ORDINANCE O-2019-

A BILL FOR AN ORDINANCE REPEALING AND REENACTING CHAPTER 16.32 OF THE LONGMONT MUNICIPAL CODE ADOPTING BY REFERENCE THE 2018 EDITION OF THE INTERNATIONAL FIRE CODE

THE COUNCIL OF THE CITY OF LONGMONT, COLORADO, ORDAINS:

Section 1. International Fire Code Adopted.

Chapter 16.32 of the Longmont Municipal Code is hereby repealed and reenacted to read as follows:

16.32.010. - International Fire Code, Appendices and Standards adopted.

Pursuant to Part 2 of Article 16 of Title 31, CRS, and Article IV of the City Charter, the International Fire Code, 2018 Edition, including appendices except for appendix A and I published by the International Code Council and copyrighted by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, IL 60478, is adopted as the City Fire Code, by reference, as amended. All references in this code to the International Fire Code are references to the edition referenced above.

16.32.020. - Copies of code—Filing for public inspection.

A certified true copy of the International Fire Code, 2018 Edition, is on file in the office of the city clerk and may be inspected by any interested person between 8:00 a.m. and 5:00 p.m., Monday through Friday, holidays excepted. The International Fire Code, as finally adopted, is available for sale at the office of the city clerk, at a price reflecting cost to the city as established by the city manager, by the municipal code. The city shall keep a copy of the adopted code in the office of the chief enforcement officer for public inspection. All references in this code to the International Fire Code are references to the edition referenced above.

16.32.030. - Section 101.1 amended—Title.

Section 101.1 of the International Fire Code is amended to read as follows:

101.1 Title. These regulations shall be known as the Fire Code of the City of Longmont, hereinafter referred to as "this code."

16.32.040. - Section 102.10 amended—Conflicting provisions.

Section 102.10 of the International Fire Code is amended by the addition of the following:

102.10.1 Conflicting provisions. Where there is a conflict between a general requirement of the International Building Code or the International Fire Code or the Longmont Municipal Code, the specific requirements of the Longmont Municipal Code shall be applicable.

16.32.050. - Section 105.6 amended—Operational permits.

Section 105.6 of the International Fire Code is amended by the deletion of sections 105.6.12, 105.6.14, 105.6.16, 105.6.18, 105.6.19, 105.6.24, 105.6.30, 105.6.31, 105.6.37, 105.6.40, and 105.6.48 as published.

16.32.060. – Table 105.6.8 replaced—Permit amounts for compressed gases.

Table 105.6.8 is replaced with the following table:

TABLE 105.6.8

PERMIT AMOUNTS FOR COMPRESSED GASES

TYPE OF GAS	**AMOUNT (cubic feet at NTP)**
Carbon dioxide used in carbon dioxide enrichment systems	875 (100 lbs.)
Carbon dioxide used in insulated liquid carbon dioxide beverage dispensing applications	875 (100 lbs) or remote fill connection
Corrosive	200
Flammable (except cryogenic fluids and liquefied petroleum gases)	200
Highly toxic	Any Amount

Insert and simple asphyxiant	6,000

16.32.070. - Section 105.6.28 amended—LP gas and repair garage.

Section 105.6.28 of the International Fire Code is deleted in its entirety and replaced with the following:

105.6.28 LP gas and repair garage. An operational permit is required for the storage and use of LP gas containers having an individual water capacity of 250 gallons or greater.

16.32.080. - Section 105.6.51 added—Fermentation and distillation of alcohol beverages.

Section 105.6 of the International Fire Code is amended by the addition of the following:

105.6.51. Fermentation and distillation of alcohol beverages. An operational permit shall be required for the fermentation and distillation of alcohol beverages where the alcohol by volume exceeds 16% ethanol.

16.32.090. - Section 105.6.45 amended—Temporary membrane structures and tents.

Section 105.6.45 of the International Fire Code is amended in the first paragraph by replacing 400 square feet with 750 square feet.

Section 105.6.45 of the International Fire Code is amended in Exception 2.1 and 2.2 by replacing 700 square feet with 1000 square feet.

16.32.100. - Section 105.7.18 amended—Temporary membrane structures and tents.

Section 105.7.18 of the International Fire Code is amended in the first paragraph by replacing 400 square feet with 750 square feet.

Section 105.7.18 of the International Fire Code is amended in Exception 3.1 and 3.2 by replacing 700 square feet with 1000 square feet.

16.32.110. - Section 108 replaced—Board of appeals.

Section 108 of the International Fire Code is deleted in its entirety and replaced with the following:

108.1 Board of appeals established. The board of appeals is established and governed pursuant to chapter 16.30 of the Longmont Municipal Code.

16.32.120. - Section 109.1 amended—Unlawful Acts.

Section 109.1 of the International Fire Code is amended by the addition of the following:

109.1.1 Unlawful Parking. Vehicles parked in fire apparatus access roads marked in accordance with Appendix D, section 103.6, shall be in violation of the Longmont Municipal Code chapter 11.16 and section 1204 of the Model Traffic Code.

16.32.130. - Section 109.4 replaced–Violation penalties.

Section 109.4 of the International Fire Code is deleted in its entirety and replaced with the following:

A. Any person, partnership or corporation who violates this chapter or fails to obey it, or who violates or fails to obey any order made under it, or who builds in violation of any detail statement of specifications or plans submitted and approved under it, or builds in violation of any certificate or permit issued under it, commits a separate offense for each day or part of a day the violation exists. Offenses are punishable according to chapter 1.12 of the Longmont Municipal Code. Imposition of one penalty for any violation shall not excuse the violation, nor permit it to continue; and all such persons shall correct or remedy such violations or defect within a reasonable time.

B. In addition to any other penalties, any violation of this code is also a public nuisance which a court of competent jurisdiction shall enjoin. The city attorney may obtain legal or equitable relief from any court of competent jurisdiction.

16.32.140. - Section 110.1.1 replaced—Unsafe conditions.

Section 110.1.1 of the International Fire Code is deleted in its entirety and replaced with the following:

110.1.1 Unsafe conditions. Structures or existing equipment that are or hereafter become unsafe or deficient because of inadequate means of egress or which constitute a fire hazard, or are otherwise dangerous to human life or the

public welfare, or which involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. The fire code official may require placarding in accordance with section 311.5 of the International Fire Code. A vacant structure that is not secured against unauthorized entry as required by section 311 of the International Fire Code shall be deemed unsafe.

16.32.150. - Section 202 amended – Definitions.

Section 202 of the International Fire Code is amended by replacement of the definition "FIRE ALARM SYSTEM" with the following:

FIRE ALARM SYSTEM. A system consisting of components and circuits arranged to monitor and annunciate the status of fire alarm or supervisory signal-initiating devices and to initiate the appropriate response to those signals.

16.32.160. - Section 503 amended—Fire apparatus access roads.

Section 503 of the International Fire Code is amended by the deletion of sections 503.1 through 503.2.8 as published and adoption of the following:

Section 503 Fire Apparatus Access Roads.

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with sections 503.1.1 through 503.1.3.

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

Exception:

The code official is authorized to increase the dimension of 150 feet where:

1. To a maximum of 300 feet when the building is equipped throughout with an approved NFPA 13 automatic sprinkler system not required by another provision of the code.

2. When fire apparatus access roads cannot be installed due to location on property, topography, waterways, non-negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

503.1.2 Additional access. A minimum of two separate and independent access/egress routes shall be provided when more than 25 individual dwelling units, or a combined potential aggregate building area of more than 24,000 square feet in any other type of development, will be served by the access. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

Exception:

When all buildings are protected by approved automatic fire sprinkler systems, installed in accordance with NFPA 13 (NFPA 13D for Group R-3), two access/egress routes need not be provided unless more than 50 dwelling units or a combined potential aggregate building area of more than 48,000 square feet will be served by the single access/egress route.

503.2 Specifications. Fire apparatus access roads shall be installed and arranged in accordance with sections 503.2.1 through 503.2.8 and the City of Longmont Public Improvements Design Standards and Construction Specifications.

503.2.3 Surface. The full width of fire apparatus access roads shall be constructed with at least the first lift of an approved type of paving material in place and meet all of the construction requirements of the City of Longmont Public Improvements Design Standards and Construction Specifications Manual.

503.2.4 Turning radius. The centerline radius of all turns shall not be less than 40 feet. No turn shall have less than a 30 foot inside radius and a 50 foot outside radius.

503.2.5 Dead-ends. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus that has a minimum cross section in accordance with Appendix D, as amended.

Exception:

When all buildings are equipped throughout with approved automatic sprinkler systems installed in accordance with NFPA 13 (NFPA 13D for one and two unit dwellings) the dead-end may be extended to 300 feet before a turnaround is required.

503.2.7 Grade and vertical alignment. The grade and vertical alignment of the fire apparatus access road shall be in accordance with the requirements of the City of Longmont Public Improvements Design Standards and Construction Specifications.

503.2.9 Neck downs and islands. Short neck downs and islands may be allowed by the code official where all of the following conditions are met:

1. The design does not negatively impact the turning radius of fire apparatus or the ability to safely operate aerial apparatus; and

2. They are designed to eliminate the potential blockage by lawfully parked vehicles and a 20 foot minimum clear width access is maintained throughout.

16.32.170. - Section 603.8.1 replaced—Residential incinerators.

Section 603.8.1 of the International Fire Code is deleted in its entirety and replaced with the following:

603.8.1 Residential incinerators. Residential incinerators shall be prohibited.

16.32.180. - Section 609 amended—Commercial kitchen hoods.

Section 609.2 of the International Fire Code is deleted in its entirety.

16.32.190. - Section 901.6 replaced—Inspection, testing, and maintenance.

Section 901.6 of the International Fire Code is deleted in its entirety and replaced with the following:

901.6 Inspection, testing, and maintenance. Fire detection, alarm, and extinguishing systems shall be maintained in an operative condition at all times and shall be replaced or repaired where defective. Non-required fire protection systems shall be inspected, tested, maintained, removed, or posted as required by the fire code official.

16.32.200. - Section 903.2.9 amended—Automatic Sprinkler Systems.

Section 903.2.9 of the International Fire Code is amended by the addition of the following exception:

Exception: Self-storage facilities separated into fire areas not to exceed 2,000 square feet with 3-hour fire-resistance rated fire walls in accordance with IBC Table 706.4, with no openings.

16.32.210 Section 903.2.11.1.3 amended—Basements.

Section 903.2.11.1.3 of the International Fire Code is amended by the deletion of 903.2.11.1.3 as published and the adoption of the following:

903.2.11.1.3 Basements. Where any portion of a basement is located more than 50 feet (22,860 mm) from openings required by section 903.2.11.1, or where walls, partitions or other obstructions are installed that restrict the application of water from hose streams, the basement shall be equipped throughout with an approved automatic sprinkler system.

Exception: Exterior access/openings to basement approved by fire code official.

Section 903.2.11.1.4 of the International Fire Code is amended by addition of the following:

903.2.11.1.4 Buildings greater than 12,000 square feet. An automatic sprinkler system shall be provided throughout all buildings where the fire area exceeds 12,000 square feet, or where the combined fire areas on all floors, including mezzanines and basements, exceed 24,000 square feet.

Exception:

1. F-2 Occupancies
2. Open parking structure.

16.32.220. - Section 903.4.2 replaced—Alarms.

Section 903.4.2 of the International Fire Code is deleted in its entirety and replaced with the following:

903.4.2 Alarms. Approved audible/visual devices shall be connected to every automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest

orifice size installed in the system. An approved audible/visual sprinkler flow alarm shall be provided on the exterior of the building in an approved location above the fire department connection. An approved audible/visual sprinkler flow alarm to alert the occupants shall be provided throughout the interior of the building in accordance with sections 907.6.2 through 907.6.2.3 and NFPA 72. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.

16.32.230. - Section 904.2.1 replaced—Commercial hood and duct systems.

Section 904.2.1 of the International Fire Code is deleted in its entirety and replaced with the following:

904.2.1 Commercial hood and duct systems. Each required commercial kitchen exhaust hood and duct systems required by the International Mechanical Code to have Type I hood shall be protected with an approved automatic fire-extinguishing system installed in accordance with this code.

16.32.240. - Section 904.3.5 amended—Monitoring.

Section 904.3.5 of the International Fire Code is amended by the addition of the following:

904.3.5.1 Monitoring. Monitoring of alternative automatic fire-extinguishing systems, when installed as an alternative to the required automatic sprinkler systems of Section 903, monitoring shall be required in accordance with NFPA 72.

16.32.250 Section 905.2 amended—Installation Standard.

Section 905.2 of the International Fire Code is amended by deletion of section 905.2 as published and adoption of the following:

905.2 Installation standard. Standpipe systems shall be installed/designed as an automatic wet standpipe with a 500 gpm at 100 psi at the two hydraulic most demanding hose outlets in accordance with this section and NFPA 14. Fire department connections for standpipe systems shall be in accordance with Section 912.

16.32.260. - Section 906.1 Item #1 amended—Where required.

Section 906.1 Item #1 of the International Fire Code is deleted in its entirety and replaced with the following:

1. In all occupancies not protected by approved fire sprinkler systems.

16.32.270. - Section 907.1.3 amended – Equipment.

Section 907.1.3 of the International Fire Code is amended by deletion of 907.1.3 as published and the adoption of the following:

907.1.3 Equipment. Systems and components shall be listed and approved for the purpose for which they are installed. Only addressable fire alarm panels will be approved.

Exception: Fire alarm panels that can transmit individual specific initiating device information.

907.1.3.1 Combination fire and security panels. A fire alarm system shall not be used for any purpose other than fire protection or control of fire protection systems. Combination fire and security panels are not permitted.

Section 907.1.3.2 Fire alarm system wiring. All fire alarm wiring shall be red jacketed wiring listed and approved for fire alarm systems.

16.32.280. - Section 907.2.1 replaced—Group A.

Section 907.2.1 of the International Fire Code is deleted in its entirety and replaced with the following:

907.2.1 Group A. A manual and automatic fire alarm system shall be installed in accordance with NFPA 72 in all Group A occupancies. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm as required for the Group E occupancy.

Exceptions:

1. Where the building is equipped throughout with an automatic sprinkler system and the alarm notification appliances will activate upon sprinkler water flow.

2. Fire area is 750 square feet or less.

16.32.290. - Section 907.2.7.1 deleted—Occupant notification.

Section 907.2.7.1 of the International Fire Code is deleted in its entirety.

16.32.300. - Section 907.6.6 amended—Monitoring.

Section 907.6.6 of the International Fire Code is amended by the addition of the following:

Supervising station shall report all fire alarms in a contact identification point reporting format.

16.32.310. - Section 913.1—General.

Section 913.1 of the International Fire Code is amended by deletion of section 913.1 as published and the adoption of the following:

913.1 General. Where provided, fire pumps shall be installed in accordance with this section and NFPA 20. Sizing of fire pumps shall be limited to a maximum of 125 percent of the pump rated capacity to meet total flow demand.

16.32.330. - Section 1010.1.9.7 amended—Special locking arrangements in Group I1-I-2.

Section 1010.1.9.7 of the International Fire Code is amended by replacing the word "or" in the second sentence with the word "and."

16.32.320. - Section 1010.1.9.8 amended—Delayed egress locks.

Section 1010.1.9.8 of the International Fire Code is amended by the deletion of the first sentence and replaced with the following:

Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E, and H occupancies in buildings which are equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1, and an approved automatic smoke detection system installed in accordance with section 907, provided that the doors unlock in accordance with Items 1 through 6 below.

16.32.330. - Section 1020.1 amended—Construction.

Section 1020.1 of the International Fire Code is amended by the revision of Table 1020.1 with the following:

Occupancy Group R required corridor fire-resistance rating in buildings with a sprinkler system shall be 1-hour.

16.32.340. - Section 1030.4.1 replaced—Window wells minimum size.

Section 1030.4.1 of the International Fire Code is deleted in its entirety and replaced with the following:

Exceptions:

1. Buildings classified in Group R occupancy constructed with permits issued before March 30, 1986, may use existing egress window wells which are a minimum of 24 inches (610mm) in depth from the foundation.

2. Buildings classified in Group R occupancy constructed with permits issued between March 30, 1986, and January 1, 1996, may use existing egress window wells which are 30 inches (762mm) in depth from the foundation.

16.32.350. - Section 1103.5 amended—Basements.

Section 1103.5 of the International Fire Code is amended by the addition of the following section.

1103.5.5. Basements. Where any portion of a basement is located more than 75 feet (22 860 mm)from openings required by section 903.2.11.1, or where walls, partitions or other obstructions are installed that restrict the application of water from hose streams, the basement shall be equipped throughout with an approved automatic sprinkler system.

Exception: Exterior access/openings as determined by the fire code official.

16.32.360. - Section 2304.3.7 amended—Motor fuel dispensing facilities and repair garages.

Section 2304.3.7, Item 1 of the International Fire Code is deleted in its entirety and replaced with the following:

1. Dispensing devices shall be programmed or set to limit uninterrupted fuel delivery to no more than 50 gallons and require a manual action to resume delivery.

Exception:

Aircraft motor-vehicle fuel dispensing facilities shall be programmed or set to limit uninterrupted fuel delivery to no more than 100 gallons and require a manual action to resume delivery.

16.32.370. - Chapter 31 amended—Temporary and Permanent Tents and Membrane Structures.

Section 3103.2 of the International Fire Code is amended in the first paragraph by replacing 400 square feet with 750 square feet.

Section 3103.2 is amended in Exception 2.1 and 2.2 by replacing 700 square feet with 1000 square feet.

Section 3103.5 of the International Fire Code is amended by deletion of Section 3103.5 and adoption of the following:

3103.5 Use Period. Temporary tents, air supported, air-inflated or tensioned membrane structures shall not be erected for a period of more than 30 days within a 12 month period on a single premise.

3103.9 Structural Stability and anchorage required is amended by the deletion of Section 3103.9 and the adoption of the following:

3103.9 Tents or membrane structures and their appurtenances shall be designed and installed to withstand the elements of weather and prevent collapsing. Documentation of structural stability shall be furnished to the fire code official. Water-filled barrels shall not be used as anchorage.

16.32.380. – Section 3311.1 replaced—Fire safety for buildings under construction and demolition.

Section 3311.1 of the International Fire Code is deleted in its entirety and replaced with the following:

3311.1 Stairways required. Where a building under construction or renovation has progressed to a height of two or more stories, not less than one permanent stairway shall be provided or approved by a fire code official.

16.32.390. – Section 3311.1.2 amended—Stairways required.

Section 3311.1.2 of the International Fire Code is amended by the addition of the following:

Where an existing building exceeding 50ft in building height is altered, not less than one temporary lighted stairway shall be provided, unless one or more of the permanent stairways are erected as the construction progresses.

16.32.400. - Section 3405 amended—Outdoor storage.

Sections 3405.1 and 3405.4 of the International Fire Code are deleted in their entirety and replaced with the following:

3405.1 Tire amounts. Outdoor storage of tires shall be restricted to no more than 500 tires per lot.

3405.4 Distance from lot lines. Within 10 feet of property lines, tire storage shall not exceed the height of a single tire on tread (approximately 36 inches) from ground level. Distances of 10 feet or greater from property lines, tire storage shall not exceed 6 feet in height.

16.32.410. - Chapter 40 added—Alcohol Beverage Production Facilities.

The International Fire Code is amended by the addition of the following chapter:

Chapter 40 ALCOHOL BEVERAGE PRODUCTION FACILITIES

SECTION 4001

GENERAL

4001.1 Scope. Buildings and portions thereof where *ethanol mixtures* are produced, stored, handled or dispensed in the production of *alcohol beverages* shall be regulated in accordance with this chapter and the 2018 *International Building and Fire Codes*, from here on referenced as *Longmont Codes*.

The intent of this chapter is to establish minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing *alcohol beverage production facilities* (*ABPFs*) such as distilleries, breweries, and wineries, and to provide safety to fire fighters and emergency responders during emergency operations. The objective is to consolidate regulations for materials, systems, processes, and conditions most commonly found in *ABPFs* to facilitate compliance with the intent of this chapter.

The *fire and building code officials* are authorized to enforce applicable provisions of the *Longmont Codes*, referenced standards, and recommended practices not specifically addressed in this chapter provided they are consistent with the intent and objective of this chapter. Consideration shall be given to the unique

materials and equipment utilized in this industry such as wooden *casks* (typically barrels) and high quality but as-yet unlisted stills.

Unless otherwise noted, where provisions in this chapter conflict with provisions in other sections of the *Longmont Codes* for *ABPFs*, the provisions of this chapter shall supersede the provisions in those sections.

4001.2 Referenced standards. The *fire and building code officials* are authorized to enforce applicable provisions of the standards listed in chapter 80 of the 2018 *International Fire Code* and chapter 35 of the 2018 *International Building Code* to ensure the safe operation of *ABPFs*. Table 4001.2 lists the standards most often utilized for *ABPFs*.

Table 4001.2 Referenced Standards

DOCUMENT	TITLE
NFPA 13	Standard for the Installation of Sprinkler Systems
NFPA 30	Flammable and Combustible Liquids Code
NFPA 61	Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities
NFPA 69	Standard on Explosion Prevention Systems
NFPA 70	National Electrical Code (NEC)
NFPA 72	National Fire Alarm and Signaling Code
NFPA 505	Fire Safety Standard For Powered Industrial Trucks Including Type Designations, Areas Of Use, Conversions, Maintenance, And Operations
NFPA 704	Standards System for Identification of the Hazardous Materials for Emergency Response
NFPA 780	Standard for the Installation of Lightning Protection Systems

4001.3 Recommended practices. The *fire and building code officials* shall have the authority to utilize the recommended practices listed in Table 4001.3 to render interpretations and develop policies and procedures in the application of the provisions of the *Longmont Codes* and referenced standards. Such interpretations, policies, and procedures shall be in compliance with the intent and objective of this chapter.

Table 4001.3 Recommended Practices

NFPA 77	Recommended Practice on Static Electricity
NFPA 497	Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas
NFPA 499	Recommended Practice for the Classification of Combustible Dusts and of Hazardous Locations for Electrical Installations in Chemical Process Areas
The Distilled Spirits Council of the United States, Inc.	Recommended Fire Protection Practices for Distilled Spirits Beverage Facilities

4001.4 Construction Documents. *Construction documents* shall be submitted for review and permit prior to the installation, construction, or modification of *ABPFs* or the operational equipment therein.

4001.5 Operational Permits. Operational permits shall be acquired as set forth is Section 105.6.49 ALCOHOL BEVERAGE PRODUCTION FACILITIES.

SECTION 4002
DEFINITIONS, ACRONYMS AND ABBREVIATIONS

4002.1 Definitions. The following words and terms shall have the meanings identified below for the purposes of this chapter and, except as noted, as used elsewhere in the *Longmont Codes*:

Alcohol Beverage (also, **"Alcoholic Beverage"**). A drinkable *ethanol mixture* intended for human consumption including *wine*, beer, and *beverage spirits*.

Alcohol Beverage Production Facility (*ABPF*). Any building or portion thereof where *ethanol mixtures* are produced, stored, handled, blended, dispensed, or bottled in the production of a*lcohol beverages* including areas for grain storage and handling.

Alcohol by Volume (*ABV*). Volume percentage of *ethanol* in an *ethanol mixture*.

Asphyxiant gas - A nontoxic or minimally toxic gas which reduces or displaces the normal oxygen concentration in breathing air and can lead to death by asphyxiation. Notable examples of asphyxiant gases are nitrogen, argon, helium, carbon dioxide, butane and propane.

Beverage Spirit. A drinkable *spirit* intended for human consumption including neutral spirits or alcohol (i.e. vodka or grain spirits), whiskey, gin, brandy, blended applejack, rum, tequila, cordials and liqueurs.

Brewery. An *ABPF* or portion thereof, including accessory uses, in which beer or other *malt liquors* are produced. For *spirit* production, *beer* and *wash* are synonymous as precursors to *distillation*.

Bulk Storage. The **s**torage of *ethanol mixtures* in containers exceeding 1.3 gallons (5L) in volume.

Cask. A closed vessel of 185 gallons (700 L) or less capacity, used primarily for storing *Class 1Liquids*, constructed of wooden staves and heads, held together by metal hoops, not equipped with provisions for emergency venting, and not intended for fixed installation.

Class 1 Liquids. Used in this chapter to identify *ethanol mixtures* that are *Class 1B* or *Class 1C flammable liquids*.

Container. Any closed vessel of 119 gallons (450 L) or less capacity used for transporting or storing *Class 1 Liquids*, not intended for fixed installation and not constructed of wood, but possibly equipped with an overpressure-relieving mechanism per FM Global Approved Standard for Plastic Plugs for Steel Drums, Class Number 6083, or equivalent.

Longmont Codes. The complete collection of International Code Council (ICC) publications as adopted and amended by the City of Longmont.

Distillation. The separation and concentration of the constituents of an *ethanol mixture* by slowly raising the temperature of the mixture through the boiling points of its constituents then collecting and condensing the constituent vapors separately from the mixture.

Distillery (also **"Distilled Spirits Plant – Beverage").** An *ABPF* licensed by the *TTB* to produce, bottle, rectify, process or store *beverage spirits* including areas for *fermentation*, *distillation*, storage, blending, packaging, and accessory uses. Other types of distilleries licensed by the *TTB* include:

Distilled Spirits Plant – Industrial. A distilled *spirits* plant established to manufacture articles, or produce, bottle or package, denature or warehouse *spirits*

for industrial use. These *spirits* are not intended for beverage use. Distilled spirits – Vinegar Plants also fall into this category.

Distilled Spirits Plant – Industrial / Beverage. A distilled *spirits* plant that manufactures beverage and industrial *spirits* on the same premises.

Distilled Spirits Plant – Experimental. An experimental distilled *spirits* plant established for specific and limited periods of time solely for experimentation in, or development of, industrial *spirits* or sources of materials used to produce *spirits*, or processes for producing or refining *spirits*.

Ethanol (also, **"Ethyl Alcohol"** or **"Grain Alcohol").** A volatile, flammable, colorless, neurotoxic liquid fit for human consumption with structural formula CH-3CH-2OH (abbreviated as C_2H_5OH or C_2H_6O).

Ethanol Mixture. Liquid mixture comprised of *ethanol* and materials with hazards not regulated by the *Longmont Codes*, namely water.

Fermentation. An enzymatically controlled, anaerobic breakdown of energy-rich compounds such as simple carbohydrates by microorganisms such as yeast, to yield carbon dioxide and *ethanol*.

HazMat (Hazardous Materials)**.** Materials with hazards regulated by the *Longmont Codes*.

HazMat Inventory Statement (*HMIS*). A portion of an *HMR* containing a list of all the *HazMat* in a facility including information related to the materials such as product names, locations, quantities, regulated hazards, and Chemical Abstract Service (**CAS**) numbers.

HazMat Management Plan (*HMMP*). A portion of a *HazMat Permit Application* containing site maps and facility floor plans identifying *HazMat* locations and site and building features relevant to the management of *HazMat* inventories, systems and operations.

HazMat Report (*HMR*). A consolidated description of a facility and the *HazMat* therein including a contact list, code-based description of the building and adjacent outdoor areas, and a *HazMat Inventory Statement* (*HMIS*).

Intermediate Bulk Container. Any closed vessel defined in Title 49, Code of Federal Regulations, Parts 100 through 199 or in Part 6 of the United

Nations' *Recommendations on the Transport of Dangerous Goods* having a liquid capacity of 793 gallons (3000 L) or less, used for transporting or storing *Class 1 Liquids*, not equipped with provisions for emergency venting, not intended for fixed installation, and not constructed of wood.

Lower Flammable Limit (*LFL*); also Lower Explosive Limit (*LEL*). The atmospheric volumetric concentration of a flammable vapor at which propagation of flame will occur in the presence of an ignition source. The *LFL* at sea level for *ethanol* vapor is 3.3 percent.

Mash. Typically the mixture of ground or cracked grains, mashed fruit, or other crushed edible organic material steeped in hot water to release carbohydrates and reduce them to sugars. The term is used inconsistently (often overlapping with *wort*) for the various solutions in process up to the point where fermentation is complete.

Minimum Explosive Concentration (***MEC***). The lowest mass to volume concentration of *combustible dust* that will propagate a flame (sometimes referred to as *LFL*). The *MEC* for grain dust is 0.055 oz/ft^3 (55 g/m^3).

Normally Closed. A system or *vessel* in an *ABPF* used in the storage, production, dispensing, blending, bottling, or handling of *Class 1 Liquids* that, for up to 50 percent of the time it is in operation, its contents are not exposed to atmosphere and vulnerable to evaporation. Processes involving *vessels* such as *casks* opened only for filling, draining or sampling, *distillation* where all vapors are condensed below their *flash point* prior to collection, uncovered *vessels* of 5.3 gallon (20 L) capacity or less used to collect distillate below its *flash point*, and covered blending or maceration *vessels* are typically considered *normally closed*.

Normally Open. A system or *vessel* in an *ABPF* used in the storage, production, dispensing, blending, bottling, or handling of *Class 1 Liquids* that, for 50 percent or more of the time it is in operation, its contents are continuously exposed to atmosphere and vulnerable to evaporation, or where a *Class 1 Liquid* at or above its *flash point* is exposed to atmosphere at any time during transfer, dispensing, or release. Continuous blending or maceration in uncovered *vessels*, open draining of *Class 1 Liquids* above their *flash points*, and the act of "bleeding"

heads (the initial vapors generated during *distillation*) or tails (the last vapors generated during *distillation*) to atmosphere are typically considered *normally open*.

Pile. Independently stacked commodities possibly organized by separate spacers, dunnage, or pallets in which the demise of any storage container on a lower tier compromises the structural stability of the storage system.

Portable tank. A *tank* that is readily capable of being relocated within the facility, not permanently attached to immovable structure or ground**,** and not constructed of wood.

Process Description. An operational description such as a flow chart of the sequence of events required to convert raw materials from the state in which they enter the *APBF* through each development point until the finished products are derived. The *process description* identifies all input and output materials and includes quantities, concentrations, temperatures, pressures, types of equipment, systems, etc. at each development point using code-based terminology; e.g., "37 gallons of 55% *ABV* at standard temperature and pressure (STP)" vs. "all the high wines collected". All systems and processes utilized to produce all intermediate and finished products are required to be included in the description.

Pressure Vessel. *Containers*, *intermediate bulk containers*, *processing vessels*, and *tanks* that under normal conditions, are permitted to operate above 15 pounds per square inch gauge (psig; 103.4 kPa).

Processing Vessel. An open or closed *vessel* other than *stills* used in the manufacture of *ethanol mixtures*. *Processing vessels* include *fermentation tanks*, mash tuns, blending *tanks*, etc., but do not include long-term storage *vessels* such as *vats* or *casks*.

Rack. Shelves or similar structural frame-supported system of tiers in which the demise of any storage container on a lower tier does not affect the structural stability of the storage system.

Remote Area (c.f. NFPA 13**).** The specified floor area over which an assigned sprinkler density (in volume per minute per unit area) is required in the design of an *automatic sprinkler system*.

Spirit. An *ethanol mixture* produced by the *distillation* of *wine, wash*, or a previously distilled *spirit*.

Stationary tank. A *tank* not intended to be relocated that is physically attached to immovable structure or ground.

Still. Any appliance is which *distillation* of an *ethanol mixture* is performed. For the purposes of this chapter, *still* includes pots, columns and condensing coils.

Storage Area. *ABPF* or portion thereof where *ethanol mixtures* or materials incorporated or utilized in the manufacture of *ethanol mixtures* are held for maturation, awaiting transport, or subsequent handling (c.f., *use area*).

Tank. Any *normally open* or *normally closed vessel* having a capacity greater than 60 gallons (230 L) intended for storing or processing (but not transporting outside the facility) *Class 1 Liquids*, and equipped with provisions for emergency venting.

Use Area. *ABPF* or portion thereof where *ethanol mixtures* or materials incorporated or utilized in the manufacture of *ethanol mixtures* are actively handled in processes such as *fermentation*, *distillation*, rectification, transportation, remixing, dispensing, bottling, blending, etc. (c.f., *storage area*).

Vat (also Foudre). A *stationary tank* constructed primarily of wood.

Wash (also Beer, **Malt Liquor).** The *ethanol mixture* intended for *distillation* produced by the *fermentation* of *mash* or *wort.* For *spirit* production, *wash* and *wine* are analogous as precursors to *distillation*.

Wine. An *ethanol mixture* produced by the *fermentation* of organic products, namely fruits, including agave. For *spirit* production, *wine* and *wash* are analogous as precursors to *distillation*.

Winery. An *ABPF* or portion thereof, including accessory uses, in which *wine* is produced.

Wort. The sugar solution strained from *mash* for *fermentation*.

Vessel. Used in this chapter to reference reservoirs holding – unless otherwise noted – *Class 1 Liquids* including *casks*, *containers*, *intermediate bulk containers*, *processing vessels*, and *tanks*.

4002.2 Acronyms and abbreviations. The following acronyms and abbreviations shall, for the purposes of this chapter, have the meanings identified below:

ABPF. *Alcohol Beverage Production Facility.*

ABV. *Alcohol by Volume.*

ASME. American Society of Mechanical Engineers.

ASTM. American Society for Testing and Materials.

HMIS. *HazMat Inventory Statement.*

HMMP. *HazMat Management Plan.*

HMPA. *HazMat* Permit Application.

HMR. *HazMat Report*.

LEL. *Lower Explosive Limit.*

LFL. *Lower Flammable Limit.*

MAQ. *Maximum allowable quantity per control area* in accordance with Section 5003.1.1.

MEC. *Minimum Explosive Concentration*.

MSDS. Material Safety Data Sheet

NEC. National Electrical Code

TTB. Alcohol and Tobacco Tax and Trade Bureau

SECTION 4003
GENERAL REQUIREMENTS

4003.1 Material classification. Hazard classifications and analyses of *ethanol mixtures* shall account for altitude-dependent properties based on an elevation of 5,000 feet (1,524 m) above sea level.

Ethanol mixtures that have no *fire point* when tested in accordance with ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester* and *ethanol mixtures* with 16 percent or less *ABV* with the remainder comprised of materials with hazards not regulated by the *Longmont Codes* shall not be regulated as *flammable or combustible liquids*.

Ethanol mixtures with greater than 16 percent *ABV* and less than or equal to 34 percent *ABV,* and the remainder comprised of water and other materials with

hazards not regulated by the *Longmont Codes*, shall be classified as *flammable 1C liquids.*

Ethanol mixtures with greater than 34 percent *ABV*, and the remainder comprised of water and other materials with hazards not regulated by the *Longmont Codes*, shall be classified as *flammable 1B liquids.*

4003.2 Occupancy classification. The occupancy classification of *use areas* and *storage areas* including grain-handling and bottling/packaging systems and processes shall be classified in accordance with Sections 4003.2.1 through 4003.2.3.

4003.2.1 H-2 occupancy classification. An H-2 occupancy classification shall be assigned to buildings or portions thereof in accordance with Sections 4003.2.1.1 and 4003.2.1.2.

4003.2.1.1 Combustible dust producing operations. *ABPFs* or portions thereof containing equipment, systems and processes where grains are stored, transferred or milled in such a manner that the confinement conditions and dust concentrations create a fire or explosion hazard shall be in accordance with chapter 22 and chapter 50. The *fire and building code officials* are authorized to require technical assistance in accordance with Section 104.7.2 to establish whether the building or portion thereof is required to be assigned an H-2 occupancy classification and to determine explosion and deflagration hazard reduction criteria.

4003.2.1.2 Flammable liquids. *ABPFs* and portions thereof with quantities of *Class 1 Liquids* in excess of the *MAQs*, that are stored or processed in *normally open vessels* or systems, or *vessels* or systems that are pressurized at more than 15 pounds per square inch gauge (psig; 103.4 kPa), or where a *Class 1 Liquid* is released to atmosphere at or above its *flash point* temperature as part of normal operations shall be assigned an H-2 occupancy classification.

4003.2.2 H-3 occupancy classification. *ABPFs* and portions thereof with quantities of *Class 1 Liquids* in excess of the *MAQs*, that are stored or processed in *normally closed vessels* or systems pressurized to 15 pounds per square inch gauge (psig; 103.4 kPa) or less, shall be classified as H-3 occupancies.

Exception: Quantities of *ethanol mixtures beverages* exceeding the *MAQs* but packaged in individual containers not exceeding 1.3 gallons (5 L) in volume shall not cause the *ABPF* or portion thereof to be assigned an H-3 occupancy classification.

4003.2.3 Non-high hazard occupancy classification. *Control areas* with *Class 1 Liquids*, *combustible dust* production, or other regulated hazards shall be assigned an occupancy classification in accordance with the *Longmont Codes* according to the fire safety and relative hazard involved.

4003.3 Hazardous materials permit application (HMPA). An *HMPA* in an *approved* format is required for all *ABPFs* using or storing *HazMat*. It shall contain at a minimum, an *HMR*, *HMMP*, *process description*, fire-safety and evacuation plans, and a storage plan.

4003.3.1 Hazardous materials report (HMR). An *HMR* in an *approved* format is required for all facilities using or storing *HazMat*. It shall contain at a minimum, critical personnel contact information, pertinent building construction and occupancy information, and an *HMIS*.

4003.3.2 Hazardous materials management plan (HMMP). An *HMMP* in accordance with Section 5001.5.1 and Appendix H101 shall be provided in an *approved* format.

4003.3.3 Process description. A *process description* shall be provided in an *approved* format.

4003.3.4 Emergency Planning. Fire safety and evacuation plans in accordance with Section 404 shall be prepared and maintained.

4003.3.5 Storage plan. Aisle and storage plans shall be submitted in accordance with chapter 50.

4003.3.6 Material safety data sheets. *MSDS* shall be readily available on the premises for *HazMat* therein.

4003.3.7 Unauthorized Discharges Preparation. Plans and provisions shall be made for controlling and mitigating unauthorized discharges.

4003.3.8 Personnel training and written procedures. Persons responsible for the operations in *Class 1 Liquid storage areas* or *use areas* shall be

familiar with the chemical nature of the materials and the appropriate mitigating actions necessary in the event of fire, leak, or spill.

4003.3.9 Fire department liaison. Responsible persons shall be designated and trained to be liaison personnel to the fire department. They shall aid the fire department in preplanning emergency responses and identifying the locations of *HazMat*, shall have access to *MSDS* and be knowledgeable in the site's emergency response procedures.

4003.4 Unauthorized discharges. When *Class 1 Liquids* are released in quantities reportable under state, federal or local regulations, the *fire code official* shall be notified and action shall be taken in accordance with Sections 4003.4.1 and 4003.4.2.

4003.4.1 Records. Accurate records shall be kept of all unauthorized discharges of *Class 1 Liquids* by the permittee.

4003.4.2 Responsibility for cleanup. The person, firm or corporation responsible for an unauthorized discharge shall institute and complete all actions necessary to remedy the effects of such unauthorized discharge, whether sudden or gradual, at no cost to the jurisdiction. When deemed necessary by the *fire code official*, cleanup may be initiated by the fire department or by an authorized individual or firm. Costs associated with such cleanup shall be borne by the *owner*, operator or other person responsible for the unauthorized discharge.

4003.5 Construction. The construction of *ABPFs* shall be in accordance with sections 4003.5.1 and 4003.5.2.

4003.5.1 General. Special detailed requirements, building heights, allowable areas, construction types, control areas, rated assemblies, finishes, means of egress, accessibility, interior environment, energy efficiency, exterior walls, roofing, structural design, fire service features, building services and systems, and fire and smoke protection shall be in accordance with the *Longmont Codes* for the assigned occupancy classifications and this chapter.

4003.5.2 Floors. Floors of *use areas* and *storage areas* for *Class 1 Liquids* shall be of noncombustible construction. Floor surfacing shall not be reactive with *ethanol*.

4003.6 Systems, features and components. Systems, features and components shall be provided in accordance with sections 4003.6.1 through 4003.6.13.

4003.6.1 Deflagration prevention by combustible concentration reduction. Atmospheric concentration of flammable vapors shall be maintained at or below 25 percent of the *LFL*, and *combustible dusts* at or below 25 percent of the *MEC*, in all areas of the *ABPF* or portion thereof where they could collect or migrate. Good housekeeping shall be exercised to prevent accumulation of *combustible dust* on all exposed surfaces at all levels throughout the building.

Indoor *storage areas* and *use areas* are permitted to be provided with natural ventilation where it can be shown to maintain the atmospheric concentrations at or below 25 percent of the *LFL* and *MEC* for the materials under consideration.

Where natural ventilation is not adequate, *Class 1 Liquid* use areas, *storage areas* and equipment, machinery, and operations which produce or emit *combustible dust*, shall be provided with an *approved* mechanical collection and exhaust system in accordance with *International Mechanical Code* sections 501, 502.1 502.8, 502.9.5, and 503.

Use areas and *storage areas* in *ABPFs* or portions thereof where *Class 1 Liquid* vapor concentrations cannot be maintained at or below 25 percent of the *LFL*, or confined enclosures where the concentration of *combustible dust* cannot be maintained at or below 25 percent of the *MEC*, shall be provided hazardous exhaust in accordance with *International Mechanical Code* sections 510 and 511.

4003.6.1.1 System requirements. Exhaust ventilation systems shall comply with all of the following:

1. Installation shall be in accordance with the *International Mechanical Code.*

2. Mechanical ventilation over the *storage area* or *use area* shall be at a rate of not less than 1 cubic foot per minute per square foot [cfm/ft^2; 0.00508 cms/m^2)] of floor area.

Exception: Areas where *Class 1 Liquids* are stored in *casks* are permitted to be provided with an engineered ventilation system in accordance with

International Mechanical Code chapter 4. The air flow rate shall not be less than the greater of (1) that required to maintain the flammable vapor concentration in the storage area at or below 25 percent of the *LFL*, or (2) 0.06 cubic feet per minute per square foot (cfm/ft^2; 0.000305 cms/m^2).

3. Systems shall operate continuously unless alternative designs are *approved.*

4. A manual shutoff control shall be provided outside of the room in a position adjacent to the access door to the room, or in an *approved* location. The switch shall be a break-glass or other *approved* type and shall be labeled, "VENTILATION SYSTEM EMERGENCY SHUTOFF."

5. Exhaust ventilation shall be designed to consider the density of the material released. For ethanol vapor, inlet air shall be introduced, and exhaust shall be taken, from a point within 12 inches (305 mm) of the floor. For dust, inlet air shall be introduced at a point within 12 inches (305 mm) of the floor and exhaust shall be taken as close to the dust generation source as possible.

6. The location and configuration of both the inlet and exhaust air openings shall be designed to provide air movement across all portions of the floor or room to prevent the accumulation of flammable vapors and suspended dust.

7. Exhaust air shall not be recirculated to occupied areas.

4003.6.2 Spill control and secondary containment. *Spill control* and *secondary containment* shall be provided in accordance with sections 4003.6.2.1 through 4003.6.2.2.

4003.6.2.1 Indoor. *Spill control* and *secondary containment* shall be provided for H-2 and H-3 occupancies in *ABPFs* where:

1. the capacity of any single *normally closed vessel* or system with *Class 1 Liquids* exceeds 55 gallons (208 L);

2. the aggregate capacity of multiple *normally closed vessels* or systems with *Class 1 Liquids* exceeds 1,000 gallons (3,785 L); or

3. *Class 1 Liquids* are dispensed into or from a *normally open vessel* or system exceeding a 5.3-gallon (20 L) capacity.

4003.6.2.1.1 Design. The drainage system shall be in accordance with the *International Plumbing Code* and the following:

1. All portions of the drainage system including floors shall be liquid-tight and constructed of noncombustible materials compatible with *ethanol*.

2. The slope of floors to drains shall be sufficient to prevent spilled *Class 1 Liquids* and water discharged from the *automatic sprinkler system* from flowing to adjoining areas, but shall not be less than 2 percent.

3. Drains and drainage system capacity shall be sized to carry the volumetric flow of water discharged from the *automatic sprinkler system* without backing up or pooling at the drains. The sprinkler coverage area used to calculate the required volumetric flow is permitted to be based on the smaller of (1) the *remote area* per NFPA 13 – provided it is located in the area served by the drains – or (2) the area of the building or portion thereof served by the drains.

4. Drainage systems shall terminate in an *approved secondary containment* reservoir designed to contain a spill from the largest vessel in the area served by the drains plus the volumetric flow of water calculated in item 3 above for a period of 20 minutes. An *approved* automatic monitoring method shall be provided to detect material in the reservoir. Monitoring devices shall be connected to *approved* visual and audible alarms. Reservoir capacity to accommodate the required in *secondary containment* volume shall be maintained at all times.

Exceptions:

1. Release of *Class 1 Liquids* and fire protection water directly into a sanitary or storm-water drainage system, onto the ground, or a combination thereof is permitted when in compliance with federal, state, and local governmental agencies' regulations and permits.

2. When released onto the ground within a fire area, such as on a dirt floor in a barrel storage warehouse, the volumetric flow of water calculated in item 3 above is permitted to be reduced to account for the percolation rate into the soil. An engineering analysis shall be provided to establish the reduction.

4003.6.2.2 Outdoor. *Secondary containment* for outdoor storage areas shall be in accordance with chapter 50.

4003.6.3 Occupant and property protection. Occupant and property protection shall be provided in accordance with sections 4003.6.3.1 through 4003.6.3.4.

4003.6.3.1 Automatic sprinklers. An *automatic sprinkler system* shall be installed throughout *ABPF* H-2 and H-3 fire areas in accordance with sections 4003.6.3.1.1 through 4003.6.3.1.3.

4003.6.3.1.1 Flammable liquids. Sprinkler discharge criteria for *Class 1 Liquid use areas* and *storage areas* in *ABPFs* or portions thereof shall be in accordance with NFPA 30 but shall not be less than that required in accordance with section 903.3.1.1 for Ordinary Hazard Group 2 with a minimum design area of 3,000 square feet (279 m2).

Exception: H-2 and H-3 occupancies with storage of *Class 1 Liquids* in *casks* shall be protected by a sprinkler system designed for Extra Hazard 2 in accordance with section 903.3.1.1, or by an *approved* engineered design.

4003.6.3.1.2 Combustible dust producing operations. Automatic sprinkler protection criteria for H-2/*Combustible Dust* Producing Operations shall be determined in accordance with section 4003.2.1.1.

4003.6.3.1.3 Non-high hazard occupancies. Sprinkler discharge criteria for *ABPFs* or portions thereof not classified as a division of the high-hazard occupancy classification and where *Class 1 Liquids* are not present in quantities or conditions required to be regulated by NFPA 30 or this chapter, shall be in accordance with section 903.3.1.1.

4003.6.3.2 Sprinkler system supervision and alarms. *Automatic sprinkler systems* shall be electrically supervised in accordance with section 903.4. Audible and visible occupant notification upon activation of water flow shall be provided in accordance with section 907.5 throughout all areas in *ABPFs* with automatic sprinkler protection.

4003.6.3.3 Emergency alarm. In addition to *automatic sprinkler system* flow detection and all fire safety functions required by other sections of this code, an *approved* manual fire alarm system in accordance with sections 4003.6.3.3.1 through 4003.6.3.3.3 shall be provided in H-2 and H-3 occupancies in *ABPFs*.

4003.6.3.3.1 Initiation. Manual fire alarm boxes shall be installed in accordance with section 907.4.2 outside of each interior *exit* or *exit access* door in the *fire barrier* walls separating the H-2 or H-3 occupancies, and in the exterior walls surrounding the H-2 or H-3 occupancies.

Exception: On exterior walls of H-2 or H-3 occupancies, fire alarm boxes are permitted to be installed inside of each interior *exit*, *exit access*, or *exit discharge* door in the exterior wall.

Manual fire alarm boxes shall be installed at not more than 150-foot (45,720 mm) intervals along *corridors*, *interior exit stairways* or *ramps*, or *exit passageways* where *Class 1 Liquids* are transported.

4003.6.3.3.2 Notification. Emergency alarm audible and visible occupant notification shall be provided in accordance with section 907.5 throughout *fire areas* containing H-2 or H-3 occupancies.

4003.6.3.3.3 Annunciation. The emergency alarm system shall be monitored and annunciated as a separate zone at the Fire Alarm Control Panel (FACP). A separate emergency alarm panel is required when prescribed by other sections of the *Longmont Codes* for regulated hazards other than, or in addition to, *Class 1 Liquids* or *combustible dust* production in the manufacture of *ethanol mixtures*. When the emergency alarm system is activated, information shall be communicated to the supervising station that the zone in alarm contains *flammable liquids* or *combustible dust*, or both.

4003.6.3.4 Portable fire extinguishers. A minimum of one *approved* portable fire extinguisher complying with section 906 and having a rating of not less than 20-B shall be located not less than 10 feet (3048 mm) or more than 50 feet (15 240 mm) from any *Class 1 Liquid storage area* or *use area* or *combustible dust* production area.

4003.6.4 Electrical. Electrical wiring, equipment and systems shall be installed and maintained in *ABPFs* in accordance with NFPA 70 and sections 605, 4003.6.4.1 through 4003.6.4.4.

4003.6.4.1 Classified electrical equipment. Classified electrical equipment per NFPA 70 shall be installed in accordance with section 5703.1.1 in

areas of *ABPFs* or portions thereof where it cannot be justified to the *fire and building code official* during design review, and subsequently demonstrated to the *fire code official* on annual inspections, that an atmospheric concentration at or below 25 percent of the *LFL* or *MEC* can be maintained.

A classified area shall not be required to extend beyond an unpierced floor, roof or other solid partition that prevents the migration of liquids, vapors and dust.

4003.6.4.1.1 Stills. Electrical equipment attached to or part of *stills* in H-2 or H-3 occupancies shall be Class 1, Division 1 per NFPA 70.

4003.6.4.1.2 Electric motors. Electric motors located 8 feet (2438 mm) or less from any edge of equipment where *Class 1 Liquid* vapor/air mixtures could exist under normal operations and 3 feet (914 mm) or less above the floor or grade level within 25 feet (7620 mm) horizontally from any equipment with *Class 1 Liquids* shall be considered Class 1, Division 2 per NFPA 70.

4003.6.4.1.3 Other applications. The *fire code official* is authorized to determine the extent of the Class 1 electrical equipment and wiring location when a condition is not specifically covered by this chapter, section 5703.1.1 or NFPA 70.

4003.6.4.1.4 Industrial trucks. Powered industrial trucks used in areas designated as classified electrical locations in accordance with section 4003.6.4.1 shall be *listed* and *labeled* for use in the intended environment in accordance with NFPA 505.

4003.6.4.2 Grounding. Equipment used for grain or *Class 1 Liquids* shall be electrically connected in accordance with NFPA 70 and 77, and sections 4003.6.4.2.1 and 4003.6.4.2.2 to prevent the accumulation of static electricity and sparking.

4003.6.4.2.1 Conveyance equipment. All conveyance equipment including that used for grain or *Class 1 Liquid* transfer shall be electrically connected by bond wires, ground cables, piping or similar means to a static grounding system. Conveyor belts shall be electrically conductive and equipped with static eliminators. Nozzles and *vessels* used for the transfer of Class 1 Liquids shall be electrically interconnected by:

1. Metallic floor plates on which *vessels* stand while filling, when such floor plates are electrically connected to the fill stem; or

2. Where the fill stem is bonded to the container during filling by means of a bond wire.

Exceptions:

1. *Vats* or *casks* without internal metal or plastic components that could hold a potential difference.

2. Equipment used in post bottling operations such as packaging and box storage shall be grounded in accordance with standards applicable to that equipment and industry practice.

4003.6.4.2.2 Storage equipment. Plastic and metal grain storage bins or silos and *Class 1 Liquid stationary tanks* that are drawn down and refilled on a regular basis or are otherwise subjected to processes that could create an electric potential difference and sparking, shall be grounded.

4003.6.4.3 Lightning protection. Lightning protection in accordance with NFPA 780 shall be provided on *ABPFs* and structures with an H-2 or H-3 occupancy and on buildings and structures where grains are stored, handled, or processed in a manner that *combustible dust* is produced.

4003.6.4.4 Standby or emergency power. Where mechanical ventilation, treatment systems, limit controls, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with NFPA 70 and section 604.1.

Exception: Subject to confirmation by the *fire and building code officials*, standby power for mechanical ventilation and limit control systems shall not be required where an *approved* fail-safe engineered system is installed.

4003.6.5 Location of stills and vessels. *Stills* and *vessels* in *Class 1 Liquid use areas* shall be located with respect to the *lot lines* of adjoining property which can be built on, in accordance with Tables 5705.3.4(1) and 5705.3.4(2).

Exceptions:

1. Where the exterior wall facing the adjoining *lot line* is without openings, has a *fire-resistance rating* of not less than 2 hours, and the *ABPF* is protected

throughout with an *automatic sprinkler system* in accordance with section 4003.6.3.1, the *fire and building code officials* are authorized to reduce the minimum separation distances to not less than 1 foot (305 mm), or the minimum separation distances required by other provisions of the *Longmont Codes*, whichever is greater.

2. Where the capacity of the largest *still* or *vessel* within the minimum separation distance is 250 gallons (946 L) or less, the aggregate volume of all *stills* and *vessels* within the minimum separation distance is 750 gallons (2839 L) or less, the normal operating pressure of all *vessels* within the minimum separation distance is 2.5 psig (17.2 kPa) or less, and the *ABPF* is protected throughout with an *automatic sprinkler system* in accordance with section 4003.6.3.1, the minimum separation distance to *lot lines* is permitted to be 1 foot (305 mm), or the minimum separation distances required by other provisions of the *Longmont Codes*, whichever is greater.

4003.6.6 Security. *Class 1 Liquid use areas* and *storage areas* shall be secured against unauthorized entry and safeguarded in a manner *approved* by the *fire code official*.

4003.6.7 Protection from vehicles. Bollards in accordance with section 312 or other *approved* means shall be provided to protect all *vessels*, *stills*, and piping which handle *Class 1 Liquids* and are subject to vehicular, including industrial truck, damage.

4003.6.8 Labeling and signage. When a permit is required in accordance with section 105.6, visible hazard identification markings, labels, signs and placards shall be placed on *vessels* and process piping used for *Class 1 Liquids*, and in *Class 1 Liquid storage areas*, *use areas* and *combustible dust* production areas, and at the entrances thereto in accordance with applicable federal, state, and standards regulations, sections 4003.6.8.1 through 4003.6.8.5, chapters 50 and 57, and NFPA 704, or as *approved*. Content shall be in English, symbols permitted by this code and referenced standards, or both. Placards shall be in accordance with NFPA 704.The *fire code official* is authorized to require additional signs and

placards at specific entrances and locations. Markings, labels, signs, and placards shall not be obscured or removed.

Exception: *Casks* are not required to be labeled.

4003.6.8.1 Warning signs. Warning signs shall be of a durable material, have a yellow background with black or red text or symbols, and shall convey the danger being identified. Warning sign text shall not be less than 3 inches (76 mm) in height with a 5/8 inch (15 mm) stroke.

4003.6.8.2 Information signs. Information signs shall be of a durable material, have a blue background with white or red text or symbols, or a white background with blue text, and shall convey the information required. Information sign text shall not be less than 3 inches (76 mm) in height with a 5/8 inch (15 mm) stroke.

Exception: Where otherwise specified by applicable regulations or standards.

4003.6.8.3 Location. Placards shall be located in accordance with NFPA 704 and shall be provided on the outside of each interior *exit* or *exit access* door in the *fire barrier* walls separating the H-2 or H-3 occupancies, and in the exterior walls surrounding the H-2 or H-3 occupancies.

4003.6.8.4 Piping. Piping and tubing conveying *Class 1, 2, or 3 flammable* or *combustible liquids* between *vessels* including heat transfer fluids shall be identified in accordance with ASME A13.1 to indicate the material conveyed.

4003.6.8.5 Individual containers, packages and cartons. Individual *containers*, *intermediate bulk containers*, packages and cartons shall be conspicuously identified in accordance with federal regulations and applicable state laws.

4003.6.8.6 Tank marking. Every *tank* shall bear a permanent nameplate or marking indicating the standard used as the basis of design. *Stationary tanks* more than 100 gallons (379 L) in capacity used for the storage of *Class 1 Liquids* shall bear a warning sign and placard in accordance with section 4003.6.8 corresponding to the material therein.

Exception: *Vats*.

4003.6.9 Sources of ignition. Sources of ignition shall comply with sections 4003.6.8.1 and 4003.6.8.2.

4003.6.9.1 Smoking. Smoking shall be in accordance with section 310 and shall be prohibited in *Class 1 Liquid storage areas* or *use areas* and in *combustible dust* production areas. "No Smoking" warning signs in accordance with sections 4003.6.8 shall be provided in such areas and at all entrances to them.

Exception: Where designated smoking areas within *ABPFs* are permitted. Designated smoking areas shall be separated from *Class 1 Liquid storage areas* and *use areas* and *combustible dust* production areas by a minimum of 25 feet (7620 mm) and shall be clearly identified with information signs in accordance with section 4003.6.8.

4003.6.9.2 Open flames. Open flames including barrel charring operations, and devices operating at temperatures above 680 °F (360 °C) are prohibited throughout fire areas containing *Class 1 Liquid storage areas* or *use areas* or *combustible dust* production areas.

Exceptions:

1. Areas designated as smoking.
2. Areas where hot work permits have been issued in accordance with section 105.
3. Listed and labeled gas fired or electric unit heaters installed in accordance with the International Mechanical and Fuel Gas Codes and NFPA 70, located more than 8 feet (2438 mm) from any edge of equipment where *Class 1 Liquid* vapor/air mixtures could exist under normal operations and more than 3 feet (914 mm) above the floor or grade level within 25 feet (7620 mm) horizontally from any equipment with *Class 1 Liquids*.

4003.6.10 Separation of incompatible materials. *Incompatible materials* shall be separated in accordance with section 5003.9.8.

4003.6.11 Seismic protection. All equipment in *ABPFs* including machinery, *racks*, piping, and *stationary tanks* shall be braced and anchored in accordance with the seismic design requirements of the *International Building Code* for the seismic zone in which the *ABPF* is located.

4003.6.12 Protection from corrosion. Machinery, piping, *tank*, *process vessel*, and *container* materials exposed to *Class 1 Liquids* shall be in accordance with sections 4003.6.12.1 and 4003.6.12.2.

4003.6.12.1 Protection from external corrosion and galvanic action. Where subject to external corrosion or galvanic action, machinery, piping, *tank*, *process vessel*, and *container* holding or conveying *Class 1 Liquids* shall be fabricated from noncorrosive materials or provided with corrosion protection. Dissimilar metallic parts subject to galvanic action shall not be joined.

4003.6.12.2 Chemical protection. Machinery, piping, *tank*, *process vessel*, and *container* materials used for *Class 1 Liquids* shall be protected from all chemicals to which they are exposed including *ethanol*. Clean-in-place (CIPs) fittings shall be compatible with the cleaning agents used on the vessels and piping to which they are attached. Tank lining shall be in accordance with section 4004.1.2.7.

4003.6.13 Limit controls. Limit controls shall be provided in accordance with sections 4003.6.13.1 through 4003.6.13.3.

4003.6.13.1 Pressure control. Machinery, piping, *tanks*, *vessels*, and *stills* containing or conveying *Class 1 Liquids* shall be designed for the pressures they will be subjected to in accordance with applicable standards. Machinery, piping, *tanks*, *containers*, *processing vessels*, and *stills* containing or conveying *Class 1 Liquids* that can generate pressures exceeding design limits because of exposure fires or internal reaction shall have an *approved* means to relieve excessive positive and negative internal pressure. Vents provided to relieve excessive positive pressure shall discharge to an *approved* location.

4003.6.13.2 High-liquid-level control. Stationary tanks and process vessels with *Class 1 Liquids* having a capacity greater than 500 gallons (1893 L) shall be equipped with a device or other means to prevent overflow into the building including, but not limited to, a float valve, preset meter on the fill line, valve actuated by the weight of the tank's contents, low-head pump incapable of producing overflow, or a liquid-tight overflow pipe at least one pipe size larger than the fill pipe and discharging by gravity back to an *approved* location.

Exception: Liquid-level sight gauges or other manual means *approved* by the *fire code official* to determine fill level are permitted in *ABPFs* where the *use area* or *storage area* is small enough that the *stationary tank* or *process vessel* is effectively under constant observation during filling operations.

4003.6.13.3 Low-liquid-level control. *Approved* safeguards shall be provided to prevent a low-liquid level in *stationary tanks*, *processing vessels* and *stills* from creating a hazardous condition, including but not limited to overheating.

4003.6.14 Handling and transportation. *Containers*, *portable tanks*, and *casks* holding more than 5 gallons (19 L) of *Class 1 Liquids* being transported in a *corridor* or enclosed *exit* shall be on a cart or truck in accordance with sections 5003.10.2 and 5003.10.3.

SECTION 4004 EQUIPMENT

4004.1 General. Equipment utilized for the production, storage, dispensing, blending or handling of *Class 1 Liquids* shall be *listed* or *approved* and shall be in accordance with sections 4004.1.1 through 4004.1.4.4.2.

4004.1.1 Piping systems. Piping systems for conveying *Class 1 Liquids* including piping, tubing, valves, pumps, and fittings shall be designed, installed, and maintained in accordance with sections 4004.1.1.1 through 4004.1.1.7, section 5703.6, and ASME B31. The use of other standards is permitted when *approved*.

4004.1.1.1 Component design and construction. Piping, tubing, hoses, valves, fittings and related components conveying *Class 1 Liquids* shall be in accordance with the following:

1. Piping, tubing, hoses, valves, pumps, fittings and related components shall be designed and fabricated from materials of adequate strength and durability to withstand the structural and environmental conditions to which they are subjected.
2. Piping, tubing, hoses, valves, pumps, fittings and related components used in liquid transfer operations shall be *approved* or *listed* for the intended use.
3. Where provided, in-line flame arresters in piping systems shall be installed and maintained in accordance with their listing or API 2028.

4. Where *Class 1 Liquids* are carried in piping pressurized above 15 pounds per square inch gauge (psig; 103 kPa), an *approved* means of leak detection shall be provided.

Exception: Piping for overpressure relief devices.

4004.1.1.2 Piping supports. Piping systems shall be substantially supported and protected against physical damage and excessive stresses arising from seismic activity, settlement, vibration, expansion and contraction. Piping supports shall be protected against exposure to fire by:

1. draining spilled liquid away from the piping support system at a minimum slope of not less than 2 percent;

2. providing protection with a *fire-resistance rating* of not less than 2 hours; or

3. other *approved* methods.

4004.1.1.3 Pipe joints. Pipe joints shall be in accordance with sections 5703.6.9 and 5703.6.10.

Exception: Where located in concealed spaces within buildings, joints in piping systems used to convey *Class 1 liquids* shall be welded.

4004.1.1.4 Valves. Piping systems with and without pumps shall contain a sufficient number of manual-control, auto-control, and check valves to protect the *ABPF* and properly control the flow of *Class 1 Liquids* in normal operation, the event of physical damage, or the condition of fire exposure, and shall be in accordance with the following:

1. Readily accessible manual valves, automatic remotely-activated fail-safe emergency shutoff valves, or excess flow control shall be installed on gravity-fed supply piping and tubing and in systems pressurized above 15 pounds per square inch gauge (psig; 103 kPa) as close to the source as practical.

2. Manual emergency shutoff valves and controls for remotely activated emergency shutoff valves shall be clearly visible and readily accessible. Information signage in accordance with section 4003.6.8 shall be provided identifying the emergency shutoff valves and controls.

3. Backflow prevention or check valves shall be provided when backflow could create a hazardous condition or cause an unauthorized discharge.

4004.1.1.5 Pumps. Solid or liquid fueled pumps are not permitted in *Class 1 Liquid* use *areas* or *storage areas.*

Exception: Fire pumps separated from the *Class 1 Liquid use areas* and *storage areas* by 2-hour fire-resistance rated *fire barriers* in accordance with section 707 of the *International Building Code*.

Positive-displacement pumps shall be provided with pressure relief discharging back to the *vessel*, pump suction or other *approved* location, or shall be provided with interlocks to prevent over-pressure.

4004.1.1.6 Pressurized transfer systems. Gases introduced to provide for transfer of *Class 1 Liquids* shall be inert. Controls, including pressure relief devices, shall be provided to limit the pressure so the maximum working pressure of *vessels* cannot be exceeded. Where devices operating through pressure within a *tank, intermediate bulk container,* or *container* are utilized, the *tank, intermediate bulk container,* or *container* shall be a *pressure vessel approved* for the intended use.

4004.1.1.7 Maintenance. Piping and appurtenances shall be maintained in a safe operating condition and in accordance with their applicable *listings* and standards. Damage to piping or appurtenances shall be repaired using materials having equal or greater strength and *fire resistance* or the equipment shall be replaced, taken out of service, repaired or disposed of in an *approved* manner. The repair, alteration or reconstruction, including welding, cutting and hot tapping of piping that has been placed in service, shall be in accordance with NFPA 30.

4004.1.2 Vessels. The design and construction of *vessels* used in *ABPFs* for *Class 1 Liquids* shall comply with the applicable sections 4004.1.2.1 through 4004.1.2.20.5 and NFPA 30, or shall be of an *approved* type. *Pressure vessels* shall comply with the *ASME* Boiler and Pressure Vessel Code.

4004.1.2.1 Underground storage of Class 1 Liquids. Underground storage in *tanks* shall comply with chapters 50 and 57. Vaults shall be in accordance with chapter 57. Underground storage in other *vessels* is prohibited.

4004.1.2.2 Outdoor storage of Class 1 Liquids. Outdoor storage shall be in accordance with chapters 50 and 57.

4004.1.2.3 Tank vehicles and tank cars. Tank vehicles and tank cars shall not be used as storage or processing *vessels*.

4004.1.2.4 Design of supports. The supporting structure for *stationary tanks* and *portable tanks* with capacity greater than 660 gallon (2498 L) shall be designed in accordance with the *International Building Code* and NFPA 30.

4004.1.2.5 Locations subject to flooding. Where a *portable tank* or *intermediate bulk container* with capacity in excess of 660 gallons (2498 L), or a *stationary tank* is located in an area where it is subject to a rise in the water table, flooding or accumulation of water from fire suppression operations, uplift protection shall be provided in accordance with sections 22.14 and 23.14 of NFPA 30.

4004.1.2.6 Tank lining. Steel *stationary tanks* and steel *portable tanks* with capacity greater than 660 gallon (2498 L) are permitted to be lined only for the purpose of protecting the interior from corrosion or providing compatibility with a material to be stored. Only those liquids tested for compatibility with the lining material are permitted to be stored in lined *tanks*.

4004.1.2.7 Manual drainage. Manual drainage control valves shall be provided on *stationary tanks* and *portable tanks* with capacity greater than 660 gallons (2498 L). Manual drainage control valves on *stationary tanks* shall be located at *approved* locations remote from the *tanks* to ensure their operation in a fire condition.

4004.1.2.8 Connections. Filling and emptying connections to *vessels* shall be provided with liquid-tight caps, covers, plugs, or valves which shall be closed when not in use.

Connections located below normal *Class 1 Liquid* levels in *stationary tanks* with capacity of 500 gallons (1893 L) or more shall be provided with internal or external isolation valves located as close as practical to the shell of the *tank*.

4004.1.2.9 Materials used in tank construction. The materials used in *tank* construction shall be in accordance with NFPA 30.

4004.1.2.10 Separation between adjacent tanks. The separation between *stationary tanks* containing *Class 1 Liquids* shall be in accordance with Table 22.4.2.1 of NFPA 30.

Exceptions:

1. Where a group of no more than 4 *stationary tanks* are aligned in a single row, the minimum separation distance between *tanks* is permitted to be reduced to 18" (457 mm) provided no single tank is over 960 gallons (3634 L) and clear access of 3 feet (914 mm) is provided around the group.

2. Where *stationary tanks* are in the drainage path of *Class 1 Liquids*, and are compacted in three or more rows or in an irregular pattern, the *fire code official* is authorized to require greater separation than specified in Table 22.4.2.1 of NFPA 30 or other means to make *tanks* in the interior of the pattern accessible for emergency response including firefighting purposes.

4004.1.2.11 Maintenance. *Vessels* and their appurtenances shall be maintained in a safe operating condition in accordance with their listings, applicable standards, and industry practice. Damage and malfunctions shall be repaired using materials having equal or greater strength and *fire resistance*. *Vessels* leaking *Class 1 Liquids* shall be promptly emptied, repaired and returned to service. Stationary tanks not returned to service shall be abandoned in accordance with section 5704.2.13, or removed in accordance with section 5704.2.14.

4004.1.2.12 Vent lines. *Portable tanks* with a storage capacity of 660 gallons (2498 L) or more and *stationary tanks* shall be provided with normal and emergency vents in accordance with sections 4004.1.2.13.1 through 4004.1.2.13.5 to relieve positive and negative pressures such as those created from filling and draining.

Vent lines shall not be used for purposes other than venting unless *approved.*

4004.1.2.12.1 Installation of vent piping. Vent pipes shall be designed, sized, constructed and installed in accordance with sections 5703.6, 5704.2.7.3 and 5704.2.7.4. Vent pipes shall be installed to drain toward the *tank* without sags or

traps in which liquid can collect. Vent pipes shall be protected from physical damage and vibration.

4004.1.2.12.2 Vent-line flame arresters and pressure-vacuum vents. Normal vents shall be equipped with vent-line flame arresters and pressure-vacuum vents in accordance with section 5704.2.7.3.2.

4004.1.2.12.3 Vent pipe outlets. To facilitate atmospheric dispersion, vent outlets shall be located so vapors are released at a safe point outside of buildings, directed upward or horizontally away from adjacent walls so vapors will not be trapped by eaves or other obstructions. Vent outlets shall not be less than 12 feet (3658 mm) above the finished ground level and shall not be less than 5 feet (1524 mm) from building openings or *lot lines* of properties that can be built upon.

4004.1.2.12.4 Manifolding. Subject to the *approval* of the *fire code official*, vent pipes are permitted to be manifolded only for special purposes such as vapor recovery, vapor conservation or air pollution control. Manifolded vent pipes shall be adequately sized to prevent system pressure limits from being exceeded when manifolded tanks are subject to the same fire exposure.

4004.1.2.12.5 Emergency venting. Tanks shall be equipped with additional venting that will relieve rapid overpressure due to fire. Emergency vents shall not discharge inside buildings. The venting shall be installed and maintained in accordance with section 22.7 of NFPA 30.

4004.1.2.13 Vessel openings other than vents. Vessel openings other than vents shall comply with sections 4004.1.2.21.1 through 4004.1.2.21.5.

4004.1.2.13.1 Filling and emptying connections. Filling and emptying connections to *stationary tanks* shall be properly identified in accordance with 4003.6.8.

4004.1.2.13.2 Fill pipes and discharge lines. For top-loaded *stationary tanks* and *portable tanks* with capacity greater than 660 gallons (2498 L), a metallic fill pipe shall be designed and installed to minimize the generation of static electricity by terminating the pipe within 6 inches (152 mm) of the bottom of the *tank*. It shall be installed in a manner which avoids excessive vibration.

4004.1.2.13.3 Manual gauging. *Vessel* openings for manual gauging, if independent of the fill pipe, shall be provided with a liquid-tight cap, cover, or plug. Covers shall be kept closed when not gauging. Such openings shall be protected against liquid overflow and possible vapor release by means of a spring-loaded check valve or other *approved* device.

4004.1.2.13.4 Protection against vapor release. *Tank* openings provided for purposes of vapor recovery shall be protected against possible vapor release by means of a spring-loaded check valve or dry-break connection, or other *approved* vapor-tight device.

Exception: Where the opening is a pipe connected to a vapor processing system.

Openings designed for combined fill and vapor recovery shall be protected against vapor release.

Exception: Where connection of the liquid delivery line to the fill pipe simultaneously connects the vapor recovery line.

4004.1.3 Stairs, platforms and walkways. Stairs, platforms and walkways installed to facilitate access to *vessels*, storage, pipes, and process equipment shall be noncombustible and designed and constructed in accordance with NFPA 30 and the *International Building Code.*

4004.1.4 Testing. Equipment, devices and systems shall be tested in accordance with sections 4004.1.4.1 through 4004.1.4.4.2.

4004.1.4.1 Piping systems. Before being covered, enclosed or placed in use, piping shall be hydrostatically tested to 150 percent of the maximum anticipated pressure of the system, or pneumatically tested to 110 percent of the maximum anticipated pressure of the system, but not less than 5 pounds per square inch gauge (psig; 34.5 kPa) at the highest point of the system. This test shall be maintained for a sufficient time period to complete visual inspection of joints and connections. For a minimum of 10 minutes, there shall be no leakage or permanent distortion. Storage *tanks* shall be tested independently from the piping.

Exception: Piping tested in accordance with the applicable section of ASME B31.9.

4004.1.4.1.1 Existing piping. Existing piping shall be tested in accordance with this section when the *fire code official* has reasonable cause to believe a leak exists. Piping used for *Class 1 Liquids* shall not be tested pneumatically.

Exception: Vapor-recovery piping is permitted to be tested using an inert gas.

4004.1.4.2 Tanks. Prior to being placed into service, tanks shall be tested in accordance with section 21.5 of NFPA 30.

4004.1.4.3 Safety systems. *Automatic sprinkler systems*, *automatic sprinkler system* monitoring, *fire alarm systems*, all limit controls, and all other fire- and life-safety systems shall pass the commissioning or acceptance tests in accordance with their respective design, installation, and testing standards prior to occupancy and use of the facility. Emergency alarms and limit-control monitoring shall be tested as for fire alarm systems in accordance with NFPA 72.

4004.1.4.4 Periodic testing. Equipment and safety systems shall be periodically tested in accordance with sections 4004.1.4.4.1 and 4004.1.4.4.2. Written records of the tests conducted or maintenance performed shall be maintained in accordance with the provisions of section 107.3.

Exceptions:

1. Periodic testing shall not be required when *approved* written documentation is provided substantiating testing will damage the equipment, device or system and the equipment, device or system is maintained as specified by the respective manufacturer.

2. Periodic testing shall not be required when the equipment and systems are utilized routinely as part of normal operations and maintained in good operating condition.

3. Periodic testing shall not be required for equipment, devices and systems that fail in a fail-safe manner.

4. Periodic testing shall not be required for equipment, devices and systems that self-diagnose and report trouble. Records of the self-diagnosis and trouble reporting shall be made available to the *fire code official.*

5. Periodic testing shall not be required if system activation occurs during the required test cycle for the components activated during the test cycle.

6. *Approved* maintenance in accordance with section 5003.2.6 that is performed not less than annually or in accordance with an *approved* schedule shall be permitted to meet the testing requirements set forth in sections 5003.2.9.1 and 5003.2.9.2.

4004.1.4.4.1 Equipment. The following equipment shall be tested periodically:

1. Piping.
2. Limit controls required by section 4003.6.12.

4004.1.4.4.1.1 Testing frequency. The equipment listed in section 4004.1.4.4.1 shall be tested at one of the frequencies listed below:

1. Not less than annually;
2. In accordance with the *approved* manufacturer's requirements;
3. In accordance with *approved* recognized industry standards; or
4. In accordance with an *approved* schedule.

4004.1.4.4.2 Safety systems. Safety systems listed in section 4004.1.3.3 shall be periodically tested in accordance with their design, installation and testing standards.

Emergency alarms and limit-control monitoring shall be tested as for fire alarm systems in accordance with NFPA 72.

4004.2 Storage and use areas. Storage and process operations shall be in accordance with the *Longmont Codes* and sections 4004.2.1 through 4004.2.3.4.

4004.2.1 Storage areas. Storage of *Class 1 Liquids* shall be in accordance with sections 4003.2.1.1.through 4004.2.1.4, chapter 32, and NFPA 30.

4004.2.1.1 General. Storage of *vessels* in closely packed piles, on pallets, in racks, or on shelves shall be in accordance with sections 4004.2.1.1.1 through 4004.2.1.1.3.

4004.2.1.1.1 Basement storage. Storage in excess of the *MAQs* is prohibited in basements.

4004.2.1.1.2 Limited combustible storage. Limited quantities of class 1 through 4 commodities are permitted to be stored in the same non-separated area, room, or building as *Class 1 Liquids* provided the combustibles, other than those used for packaging the *Class 1 Liquids*, are separated from the *Class 1 Liquids* in storage by a minimum of 8 feet (2438 mm) horizontally either by open aisles, open racks, or racks filled with noncombustible commodities.

4004.2.1.1.3 Shelf storage. Shelving shall be of substantial construction, and shall be braced and anchored in accordance with the seismic design requirements of the *International Building Code* for the seismic zone in which the *ABPF* is located.

Shelving, chocks, scuffboards, floor overlay and similar installations shall be of noncombustible construction or of wood not less than a 1-inch (25 mm) nominal thickness; treatments, coatings and construction materials shall be compatible with *ethanol*.

Shelves shall be provided with a lip or guard when used for the storage of individual *containers* or *casks*.

Exception: Storage in flammable liquid storage cabinets specifically designed for such use.

4004.2.1.1.4 Separation and aisles. Aisles shall be provided in *storage areas* such that all storage *vessels* are located no more than 20 feet (6096 mm) horizontally from a main aisle or access aisle.

Main aisles shall be a minimum of 8 feet (2438 mm) wide in high piled combustible storage areas and a minimum of 4 feet wide on non-high piled combustible storage areas.

Access aisles shall be a minimum of 4 feet (1219 mm) wide in high piled combustible storage areas and a minimum of 44 inches (1118 mm) wide on non-high piled combustible storage areas.

Aisles utilized for manual stocking, separation between piles, separation between adjacent rows of racks, and separation between racks and adjacent pile storage shall be main aisles or access aisles.

Aisles utilized for mechanical stocking shall be main aisles.

All piles including palletized storage shall border a main aisle on a minimum of one side or end.

Additional aisles shall be provided for access to doors, required windows and ventilation openings, standpipe connections, fire extinguishers, mechanical equipment and switches. Such aisles shall be at least 3 feet (914 mm) in width.

A single aisle is permitted to serve multiple functions provided its minimum width is the largest of the widths required for the functions served.

4004.2.1.1.5 Material handling equipment. Material handling equipment shall be suitable to manipulate *vessels* at the highest tier level.

4004.2.1.1.6 Housekeeping. Storage shall be maintained in an orderly manner.

4004.2.1.1.7 Dunnage, scuffboards, floor overlay. Dunnage, scuffboards, floor overlay and similar installations shall be of noncombustible construction or of wood not less than a 1-inch (25 mm) nominal thickness.

4004.2.1.1.8 High piled combustible storage. Storage of *vessels* in closely packed piles, on pallets, in racks, or on shelves, where the top of storage is greater than 6 feet (1829 mm) in height, shall be considered high piled combustible storage. Where applicable requirements in chapter 32 are in conflict with those in section 4004.2.1, the more restrictive shall govern.

4004.2.1.3 Pile storage. Pile storage including palletized storage shall be in accordance with sections 4004.2.1.3.1 through 4004.2.1.3.2.2.

4004.2.1.3.1 Stabilizing and supports. *Intermediate bulk containers, containers,* and *portable tanks* shall be stored in accordance with NFPA 30.

Horizontally oriented *casks* stored in piles shall be supported by stackable racks or cradles of substantial construction designed for that purpose. Lateral bracing shall be provided for horizontally oriented *casks* stored in piles where the height of the pile exceeds three times the least dimension of the base rack or cradle.

Exception: Where an approved engineering analysis is submitted demonstrating taller storage configurations are stable against overturning in accordance with the seismic design requirements of the *International Building Code* for the seismic zone in which the *ABPF* is located.

Storage height of horizontally oriented casks in this configuration shall not exceed the lesser of the rack manufacturer's recommendations or industry standards.

4004.2.1.3.2 Palletized storage. Palletized storage shall be in accordance with sections 4004.2.1.3.2.1 and 4004.2.1.3.2.2.

4004.2.1.3.2.1 Stabilizing and supports. *Casks* stacked vertically for storage shall be separated by pallets or other dunnage that spreads the weight of the *casks* on the tier above over the *casks* on the tier below. A lower tier shall not have less than four *casks* and shall not have an empty *cask* when a tier above has a *cask* that is not empty. No more than two tiers of *casks* are permitted to be stacked vertically in this configuration.

Exceptions:

1. Where the collapse strength of the casks on the lowest tier is not exceeded, palletized storage of vertically oriented *casks* are permitted to be stacked to a height of four tiers where the *casks* are bound together in a square pattern groups of no less than four, by a steel band or other *approved* binding.

2. Where the collapse strength of the casks on the lowest tier is not exceeded, palletized storage of vertically oriented *casks* are permitted to be stacked to a height of six tiers where the *casks* are bound together in a square pattern in groups of no less than nine, by a steel band or other *approved* binding.

3. Where the collapse strength of the casks on the lowest tier is not exceeded, an engineered overturning analysis shall be provided demonstrating stability in accordance with the seismic design requirements of the *International Building Code* for the seismic zone in which the *ABPF* is located for storage configurations other than permitted in exceptions 1 and 2.

4004.2.1.3.2.2 Idle combustible pallets. Storage of idle wood pallets shall be limited to a maximum pile size of 2,500 square feet (232 m^2) and to a maximum storage height of 6 feet (1829 mm). Storage of idle plastic pallets shall be in accordance with section 3206.4.1.1 and as limited by the capacity of the automatic sprinkler system in accordance with section 903.3.1.1. Pallet storage shall be

separated from liquid storage by aisles that are a minimum of 8 feet (2438 mm) wide.

4004.2.1.4 Portable tank, intermediate bulk container, and container storage. *Portable tanks* and *intermediate bulk containers* stored over one tier in height shall be designed to nest securely without dunnage. Stacked *containers* shall be separated by pallets or dunnage to provide stability and to prevent excessive stress to container walls. The storage height and configuration shall be in accordance with NFPA 30.

4004.2.2 Grain storage. Grain storage shall be in accordance with section 4003.2.1.1.

4004.2.3 Use areas. *Use areas* for *Class 1 Liquids* in amounts exceeding the *MAQ* shall be in accordance with sections 4004.2.3.1 through 4004.2.3.3.

4004.2.3.1 General. Systems shall be suitable for the use intended and shall be designed by persons competent in such design. Controls shall be designed to prevent materials from entering or leaving the process or reaction system at other than the intended time, rate or path. Where failure of an automatic control could result in a dangerous condition or reaction, the automatic control shall be fail-safe.

Use areas with *Class 1 Liquids* in excess of the *MAQs* are prohibited in basements.

4004.2.3.2 Non-listed appliances. *Stills* where internal operating vapor pressures normally exceed 2.5 psig (103.4 kPa) or could potentially exceed 2.5 psig (103.4 kPa) due to failures in operating methods such as clogged head packing or other materials held on column plates shall be provided with a listed pressure relief valve piped to discharge to the exterior in an *approved* location.

Exception: *Stills listed* for operation above 2.5 psig (103.4 kPa) and, where approved, *stills* constructed in accordance with the *ASME* Boiler and Pressure Vessel Code.

4004.2.3.3 Class 1 Liquid transfer. *Class 1 liquids* shall be transferred by one of the following methods:

1. From safety cans in accordance with NFPA 30.
2. Through an *approved* closed piping system.

3. From *vessels* by an *approved* pump taking suction through an opening in the top of the *vessel*.

4. By gravity from a *tank*, *intermediate bulk container*, or *container* through an *approved* self-closing or automatic-closing valve.

5. *Approved* engineered liquid transfer systems.

Exception: Liquids transferred into and from containers not exceeding a 5.3-gallon (20 L) capacity.

16.32.420. - section 5003.3.1 replaced—Unauthorized discharges.

Section 5003.3.1 of the International Fire Code is deleted in its entirety and replaced with the following:

5003.3.1 Unauthorized discharges. The owner or person in possession or control of any property, or the person in possession or control of any hazardous materials, shall immediately notify the fire department when any unauthorized discharge of hazardous material occurs. The following procedures are required in accordance with sections 5003.3.1.1 through 5003.3.1.4.

16.32.430 - Section 5307.1 amended.

Section 5307.1 is replaced with the following:

5307.1 General. Carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide or a remote fill connection used in beverage dispensing applications shall comply with sections 5307.2 through 5307.5.2.

16.32.440. - Section 5701.2–Nonapplicability.

Section 5701.2 of the International Fire Code is amended by the deletion of #10 as published.

16.32.450. - chapter 80 amended—NFPA codes.

The referenced NFPA codes in chapter 80 of the International Fire Code are deleted in their entirety and replaced with the following:

National Fire Protection Association (NFPA), Batterymarch Park, Quincy, MA 02269.

Standard Reference Number	Title	Referenced in code section number
02-16	Hydrogen Technologies Code.	2309.3.1.1, 2309.3.1.2, 5301.1, 5307.3, 5801.1
10-2018	Standard for Portable Fire Extinguishers	Table 901.6.1, 906.2, 906.3, Table 906.3(1), Table 906.3(2), 906.3.2, 906.3.4, 3006.3, I101.1
11-2016	Low Expansion Foam, Medium- and High-Expansion Foam Systems	904.7, 5704.2.9.2.2
12-2018	Carbon Dioxide Extinguishing Systems	Table 901.6.1, 904.8, 904.12
12A-2018	Halon 1301 Fire Extinguishing Systems	Table 901.6.1, 904.9
13-2019	Installation of Sprinkler Systems	903.3.1.1, 903.3.2, 903.3.8.2 903.3.8.5, 904.12, 905.3.4, 907.6.4, 914.3.2, 1019.3, 1103.4.8, 3201.1, 3204.2, Table 3206.2, 3206.4.1, 3206.9, 3207.2, 3207.2.1, 3208.2.2, 3208.2.2.1, 3208.4, 3210.1, 3401.1, 5104.1, 5104.1.1, 5106.5.7, 5704.3.3.9, Table 5704.3.6.3(7), 5704.3.7.5.1, 5704.3.8.4
13D-2019	Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes	903.3.1.3
13R-2019	Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height	903.3.1.2, 903.3.5.2, 903.4
14-2019	Installation of Standpipe and Hose Systems	905.2, 905.3.4, 905.4.2, 905.6.2, 905.8
15-2017	Water Spray Fixed Systems for Fire Protection	5704.2.9.2.3

16-2019	Installation of Deluge Foam-Water Sprinkler and Foam-Water Spray Systems	904.7, 904.12
17-2017	Dry Chemical Extinguishing Systems	Table 901.6.1, 904.6, 904.12
17A-2017	Wet Chemical Extinguishing Systems	Table 901.6.1, 904.5, 904.12
20-2019	Installation of Centrifugal Fire Pumps	913.1, 913.2, 913.5.1
22-2018	Water Tanks for Private Fire Protection	507.2.2
24-2016	Installation of Private Fire Service Mains and their Appurtenances	507.2.1, 2809.5
25-2017	Inspection, Testing and Maintenance of Water-Based Fire Protection Systems	507.5.3, Table 901.6.1, 904.7.1, 912.7, 913.5
30-2018	Flammable and Combustible Liquids Code	610.1, 5701.2, 5703.6.2, 5703.6.2.1, 5704.2.7, 5704.2.7.1, 5704.2.7.2, 5704.2.7.3.2, 5704.2.7.4, 5704.2.7.6, 5704.2.7.7, 5704.2.7.8, 5704.2.7.9, 5704.2.9.3, 5704.2.9.4, 5704.2.9.6.1.1, 5704.2.9.6.1.2, 5704.2.9.6.1.3, 5704.2.9.6.1.4, 5704.2.9.6.1.5, 5704.2.9.6.2, 5704.2.9.7.3, 5704.2.10.2, 5704.2.11.3, 5704.2.11.4.2, 5704.2.12.1, 5704.3.1, 5704.3.6, Table 5704.3.6.3(1), Table 5704.3.6.3(2), Table 5704.3.6.3(3), 5704.3.7.2.3, 5704.3.8.4, 5706.8.3
30A-2018	Automotive and Marine Service Station Code	2301.4, 2301.5, 2301.6, 2306.6.3, 2310.1
30B-2018	Manufacture and Storage of Aerosol Products	5101.1, 5103.1, 5104.1, Table 5104.3.1, Table 5104.3.2, Table 5104.3.2.2, 5104.4.1, 5104.5.2, 5104.6, 5106.2.3 5106.3.2, Table 5106.4, 5106.5.1, 5106.5.6, 5107.1
31-2016	Installation of Oil-Burning Equipment	603.1.7, 603.3.1, 603.3.3
32-2016	Dry Cleaning Plants	2107.1, 2107.3

33-2018	Spray Application Using Flammable or Combustible Materials	2404.3.2
34-2018	Dipping and Coating Processes Using Flammable or Combustible Liquids	2405.3, 2405.4.1.1
35-2016	Manufacture of Organic Coatings	2901.3, 2905.4
40-2016	Storage and Handling of Cellulose Nitrate Motion Picture Film	306.2
51-2018	Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes	3501.5, 3507.1, 3509.1
51A-2012	Acetylene Cylinder Charging Plants	3508.1
52-2016	Vehicular Gaseous Fuel Systems Code	5301.1
58-2017	Liquefied Petroleum Gas Code	603.4.2.1.1, 6101.1, 6103.1, 6103.2.1, 6103.2.1.2, 6103.2.1.7, 6103.2.2, 6104.1, 6104.3.2, 6104.4, 6105.2, 6106.2, 6106.3, 6107.2, 6107.4, 6108.1, 6108.2, 6109.11.2, 6111.3
59A-2016	Production, Storage and Handling of Liquefied Natural Gas (LNG)	5301.1, 5501.1
61-2017	Prevention of Fires and Dust Explosions in Agricultural and Food Products Facilities	Table 2204.1
69-2014	Explosion Prevention Systems	911.1, 911.3, Table 2204.1
70-2017	National Electric Code	603.1.3, 603.1.7, 603.5.2, 604.1.2, 605.3, 605.4, 605.9, 605.11, 606.16, 610.6, 610.7, 904.3.1, 907.6.1, 909.12.2, 909.16.3, 910.4.6, 2006.3.4, 2104.2.3, 2108.2, Table 2204.1, 2301.5, 2305.4, 2308.8.1.2.4, 2309.2.3, 2309.6.1.2.4, 2311.3.1, 2403.2.1, 2403.2.1.1, 2403.2.1.4, 2403.2.5, 2404.6.1.2.2, 2404.9.4, 2504.5, 2603.2.1, 2606.4, 2703.7.1, 2703.7.2, 2703.7.3, 2803.4, 2904.1, 3103.12.6.1,

		3104.15.7, 3304.7, 3506.4, 5003.7.3, 5003.8.7.1, 5003.9.4, 5303.7.6, 5303.8, 5303.16.11, 5303.16.14, 5503.6, 5503.6.2, 5703.1, Table 5703.1.1, 5703.1.3, 5704.2.8.12, 5704.2.8.17, 5706.2.8, 5803.1.5, 5803.1.5.1, 5807.1.10, 5906.5.5, 5906.5.6, 6109.15.1
72-2019	National Fire Alarm Code	508.1.6, 604.2.4, Table 901.6.1, 903.4.1, 904.3.5, 907.2, 907.2.6, 907.2.9.3, 907.2.11, 907.2.13.2, 907.3, 907.3.3, 907.3.4, 907.5.2.1.2, 907.5.2.2, 907.5.2.2.5, 907.6, 907.6.1, 907.6.2, 907.6.6, 907.7, 907.7.1, 907.7.2, 907.8, 907.8.2, 907.8.5, 1103.3.2
80-2016	Fire Doors and Fire Windows	703.1.3, 1010.1.4.3
85-2015	Boiler and Combustion System Hazards Code	Table 2204.1
86-2019	Ovens and Furnaces	3001.1
92-2018	Smoke Management Systems in Malls, Atria, and Large Spaces	909.7, 909.8
99-2018	Health Care Facilities	611.1, 1105.5.2, 1105.10.1, 1105.10.2, 5306.4, 5306.5
101-2018	Life Safety Code	1029.6.2
110-2016	Emergency and Standby Power Systems	604.1, 604.3, 604.4, 913.5.2, 913.5.3
111-2019	Stored Electrical Energy Emergency and Standby Power Systems	604.1, 604.4, 604.5
120-2015	Coal Preparation Plants	Table 2204.1
160-2016	Flame Effects Before an Audience	308.3.2
170-2018	Standard for Fire Safety and Emergency Symbols	1025.2.6.1
211-2016	Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances	603.2
241-2013	Safeguarding Construction, Alteration, and Demolition Operations	3301.1
253-2015	Standard Test for Critical Radiant Flux of Floor	804.3.1, 804.3.2, 804.4

	Covering Systems Using a Radiant Heat Energy Source	
260-2013	Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture	805.1.1.1, 805.2.1.1, 805.3.1.1, 805.4.1.1
261-2018	Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes	805.2.1.1, 805.3.1.1, 805.4.1.1
265-2015	Fire Tests for Evaluating Room Fire Growth Contribution of Textile Wall Coverings	803.5.1, 803.5.1.1, 803.5.1.2, 803.5.2, 803.6
286-2015	Standard Method of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth	803.1, 803.1.2, 803.1.2.1, 803.5.1, 803.5.2, 803.6, 803.7
289-13	Standard Method of Fire Test for Individual Fuel Packages	806.2, 807.4, 807.5.1.1, 808.3
303-2016	Fire Protection Standard for Marinas and Boatyards	905.3.7, 3603.5, 3603.6, 3604.2
400-16	Hazardous Material Code	5601.1.5, 6304.1.2, Table 6304.1.5(1), Table 6304.1.5(2)
407-2017	Aircraft Fuel Servicing	2006.2, 2006.3
409-2016	Aircraft Hangars	914.8.3, Table 914.8.3, 914.8.3.1, 914.8.6
410-2018	Standard on Aircraft Maintenance	2004.7
484-2015	Combustible Metals.	Table 2204.1
495-2018	Explosive Materials Code	202, 911.1, 911.4, 5601.1.1, 5601.1.5, 5604.2, 5604.6.2, 5604.6.3, 5604.7.1, 5605.1, 5606.1, 5606.5.2.1, 5606.5.2.3, 5607.1, 5607.9, 5607.11, 5607.15
498-2018	Safe Havens and Interchange Lots for Vehicles Transporting Explosives	5601.1.2
505-2018	Powered Industrial Trucks, Including Type Designations, Areas of Use,	5003.7.3

	Maintenance, and Operation	
654-2017	Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids,	Table 2204.1
655-2017	Prevention of Sulfur Fires and Explosions	Table 2204.1
664-2017	Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities	Table 2204.11.1, 2805.3
701-2015	Methods of Fire Tests for Flame-Resistant Textiles and Films	806.2, 807.4, 807.5.1.2, 2603.5, 3104.2
703-2018	Fire Retardant Impregnated Wood and Fire Retardant Coatings for Building Materials	803.4
704-2017	Identification of the Hazards of Materials for Emergency Response	606.7, 202, 3104.2, 5003.2.2.1, 5003.2.2.2, 5003.5, 5003.10.2, 5005.1.10, 5005.2.1.1, 5005.4.4, 5503.4.1, 5704.2.3.2
750-2019	Standard on Water Mist Fire Protection Systems	202, Table 901.6.1, 904.11.1.1
914-2015	Code for Fire Protection of Historic Structures	1103.1.1
1122-2018	Model Rocketry	5601.1.4
1123-2017	Fireworks Display	202, 5604.2, 5608.1, 5608.2.2, 5608.5, 5608.6
1124-2017	Manufacture, Transportation, and Storage of Fireworks	202, 5601.1.3, 5604.2, 5605.1, 5605.3, 5605.4, 5605.5, 5609.1
1125-2017	Manufacture of Model Rocket and High Power Rocket Motors	5601.1.4
1126-2016	Use of Pyrotechnics Before a Proximate Audience	5604.2, 5605.1, 5608.1, 5608.2.2, 5608.4, 5608.5
1127-20183	High Power Rocketry	5601.1.4
2001-2018	Clean Agent Fire Extinguishing Systems	Table 901.6.1, 904.10

16.32.460. - Sections B104.2 amended–Area separation amended–Type IA and Type IB construction.

Section B104.2 of the International Fire Code is amended by deletion of section B104.2 as published and adoption of the following:

B104.2 Area separation. Portions of buildings that are completely isolated from adjoining portions of the building by a wall having a 4 hour fire resistance rating with no openings, constructed as required by section 705 of the International Building Code are allowed to be considered as separate fire areas.

16.32.470. - Appendix D amended–Fire apparatus access roads.

Appendix D of the International Fire Code is amended by the deletion of sections D101, D102, D103.1 through D103.5, D106, D107, and D108 as published.

Section 2. Validity.

To the extent only that they conflict with this ordinance, the council repeals any conflicting ordinances or parts of ordinances. The provisions of this ordinance are severable, and invalidity of any part shall not affect the validity or effectiveness of the rest of this ordinance. Neither the adoption of this ordinance nor its action repealing or amending any other ordinance of the City of Longmont shall in any manner affect prosecution for violations of ordinances committed before the effective date of this ordinance. This ordinance shall not waive any license, fee or penalty due and unpaid under pre-existing ordinances on its effective date. This ordinance shall not affect any pre-existing ordinances on the collection of any license, fee or penalty, or the penal provisions applicable to any violation thereof. This ordinance shall not affect the validity of any bond or cash deposit required under any ordinance. All rights and obligations under such security shall continue in full force and effect.

Introduced this _____ day of _____, 2018.

Passed and adopted this _____ day of _____, 2019.

_____

MAYOR

ATTEST:

_____
CITY CLERK

NOTICE: THE COUNCIL WILL HOLD A PUBLIC HEARING ON THIS ORDINANCE AT 7:00 P.M. ON THE _____ DAY OF _____, 2019, IN THE LONGMONT COUNCIL CHAMBERS.

APPROVED AS TO FORM:

_____ _____
ASSISTANT CITY ATTORNEY DATE

_____ _____
PROOFREAD DATE

APPROVED AS TO FORM AND SUBSTANCE:

_____ _____
ORIGINATING DEPARTMENT DATE

CA File: 18-000077