a chamber shall be regarded as enclosed when, during the time combustion occurs, only apertures, ducts, stacks, flues or chimneys necessary to provide combustion air and permit the escape of exhaust gas are open.

⌘ *Open burning is any burning that takes place in an unenclosed space. Examples include burning of leaves or grass clippings, burning construction debris and fires built on the ground for warmth in cold weather. The burning of wood scraps in a steel drum or in a piece of culvert over which a supply of construction sand can be dumped and kept thawed are common practices on construction sites in cold climates and could be evaluated by the fire code official as being an*

*allowable “occupational use” as mentioned in the definition. The definition has also been revised to clarify that the use of portable outdoor fireplaces (also known as patio fireplaces) is specifically excluded, thus eliminating the confusion that previously existed as to how to treat those devices. See also the definition of “Recreational fire.”*

**PORTABLE OUTDOOR FIREPLACE.** A portable, outdoor, solid-fuel-burning fireplace that may be constructed of steel, concrete, clay or other noncombustible material. A portable outdoor fireplace may be open in design, or may be equipped with a small hearth opening and a short chimney or chimney opening in the top.

⌘ *This definition describes a fairly recent innovation that has often been treated as open burning. These devices function similar to a masonry or factory-built indoor fireplace except that they are portable, solid fuel-burning fireplaces designed to provide ambience and warmth in outdoor settings. They come in many styles and designs, both open and enclosed. Some designs are constructed of steel with screening around the firebox while others are made of concrete or clay with a small hearth opening and are equipped with a short chimney or simply a chimney opening. Still others function as a fire pit on legs. The design will typically include a stand or legs to elevate the firebox above the surface upon which it is placed to provide clearance to combustible materials. Sections 307.4.3 and 307.5 of the code contain specific clearance and attendance requirements for these devices. See also the definitions of “Open burning” and “Recreational fire.”*

**POWERED INDUSTRIAL TRUCK.** A forklift, tractor, platform lift truck or motorized hand truck powered by an electrical motor or internal combustion engine. Powered industrial trucks do not include farm vehicles or automotive vehicles for highway use.

⌘ *This kind of vehicle includes forklift trucks and other similar vehicles used to move stock in warehouses, industrial buildings, large retail spaces, storage yards and loading docks. These vehicles are not licensed for highway travel and do not include farm machinery.*

**RECREATIONAL FIRE.** An outdoor fire burning materials

other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, portable outdoor fireplace, barbeque grill or barbeque pit and has a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes.

⌘ *This kind of fire includes ordinary campfires and other small fires used for the activities listed. The definition has also been revised to clarify that the use of portable outdoor fireplaces (also known as patio fireplaces) is specifically included thus eliminating the confusion that previously existed as to how to treat those devices. See also the definition of “Open burning.”*

## SECTION 304

### COMBUSTIBLE WASTE MATERIAL

**304.1 Waste accumulation prohibited.** Combustible waste material creating a fire hazard shall not be allowed to accumulate in buildings or structures or upon premises.

⌘ *Accumulated waste, trash, construction debris and other natural materials, such as grass clippings, leaves and shrubbery cuttings, can become a serious fire hazard. The three subsections that follow this general statement address the most common situations.*

**304.1.1 Waste material.** Accumulations of wastepaper, wood, hay, straw, weeds, litter or combustible or flammable waste or rubbish of any type shall not be permitted to remain on a roof or in any court, yard, vacant lot, alley, parking lot, open space, or beneath a grandstand, bleacher, pier, wharf, manufactured home, recreational vehicle or other similar structure.

⌘ *This section considers the kind of waste material that is most likely to accumulate during construction, renovation, additions or demolition and is often referred to as “the housekeeping section.” It prohibits disorderly, unkempt storage or accumulation of trash; waste rags; wastepaper; scrub brush and weeds; litter and other combustible materials. Litter and trash represent a serious fire hazard because of their ease of ignition and rapid heat release once ignited. The importance of maintaining property and buildings in good*

*order seems obvious, but sloppy housekeeping still occurs and can be the cause of serious fires. In one of the most serious fires in recent years (February 1991), improper storage of linseed-oil-soaked rags used to refinish paneling in a high-rise office building caused a fire that destroyed eight floors of the building and killed three fire fighters.*

**304.1.2 Vegetation.** Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises. Vegetation clearance requirements in urban-wildland interface areas shall be in accordance with the *International Wildland-Urban Interface Code*.

⌘ *Accumulations of natural waste, such as grass clippings, weed growth and shrubbery cuttings, are not only unsightly, but also represent a serious fire hazard. All too often these accumulations occur at or near fence lines that are adjacent to streets or alleys. This makes accidental ignition by a cigarette butt tossed from a passing vehicle a good possibility. Common sense tells us that removal of this kind of waste is beneficial. The rules of nearly all jurisdictions make waste control and removal the responsibility of the building or property owner, his or her agent, the tenant or the contractor if work is being done on the site.*

*Uncontrolled vegetation growth poses substantial risk to areas designated as wildland-urban interface areas. Accordingly, such areas must comply with the provisions of the International Wildland-Urban Interface Code™ (IWUIC™).*

**304.1.3 Space underneath seats.** Spaces underneath grandstand and bleacher seats shall be kept free from combustible and flammable materials. Except where enclosed in not less than 1-hour fire-resistance-rated construction in accordance with the *International Building Code*, spaces underneath grandstand and bleacher seats shall not be occupied or utilized for purposes other than means of egress.

⌘ *Numerous fires in grandstands and stadiums have shown over the years that the accumulation of flammable or combustible materials under grandstand seating areas can lead to fire disasters. Except as noted in the International Building Code® (IBC®), ar-*

*spaces under grandstand seating must be kept free of flammable materials, including accumulations of waste or trash. One of the best ways to prevent a fire is to make certain there is no fuel to feed one.*

*The IBC does allow space under the stands to be used for purposes other than means of egress if that space is separated from the seating area by construction having at least a 1-hour fire-resistance rating. The separation is intended to allow time for occupants in the seating to clear it should a fire occur. The fire code official would usually have to approve plans for use of space under the stands for concession stands, sales areas or storage areas.*

**304.2 Storage.** Storage of combustible rubbish shall not produce conditions that will create a nuisance or a hazard to the public health, safety or welfare.

⌘ *Storage of combustible rubbish either indoors or outdoors must be approved by the fire code official. Combustibles should be accumulated in noncombustible containers, such as metal trash cans with tight lids or steel barrels or dumpster bins, which should be removed from the site regularly. The use of plastic waste containers should be discouraged due to the extremely high fuel content of such materials, which can sometimes be several times the fuel content of the waste material they contain. Such containers could, under fire conditions, cause rapid fire spread and possibly overtax sprinkler systems, where installed. This section mentions public health as well as safety and welfare, indicating concern over retention of decomposing organic waste as well as flammable and combustible materials.*

**304.3 Containers.** Combustible rubbish, and waste material kept within or near a structure shall be stored in accordance with Sections 304.3.1 through 304.3.4.

⌘ *Proper containers must be used to improve the safety of indoor storage or outdoor storage in close proximity to buildings of trash and isolate readily combustible materials. This section introduces the more detailed requirements in Sections 304.3.1 through 304.3.4.*

**304.3.1 Spontaneous ignition.** Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. Contents of such contain-

ers shall be removed and disposed of daily.

⌘ *Disposal containers, often called “waste cans” or “oily rag cans,” used for storage of materials that might auto-ignite as a result of the spontaneous combustion process must be tested and listed for that use by a recognized testing laboratory or agency and must bear a label showing that they have been tested, along with the name of the testing agency. Such containers are most commonly round and generally available in sizes ranging from 5 to 40 gallons (19 to 151 L). They are equipped with a manual or foot treadle-operated lid that opens to a maximum angle of 60 degrees (1.05 rad) and closes by gravity. These containers are designed to prevent continuing combustion of the contents if ignition occurs. Container design includes features that keep the can body containing waste from coming into contact with combustible surfaces of walls or floors (see commentary, Section 202, for the definition of “Listed”). Daily disposal of container contents reduces the amount of time that oily materials will lie dormant, generating internal heat that can lead to ignition. UL 32 provides further information on the construction, testing and listing of these containers.*

**304.3.2 Capacity exceeding 5.33 cubic feet.** Containers with a capacity exceeding 5.33 cubic feet (40 gallons) (0.15 m<sup>3</sup>) shall be provided with lids. Containers and lids shall be constructed of noncombustible materials or of combustible materials with a peak rate of heat release not exceeding 300 kW/m<sup>2</sup> when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m<sup>2</sup> in the horizontal orientation.

**Exception:** Wastebaskets in Group I-3 occupancies shall comply with Section 808.1.

⌘ *Requiring larger containers to meet stricter conditions is common sense. The larger volume of waste each container holds represents a larger fire hazard. Isolating the containers from one another with lids helps reduce the possibility that a fire in one container will spread to nearby containers. The lid also helps to smother a fire within the container by limiting the oxygen available to feed it. Additionally, closed containers protect flammable and combustible materials from potential external ignition sources.*