

1 **ORDINANCE NO.**

2 **AN ORDINANCE REPEALING AND REPLACING ARTICLE 7 OF CITY CODE**
3 **CHAPTER 25-12 TO ADOPT THE 2015 INTERNATIONAL FIRE CODE AND**
4 **LOCAL AMENDMENTS; AND CREATING OFFENSES.**

5 **BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:**

6 **PART 1.** City Code Chapter 25-12 is amended to repeal Article 7 (*Fire Code*) and
7 replace it with a new Article 7 to read as follows:

8 **ARTICLE 7. FIRE CODE**

9 **§ 25-12-171 INTERNATIONAL FIRE CODE.**

10 (A) The International Fire Code and Appendices B and F, 2015 Edition, published by
11 the International Code Council (“2015 Fire Code”), are adopted and incorporated
12 by reference into this section with the changes described in Subsection (B) and
13 amendments in Section 25-12-173 (*Local Amendments to the 2015 Fire Code*).

14 (B) The following sections are amended or deleted:

101.1	102.7	102.7.1	102.7.2	103.1	103.2	103.3
103.4	104.1	104.1.1	104.9	104.10.2	104.12	105.3.1
105.4	105.4.1	105.4.1.1	105.4.2	105.4.4	105.6	105.6.4
105.6.5	105.6.9	105.6.11	105.6.15.1	105.6.15.2	105.6.15.3	105.6.16
105.6.17	105.6.21	105.6.22	105.6.23	105.6.28	105.6.32	105.6.34
105.6.36	105.6.37	105.6.38	105.6.45	105.7.1	105.7.2	106.2.3
108.1	109.3.2	109.3.3	109.3.3.1	113	304.3.3	307.2
307.4	308.1.4	308.5	308.6	308.7	311.5	316.7
316.7.1	401.3	408.12	409.2	503.1	503.2.1	503.2.2
503.2.4	503.2.6	503.2.6.1	503.3	503.3.1	503.3.2	503.4.1
503.7	504.1	505.3	505.3.1	507.3	507.4	507.5.1
507.5.3	507.5.7	507.6	507.6.1	508.1.6	510.1	510.1.1
510.1.2	603.3.2	609.2	901.5	901.6	Table 901.6.1	
901.6.2	903.2.1.6	903.2.8.3	903.3.1.1.1	903.3.1.2.1	903.3.1.2.2	903.3.5
903.3.5.4	903.3.6	903.3.9	903.4.2	904.9	904.11	904.13
905.1	905.1.1	905.3.4.1	905.5.3	905.4	906.1	907.1
907.2.1.3	907.2.3.1	907.2.6.4	907.2.7	907.2.8.1	907.2.8.2	907.2.9
907.2.9.1	907.2.13.2	907.5.2.1.1	907.6.1.1	907.6.1.2	907.6.5	907.6.7
909.5	909.6.3	909.10.2	909.12.4	909.18	909.20.6	909.22
912.1	912.1.1	912.4	912.5.1	912.5.3	1010.1.9.8	1010.1.9.11
1025.6	1030.2	1103.4.1	1103.4.8	1103.4.9	1103.5.3	1103.6

1103.7.6	1103.8.3	1103.8.4	1103.9	2301.1	2304.1	2304.2
2305.1.3	2305.2.1	2305.5	2306.7.6.2	2403.5	3103.5	3103.8.2
5001.1.2	5001.2	5001.2.3	5001.5	5001.5.1	5001.5.2	5001.7
5001.7.1	5001.7.2	5001.7.3	5001.7.4	5001.7.5	5001.7.6	5001.7.7
5001.7.8	5001.7.9	Table 5003.1.1(1)	5003.2.4.3	5003.3.1.5	5003.9.8	5004.2
5004.2.1	5004.2.2	5004.2.2.1	5004.2.2.5	5004.2.2.6	5005.1.8.1	5306.2
5306.2.1	5306.2.2	5306.3	5404.2	5404.2.1	5504.3.1.1	5601.1.6
5601.2.4	5601.2.5	5601.2.6	5601.2.7	5601.2.8	5601.2.9	5601.4
5607.4.1	5607.5	5607.11.1	5607.12.1	5607.16	5607.17	5607.18
5607.19	5607.20	5608.2.3	5704.2.9.6.1		5704.2.10	5704.2.10.1
5704.2.11.2		5704.2.11.3		5704.2.11.4		5803.1.1
6003.1.4.1		6101.2	6103.2.1.2	6103.2.2	6104.2	6104.3.2
6104.4	6107.2	6108.1	6109.11.2	6303.1.1.2.1		Chapter 80
B105.1	B105					

1 (C) The city clerk shall retain a copy of the 2015 Fire Code with the official ordinances
2 of the City of Austin.

3 **§ 25-12-172 CITATIONS TO THE FIRE CODE.**

4 In the City Code, “Fire Code” means the 2015 Fire Code as adopted by Section 25-
5 12-171 (*International Fire Code*), and as amended by Section 25-12-173 (*Local*
6 *Amendments to the Fire Code*).

7 **§ 25-12-173 LOCAL AMENDMENTS TO THE FIRE CODE.**

8 The following provisions are local amendments to the 2015 Fire Code. Each
9 provision in this section is a substitute for the identically numbered provision deleted by
10 Section 25-12-171(B) (*International Fire Code*) or is an addition to the 2015 Fire Code:

11 **[A] 102.7 Referenced codes and standards.** Chapter 80 (*Referenced Standards*)
12 establishes the codes and standards referenced in the Fire Code.

13 **[A] 102.7.1 Conflicts.** In the event of a conflict between referenced provisions of the
14 International Mechanical Code and the Mechanical Code, the Mechanical Code prevails.
15 In the event of a conflict between referenced provisions of the International Plumbing
16 Code, the International Fuel Gas Code and the Plumbing Code, the Plumbing Code
17 prevails. Where differences occur between the provisions of the Fire Code and the
18 referenced standards, the provisions of the Fire Code prevail.

19 **[A] 102.7.2 Provisions in referenced codes and standards.** Unless precedence is
20 specified by another ordinance of the City, where the extent of the reference to a

1 referenced code or standard includes subject matter that is within the scope of this code,
2 the provisions of this code, as applicable, shall take precedence over the provisions in the
3 referenced code or standard.

4 **[A] SECTION 103 FIRE PREVENTION**

5 **[A] 103.1 General.** The Austin Fire Department, under the direction of the fire chief, is
6 authorized to implement, administer and enforce the Fire Code.

7 **[A] 103.2 Appointment.** The fire chief is appointed by the City Manager in accordance
8 with the policies and procedures of the City of Austin and in compliance with state law.
9 The fire chief serves as the fire code official.

10 **[A] 103.3 Deputies.** The fire chief appoints the fire marshal and assistant fire marshals,
11 inspectors, or other employees and delegates duties consistent with the policies and
12 procedures of the Austin Fire Department. Where the terms “fire code official”, “fire
13 chief”, “chief”, “fire department”, or “fire marshal” are used in the Fire Code, the
14 provisions apply to assistant fire marshals, inspectors, engineering professionals, and
15 other fire department employees in the execution of their assigned duties.

16 **[A] 103.4 Liability for Damages.** The Fire Chief may not be held personally liable for
17 any damages that may accrue to persons or property as a result of any act or by reason of
18 any act or omission in the discharge of his duties when he acts in good faith and without
19 malice in the discharge of his duties. Additionally, this code shall not be construed to
20 hold the City or any officer or employee responsible for any damage to persons or
21 property by reason of inspection or reinspection authorized or provided in this Chapter or
22 by reason of the approval or disapproval of any equipment or process authorized in this
23 chapter, or for any action in connection with the control or extinguishment of any fire or
24 in connection with any other official duties. Any suit brought against the Fire Chief
25 because of any act or omission performed by him in the enforcement of any provision of
26 the International Fire Code or this Chapter shall be handled in accordance with the
27 resolution adopted by City Council on April 9, 1987 relating to employee
28 indemnification.

29 This code does not reduce the responsibility of any person owning, operating or
30 controlling any building or structure for any damages to persons or property caused by
31 defects, nor shall the Austin Fire Department or the City of Austin assume any liability
32 by reason of the inspections authorized by this code or any permits or certificates issued
33 under this code.

34 **[A] 104.1 General.** The fire chief is authorized to administer, implement, and enforce
35 the Fire Code; is authorized to render interpretations of the Fire Code; and to adopt
36 policies, procedures, rules and regulations in order to implement the Fire Code. An

1 interpretation rendered or a policy, procedure, rule, or regulation adopted by the fire
2 chief must comply with the intent and purpose of the Fire Code and cannot have the
3 effect of waiving a requirement of the Fire Code. Under the fire chief's direction, the
4 fire department is authorized to enforce all ordinances of the jurisdiction pertaining to:

- 5 1. the prevention of fires;
- 6 2. the suppression or extinguishment of dangerous or hazardous fires;
- 7 3. the storage, use and handling of hazardous materials;
- 8 4. the installation and maintenance of automatic, manual and other private
9 fire alarm systems and fire-extinguishing equipment;
- 10 5. the maintenance and regulation of fire escapes;
- 11 6. the maintenance of fire protection and the elimination of fire hazards on
12 land and in buildings, structures and other property, including those under
13 construction;
- 14 7. the maintenance of means of egress; and
- 15 8. the investigation of the cause, origin and circumstances of fire and
16 unauthorized releases of hazardous materials.

17 **[A] 104.1.1 Authorized Personnel.** The fire chief and members of the fire department
18 assigned to enforce the Fire Code are authorized to issue citations for violations of the
19 Fire Code.

20 **[A] 104.9 Alternative materials and methods.** The provisions of the Fire Code are not
21 intended to prevent the installation of any material or to prohibit any method of
22 construction not specifically prescribed by the Fire Code, provided that any such
23 alternative has been approved. The fire chief is authorized to approve an alternative
24 material or method of construction where the fire chief finds that the proposed design is
25 satisfactory and complies with the intent of the provisions of the Fire Code, and that the
26 material, method or work offered is, for the purpose intended, at least the equivalent of
27 that prescribed in this code in quality, strength, effectiveness, fire resistance, durability
28 and safety. The owner, lessee, or a representative shall apply for approval of an alternate
29 material or method in writing, detailing the specifics of the alternate materials or methods
30 including evidence of equivalence with the prescribed requirements of the Fire Code. If
31 the alternative means or methods also involves matters regulated by the Building Code,
32 the alternative means or methods is also subject to the approval of the building official.

1 [A] **104.12 Authority of the Chief.** The fire chief, or the fire chief's designee, may order
2 the evacuation of or cessation of its use or operation of any area, premises, building,
3 building under construction, or vehicle that is or is in imminent danger of becoming a fire
4 hazard, becoming a chemical exposure hazard, or becoming a life or health hazard as a
5 result of flooding or other dangerous condition.

6 [A] **105.3.1 Expiration.** An operational permit remains in effect until reissued, renewed,
7 revoked, or for such a period of time as specified in the permit. Construction permits are
8 issued and administered consistent with the Building Code. Unless otherwise provided in
9 the Fire Code, permits are not transferable and any change in occupancy, operation,
10 tenancy or ownership requires a new permit.

11 [A] **105.4 Construction documents.** Construction documents must comply with the Fire
12 Code and be consistent with the guidance in the City's "Fire Protection Criteria Manual".

13 [A] **105.4.1 Submittals.** Construction documents and supporting data that are part of a
14 site plan or building permit submittal must be submitted consistent with the requirements
15 in Title 25 (*Land Development*). After building permit review, a shop drawing submittal
16 must be submitted directly to the fire department in two or more sets and in the form and
17 with the detail required by the fire chief. Construction documents must be prepared by a
18 registered design professional, licensed fire alarm planning superintendent (APS), or
19 licensed fire sprinkler responsible managing employee (RME) as appropriate and as
20 required by Texas law.

21 **Exception:** The fire chief may waive the submission of construction documents
22 and supporting data that is not required to be prepared by a registered design
23 professional if the fire chief finds that the nature of the work applied for is such
24 that review of construction documents is not necessary to obtain compliance with
25 the Fire Code.

26 [A] **105.4.1.1 Examination of documents.** The fire chief shall examine or cause to be
27 examined the accompanying construction documents and shall ascertain by such
28 examinations whether the work indicated and described is in accordance with the
29 requirements of this code.

30 [A] **105.4.2 Information on construction documents.** Construction documents must be
31 drawn to scale, be on suitable material, and in a media acceptable to the City of Austin
32 Development Services Department, or its successor department, and the Austin Fire
33 Department. A person who submits a shop drawing to the Fire Department that is drawn
34 to a scale other than $\frac{1}{8}''=1'$ or $\frac{1}{4}''=1'$ must pay a fee, set by separate ordinance, for non-
35 standard drawing scales. Construction documents must be sufficiently clear to indicate
36 the location, nature and extent of the work proposed and must show, in detail, that the

1 work will conform to the provisions of the Fire Code and relevant laws, ordinances, rules
2 and regulations as determined by the fire code official.

3 **[A] 105.4.4 Approved documents.** Construction documents approved by the fire chief
4 are approved with the intent that such construction documents comply in all respects with
5 Fire Code. When plans, specifications, or other construction documents are approved or
6 issued, the approval does not authorize a violation of the Fire Code or of any other City
7 ordinance, regulation, or requirement. An approval that appears to authorize a person to
8 violate or disregard a provision of the Fire Code is not valid. Review and approval by the
9 fire department does not relieve the applicant of his or her responsibility to comply with
10 the Fire Code. The fire chief may require a person to correct errors in plans,
11 specifications, or data; and may require a process, building operation, or use to cease
12 when it is carried out in a manner than violates the Fire Code or other City ordinance,
13 regulation, or requirement.

14 **105.6 Required operational permits.** The fire code official may issue an operational
15 permit for an operation, practice, or function described in this section.

16 **105.6.1 Aerosol products.** Not adopted.

17 **105.6.2 Amusement buildings.** Not adopted.

18 **105.6.3 Aviation facilities.** Not adopted.

19 **105.6.4 Carbon dioxide systems used in beverage dispensing applications.** Not
20 adopted. See Section 105.6.21.2 for carbon dioxide permitting requirements.

21 **105.6.5 Carnivals and fairs.** An operational permit is required to conduct a carnival or
22 fair.

23 **105.6.6 Cellulose nitrate film.** Not adopted.

24 **105.6.7 Combustible dust-producing operations.** Not adopted.

25 **105.6.8 Combustible fibers.** Not adopted.

26 **105.6.9 Compressed gases.** An operational permit for compressed gases is required and
27 must comply with Section 105.6.21 (*Hazardous materials*).

28 **105.6.10 Covered and open mall buildings.** Not adopted.

29 **105.6.11 Cryogenic fluids.** An operational permit for cryogenic fluids is required and
30 must comply with Section 105.6.21 (*Hazardous materials*).

1 **105.6.12 Cutting and welding.** Not adopted.

2 **105.6.13 Dry Cleaning.** Not adopted.

3 **105.6.14 Exhibits and trade shows.** An operational permit is required to operate exhibits
4 and trade shows.

5 **105.6.15 Explosives.**

6 **105.6.15.1 Blasting.** An operational permit is required to use explosives or blasting
7 agents at an addressed location for a specified period, which is based on the class of
8 permit. Chapter 56 (*Explosives and fireworks*) establishes additional requirements for a
9 blasting operational permit.

10 1. Class A: 45 days

11 2. Class B: 120 days

12 3. Class C: 1 year

13 4. Class D: 10 days

14 **105.6.15.2 Explosives or Blasting Agents.** An operational permit is required to
15 manufacture, store, handle, sell or use any quantity of explosives, explosive material, or
16 blasting agents. Chapter 56 (*Explosives and fireworks*) establishes additional
17 requirements for a blasting operational permit.

18 **Exception:** In a Group R-2 or Group R-3 occupancy, storing smokeless propellant,
19 black powder and small arms primers for personal use, not for resale and consistent
20 with Section 5606.

21 **105.6.15.3 Fireworks.** An operational permit is required to manufacture, store, handle,
22 sell, or use any quantity of fireworks or pyrotechnic special effects.

23 **105.6.16 Fire protection systems.** An annual operational permit is required for all fixed
24 fire protection systems in buildings and facilities, including but not limited to fire alarm
25 systems, fire sprinkler systems, commercial kitchen hood suppression systems, and
26 mechanical smoke control systems. A single permit is required for each building or
27 facility and must detail the types and locations of systems present. Inspections and testing
28 that complies with the City of Austin Fire Protection Criteria Manual and any other
29 applicable national standards is a condition of permit approval. See 105.6.37 for private
30 hydrant systems.

31 **105.6.16 Fire hydrants and valves.** Not adopted.

1 **105.6.17 Flammable and combustible liquids.** An operation permit for flammable and
2 combustible liquids is required and must comply with Section 105.6.21 (*Hazardous*
3 *materials*).

4 **105.6.18 Floor finishing.** Not adopted.

5 **105.6.19 Fruit and crop ripening.** Not adopted.

6 **105.6.20 Fumigation and insecticidal fogging.** Not adopted.

7 **105.6.21 Hazardous Materials.**

8 **105.6.21.1** An operational permit is required to use or possess hazardous materials
9 in a quantity in excess of that described in 105.6.21.2 below and meeting any one
10 of the following criteria:

11 **105.6.21.1.1** Materials with a toxicity rating of 2 or more, as defined in
12 Appendix F.

13 **105.6.21.1.2** Materials with a flammability rating of 2 or more, as defined in
14 Appendix F.

15 **105.6.21.1.3** Materials with an instability rating of 2 or more, as defined in
16 Appendix F.

17 **105.6.21.1.4** Compressed gases, liquefied compressed gases and cryogenic
18 fluids.

19 **105.6.21.2** An operational permit is required to use or possess hazardous materials
20 if the aggregate quantity of each material with the same hazard rating, in the same
21 physical state throughout the facility, is equal to or greater than the following:

22 **MINIMUM AGGREGATE**

Flammability	Rating	Quantity
4	Extreme	0.5 lbs. or 5 Gallons
3	High	12 lbs. or 10 Gallons
2	Moderate	60 lbs. or 120 Gallons

Toxicity	Rating	Quantity
4	Extreme	0.35 oz. or 0.3 fl. oz.
3	High	10 lbs. or 1 gal.
2	Moderate	110 lbs. or 55 gal.
Instability	Rating	Quantity
4	Extreme	0.35 oz. or 0.3 fl. oz.
3	High	2.2 lbs or 0.26 gal.
2	Moderate	110 lbs. or 55 gal.
Carbon dioxide system		101 lbs.
Compressed gases, and liquefied compressed gases		100 Cu. Ft. at NTP
Cryogenic fluids		1 gallon

1 **105.6.21.3** An operational permit is required to dispense liquid fuels, regardless of hazard
2 classification, from tank vehicles into the fuel tanks of motor vehicles at commercial,
3 industrial, governmental or manufacturing establishments. A person may not dispense
4 liquid fuels of any kind from tank vehicles into the fuel tanks of motor vehicles at a
5 residence.

6 **105.6.21.4** The criteria for the rating of hazardous materials are contained in NFPA
7 Standard No. 704 (See Appendix F). The fire chief uses NFPA Standard No. 704 to
8 assign hazard ratings to hazardous materials. If the NFPA Fire Protection Handbook
9 assigns a material a hazard rating, then that rating is used. When a rating is not provided,
10 the fire chief uses NFPA 704, information contained in Material Safety Data Sheets
11 (MSDS), Appendix E, or other commonly accepted published standards of nationally
12 recognized organizations/authors to classify hazardous materials.

13 **105.6.21.5** Compressed and liquefied gases and cryogenic fluids will be totaled on a
14 quantitative basis for each hazard class. The materials may be reported in pounds or

gallons but, for the purpose of regulation, are calculated in cubic feet by the Fire Department.

105.6.21.6 The state of a material (liquid, solid, gas) is based on its physical state at NTP.

105.6.21.7 Materials not requiring a permit. The following materials are not subject to the permitting requirements:

105.6.21.7.1 Inert gases that do not support combustion including argon, helium, krypton, neon, xenon, compressed air, and nitrogen. When stored as cryogenic fluids, these gases are subject to permitting requirements.

105.6.21.7.2 Any material used or stored for household purposes at a private residence.

105.6.21.7.3 Any material contained in a transportation vehicle when the vehicle is not being used for permanent storage.

105.6.21.7.4 Commercial products used at a facility solely for janitorial purposes and maintenance products that are necessary for the immediate, continued operation of equipment at the facility (not to include fuels) and are not for resale. This includes air conditioning refrigerant and pool chemicals when maintained in quantities less than the following:

TABLE 105.6.21.7.4 – MATERIAL LIMITS

Material	Rating	Quantity
Corrosives (i.e. Muriatic Acid)	3-0-0	4 gallons
Class 2 Oxidizers Trichloro-s-triazinetriene (trichloroisocyanuric acid)	3-0-2	150 pounds
Class 3 Oxidizers Calcium hypochlorite (HTH, Hy-chlor)	3-0-2	110 pounds
Air Conditioning Refrigerant	2-0-0	2-30 pound cylinders

105.6.21.7.5 Materials held solely as pharmaceutical products that are packaged for distribution to, and use by, the general public, except for those materials with a toxic or flammable hazard rating of 3 or more and reactive materials with a rating of 2 or more, based on the criteria in the Fire Protection Manual.

105.6.21.7.6 Any waste material regulated by the State of Texas under Chapter 361, Health and Safety Code or under Federal regulations must be listed in a

1 permit application, but will not require a permit nor be considered in setting the
2 amount of the permit fee.

3 **105.6.21.7.7** Nuclear and radioactive material(s) regulated by the State of Texas
4 under Chapter 401, Health and Safety Code or under Federal regulations must be
5 listed in a permit application, but will not require a permit nor be considered in
6 setting the amount of the permit fee.

7 **105.6.21.7.8** Any material contained in a process vessel, except when the process
8 vessel is being used for permanent storage.

9 **105.6.21.7.9** Any material stored in an underground tank that complies with the
10 permit requirements of the Development Services Department, or its successor
11 department, and with the reporting requirements of the U.S. Environmental
12 Protection Agency (EPA) Emergency Planning and Community Right-to-Know
13 Act (EPCRA), also known as Title III of the Superfund Amendments and
14 Reauthorization Act (SARA Title III), and if applicable, with the requirements of
15 the Texas Hazard Communication Act.

16 **105.6.21.7.10** Class II combustible liquids used to fuel emergency generators,
17 located outside of buildings, and in approved tanks or containers less than 275
18 gallons in size.

19 **105.6.20.7.11.** Carbon dioxide systems utilizing high pressure cylinders that are
20 not associated with beverage dispensing applications.

21 **105.6.22 HPM facilities.** HPM facilities, including Group H-5 occupancies are required
22 to obtain a hazardous materials permit and must comply with Section 105.6.21.

23 **105.6.23 High-piled storage.** A triennial operational permit is required to use a building
24 or portion thereof as a high-piled storage area that exceeds 500 square feet (46m²).

25 **105.6.24 Hot work.** Not adopted.

26 **105.6.25 Industrial ovens.** Not adopted.

27 **105.6.26 Lumber yards and woodworking plants.** Not adopted.

28 **105.6.27 Liquid- or gas-fueled vehicles in assembly buildings.** Not adopted.

29 **105.6.28 LP-Gas.** An operational permit is required for liquefied petroleum gas and must
30 comply with Section 105.6.21 (Hazardous materials).

31 **105.6.29 Magnesium.** Not adopted.

32 **105.6.30 Miscellaneous combustible storage.** Not adopted.

1 **105.6.31 Motor fuel-dispensing facilities.** Not adopted.

2 **105.6.32 Open burning.** An operational permit is required to kindle or maintain an open
3 fire or a fire on a public street, alley, road or other public or private ground. A person
4 must comply with the instructions and stipulations of the permit. An open fire or fire
5 includes trench burners (Section 308.5), mobile incinerators (Section 308.6) and
6 agricultural burning (Section 308.7)

7 **Exception:** Recreational fires

8 **105.6.33 Open flames and torches.** Not adopted.

9 **105.6.34 Open flames and candles.** An operational permit is required to use open flames
10 or candles in connection with an assembly area or the dining area of a restaurant or
11 drinking establishment.

12 **105.6.35 Organic coatings.** An operational permit is required for organic coatings and
13 must comply with Section 105.6.21 (*Hazardous materials*).

14 **105.6.36 Places of assembly.** An operational permit or appropriate certificate of
15 occupancy is required to operate a place of assembly.

16 **105.6.36.1** An annual operational permit is required to operate a place of assembly
17 where 51% or more of the gross receipts at the location are from alcoholic
18 beverage sales.

19 **105.6.36.2** With concurrence of the Building Official, the fire chief may issue a
20 temporary change of use permit to use a structure for public assembly in
21 accordance with Section 409.

22 **105.6.37 Private fire hydrants.** Not adopted.

23 **105.6.38 Pyrotechnic special effects material.** An operational permit is required to use
24 and handle pyrotechnic special effects material.

25 **105.6.39 Pyroxylin plastic.** Not adopted.

26 **105.6.40 Refrigeration equipment.** Not adopted.

27 **105.6.41 Repair garages and motor fuel-dispensing facilities.** Not adopted.

28 **105.6.42 Rooftop heliports.** Not adopted.

29 **105.6.43 Spraying or dipping.** Not adopted.

30 **105.6.44. Storage of scrap tires and tire byproducts.** Not adopted.

1 **105.6.45 Temporary membrane structures and tents.** An operational permit is
2 required to operate an air-supported temporary membrane structure or a tent having an
3 area in excess of 100 square feet (9.3 m²), or an aggregate area of multiple tents or
4 membrane structures placed side by side in excess of 400 square feet (37m²).

5 **Exceptions:**

- 6 1. Tents used exclusively for recreational camping purposes.
- 7 2. Funeral tents and curtains or extensions attached thereto, when used for
8 funeral services.
- 9 3. Tents that are not attached to, or located within 20 feet (6096 mm) of, a
10 building shall not require a permit unless the tent is in excess of 400 square
11 feet (37 m²).
- 12 4. Tents open on all sides which comply with all of the following:
 - 13 4.1 Individual tents having a maximum size of 700 square feet (65 m²).
 - 14 4.2 The aggregate area of multiple tents placed side by side without a
15 firebreak clearance of not less than 12 feet (3658mm) shall not exceed
16 700 square feet (65 m²) total.
 - 17 4.3 A minimum clearance of 20 feet (6096 mm) to structures and other
18 tents shall be provided.
- 19 5. Inflatable playground equipment at one- or two- family residences.
- 20 6. Inflatable playground equipment used for less than 24 hours at places of
21 worship or education facilities (for ages served by the 6th grade and younger)
22 when located a minimum of 20 feet from the nearest building.

23 **105.6.46 Tire-rebuilding plant.** Not adopted.

24 **105.6.47 Waste handling.** Not adopted.

25 **105.6.48 Wood Products.** Not adopted.

26 **105.7 Required construction permits.** The fire code official may issue construction
27 permits for work as described in Section 105.7.1.

28 **105.7.1 No Separate Construction Permits Required.** Construction permits for
29 permanent structures and systems that are issued through the building permit
30 system administered by the Development Services Department, or its successor
31 department.

1 **105.7.2 Temporary membrane structures and tents.** A construction permit is
2 required to erect an air supported temporary membrane structure or tent having an
3 area in excess of 100 square feet (9.3 m²) or an aggregate area of multiple tents
4 placed side by side in excess of 400 square feet (37 m²).

5 **Exceptions:**

- 6 1. Tents used exclusively for recreational camping purposes.
- 7 2. Funeral tents and curtains or extensions attached thereto, when used
8 for funeral services.
- 9 3. Tents that are not attached in any way to or within 20 feet (6096 mm)
10 of a building shall not require a permit unless the tent is in excess of
11 400 square feet (37 m²).
- 12 4. Tents open on all sides, which comply with all of the following;
- 13 4.1 Individual tents having a maximum size of 700 square feet (65
14 m²).
- 15 4.2 The aggregate area of multiple tents placed side by side without
16 a fire break clearance of not less than 12 feet (3658 mm) shall
17 not exceed 700 square feet (65 m²) total.
- 18 4.3 A minimum clearance of 20 feet (3658 mm) to structures and
19 other tents shall be provided.
- 20 5. Inflatable playground equipment at one- or two- family residences.
- 21 6. Inflatable playground equipment used for less than 24 hours at places
22 of worship or education facilities (for ages served by the 6th grade and
23 younger) when located a minimum of 20 feet from the nearest
24 building.

25 **106.2.3 Re-inspections.** When previously identified violations have not been corrected, a
26 fee shall be assessed for a construction related re-inspection requested by the applicant or
27 contractor. When a scheduled inspection fails, or is cancelled with less than a 24 hour
28 notice, due to the fact that the applicant or contractor was not capable of nor prepared for
29 the inspection to be conducted, a re-inspection fee shall be assessed. The re-inspection
30 fee shall be in an amount set by separate ordinance. No subsequent inspections shall be
31 made until the required fees have been paid and required documentation submitted.

32 **108.1 Appeals.** Appeals are handled consistent with Chapter 25-1, Article 7, Division 1
33 (*Appeals*).

1 **109.3.2 Compliance with orders and notices.** Orders and notices of violation issued
2 or served as provided by this code shall be complied with by the owner, operator,
3 occupant or other person responsible for the condition or violation to which the notice
4 of violation pertains. In cases of immediate danger to persons or property, immediate
5 compliance is required. If the building or other premises is not owner occupied, under
6 lease or otherwise, and the order or notice requires additions or changes in the building
7 or premises which would immediately become fixtures and be the property of the
8 owner of the building or premises, such orders or notices shall be complied with by the
9 owner.

10 **Exception:** When the owner and the occupant have agreed otherwise between
11 themselves, in which event the occupant shall comply.

12 **109.3.3 Prosecution of violations.** If the notice of violation is not complied with
13 promptly, the fire chief is authorized to request the legal counsel of the City to institute
14 the appropriate legal proceedings at law or in equity to restrain, correct or abate such
15 violation or to require removal or termination of the unlawful occupancy of the structure
16 in violation of the provisions of this code or of the order or direction made pursuant
17 hereto.

18 **109.3.3.1 Citations.** Persons operating or maintaining an occupancy, premises or
19 vehicle subject to this code who allow a hazard to exist or fail to take immediate action
20 to abate a hazard on such occupancy, premises or vehicle when ordered or notified to
21 do so by the chief shall be guilty of a misdemeanor.

22 **109.3.4 Unauthorized tampering.** Signs, notices, orders, tags or seals posted or
23 affixed by the fire chief shall not be mutilated, destroyed or tampered with or removed
24 without authorization from the fire chief.

25 **Section 113 FEES**

26 **[A] 113.1 Fees.** A permit may not be issued until the required fees are paid.

27 **[A] 113.2 Schedule of fees.** Each permit or service fee established in the Fire Code is
28 set by separate ordinance.

29 **[A] 113.3 Work commencing before permit issuance.** Any person who commences
30 any work, activity or operation regulated by this code before obtaining the necessary
31 permits shall be subject to a notice of violation and to prosecution as provided in
32 Section 109.3 of this code. Any penalties assessed due to prosecution under this code
33 shall be in addition to the required permit or service fees.

34 **[A] 113.4 Related fees.** The payment of the fee for the construction, alteration,
35 removal or demolition of work done in connection to or concurrently with the work or

1 activity authorized by a permit shall not relieve the applicant or holder of the permit
2 from the payment of other fees that are prescribed by law.

3 **[A] 113.5 Refunds.** The refund policy of the City of Austin and the Austin Fire
4 Department shall be applicable to the overpayment of any fees associated with the
5 administration of this code.

6 **202.1 Supplemental and replacement definitions.** The following definitions in this
7 subsection apply throughout this code and supplement the definitions in Section 202
8 (*General Definitions*) of the 2015 Fire Code, as published.

9 **ACCESS ROADWAY.** Any road(s) providing access around the perimeter of any
10 building, to a building from a public street, or to a building or its fire department
11 connection from a required fire hydrant.

12 **ALL WEATHER DRIVING SURFACE.** Hot mix asphaltic concrete or concrete
13 pavement as per City of Austin Standard Specifications or other alternative roadway
14 methods approved by the fire code official.

15 **AUTOMOBILE WRECKING YARD.** An area that stores salvage vehicles.

16 **[B] BED AND BREAKFAST.** A private residence having a limited number of sleeping
17 rooms which are available for transient guests who have paid for accommodations. For
18 the different classifications of Bed and Breakfast, refer to Section 25-2-781 (*Bed and*
19 *Breakfast Residential Use Structures Classified*).

20 **BLASTER'S LICENSE.** An instrument issued by the fire chief authorizing certain
21 individuals to engage in the loading, firing and supervision of the loading or firing, of
22 explosive materials in accordance with applicable ordinances, resolutions, and
23 regulations of the City of Austin.

24 **CERTIFICATION.** A record of the test, including problems found and corrections
25 made, documenting the actions on approved forms.

26 **CITY/AUSTIN/CITY OF AUSTIN.** These terms mean the City of Austin, in the Hays,
27 Travis and Williamson Counties the State of Texas. Geographically these terms indicate
28 all territory within the corporate limits of the City of Austin and that territory annexed for
29 limited purpose by the City of Austin in accordance with Article I, Section 7 of the
30 Charter of the City of Austin.

31 **[M] COMMERCIAL COOKING APPLIANCES.** Appliances used in a commercial
32 food service establishment for heating or cooking food and which produce grease vapors,
33 steam, fumes, smoke or odors that are required to be removed through a local exhaust
34 ventilation system. Such appliances include deep fat fryers; upright broilers; griddles;

1 broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens;
2 barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food
3 service establishment shall include any building or a portion thereof used for the
4 preparation and serving of food for more than 6 hours per week, including food services
5 within a residential board and care facility if the facility serves 12 or more residents.

6 **EXTENSION CORD AND FLEXIBLE CORD.** Flexible cord of any length which has
7 one male electrical connector on one end and one or more female electrical connectors on
8 the other end.

9 **FIRE APPARATUS ACCESS ROAD.** A road that provides fire apparatus access from
10 a fire station to a facility, building or portion thereof. This is a general term inclusive of
11 all other terms such as fire lane, fire zone, public street, private street, parking lot lane
12 and access roadway.

13 **FIRE COMMAND CENTER.** The principal attended or unattended location where the
14 status of the detection, alarm communications and control systems is displayed, and from
15 which the system(s) can be manually controlled.

16 **FIRE DEPARTMENT MASTER KEY.** A limited issue key of special or controlled
17 design to be carried by fire department officials in command which will open key boxes
18 on specified properties.

19 **FIRE LANE AND FIRE ZONE.** A road, an off-street area, or other passageway
20 developed to allow the passage of fire apparatus that is designated in accordance with this
21 code that is to remain free and clear of parked or standing vehicles in order to provide
22 access to buildings, processes, storage areas or fire appliances in case of fire or other
23 emergency. A fire lane is not necessarily intended to be used by vehicular traffic other
24 than fire apparatus.

25 **HAZARDOUS PRODUCTION MATERIAL (HPM).** A solid, liquid or gas associated
26 with semiconductor manufacturing that has a degree-of-hazard rating health,
27 flammability or instability of Class 3 or 4 as ranked by NFPA 704 and which is used
28 directly in research, laboratory or production processes which have, as their end product,
29 materials that are not hazardous. Class II combustible liquids shall also be classified as a
30 hazardous production material when used in the manner described in this definition.

31 **KEY BOX AND KNOX BOX.** A secure device with a lock operable only by a fire
32 department master key, and containing building entry keys and other keys that may be
33 required for access in an emergency.

34 **INDEPENDENT EXIT/INDEPENDENT STAIRWAY/INDEPENDENT EXIT**
35 **RAMP.** An independent exit, independent stairway, or independent exit ramp is an exit

1 or egress component that does not require the occupant to travel within 10 feet (3.048 m)
2 of another apartment's door or window at any point in the path of egress.

3 **LEGITIMATE COOKING FIRE.** A fire kindled within the confines of an appliance or
4 structure manufactured or built for the express purpose of cooking meals for consumption
5 by human. Incidental cooking or warming of foods with an open recreational fire shall
6 not be considered a "legitimate cooking fire".

7 **LEGITIMATE WARMING FIRE.** A fire kindled within the confines of a metal or
8 other non-combustible container at a construction site or other similar outdoor
9 employment location for the sole purpose of allowing employees/workers to warm
10 themselves without having to leave the workplace or construction site.

11 **MOTOR VEHICLE FLUIDS.** Liquids which are flammable, combustible or hazardous
12 materials, such as crankcase fluids, fuel, brake fluids, transmission fluids, radiator fluids
13 and gear oil. This definition does not include liquids which are permanently sealed, such
14 as hydraulic fluid within shock absorbers.

15 **OCCUPANCY CLASSIFICATION.** For the purpose of the Fire Code, certain
16 occupancies are defined as follows:

17 **[BG] Group E, Day Care Facilities.** This group includes buildings and structures or
18 portions thereof occupied by more than six children older than 2 ½ years of age who
19 receive educational, supervision or personal care services for fewer than 24 hours per
20 day. A child care facility that provides care for more than six but no more than 100
21 children 2 ½ years or less of age, where the rooms in which the children are cared for are
22 located on a level of exit discharge serving such rooms and each of these child care
23 rooms has an exit door directly to the exterior, shall also be classified as Group E.

24 **[BG] Six or fewer children.** A facility having six or fewer children receiving such
25 day care shall be classified as part of the primary occupancy.

26 **[BG] Six or fewer children in a dwelling unit.** A facility such as the above within
27 a dwelling unit and having six or fewer children receiving such day care shall be
28 classified as a Group R-3 occupancy or shall comply with the 2015 Residential
29 Code.

30 **[BG] High-hazard Group H.** High-hazard Group H occupancy includes, among others,
31 the use of a building or structure, or a portion thereof, that involves the manufacturing,
32 processing, generation or storage of materials that constitute a physical or health hazard
33 in quantities in excess of those allowed in control areas complying with Section 5003.8.3,
34 based on the maximum allowable quantity limits for control areas set forth in Tables
35 5003.1.1(1) and 5003.1.1(2). Hazardous occupancies are classified in Groups H-1, H-2,

1 H-3, H-4 and H-5 and shall be in accordance with this code and the requirements of
2 Section 415 of the Building Code.

3 **[BG] Institutional Group I-1.** The same meaning as in the Building Code.

4 **[BG] Seven to sixteen persons receiving custodial care.** A facility housing not
5 fewer than seven and not more than 16 persons receiving custodial care shall be
6 classified as Group R-4.

7 **[BG] Six or fewer persons receiving care.** A facility having six or fewer persons
8 receiving custodial care shall be classified as part of the primary occupancy.

9 **[BG] Six or fewer persons receiving care in a dwelling unit.** A facility with six or
10 fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or
11 shall comply with the Residential Code provided an automatic sprinkler system is
12 installed in accordance with Section 903.3.1.3 or with Section P2904 of the 2015
13 Residential Code.

14 **[BG] Institutional Group I-2.** This occupancy shall include buildings and structures
15 used for medical care on a 24-hour basis for more than six persons who are incapable of
16 self-preservation. This group shall include, but not be limited to, the following:
17 detoxification facilities, hospitals, nursing homes, and psychiatric hospitals.

18 **[BG] Group I-2 Condition 1.** This occupancy condition shall include facilities that
19 provide nursing and medical care but do not provide emergency care, surgery,
20 obstetrics or in-patient stabilization units for psychiatric or detoxification.

21 **[B] Group I-2 with six or fewer persons receiving medical care.** A facility with six
22 or fewer persons receiving medical care shall be classified as Group R-3 or shall
23 comply with the Residential Code provided an automatic sprinkler system is installed
24 in accordance with Section 903.3.1.3 or Section P2904 of the Residential Code.

25 **[BG] Institutional Group I-4, day care facilities.** This group shall include buildings and
26 structures not classified above which are occupied by more than six persons of any age
27 who receive custodial care for fewer than 24 hours per day by persons other than parents
28 or guardians, relatives by blood, marriage or adoption, and in a place other than the home
29 of the person cared for. This group shall include, but not be limited to, an adult day care.

30 **[BG] Residential Group R** Residential Group R includes, among others, the use of a
31 building or structure, or a portion thereof, for sleeping purposes when not classified as an
32 Institutional Group I or when not regulated by the Residential Code. Residential
33 occupancies shall include the following:

1 **[BG] R-1** Residential occupancies containing sleeping units where the
2 occupants are primarily transient in nature, including: boarding houses (transient),
3 hotels (transient), motels (transient), and bed and breakfast operations.

4 **[BG] Group R-3 care facilities within a dwelling.** Care facilities for six or fewer
5 persons receiving care that are within a single-family dwelling are permitted to
6 comply with the International Residential Code, provided an automatic sprinkler
7 system is installed in accordance with Section 903.3.1.3 or Section P2904 of the
8 Residential Code.

9 **Exception:** Compliance with Section 903.3.1.3 is not required for adult care and
10 child care facilities that are within the proprietor's single-family home, provided
11 that the home was constructed and occupied as a residence prior to October 1,
12 2010.

13 **PERMANENT STORAGE.** Storage for a period of over 30 days.

14 **PROCESS VESSEL** A container, including the associated piping, used or designed to be
15 used to contain or promote a chemical or physical reaction.

16 **SALVAGE VEHICLE** A vehicle which is dismantled for parts or awaiting destruction.

17 **STAIRWAY EXTERIOR** A stairway that is open on at least two adjacent sides with
18 75% of the side with free area, except for required structural columns, beams, handrails
19 and guards. The adjoining areas shall be either yards, courts or public ways. The other
20 sides of the exterior stairway need not be open.

21 **TESTS** A complete check of the system under nationally recognized standards to
22 determine that the system operates and functions as designed.

23 **304.3.3 Capacity exceeding 1.5 cubic yards.** Dumpsters and containers with an
24 individual capacity of 1.5 cubic yards [40.5 cubic feet (1.15 m³)] or more shall not be
25 stored in buildings or placed within 10 feet (3048 mm) of combustible walls, openings or
26 combustible roof eave lines.

27 **Exceptions:**

- 28 1. Dumpsters or containers in areas protected by an approved automatic sprinkler
29 system installed throughout in accordance with Section 903.3.1.1 or 903.3.1.2.
- 30 2. Storage in a structure shall not be prohibited where the structure is of Type I or
31 Type IIA construction, located not less than 10 feet (3048 mm) from other
32 buildings and used exclusively for dumpster or container storage.

1 **307.2 Permit required.** A permit shall be obtained from the fire department emergency
2 prevention division in accordance with Section 105.6 prior to kindling a fire for
3 recognized silvicultural or range or wildlife management practices, prevention or control
4 of disease or pests, a warming fire, a rubbish fire, or a bonfire. Application for such
5 approval shall only be presented by and permits issued to the owner of the land upon
6 which the fire is to be kindled. Rubbish includes waste material from the construction or
7 demolition of buildings. For additional requirements concerning trench burning, see
8 Section 308.5. For mobile incinerators, see Section 308.6. For agricultural burning see
9 Section 308.7.

10 **Exception:** A permit is not required for legitimate cooking fires or legitimate
11 warming fires as defined in this chapter.

12 **307.4 Location.** When authorized by permits in accordance with Section 307.2, the
13 location for open burning shall not be less than 50 feet (15 240 mm) from any structure,
14 and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240
15 mm) of any structure. Such fires shall be constantly attended by a competent person with
16 an approved means to extinguish the fire.

17 **Exceptions:**

- 18 1. Fires in approved containers that are not less than 15 feet (4572 mm) from a
19 structure.
- 20 2. Operation of a trench burner shall be in accordance with Section 308.5.
- 21 3. Operation of a mobile incinerator shall be in accordance with Section 308.6.
- 22 4. Open burning for agricultural purposes may be approved by the fire chief in
23 accordance with Section 308.7.

24 **308.1.4 Residential Barbecue Pits and Incinerators.** No person may construct, erect,
25 install, maintain or use any incinerator or barbecue pit or burn any combustible material
26 to constitute a fire hazard by the use or burning or to endanger the life or property of any
27 person. Residential barbecue pits, hibachis or other cooking appliances utilizing charcoal,
28 wood or gas as a fuel may not be stored or used on any balconies of residential
29 occupancies, on other combustible balconies, within five feet measured horizontally from
30 any portion of a combustible building, or within fifteen feet measured along the shortest
31 distance if the pit is located below any portion of a combustible building.

32 **Exception:** Detached one- and two-family dwellings.

1 **308.5 Trench Burners.** In addition to the provisions of Section 307 of the Fire Code, all
2 trench burners in the City shall comply with the following:

3 **308.5.1 Construction.** The trench burner shall be located at the center of a circle
4 three hundred feet in diameter, in which no combustible matter will be located or
5 stored, except for the pile of combustible debris which has been readied for loading
6 into the trench burner pit, except as otherwise provided by law.

- 7 1. Pertaining to trees, landscaping, erosion, drainage, or run-off control the
8 surface of the land within the circle shall be cleared of any high grasses,
9 and any trees, brush, and weeds.
- 10 2. The pit must be built in the ground and not above grade.
- 11 3. The dimensions of the pit shall be 14 feet wide, 40 feet long, and at least
12 10 feet deep, except in cases where a permit issued to the applicant by the
13 Texas Commission on Environmental Quality (TCEQ) prescribes
14 different dimensions. The ash generated by the operation of the trench
15 burner shall be removed from the trench as necessary to maintain a
16 minimum trench depth of 10 feet.
- 17 4. The pit, air blower or fan, and other operating equipment shall be
18 securely enclosed by a locked gate and security fence of a minimum
19 height of eight feet which completely surrounds the pit and equipment at
20 all times when the trench burner is unattended. The top portions of the
21 fence shall consist of at least three runs of barbed wire. The fencing shall
22 not be removed until the pit is closed and filled. An approved Fire
23 Department key lock shall be required to secure the gate.

24 **308.5.2 Location.** A trench burner must not be located within 1320 feet of any
25 recreational area, building or structure that is not occupied or used solely by the
26 owner of the property on which the trench burner is constructed.

27 **308.5.3 Hours of Operation.** The hours of continuous loading operation shall be
28 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Trench burners may not
29 be operated on Saturday, Sunday or legal holidays.

- 30 1. The blower or fan will be allowed to operate an additional two hours from
31 4:00 p.m. to 6:00 p.m. to ensure cool down after its period of continuous
32 loading operations.
- 33 2. The hours of operation may be changed by the fire chief when unusual
34 atmospheric conditions exist.

1 3. No burning is permitted when air stagnation advisories are in effect for the
2 area in which the trench burner is located.

3 4. No burning is permitted during periods of high fire hazard weather
4 conditions.

5 **308.5.4 Method of Operation.** Material that may be burned is limited to trees,
6 brush, untreated waste lumber, shrubs, roots, bushes, and all untreated wood waste
7 cleared from the site described in the permit application. Combustible debris
8 cleared from other sites may not be burned in the trench burner.

9 1. All other materials, including but not limited to paper, roofing, shingles,
10 insulation, wiring, treated wood products, metal products, chemicals,
11 plastics, tires and other real or synthetic rubber materials may not be burned
12 in the pit. Flammable or combustible liquids may not be burned except for
13 ignition purposes.

14 2. Suitable fire protection shall be present on the site where the trench burner is
15 located during operation. Suitable fire protection consists of a trailer or tank
16 truck fitted with a water tank capable of transporting a 500 gallon water
17 supply to any location on the job site and an approved water delivery system
18 consisting of a pump, at least 100 feet of rubber booster hose having a
19 minimum diameter of three-fourths inch, and either a straight stream or
20 adjustable spray nozzle.

21 3. The pit must be closed and filled with dirt within 48 hours after the trench
22 burner operations are discontinued.

23 4. Combustible material may not be placed in the trench any higher than three
24 feet below the surface level.

25 5. Every trench burner must be attended when in operation. The trench burner
26 shall be completely extinguished before being left unattended.

27 **308.5.5 Permit Application.** The permit application must contain the following:

28 1. The name, address, and phone number of the individual or entity that owns
29 the trench burner unit.

30 2. The name, address, and phone number of the individual or entity responsible
31 for the operation of the trench burner unit.

- 1 3. A description of the site to be cleared, and the name, address and telephone
2 number of owner of the property.
- 3 4. An operating schedule including initial date of operation and expected
4 number of weeks of operation.
- 5 5. A copy of the Texas Commission on Environmental Quality permit issued
6 for the construction of the unit, if a permit is required.
- 7 6. A statement from the applicant confirming the applicant will inform the
8 Watershed Protection Department, or its successor department, of the dates
9 the trench burner will be operating.
- 10 7. A description of the type and quantity of petroleum product utilized to ignite
11 the trench burner. If this is to be stored at the site, then the manner of storage
12 and quantity to be stored must be described. The method of igniting the
13 trench burner must be described.
- 14 8. Proof that the applicant has current liability insurance in the amount of
15 \$1,000,000 for personal injuries, and \$500,000 for property damage any
16 time the trench burner is in use.
- 17 9. The payment of the permit fee as established by the City Council.
- 18 10. Certification from the Development Services Department, or its successor
19 department, as required by Article 308.5.6 of this code.
- 20 11. A construction permit from the Texas Commission on Environmental
21 Quality must be obtained if required by Commission rule. If the trench
22 burner is exempt from the Commission permit requirements all conditions of
23 the exemption must be complied with.

24 **308.5.6 Environmental Protection.** The Development Services Department, or its
25 successor department, shall require the following before the issuance of certification:

- 26 1. The bottom of the trench is located at a minimum distance of 50 feet from
27 the water table;
- 28 2. No fissures are located inside or adjacent to the trench;
- 29 3. Ignition fuel shall be limited to combustible liquids, as defined by this code.
30 Approval shall also be granted where an alternative to the use of
31 combustible liquids is used to ignite the trench;

- 1 4. The method of igniting the trench ensures no amount of combustible liquid
2 greater than necessary to ignite the trench will be used; and,
- 3 5. The manner of storage of the product at the site is designed to prevent any
4 leak or accidental discharge, and where applicable, the hazardous materials
5 storage and registration requirements are met; and
- 6 6. An environmental review shall be conducted of the watershed of Lake
7 Austin, Lake Travis, or with the aquifer-related watershed of Barton,
8 Williamson, Slaughter, Big Bear, Little Bear and Onion Creek, including the
9 Edwards Aquifer recharge zone North and South of the Colorado River, all
10 as shown on the hazardous materials storage and registration map on file in
11 the Office of the City Clerk.

12 **308.6 Mobile Incinerators.** All mobile incinerators in the City must comply with the
13 following:

14 **308.6.1 Construction.** Each mobile incinerator must be constructed as follows:

- 15 1. Engineered and constructed of material and of a gauge to withstand normal
16 operating temperature of 1200° F or higher without deformation.
- 17 2. Chimneys serving mobile incinerators must terminate into a spark arrester
18 having an area not less than four times the net free area of the chimney.
19 Openings shall not permit the passage of spheres having a diameter larger
20 than ½ inch nor block the passage of spheres having a diameter smaller than
21 3/8 inch.
- 22 3. The exterior wall of the mobile incinerator must be of double wall
23 construction. The incinerator must be designed such that the temperature rise
24 above ambient temperature (750° F + 5° F) of any portion of the incinerator
25 accessible to the operator shall not exceed 150° F.
- 26 4. Insulation must be installed or adequate airspace provided between the
27 external casing and the inner wall as required to meet this temperature
28 limitation.
- 29 5. Mobile incinerators must be constructed with a dual combustion chamber of
30 which the secondary chamber must maintain a temperature of 1200° F or
31 higher at all times waste material is being reduced by oxidation caused by
32 heat of combustion.

- 1 6. The secondary chamber must be provided with a thermocouple connected to
2 a temperature display for monitoring the temperature.
- 3 7. Any design not in compliance with the criteria and appropriate nationally
4 recognized standards must have the construction reviewed and submitted as
5 an alternative method under the seal of a registered professional engineer or
6 a recognized testing laboratory.

7 **308.6.2 Location.** No mobile incinerator may be located:

- 8 1. Within 10 feet of any property line, and a minimum of 10 feet must be
9 maintained between any incinerator and rubbish, dry grass, weeds,
10 vegetation and other combustible materials.
- 11 2. Within 300 feet of any recreational area, residence or structure not occupied
12 or used solely by the owner of the mobile incinerator or the owner of the
13 property on which the mobile incinerator is used.

14 **308.6.3 Hours of Operation.** The hours of continuous loading operation shall be
15 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Mobile incinerators
16 may not be operated on Saturday, Sunday or legal holidays.

- 17 1. The mobile incinerator may be allowed to operate an additional two hours
18 from 4:00 p.m. to 6:00 p.m. to ensure cool down after its period of
19 continuous loading operations.
- 20 2. The fire chief may change the hours of operation when unusual atmospheric
21 conditions exist.
- 22 3. No burning is permitted during air stagnation advisories in effect in the area
23 in which the mobile incinerator is located.
- 24 4. No burning is permitted during periods of high fire hazard weather
25 conditions.

26 **308.6.4 Method of Operation.** Material to be burned in the mobile incinerator is
27 limited to highly combustible waste, paper, wood, cardboard cartons, including up
28 to 10 percent treated papers or plastic scraps.

- 29 1. Suitable fire protection must be present within a distance of 20 feet at all
30 times of operation. Suitable fire protection consists of an approved water
31 extinguisher having a minimum rating of 10-A, and one dry chemical
32 portable fire extinguisher with at least a 2A-10BC rating.

- 1 2. Material to be incinerated may not be stored within 10 linear feet of any
2 surface of the mobile incinerator's combustion chamber, chimney or hot
3 ashes.
- 4 3. The mobile incinerator must be enclosed by a portable security fence of a
5 minimum of four feet, or other equivalent approved barrier, which
6 completely surrounds the mobile incinerator providing a clear space of five
7 feet at all times when the unit is in operation. The fencing may not be
8 removed until the incinerator is cool to the touch.
- 9 4. The mobile incinerator must not be moving and must be in a fixed position
10 when operational or cooling.
- 11 5. Every mobile incinerator must be attended when in operation. It shall be
12 completely extinguished before being left unattended.

13 **308.6.5 Permit Application.** The permit application must contain the following:

- 14 1. Name, address, and phone number of the individual or entity that owns the
15 mobile incinerator.
- 16 2. Name, address, and phone number of the individual or entity responsible for
17 the operation of the mobile incinerator.
- 18 3. Name, address, and phone number of the owner of the property where the
19 mobile incinerator is to be operated.
- 20 4. Copy of the Texas Commission on Environmental Quality permit or
21 exemption letter issued for the use of the unit. (See Chapter 382, Health and
22 Safety Code).
- 23 5. Proof that the applicant has in effect liability insurance in the amount of
24 \$1,000,000 for personal injuries, and \$500,000 for property damage any
25 time the mobile incinerator is in use.
- 26 6. Written permissions of the owner of the property where the mobile
27 incinerator is to be operated.
- 28 7. Certification from the Development Services Department, or its successor
29 department, as required by Section 308.6.6 of this code.
- 30 8. The payment of the permit fee set by separate ordinance.

1 **308.6.6 Environmental Protection.** The Development Services Department, or its
2 successor department, shall require the following before the issuance of
3 certification:

- 4 1. A statement that the applicant will not deposit or discharge any waste in a
5 manner that is in conflict with other applicable City Code requirements.
- 6 2. A description of the plan for storage and disposal of combustion residue.

7 **308.7 Agricultural Burning.** In addition to the provisions of Section 307 of the Fire
8 Code, all agricultural burning in the City shall comply with the following:

9 **308.7.1 Location.** The location of any agricultural burning activity shall be limited
10 to property zoned AG consisting of at least 150 contiguous acres. The burn site
11 shall be located at least 50 feet from the nearest property line or agricultural
12 structure and shall be at least 1320 feet from the nearest recreational property (i.e.
13 park), building or structure not owned and occupied or used solely by the owner of
14 the agricultural property.

15 **308.7.2 Environmental conditions.** The permit holder shall comply with
16 applicable air quality regulations of the Texas Commission on Environmental
17 Quality (TCEQ) including time limits and atmospheric conditions. Burning shall
18 not be permitted during atmospheric inversions or other conditions that limit
19 dispersion of the smoke plume.

20 **308.7.3 Burning bans.** Burning shall not be permitted during any weather related
21 burn bans.

22 **308.7.4 Fuel limitations.** Material to be burned is limited to trees, brush, untreated
23 waste lumber, shrubs, roots, bushes, and all untreated wood waste associated with
24 the agricultural property for which the burn permit is issued. Distilled
25 hydrocarbons including liquid fuels, lubricants, synthetic materials, tires, rubber,
26 and plastics shall not be burned under an agricultural burn permit.

27 **Exception:** A limited quantity of liquid hydrocarbon fuel may be burned for
28 the sole purpose of initial ignition of organic waste materials.

29 **308.7.5 Insurance.** Proof shall be provided at permit application that the applicant
30 has current liability insurance in the amount of \$1,000,000 for personal injuries,
31 and \$500,000 for property damage any time agricultural burning is in progress.

1 **311.5 Placards.** Any vacant or abandoned buildings or structures determined to be unsafe
2 pursuant to Section 110 of this code relating to structural or interior hazards shall be
3 marked as required by the Austin Code Department, or the successor department.

4 **311.5.1 Placards for hazards related to emergency response.** Any building or
5 structure that is determined to present unique hazards to firefighters during
6 emergency operations shall be protected or marked as required by Section 505.3 of
7 this code.

8 **316.7 Unprotected Construction Presenting Hazards To Firefighters in Existing**
9 **Buildings.** When existing buildings, including residential structures, are identified as
10 employing construction methods or materials that have been shown by experience or
11 testing to be associated with early failure or failure with little or no warning under fire
12 exposure, the premises identification markings shall be revised to achieve compliance
13 with Section 505.3.

14 **Exceptions:**

- 15 1. Buildings protected throughout by automatic fire sprinklers in accordance
16 with 903.3.1.1, 903.3.1.2 or 903.3.1.3.
- 17 2. Buildings with a noncombustible or limited combustible membrane that
18 shields the floor or roof construction materials from fire exposure. Such
19 membranes may be constructed using gypsum wallboard of at least ½”
20 nominal thickness, cementous fiberboard of at least ¼ inch nominal
21 thickness, or fire retardant treated wood (FRTW) of at least ½ inch nominal
22 thickness.

23 **401.3 Emergency responder notification.** Notification of emergency responders shall
24 be in accordance with Sections 401.3.1 through 401.3.4.

25 **401.3.1 Emergency events.** Except as provided in Section 401.3.4, in the event an
26 unwanted fire occurs, or upon the discovery of a fire, explosion, deflagration,
27 smoke or unauthorized release of flammable, toxic, or hazardous materials on any
28 property, the owner or occupant shall immediately report such condition to the fire
29 department. Building employees and tenants shall implement the appropriate
30 emergency plans and procedures.

31 **401.3.2 Alarm activations.** Upon activation of a fire alarm signal, employees or
32 staff shall immediately notify the fire department.

1 **401.3.3 Delayed notification.** A person shall not, by verbal or written directive,
2 require any delay in the reporting of a fire or unauthorized chemical release to the
3 fire department.

4 **401.3.4 Emergency Response Teams and Fire Brigades.** Facilities complying
5 with Section 5003.9.1 by maintaining on-site emergency response teams (ERT) or
6 industrial fire brigades that comply with the requirements of Occupational Safety
7 and Health Administration (OSHA) regulations in 29 CFR 1910.120 or 29 CFR
8 1910 Subpart L may, on completion of an audit of compliance by the fire chief
9 (audits may be performed during annual inspections by the fire department) and
10 contingent on continued ERT/fire brigade compliance, develop site-specific
11 procedures for determining reporting requirements based on facility staffing and
12 qualifications.

13 **401.3.4.1** Guidance is published in the Fire Protection Criteria Manual to
14 help assure equitable assessment of site procedures. The procedures must be
15 submitted to the fire chief for review and approval. Maintenance of the ERT
16 or fire brigade shall be verified by a periodic audit during inspections by the
17 Fire Department. This provision does not waive a facility's or organization's
18 reporting obligations under State or Federal regulations.

19 **401.3.4.2** Failure to maintain and provide records of internal responses will
20 result in revocation of the facility's procedural approach to reporting.

21 **408.12 High-Rise Buildings.** All buildings that have occupied floors located more
22 than 75 feet (22,860 mm) above the lowest level of fire department vehicle access shall
23 have at least one Automated External Defibrillator (AED) located on each occupied
24 level.

25 **Exception:** The provisions of this section shall not apply to the following
26 buildings and structures:

- 27 1. Airport traffic control towers in accordance with Section 412 of the
28 Building Code.
- 29 2. Open parking garages in accordance with Section 406.5 of the Building
30 Code.
- 31 3. Group A-5 occupancies in accordance with Section 303.6 of the
32 Building Code.
- 33 4. Group H-1, H-2 or H-3 in accordance with Section 415 of the Building
34 Code.

1 **408.12.1 Type.** All AEDs used in high-rise buildings must be of the type approved
2 by the United States Food and Drug Administration (FDA).

3 **408.12.2 Accessibility.** All AEDs must be available for public use.

4 1. All AEDs shall be located in the elevator lobby unless otherwise
5 approved by the fire chief.

6 2. Standard industry accepted signs shall mark the location of each AED.

7 **408.12.3 Maintenance.** All AEDs shall be maintained and tested according to
8 manufacturer recommendations.

9 1. Maintenance records shall be kept for a period of 1 year.

10 2. Disposable supplies (Defibrillation pads) shall be replaced upon their
11 expiration date or following use.

12 **408.12.4 Medical Direction.** A licensed physician shall be involved to ensure
13 compliance with the requirements of the Health and Safety Code, Chapter 799,
14 Automated External Defibrillators.

15 **408.12.5 Training.** The person or entity that acquires an AED shall ensure that
16 users are trained in cardiopulmonary resuscitation (CPR) and use of the automated
17 external defibrillator (AED) in a course approved by the Texas Department of State
18 Health Services.

19 **408.12.6 Notifying Emergency Medical Services Providers.** Upon acquisition of
20 an AED, the person or entity shall notify the Fire Department AED Coordinator of
21 the existence, location and type of AED.

22 **SECTION 409 TEMPORARY CHANGE OF USE PERMITS**

23 **409.1 Scope.** Temporary Change of Use Permits shall be in accordance with this Section.
24 A temporary permit for a facility or building for public assembly use is not intended to be
25 a means for creating a permanent assembly occupancy or use.

26 **409.1.2 Temporary Change of Use To a Public Assembly (TCOU) Permit.** A
27 TCOU to a public assembly permit is required for any occupancy not classified as
28 Group A with a gathering of more than 50 people for civic, social, recreational or
29 religious functions. A permit is required for gatherings of 50 or more people
30 confined by fences, walls or similar occupancies.

1 **409.2 Annual Permit Limit.** Not more than twelve TCOU permits shall be issued for a
2 given address during a 12-month period. The measurement period shall be based on the
3 date the first permit was approved during a given calendar year.

4 **409.2.1 Permit Duration.** The duration of the TCOU permit shall not exceed 14
5 calendar days.

6 **409.3 Permit Application.** A TCOU permit application shall be submitted to the fire
7 department for plan review. Applications and required plan information shall be
8 submitted 21 calendar days prior to the event start date.

9 **409.4 Fire Watch.** The Fire Marshal's Office may require a fire watch or standby if
10 additional fire and life safety hazards are identified during plan review.

11 **503.1 Where required.** Fire apparatus access roads shall be provided and maintained in
12 accordance with Sections 503.1.1 through 503.9.

13 **503.1.4 Approval of Fire Zones on Site Plans.** The Director of the Development
14 Services Department, or its successor department, shall submit site plans of proposed
15 commercial developments to the fire chief for his review and approval of the
16 adequacy of fire zones before the issuance of a building permit for the development.

17 **503.2.1 Dimensions.** Fire apparatus access roads shall have an unobstructed width of not
18 less than 25 feet (7620 mm), except for approved security gates in accordance with
19 Section 503.6 and the Fire Protection Criteria Manual, and an unobstructed vertical
20 clearance of not less than 14 feet (4267 mm).

21 **Exceptions.**

- 22 1. The unobstructed roadway width may be reduced to less than 25 feet for all
23 or part of the required roadway so long as the access road complies with the
24 appropriate minimum street width for dedicated City streets, and
- 25 a. Such fire access roadways, or portions of such roadways, which are
26 less than 25 feet wide are not in locations where aerial apparatus
27 deployment could be necessary to achieve control and/or
28 extinguishment of a fire, and
- 29 b. Turning radii are adequate for maneuvering Fire Department and other
30 emergency services vehicles.
- 31 2. The unobstructed roadway width may be reduced to less than 25 feet for all
32 or part of the required roadway so long as the access road complies with the
33 appropriate minimum street width for dedicated City streets and

- 1 a. The access roadway is part of a system of roadways or driveways that
2 include interconnected public and/or private roads or driveways that
3 provide multiple pathways for emergency vehicles to access the
4 structures served by the roadway system, provided that a fire vehicle
5 blocking the roadway within the narrowed length will not create a
6 dead-end road segment in excess of 150 feet long.
- 7 b. The width of each segment is sufficiently wide to accommodate the
8 deployment of emergency vehicles anticipated for that segment during
9 a potential emergency (e.g. outrigger placement and aerial operations
10 for fires in multi-story structures), and turning radii are adequate for
11 maneuvering Fire Department and other emergency services vehicles.
- 12 c. Divided roadways serving as fire lanes are allowed to consist of two
13 (2) lanes each 15 feet wide, one on each side of the division in
14 locations where aerial operations are not anticipated.

15 **503.2.2 Authority.** The fire chief shall have the authority to require an increase in the
16 minimum access widths where they are inadequate for fire or rescue operations; or may
17 decrease the minimum access width when necessary to meet the public safety objectives
18 of the City of Austin provided the street or access roadway remains compliant with
19 503.2.1.

20 **503.2.6 Bridge and elevated surfaces.** Where a bridge or an elevated surface is part of a
21 fire apparatus access road, the bridge shall be constructed and maintained in accordance
22 with AASHTO HB-17 or the latest addition of AASHTO Load and Resistance Factor
23 Design accepted by the Texas Department of Transportation. Bridges and elevated
24 surfaces shall be designed for a live load sufficient to carry the imposed loads of fire
25 apparatus. Vehicle load limits shall be posted at both entrances to bridges where required
26 by the fire code official. A designated fire lane shall be maintained for the purpose of
27 vehicle access and shall prohibit obstructions as per Section 503.3. The entire bridge deck
28 or elevated surface shall be designed and maintained to support fire apparatus operations
29 as required and approved by the fire code official.

30 **503.2.6.1 Operational and outrigger loads.** Where an elevated surface or
31 structure or portions of a structure are subject to operational loads with deployment
32 of outriggers utilizing a crane, lift or ladder, the structure shall be designed and
33 maintained to support the following independent static loading conditions as
34 required and approved by the fire code official: 1) a load of 43,200 pounds on one
35 outrigger and 2) a load of 28,600 pounds on each of two adjacent outriggers with
36 18 feet of separation on centers (the total load is 57,200 pounds.) The contact area
37 of each outrigger is 24 inches × 24 inches. In addition to verifying that special

1 inspections per the Building Code, the design engineer of record shall make
2 periodic construction observations and upon substantial completion of the work,
3 the design engineer shall provide the fire code official an engineer's letter of
4 concurrence that the work and materials were installed in substantial conformance
5 with the fire code official's record document.

6 **503.2.4 Turning radius.** The required inside turning radius of a fire apparatus access
7 road shall be 25 feet (7.62 m). The required outside turning radius of a fire apparatus
8 access road shall be 50 feet (15.24 m).

9 **503.3 Designation, Location, and Maintenance of Fire Zones Official Records.** All
10 fire apparatus access roads required by Sections 503.1.1 and 3206.6 and that are out of
11 the public right-of-way, are designated as fire zones or fire lanes, to maintain the required
12 unobstructed clearance in accordance with Section 503.2.1 as amended. The fire
13 department will keep records of the designation and location of fire zones and fire lanes.

14 **Exception:** Fire apparatus access roads between aisles of parking or under porte
15 cocheres need not be designated as fire zones.

16 **503.3.1 Tow Away Zones.** All fire zones and fire lanes shall be designated
17 as tow away zones. The designation of the fire zones or fire lanes does not
18 make the City responsible for the maintenance of the fire zones or fire lanes
19 on private property, but the owner of the property continues to be
20 responsible for the maintenance of the area.

21 **503.3.2 Signs and Identification Markers Designating Fire Zones/Fire**
22 **Lanes.** After designation of a fire zone or fire lane under this article, the fire
23 chief shall give notice of the designation to the owner of the property,
24 directing the owner to cause, at the expense of the owner, markings to be
25 painted on any areas designated as a fire zone or fire lane. The markings
26 must be red with white stenciling reading "FIRE ZONE/TOW AWAY
27 ZONE" or "FIRE LANE/TOW AWAY ZONE" in lettering at least three
28 inches in height. The stenciling shall be at intervals of 35 feet or less. In
29 addition, the owner shall cause signs to be posted at both ends of a fire zone
30 or fire lane and at each entry and exit point which constitutes a portion of the
31 fire zone or fire lane. Alternative marking of fire zones and fire lanes may be
32 approved by the fire chief provided fire zones or fire lanes are clearly
33 identified at both ends and at intervals not to exceed 35 feet and are clearly
34 marked "Tow Away Zones" at least every 35 feet. The signs shall be
35 installed with the top of the sign no higher than eight feet above grade and
36 no less than five feet above grade.

1 **503.4.1. Traffic calming devices.** Geometric street features intended to mitigate unsafe
2 traffic conditions such as speeding or excessive cut-through traffic shall be designed to
3 address both traffic safety and emergency access requirements. Approved street features
4 shall mitigate the traffic conditions identified by the city traffic engineer while providing
5 for adequate emergency vehicle access to the satisfaction of the fire department.

6 **503.7 Persons authorized to Issue Citations.** A citation for a charge of parking,
7 standing, or stopping in a fire zone or fire lane in violation of this article may be issued
8 by a licensed peace officer employed by the City of Austin, an employee of the Fire
9 Department designated by the fire chief, an employee of the City authorized to issue
10 tickets for parking violations by the City Code, or a private security guard employed by
11 an agency operating under either a license or a letter of authority issued by the Texas
12 Board of Private Investigators and Private Security Agencies, and who is employed by
13 the owner or lessee of the property on which a fire zone has been established.

14 **504.1 Required Access.** Exterior doors and openings required by the code or the
15 International Building Code shall be maintained accessible for emergency access by the
16 fire department. An approved access walkway constructed of approved materials at least
17 36 inches in width leading from fire apparatus access roads to exterior openings shall be
18 provided when required by the fire code official. The walkway shall be constructed in
19 accordance with Section 1003.4.

20 **505.3 Premise Hazard Identification Signs.** Structures that the fire chief deems to have
21 the potential to present an unusual level of hazard to firefighters during fire ground
22 operations shall be identified such that it is readily identifiable to responding fire
23 department personnel. Such structures may or may not present obvious dangers to the
24 occupants of the building when no fire is present. Potentially hazardous structures may
25 be identified as prescribed by this code, by the Building Code, or by fire department
26 safety policies and procedures.

27 **505.3.1 Hazardous Address Numbering.** Structures that are required to be
28 readily identifiable by responding fire department personnel shall have unique
29 address numbering signs. The signs shall be installed on all sides of the building
30 facing emergency vehicle access established in accordance with Section 503 or
31 facing an approach directly from public rights-of-way. Signs will consist of the
32 address numbers of the building in 4-inch tall white numbers on a solid red
33 background. The address numbers will be oriented vertically. The signage will be
34 reflective to be visible at night, weather resistant and permanent.

35 **507.3 Fire flow.** Fire flow requirements for buildings or portions of buildings and
36 facilities shall be determined in accordance with Appendix B of the Fire Code.

1 **507.4 Water supply test.** The fire department emergency prevention division shall be
2 notified prior to the water supply test. Water supply tests shall be conducted by or
3 witnessed by the fire department emergency prevention division.

4 **507.5.1 Where required.** Where a portion of the facility or building hereafter
5 constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from
6 the nearest hydrant on a fire apparatus access road or more than 500 feet (152 m) from
7 secondary hydrants needed to supply the minimum fire flow, as measured by an approved
8 route around the exterior of the facility or building, on-site fire hydrants and mains shall
9 be provided where required by the fire code official.

10 **Exceptions:**

- 11 1. For Group R-3 and Group U occupancies, the distance requirement shall be
12 600 feet (183 m).
- 13 2. For buildings equipped throughout with an approved automatic sprinkler
14 system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the
15 distance requirement for all required fire hydrants shall be 500 feet (152 m).

16 **507.5.3 Private fire service mains and water tanks.** Private fire service mains,
17 including private fire hydrants and water tanks, shall be inspected, tested and maintained
18 consistent with NFPA 25, *Standard for Inspection, Testing and Maintenance of Water-*
19 *Base Fire Protection Systems*; the *Fire Criteria Manual* and the American Water Works
20 Association (AWWA) Manual M-17, *Installation, Field Testing and Maintenance of Fire*
21 *Hydrants* at the following intervals:

- 22 1. Private fire hydrants (all types): Inspection annually and after each operation; flow
23 test and maintenance annually to ensure proper functioning in accordance with the
24 following:
 - 25 a. Private fire hydrants shall be flushed annually. Chlorine residual tests will be
26 performed on all private hydrant systems not separated from potable water
27 uses by an approved back-flow prevention device. The unseparated hydrants
28 shall be flushed until the free chlorine residual meets or exceeds the 0.2 mg/l
29 minimum established by the Texas Commission on Environmental Quality
30 in Section 290.46(f)(1) of the Rules and regulations for Public Water
31 Systems. Chlorine residual shall be determined using the N,N-diethyl-p-
32 phenylenediamine (DPD) method.
 - 33 b. Static testing shall be performed in accordance with AWWA Manual M-17,
34 *Installation, Field Testing and Maintenance of Fire Hydrants*, Chapter 4.

1 c. Flow tests shall be conducted in accordance with Manual M-17, Installation,
2 Field Testing and Maintenance of Fire Hydrants, Chapter 6.

3 2. Fire service main piping: Inspection of exposed, annually; flow test every 5 years.

4 3. Fire service main piping strainers: Inspection and maintenance after each use.

5 **507.5.7 Fire-protection equipment and fire hydrants.** Fire-protection equipment and
6 fire hydrants shall be clearly identified in an approved manner to prevent obstruction by
7 parking and other obstructions.

8 All fire hydrants shall be painted in accordance with City of Austin Standard
9 Specifications. With the approval of the fire chief, private hydrants may be painted an
10 alternate reflective color; multi-colored hydrants are prohibited. When required by the
11 chief, hydrant locations shall be identified by the installation of reflective markers.

12 **507.6 Protection of potable water systems.** Fire hydrants and the supply piping to them
13 which contain chemicals or additives shall be separated from sources of potable water by
14 a reduced pressure backflow assembly installed at the connection to the potable water
15 system. Backflow assemblies shall be operationally tested and maintained in accordance
16 with Chapter 15-1 (*Cross-Connection Regulations*).

17 Private fire hydrants located more than 100 feet from a flowing water service shall have
18 backflow prevention protection as required by Chapter 15-1 (*Cross-Connection*
19 *Regulations*).

20 Private fire hydrant systems not maintained, flushed and tested for chlorine residual in
21 accordance with Section 507.5.3, item 1 a. shall be provided with backflow prevention
22 protection in accordance with Chapter 15-1 (*Cross-Connection Regulations*).

23 **507.6.1 Special inspections.** Austin Water Utility shall inspect private property to
24 identify each existing private fire hydrant connected to the City's potable water
25 distribution system. The owner of the property or the water service customer shall bear
26 the costs and the responsibility to provide a flushing and maintenance program in
27 accordance with Section 507.5.3 or to provide backflow prevention protection in
28 accordance with Chapter 15-1 (*Cross-Connection Regulations*).

29 Further modifications shall be made by, and at the expense of, the property owner or
30 water service customer as necessary to correct any water supply deficiencies (flow or
31 pressure) resulting from the installation of required backflow prevention protection
32 assemblies.

1 **508.1.6 Required Features.** The fire command center shall comply with NFPA 72 and
2 shall contain the following features:

3 Items 1 through 6 remain unchanged.

- 4 7. Controls for unlocking stairway doors simultaneously. Stairways doors shall be
5 physically unlocked by UL listed fire alarm system components. The unlocking
6 means shall be a red light switch mounted on the wall in the command room with
7 appropriate signage or other approved method.

8 Items 8 through 13.3 remain unchanged.

9 **13.4** Exit access stairway and exit stairway information that includes: number of exit
10 access stairways and exit stairways in building, each exit access stairway and exit
11 stairway designation and floors served; location where each exit access stairway
12 and exit stairway discharges; interior exit stairways that are pressurized; exit
13 stairways provided with emergency lighting; each exit stairway that allows reentry;
14 exit stairways providing roof access; elevator information that includes: number of
15 elevator banks, elevator bank designation, elevator car numbers and respective
16 floors that they serve; location of elevator machine rooms, control rooms and
17 control spaces; location of sky lobby; location of freight elevator banks; location of
18 the Fire-fighters Service Access Elevator banks when applicable; and location of
19 Occupant Evacuation Elevator banks when applicable.

20 Items 14 through 18 remain unchanged.

21 **510.1 Emergency responder radio coverage in buildings.** All buildings shall have
22 approved radio coverage for emergency responders within the building based upon the
23 existing coverage levels of the public safety communications system of the jurisdiction at
24 the exterior of the building. This section shall not require improvement of the existing
25 public safety communication system.

26 **Exceptions:**

- 27 1. Where approved by the building official and the fire chief, a wired
28 communication system in accordance with Section 907.2.13.2 shall be
29 permitted to be installed or maintained in lieu of an approved radio coverage
30 system in buildings where a floor for human occupancy is located not more than
31 75 feet (22 860 mm) above the lowest level of fire department vehicle access.
- 32 2. Where it is determined by the fire code official that the radio coverage system is
33 not needed.

1 **510.1.1 Time Frame for New Building Installations.** The adequacy of radio coverage
2 for buildings permitted after adoption of this code shall be determined following
3 completion of construction and issuance of the Certificate of Occupancy. If supplemental
4 equipment such as bi-directional amplifiers are necessary to assure radio coverage, the
5 design and installation of the supplementary radio transmission equipment shall be
6 completed within two years of original occupancy.

7 **510.1.2 Time Frame for Existing Buildings.** If it is discovered that radio coverage is
8 not adequate within buildings permitted prior to the adoption of this code, the design and
9 installation of necessary supplementary radio transmission equipment shall be completed
10 within three years of the discovery of the deficiency.

11 **603.3.2 Fuel oil storage inside buildings.** Fuel oil storage inside of buildings shall
12 comply with Sections 603.3.2.1 through 603.3.2.4 and Chapter 57.

13 **603.3.2.1 Quantity limits.** Except as modified by this section, the maximum
14 allowable quantity for fuel oils shall be 120 gallons (240 gallons in buildings with
15 fire sprinkler protection) of Class II or 330 gallons (660 gallons in buildings with
16 fire sprinkler protection) of Class III liquids. One or more fuel storage tanks
17 containing Class II or III combustible liquids shall be permitted in a building.
18 When Class II fuel oil tanks are located in a room protected with a 1-hr fire barrier
19 wall and the building is protected by an automatic sprinkler system, the aggregate
20 capacity of all fuel oil tanks shall not exceed 660 gallons (2498 L).

21 **Exception:** The aggregate capacity limit shall be permitted to be increased to
22 3,000 gallons (11 356 L) of Class II or III liquid for storage in protected
23 aboveground tanks complying with Section 5704.2.9.6, when the following
24 conditions are met:

- 25 1. The entire 3,000 gallon (11 356 L) quantity shall be stored in protected
26 above-ground tanks;
- 27 2. The 3,000 gallon (11 356 L) capacity shall be permitted to be stored in a
28 single tank or multiple smaller tanks;
- 29 3. The tanks shall be located in a building protected by an automatic
30 sprinkler system complying with 903.3.1.1; and
- 31 4. The room containing the tank or tanks is built as a Group H Occupancy
32 except that ventilation in accordance with 5004.3 will not be required.

33 **603.3.2.2 Restricted use and connection.** Tanks installed in accordance with
34 Section 603.3.2 shall be used only to supply fuel to fuel-burning or generator

1 equipment installed in accordance with Section 603.3.2.3. Connections between
2 tanks and equipment supplied by such tanks shall be made using closed piping
3 systems.

4 **603.3.2.3 Installation.** Tanks and piping systems shall be installed and separated
5 from other uses in accordance with Section 915 of the Mechanical Code and
6 Chapter 13 of the Mechanical Code, as applicable.

7 **603.3.2.4 Tanks in basements.** Tanks in basements shall be located not more than
8 one story below the grade plane.

9 **[M] 609.2 Where required.** A Type I hood shall be installed at or above all commercial
10 cooking appliances and domestic cooking appliances used for commercial purposes that
11 produce grease vapors.

12 **Exception:** A Type I hood shall not be required for an electric cooking appliance
13 where an approved testing agency provides documentation that the appliance
14 effluent contains less than 5 mg/m³ or less of grease when tested at an exhaust flow
15 rate of 500 CFM (0.236 m³/s) in accordance with UL 710B. The appliance
16 component controls and safety interlocks shall be inspected in accordance with the
17 manufacturer installation instructions by qualified service personnel a minimum of
18 once every 6 months and results of the inspection shall be available on the
19 premises for review by the fire code official. When provided, automatic fire
20 extinguishing systems shall be in accordance with Section 904.12.

21 **901.5 Installation acceptance testing.** Fire detection and alarm systems, fire-
22 extinguishing systems, fire hydrant systems, fire standpipe systems, fire pump systems,
23 private fire service mains and all other fire protection systems and appurtenances thereto
24 shall be subject to acceptance tests as contained in the installation standards and as
25 approved by the fire department. The fire department emergency prevention division
26 shall be notified before any required acceptance testing.

27 **901.6 Inspection, testing and maintenance.** Fire detection, alarm, and extinguishing
28 systems, mechanical smoke exhaust systems, mechanical smoke control systems and
29 smoke and heat vent systems shall be maintained in an operative condition at all times,
30 and shall be replaced or repaired where defective. Non-required fire protection systems
31 and equipment shall be inspected, tested and maintained or removed.

32 **TABLE 901.6.1 FIRE PROTECTION SYSTEM MAINTENANCE STANDARDS.**

SYSTEM	STANDARD
Portable fire extinguishers	NFPA 10

Carbon dioxide fire-extinguishing system	NFPA 12
Halon 1301 fire-extinguishing systems	NFPA 12A
Dry-chemical extinguishing systems	NFPA 17
Wet-chemical extinguishing systems	NFPA 17A
Water-based fire protection systems	NFPA 25
Fire alarm systems	NFPA 72
Smoke and heat venting systems	NFPA 204
Mechanical smoke control systems	NFPA 92
Water-mist systems	NFPA 750
Clean-agent extinguishing systems	NFPA 2001

1 **901.6.2 Records.** Records of all system inspections, tests and maintenance required by
2 the referenced standards shall be maintained on the premises for a minimum of three
3 years and shall be copied to the fire code official upon request.

4 **903.2.1.6 Assembly occupancies on roofs.** Where an occupied roof has an assembly
5 occupancy with an occupant load exceeding 100 for Group A-2 and 300 for other Group
6 A occupancies, all floors between the occupied roof and the level of exit discharge shall
7 be equipped with an automatic sprinkler system in accordance with Section 903.3.1.1.

8 **Exception:** Open parking garages of Type I or II construction.

9 **[BG] 903.2.8.1.1 Group R-1 Bed and Breakfast occupancies.** Compliance with Section
10 903.2.8 (*Group R*) is not required for a single structure Group R-1 Bed and Breakfast
11 occupancy as defined in Section 25-2-781 (*Bed and Breakfast Residential Use Structures*
12 *Classified*) when the owner resides within the Bed and Breakfast occupancy and provided
13 that:

- 14 1. the structure is a detached single family home that was legally constructed and
15 occupied as a single family residence prior to January 1, 2006;
- 16 2. the total number of sleeping rooms has not been increased after January 1, 2006;
- 17 3. the residence is protected by a monitored residential style fire/security system
18 with an appropriate automatic smoke detection system installed throughout the
19 residence with occupant notification devices in accordance with Section 907.5;
20 and
- 21 4. the residential style fire/security system shall be inspected, tested and maintained
22 in accordance with Section 907.8.

1 **903.2.8.3 Group R-4 Condition 2.** An automatic sprinkler system installed in
2 accordance with Section 903.3.1.2 shall be permitted in Group R-4 Condition 2
3 occupancies.

4 **903.3.1.1.1 Exempt locations.** When approved, automatic sprinkler protection shall not
5 be required in the following rooms or areas where such rooms or areas are protected with
6 an approved automatic fire detection system in accordance with Section 907.2 that will
7 respond to visible or invisible particles of combustion. Sprinklers shall not be omitted
8 from a room merely because it is damp, of fire-resistance-rated construction or contains
9 electrical equipment.

10 1. Provision remains unchanged.

11 2. Transformer rooms owned and operated by an electric utility, and separated from
12 the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies
13 having a fire-resistance rating of not less than two hours. The automatic fire
14 detection system for exempt locations is not required.

15 3. Provision remains unchanged.

16 4. Provision remains unchanged.

17 5. Provision remains unchanged.

18 **903.3.1.2.1 Balconies and decks.** Sprinkler protection shall be provided for exterior
19 balconies, decks and ground floor patios of dwelling units and sleeping units where the
20 building is of Type V construction, or of Type III construction if the balcony or deck is
21 framed with wood, provided there is a roof or deck above. Sidewall sprinklers that are
22 used to protect such areas shall be permitted to be located such that their deflectors are
23 within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a
24 maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and
25 decks that are constructed of open wood joist construction.

26 **903.3.1.2.2 Balcony closets.** Sprinkler protection shall be provided for all balcony
27 closets.

28 **Section 903.3.5 Water supplies.** Water supplies for automatic sprinkler systems shall
29 comply with this section and the standards referenced in Section 903.3.1. Fire hydrant
30 flow tests shall be in accordance with Section 507.4. Protection of potable water supplies
31 shall be in accordance with Section 507.6.

32 **903.3.5.3** Water supplies designed for automatic sprinkler systems shall provide a safety
33 factor of ten pounds per square inch gauge (PSIG) or ten percent of the minimum

1 required residual pressure, whichever is greater. The safety factor shall be based on the
2 calculated system design flow and pressure.

3 **Exception:** A safety factor less than those defined in this Section may be approved
4 by the fire chief only if historical water supply data is available to demonstrate that
5 reasonable expected fluctuations will not cause the water supply to fall below the
6 system demand.

7 **903.3.5.4 Hose Stream Demand.** The minimum calculated hose stream demand for Type
8 V-B and Type V-A construction, as defined in the Building Code, shall be a minimum of
9 250 Gallons Per Minute (GPM).

10 **903.3.6 Hose threads.** Fire hose threads and fittings used in connection with automatic
11 sprinkler systems shall be approved and shall be National Standard Hose Thread.

12 **903.3.9 Sprinkler System Flexible Hoses.** Flexible hoses used in automatic sprinkler
13 systems shall be limited in length to a maximum of 6 feet. The extinguishing agent shall
14 pass through a maximum of one 6-foot section before discharging from the sprinkler
15 orifice (head). Approval of shop drawing submittals shall be required for all uses of
16 flexible hose sprinkler piping, and where more than one flexible hose sprinkler drop is
17 used in a remodel application, the adequacy of the water supply shall be verified by
18 hydraulic calculations.

19 **903.4.2 Alarms.** A listed fire alarm bell, located on the exterior of the building in an
20 approved location, shall be connected to each automatic sprinkler system. The fire alarm
21 bell shall be activated by water flow equivalent to the flow of a single sprinkler of the
22 smallest orifice size installed in the system. Where a fire alarm system is installed,
23 actuation of the automatic sprinkler system shall actuate the building fire alarm system.

24 **904.9 Halon systems.** Halogenated extinguishing systems shall be installed, maintained,
25 and periodically inspected and tested in accordance with NFPA 12A and their listing.
26 The conditions of approval of all Halon automatic fire-extinguishing systems shall
27 include (i) a demonstration of need acceptable to the fire chief detailing a critical need for
28 the system such as a direct effect on life safety that cannot be adequately addressed by
29 other types of suppression systems, and (ii) an approved method of testing that does not
30 include the intentional release of Halon gas.

31 **904.12 Commercial cooking systems.** The automatic fire-extinguishing system for
32 commercial cooking systems shall be of a type recognized for protection of commercial
33 cooking equipment and exhaust systems of the type and arrangement protected. Each pre-
34 engineered automatic dry- and wet-chemical extinguishing system shall be tested in
35 accordance with UL 300 and listed and labeled for its intended application. Other types
36 of extinguishing systems shall be listed and labeled for specific use as protection for

1 commercial cooking operations. The system shall be installed in accordance with this
2 code, its listing and the manufacturer's installation instructions. Automatic fire
3 suppression systems of the following types shall be installed in accordance with the
4 referenced standard indicated, as follows:

- 5 1. Carbon-dioxide extinguishing systems, NFPA 12.
- 6 2. Automatic sprinkler system, NFPA 13.
- 7 3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
- 8 4. Dry-chemical extinguishing systems, NFPA 17.
- 9 5. Wet-chemical extinguishing systems, NFPA 17A.

10 **Exception 1:** Factory-built commercial cooking recirculating systems that are
11 tested in accordance with UL 710B, and listed and installed in accordance with
12 Section 304.1 of the Mechanical Code.

13 **Exception 2:** With the concurrence of the building official, commercial cooking
14 equipment used intermittently for periods which total less than 6 hours per week
15 may be served by a Type II ventilation hood without fixed fire suppression. A
16 portable fire extinguisher rated for commercial cooking applications shall be
17 provided.

18 **904.13 Domestic cooking systems in Group I-2 Condition 1.** In Group I-2 Condition 1
19 occupancies where cooking facilities are installed in accordance with Section 407.2.6 of
20 the Building Code, the domestic cooking hood provided over the cooktop or range shall
21 be equipped with an automatic fire-extinguishing system of a type recognized for
22 protection of domestic cooking equipment. Pre-engineered automatic extinguishing
23 systems shall be tested in accordance with UL 300A and listed and labeled for the
24 intended application. The system shall be installed in accordance with this code, its
25 listing and the manufacturer's instructions.

26 **Exception:** I-2 Foster Care facilities providing care for 6 or fewer children 2.5
27 years of age or younger.

28 **905.1 General.** Standpipe systems shall be provided in new buildings and structures in
29 accordance with this section. Fire hose threads used in connection with new fire
30 standpipe systems shall be approved and shall be National Standard Hose Thread. Except
31 as otherwise approved by the fire chief, existing standpipe fire hose threads shall be
32 national standard hose thread. The location of fire department hose connections shall be

1 approved. In buildings used for high-piled combustible storage, fire protection shall be in
2 accordance with Chapter 32 (*High-Piled Combustible Storage*).

3 **905.1.1 Hose.** With the concurrence of the building official, hoses need not be installed
4 or maintained on standpipes of any class when the occupancy does not provide training in
5 the use of standpipe hose and the employees, residents, or other regular occupants of the
6 occupancy are trained or instructed to evacuate and evacuation drills are conducted at
7 intervals agreed on by the owner or agent and the fire department.

8 **905.3.4.1 Hose and cabinet.** If hose is installed, the 1½-inch (38 mm) hose connections
9 shall be equipped with sufficient lengths of 1½-inch (38 mm) hose to provide fire
10 protection for the stage area. Hose connections shall be equipped with an approved
11 adjustable fog nozzle and be mounted in a cabinet or on a rack.

12 **905.4 Location of Class I standpipe hose connections.** Class I standpipe hose
13 connections shall be provided in all of the following locations:

14 *Items 1 through 4 and item 6 remain unchanged*

15 5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-
16 percent slope), a hose connection shall be located to serve the roof or at the highest
17 landing of a stairway with stair access to the roof provided in accordance with Section
18 1009.16. An additional hose connection shall be provided at the top of the most
19 hydraulically remote standpipe for testing purposes.

20 **905.5.3 Class II system hose.** If installed, the minimum diameter for standpipe hose
21 shall be 1½-inch (38 mm) and such hose shall be listed for this service.

22 **907.2 Where required, new buildings and structures.** An approved manual, automatic
23 or manual and automatic fire alarm system installed in accordance with the provisions of
24 this code and NFPA 72 shall be provided in new buildings and structures in accordance
25 with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance
26 with Section 907.6, unless other requirements are provided by another section of this
27 code. The fire alarm control panel or a full function remote annunciator shall be installed
28 at the main entrance for use by fire department personnel.

29 A minimum of one manual fire alarm box shall be provided in an approved location to
30 initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or
31 water-flow detection devices. Where other sections of this code allow elimination of fire
32 alarm boxes due to sprinklers, a single fire alarm box shall be installed. The manual fire
33 alarm box is required to provide a means for fire watch personnel to initiate an alarm
34 during a sprinkler system impairment event.

1 **Exceptions:**

- 2 1. The manual fire alarm box is not required for fire alarm systems dedicated to
3 elevator recall control and supervisory service.
- 4 2. Automatic heat detection required by this section shall not be required if
5 automatic sprinkler protection installed in accordance with Section 903.3.1.1
6 or 903.3.1.2 is provided and connected to the building fire alarm system.
- 7 3. Where ambient conditions prohibit installation of automatic smoke
8 detection, other approved automatic fire detection may be allowed.
- 9 4. Duct smoke detectors installed in accordance with applicable mechanical
10 code requirements for stand alone operation, located in separate lease
11 spaces, occupied or vacant, of shell buildings need not be connected to the
12 fire alarm control panels (FACP) where the FACP is only required for the
13 sprinkler monitoring system.

14 **907.2.1.3 Electrical Shunt for Amplified Sound Conditions.** For venues with
15 amplified music or sound systems, in Group A occupancies having an occupant load of
16 300 or more, electrical shunts shall be provided to de-energize the music or sound
17 systems upon alarm activation as necessary to demonstrate compliance with the audibility
18 requirements of NFPA 72.

19 **907.2.3.1 Common Areas within a Group E Day Care Occupancies.** Group E day care
20 occupancies shall be provided with a fire alarm system in accordance with Section
21 907.2.3 and shall be protected by smoke detectors installed in accordance with this
22 section, the listing of the detectors and NFPA 72, and shall activate notification in
23 accordance with Section 907.5. Detectors shall be placed throughout all corridors of all
24 floors containing the day care facility, in lounges, and in each room occupied by children
25 and on each story.

26 **Exceptions:**

- 27 1. A day care housed within and serving the students of a Group E occupancy,
28 such as a public charter or private school, grades K-12, is permitted to
29 comply with the alarm and detection requirements of Section 907.2.3.
- 30 2. Group E day cares serving 12 or fewer children located in a state licensed or
31 registered Child-Care Home, provided that the dwelling is protected with
32 interconnected hard wired smoke alarms located as required by this section,
33 907.2.3.1, and powered as required for a new home in accordance with the
34 International Residential Code and NFPA 72 or battery operated in

1 accordance with Section 1103.8.3 and maintained in accordance with
2 Section 1103.8.4. When such day cares serve hearing impaired children,
3 parents, or guardians, the smoke alarms shall be listed for both audible and
4 visual alarm service.

5 **907.2.6.4 Common Areas within Group I-4 Day Care Occupancies.** Group I-4 day
6 care occupancies shall be protected by a fire alarm system which monitors smoke
7 detectors installed in accordance with this section, the listing of the detectors and NFPA
8 72 and activates notification devices in accordance with Section 907.5. Detectors shall
9 be placed on each story in front of doors to the stairways throughout the corridors of all
10 floors containing the day care facility, lounges and each room used by occupants
11 receiving custodial care.

12 **907.2.8.2 Automatic smoke detection system.** An automatic smoke detection system
13 that activates the occupant notification system in accordance with Section 907.6 shall be
14 installed throughout all group R-1 occupancies. Listed system-type automatic detectors
15 shall be installed within interior corridors serving sleeping units and unseparated areas
16 such as recreational rooms, laundry rooms, and similar areas served by interior corridors
17 providing access to and egress from sleeping units.

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

22 **907.2.9 Group R-2.** Fire alarm systems and smoke alarms shall be installed in Group R-2
23 occupancies as required in Sections 907.2.9.1 thru 907.2.9.2.

24 **907.2.9.1 Manual and automatic fire alarm system.** A manual and automatic fire alarm
25 system that activates the occupant notification system in accordance with Section 907.6
26 shall be installed in Group R-2 occupancies where:

- 27 1. Any dwelling unit or sleeping unit is located three or more stories above the
28 lowest level of exit discharge;
- 29 2. Any dwelling unit or sleeping unit is located more than one story below the
30 highest level of exit discharge of exits serving the dwelling unit or sleeping
31 unit; or
- 32 3. The building contains more than 16 dwelling units or sleeping units.

33 Listed system-type automatic detectors shall be installed within interior corridors serving
34 as the primary access and egress for dwelling units, and unseparated common areas such

1 as recreational room, laundry rooms and similar areas. Heat detection may be installed in
2 lieu of smoke detection in areas that are not suitable for smoke detection in accordance
3 with NFPA 72 (2013 edition), Sections 17.1.7, and 17.1.8.

4 **Exceptions:**

- 5 1. A fire alarm system is not required in buildings not more than two stories in
6 height where all dwelling units or sleeping units and contiguous attic and
7 crawl spaces are separated from each other and public or common areas by
8 at least 1-hour fire partitions and each dwelling unit or sleeping unit has an
9 exit directly to a public way, exit court or yard.
- 10 2. Manual fire alarm boxes are not required throughout the building when all
11 the following conditions are met:
 - 12 2.1. The building is equipped throughout with an automatic sprinkler
13 system in accordance with Section 903.3.1.1 or Section 903.3.1.2;
 - 14 2.2. The notification appliances will automatically activate throughout the
15 notification zones upon sprinkler water flow; and
- 16 3. A separate fire alarm system is not required in buildings that do not have
17 interior corridors serving dwelling units and are protected by an approved
18 automatic sprinkler system installed in accordance with 903.3.1.1 or
19 903.3.1.2, provided that sprinkler system activation results in a local alarm
20 designed to notify all occupants, and dwelling units have a means of egress
21 door opening directly to an exterior exit access that leads directly to the
22 exists or are served by open ended corridors as defined in Section 202 and
23 designed in accordance with Section 1027.6, Exception 3.

24 **907.2.13.2 Two-Way, In-Building Wired Fire Department Communication System.**

25 A wired communication system is required and shall be designed and installed in
26 accordance with NFPA 72 Section 24.8, Two-Way, In-Building Wired Emergency
27 Services Communication Systems and shall operate between a fire command center
28 complying with Section 508 and all locations indicated in NFPA 72 requirements for
29 Two-Way, In-Building Wired Emergency Services Communication Systems.

30 **Exceptions:**

- 31 1. An emergency responder radio system may be installed as an alternate
32 method of compliance in lieu of a wired fire department communication system
33 if after all building construction is complete, and prior to Certificate of
34 Occupancy, the completed building successfully passes a radio coverage test

1 approved by AFD. If the completed building fails the radio coverage test after
2 several attempts to provide radio coverage in the building then an approved
3 wired communication system shall be designed and installed in accordance with
4 NFPA 72 as indicated above, tested and accepted prior to the building being
5 occupied.

6 2. A wired fire department communication system is not required if an
7 approved two-way radio communication enhancement system in accordance
8 with Section 510, NFPA 72, and NFPA 1221 Chapter 5 and 9.6 is provided.
9 After building construction is complete, and prior to Certificate of Occupancy,
10 testing in accordance with Section 510 demonstrates the building complies with
11 Section 510.4.1. The test plan shall be prepared by a Texas registered
12 Professional Engineer or by an organization complying with Section 510.5.2 and
13 compliance shall be demonstrated in accordance with Section 510.5.3.

14 **907.5.2.1.1 Average sound pressure.** The audible alarm notification appliances shall
15 provide a sound pressure level of 15 decibels (dBA) above the average ambient sound
16 level or 5 dBA above the maximum sound level having a duration of not less than 60
17 seconds, whichever is greater, in every occupiable space, including occupiable balconies
18 within the building.

19 **907.6.1 Wiring.** Wiring shall comply with the requirements of NFPA 70 and NFPA 72.
20 Wireless protection systems utilizing radio-frequency transmitting devices shall comply
21 with the special requirements for supervision of low-power wireless systems in NFPA 72.

22 **907.6.1.1 Surge protection devices.** Surge protection devices (SPDs) for fire alarm
23 circuits shall be in accordance with Sections 907.6.1.1 through 907.6.1.3.

24 SPDs shall be listed for the repeated limiting of transient voltage surges on 60 Hertz
25 power circuits not exceeding 1,000 Volts in accordance with UL 1449, *Standard for*
26 *Surge Protective Devices*. SPDs for power-limited and non-power-limited fire alarm
27 circuits shall be listed in accordance with UL 497B *Protectors for Data Communications*
28 *and Fire Alarm Circuits*.

29 **907.6.1.2 Circuits extending beyond one building.** Non-power-limited and power-
30 limited signaling system circuits that extend beyond building and routed outdoors shall be
31 provided with surge protection devices (SPDs) in accordance with Article 760.32 of the
32 Electrical Code.

33 **907.6.1.3 Fire Alarm Equipment.** An SPD shall be installed on the dedicated AC
34 branch circuit connected to any piece of fire alarm equipment that requires a dedicated
35 AC branch circuit.

1 **907.6.1.4 Signaling Line Circuit (SLC) Protection.** Each SLC shall be provided with an
2 SPD at the connection to the panel that controls the SLC.

3 **907.6.2.1 Protection of fire alarm control unit and notification power supplies.** In
4 areas that are not continuously occupied, a single smoke detector shall be provided at the
5 location of each fire alarm control unit, notification appliance circuit power extenders,
6 and supervising station transmitting equipment.

7 **Exceptions:**

- 8 1. Where ambient conditions prohibit installation of automatic smoke
9 detection, when approved, a heat detector shall be permitted.

10 **907.6.5 Monitoring.** Fire alarm systems required by this chapter or the Building Code
11 shall be monitored by an approved supervising station in accordance with NFPA 72, or
12 by a local alarm which gives audible and visual signals at an approved constantly
13 attended location. Reporting procedures and personnel training records for local alarm
14 systems monitored at a constantly attended location shall be maintained for review and
15 approval by the Fire Department.

16 **Exception:** Supervisory service is not required for:

- 17 1. Single- and multiple-station smoke alarms required by Section 907.2.11.
18 2. Automatic sprinkler systems in one- and two-family dwellings.

19 **907.6.7 Annunciation and control.** The main fire alarm control panel or a full function
20 remote annunciator shall be installed at the main entrance or at an approved location near
21 the main entrance of buildings with fire alarm systems.

22 **909.5 Smoke barrier construction.** Smoke barriers required for passive smoke control
23 and a smoke control system using the pressurization method shall comply with Section
24 709 of the International Building Code. Smoke barriers shall be constructed and sealed
25 to limit leakage areas exclusive of protected openings. The maximum allowable leakage
26 area shall be the aggregate area calculated using the following leakage area ratios:

- 27 1. Exterior walls : $A/A_w = 0.00035$ (includes construction cracks, and cracks
28 around windows and doors)
29 2. Stairwell walls: $A/A_w = 0.00035$ (includes construction cracks but not cracks
30 around windows or doors)
31 3. Elevator shaft walls: $A/A_w = 0.0018$ (includes construction cracks but not
32 cracks around doors)

1 4. Floors: $A/A_F = 0.00017$ (includes construction cracks and gaps around
2 penetrations)

3 Where:

4 A = Total leakage area, square feet (m^2)

5 A_F = Unit floor or roof area of barrier, square feet (m^2)

6 A_w = Unit wall area of barrier, square feet (m^2)

7 The leakage area ratios shown do not include openings due to gaps around doors and
8 operable windows. The total leakage area of the smoke barrier shall be determined in
9 accordance with Section 909.5.1 and tested in accordance with Section 909.5.2.

10 **909.6.3 Pressurized stairways and elevator hoistways.** Where stairways or elevator
11 hoistways are pressurized, such pressurization systems shall comply with Section 909 as
12 smoke control systems, in addition to the requirements of Section 909.21.

13 **909.10.2 Ducts.** Duct materials and joints shall be capable of withstanding the probable
14 temperatures and pressures to which they are exposed as determined in accordance with
15 Section 909.10. Shafts constructed of gypsum board or gypsum panel products are not
16 allowed. Ducts shall be constructed and supported in accordance with the Mechanical
17 Code. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance
18 with nationally accepted practices. Measured leakage shall not exceed 5 percent of design
19 flow. Results of such testing shall be a part of the documentation procedure. Ducts shall
20 be supported directly from fire-resistance-rated structural elements of the building by
21 substantial, noncombustible supports.

22 **Exception:** Flexible connections, for the purpose of vibration isolation, complying
23 with the Mechanical Code and that are constructed of approved fire-resistance-
24 rated materials.

25 **909.12.4 Automatic Control.** Where completely automatic control is required or used,
26 the automatic-control sequences shall be initiated from an appropriately zoned automatic
27 sprinkler system complying with Section 903.3.1.1, an automatic smoke detection system
28 complying with 907.2.13, manual controls that are readily accessible to the fire
29 department and any smoke detectors required by the engineering analysis.

30 **909.18.8 Testing for smoke control.** Smoke control systems shall be tested by a special
31 inspector.

32 **909.20.6 Components bypassing weekly test.** Where components of the smoke control
33 system are bypassed by the preprogrammed weekly test required by Section 909.12.1,
34 such components shall be tested annually. The system shall be tested under standby
35 power conditions.

1 **909.22 Smokeproof enclosures.** Where required by Section 1023.11 of the Building
2 Code, a smokeproof enclosure shall be constructed in accordance with this section. A
3 smokeproof enclosure shall consist of a pressurized interior exit stairway or ramp that is
4 enclosed in accordance with the applicable provisions of Section 1023 of the Building
5 Code and a pressurized vestibule meeting the requirements of this section. Where access
6 to the roof is required by Section 1011.12, such access shall be from the smokeproof
7 enclosure where a smokeproof enclosure is required.

8 **909.22.1 Access.** Access to the stairway or ramp shall be by way of a vestibule. The
9 minimum dimension of the vestibule shall be not less than the required width of the
10 corridor leading to the vestibule but shall not have a width of less than 44 inches (1118
11 mm) and shall not have a length of less than 72 inches (1829 mm) in the direction of
12 egress travel.

13 **909.22.2 Vestibule doors.** The door assembly from the building into the vestibule shall
14 be a fire door assembly complying with Section 716.5.3 of the Building Code. The door
15 assembly from the vestibule to the stairway or ramp shall not have less than a 90-minute
16 fire protection rating and shall meet the requirements for a smoke door assembly in
17 accordance with Section 716.5.3 of the Building Code. The door shall be installed in
18 accordance with NFPA 105.

19 **909.22.3 Construction.** The smokeproof enclosure shall be separated from the
20 remainder of the building by not less than 2-hour fire barriers constructed in accordance
21 with Section 707 of the Building Code or horizontal assemblies constructed in
22 accordance with Section 711 of the Building Code, or both. Openings are not permitted
23 other than the required means of egress doors. The vestibule shall be separated from the
24 stairway or ramp by not less than 2-hour fire barriers constructed in accordance with
25 Section 707 of the Building Code or horizontal assemblies constructed in accordance
26 with Section 711 of the Building Code, or both.

27 **909.22.4 Door closers.** Doors in a smokeproof enclosure shall be self-closing and self-
28 latching.

29 **909.22.5 Stair pressurization system.** The stairs shall be pressurized to accommodate
30 the conditions of all doors closed and the ground floor exterior stair door open with all
31 other doors closed. The maximum allowable door opening force shall be 30 pounds with
32 the system operating. Validation of the pressurization fan sizes shall include the analysis
33 described in Section 909.4 under both winter and summer conditions and shall use the
34 allowable leakage ratios of Section 909.5. A relief vent sized at 5,000 cfm and a 0.35
35 inch w.g. (field adjustable) opening point shall be provided at the upper portion of the
36 stair shaft. The system shall have multiple injection points into the stairwell. Use of
37 algebraic equations for pressurization fan sizing shall only be acceptable for simple

1 idealized buildings. Complex systems for mixed-use high rises and very tall buildings
2 shall be designed using a network model.

3 **909.22.6 Pressurized vestibules.** The minimum pressure difference within the vestibule
4 with the doors closed shall be 0.05 inch w.g. positive pressure relative to the floor and
5 0.05 inch w.g. negative relative to the stairwell for a total differential of +0.10 inch w.g.
6 from the stairwell to the corridor/floor.

7 **909.22.7 Standby power.** Mechanical vestibule and stairway and ramp shaft ventilation
8 systems and automatic fire detection systems shall be provided with standby power in
9 accordance with Section 2702 of the Building Code.

10 **909.22.8 Acceptance and testing.** Before the mechanical equipment is approved, the
11 system shall be tested in the presence of the fire official to confirm that the system is
12 operating in compliance with these requirements.

13 **912.1 Installation.** Fire department connections shall be installed in accordance with the
14 NFPA standard applicable to the system design and shall comply with Sections 912.1.1
15 through 912.7.

16 **912.1.1 Number of Hose Connections.** Fire department connections (FDC's) shall
17 include a minimum of two 2½ inch (63.5 mm) female National Standard Hose Thread
18 (NST) inlet connections. Where system design flow rates exceed 500 gpm (1,893 lpm), a
19 minimum of one FDC inlet connection shall be installed for each 250 gpm (946 lpm) or
20 portion thereof.

21 **Exception:** A single 2½ inch FDC inlet shall be provided for NFPA 13R
22 automatic sprinkler systems.

23 **912.4 Access.** Immediate access to fire department connections shall be maintained at all
24 times and without obstruction by fences, bushes, trees, walls or any other fixed or
25 moveable object for a minimum of 3 feet (914 mm). Access to fire department
26 connections shall be approved by the fire chief.

27 **Exception:** Fences, where provided with an access gate equipped with a sign
28 complying with the legend requirements of Section 912.5 and a means of
29 emergency operation. Locks, if installed shall be openable by use of a fire
30 department Knox Key. The gate and means of emergency operation shall be
31 approved by the fire chief and maintained operational at all times.

32 **912.4.1 Locking fire department connection caps.** The fire code official is authorized
33 to require locking caps on fire department connections for water-based fire protection

1 systems. The locking caps shall be manufactured by an approved manufacturer and used
2 and maintained as designed.

3 **912.4.1.2 Locking fire department connection caps in existing buildings or**
4 **structures.** The fire code official is authorized to require locking caps on fire department
5 connections (FDC) for water-based fire protection systems serving existing buildings
6 where the fire department has observed obstructions placed in the FDC or where the FDC
7 is missing caps. The locking caps shall be manufactured by an approved manufacturer
8 and used and maintained as designed.

9 **912.5.1 Fire Department Connection Placard – for existing structures.** In addition to
10 the signage required in 912.5.1, an all-weather, permanent, system placard shall be placed
11 in a visible location adjacent to the fire department connection on all structures with a fire
12 protection system requiring pressures exceeding 150psi. The placard text shall be white
13 reflective letters, 1 ½ inch minimum height, on either a red or black background. The
14 placard shall contain the following information:

- 15 1. Required system pressure at FDC inlet;
- 16 2. Area of building served by FDC; and
- 17 3. System PRV locations.

18 **914.5.3 Compartment smoke control system.** Where compartmentation is required by
19 Section 405.4 of the Building Code, each compartment shall have an independent smoke
20 control system. The system shall be automatically activated and capable of manual
21 operation from the firefighter's smoke control panel in accordance with Section 907.2.18.

22 **1002.2 Supplemental Definitions.** The following supplemental definitions are defined in
23 Section 202.1. For the purposes of this chapter and as used elsewhere in this code, these
24 definitions shall have the meanings shown in Section 202.1. The definitions in the 2015
25 Fire Code are adopted as published except that the supplemental definitions are added or
26 amended.

27 **STAIR.** A change in elevation, consisting of two or more risers.

28 **STAIRWAY EXTERIOR.**

29 **Table 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT.**

OCCUPANCY	FLOOR AREA IN SQ. FT. PER OCCUPANT
Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross

Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly Gaming floors (keno, slots, etc.)	11 gross
Assembly with fixed seats	See Section 1004.7
Assembly without fixed seats	
Concentrated (standing room)	7 net
Queuing line	7 net
Unconcentrated (tables and chairs)	15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas	100 gross
Courtrooms—other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops and other vocational room areas	50 net
Exercise rooms	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross

Mercantile	
Areas on other floors	60 gross
Basement and grade floor areas	30 gross
Storage, stock, shipping areas	300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Accessory storage areas, mechanical equipment room	300 gross
Warehouses	500 gross

1 **1004.2 Increased occupant load.** The occupant load permitted in any building, or
2 portion thereof is permitted to be increased from that number established for the
3 occupancies in Table 1004.1.1 provided that all other requirements of the code are also
4 met based on such modified number and the overall occupant load shall not exceed one
5 occupant per 7 square feet (0.65 m²) of occupiable floor space. Where required by the fire
6 code official, an approved aisle, seating or fixed equipment diagram substantiating any
7 increase in occupant load shall be submitted. Where required by the fire chief, such
8 diagram shall be posted.

9 **1004.3 Posting of occupant load.** Every room or space that is an assembly occupancy
10 shall have the occupant load of the room or space posted in a conspicuous place, near the
11 main exit or exit access doorway from the room or space. Posted signs shall be of an
12 approved legible permanent design and shall be maintained by the owner or authorized
13 agent. Section 403.1.3 concerning advanced ticket sales limitations may also apply.

14 **1010.1.9.8 Sensor release of electrically locked egress doors.** Section 1010.1.9.8 is
15 deleted.

16 **[B] 1010.1.9.11 Stairway doors.** Interior stairway means of egress doors shall be
17 openable from both sides without the use of a key or special knowledge or effort.

18 **Exceptions:**

- 19 1. Stairway discharge doors shall be openable from the egress side and shall only
20 be locked from the opposite side.

- 1 2. This section shall not apply to doors arranged in accordance with Section
2 403.5.3.
- 3 3. In stairways serving two stories or greater in a building not classified as a high-
4 rise by Section 403, doors are permitted to be locked from the side opposite the
5 egress side, provided they are openable from the egress side. The exit doors
6 shall be capable of being unlocked simultaneously without unlatching upon a
7 signal from an approved fire department key switch. The key switch shall be
8 located at the exterior opening of the stair or at the main entrance to the
9 building.

10 Exceptions 4 and 5 remain unchanged.

11 **[B] 1025.6 Active Egress Path Illumination System.** An active egress path illumination
12 system shall be in accordance with Sections 1025.6.1 through 1025.6.5.3. Designs
13 complying with this section are equivalent to the requirements in Sections 1025.1 through
14 1025.5.

15 The level of the egress illumination shall be in accordance with Section 1008.

16 **[B] 1025.6.1 Luminaries.** Luminaries shall be listed for emergency illumination and
17 contain a lamp with an integral battery, battery charger and manual test switch and
18 comply with Article 700 of the Electrical Code. The unit equipment shall be housed in a
19 sealed and gasketed fixture rated for indoor wet locations. Luminaire batteries shall be
20 listed for use as a secondary power supply in accordance with UL 924. Luminaires shall
21 not be equipped with an occupancy sensor. Every luminaire shall have a test switch to
22 confirm the lamp's availability for service when operating on primary or emergency
23 power.

24 **Exception:** The integral battery and battery charger is not required when
25 luminaires are connected to a Stored Energy Emergency Power Supply System
26 (SEPSS) complying with Section 1025.6.5.

27 **[B] 1025.6.2 Primary and Secondary Electrical Power.** A primary and secondary
28 power source shall be provided for each luminaire. Primary power shall be a dedicated
29 electrical branch circuit supplied from utility power. Secondary power shall be a branch
30 circuit connected to an Emergency Power system complying with Section 604.2.12. The
31 primary and emergency source for each luminaire shall be connected to a dedicated
32 primary and emergency power branch circuit.

33 **[B] 1025.6.3 Location.** Luminaries for the active egress path illumination system shall be
34 located at each intermediate landing and stair landing within each interior exit stairway.

1 **[B] 1025.6.4 Functional Test and Records.** The luminaries shall be tested in accordance
2 with Section 604.6 except that the frequency of activation tests shall be weekly.
3 Documentation records for the location of each luminaire and the results of the weekly
4 activation and annual power tests shall be in accordance with Section 604.6. Records
5 shall be available to the fire code official upon request. Operational testing and
6 maintenance reports produced by the SEPSS are permitted provided they comply with
7 NFPA 110 Chapter 8.

8 **[B] 1025.6.5 Lamp Failure.** Luminary lamps that do not operate because of a test or an
9 incident shall be replaced. Any battery that cannot operate a lamp for a minimum of 90
10 minutes shall be replaced.

11 **[B] 1025.6.6 Stored Energy Emergency Power Supply System.** When provided, the
12 SEPSS with an integral alternating current – to – direct current inverter shall comply with
13 604.1.2 and be listed in accordance with UL 924. The SEPSS shall be designed as Level
14 1 system in accordance with NFPA 111.

15 The SEPSS shall be located in the room separated from the remainder of the building by
16 a minimum 1-hour fire-resistance rated construction and required opening protectives in
17 accordance with the Building Code. The design temperature and humidity of the room
18 housing the SEPPS shall be in accordance with the manufacture installation instructions.

19 SEPSS are prohibited inside a Fire Command Center.

20 **[B] 1025.6.6.1 Load Carrying Capacity.** Battery systems complying with NFPA 111
21 shall be used to supply the emergency power to luminaires serving the active egress path
22 illumination system. Batteries shall be rated for a minimum 90 minute discharge time and
23 sized based on the total combined load of luminaires connected to the SEPSS.

24 **[B] 1025.6.6.2 Required SEPSS.** In buildings where the highest occupied floor is less
25 than or equal to 120 feet above the lowest level of fire department access, one SEPSS
26 shall be provided that complies with Section 1025.6.5.1 for all required interior exit
27 stairways. A SEPSS shall be provided for each required interior exit stairway that serves
28 floors greater than 120 feet above the lowest level of fire department access.

29 **[B] 1025.6.6.3 Instrumentation and Annunciation.** Instrumentation and annunciation
30 shall be in accordance with NFPA 111. A remote annunciator displaying the status of the
31 SEPSS shall be provided in the Fire Command Center. The SEPSS and its annunciator
32 shall display the following information and its function shall be identified in the Fire
33 Command Center:

- 34 1. electrical load on utility power;
- 35 2. electrical load on emergency power;

3. output circuit breaker open;
4. output overload or overcurrent;
5. high temperature;
6. emergency conversion equipment is bypassed;
7. low battery capacity; and
8. any major or minor alarms prescribed by the SEPSS manufacturer.

1031.2 Reliability. Required exit accesses, exits or exit discharges shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency when the areas served by such exits are occupied. Security devices, including drop bars, affecting means of egress shall require approval of the fire chief. Doors utilizing drop bars must have signage on the exterior of the door stating “Door equipped with drop bar”. Doors utilizing drop bars must have signage on the interior of the door stating “Drop bar must be removed when building is occupied”. When security devices are not in use, they must be secured in a manner where unauthorized use is prevented, such as:

1. Locking bar in a keeper near the door.
2. Securing bar in an office, locked closet, or similar location not accessible to the general public.

Approval to use security devices outside the scope of this code may be revoked for failure to meet the letter and intent of these rules.

1102.1 Supplemental Definitions. The definitions in the 2015 Fire Code are adopted as published except that supplemental definitions are added or amended. The following supplemental definitions are defined in Section 202.1.1. For the purposes of this chapter and as used elsewhere in this code, these definitions shall have the meanings shown in Section 202.1.1.

INDEPENDENT EXIT/INDEPENDENT STAIRWAY/INDEPENDENT EXIT RAMP.

1103.5.5 Group B ambulatory health care facilities. An automatic sprinkler system shall be installed throughout all existing fire areas containing a Group B ambulatory health care facility occupancy when the facility is designed to allow either of the following conditions to exist at any time:

1. Four or more care recipients are incapable of self-preservation.
2. One or more care recipients who are incapable of self-preservation are located at other than the level of exit discharge serving such occupancy.

1 **1103.4.1 Group I-2 and I-3 occupancies.** *This section is deleted in its entirety.*

2 **1103.4.8 Occupancies other than Group I-2 and I-3.** *This section is deleted in its*
3 *entirety.*

4 **1103.4.9 Waste and linen chutes.** *This section is deleted in its entirety.*

5 **1103.6.1 Existing multiple story buildings.** Existing structures with occupied floors
6 located more than 50 feet (15,240 mm) above or below the lowest level of fire
7 department access shall be equipped with standpipes installed in accordance with Section
8 905. The standpipes shall have an approved fire department connection with hose
9 connections at each floor level above or below the lowest level of fire department access.
10 The fire chief is authorized to approve the installation of manual standpipe systems to
11 achieve compliance with this section where the system is demonstrated to be capable of
12 providing the required hose flow and pressure at the highest standpipe outlet while the
13 fire department is providing the water supply to the fire department connection (FDC) at
14 a maximum FDC inlet pressure of 150 psi (10.3 bar).

15 **1103.7.6 Group R-2.** An automatic or manual fire alarm system that activates the
16 occupant notification system in accordance with Section 907.6 shall be installed in
17 existing Group R-2 occupancies more than three stories in height or with more than 16
18 dwelling or sleeping units. A plan for achieving compliance shall be completed by the
19 owner within 12 months of the discovery of the deficiency. Compliance shall be
20 achieved within 24 months of the discovery of the deficiency.

21 **Exceptions:**

- 22 1. A fire alarm system is not required in existing R-2 occupancies where each
23 living unit is separated from other contiguous living units by fire barriers
24 having a fire-resistance rating of not less than 0.75 hour, and where each
25 living unit has either its own independent exit or its own independent
26 stairway or ramp discharging at grade. When conditions warrant, the fire
27 chief is authorized to accept an alternate minimum distance from the egress
28 path to nearby doors and windows of apartments.
- 29 2. A separate fire alarm system is not required in buildings that are equipped
30 throughout with an approved supervised automatic sprinkler system installed
31 in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm
32 to notify all occupants.
- 33 3. A fire alarm system is not required in buildings that do not have interior
34 corridors serving dwelling units and are protected by an approved automatic
35 sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2,

1 provided that dwelling units either have a means of egress door opening
2 directly to an exterior exit access that leads directly to the exits or are served
3 by open-ended corridors designed in accordance with Section 1023.6,
4 Exception 4.

5 **1103.8.3 Power source.** In Group R occupancies, single-station smoke alarms shall
6 receive their primary power from the building wiring provided that such wiring is served
7 from a commercial source and shall be equipped with a battery backup. Smoke alarms
8 with integral strobes that are not equipped with battery backup shall be connected to an
9 emergency electrical system. Smoke alarms shall emit a signal when the batteries are
10 low. Wiring shall be permanent and without a disconnecting switch other than as required
11 for overcurrent protection. Listed single-station battery-operated smoke alarms installed
12 or replaced shall be replaced with a non-replaceable, non-removable battery that can
13 power the smoke alarm for a minimum of 10 years.

14 **Exceptions:**

- 15 1. Smoke alarms are permitted to be solely battery operated in existing
16 buildings in locations where smoke alarms were not required to be powered
17 by the building wiring under the code in effect at the time of construction
18 and where no construction is taking place.
- 19 2. Smoke alarms are permitted to be solely battery operated in buildings that
20 are not served from a commercial power source.
- 21 3. Smoke alarms are permitted to be solely battery operated in existing areas of
22 buildings in locations where smoke alarms were not required to be powered
23 by the building wiring under the code in effect at the time of construction
24 and undergoing alterations or repairs that do not result in the removal of
25 interior walls or ceiling finishes exposing the structure.

26 **1103.8.4 Smoke Alarm Service Life.** Single-station battery-operated smoke alarms shall
27 be replaced when the smoke alarm has been in service for ten years.

28 **1103.9 Carbon monoxide alarms.** When interior work requiring a building permit is
29 done in existing Group I-1, I-2, I-4, and R occupancies, they shall be equipped with
30 carbon monoxide alarms in accordance with Section 915 in the unit(s) in which the work
31 was performed, except that the carbon monoxide alarms shall be allowed to be solely
32 battery operated.

1 **CHAPTER 23 MOTOR FUEL-DISPENSING FACILITIES, REPAIR GARAGES,**
2 **AND AUTOMOBILE WRECKING YARDS.**

3 **2301.1 Scope.** Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing
4 facilities, fleet vehicle motor fuel-dispensing facilities, automobile wrecking yards, and
5 repair garages shall be in accordance with this chapter and the Building Code, the
6 Plumbing Code and the Mechanical Code. Such operations shall include both operations
7 that are accessible to the public and private operations.

8 **2304.1 Supervision of dispensing.** The dispensing of fuel at motor fuel-dispensing
9 facilities shall be conducted by a qualified attendant who is a Texas Commission on
10 Environmental Quality (TCEQ) certified UST Operator or shall be under the supervision
11 of a qualified attendant who is a TCEQ certified UST Operator at all times or shall be in
12 accordance with Section 2304.3.

13 **2304.2 Attended self-service motor fuel-dispensing facilities.** Attended self-service
14 motor fuel-dispensing facilities shall comply with Sections 2304.2.1 through 2304.2.5.
15 Attended self-service motor fuel-dispensing facilities shall have at least one TCEQ
16 certified UST Operator on duty while the facility is open for business. The attendant's
17 primary function shall be to supervise, observe and control the dispensing of fuel. The
18 attendant shall prevent the dispensing of fuel into containers that do not comply with
19 Section 2304.4.1, control sources of ignition, give immediate attention to accidental spills
20 or releases, and be prepared to use fire extinguishers.

21 **2305.1.3 Tank fill connections.** Delivery of flammable liquids to tanks shall be made by
22 means of approved liquid- and vapor-tight connections between the delivery hose and
23 tank fill pipe. Where tanks are equipped with any type of vapor recovery system, all
24 connections required to be made for the safe and proper functioning of the particular
25 vapor recovery process shall be made. Such connections shall be made liquid and vapor
26 tight and remain connected throughout the unloading process. Vapors shall not be
27 discharged at grade level during delivery.

28 **2305.2.1 Inspections.** Flammable and combustible liquid fuel dispensing and
29 containment equipment shall be inspected at least once every sixty days in accordance
30 with the regulations of the TCEQ in order to verify that it is in proper working order and
31 not subject to leakage.

32 **2305.3 Spill control.** Provisions shall be made to prevent liquids spilled during
33 dispensing operations from flowing into buildings or off of the property on which the
34 tank is located. Acceptable methods include, but shall not be limited to, grading
35 driveways, raising doorsills, or other approved means.

1 **2306.7.6.2 Testing.** The automatic closing function of automatic closing fuel delivery
2 hose nozzles that dispense Class I, II, and III liquids shall be tested an annual basis.

3 **Section 2312 AUTOMOBILE WRECKING YARDS**

4 **2312.1 Scope.** Automobile wrecking yards shall comply with this section and the
5 Building Code. Rubbish handling operations are addressed in Chapter 3 (*General*
6 *Requirements*).

7 **2312.2 Fire apparatus access roads.** Fire apparatus access roads shall be constructed
8 and maintained throughout the site in accordance with Section 503.

9 **2312.3 Welding and cutting.** Welding and cutting operations shall be in accordance
10 with Chapter 35 (*Welding and Other Hot Work*).

11 **2312.4 Housekeeping.** Combustible rubbish accumulated on the site shall be collected
12 and stored in approved containers, rooms or vaults of noncombustible materials.
13 Combustible vegetation, cut or uncut, shall be removed when determined by the chief to
14 be a fire hazard.

15 **2312.5 Fire protection.** Offices, storage buildings and vehicles used for site operations
16 shall each be provided with at least one portable fire extinguisher with a rating of not less
17 than 4-A:40-B:C. When required by the chief, additional portable fire extinguishers shall
18 be provided in specific use areas in accordance with NFPA 10.

19 **2312.6 Tires.** Tires shall be stored on racks in an approved manner or shall be piled in
20 accordance with Chapter 34 (*Tire Rebuilding and Tire Storage*).

21 **2312.7 Burning operations.** The burning of salvage vehicles and salvage or waste
22 materials shall be in accordance with Chapter 3 (*General Requirements*) and regulations
23 adopted by the Texas Commission on Environmental Quality.

24 **2312.8 Motor Vehicle fluids and hazardous materials.**

25 **2312.8.1 General.** The storage, use and handling of motor vehicle fluids and
26 hazardous materials, such as those used to operate air bags and electrical systems,
27 shall be in accordance with Section 2312 (*Automobile Wrecking Yards*), Section
28 2311 (*Repair Garages*), Chapter 50 (*Hazardous Materials – General Provisions*),
29 and Chapter 57 (*Flammable and Combustible Liquids*).

30 **2312.8.2 Motor Vehicle Fluids.** Motor vehicle fluids shall be drained from
31 salvage vehicles when such fluids are leaking. Storage and handling of motor
32 vehicle fluids shall be done in an approved manner. Flammable and combustible
33 liquids shall be stored and handled in accordance with Section 2311 (*Repair*

1 Garages), Chapter 50 (*Hazardous Materials – General Provisions*), and Chapter
2 57 (*Flammable and Combustible Liquids*).

3 **2312.8.3 Mitigation for Vehicle Fluid Leaks.** Supplies or equipment capable of
4 mitigating leaks from fuel tanks, crankcases, brake systems and transmissions shall be
5 kept available on site. Single-use plugging, diking and absorbent materials shall be
6 disposed of as hazardous waste and removed from the site in a manner approved by
7 federal, state or local requirements.

8 **2312.8.4 Air Bag Systems.** Removed air bag systems shall be handled and stored in
9 accordance with Chapter 50 (*Hazardous Materials – General Provisions*).

10 **2312.8.5 Lead-acid Batteries.** Lead-acid batteries shall be removed from salvage
11 vehicles when such batteries are leaking. Lead-acid batteries that have been removed
12 from vehicles shall be stored in an approved manner.

13 **2312.8.6. Container Destruction.** Destruction of vehicle containers containing liquids or
14 gases defined as flammable or combustible by this code is prohibited unless the
15 containers are properly drained and the by-product stored or disposed of in accordance
16 with Chapter 50 (*Hazardous Materials – General Provisions*), are filled with an inert
17 material or purged, and at the time of destruction, have a vapor content less than 25
18 percent of the by-product's lower explosive limit or an oxygen content of less than 10
19 percent.

20 **2403.5 Mixing and Blending Area.** Mixing, blending, and similar operations involving
21 less than 10 gallons of Class I or Class II liquids, outside of a room approved for inside
22 use, dispensing and mixing in accordance with 5705.3.7, must be performed in an area
23 meeting the following requirements:

- 24 1. All electrical service within 10 feet of the mixing operations must meet the
25 Class I, Division II requirements of the Electrical Code.
- 26 2. Ventilation for the area must be adequate to maintain flammable vapors
27 under 25 percent of the lower explosive limit of the most volatile material in
28 use. A line of site partition of one-hour construction must separate the
29 mixing and blending operations from other spray finishing operations and
30 flammable liquids storage.

31 **3103.5 Use periods.** Temporary tents, air supported, air-inflated or tensioned membrane
32 structures of any size that are independent of and separated by at least 20 feet (6096 mm)
33 from any building as specified in Section 2403.8.2 shall not be erected for a period of
34 more than 180 days within a 12-month period on a single premises. Temporary tents, air
35 supported, air-inflated or tensioned membrane structures of any size that are in any way

1 attached to or within 20 feet (6096 mm) of a building shall not be issued a permit for a
2 continuous period of more than 30 days or for a total of more than 90 days within a 12-
3 month period on a single premises. Tents, air supported, air-inflated or tensioned
4 membrane structures used for periods exceeding these limits shall be considered
5 buildings or structures regulated by the Building Code and shall be required to be erected
6 under a building permit and obtain a certificate of occupancy.

7 **3103.8.2 Location.** Tents or membrane structures shall not be located within 20 feet
8 (6096 mm) of lot lines, buildings, other tents or membrane structures, parked vehicles or
9 internal combustion engines. For the purpose of determining required distances, support
10 ropes and guy wires shall be considered as part of the temporary membrane structure, or
11 tent.

12 **Exceptions:**

- 13 1. Separation distance between membrane structures and tents not used for
14 cooking, is not required when the aggregate floor area does not exceed
15 15,000 square feet (1394 m²).
- 16 2. Membrane structures or tents need not be separated from buildings when all
17 of the following conditions are met:
 - 18 2.1. The aggregate floor area of the membrane structure or tent shall not
19 exceed 10,000 square feet (929 m²).
 - 20 2.2. The aggregate floor area and total height of the building and
21 membrane structure or tent shall not exceed the allowable floor area
22 or the allowable height, in stories or feet, including increases as
23 indicated in the Building Code.
 - 24 2.3. Required means of egress are provided for both the building and the
25 membrane structure or tent including travel distances.
 - 26 2.4. Fire apparatus access roads are provided in accordance with Section
27 503.
 - 28 2.5. Occupant load is, for the purposes of complying with Chapters 9 and
29 10 of the Building Code and Fire Code, based on the aggregate of the
30 building floor area and the area under the membrane structure or tent.

31 **5001.1.2 Purpose.** This chapter regulates the handling and storage of hazardous materials
32 in aboveground storage facilities. Underground storage facilities are regulated by Chapter
33 6-2 (*Hazardous Materials*).

1 **5001.2 Material classification.** Hazardous materials are those chemicals or substances
2 defined as such in this code. Definitions of hazardous materials shall apply to all
3 hazardous materials, including those materials regulated elsewhere in this code.
4 Appendix E contains descriptions and examples of materials included in hazard
5 categories.

6 **5001.2.3 Radioactive Materials.** Storage of radioactive materials shall be in
7 accordance with the provisions set forth by the Texas Department of State Health
8 Services, Radiation Control Program.

9 **5001.5 Permits.** No person, firm, or corporation may store, dispense, use, or handle
10 hazardous materials in more than the quantities named in Section 105.6 unless a valid
11 permit has been issued under this chapter.

12 When required by the fire chief, permit holders shall apply for approval to permanently
13 close a storage, use or handling facility. Such application shall be submitted at least 30
14 days prior to the termination of the storage, use or handling of hazardous materials. The
15 fire chief is authorized to require that the application be accompanied by an approved
16 facility closure plan in accordance with Section 5001.6.3.

17 **5001.5.1 Hazardous Materials Management Plan.** Where required by the fire
18 chief, an application for a permit shall include a Hazardous Materials Management
19 Plan (HMMP). The HMMP shall include a facility site plan clearly designating the
20 following:

- 21 1. locations of and access to each storage and use area;
- 22 2. maximum amount of each material stored or used in each area and the range
23 of container sizes used;
- 24 3. location of emergency equipment, including emergency isolation and
25 mitigation valves and devices, and product conveying piping containing
26 liquids or gases, other than utility-owned fuel gas lines and low-pressure fuel
27 gas lines. The normal position of valves (on/off or open/closed) shall be
28 provided for position indicating valves;
- 29 4. location where liaison will meet emergency responders;
- 30 5. facility evacuation meeting point locations;
- 31 6. the general purpose of other areas within the building;
- 32 7. storage plan showing the intended storage arrangement, including the
33 location and dimensions of aisles, the location of all aboveground and

1 underground tanks and their appurtenances including, but not limited to,
2 sumps, vaults, below-grade treatment systems and piping;

- 3 7. the hazard classes in each area;
- 4 8. locations of all control areas and Group H occupancies; and
- 5 9. emergency exits.

6 The plans shall be legible and drawn approximately to scale. Separate distribution
7 systems are allowed to be shown on separate pages.

8 **5001.5.2 Hazardous Materials Inventory Statement (HMIS).** Where required by
9 the fire chief, an application for a permit shall include an HMIS, such as Superfund
10 Amendments and Reauthorization Act of 1986 (SARA) Title III, Tier II Report or
11 other approved statement. The HMIS shall include the following information:

- 12 1. manufacturer's name;
- 13 2. chemical names, product or trade names, hazardous ingredients;
- 14 3. United Nations (UN), North America (NA) and the Chemical Abstract
15 Service (CAS) identification number (as applicable and as available);
- 16 4. maximum quantities stored or used on-site at one time, including amounts in
17 use-closed systems and amounts in use-open systems;
- 18 5. location where stored or used;
- 19 6. container sizes; and
- 20 7. hazard classifications including the NFPA 704 rating of each chemical.

21 **5001.7 Permit Procedure.** A hazardous materials permit shall be granted after:

- 22 1. The applicant has filed with the Fire Department a completed hazardous
23 materials permit application, in accordance with Section 5001.5 and this
24 section; and
- 25 2. The applicant has paid the application fee set by separate ordinance.

26 **5001.7.1 Application.** A Hazardous Materials Permit Application shall include the
27 following:

1. general information including the name, address, and telephone number of the facility, the number of employees, hours of operation, and a name and emergency telephone number of the primary emergency contact person;
2. an HMMP in accordance with Section 5001.5.1 which includes a facility site plan and a storage map, which shall identify the location of hazardous materials storage areas, and access to the materials; and
3. a Hazardous Materials Inventory Statement (HMIS) in accordance with Section 5001.5.2.

5001.7.1.1 The facility site plan required in Section 5001.5.1 may be omitted from applications when, in the opinion of the fire chief, the plan will not provide additional information necessary to prevent an actual or potential hazard to the public health, safety, or welfare (including the health, safety, or welfare of firefighters) or to facilitate the fire department's response in the event of an emergency involving hazardous materials at the facility.

5001.7.2 Permit Required. No person, firm, or corporation may install, repair, abandon, remove, place temporarily out of service, close, or substantially modify a storage facility or other area required to be permitted under this chapter without a permit. Section 5001.6.3 also applies.

Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.
3. Registered Industrial Plants may perform work in accordance with the provisions of the Building Code and rules governing the facilities.

Permit holders shall apply for approval to close bulk storage, use, or handling facility at least 30 days before the termination of the storage, use, or handling of hazardous materials. The applicant shall include any change or alteration of the facility closure plan filed under Section 5001.6.3 of this chapter. This 30 day period may be waived by the chief.

5001.7.3 Permit Effective Date. The fire department shall grant or deny a permit application no later than 60 days after receipt of the completed application. The Department will provide written confirmation to the applicant demonstrating

1 receipt of the application within 30 days of receipt of the application. If the
2 department fails to grant or deny the permit within 60 days, the permit is
3 considered to be issued and in effect. The fire department may inspect the business
4 for satisfactory storage and use of hazardous materials. The operation of a facility
5 under a permit issued before inspection constitutes the permission of the facility
6 owner/operator for the chief to enter on the facility for the purpose of conducting
7 the required inspection. Refusal to allow the inspection shall constitute a prima
8 facie cause to revoke the permit under Section 105.6.

9 **5001.7.4 Permit Term and Renewal.** A permit is granted for a term of three years
10 from the date of issuance. Permits may be renewed every three years on the
11 anniversary of permit issuance. At the discretion of the fire chief, a permit may be
12 issued for a shorter period. The fee assessed for the permits shall be prorated for
13 the appropriate time. If a permit is issued for a shorter period at the request of the
14 applicant, an additional handling fee may be assessed, not to exceed the actual cost
15 of clerical processing time.

16 **5001.7.5 Annexation Procedure.** A facility brought under regulation by this
17 chapter through annexation shall file a permit application with the fire department
18 no later than 90 days after the effective date of annexation. The department shall
19 grant or deny a permit application submitted under this subsection no later than six
20 months after receipt of the completed application. If the department fails to grant
21 or deny the permit within the period, the permit is considered to be issued and in
22 effect. The fire department shall inspect the business for satisfactory storage or use
23 of hazardous materials. The operation of a facility under a permit issued before
24 inspection constitutes the permission of the facility owner/operator for the fire
25 chief to enter on the facility for the purpose of conducting the required inspection.
26 Refusal to allow the inspection shall constitute a prima facie cause to revoke the
27 permit under Section 105.5 (*Revocation*).

28 **5001.7.6 Permit Denial.** If the fire department denies a permit, the department
29 shall notify the applicant in writing of the action. The notification must include a
30 statement of the department's reasons for the action.

31 **5001.7.7 Transfer.** A permit may be transferred to a new owner or operator of a
32 business at the same location if the new owner or operator by letter to the fire
33 department accepts responsibility for all obligations under this chapter at the time
34 of the transfer of the business. All permit transfers are subject to the approval of
35 the fire chief.

1 **5001.7.8 Fees.** No permit may be granted, renewed or continued in effect until the
2 fee set by separate ordinance has been paid. The fee shall be paid at the time an
3 application is filed.

4 **5001.7.9 Amendment.** Any information required to be submitted by this chapter
5 shall be amended or supplemented no later than 30 days after the occurrence of an
6 event that would render the information inaccurate. Unless the change(s) would
7 affect the ability of emergency response personnel to safely respond to an
8 emergency, an amendment or supplement is not required to record:

- 9 1. minor changes in the quantities of hazardous materials stored;
- 10 2. the temporary storage of hazardous materials at the facility; or
- 11 3. a temporary change of hazardous materials storage location.

12 **5002.1 Supplemental Definitions.** The definitions in the 2015 Fire Code are adopted as
13 published except that supplemental definitions are added or amended. The following
14 supplemental definitions are defined in Section 202.1.1. For the purposes of this chapter
15 and as used elsewhere in this code, these definitions shall have the meanings shown in
16 Section 202.1.1.

17 **BULK STORAGE.**

18 **PERMANENT STORAGE.**

19 **PERMIT.**

20 **PROCESS VESSEL.** A container, including the associated piping, used or designed to
21 be used to contain or promote a chemical or physical reaction.

22 **Table 5003.1.1(1) Footnote i**

- 23 i. The maximum allowable quantity for fuel oil storage may be increased in
24 accordance with Section 606.3.2.

25 **5003.2.4.3 Indoor Tank Filling.** Aboveground stationary tanks used for the indoor
26 storage of hazardous materials shall be filled using one of the liquid transfer methods in
27 Section 5005.1.10. The transfer of hazardous materials to indoor stationary tanks from
28 tank vehicles shall be done from a liquid tight remote fill connection located outdoors.
29 Fill connections shall be not more than five feet above the finished ground level, in an
30 approved location in close proximity to the parked delivery vehicle. Connections shall be
31 five feet away from building openings. Such connections shall be closed and liquid tight
32 when not in use and shall be properly identified.

1 **5003.3.1.5 Responsibility for cleanup.** The person, firm or corporation responsible for
2 an unauthorized discharge shall institute and complete all actions necessary to remedy the
3 effects of such unauthorized discharge, whether sudden or gradual, at no cost to the
4 jurisdiction. When deemed necessary by the fire chief, cleanup may be initiated by the
5 fire department or by an authorized individual or firm. Costs associated with such
6 cleanup shall be borne by the owner, operator or other person responsible for the
7 unauthorized discharge. Such costs shall include but shall not be limited to:

- 8 1. chemical absorbent or adsorbent materials;
- 9 2. chemical neutralizers;
- 10 3. chemical resistant suits, gloves, or boots;
- 11 4. chemical containment drums;
- 12 5. vapor suppression foams;
- 13 6. containment tools;
- 14 7. chemical detection devices; and
- 15 8. personnel costs for incident related overtime activities.

16 **5003.9.8 Separation of incompatible materials.** Incompatible materials in storage and
17 storage of materials that are incompatible with materials in use shall be separated when
18 the stored materials are in containers having a capacity of more than five pounds (2 kg) or
19 0.5 gallon (2 L). Separation shall be accomplished by:

- 20 1. Segregating incompatible materials in storage by a distance of not less than
21 20 feet (6096 mm).

22 **Exception:** Segregation of less than exempt amounts of corrosive and
23 oxidizing materials, when such materials are necessary to maintain
24 swimming pools for Group R occupancies, may be accomplished by a
25 minimum separation of five feet (1524 mm).

- 26 2. Isolating incompatible materials in storage by a noncombustible partition
27 extending not less than 18 inches (457 mm) above and to the sides of the
28 stored material.
- 29 3. Storing liquid and solid materials in hazardous material storage cabinets.
- 30 4. Storing compressed gases in gas cabinets or exhausted enclosures in
31 accordance with Sections 5003.8.5 and 5003.8.6. Materials that are
32 incompatible shall not be stored within the same cabinet or exhausted
33 enclosure.

34 **5004.2 Spill control and secondary containment for liquid and solid hazardous**
35 **materials.**Tanks, rooms, buildings or areas used for the storage of liquid or solid

1 hazardous materials shall be provided with spill control and secondary containment in
2 accordance with Sections 5004.2.1 through 5004.2.3.

3 **Exceptions:**

- 4 1. Outdoor storage of containers on approved containment pallets in
5 accordance with Section 5004.2.3.
- 6 2. Liquids that are a gas at NTP.

7 **5004.2.1 Spill control for hazardous material liquids.** Tanks, rooms, buildings or areas
8 used for the storage of hazardous material liquids in excess of the lesser of the maximum
9 allowable quantities established by Tables 5003.1.1(1) and 5003.1.1(2) or limits
10 specifically set in Chapters 51 through 67 shall be provided with spill control to prevent
11 the flow of liquids to adjoining areas. Floors in indoor locations and similar surfaces in
12 outdoor locations shall be constructed to contain a spill from the largest single vessel by
13 one of the following methods:

- 14 1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in
15 outdoor locations.
- 16 2. Liquid-tight floors in indoor locations or similar areas in outdoor locations
17 provided with liquid-tight raised or recessed sills or dikes.
- 18 3. Sumps and collection systems.
- 19 4. Other approved engineered systems.

20 Except for surfacing, the floors, sills, dikes, sumps and collection systems shall be
21 constructed of noncombustible material, and the liquid-tight seal shall be compatible with
22 the material stored. When liquid-tight sills or dikes are provided, they are not required at
23 perimeter openings having an open-grate trench across the opening that connects to an
24 approved collection system.

25 **5004.2.2 Secondary containment for hazardous material liquids and solids.** Where
26 required by Table 5004.2.2 tanks, buildings, rooms or areas used for the storage of
27 hazardous materials liquids or solids shall be provided with secondary containment in
28 accordance with this section when the quantity of materials exceeds the maximum
29 allowable quantity as established by Tables 5003.1.1(1) and 5003.1.1(2) or limits
30 specifically set in Chapters 51 through 67.

31 **5004.2.2.1 Containment and drainage methods.** The tank, building, room or area shall
32 contain or drain the hazardous materials and fire protection water through the use of one
33 of the following methods:

1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in outdoor locations.
2. Liquid-tight floors in indoor locations or similar areas in outdoor locations provided with liquid-tight raised or recessed sills or dikes.
3. Sumps and collection systems.
4. Drainage systems leading to an approved location.
5. Other approved engineered systems.

5004.2.2.2 Incompatible materials. Incompatible materials used in open systems shall be separated from each other in the secondary containment system. Incompatible materials are allowed to be combined when they have been rendered acceptable by an approved means for discharge into the public sewer.

5004.2.2.5 Monitoring. An approved monitoring method shall be provided to detect hazardous materials in the secondary containment system. The monitoring method is allowed to be visual inspection of the primary or secondary containment, or other approved means. Where secondary containment is subject to the intrusion of water, a monitoring method for detecting water shall be provided. Where monitoring devices are provided, they shall be connected to an approved visual or audible alarm.

Leak-detecting devices must be tested annually by the owner or occupant of the property on which the devices are located. Test results shall be maintained on the premises and be available to the fire chief on request.

5004.2.2.6 Drainage system design. Drainage systems shall be in accordance with the Plumbing Code and all of the following:

1. The slope of floors to drains in indoor locations, or similar areas in outdoor locations shall not be less than 1 percent.
2. Drains from indoor storage areas shall be sized to carry the volume of the fire protection water as determined by the design density discharged from the automatic fire-extinguishing system over the minimum required system design area or area of the room or area in which the storage is located, whichever is smaller.
3. Drains from outdoor storage areas shall be sized to carry the volume of the fire flow and the volume of a 24-hour rainfall as determined by a 25-year storm.
4. Materials of construction for drainage systems shall be compatible with the materials stored.

- 1 5. Incompatible materials used in open systems shall be separated from each
2 other in the drainage system. Incompatible materials are allowed to be
3 combined when they have been rendered acceptable by an approved means
4 for discharge into the public sewer.
- 5 6. Drains, including overflow from secondary containment, shall terminate in
6 an approved location away from buildings, valves, means of egress, fire
7 access roadways, adjoining property storm drains, waterways and critical
8 environmental features (CEF's). Tanks shall be set back at 150 feet (45,720
9 mm) from any recognized waterway or CEF.

10 **5005.1.8.1** Gas cabinets, exhausted enclosures, and exhaust ducts with a cross sectional
11 dimension of 10 inches or greater shall be internally sprinklered.

12 **5306.2 Interior supply location.** Medical gases shall be stored in areas dedicated to the
13 storage of such gases without other storage or uses. Where containers of medical gases in
14 quantities greater than 300 ft³ (8.5 m³) and less than 1500 ft³ (42.5 m³) are located inside
15 buildings, they shall be in a 1-hour exterior room, a 1-hour interior room or a gas cabinet
16 in accordance with Section 5306.2.1, 5306.2.2, or 5306.2.3, respectively. Where
17 containers of medical gases in excess of 1500 ft³ (42.5 m³) and less than 3,000 ft³ (85 m³)
18 are located inside a building, they shall be protected by a local application fire sprinkler
19 system in addition to the room or cabinet enclosure required by 5306.2.1, 5306.2.2 or
20 5306.2.3. Rooms or areas where medical gases are stored or used in quantities exceeding
21 3000 ft³ (85 m³) per control area shall be in accordance with the Building Code for high-
22 hazard Group H occupancies.

23 **5306.2.1 One-hour exterior rooms.** A 1-hour exterior room shall be a room or enclosure
24 separated from the remainder of the building by fire barriers constructed in accordance
25 with Section 707 of the Building Code or horizontal assemblies constructed in
26 accordance with Section 711 of the Building Code, or both, with a fire-resistance rating
27 of not less than 1 hour. Openings between the room or enclosure and interior spaces shall
28 be self-closing smoke- and draft-control assemblies having a fire protection rating of not
29 less than 1 hour. Rooms shall have at least one exterior wall that is provided with at least
30 two vents. Each vent shall not be less than 72 square inches (0.046 m²) in area. One vent
31 shall be within 12 inches (304.8 mm) of the floor and one shall be within 12 inches
32 (304.8 mm) of the ceiling. Rooms containing medical gases in excess of 1500 ft³ (42.5
33 m³) and less than 3,000 ft³ (85 m³) shall be provided with at least one local application
34 automatic sprinkler to provide container cooling in case of fire.

35 **5306.2.2 One-hour interior room.** When an exterior wall cannot be provided for the
36 room, the room shall be exhausted through a duct to the exterior. Supply and exhaust
37 ducts shall be enclosed in a 1-hour-rated shaft enclosure from the room to the exterior.

1 Approved mechanical ventilation shall comply with the Mechanical Code and be
2 provided at a minimum rate of 1 cubic foot per minute per square foot [$0.00508 \text{ m}^3/(\text{s} \times$
3 $\text{m}^2)$] of the area of the room. Rooms containing medical gases in excess of 1500 ft^3 (42.5
4 m^3) and less than $3,000 \text{ ft}^3$ (85 m^3) shall be provided with at least one local application
5 automatic sprinkler to provide container cooling in case of fire.

6 **5306.2.3 Gas cabinets.** Gas cabinets shall be constructed in accordance with Section
7 5003.8.6 and the following:

- 8 1. The average velocity of ventilation at the face of access ports or windows
9 shall not be less than 200 feet per minute (61 m/s) with a minimum of 150
10 feet per minute (46 m/s) at any point of the access port or window.
- 11 2. Connected to a ducted exhaust system with exhaust ducts enclosed in a 1-
12 hour shaft enclosure to the exterior.
- 13 3. Internally sprinklered when the quantity of medical gases exceeds 1500 ft^3
14 (42.5 m^3).

15 **5306.3 Exterior supply locations.** Oxidizer medical gas systems located on the exterior
16 of a building shall be located in accordance with Section 6304.2.1.

17 **5404.2 Outdoor storage.** Outdoor storage of corrosive materials shall be in accordance
18 with Sections 5001, 5003, 5004 and this chapter.

19 **Exception:** Up to 10 gallons of corrosive liquids may be stored outside of
20 buildings without spill control, drainage, and secondary containment provided:

- 21 1. The volume of individual containers is less than five gallons;
- 22 2. The containers are constructed of metal or plastic; and
- 23 3. The containers are located a minimum of 10 feet from property lines, exit
24 openings, and storm water drains.

25 **5404.2.1 Above-ground outside storage tanks.** Above-ground outside storage tanks of
26 corrosive liquids shall be provided with secondary containment in accordance with
27 Section 5004.2.2.

28 **5504.3.1.1 Stationary Containers.** Stationary containers shall be separated from
29 exposure hazards in accordance with the provisions applicable to the type of fluid
30 contained and the minimum separation distance indicated in Table 5504.3.1.1. Storage of
31 flammable cryogenic fluids, including liquefied natural gas (LNG), in aggregate

1 quantities exceeding 15,000 gallon (56,781 L) water capacity is prohibited outside of a
2 light industry (LI) zoning district except as provided in this section.

3 The placement of aboveground or below ground containers of flammable cryogenic
4 fluids, including liquefied natural gas (LNG), in aggregate quantities exceeding 15,000
5 gallon water (56,781 L) capacity may be considered for other locations on a case-by-case
6 basis provided zoning issues, secondary containment, and fire exposures are satisfactorily
7 addressed including the identification of hazard ratings in accordance with Appendix F.
8 Where the nearest off-site exposure(s) is(are) less than 500 feet (152.4 m) from the
9 container(s) the placement may be permitted outside of a light industry (LI) zoning
10 district by the fire chief only after notification of owners/occupants of properties within
11 500 feet (152.4 m), requesting their input in order to assess the potential effect on the
12 community. Notice to adjacent property owners shall be accomplished in accordance with
13 the established procedures outlined in the Title 25 (*Land Development*) for notice of
14 applications and administrative actions or decisions.

15 **5601.2.4 Financial responsibility.** Before a permit is issued, as required by Section
16 5601.2, the applicant shall file with the Austin Fire Department a public liability
17 insurance policy in the principal sum of \$1,000,000 for personal injuries and \$500,000
18 for property damage. The policy shall be current and shall name the City of Austin as an
19 additional insured for the purpose of the payment of all damages to persons or property
20 which arise from, or are caused by, the conduct of any act authorized by the permit upon
21 which any judicial judgment results. The fire chief is authorized to specify a greater or
22 lesser amount when, in his or her opinion, conditions at the location of use indicate a
23 greater or lesser amount is required. Government entities shall be exempt from this bond
24 requirement.

25 **5601.2.5 Permit Denial.** When in the opinion of the fire chief there is a substantial
26 danger to life, health, or property in the immediate area exposed to the blasting, fireworks
27 display or use of pyrotechnic materials for which a permit is being requested, the request
28 shall be denied.

29 **5601.2.6 License Required.** The fire chief may in the interest of public safety require
30 that the persons engaged in the use of explosives meet specific licensing requirements
31 (See Section 5601.9) as a condition of the permit.

32 **5601.2.7 Permit Application.** To obtain a permit the licensed blaster must file with the
33 fire chief an application in writing on a form to be furnished by the fire chief. Each
34 application must describe the proposed work, the location of the work, and the other
35 pertinent information as may be required.

1 **5601.2.8 Permit Review.** The fire chief may require written comments on each permit
2 application from the various affected City departments. When in the opinion of the fire
3 chief the departments have a valid objection to the issuance of a permit, no permit may be
4 approved until the objection has been resolved to the satisfaction of the fire chief.

5 **5601.2.9 Permit Fees.** Permits authorized by the provisions of Section 5601.2 may be
6 issued only on payment of the appropriate fee, which is set by separate ordinance. City
7 departments are not required to pay permit fees when engaged in the work described in
8 this section.

9 **5601.4 Qualifications.** Persons in charge of magazines, blasting, fireworks display, or
10 pyrotechnic special effect operations shall not be under the influence of alcohol or drugs
11 which impair sensory or motor skills, shall be at least 21 years of age, and shall
12 demonstrate knowledge of all safety precautions related to the storage, handling or use of
13 explosives, explosive materials or fireworks. Persons actively involved in or responsible
14 for blasting, fireworks displays, or the production of pyrotechnic special effects or
15 displays shall meet all applicable federal, state and local license requirements for the
16 work or activity being performed.

17 **5601.9. Blasting Licenses.**

18 **5601.9.1. General.** No person may engage in the use of explosive material within
19 the City unless that person is licensed under this section or is under the direct
20 supervision of a person licensed under this section.

21 **5601.9.2.** No person may engage in the use of explosive material within the City
22 unless that person meets the specific license requirements of the blasting permit
23 granted by Section 5601.2, or be under the direct supervision of a person so
24 licensed.

25 **5601.9.3.** A license issued under this section is valid for a period of one year.

26 **5601.9.4.** A license may be renewed each year on presentation of credible
27 documentary proof that the license holder has been actively engaged in blasting
28 operations in the preceding year.

29 **5601.9.5.** The license application fee and license application renewal fee are set by
30 separate ordinance.

31 **5601.9.6.** No license may be assigned or transferred.

32 **5601.9.7.** After taking the Class "S" examination, a person holding a current Class
33 "B" license may convert it to a Class "S" license at any time without payment of

1 fee. A Class "B" license holder may convert to a Class "S" license at renewal time.
2 The fee for this conversion will be the set Class "S" renewal fee.

3 **5601.9.8.** If an applicant for a blasting license fails to pass the examination, the
4 applicant is not eligible for re-examination for a period of 30 days. If an applicant
5 fails to pass the examination at any subsequent time, the applicant is not eligible
6 for another examination for a period of six months following the failure. Another
7 license application fee must be paid for each test after the third test administered.

8 **5601.9.9.** A Class "C" license holder may not be named on a blasting permit as the
9 responsible blaster except on a permit for blasting operations involving
10 uninhabited areas. An uninhabited area is a point without a person, animal,
11 structure, or road within a distance of 500 feet.

12 **5601.9.10.** A Class "S" license holder is restricted to blasting operations involving
13 swimming pools and septic systems.

14 **5601.9.11.** Class "B" and Class "C" license holders are restricted from blasting
15 operations involving swimming pools and septic systems unless a Class "S" release
16 is attached to their license. To obtain a Class "S" release, a Class "B" or Class "C"
17 license holder must pass the Class "S" blaster's examination.

18 **5601.9.12.** All work performed by persons licensed under this section must be
19 done in strict compliance with all federal and state laws and City ordinances.
20 Violation of any law or ordinance will be cause for the fire chief to revoke or
21 suspend a license granted under this article. Whenever the fire chief believes that
22 any grounds for revocation or suspension of a license exist, he shall give written
23 notice to the holder of the license. The fire chief will hold a hearing at which the
24 license holder may appear either personally or by representative and present
25 evidence and make statements. If the fire chief's decision is to revoke or suspend
26 the license, the holder may appeal in accordance with Section 103.1.4 of this code.

27 **5601.9.13.** The fire chief may stop blasting operations in the interest of public
28 health or safety. In addition, the fire chief may seize, take, remove or cause to be
29 removed at the expense of the owner, explosive materials offered or exposed for
30 sale, stored, possessed, used, or transported in violation of this code.

31 **5601.10 Blaster Classifications and Requirements.**

32 **5601.10.1. General Requirements for All License Classes.** Applicant must:

- 33 1. Be at least 21 years of age;

- 1 2. Be in adequate physical and mental condition to perform the work required;
- 2 3. Achieve a passing score on a test appropriate to the license class desired;
- 3 4. Be able to understand and give written and oral directions in the English
- 4 language;
- 5 5. Not have been convicted of a felony or two or more misdemeanors within
- 6 two years preceding the date of application for license, containing
- 7 intoxication as an element of the offense.
- 8 6. Have a working knowledge of federal, state, and local laws and regulations
- 9 pertaining to explosive materials;
- 10 7. Have no revoked, suspended, or terminated blaster's license, or any criminal
- 11 action involving blasting activities pending in a federal, state, or municipal
- 12 court of law; and
- 13 8. Pay the license application fee set by separate ordinance

14 **5601.10.2.** In addition to the General Requirements, the applicant must satisfy the

15 following requirements for the class license indicated:

16 **5601.10.2.1. Class "A."**

- 17 1. Has held a Class "B" blaster's license from the City for at least the
- 18 preceding two years or the applicant has at least six years of
- 19 experience in the field of transporting, storing, handling, and using
- 20 explosive materials during the preceding 10 years, and submits
- 21 credible documentary proof of the experience, including references.
- 22 2. Be knowledgeable in designing blasting programs, in calculating
- 23 powder factors, and in the deployment and precise use of delay
- 24 blasting for all phases of construction.
- 25 3. Be capable of instructing others in the explosives field.

26 **5601.10.2.2. Class "B."** Has held a Class "C" blasters license from the City

27 for at least the preceding two years or has at least four years of experience in

28 the field of transporting, storing, handling, and using explosive materials

29 within the preceding eight years, and submits credible documentary proof of

30 the experience, including references.

1 **5601.10.2.3. Class "C."** Has at least two years of experience in the field of
2 transporting, storing, handling, and using explosive materials within the
3 preceding four years, and submits credible documentary proof of the
4 experience, including references.

5 **5601.10.2.4. Class "S."** Has held a Class "B" blasters license from the City
6 for at least the preceding two years or has at least four years of experience in
7 the field of transporting, storing, handling, and using explosive materials
8 within the preceding eight years, and submits credible documentary proof of
9 the experience, including references.

10 **5607.4.1** Prior written approval is required for blasting to be conducted on Sunday, legal
11 holidays, or between the hours of 5:00 p.m. and 8:00 a.m. on other days.

12 **5607.5 Notification.** All blasting operations must be preceded by a pre-blast notification
13 to the owners or managers of all affected premises. The range of the pre-blast
14 notification shall be at the discretion of the blaster or as required by the permit.
15 Whenever blasting is being conducted in the vicinity of utility lines or rights-of-way, the
16 blaster shall notify the appropriate representatives of the utilities at least 24 hours in
17 advance of blasting, specifying the location and intended time of such blasting. Verbal
18 notices shall be confirmed with written notice.

19 **Exception:** In an emergency situation, the time limit shall not apply when
20 approved.

21 **5607.11.1** Approved blasting machines must be used. All other equipment is prohibited.

22 **5607.12.1** Only blasting trunk wire of 18 gauge minimum may be used while conducting
23 blasting operations under permits.

24 **5607.16 Removal of lead wires.** All exposed blasting cap lead wires in the ground from
25 previous work shall be removed at the end of the work day.

26 **5607.17 Particle velocity limits.** Particle velocities may not exceed the safe levels
27 indicated in Table 5607-A, and in no case shall particle velocities exceed 1.7 inches per
28 second.

29 Monitoring of particle velocities for all blasting operations shall be carried out as
30 required in this section. When particle velocities exceed 0.5 inches per second, blast
31 frequencies shall also be monitored. Air overpressures shall not exceed the values of
32 Table 5607-B. Particle velocities, frequencies, or air overpressure in excess of the
33 prescribed limits named in this section shall require the immediate suspension of blasting

1 and initiation of corrective measures. The fire chief may grant or require deviations from
2 these limits as required to adequately protect the public safety.

3 **Table 5607-A**

Frequency (Hertz)	Maximum Peak Particle Velocity (inches per second)
Less (applied to quantity)*fewer than 2	0.2
2.00 - 2.99	0.3
3.00 - 3.99	0.4
4.00 - 19.99	0.7
20.00 - 29.99	1.0
More than 30	1.7

4 **Table 5607-B**

Lower Frequency Limit of the Measuring System	Maximum Air Blast Overpressure (Decibels)
0.1 Hertz, high pass system	134
2 Hertz, high pass system	133
5-6 Hertz, high pass system	129

5
6 **5607.18 Blast Monitoring.** A blast monitor, such as a seismic blast recording machine, is
7 required during all blasting operations for which a permit is issued by the City. Particle
8 velocity shall be recorded in three mutually perpendicular axes. The maximum particle
9 velocity shall be the maximum of any of the three axes. Blast monitoring shall be
10 performed by an independent company, experienced in planning and implementing blast
11 monitoring programs. The blast monitoring company shall prepare monitoring plans and
12 shall be responsible for ensuring that the monitor sensors are placed properly and that the
13 measuring and recording instruments function properly. The monitoring company shall

1 prepare blast monitoring reports. All monitoring reports shall carry the seal of an
2 engineer licensed in the State of Texas and shall be retained on file by the permit holder.
3 These reports shall be available to the City on request.

4 **Exception:** When, in the opinion of the fire chief, the damage to structures or
5 buildings due to blasting operations is unlikely, the requirements of this subsection
6 may be waived.

7 **5607.19 Detonating Cord.** Detonating cord may be used only when approved on the
8 blasting permit. Unauthorized use of detonating cord will result in revocation of the
9 blasting permit and the blaster's license.

10 **5607.20 Conditions of Approval.** The fire chief shall set other conditions for the
11 approval of the application that are necessary to adequately protect public health and
12 safety. These conditions may include, but are not limited to, the required class of license
13 for the responsible blaster, reduced allowable particle velocities, reduced allowable air
14 overpressure, additional monitoring, increased insurance protection, hours of operation,
15 type and amount of explosives used, and engineered blasting plans.

16 **5703.4 Spill Control, Drainage Control, and Secondary Containment.**

17 **5703.4.1 General.** Tanks, buildings, rooms, and areas used for storage, dispensing,
18 use, mixing, or handling of Class I, II, and III-A liquids shall be provided with a
19 means to control spillage and to contain or drain spillage and fire protection water
20 as set forth in Section 5004.2.

21 **Exception:** Up to 10 gallons of Class I, II, and III liquids may be stored
22 outside of buildings without spill control, drainage, and secondary
23 containment, provided:

- 24 1. The volume of individual containers is less than 5 gallons;
- 25 2. The containers are constructed of metal or plastic; and,
- 26 3. The containers are located a minimum of 10 feet from property
27 lines, exit openings, and storm water drains.

28 **5703.4.2 Spill Control.** When spill control is required, floors of rooms, buildings
29 or areas containing flammable or combustible liquids must be sloped; constructed
30 with sumps and collection systems; recessed a minimum of four inches (101.6
31 mm); provided with a liquid-tight, raised sill to a minimum height of four inches
32 (101.6 mm) to prevent the flow of liquids to adjoining areas; or otherwise
33 constructed to contain a spill from the largest single container or tank. The floor
34 and sill must be constructed of noncombustible material and must be liquid-tight.
35 The liquid-tight seal must be compatible with the material being stored. When

1 raised sills are provided, they are not required at perimeter openings that are
2 provided with an open-grate trench across the opening that connects to an
3 approved drainage control system.

4 **5703.4.3 Drainage Control.**

5 **5703.4.3.1 General.** When drainage control is required, rooms, buildings or
6 areas must be provided with a drainage system to direct the flow of liquids
7 to an approved location or treatment system, or be provided with secondary
8 containment for the flammable and combustible liquids and fire protection
9 water.

10 **5703.4.3.2 Sizing.** Drains shall be sized to carry the sprinkler system design
11 flow rate over the sprinkler system design area. The slope of drains may not
12 be less than one percent. The drains must be liquid-tight. Materials used to
13 construct drainage systems must be compatible with the stored materials.

14 **5703.4.3.3 Incompatible Materials.** Incompatible materials must be
15 separated from each other in drainage systems.

16 **Exception:** Incompatible materials are allowed to be combined when
17 they have been rendered acceptable for discharge by an approved
18 means into the public sewer.

19 **5703.4.3.4 Neutralizers and Treatment Systems.** Drainage systems for
20 spillage and fire-protection water which are directed to a neutralizer or
21 treatment system shall comply with the following:

- 22 1. The system must be designed to handle the maximum worst-case spill
23 from the single largest container plus the volume of fire protection
24 water from the system over the minimum design area for a water flow
25 duration of 20 minutes; and
- 26 2. Overflow control from the neutralizer or treatment system must direct
27 liquid leakage and fire protection water to a safe location away from
28 buildings, material, or fire-protection control valves, means of egress,
29 adjoining properties or fire apparatus access roadways.

30 **5703.4.4 Secondary Containment.** When secondary containment is required:

- 31 1. Drains must be directed to a containment system or other location designed
32 as secondary containment for flammable or combustible liquids and fire-
33 protection water; or

1 2. The room, building or area must be designed to provide secondary
2 containment of flammable and combustible liquids and fire-protection water
3 through the use of recessed floors or liquid-tight, raised sills.

4 **5703.4.4.1 Sizing of Indoor Containment.** Secondary containment must be
5 designed to retain the spill from the largest single container plus the design flow
6 rate of the sprinkler system for the area of the room or area in which the storage
7 is located or the sprinkler system design area, whichever is smaller. The
8 containment capacity must be capable of containing the water flow from a
9 discharge having a duration of 20 minutes.

10 **5703.4.4.2 Sizing of Outdoor Containment.** If the storage area is open to
11 rainfall, the secondary containment shall be designed to accommodate the
12 volume of the largest container or tank plus a 24-hour rainfall as determined by
13 a 25-year storm.

14 **Exception:** Listed tanks constructed with a integral method of secondary
15 containment.

16 **5703.4.4.3 Construction of Secondary Containment.** The floor and walls of
17 the secondary containment must be constructed of noncombustible material and
18 must be liquid-tight. The liquid-tight seal must be compatible with the material
19 being stored. In addition to these requirements, walls must be constructed in
20 accordance with Section 5004.2.

21 **5703.4.4.4 Overflow.** Overflow control from the secondary containment system
22 must direct liquid leakage and fire-protection water to a safe location away
23 from buildings, material or fire-protection control valves, means of egress, fire
24 apparatus access roadways, adjoining properties, storm drains, waterways, and
25 critical environmental features (CEFs). Tanks shall be set back at least 150 feet
26 from any recognized waterway or CEF.

27 **5703.4.4.5 Monitoring and Leak Detection.**

28 **5703.4.4.5.1 Method.** A monitoring method capable of detecting hazardous
29 material leakage from the primary containment into the secondary
30 containment must be provided. When visual inspection of the primary
31 containment is not practical, other approved means of monitoring are
32 allowed. When double walled tanks are used to provide secondary
33 containment for Class I and II liquids, automatic leak detection devices must
34 be provided. When secondary containment is subject to the intrusion of
35 water, a monitoring method for detecting the water must be provided. When
36 monitoring devices are provided, they must be connected to distinct visual or
37 audible alarms.

1 **5703.4.4.5.2 Testing.** Leak-detecting devices shall be tested annually by the
2 owner or occupant of the property on which they were located. Test results
3 shall be maintained on the premises and available to the fire chief on
4 request.

5 **5704.2.9.6.1 Locations where above-ground tanks are prohibited.** Storage of Class I
6 and II liquids in above-ground tanks outside of buildings is prohibited outside of a major
7 industry (MI) district.

8 **Exceptions:**

- 9 1. The storage of up to 12,000 gallons (45,425 L) of Class I and II liquids
10 within the limits defined as Light Industrial is allowable provided the tank is
11 listed and labeled “protected aboveground tank”, and is installed in
12 accordance with Section 5704.2.9.7 and its listing. The product shall be a
13 noncorrosive, nonreactive liquid having a specific gravity equal to or less
14 than one.
- 15 2. The storage of up to 1,100 gallons (4,164 L) of Class I and II liquids at
16 construction sites is allowed provided the tank is listed, labeled, and installed
17 in accordance with its listing.
- 18 3. The placement of aboveground storage tanks at other locations or of greater
19 capacity may be considered on a case-by-case basis provided zoning issues,
20 secondary containment, and fire exposures are satisfactorily addressed. The
21 placement of aboveground tanks of Class I and II liquids in aggregate
22 quantities exceeding 12,000 gallons (45,425 L) water capacity, where the
23 nearest off-site exposure(s) is (are) less than 500 feet (152.4 m) from the
24 tank(s), may be permitted by the fire chief only after notification of
25 owners/occupants of properties within 500 feet (152.4 m) requesting their
26 input in order to assess the potential effect on the community. Notice to
27 adjacent property owners shall be accomplished in accordance with the
28 established procedures outlined in the Title 25 (*Land Development*) for
29 notice of applications and administrative actions or decisions.

30 **5704.2.10 Drainage and diking.** The area surrounding a tank or group of tanks shall be
31 provided with drainage control or shall be diked to prevent accidental discharge of liquid
32 from endangering adjacent tanks, adjoining property, reaching waterways, or CEF’s.

33 **Exceptions:**

- 34 1. For tank installations having an aggregate volume of less than 50,000
35 gallons, the fire chief is authorized to alter or waive these requirements
36 based on a technical report which demonstrates that such tank or group of

1 tanks does not constitute a hazard to other tanks, waterways, CEF's, or
2 adjoining property, after consideration of special features such as
3 topographical conditions, nature of occupancy and proximity to buildings on
4 the same or adjacent property, capacity, and construction of proposed tanks
5 and character of liquids to be stored, and nature and quantity of private and
6 public fire protection provided.

- 7 2. Drainage control and diking is not required for listed secondary containment
8 tanks.

9 **5704.2.10.1 Volumetric capacity.** The volumetric capacity of the diked area shall
10 not be less than the greatest amount of liquid that can be released from the largest
11 tank within the diked area plus a 24-hour rainfall as determined by a 25-year storm.
12 The capacity of the diked area enclosing more than one tank shall be calculated by
13 deducting the volume of the tanks other than the largest tank below the height of
14 the dike.

15 **5704.2.11.1 Location.** Flammable and combustible liquid storage tanks located
16 underground shall be in accordance with all of the following:

- 17 1. Tanks shall be located with respect to existing foundations and supports such
18 that the loads carried by the latter cannot be transmitted to any portion of the
19 area excavated for the installation of the tank.
- 20 2. The distance from any part of an excavated area intended for the installation
21 of a tank for storing liquids to the nearest wall of a basement, pit, cellar, or
22 lot line shall not be less than five feet (1523 mm).
- 23 3. A minimum distance of two feet (610 mm), shell to shell, shall be
24 maintained between underground tanks.

25 **5704.2.11.2 Depth and cover.** Excavation for underground storage tanks shall be
26 made with due care to avoid undermining of foundations of existing structures.
27 Underground tanks shall be set on firm foundations and surrounded with at least
28 two feet (610 mm) of noncorrosive inert material, such as clean sand or pea gravel
29 well tamped in place or in accordance with the manufacturer's installation
30 instructions. Tanks shall be covered with a minimum of two feet (610 mm) of earth
31 or shall be covered by not less than one foot (305 mm) of earth, on top of which
32 shall be placed a slab of reinforced concrete not less than four inches (102 mm)
33 thick.

34 When underground tanks are, or are likely to be, subjected to traffic, they shall be
35 protected against damage from vehicles passing over them by at least three feet
36 (915 mm) of earth cover, or 18 inches (457 mm) of well-tamped earth plus six

1 inches (152 mm) of reinforced concrete, or eight inches (203 mm) of asphaltic
2 concrete. When asphaltic or reinforced concrete paving is used as part of the
3 protection, it shall extend at least two feet (610 mm) horizontally beyond the
4 outline of the tank in all directions.

5 For tanks built in accordance with Section 5704.2.7, the burial depth and the height
6 of the vent line shall be such that the static head imposed at the bottom of the tank
7 will not exceed 10 psig (68.9 kPa) if the fill or vent pipe is filled with liquid.

8 If the depth of cover exceeds seven feet (2134 mm) or the manufacturer's
9 specifications, reinforcements shall be provided in accordance with the tank
10 manufacturer's recommendations.

11 Nonmetallic underground tanks shall be installed in accordance with the
12 manufacturer's instructions. The minimum depth of cover shall be as specified
13 above in this section.

14 **5704.2.11.4.1 Inventory control.** Daily inventory records shall be maintained for
15 underground storage tank systems. Fill and withdrawal amounts shall be reconciled
16 monthly.

17 **5803.1.1 Special limitations for indoor storage and use.** Flammable gases shall not be
18 stored or used in Group A, E, I or R occupancies or in offices in Group B
19 occupancies.

20 **Exceptions.**

- 21 1. Cylinders of nonliquefied compressed gases not exceeding a capacity of
22 250 cubic feet (7.08 m³) or liquefied gases not exceeding a capacity of 40
23 pounds (18 kg) each at normal temperature and pressure (NTP) used for
24 maintenance purposes, patient care or operation of equipment.
- 25 2. Food service operations in accordance with Section 6103.2.1.7.

26 **6003.1.4.1 Floors.** In addition to the requirements set forth in Section 5004.12, floors of
27 storage shall be of liquid-tight construction.

28 **6101.2 Permits.** The requirements in this chapter for permits to store or use hazardous
29 materials within the City are applicable to a permit to store, use, handle, or dispense LP-
30 gas, or to install or maintain an LP-gas container.

31 Permits shall be required as set forth in Section 105.6. As noted in Section 105.6.21.7 of
32 these amendments, a permit is not required for non-commercial use at a single family
33 residence. However, the information concerning location and exposures, as outlined in
34 the Fire Protection Criteria Manual, shall be provided to the Fire Department by the
35 owner of the residence.

1 Where a single container is over 2,000 gallon (7571 L) or the aggregate capacity of
2 containers is over 4,000 gallon (15,142 L) water capacity, the installer shall submit plans
3 for the installation.

4 Distributors shall not fill an LP-gas container for which a permit is required unless a
5 permit for installation has been issued for that location by the fire chief.

6 **6103.2.1.2 Construction and temporary heating.** Portable LP-gas containers are
7 allowed to be used in buildings or areas of buildings undergoing construction or for
8 temporary heating as set forth in Sections 6.20.4, 6.20.5 and 6.20.8 of NFPA 58.

9 **6103.2.2 Industrial vehicles and floor maintenance machines.** LP-gas containers on
10 industrial vehicles and floor maintenance machines shall comply with Sections 11.14 and
11 11.15 of NFPA 58.

12 **6104.2 Maximum capacity within established limits.** The storage of LP-gas in
13 aggregate quantities greater than 2000 gallons (7571 L) water capacity is not permitted
14 within the city. The storage of LP-gas in aboveground or below ground containers,
15 greater than 24 gallons (91 L) water capacity and up to a maximum of 2000 gallons (7571
16 L) water capacity, is prohibited outside of Major Industry (MI) or Light Industry (LI)
17 districts. Location of containers within a Light Industry zoning district may be approved
18 by the fire chief, subject to zoning and fire exposure concerns being satisfactorily
19 addressed.

20 **Exceptions:**

- 21 1. The fire chief may approve the placement of aboveground or below ground
22 containers for single family residential, multi-family residential or
23 commercial occupancies on a case-by-case basis, provided the container and
24 appurtenances are listed and installed in accordance with that listing, and
25 issues such as zoning and fire exposures are satisfactorily addressed.
26 Guidance for evaluating locations for acceptability is published in the Fire
27 Protection Criteria Manual.
- 28 2. Where the nearest off-site exposure(s) is(are) less than 1,000 feet (304.8 m)
29 from the tank(s), the fire chief may approve the placement of aboveground
30 or below ground containers of LP-gas in aggregate quantities exceeding
31 2000 gallon water capacity only after notification of owners/occupants
32 within 1,000 feet (304.8 m) of the tank(s) to assess the potential effect on the
33 community. Notice to adjacent property owners and occupants shall be
34 accomplished in accordance with the established procedures outlined in the
35 Title 25 (*Land Development*) for notice of applications and administrative
36 actions or decisions, with the exception that notice shall be made to a
37 distance of 1000 feet (304.8 m).

1 **6104.3.2 Special hazards.** LP-gas containers shall also be located with respect to special
2 hazards including, but not limited to, above-ground flammable or combustible liquid
3 tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines as
4 specified in Section 6.4.1.1 of NFPA 58.

5 **6104.4 Multiple LP-gas container installations.** Multiple LP-gas container installations
6 with a total water storage capacity of more than 180,000 gallons (681 300 L) [150,000-
7 gallon (567 750 L) LP-gas capacity] shall be subdivided into groups containing not more
8 than 180,000 gallons (681 300 L) in each group. Such groups shall be separated by a
9 distance of not less than 50 feet (15 240 mm), unless the containers are protected in
10 accordance with one of the following:

- 11 1. Mounded in an approved manner.
- 12 2. Protected with approved insulation on areas that are subject to impingement of
13 ignited gas from pipelines or other leakage.
- 14 3. Protected by firewalls of approved construction.
- 15 4. Protected by an approved system for application of water as specified in Table
16 6.4.1.2 of NFPA 58.
- 17 5. Protected by other approved means.

18 Where one of these forms of protection is provided, the separation shall not be less than
19 25 feet (7620 mm) between LP-gas container groups.

20 **6107.2 Smoking and other sources of ignition.** “No Smoking” signs complying with
21 Section 310 shall be posted when required by the fire code official. Smoking within 25
22 feet (7620 mm) of a point of transfer, while filling operations are in progress at LP-gas
23 containers or vehicles, shall be prohibited.

24 Control of other sources of ignition shall comply with Chapter 3 of this code and Section
25 6.23 of NFPA 58.

26 **6108.1 General.** Fire protection shall be provided for installations having LP-gas storage
27 containers with a water capacity of more than 4,000 gallons (15,140 L), as required by
28 Section 6.27 of NFPA 58.

29 **6109.11.2 Construction.** The construction of such buildings and rooms shall comply
30 with requirements for Group H occupancies in the Building Code, Chapter 10 of NFPA
31 58 and both of the following:

- 32 1. Adequate vents shall be provided to the outside at both top and bottom, located at
33 least five feet (1524 mm) from building openings.
- 34 2. The entire area shall be classified for the purposes of ignition source control in
35 accordance with Section 6.23 of NFPA 58.

1 **6303.1.1.1.2.1** A maximum of 110 pounds (49.9 kg) of solid Class 3 oxidizer is allowed
 2 in nonresidential detached storage adjacent to Group R occupancies, when such materials
 3 are necessary for maintenance purposes associated with swimming pools. The oxidizers
 4 shall be stored in approved containers and in an approved manner.

5 **CHAPTER 80 REFERENCED STANDARDS**

6 This chapter lists the standards that are referenced in various sections of this document
 7 and the 2015 Fire Code. The standards within Chapter 80 of the published 2015 Fire
 8 Code and amended by the City of Austin are listed herein and in the published code by
 9 the promulgating agency of the standard, the standard identification, the effective date
 10 and title, and the section or sections of this document that reference the standard. The
 11 references specifically amended below replace the reference within the published code.
 12 All other references remain as published by the ICC. The application of the referenced
 13 standards shall be as specified in Section 102.7.

National Fire
 Protection Association
 Batterymarch Park
 Quincy, MA 02269

NFPA

Standard Reference Number	Title	Referenced In Code Section Number
13	2016 Installation of Sprinkler Systems	903.3.1.1, 903.3.2, 903.3.5.1.1, 903.3.8.2, 903.3.8.3.5, 904.11, 905.3.4, 907.6.3, 1009.3, 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	2016 Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.	903.3.1.3, 903.3.5.1.1
13R	2016 Installation of Sprinkler Systems in Residential	903.3.1.2, 903.3.5.2

Occupancies up to and Including Four Stories in Height.	903.3.5.1.2, 903.4
14 — 2016 Installation of Standpipe and Hose Systems	905.2, 905.4.2, 905.6.2, 905.8
30 — 2015 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, 5704.2.9.7.4, 5704.2.10.2, 5704.2.11.4, 5704.2.11.5.2, 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
58 — 2014 Liquefied Petroleum Gas Code	603.4.2.1.1, 2307.4, 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
72—2016 National Fire Alarm and Signaling Code	508.1.5, 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, 907.6, 907.6.1, 907.6.2, 907.6.5, 907.7, 907.7.1, 907.7.2, 907.8, 907.8.2, 907.8.5, 1103.3
1221 – 2016 Standard for the Installation, Maintenance and Use of Emergency Services Communication Systems, Chapters 1, 3, and 5 and Section 9.6 only.	907.2.13.2

B105.1 One- and two-family dwellings. The minimum fire-flow requirements for detached one- and two-family dwellings having a fire-flow calculation area which does not exceed 3,600 square feet (344.5 m²) and separated from adjacent homes and structures by at least 10 feet (3.05 m) shall be 1,000 gallons per minute (3785.4 L/min).

B105.1.1 The minimum fire-flow requirements one- and two-family dwellings, including townhomes, having a fire-flow calculation area which does not exceed 3,600 square feet (344.5 m²) and separated from adjacent homes and structures by less than 10 feet (3.05 m) shall be 1,500 gallons per minute (3785.4 L/min).

B105.1.2 Fire-flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet (344.5 m²) shall not be less than that specified in Table B105.1.

Exception: A reduction in required fire flow of 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system.

APPENDIX F HAZARDOUS MATERIALS, HAZARD RANKING

F101.2 General. The hazard rating of a material is required to be included in the hazardous materials inventory and shall be determined by evaluating the potential for harm and the relative toxicity of the material or mixture of materials as a whole. NFPA Standard 704, "Standard System for the Identification of the Fire Hazards of Materials", shall be used to the extent possible in identifying degree of hazard and is declared to be part of this code as if set forth in full in this section. MSDS's, published data (Irving Sax, etc.), Table F101.2, or Appendix E shall be used when NFPA 704-2012 does not apply or provides insufficient guidance, e.g. oxidizers. Sections 105.6.21 and 5001.2 also include applicable requirements.

As noted in Section 4.2 of NFPA 704, there could be specific reasons to alter the degree of hazard assigned to a specific material; for example, ignition temperature, flammable range or susceptibility of a container to rupture by an internal combustion explosion or to

1 metal failure while under pressure or because of heat from external fire. As a result, the
2 degree of hazard assigned for the same material can vary when assessed by different
3 people of equal competence.

4 The hazard rankings assigned to each class represent reasonable minimum hazard levels
5 for a given class based on the use of criteria established by NFPA 704. Specific cases of
6 use or storage may dictate the use of higher degrees of hazard in certain cases.

7 **PART 2.** The Council finds that

- 8 (1) additional fire protection measures may be needed in existing high-rise buildings
9 that do not include automatic sprinkler systems;
- 10 (2) the purpose of additional fire protection measures is to increase fire and life-safety
11 for occupants, fire department personnel, and the structures;
- 12 (3) whether an existing high-rise building requires additional fire protection measures
13 is based on the current use of the high-rise building and the current fire protection
14 systems; and
- 15 (4) property owners (or managers) and the Fire Chief need at least 12 months to
- 16 (a) determine whether a specific existing high-rise building requires additional
17 fire protection measures; and
- 18 (b) for those existing high-rise buildings that require additional fire protection
19 measures, find solutions that will provide additional fire protection.

20 Therefore, the Council directs the City Manager to bring an ordinance to Council by
21 January 31, 2019, that requires, as determined using the criteria in (3) and (4), additional
22 fire protection measures for existing high-rise buildings that are not required to bring fire
23 protection systems to current Fire Code requirements due to a change of use or remodel
24 of the structure.

25 **PART 3.** The Council finds that

- 26 (1) it is in the City's interest to adopt the 2015 Fire Code;
- 27 (2) Part 1 of this ordinance amended Sections 503.2.1 (*Dimensions and Exceptions*)
28 and 503.2.2 (*Authority*) of the 2015 Fire Code;
- 29 (3) the amendments in Part 1 are the same as the requirements in Ordinance No.
30 20130606-092; and
- 31 (4) the City Manager needs additional time to consider whether the existing road width
32 dimensions, the exceptions to road width dimensions, and the related fire chief
33 authority should be further amended.

