

1 **ORDINANCE NO.**

2 **AN ORDINANCE REPEALING AND REPLACING ARTICLE 7 OF CITY CODE**
3 **CHAPTER 25-12 TO ADOPT THE 2021 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, 2021 Edition, published by
11 the International Code Council (“2021 International Fire Code”), are adopted and
12 incorporated by reference into this section with the changes described in
13 Subsection (B) and amendments in Section 25-12-173 (*Local Amendments to the*
14 *2021 International Fire Code*).

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

101.1	102.7.1	102.7.2	103.1	103.2	103.3	104.1
104.1.1	104.7	104.10	104.11.2	104.13	105.3.1	105.5
105.5.5	105.5.9	105.5.11	105.5.16.1	105.5.16.2	105.5.16.3	105.5.17
105.5.18	105.5.22	105.5.23	105.5.24	105.5.29	105.5.34	105.5.36
105.5.39	105.5.40	105.5.41	105.5.42	105.5.43	105.5.44	105.5.45
105.5.46	105.5.47	105.5.48	105.5.49	105.5.50	105.5.51	105.5.52
105.6	105.6.1	105.6.2	106.1	106.2	106.2.1	106.2.4
107	108.2.3	111.1	112.3.2	112.3.3	112.3.3.1	112.3.4
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	409	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	505.1	505.3	505.3.1
507.4	507.5.1	508.1.6	510.1	510.1.1	510.1.2	609.2
611	901.6	Table 901.6.1		901.6.3	903.2.1.6	903.2.4.2
903.2.9.3	903.3.1.1.1	903.3.1.2.1	903.3.1.2.2	903.3.5	903.3.6	903.3.9
904.9	904.13	904.14	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	907.5.2.1.1	907.6.1.1	907.6.2.1
907.6.7	909.5	909.6.3	909.10.2	909.12.4	909.18	912.1
912.1.1	912.4	912.5.1	914.5.3	916.1	916.4	916.5
916.6	916.7	916.8	916.8	916.10	1001.1	1032.2
1103.4.1	1103.4.8	1103.4.9	1103.5.6	1103.6	1103.7.6	1103.8.3

1103.8.4	1103.9	1207.1.1	1207.1.2.1	1207.6	1207.1	1207.4.7
1207.5.3	1207.5.4	Table 1207.6		1207.6.2.3	1207.6.6	1207.9.1
2301.1	2304.1	2304.2	2305.1.3	2305.2.1	2305.5	2306.7.6.2
2312.1 to 2312.8.6		2403.5	2701.4	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)		5003.2.2.3	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
5005.1.12		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	5601.4
5607.4	5607.5	5607.11.1	5607.12.1	5607.14	5607.16	5607.17
5607.18	5608.2.3	5703.4.1 to 5703.4.4.5.2		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 to B105.1.2		Appendices F, M, M103.2, M103.3, M103.4, M103.5				

16 (C) The following definitions are deleted:

Group E Day Care	High-hazard Group H	Institution Group I-1	Institution Group I-2
Institution Group I-4	Group R-1	Group R-3 Care Facilities within a Dwelling	

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18 (D) The city clerk shall retain a copy of the 2021 International Fire Code with the
19 official ordinances of the City of Austin.

20 **§ 25-12-172 CITATIONS TO THE FIRE CODE.**

21 In the City Code, “Fire Code” means the 2021 Fire Code as adopted by Section 25-
22 12-171 (*International Fire Code*), and as amended by Section 25-12-173 (*Local*
23 *Amendments to the International Fire Code*).

24 **§ 25-12-173 LOCAL AMENDMENTS TO THE FIRE CODE.**

25 Each provision in this section is a substitute for the identically numbered provision
26 deleted by Section 25-12-171(B),(C) (*International Fire Code*) or is an addition to the
27 2021 Fire Code:

28 **[A]101.1 Title.** These regulations shall be known as the Fire Code and hereinafter
29 referred to as “this code.”

30 [A] **102.7.1 Conflicts.** In the event of a conflict between referenced provisions of the
31 International Mechanical Code and the Mechanical Code, the Mechanical Code prevails.
32 In the event of a conflict between referenced provisions of the International Plumbing
33 Code, the International Fuel Gas Code and the Plumbing Code, the Plumbing Code
34 prevails. Where differences occur between the provisions of the Fire Code and the
35 referenced standards, the provisions of the Fire Code prevail.

36 [A] **102.7.2 Provisions in referenced codes and standards.** Unless precedence is
37 specified by another ordinance of the City, where the extent of the reference to a
38 referenced code or standard includes subject matter that is within the scope of this code,
39 the provisions of this code, as applicable, shall take precedence over the provisions in the
40 referenced code or standard.

41 [A] SECTION 103 FIRE PREVENTION

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

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

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

53 [A] **104.1 General.** The fire chief is authorized to administer, implement, and enforce
54 the Fire Code; is authorized to render interpretations of the Fire Code; and to adopt
55 policies, procedures, rules and regulations in order to implement the Fire Code. An
56 interpretation rendered or a policy, procedure, rule, or regulation adopted by the fire
57 chief must comply with the intent and purpose of the Fire Code and cannot have the
58 effect of waiving a requirement of the Fire Code. Under the fire chief's direction, the
59 fire department is authorized to enforce all ordinances of the jurisdiction pertaining to:

- 60 1. the prevention of fires;
- 61 2. the suppression or extinguishment of dangerous or hazardous fires;
- 62 3. the storage, use and handling of hazardous materials;
- 63 4. the installation and maintenance of automatic, manual and other private
64 fire alarm systems and fire-extinguishing equipment;

- 65 5. the maintenance and regulation of fire escapes;
- 66 6. the maintenance of fire protection and the elimination of fire hazards on
67 land and in buildings, structures and other property, including those under
68 construction;
- 69 7. the maintenance of means of egress; and
- 70 8. the investigation of the cause, origin and circumstances of fire and
71 unauthorized releases of hazardous materials.

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

75 **[A] 104.10 Alternative materials and methods.** The provisions of the Fire Code are not
76 intended to prevent the installation of any material or to prohibit any method of
77 construction not specifically prescribed by the Fire Code, provided that any such
78 alternative has been approved. The fire chief is authorized to approve an alternative
79 material or method of construction where the fire chief finds that the proposed design is
80 satisfactory and complies with the intent of the provisions of the Fire Code, and that the
81 material, method or work offered is, for the purpose intended, at least the equivalent of
82 that prescribed in this code in quality, strength, effectiveness, fire resistance, durability
83 and safety. The owner, lessee, or a representative shall apply for approval of an alternate
84 material or method in writing, detailing the specifics of the alternate materials or methods
85 including evidence of equivalence with the prescribed requirements of the Fire Code. If
86 the alternative means or methods also involves matters regulated by the Building Code,
87 the alternative means or methods is also subject to the approval of the building official.

88 **[A] 104.13 Authority of the Chief.** The fire chief, or the fire chief's designee, may order
89 the evacuation of or cessation of its use or operation of any area, premises, building,
90 building under construction, or vehicle that is or is in imminent danger of becoming a fire
91 hazard, becoming a chemical exposure hazard, or becoming a life or health hazard as a
92 result of flooding or other dangerous condition.

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

98 **105.5 Required operational permits.** The fire code official may issue an operational
99 permit for an operation, practice, or function described in this section.

100 **105.5.2 Aerosol products, aerosol cooking spray products and plastic aerosol 3**
101 **products.** Not adopted.

102 **105.5.3 Amusement buildings.** Not adopted.

103 **105.5.4 Aviation facilities.** Not adopted.

104 **105.5.5 Carnivals and fairs.** An operational permit is required to conduct a carnival or
105 fair.

106 **105.5.6 Cellulose nitrate film.** Not adopted.

107 **105.5.7 Combustible dust-producing operations.** Not adopted.

108 **105.5.8 Combustible fibers.** Not adopted.

109 **105.5.9 Compressed gases.** An operational permit for compressed gases is required and
110 must comply with Section 105.6.21 (*Hazardous materials*).

111 **105.5.10 Covered and open mall buildings.** Not adopted.

112 **105.5.11 Cryogenic fluids.** An operational permit for cryogenic fluids is required and
113 must comply with Section 105.6.21 (*Hazardous materials*).

114 **105.5.12 Cutting and welding.** Not adopted.

115 **105.5.13 Dry Cleaning.** Not adopted.

116 **105.5.15 Exhibits and trade shows.** An operational permit is required to operate exhibits
117 and trade shows.

118 **105.5.16 Explosives.**

119 **105.5.16.1 Blasting.** An operational permit is required to use explosives or blasting
120 agents at an addressed location for a specified period, which is based on the class of
121 permit. Chapter 56 (*Explosives and fireworks*) establishes additional requirements for a
122 blasting operational permit.

123 1. Class A: 45 days

124 2. Class B: 120 days

125 3. Class C: 1 year

126 4. Class D: 10 days

127 **105.5.16.2 Explosives or Blasting Agents.** An operational permit is required for the
128 manufacture, storage, handling, sale, or use explosives, and explosive materials within
129 the scope of Chapter 56 (*Explosives and fireworks*).

130 **Exception:** Storage in Group R-3 occupancies of smokeless propellant, black
131 powder and small arms primers for personal use, not for resale and consistent with
132 Section 5606.

133 **105.5.15.3 Fireworks.** An operational permit is required to manufacture, store, handle,
134 sell, or use any quantity of fireworks or pyrotechnic special effects.

135 **105.5.17 Fire protection systems.** An annual operational permit is required for all fixed
136 fire protection systems in buildings and facilities, including but not limited to fire alarm
137 systems, fire sprinkler systems, commercial kitchen hood suppression systems, and
138 mechanical smoke control systems. A single permit is required for each building or
139 facility and must detail the types and locations of systems present. Inspections and testing
140 that complies with the City of Austin Fire Protection Criteria Manual and any other
141 applicable national standards is a condition of permit approval.

142 **105.5.18 Flammable and combustible liquids.** An operation permit for flammable and
143 combustible liquids is required and must comply with Section 105.5.22.2 (*Hazardous*
144 *materials*).

145 **105.5.19 Floor finishing.** Not adopted.

146 **105.5.20 Fruit and crop ripening.** Not adopted.

147 **105.5.21 Fumigation and insecticidal fogging.** Not adopted.

148 **105.5.22 Hazardous Materials.**

149 **105.5.22.1** An operational permit is required to use or possess hazardous materials
150 in a quantity in excess of that described in 105.6.21.2 below and meeting any one
151 of the following criteria:

152 **105.5.22.1.1** Materials with a toxicity rating of 2 or more, as defined in
153 Appendix F.

154 **105.5.22.1.2** Materials with a flammability rating of 2 or more, as defined in
155 Appendix F.

156 **105.5.22.1.3** Materials with an instability rating of 2 or more, as defined in
157 Appendix F.

158 **105.6.21.1.4** Compressed gases, liquefied compressed gases and cryogenic
159 fluids.

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

MINIMUM AGGREGATE QUANTITY

<u>Flammability</u>	<u>Rating</u>	<u>Quantity</u>
<u>4</u>	<u>Extreme</u>	<u>0.5 pounds or 5 gallons</u>
<u>3</u>	<u>High</u>	<u>12 pounds or 10 gallons</u>
<u>2</u>	<u>Moderate</u>	<u>60 pounds or 120 gallons</u>
<u>Toxicity</u>	<u>Rating</u>	<u>Quantity</u>
<u>4</u>	<u>Extreme</u>	<u>0.35 ounces or 0.3 fluid ounces</u>
<u>3</u>	<u>High</u>	<u>10 pounds or 1 gallon</u>
<u>2</u>	<u>Moderate</u>	<u>110 pounds or 55 gallons</u>
<u>Instability</u>	<u>Rating</u>	<u>Quantity</u>
<u>4</u>	<u>Extreme</u>	<u>0.35 ounces or 0.3 fluid ounces</u>
<u>3</u>	<u>High</u>	<u>10 pounds or 1 gallon</u>
<u>2</u>	<u>Moderate</u>	<u>110 pounds or 55 gallons</u>
<u>Carbon Dioxide System</u>		<u>101 pounds</u>
<u>Compressed gases and liquefied compressed gases</u>		<u>100 cubic feet @ NTP</u>
<u>Cryogenic fluids</u>		<u>1 gallon</u>
<u>Stationary and Mobile Energy Storage System (ESS)</u>		<u>Energy Capacity or Quantity</u>
<u>Capacitor ESS – nameplate rating</u>		<u>3 kWh</u>
<u>Flow batteries – nameplate rating</u>		<u>20 kWh</u>
<u>Lithium ion ESS – nameplate rating</u>		<u>20 kWh</u>
<u>Nickel metal hydride – nameplate rating</u>		<u>70 kWh</u>
<u>Other battery technologies – nameplate rating</u>		<u>10 kWh</u>
<u>Other electrochemical ESS technologies – nameplate rating</u>		<u>3 kWh</u>
<u>Stationary lead-acid batteries - flooded and valve regulated, and Nickel-Cadmium ESS. Mobile ESS utilizing lead acid battery technology are exempt.</u>		<u>15 gallons</u>

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

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105.5.22.4 The criteria for the rating of hazardous materials are contained in NFPA Standard No. 704 (See Appendix F). The fire chief uses NFPA Standard No. 704 to

171 assign hazard ratings to hazardous materials. If the NFPA Fire Protection Handbook
172 assigns a material a hazard rating, then that rating is used. When a rating is not provided,
173 the fire chief uses NFPA 704, information contained in Material Safety Data Sheets
174 (MSDS), Appendix E, or other commonly accepted published standards of nationally
175 recognized organizations/authors to classify hazardous materials.

176 **105.5.22.5** Compressed and liquefied gases and cryogenic fluids will be totaled on a
177 quantitative basis for each hazard class. The materials may be reported in pounds or
178 gallons but, for the purpose of regulation, are calculated in cubic feet by the Fire
179 Department.

180 **105.5.22.6** The state of a material (liquid, solid, gas) is based on its physical state at NTP.

181 **105.5.22.7 Materials not requiring a permit.** The following materials are not subject to
182 the permitting requirements:

183 **105.5.22.7.1** Inert gases that do not support combustion including argon, helium,
184 krypton, neon, xenon, compressed air, and nitrogen. When stored as cryogenic
185 fluids, these gases are subject to permitting requirements.

186 **105.5.22.7.2** Any material used or stored for household purposes at a private
187 residence.

188 **105.5.22.7.3** Any material contained in a transportation vehicle when the vehicle is
189 not being used for permanent storage.

190 **105.5.22.7.4** Commercial products used at a facility solely for janitorial purposes
191 and maintenance products that are necessary for the immediate, continued
192 operation of equipment at the facility (not to include fuels) and are not for resale.
193 This includes air conditioning refrigerant and pool chemicals when maintained in
194 quantities less than the following:

195 **TABLE 105.5.22.7.4 – 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

196 **105.5.22.7.5** Materials held solely as pharmaceutical products that are packaged
197 for distribution to, and use by, the general public, except for those materials with a
198 toxic or flammable hazard rating of 3 or more and reactive materials with a rating
199 of 2 or more, based on the criteria in the Fire Protection Manual.

200 **105.5.22.7.6** Any waste material regulated by the State of Texas under Chapter
201 361, Health and Safety Code, or under Federal regulations must be listed in a
202 permit application, but will not require a permit nor be considered in setting the
203 amount of the permit fee.

204 **105.5.22.7.7** Nuclear and radioactive material(s) regulated by the State of Texas
205 under Chapter 401, Health and Safety Code, or under Federal regulations must be
206 listed in a permit application, but will not require a permit nor be considered in
207 setting the amount of the permit fee.

208 **105.5.22.7.8** Any material contained in a process vessel, except when the process
209 vessel is being used for permanent storage.

210 **105.5.22.7.9** Any material stored in an underground tank that complies with the
211 permit requirements of the Development Services Department, or its successor
212 department, and with the reporting requirements of the U.S. Environmental
213 Protection Agency (EPA) Emergency Planning and Community Right-to-Know
214 Act (EPCRA), also known as Title III of the Superfund Amendments and
215 Reauthorization Act (SARA Title III), and if applicable, with the requirements of
216 the Texas Hazard Communication Act.

217 **105.5.22.7.10** Class II combustible liquids used to fuel emergency generators,
218 located outside of buildings, and in approved tanks or containers less than 275
219 gallons in size.

220 **105.5.22.7.11.** Carbon dioxide systems utilizing high pressure cylinders that are
221 not associated with beverage dispensing applications.

222 **105.5.23 HPM facilities.** HPM facilities, including Group H-5 occupancies are required
223 to obtain a hazardous materials permit and must comply with Section 105.6.21.

224 **105.5.24 High-piled storage.** A triennial operational permit is required to use a building
225 or portion thereof as a high-piled storage area that exceeds 500 square feet (46m²).

226 **105.5.25 Hot work.** Not adopted.

227 **105.5.26 Industrial ovens.** Not adopted.

228 **105.5.27 Lumber yards and woodworking plants.** Not adopted.

229 **105.5.28 Liquid- or gas-fueled vehicles in assembly buildings.** Not adopted.

230 **105.5.29 LP-Gas.** An operational permit is required for liquefied petroleum gas and must
231 comply with Section 105.6.21 (Hazardous materials).

232 **105.5.30 Magnesium.** Not adopted.

233 **105.5.31 Miscellaneous combustible storage.** Not adopted.

234 **105.5.33 Motor fuel-dispensing facilities.** Not adopted.

235 **105.5.34 Open burning.** An operational permit is required to kindle or maintain an open
236 fire or a fire on a public street, alley, road or other public or private ground. A person
237 must comply with the instructions and stipulations of the permit. An open fire or fire
238 includes trench burners (Section 308.5), mobile incinerators (Section 308.6) and
239 agricultural burning (Section 308.7)

240 **Exception:** Recreational fires

241 **105.5.35 Open flames and torches.** Not adopted.

242 **105.5.36 Open flames and candles.** An operational permit is required to use open flames
243 or candles in connection with an assembly area or the dining area of a restaurant or
244 drinking establishment.

245 **105.5.37 Organic coatings.** An operational permit is required for organic coatings and
246 must comply with Section 105.6.21 (*Hazardous materials*).

247 **105.5.39 Places of assembly.** An operational permit or appropriate certificate of
248 occupancy is required to operate a place of assembly.

249 **105.5.39.1** An annual operational permit is required to operate a place of assembly
250 where 51% or more of the gross receipts at the location are from alcoholic
251 beverage sales.

252 **105.5.39.2** With concurrence of the Building Official, the fire chief may issue a
253 temporary change of use permit to use a structure for public assembly in
254 accordance with Section 408 of this code.

255 **105.5.41 Private fire hydrants.** Not adopted.

256 **105.5.42 Pyrotechnic special effects material.** An operational permit is required to use
257 and handle pyrotechnic special effects material.

258 **105.5.43 Pyroxylin plastic.** Not adopted.

259 **105.5.44 Refrigeration equipment.** Not adopted.

260 **105.5.45 Repair garages and motor fuel-dispensing facilities.** Not adopted.

261 **105.5.46 Rooftop heliports.** Not adopted.

262 **105.5.47 Spraying or dipping.** Not adopted.

263 **105.5.48. Storage of scrap tires and tire byproducts.** Not adopted.

264 **105.5.49 Temporary membrane structures and tents.** An operational permit is
265 required to operate an air-supported temporary membrane structure or a tent having an
266 area in excess of 100 square feet (9.3 m²), or an aggregate area of multiple tents or
267 membrane structures placed side by side in excess of 400 square feet (37m²).

268 **Exceptions:**

- 269 1. Tents used exclusively for recreational camping purposes.
- 270 2. Funeral tents and curtains or extensions attached thereto, when used for
271 funeral services.
- 272 3. Tents that are not attached to, or located within 20 feet (6096 mm) of, a
273 building shall not require a permit unless the tent is in excess of 400 square
274 feet (37 m²).
- 275 4. Tents open on all sides which comply with all of the following:
 - 276 4.1 Individual tents having a maximum size of 700 square feet (65 m²).
 - 277 4.2 The aggregate area of multiple tents placed side by side without a
278 firebreak clearance of not less than 12 feet (3658mm) shall not exceed
279 700 square feet (65 m²) total.
 - 280 4.3 A minimum clearance of 20 feet (6096 mm) to structures and other
281 tents shall be provided.
- 282 5. Inflatable playground equipment at one- or two- family residences.
- 283 6. Inflatable playground equipment used for less than 24 hours at places of
284 worship or education facilities (for ages served by the 6th grade and younger)
285 when located a minimum of 20 feet from the nearest building.

286 **105.5.50 Tire-rebuilding plant.** Not adopted.

287 **105.5.51 Waste handling.** Not adopted.

288 **105.5.52 Wood Products.** Not adopted.

289 **105.6 Required construction permits.** The fire code official may issue construction
290 permits for work as described in Section 105.7.1.

291 **105.6.1 No Separate Construction Permits Required.** Construction permits for
292 permanent structures and systems that are issued through the building permit
293 system administered by the Development Services Department, or its successor
294 department.

295 **105.6.2 Temporary membrane structures and tents.** A construction permit is
296 required to erect an air supported temporary membrane structure or tent having an

297 area in excess of 100 square feet (9.3 m²) or an aggregate area of multiple tents
298 placed side by side in excess of 400 square feet (37 m²).

299 **Exceptions:**

- 300 1. Tents used exclusively for recreational camping purposes.
- 301 2. Funeral tents and curtains or extensions attached thereto, when used
302 for funeral services.
- 303 3. Tents that are not attached in any way to or within 20 feet (6096 mm)
304 of a building shall not require a permit unless the tent is in excess of
305 400 square feet (37 m²).
- 306 4. Tents open on all sides, which comply with all of the following;
- 307 4.1 Individual tents having a maximum size of 700 square feet (65
308 m²).
- 309 4.2 The aggregate area of multiple tents placed side by side without
310 a fire break clearance of not less than 12 feet (3658 mm) shall
311 not exceed 700 square feet (65 m²) total.
- 312 4.3 A minimum clearance of 20 feet (3658 mm) to structures and
313 other tents shall be provided.
- 314 5. Inflatable playground equipment at one- or two- family residences.
- 315 6. Inflatable playground equipment used for less than 24 hours at places
316 of worship or education facilities (for ages served by the 6th grade and
317 younger) when located a minimum of 20 feet from the nearest
318 building.

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320 **[A] 106.1 Submittals.** Construction documents and supporting data that are part of a site
321 plan or building permit submittal must be submitted consistent with the requirements in
322 Title 25 (Land Development). After building permit review, a shop drawing submittal
323 must be submitted directly to the fire department in two or more sets in such form and
324 detail as required by the fire chief. The construction documents shall be prepared by a
325 registered design professional, licensed fire alarm planning superintendent (APS), or
326 licensed fire sprinkler responsible managing employee (RME) as appropriate and as
327 required by Texas Law. Construction documents must comply with the Fire Code and be
328 consistent with the guidance in the City's "Fire Protection Criteria Manual".

329 **Exception:** The fire chief may waive the submission of construction documents
330 and supporting data that is not required to be prepared by a registered design
331 professional if the fire chief finds that the nature of the work applied for is such

332 that review of construction documents is not necessary to obtain compliance with
333 the Fire Code.

334 **[A] 106.2 Examination of documents.** The fire chief shall examine or cause to be
335 examined the accompanying construction documents and shall ascertain by such
336 examinations whether the work indicated and described is in accordance with the
337 requirements of this code the Fire Code.

338 **[A] 106.2.1 Information on construction documents.** Construction documents shall be
339 drawn to scale, be on suitable material, and in a media acceptable to the City of Austin
340 Development Services Department, or its successor department and the Austin Fire
341 Department. Scale of reference shall be based on standard US empirical or SI units. A
342 person who submits a shop drawing to the Fire Department that is drawn to a scale other
343 than $\frac{1}{8}''=1'$ or $\frac{1}{4}''=1'$ must pay a fee, set by a separate ordinance, for non-standard
344 drawing scales. Construction documents shall be of sufficient clarity to indicate the
345 location, nature and extent of the work proposed and must show, in detail, that the work
346 will conform to the provisions of this code and relevant laws, ordinances, rules and
347 regulations as determined by the fire code official.

348 **[A] 106.2.4 Approved documents.** Construction documents approved by the fire chief
349 are approved with the intent that such construction documents comply in all respects with
350 Fire Code. When plans, specifications, or other construction documents are approved or
351 issued, approval does not authorize a violation of the Fire Code or any other City
352 ordinance, regulation, or requirement. An approval that appears to authorize a person to
353 violate or disregard a provision of the Fire Code is not valid. Review and approval by the
354 fire department does not relieve the applicant of his or her responsibility to comply with
355 the Fire Code. The fire chief may require a person to correct errors in the plans,
356 specifications, or data; and may require a process, building operation, or use to cease
357 when it is carried out in a manner that violates the Fire Code or other City ordinance,
358 regulation, or requirement.

359 **Section 107 FEES**

360
361 **[A] 107.1 Fees.** A permit shall not be issued until the fees have been paid.

362
363 **[A] 107.2 Schedule of fees.** Each permit or service fee established in the Fire Code is
364 set by separate ordinance.

365 **[A] 107.4 Work commencing before permit issuance.** Any person who commences
366 any work, activity or operation regulated by this code before obtaining the necessary
367 permits shall be subject to a notice of violation and to prosecution as provided in
368 section 109.3 of this code. Any penalties assessed due to prosecution under this code
369 shall be in addition to the required permit or service fees.

370
371 **[A] 107.5 Related fees.** The payment of the fee for the construction, alteration,

372 removal or demolition of work done in connection to or concurrently with the work or
373 activity authorized by a permit shall not relieve the applicant or holder of the permit
374 from the payment of other fees that are prescribed by law.

375 **[A] 107.6 Refunds.** The refund policy of the City of Austin and the Austin Fire
376 Department shall be applicable to the over payment of any fees associated with the
377 administration of this code.

378 **108.2.3 Re-inspections.** When previously identified violations have not been corrected, a
379 fee shall be assessed for a construction related re-inspection requested by the applicant or
380 contractor. When a scheduled inspection fails, or is cancelled with less than a 24 hour
381 notice, due to the fact that the applicant or contractor was not capable of nor prepared for
382 the inspection to be conducted, a re-inspection fee shall be assessed. The re-inspection
383 fee shall be in an amount set by separate ordinance. No subsequent inspections shall be
384 made until the required fees have been paid and required documentation submitted.

385 **111.1 Appeals.** Appeals are handled consistent with Chapter 25-1, Article 7, Division 1
386 (*Appeals*).

387 **112.3.2 Compliance with orders and notices.** Orders and notices of violation issued
388 or served as provided by this code shall be complied with by the owner, operator,
389 occupant or other person responsible for the condition or violation to which the notice
390 of violation pertains. In cases of immediate danger to persons or property, immediate
391 compliance is required. If the building or other premises is not owner occupied, under
392 lease or otherwise, and the order or notice requires additions or changes in the building
393 or premises which would immediately become fixtures and be the property of the
394 owner of the building or premises, such orders or notices shall be complied with by the
395 owner.

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

398 **112.3.3 Prosecution of violations.**

399 **112.3.3.1** A violation of this code is a misdemeanor punishable as set forth in City
400 Code Section 25-1-462 (*Criminal Enforcement*). The filing of a criminal action
401 does not preclude the pursuit of a civil, quasi-judicial, or administrative action for
402 violation of this code.

403 **112.3.3.2** The fire chief may enforce the provisions of this code by pursuing all
404 civil, quasi-judicial, administrative, and criminal actions; all remedies available to
405 a city under state law; or by any combination of remedies available at law or
406 equity. In any court action, the fire official may pursue the collection of attorney's
407 fees and costs; and maximum interest on liens and judgments as allowed by law.
408 The filing of a civil action does not preclude the pursuit of any other action or
409 remedy, whether quasi-judicial, administrative, or criminal. All remedies

410 authorized under this code are cumulative of all others unless otherwise expressly
411 provided.

412 **112.3.3.3 Citations.** Persons operating or maintaining an occupancy, premises or
413 vehicle subject to this code who allow a hazard to exist or fail to take immediate
414 action to abate a hazard on such occupancy, premises or vehicle when ordered or
415 notified to do so by the fire chief shall be guilty of a misdemeanor.

416 **112.3.4 Unauthorized tampering.** Signs, notices, orders, tags or seals posted or
417 affixed by the fire chief shall not be mutilated, destroyed or tampered with or removed
418 without authorization from the fire chief.

419 **202.1 Supplemental and replacement definitions.** The following definitions in this
420 subsection apply throughout this code and supplement the definitions in Section 202
421 (*General Definitions*) of the 2021 International Fire Code.

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

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

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

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

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

435 **CITY.** These terms mean the City of Austin, in the Hays, Travis and Williamson
436 Counties the State of Texas. Geographically these terms indicate all territory within the
437 corporate limits of the City of Austin and that territory annexed for limited purpose by
438 the City of Austin in accordance with Article I, Section 7 of the Charter of the City of
439 Austin.

440 **[M] COMMERCIAL COOKING APPLIANCES.** Appliances used in a commercial
441 food service establishment for heating or cooking food and which produce grease vapors,
442 steam, fumes, smoke or odors that are required to be removed through a local exhaust
443 ventilation system. Such appliances include deep fat fryers; upright broilers; griddles;
444 broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens;
445 barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food
446 service establishment shall include any building or a portion thereof used for the

447 preparation and serving of food for more than 6 hours per week, including food services
448 within a residential board and care facility if the facility serves 12 or more residents.

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

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

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

459 **FIRE DEPARTMENT.** The Austin Fire Department.

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

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

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

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

478 **INDEPENDENT EXIT/INDEPENDENT STAIRWAY/INDEPENDENT EXIT**
479 **RAMP.** An independent exit, independent stairway, or independent exit ramp is an exit
480 or egress component that does not require the occupant to travel within 10 feet (3.048 m)
481 of another apartment's door or window at any point in the path of egress.

482 **LEGITIMATE COOKING FIRE.** A fire kindled within the confines of an appliance or
483 structure manufactured or built for the express purpose of cooking meals for consumption
484 by human. Incidental cooking or warming of foods with an open recreational fire shall
485 not be considered a “legitimate cooking fire”.

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

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

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

496 **[BG] GROUP E, DAY CARE FACILITIES.** This group includes buildings and
497 structures or portions thereof occupied by more than six children older than 2 ½ years of
498 age who receive educational, supervision or personal care services for fewer than 24
499 hours per day. A child care facility that provides care for more than six but no more than
500 100 children 2 ½ years or less of age, where the rooms in which the children are cared for
501 are located on a level of exit discharge serving such rooms and each of these child care
502 rooms has an exit door directly to the exterior, shall also be classified as Group E.

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

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

508 **[BG] HIGH-HAZARD GROUP H.** High-hazard Group H occupancy includes, among
509 others, the use of a building or structure, or a portion thereof, that involves the
510 manufacturing, processing, generation or storage of materials that constitute a physical or
511 health hazard in quantities in excess of those allowed in control areas complying with
512 Section 5003.8.3, based on the maximum allowable quantity limits for control areas set
513 forth in Tables 5003.1.1(1) and 5003.1.1(2). Hazardous occupancies are classified in
514 Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this code and the
515 requirements of Section 415 of the Building Code.

516 **[BG] INSTITUTIONAL GROUP I-1.** The same meaning as in the Building Code.

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

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

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

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

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

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

538 [BG] **INSTITUTIONAL I-4, DAY CARE FACILITIES.** This group shall include
539 buildings and structures not classified above which are occupied by more than six
540 persons of any age who receive custodial care for fewer than 24 hours per day by persons
541 other than parents or guardians, relatives by blood, marriage or adoption, and in a place
542 other than the home of the person cared for. This group shall include, but not be limited
543 to, an adult day care.

544 [BG] **RESIDENTIAL GROUP R** Residential Group R includes, among others, the use
545 of a building or structure, or a portion thereof, for sleeping purposes when not classified
546 as an Institutional Group I or when not regulated by the Residential Code. Residential
547 occupancies shall include the following:

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

551 [BG] **Group R-3 care facilities within a dwelling.** Care facilities for six or fewer
552 persons receiving care that are within a single-family dwelling are permitted to

553 comply with the International Residential Code, provided an automatic sprinkler
554 system is installed in accordance with Section 903.3.1.3 or Section P2904 of the
555 Residential Code.

556 **Exception:** Compliance with Section 903.3.1.3 is not required for adult care and
557 childcare facilities that are within the proprietor's single-family home, provided
558 that the home was constructed and occupied as a residence prior to October 1,
559 2010.

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

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

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

564 **STAIRWAY EXTERIOR** A stairway that is open on at least two adjacent sides with
565 75% of the side with free area, except for required structural columns, beams, handrails
566 and guards. The adjoining areas shall be either yards, courts or public ways. The other
567 sides of the exterior stairway need not be open.

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

570 **304.3.3 Capacity exceeding 1.5 cubic yards.** Dumpsters and containers with an
571 individual capacity of 1.5 cubic yards [40.5 cubic feet (1.15 m³)] or more shall not be
572 stored in buildings or placed within 10 feet (3048 mm) of combustible walls, openings or
573 combustible roof eave lines.

574 **Exceptions:**

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

580 **307.2 Permit required.** A permit shall be obtained from the fire department emergency
581 prevention division in accordance with Section 105.6 prior to kindling a fire for
582 recognized silvicultural or range or wildlife management practices, prevention or control
583 of disease or pests, a warming fire, a rubbish fire, or a bonfire. Application for such
584 approval shall only be presented by and permits issued to the owner of the land upon
585 which the fire is to be kindled. Rubbish includes waste material from the construction or
586 demolition of buildings. For additional requirements concerning trench burning, see

587 Section 308.5. For mobile incinerators, see Section 308.6. For agricultural burning see
588 Section 308.7.

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

591 **307.4 Location.** When authorized by permits in accordance with Section 307.2, the
592 location for open burning shall not be less than 50 feet (15 240 mm) from any structure,
593 and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240
594 mm) of any structure. Such fires shall be constantly attended by a competent person with
595 an approved means to extinguish the fire.

596 **Exceptions:**

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

603 **308.1.4 Residential Barbecue Pits and Incinerators.** No person may construct, erect,
604 install, maintain or use any incinerator or barbecue pit or burn any combustible material
605 to constitute a fire hazard by the use or burning or to endanger the life or property of any
606 person. Residential barbecue pits, hibachis or other cooking appliances utilizing charcoal,
607 wood or gas as a fuel may not be stored or used on any balconies of residential
608 occupancies, on other combustible balconies, within five feet measured horizontally from
609 any portion of a combustible building, or within fifteen feet measured along the shortest
610 distance if the pit is located below any portion of a combustible building.

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

612 **308.5 Trench Burners.** In addition to the provisions of Section 307 of the Fire Code, all
613 trench burners in the City shall comply with the following:

614 **308.5.1 Construction.** The trench burner shall be located at the center of a circle
615 three hundred feet in diameter, in which no combustible matter will be located or
616 stored, except for the pile of combustible debris which has been readied for loading
617 into the trench burner pit, except as otherwise provided by law.

- 618 1. Pertaining to trees, landscaping, erosion, drainage, or run-off control the
619 surface of the land within the circle shall be cleared of any high grasses,
620 and any trees, brush, and weeds.

- 621 2. The pit must be built in the ground and not above grade.
- 622 3. The dimensions of the pit shall be 14 feet wide, 40 feet long, and at least
623 10 feet deep, except in cases where a permit issued to the applicant by the
624 Texas Commission on Environmental Quality (TCEQ) prescribes
625 different dimensions. The ash generated by the operation of the trench
626 burner shall be removed from the trench as necessary to maintain a
627 minimum trench depth of 10 feet.
- 628 4. The pit, air blower or fan, and other operating equipment shall be
629 securely enclosed by a locked gate and security fence of a minimum
630 height of eight feet which completely surrounds the pit and equipment at
631 all times when the trench burner is unattended. The top portions of the
632 fence shall consist of at least three runs of barbed wire. The fencing shall
633 not be removed until the pit is closed and filled. An approved Fire
634 Department key lock shall be required to secure the gate.

635 **308.5.2 Location.** A trench burner must not be located within 1320 feet of any
636 recreational area, building or structure that is not occupied or used solely by the
637 owner of the property on which the trench burner is constructed.

638 **308.5.3 Hours of Operation.** The hours of continuous loading operation shall be
639 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Trench burners may not
640 be operated on Saturday, Sunday or legal holidays.

- 641 1. The blower or fan will be allowed to operate an additional two hours from
642 4:00 p.m. to 6:00 p.m. to ensure cool down after its period of continuous
643 loading operations.
- 644 2. The hours of operation may be changed by the fire chief when unusual
645 atmospheric conditions exist.
- 646 3. No burning is permitted when air stagnation advisories are in effect for the
647 area in which the trench burner is located.
- 648 4. No burning is permitted during periods of high fire hazard weather
649 conditions.

650 **308.5.4 Method of Operation.** Material that may be burned is limited to trees,
651 brush, untreated waste lumber, shrubs, roots, bushes, and all untreated wood waste
652 cleared from the site described in the permit application. Combustible debris
653 cleared from other sites may not be burned in the trench burner.

- 654 1. All other materials, including but not limited to paper, roofing, shingles,
655 insulation, wiring, treated wood products, metal products, chemicals,

656 plastics, tires and other real or synthetic rubber materials may not be burned
657 in the pit. Flammable or combustible liquids may not be burned except for
658 ignition purposes.

- 659 2. Suitable fire protection shall be present on the site where the trench burner is
660 located during operation. Suitable fire protection consists of a trailer or tank
661 truck fitted with a water tank capable of transporting a 500 gallon water
662 supply to any location on the job site and an approved water delivery system
663 consisting of a pump, at least 100 feet of rubber booster hose having a
664 minimum diameter of three-fourths inch, and either a straight stream or
665 adjustable spray nozzle.
- 666 3. The pit must be closed and filled with dirt within 48 hours after the trench
667 burner operations are discontinued.
- 668 4. Combustible material may not be placed in the trench any higher than three
669 feet below the surface level.
- 670 5. Every trench burner must be attended when in operation. The trench burner
671 shall be completely extinguished before being left unattended.

672 **308.5.5 Permit Application.** The permit application must contain the following:

- 673 1. The name, address, and phone number of the individual or entity that owns
674 the trench burner unit.
- 675 2. The name, address, and phone number of the individual or entity responsible
676 for the operation of the trench burner unit.
- 677 3. A description of the site to be cleared, and the name, address and telephone
678 number of the owner of the property.
- 679 4. An operating schedule including initial date of operation and expected
680 number of weeks of operation.
- 681 5. A copy of the Texas Commission on Environmental Quality permit issued
682 for the construction of the unit, if a permit is required.
- 683 6. A statement from the applicant confirming the applicant will inform the
684 Watershed Protection Department, or its successor department, of the dates
685 the trench burner will be operating.
- 686 7. A description of the type and quantity of petroleum product utilized to ignite
687 the trench burner. If this is to be stored at the site, then the manner of storage
688 and quantity to be stored must be described. The method of igniting the
689 trench burner must be described.

- 690 8. Proof that the applicant has current liability insurance in the amount of
691 \$1,000,000 for personal injuries, and \$500,000 for property damage any
692 time the trench burner is in use.
- 693 9. The payment of the permit fee as established by the City Council.
- 694 10. Certification from the Development Services Department, or its successor
695 department, as required by Article 308.5.6 of this code.
- 696 11. A construction permit from the Texas Commission on Environmental
697 Quality must be obtained if required by Commission rule. If the trench
698 burner is exempt from the Commission permit requirements all conditions of
699 the exemption must be complied with.

700 **308.5.6 Environmental Protection.** The Development Services Department, or its
701 successor department, shall require the following before the issuance of certification:

- 702 1. The bottom of the trench is located at a minimum distance of 50 feet from
703 the water table;
- 704 2. No fissures are located inside or adjacent to the trench;
- 705 3. Ignition fuel shall be limited to combustible liquids, as defined by this code.
706 Approval shall also be granted where an alternative to the use of
707 combustible liquids is used to ignite the trench;
- 708 4. The method of igniting the trench ensures no amount of combustible liquid
709 greater than necessary to ignite the trench will be used; and,
- 710 5. The manner of storage of the product at the site is designed to prevent any
711 leak or accidental discharge, and where applicable, the hazardous materials
712 storage and registration requirements are met; and
- 713 6. An environmental review shall be conducted of the watershed of Lake
714 Austin, Lake Travis, or with the aquifer-related watershed of Barton,
715 Williamson, Slaughter, Big Bear, Little Bear and Onion Creek, including the
716 Edwards Aquifer recharge zone North and South of the Colorado River, all
717 as shown on the hazardous materials storage and registration map on file in
718 the Office of the City Clerk.

719 **308.6 Mobile Incinerators.** All mobile incinerators in the City must comply with the
720 following:

721 **308.6.1 Construction.** Each mobile incinerator must be constructed as follows:

- 722 1. Engineered and constructed of material and of a gauge to withstand normal
723 operating temperature of 1200° F or higher without deformation.
- 724 2. Chimneys serving mobile incinerators must terminate into a spark arrester
725 having an area not less than four times the net free area of the chimney.
726 Openings shall not permit the passage of spheres having a diameter larger
727 than ½ inch nor block the passage of spheres having a diameter smaller than
728 3/8 inch.
- 729 3. The exterior wall of the mobile incinerator must be of double wall
730 construction. The incinerator must be designed such that the temperature rise
731 above ambient temperature (750° F + 5° F) of any portion of the incinerator
732 accessible to the operator shall not exceed 150° F.
- 733 4. Insulation must be installed, or adequate airspace provided, between the
734 external casing and the inner wall as required to meet this temperature
735 limitation.
- 736 5. Mobile incinerators must be constructed with a dual combustion chamber of
737 which the secondary chamber must maintain a temperature of 1200° F or
738 higher at all times waste material is being reduced by oxidation caused by
739 heat of combustion.
- 740 6. The secondary chamber must be provided with a thermocouple connected to
741 a temperature display for monitoring the temperature.
- 742 7. Any design not in compliance with the criteria and appropriate nationally
743 recognized standards must have the construction reviewed and submitted as
744 an alternative method under the seal of a registered professional engineer or
745 a recognized testing laboratory.

746 **308.6.2 Location.** No mobile incinerator may be located:

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

753 **308.6.3 Hours of Operation.** The hours of continuous loading operation shall be
754 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Mobile incinerators
755 may not be operated on Saturday, Sunday or legal holidays.

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1. The mobile incinerator may be allowed to operate an additional two hours from 4:00 p.m. to 6:00 p.m. to ensure cool down after its period of continuous loading operations.
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760 2. The fire chief may change the hours of operation when unusual atmospheric conditions exist.
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762 3. No burning is permitted during air stagnation advisories in effect in the area in which the mobile incinerator is located.
 - 763
764 4. No burning is permitted during periods of high fire hazard weather conditions.

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767 **308.6.4 Method of Operation.** Material to be burned in the mobile incinerator is limited to highly combustible waste, paper, wood, cardboard cartons, including up to 10 percent treated papers or plastic scraps.

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1. Suitable fire protection must be present within a distance of 20 feet at all times of operation. Suitable fire protection consists of an approved water extinguisher having a minimum rating of 10-A, and one dry chemical portable fire extinguisher with at least a 2A-10BC rating.
 - 772
773 2. Material to be incinerated may not be stored within 10 linear feet of any surface of the mobile incinerator's combustion chamber, chimney or hot ashes.
 - 774
775
776 3. The mobile incinerator must be enclosed by a portable security fence of a minimum of four feet, or other equivalent approved barrier, which completely surrounds the mobile incinerator providing a clear space of five feet at all times when the unit is in operation. The fencing may not be removed until the incinerator is cool to the touch.
 - 777
778
779 4. The mobile incinerator must not be moving and must be in a fixed position when operational or cooling.
 - 780
781
782 5. Every mobile incinerator must be attended when in operation. It shall be completely extinguished before being left unattended.
 - 783

784 **308.6.5 Permit Application.** The permit application must contain the following:

- 785
786
1. Name, address, and phone number of the individual or entity that owns the mobile incinerator.
 - 787
788 2. Name, address, and phone number of the individual or entity responsible for the operation of the mobile incinerator.

- 789 3. Name, address, and phone number of the owner of the property where the
790 mobile incinerator is to be operated.
- 791 4. Copy of the Texas Commission on Environmental Quality permit or
792 exemption letter issued for the use of the unit. (See Chapter 382, Health and
793 Safety Code).
- 794 5. Proof that the applicant has in effect liability insurance in the amount of
795 \$1,000,000 for personal injuries, and \$500,000 for property damage any
796 time the mobile incinerator is in use.
- 797 6. Written permissions of the owner of the property where the mobile
798 incinerator is to be operated.
- 799 7. Certification from the Development Services Department, or its successor
800 department, as required by Section 308.6.6 of this code.
- 801 8. The payment of the permit fee set by separate ordinance.

802 **308.6.6 Environmental Protection.** The Development Services Department, or its
803 successor department, shall require the following before the issuance of
804 certification:

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

808 **308.7 Agricultural Burning.** In addition to the provisions of Section 307 of the Fire
809 Code, all agricultural burning in the City shall comply with the following:

810 **308.7.1 Location.** The location of any agricultural burning activity shall be limited
811 to property zoned AG consisting of at least 150 contiguous acres. The burn site
812 shall be located at least 50 feet from the nearest property line or agricultural
813 structure and shall be at least 1320 feet from the nearest recreational property (i.e.
814 park), building or structure not owned and occupied or used solely by the owner of
815 the agricultural property.

816 **308.7.2 Environmental conditions.** The permit holder shall comply with
817 applicable air quality regulations of the Texas Commission on Environmental
818 Quality (TCEQ) including time limits and atmospheric conditions. Burning shall
819 not be permitted during atmospheric inversions or other conditions that limit
820 dispersion of the smoke plume.

821 **308.7.3 Burning bans.** Burning shall not be permitted during any weather related
822 burn bans.

823 **308.7.4 Fuel limitations.** Material to be burned is limited to trees, brush, untreated
824 waste lumber, shrubs, roots, bushes, and all untreated wood waste associated with
825 the agricultural property for which the burn permit is issued. Distilled
826 hydrocarbons including liquid fuels, lubricants, synthetic materials, tires, rubber,
827 and plastics shall not be burned under an agricultural burn permit.

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

830 **308.7.5 Insurance.** Proof shall be provided at permit application that the applicant
831 has current liability insurance in the amount of \$1,000,000 for personal injuries,
832 and \$500,000 for property damage any time agricultural burning is in progress.

833 **311.5 Placards.** Any vacant or abandoned buildings or structures determined to be unsafe
834 pursuant to Section 110 of this code relating to structural or interior hazards shall be
835 marked as required by the Austin Code Department, or the successor department.

836 **311.5.1 Placards for hazards related to emergency response.** Any building or
837 structure that is determined to present unique hazards to firefighters during
838 emergency operations shall be protected or marked as required by Section 505.3 of
839 this code.

840 **316.7.1 Unprotected Construction Presenting Hazards To Firefighters in Existing**
841 **Buildings.** When existing buildings, including residential structures, are identified as
842 employing construction methods or materials that have been shown by experience or
843 testing to be associated with early failure or failure with little or no warning under fire
844 exposure, the premises identification markings shall be revised to achieve compliance
845 with Section 505.3.

846 **Exceptions:**

- 847 1. Buildings protected throughout by automatic fire sprinklers in accordance
848 with 903.3.1.1, 903.3.1.2 or 903.3.1.3.
- 849 2. Buildings with a noncombustible or limited combustible membrane that
850 shields the floor or roof construction materials from fire exposure. Such
851 membranes may be constructed using gypsum wallboard of at least ½”
852 nominal thickness, cementous fiberboard of at least ¼ inch nominal
853 thickness, or fire-retardant treated wood (FRTW) of at least ½ inch nominal
854 thickness.

855 **401.3 Emergency responder notification.** Notification of emergency responders shall
856 be in accordance with Sections 401.3.1 through 401.3.4.

857 **401.3.1 Emergency events.** Except as provided in Section 401.3.4, in the event an
858 unwanted fire occurs, or upon the discovery of a fire, explosion, deflagration,
859 smoke or unauthorized release of flammable, toxic, or hazardous materials on any
860 property, the owner or occupant shall immediately report such condition to the fire
861 department. Building employees and tenants shall implement the appropriate
862 emergency plans and procedures.

863 **401.3.2 Alarm activations.** Upon activation of a fire alarm signal, employees or
864 staff shall immediately notify the fire department.

865 **401.3.3 Delayed notification.** A person shall not, by verbal or written directive,
866 require any delay in the reporting of a fire or unauthorized chemical release to the
867 fire department.

868 **401.3.4 Emergency Response Teams and Fire Brigades.** Facilities complying
869 with Section 5003.9.1 by maintaining on-site emergency response teams (ERT) or
870 industrial fire brigades that comply with the requirements of Occupational Safety
871 and Health Administration (OSHA) regulations in 29 CFR 1910.120 or 29 CFR
872 1910 Subpart L may, on completion of an audit of compliance by the fire chief
873 (audits may be performed during annual inspections by the fire department) and
874 contingent on continued ERT/fire brigade compliance, develop site-specific
875 procedures for determining reporting requirements based on facility staffing and
876 qualifications.

877 **401.3.4.1** Guidance is published in the Fire Protection Criteria Manual to
878 help assure equitable assessment of site procedures. The procedures must be
879 submitted to the fire chief for review and approval. Maintenance of the ERT
880 or fire brigade shall be verified by a periodic audit during inspections by the
881 Fire Department. This provision does not waive a facility's or organization's
882 reporting obligations under State or Federal regulations.

883 **401.3.4.2** Failure to maintain and provide records of internal responses will
884 result in revocation of the facility's procedural approach to reporting.

885 **SECTION 408 TEMPORARY CHANGE OF USE PERMITS**

886 **408.1 Scope.** Temporary Change of Use Permits shall be in accordance with this Section.
887 A temporary permit for a facility or building for public assembly use is not intended to be
888 a means for creating a permanent assembly occupancy or use.

889 **408.1.2 Temporary Change of Use To a Public Assembly (TCOU) Permit.** A
890 TCOU to a public assembly permit is required for any occupancy not classified as
891 Group A with a gathering of more than 50 people for civic, social, recreational or
892 religious functions. A permit is required for gatherings of 50 or more people
893 confined by fences, walls or similar occupancies.

894 **408.2 Annual Permit Limit.** Not more than twelve TCOU permits shall be issued for a
895 given address during a 12-month period. The measurement period shall be based on the
896 date the first permit was approved during a given calendar year.

897 **408.2.1 Permit Duration.** The duration of the TCOU permit shall not exceed 14
898 calendar days.

899 **408.3 Permit Application.** A TCOU permit application shall be submitted to the fire
900 department for plan review. Applications and required plan information shall be
901 submitted 21 calendar days prior to the event start date.

902 **408.4 Fire Watch.** The Fire Marshal's Office may require a fire watch or standby if
903 additional fire and life safety hazards are identified during plan review.

904 **409 FIRST RESPONDER EMERGENCY PLANS**

905 **409.1 Scope.** First Responder Emergency Plans shall be plans assembled by AFD to aid
906 First Responders in familiarity with the building and its fire safety features in the event of
907 an emergency. Plans will also aid with annual maintenance inspections.

908 **409.2 Building Floor Plans.** At the completion of new projects, the Architect/Engineer
909 shall submit to AFD an electronic set of building floor plan as-builts in an approved
910 format (PDF, DWG, DXF).

911 **409.2.1 Existing Buildings.** Existing buildings shall have 3 years to submit
912 building floor plan of AFD.

913 **409.3 Plan Requirements.** Building floor plans submitted to AFD shall contain the
914 following information, as applicable:

- 915 (a) Locations of exits, exit passageways, and horizontal exits.
- 916 (b) Location of fire alarm control panel and remote annunciator panel.
- 917 (c) Location of fire department connection.
- 918 (d) Location of all standpipes and hose valve connections.
- 919 (e) Rated wall locations.

920 **503.1 Where required.** Fire apparatus access roads shall be provided and maintained in
921 accordance with Sections 503.1.1 through 503.1.5. Where required fire apparatus access
922 roads are located on property other than a public right-of-way, the required fire apparatus
923 access road shall be located within the legal boundaries of the property unless otherwise
924 approved by the fire code official.

925 **503.1.1 Buildings and facilities.** Approved fire apparatus access roads shall be
926 provided for every facility, building or portion of a building hereafter constructed
927 or moved into or within the jurisdiction. The fire apparatus access road shall
928 comply with the requirements of this section and shall extend to within 150 feet

929 (45 720 mm) of all portions of the facility and all portions of the exterior walls of
930 the first story of the building as measured by an approved route around the exterior
931 of the building or facility.

932 Exceptions:

933 1. The fire chief is authorized to increase the dimension of 150 feet (45 720 mm)
934 where any of the following conditions occur:

935 1.1. The building is equipped throughout with an approved automatic
936 sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or
937 903.3.1.3.

938 1.2. Fire apparatus access roads cannot be installed because of location on
939 property, topography, waterways, nonnegotiable grades or other similar
940 conditions, and an approved alternative means of fire protection is provided
941 by the owner and has been approved by the fire chief.

942 1.3. There are not more than two Group R-3 or Group U occupancies.

943 2. Where approved by the fire code official, fire apparatus access roads shall be
944 permitted to be exempted or modified for solar photovoltaic power generation
945 facilities.

946 3. Where approved by the fire chief, the fire apparatus access roads for a facility,
947 building or portion of a building hereafter constructed, may be located on adjacent
948 property(s), provided the fire apparatus access roads on the adjacent property(s) are
949 bound in perpetuity to any and all associated properties necessary to comply with
950 the fire apparatus road requirements herein by either a Unified Development
951 Agreement (UDA) or a Joint Use Access Easement (JUAE) that is approved and
952 recorded with the county in which the properties are located.

953 **503.1.4 Approval of Fire Zones on Site Plans.** The Director of the Development
954 Services Department, or its successor department, shall submit site plans of proposed
955 commercial developments to the fire chief for his review and approval of the
956 adequacy of fire zones before the issuance of a building permit for the development.

957 **503.1.5 Official records.** All required fire apparatus access roads that are not located
958 within a public right-of-way shall be registered with the fire department.

959 **503.2.1 Dimensions.** Fire apparatus access roads shall have an unobstructed width of not
960 less than 25 feet (7620 mm), except for approved security gates in accordance with
961 Section 503.6 and the Fire Protection Criteria Manual, and an unobstructed vertical
962 clearance of not less than 14 feet (4267 mm).

963 **Exceptions.**

- 964 1. The unobstructed roadway width may be reduced to less than 25 feet for all
965 or part of the required roadway so long as the access road complies with the
966 appropriate minimum street width for dedicated City streets, and
- 967 a. Such fire access roadways, or portions of such roadways, which are
968 less than 25 feet wide are not in locations where aerial apparatus
969 deployment could be necessary to achieve control and/or
970 extinguishment of a fire, and
- 971 b. Turning radii are adequate for maneuvering Fire Department and other
972 emergency services vehicles.
- 973 2. The unobstructed roadway width may be reduced to less than 25 feet for all
974 or part of the required roadway so long as the access road complies with the
975 appropriate minimum street width for dedicated City streets and
- 976 a. The access roadway is part of a system of roadways or driveways that
977 include interconnected public and/or private roads or driveways that
978 provide multiple pathways for emergency vehicles to access the
979 structures served by the roadway system, provided that a fire vehicle
980 blocking the roadway within the narrowed length will not create a
981 dead-end road segment in excess of 150 feet long.
- 982 b. The width of each segment is sufficiently wide to accommodate the
983 deployment of emergency vehicles anticipated for that segment during
984 a potential emergency (e.g. outrigger placement and aerial operations
985 for fires in multi-story structures), and turning radii are adequate for
986 maneuvering Fire Department and other emergency services vehicles.
- 987 c. Divided roadways serving as fire lanes are allowed to consist of two
988 lanes each 15 feet wide, one on each side of the division in locations
989 where aerial operations are not anticipated.

990 **503.2.2 Authority.** The fire chief shall have the authority to require an increase in the
991 minimum access widths where they are inadequate for fire or rescue operations or to
992 permit a decrease in width when necessary to meet the public safety objectives of the
993 City of Austin provided the street or access roadway remains compliant with 503.2.1.

994 **503.2.4 Turning radius.** The required inside turning radius of a fire apparatus access
995 road shall be 25 feet (7.62 m). The required outside turning radius of a fire apparatus
996 access road shall be 50 feet (15.24 m).

997 **503.2.6 Bridge and elevated surfaces.** Where a bridge or an elevated surface is part of a
998 fire apparatus access road, the bridge shall be constructed and maintained in accordance
999 with AASHTO HB-17 or the latest addition of AASHTO Load and Resistance Factor

1000 Design accepted by the Texas Department of Transportation. Bridges and elevated
1001 surfaces shall be designed for a live load sufficient to carry the imposed loads of fire
1002 apparatus. Vehicle load limits shall be posted at both entrances to bridges where required
1003 by the fire chief. A designated fire lane shall be maintained for the purpose of vehicle
1004 access and shall prohibit obstructions as per Section 503.3. The entire bridge deck or
1005 elevated surface shall be designed and maintained to support fire apparatus operations as
1006 required and approved by the fire chief.

1007 **503.2.6.1 Operational and outrigger loads.** Where an elevated surface or
1008 structure or portions of a structure are subject to operational loads with deployment
1009 of outriggers utilizing a crane, lift or ladder, the structure shall be designed and
1010 maintained to support the following independent static loading conditions as
1011 required and approved by the fire chief: 1) a load of 43,200 pounds on one
1012 outrigger and 2) a load of 28,600 pounds on each of two adjacent outriggers with
1013 18 feet of separation on centers (the total load is 57,200 pounds.) The contact area
1014 of each outrigger is 24 inches × 24 inches. In addition to verifying that special
1015 inspections per the Building Code, the design engineer of record shall make
1016 periodic construction observations and upon substantial completion of the work,
1017 the design engineer shall provide the fire chief an engineer's letter of concurrence
1018 that the work and materials were installed in substantial conformance with the fire
1019 chief's record document.

1020 **503.3 Designation, Location, and Maintenance of Fire Zones Official Records.** All
1021 fire apparatus access roads required by Sections 503.1.1 and 3206.6 and that are out of
1022 the public right-of-way, are designated as fire zones or fire lanes, to maintain the required
1023 unobstructed clearance in accordance with Section 503.2.1 as amended. The fire
1024 department will keep records of the designation and location of fire zones and fire lanes.

1025 **Exception:** Fire apparatus access roads between aisles of parking or under porte
1026 cocheres need not be designated as fire zones.

1027 **503.3.1 Tow Away Zones.** All fire zones and fire lanes shall be designated
1028 as tow away zones. The designation of the fire zones or fire lanes does not
1029 make the City responsible for the maintenance of the fire zones or fire lanes
1030 on private property, but the owner of the property continues to be
1031 responsible for the maintenance of the area.

1032 **503.3.2 Signs and Identification Markers Designating Fire Zones/Fire**
1033 **Lanes.** After designation of a fire zone or fire lane under this article, the fire
1034 chief shall give notice of the designation to the owner of the property,
1035 directing the owner to cause, at the expense of the owner, markings to be
1036 painted on any areas designated as a fire zone or fire lane. The markings
1037 must be red with white stenciling reading "FIRE ZONE/TOW AWAY
1038 ZONE" or "FIRE LANE/TOW AWAY ZONE" in lettering at least three

1039 inches in height. The stenciling shall be at intervals of 35 feet or less. In
1040 addition, the owner shall cause signs to be posted at both ends of a fire zone
1041 or fire lane and at each entry and exit point which constitutes a portion of the
1042 fire zone or fire lane. Alternative marking of fire zones and fire lanes may be
1043 approved by the fire chief provided fire zones or fire lanes are clearly
1044 identified at both ends and at intervals not to exceed 35 feet and are clearly
1045 marked "Tow Away Zones" at least every 35 feet. The signs shall be
1046 installed with the top of the sign no higher than eight feet above grade and
1047 no less than five feet above grade.

1048 **503.4.1. Traffic calming devices.** Geometric street features intended to mitigate unsafe
1049 traffic conditions such as speeding or excessive cut-through traffic shall be designed to
1050 address both traffic safety and emergency access requirements. Approved street features
1051 shall mitigate the traffic conditions identified by the city traffic engineer while providing
1052 for adequate emergency vehicle access to the satisfaction of the fire department.

1053 **503.7 Persons authorized to Issue Citations.** A citation for a charge of parking,
1054 standing, or stopping in a fire zone or fire lane in violation of this article may be issued
1055 by a licensed peace officer employed by the City, an employee of the Fire Department
1056 designated by the fire chief, an employee of the City authorized to issue tickets for
1057 parking violations by the City Code, or a private security guard employed by an agency
1058 operating under either a license or a letter of authority issued by the Texas Board of
1059 Private Investigators and Private Security Agencies, and who is employed by the owner
1060 or lessee of the property on which a fire zone has been established.

1061 **504.1 Required Access.** Exterior doors and openings required by the code or the
1062 International Building Code shall be maintained accessible for emergency access by the
1063 fire department. An approved access walkway constructed of approved materials at least
1064 36 inches in width leading from fire apparatus access roads to exterior openings shall be
1065 provided when required by the fire chief. The walkway shall be constructed in
1066 accordance with Section 1003.4.

1067 **505.1 Address identification.** New and existing buildings shall be provided with
1068 approved address identification in accordance with the Fire Protection Criteria Manual.

1069 **505.3 Premise Hazard Identification Signs.** Structures that the fire chief deems to have
1070 the potential to present an unusual level of hazard to firefighters during fire ground
1071 operations shall be identified such that it is readily identifiable to responding fire
1072 department personnel. Such structures may or may not present obvious dangers to the
1073 occupants of the building when no fire is present. Potentially hazardous structures may
1074 be identified as prescribed by this code, by the Building Code, or by fire department
1075 safety policies and procedures.

1076 **505.3.1 Hazardous Address Numbering.** Structures that are required to be
1077 readily identifiable by responding fire department personnel shall have unique
1078 address numbering signs. The signs shall be installed on all sides of the building
1079 facing emergency vehicle access established in accordance with Section 503 or
1080 facing an approach directly from public rights-of-way. Signs will consist of the
1081 address numbers of the building in 8-inch tall white numbers on a solid red
1082 background. The address numbers will be oriented vertically. The signage will be
1083 reflective to be visible at night, weather resistant and permanent.

1084 **507.3 Fire flow.** Fire flow requirements for buildings or portions of buildings and
1085 facilities shall be determined in accordance with Appendix B of the Fire Code.

1086 **507.4 Water supply test.** The fire department emergency prevention division shall be
1087 notified prior to the water supply test. Water supply tests shall be conducted by or
1088 witnessed by the fire department emergency prevention division.

1089 **507.5.1 Where required.** Where a portion of the facility or building hereafter
1090 constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from
1091 the nearest hydrant on a fire apparatus access road or more than 500 feet (152 m) from
1092 secondary hydrants needed to supply the minimum fire flow, as measured by an approved
1093 route around the exterior of the facility or building, on-site fire hydrants and mains shall
1094 be provided where required by the fire chief.

1095 **Exceptions:**

- 1096 1. For Group R-3 and Group U occupancies, the distance requirement shall be
1097 600 feet (183 m).
- 1098 2. For buildings equipped throughout with an approved automatic sprinkler
1099 system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the
1100 distance requirement for all required fire hydrants shall be 500 feet (152 m).

1101 **507.5.3 Private fire service mains and water tanks.** Private fire service mains,
1102 including private fire hydrants and water tanks, shall be inspected, tested and maintained
1103 consistent with NFPA 25, *Standard for Inspection, Testing and Maintenance of Water-*
1104 *Base Fire Protection Systems*; the *Fire Criteria Manual* and the American Water Works
1105 Association (AWWA) Manual M-17, *Installation, Field Testing and Maintenance of Fire*
1106 *Hydrants* at the following intervals:

- 1107 1. Private fire hydrants (all types): Inspection annually and after each operation; flow
1108 test and maintenance annually to ensure proper functioning in accordance with the
1109 following:
 - 1110 a. Private fire hydrants shall be flushed annually. Chlorine residual tests will be
1111 performed on all private hydrant systems not separated from potable water

1112 uses by an approved back-flow prevention device. The unseparated hydrants
1113 shall be flushed until the free chlorine residual meets or exceeds the 0.2 mg/l
1114 minimum established by the Texas Commission on Environmental Quality
1115 in Section 290.46(f)(1) of the Rules and regulations for Public Water
1116 Systems. Chlorine residual shall be determined using the N,N-diethyl-p-
1117 phenylenediamine (DPD) method.

1118 b. Static testing shall be performed in accordance with AWWA Manual M-17,
1119 Installation, Field Testing and Maintenance of Fire Hydrants, Chapter 4.

1120 c. Flow tests shall be conducted in accordance with Manual M-17, Installation,
1121 Field Testing and Maintenance of Fire Hydrants, Chapter 6.

1122 2. Fire service main piping: Inspection of exposed, annually; flow test every 5 years.

1123 3. Fire service main piping strainers: Inspection and maintenance after each use.

1124 **507.5.7 Fire-protection equipment and fire hydrants.** Fire-protection equipment and
1125 fire hydrants shall be clearly identified in an approved manner to prevent obstruction by
1126 parking and other obstructions.

1127 All fire hydrants shall be painted in accordance with City of Austin Standard
1128 Specifications. With the approval of the fire chief, private hydrants may be painted an
1129 alternate reflective color; multi-colored hydrants are prohibited. When required by the
1130 chief, hydrant locations shall be identified by the installation of reflective markers.

1131 **507.6 Protection of potable water systems.** Fire hydrants and the supply piping to them
1132 which contain chemicals or additives shall be separated from sources of potable water by
1133 a reduced pressure backflow assembly installed at the connection to the potable water
1134 system. Backflow assemblies shall be operationally tested and maintained in accordance
1135 with Chapter 15-1 (*Cross-Connection Regulations*).

1136 Private fire hydrants located at a distance from a flowing water service such that the
1137 volume of water in the hydrant lead is more than 100 gallons shall have backflow
1138 prevention protection as required by Chapter 15-1 (*Cross-Connection Regulations*).

1139 Private fire hydrant systems not maintained, flushed and tested for chlorine residual in
1140 accordance with Section 507.5.3, item 1 a. shall be provided with backflow prevention
1141 protection in accordance with Chapter 15-1 (*Cross-Connection Regulations*).

1142 **507.6.1 Special inspections.** Austin Water Utility shall inspect private property to
1143 identify each existing private fire hydrant connected to the City's potable water
1144 distribution system. The owner of the property or the water service customer shall bear
1145 the costs and the responsibility to provide a flushing and maintenance program in

1146 accordance with Section 507.5.3 or to provide backflow prevention protection in
1147 accordance with Chapter 15-1 (*Cross-Connection Regulations*).

1148 Further modifications shall be made by, and at the expense of, the property owner or
1149 water service customer as necessary to correct any water supply deficiencies (flow or
1150 pressure) resulting from the installation of required backflow prevention protection
1151 assemblies.

1152 **508.1.6 Required Features.** The fire command center shall comply with NFPA 72 and
1153 shall contain the following features:

1154 Items 1 through 6 remain unchanged.

- 1155 7. Controls for unlocking stairway doors simultaneously. Stairways doors shall be
1156 physically unlocked by UL listed fire alarm system components. The unlocking
1157 means shall be a red light switch mounted on the wall in the command room with
1158 appropriate signage or other approved method.

1159 Items 8 through 13.3 remain unchanged.

1160 **13.4** Exit access stairway and exit stairway information that includes: number of exit
1161 access stairways and exit stairways in building, each exit access stairway and exit
1162 stairway designation and floors served; location where each exit access stairway
1163 and exit stairway discharges; interior exit stairways that are pressurized; exit
1164 stairways provided with emergency lighting; each exit stairway that allows reentry;
1165 exit stairways providing roof access; elevator information that includes: number of
1166 elevator banks, elevator bank designation, elevator car numbers and respective
1167 floors that they serve; location of elevator machine rooms, control rooms and
1168 control spaces; location of sky lobby; location of freight elevator banks; location of
1169 the Fire-fighters Service Access Elevator banks when applicable; and location of
1170 Occupant Evacuation Elevator banks when applicable.

1171 Items 14 through 18 remain unchanged.

1172 **510.1 Emergency responder communication coverage in buildings.** Approved in-
1173 building, two-way emergency responder communication coverage for emergency
1174 responders shall be provided in all new buildings. In-building, two-way emergency
1175 responder communication coverage within the building shall be based on the existing
1176 coverage levels of the public safety communication systems utilized by the jurisdiction,
1177 measured at the exterior of the building. This section shall not require improvement of
1178 the existing public safety communication systems.

1179 **Exceptions:** Where it is determined by the fire chief that the radio coverage system
1180 is not needed.

1181 **605.4 Fuel oil storage systems.** Fuel oil storage systems for building heating
1182 systems shall be installed and maintained in accordance with this code. Tanks and fuel-oil
1183 piping systems shall be installed in accordance with the Mechanical Code. Aboveground
1184 storage tanks and piping for generators shall comply Chapter 57.

1185
1186 **605.4.1.2 Fuel oil storage for stationary generators.** Aboveground outdoor fuel oil
1187 storage for stationary generators in quantities exceeding 660 gallons shall meet the
1188 following requirements.

- 1189
1190 (1) All storage must be located 50 ft. from a property line that is or can be built
1191 upon, including the opposite side of a public way.
1192 (2) For installations storing all fuel oil in UL 2085 Aboveground Storage Tank, the
1193 distance from a property line that is or can be built upon, including the opposite
1194 side of a public way shall be in accordance with NFPA 30.
1195 (3) All tank openings shall be above the tank liquid level
1196 (4) All installations exceeding an aggregate volume of 20,000 gallons (75708 L) shall
1197 be subject to public notification requirements of Section 5704.2.9.6.1, Exception 3.
1198

1199 **605.4.2 Fuel oil storage inside buildings.** Fuel oil storage inside buildings shall comply
1200 with Sections 605.4.2.2 through 605.4.2.8 and Chapter 57.

1201
1202 **605.4.2.1 Approval** Indoor fuel oil storage tanks shall be in accordance with UL 80, UL
1203 142 or UL 2085.

1204
1205 **605.4.2.2 Quantity limits.** One or more fuel oil storage tanks containing Class II or
1206 III *combustible liquid* shall be permitted in a building. The aggregate capacity of all tanks
1207 shall not exceed the following:
1208

- 1209 (1) 120 gallons of Class II combustible liquid in unsprinklered buildings where
1210 stored in a tank complying with UL 80, UL 142 or UL 2085.
1211 (2) 330 gallons of Class III combustible liquid in unsprinklered buildings where
1212 stored in a tank complying with UL 80, UL 142 or UL 2085.
1213 (3) 660 gallons (2498 L) in buildings equipped with an *automatic*
1214 *sprinkler* system in accordance with Section 903.3.1.1, where stored in a tank
1215 complying with UL 80, UL 142 or UL 2085.
1216 (4) 3,000 gallons (11 356 L) in a building equipped with an automatic sprinkler
1217 system in accordance with Section 9-3.1.1, when all of the following are met:
1218 (a) All storage is in protected aboveground tanks complying with UL 2085
1219 and Section 5704.2.9.7.
1220 (b) Tanks are listed as secondary containment tanks as required by UL
1221 2085 and the secondary containment is monitored visually or
1222 automatically.

- 1223 (c) All storage is located 6 stories or less above the lowest level of fire
1224 department access.
1225 (d) All piping for the tanks above the ground level have welded
1226 connections except where replaceable components are installed
1227

1228 **605.4.2.3 Restricted use and connection.** Tanks installed in accordance with Section
1229 605.4.2 shall be used only to supply fuel oil to fuel-burning equipment, generators or fire
1230 pumps installed in accordance with Section 605.4.2.5. Connections between tanks and
1231 equipment supplied by such tanks shall be made using closed piping systems In
1232 accordance with the Mechanical Code. Closed piping systems for generators shall comply
1233 with Chapter 57.
1234

1235 **605.4.2.6 Separation.** Rooms containing fuel oil tanks for internal combustion engines
1236 shall be separated from the remainder of the building by *fire barriers, horizontal*
1237 *assemblies*, or both, with a minimum 1-hour *fire-resistance rating* with 1-hour fire-
1238 protection-rated *opening protectives* constructed in accordance with the Building Code.
1239

1240 **[M] 609.2 Where required.** A Type I hood shall be installed at or above all commercial
1241 cooking appliances and domestic cooking appliances used for commercial purposes that
1242 produce grease vapors.

1243 **Exception:** A Type I hood shall not be required for an electric cooking appliance
1244 where an approved testing agency provides documentation that the appliance
1245 effluent contains less than 5 mg/m³ or less of grease when tested at an exhaust flow
1246 rate of 500 CFM (0.236 m³/s) in accordance with UL 710B. The appliance
1247 component controls and safety interlocks shall be inspected in accordance with the
1248 manufacturer installation instructions by qualified service personnel a minimum of
1249 once every 6 months and results of the inspection shall be available on the
1250 premises for review by the fire chief. When provided, automatic fire extinguishing
1251 systems shall be in accordance with Section 904.12.

1252 **611 Automated External Defibrillator (AED) in High-Rise Buildings**

1253 **611.1 Locations.** All buildings that have occupied floors located more than 75 feet (22
1254 860 mm) above the lowest level of fire department vehicle access shall have at least
1255 one Automated External Defibrillator (AED) located on each occupied level.

1256 **Exception:** The provisions of this section shall not apply to the following
1257 buildings and structures:

- 1258 (1) Airport traffic control towers in accordance with Section 412.2 of the
1259 Building Code.
1260 (2) Open parking garages in accordance with Section 406.5 of the Building
1261 Code.

- (3) Group A-5 occupancies in accordance Section 303.6 of the Building Code.
- (4) Group H-1, H-2 or H-3 in accordance with Section 415 of the Building Code.

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

611.3 Accessibility. All AEDs must be available for public use.

- 1. All AEDs shall be located in the elevator lobby unless otherwise approved by the fire chief.
- 2. Standard industry accepted signs shall mark the location of each AED.

611.4 Maintenance. All AEDs shall be maintained and tested according to manufacturer recommendations.

- 1. Maintenance records shall be kept for a period of 1 year.
- 2. Disposable supplies (Defibrillation pads) shall be replaced upon their expiration date or following use.

611.5 Medical Direction. A licensed physician shall be involved to ensure compliance with the requirements of the Health and Safety Code, chapter 779, Automated External Defibrillators.

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

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

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

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

1292 **901.6.3 Records.** Records of all system inspections, tests and maintenance required by
1293 the referenced standards shall be maintained on the premises for a minimum of three
1294 years and shall be copied to the fire chief upon request.

1295 **903.2.1.6 Assembly occupancies on roofs.** Where an occupied roof has an assembly
1296 occupancy with an occupant load exceeding 100 for Group A-2 and 300 for other Group
1297 A occupancies, all floors between the occupied roof and the level of exit discharge shall
1298 be equipped with an automatic sprinkler system in accordance with Section 903.3.1.1.

1299 **Exception:** Open parking garages of Type I or II construction.

1300 **903.2.4.2 Group F-1 distilled spirits and beverages.** An automatic sprinkler system
1301 shall be provided throughout a Group F-1 fire area used for the manufacture or mixing of
1302 over 20% by volume (15.8% by weight) of ethyl alcohol distilled spirits in an aqueous
1303 solution in a volume exceeding the Maximum Allowable Quantity per Control Area.

1304 **[BG] 903.2.8.1.1 Group R-1 Bed and Breakfast occupancies.** Compliance with Section
1305 903.2.8 (*Group R*) is not required for a single structure Group R-1 Bed and Breakfast
1306 occupancy as defined in Section 25-2-781 (*Bed and Breakfast Residential Use Structures*
1307 *Classified*) when the owner resides within the Bed and Breakfast occupancy and provided
1308 that:

- 1309 (1) the structure is a detached single family home that was legally constructed
1310 and occupied as a single family residence prior to January 1, 2006;
- 1311 (2) the total number of sleeping rooms has not been increased after January 1,
1312 2006;
- 1313 (3) the residence is protected by a monitored residential style fire/security
1314 system with an appropriate automatic smoke detection system installed
1315 throughout the residence with occupant notification devices in accordance
1316 with Section 907.5; and
- 1317 (4) the residential style fire/security system shall be inspected, tested and
1318 maintained in accordance with Section 907.8.

1319 **903.3.1.1.1 Exempt locations.** When approved, automatic sprinkler protection shall not
1320 be required in the following rooms or areas where such rooms or areas are protected with
1321 an approved automatic fire detection system in accordance with Section 907.2 that will
1322 respond to visible or invisible particles of combustion. Sprinklers shall not be omitted
1323 from a room merely because it is damp, of fire-resistance-rated construction or contains
1324 electrical equipment.

1325 (1) Provision remains unchanged.

1326 (2) Transformer rooms owned and operated by an electric utility and separated from
1327 the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies
1328 having a fire-resistance rating of not less than two hours. The automatic fire
1329 detection system for exempt locations is not required.

1330 (3) Provision remains unchanged.

1331 (4) Provision remains unchanged.

1332 (5) Provision remains unchanged.

1333 **903.3.1.2.1 Balconies and decks.** Sprinkler protection shall be provided for exterior
1334 balconies, decks and ground floor patios of dwelling units and sleeping units where the
1335 either of the following conditions exists:

1336 (1) the building is of Type V construction, or of Type III construction if the
1337 balcony or deck is framed with wood, provided there is a roof or deck above;
1338 or

1339 (2) exterior balconies, decks, and ground floor patios of dwelling units and
1340 sleeping units are constructed in accordance with Section 705.2.3.1,
1341 Exception 3 of the Building Code.

1342 Sidewall sprinklers that are used to protect such areas shall be permitted to be
1343 located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below
1344 the structural members and a maximum distance of 14 inches (356 mm) below the deck
1345 of the exterior balconies and decks that are constructed of open wood joist construction.

1346 **903.3.1.2.2 Balcony closets.** Sprinkler protection shall be provided for all balcony
1347 closets.

1348 **Section 903.3.5 Water supplies.** Water supplies for automatic sprinkler systems shall
1349 comply with this section and the standards referenced in Section 903.3.1. Fire hydrant
1350 flow tests shall be in accordance with Section 507.4. Protection of potable water supplies
1351 shall be in accordance with Section 507.5.6.

1352 **903.3.5.3** Water supplies designed for automatic sprinkler systems shall provide a
1353 safety factor of ten pounds per square inch gauge (PSIG). The safety factor shall
1354 be based on the calculated system design flow and pressure.

1355 **Exception:** A safety factor less than those defined in this Section may be
1356 approved by the fire chief only if historical water supply data is available to
1357 demonstrate that reasonable expected fluctuations will not cause the water
1358 supply to fall below the system demand.

1359 **903.3.5.4 Hose Stream Demand.** The minimum calculated hose stream demand for Type
1360 V-B and Type V-A construction, as defined in the Building Code, shall be a minimum of
1361 250 Gallons Per Minute (GPM).

1362 **903.3.6 Hose threads.** Fire hose threads and fittings used in connection with automatic
1363 sprinkler systems shall be approved and shall be National Standard Hose Thread.

1364 **903.3.9 Flexible Sprinkler Hose Fittings.** Flexible hoses used in automatic sprinkler
1365 systems shall be limited in length to a maximum of 6 feet. The extinguishing agent shall
1366 pass through a maximum of one 6-foot section before discharging from the sprinkler
1367 orifice (head). Approval of shop drawing submittals shall be required for all uses of
1368 flexible hose sprinkler piping, and where more than one flexible hose sprinkler drop is
1369 used in a remodel application, the adequacy of the water supply shall be verified by
1370 hydraulic calculations.

1371 **903.4.2 Alarms.** A listed fire alarm bell, located on the exterior of the building in an
1372 approved location, shall be connected to each automatic sprinkler system. The fire alarm
1373 bell shall be activated by water flow equivalent to the flow of a single sprinkler of the
1374 smallest orifice size installed in the system. Where a fire alarm system is installed,
1375 actuation of the automatic sprinkler system shall actuate the building fire alarm system.

1376 **904.9 Halon systems.** Halogenated extinguishing systems shall be installed, maintained,
1377 and periodically inspected and tested in accordance with NFPA 12A and their listing.
1378 The conditions of approval of all Halon automatic fire-extinguishing systems shall
1379 include (i) a demonstration of need acceptable to the fire chief detailing a critical need for
1380 the system such as a direct effect on life safety that cannot be adequately addressed by
1381 other types of suppression systems, and (ii) an approved method of testing that does not
1382 include the intentional release of Halon gas.

1383 **904.13 Commercial cooking systems.** The automatic fire-extinguishing system for
1384 commercial cooking systems shall be of a type recognized for protection of commercial
1385 cooking equipment and exhaust systems of the type and arrangement protected. Each pre-
1386 engineered automatic dry- and wet-chemical extinguishing system shall be tested in
1387 accordance with UL 300 and listed and labeled for its intended application. Other types
1388 of extinguishing systems shall be listed and labeled for specific use as protection for
1389 commercial cooking operations. The system shall be installed in accordance with this

code, its listing and the manufacturer's installation instructions. Automatic fire suppression systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:

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

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

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

904.13 Domestic cooking systems facilities. in Group I-2 Condition 1. Cooktops and ranges installed in the following occupancies shall be protected in accordance with Section 904.14.1:

- (1) In Group I-1 occupancies where domestic cooking facilities are installed in accordance with Section 420.9 of the Building Code.
- (2) In Group I-2 occupancies where domestic cooking facilities are installed in accordance with Section 407.2.7 of the Building Code

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

905.1 General. Standpipe systems shall be provided in new buildings and structures in accordance with this section. Fire hose threads used in connection with new fire standpipe systems shall be approved and shall be National Standard Hose Thread. Except as otherwise approved by the fire chief, existing standpipe fire hose threads shall be national standard hose thread. The location of fire department hose connections shall be approved. In buildings used for high-piled combustible storage, hose connections shall be in accordance with Chapter 32 (*High-Piled Combustible Storage*).

1422 **905.1.1 Hose.** With the concurrence of the building official, hoses need not be
1423 installed or maintained on standpipes of any class when the occupancy does not
1424 provide training in the use of standpipe hose and the employees, residents, or other
1425 regular occupants of the occupancy are trained or instructed to evacuate and
1426 evacuation drills are conducted at intervals agreed on by the owner or agent and
1427 the fire department.

1428 **905.4 Location of Class I standpipe hose connections.** Class I standpipe hose
1429 connections shall be provided in all of the following locations:

- 1430 (1) In every required interior exit stairway, a hose connection shall be provided
1431 for each story above and below grade plane. Hose connections shall be
1432 located at the intermediate floor landing unless otherwise approved by the
1433 fire chief.

1434 *Items 2 through 4 and item 6 remain unchanged*

- 1435 (5) Where the roof has a slope less than four units vertical in 12 units horizontal
1436 (33.3-percent slope), a hose connection shall be located to serve the roof or
1437 at the highest landing of a stairway with stair access to the roof provided in
1438 accordance with Section 1009.16. An additional hose connection shall be
1439 provided at the top of the most hydraulically remote standpipe for testing
1440 purposes.

1441 **905.5.3 Class II system hose.** If installed, the minimum diameter for standpipe hose
1442 shall be 1½-inch (38 mm) and such hose shall be listed for this service.

1443 **907.2 Where required, new buildings and structures.** An approved manual, automatic
1444 or manual and automatic fire alarm system installed in accordance with the provisions of
1445 this code and NFPA 72 shall be provided in new buildings and structures in accordance
1446 with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance
1447 with Section 907.6, unless other requirements are provided by another section of this
1448 code. The fire alarm control panel or a full function remote annunciator shall be installed
1449 at the main entrance for use by fire department personnel.

1450 A minimum of one manual fire alarm box shall be provided in an approved location to
1451 initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or
1452 water-flow detection devices. Where other sections of this code allow elimination of fire
1453 alarm boxes due to sprinklers, a single fire alarm box shall be installed. The manual fire
1454 alarm box is required to provide a means for fire watch personnel to initiate an alarm
1455 during a sprinkler system impairment event.

1456 **Exceptions:**

- 1457 1. The manual fire alarm box is not required for fire alarm systems dedicated to
1458 elevator recall control and supervisory service.
- 1459 2. Automatic heat detection required by this section shall not be required if
1460 automatic sprinkler protection installed in accordance with Section 903.3.1.1
1461 or 903.3.1.2 is provided and connected to the building fire alarm system.
- 1462 3. Where ambient conditions prohibit installation of automatic smoke
1463 detection, other approved automatic fire detection may be allowed.
- 1464 4. Duct smoke detectors installed in accordance with applicable mechanical
1465 code requirements for stand-alone operation, located in separate lease
1466 spaces, occupied or vacant, of shell buildings need not be connected to the
1467 fire alarm control panels (FACP) where the FACP is only required for the
1468 sprinkler monitoring system.

1469 **907.2.1.3 Electrical Shunt for Amplified Sound Conditions.** For venues with
1470 amplified music or sound systems, in Group A occupancies having an occupant load of
1471 300 or more, electrical shunts shall be provided to de-energize the music or sound
1472 systems upon alarm activation as necessary to demonstrate compliance with the audibility
1473 requirements of NFPA 72.

1474 **907.2.3.1 Common Areas within a Group E Day Care Occupancies.** Group E day care
1475 occupancies shall be provided with a fire alarm system in accordance with Section
1476 907.2.3 and shall be protected by smoke detectors installed in accordance with this
1477 section, the listing of the detectors and NFPA 72, and shall activate notification in
1478 accordance with Section 907.5. Detectors shall be placed throughout all corridors of all
1479 floors containing the day care facility, in lounges, and in each room occupied by children.

1480 **Exceptions:**

- 1481 1. A day care housed within and serving the students of a Group E occupancy,
1482 such as a public charter or private school, grades K-12, is permitted to
1483 comply with the alarm and detection requirements of Section 907.2.3.
- 1484 2. Group E day cares serving 12 or fewer children located in a state licensed or
1485 registered Child-Care Home, provided that the dwelling is protected with
1486 interconnected hard wired smoke alarms located as required by this section,
1487 907.2.3.1, and powered as required for a new home in accordance with the
1488 International Residential Code and NFPA 72 or battery operated in
1489 accordance with Section 1103.8.3 and maintained in accordance with
1490 Section 1103.8.4. When such day cares serve hearing impaired children,
1491 parents, or guardians, the smoke alarms shall be listed for both audible and
1492 visual alarm service.

1493 **907.2.6.4 Common Areas within Group I-4 Day Care Occupancies.** Group I-4 day
1494 care occupancies shall be protected by a fire alarm system which monitors smoke
1495 detectors installed in accordance with this section, the listing of the detectors and NFPA
1496 72 and activates notification devices in accordance with Section 907.5. Detectors shall
1497 be placed on each story in front of doors to the stairways throughout the corridors of all
1498 floors containing the day care facility, lounges and each room used by occupants
1499 receiving custodial care.

1500 **907.2.8.2 Automatic smoke detection system.** An automatic smoke detection system
1501 that activates the occupant notification system in accordance with Section 907.6 shall be
1502 installed throughout all group R-1 occupancies. Listed system-type automatic detectors
1503 shall be installed within interior corridors serving sleeping units and unseparated areas
1504 such as recreational rooms, laundry rooms, and similar areas served by interior corridors
1505 providing access to and egress from sleeping units.

1506 **Exception:** An automatic smoke detection system is not required in buildings that
1507 do not have interior corridors serving sleeping units, where each sleeping unit has a
1508 means of egress door opening directly to an exit or to an exterior exit access, an
1509 egress balcony or similar exit access that leads directly to an exit.

1510 **907.2.9 Group R-2.** Fire alarm systems and smoke alarms shall be installed in Group R-2
1511 occupancies as required in Sections 907.2.9.1 thru 907.2.9.2.

1512 **907.2.9.1 Manual and automatic fire alarm system.** A manual and automatic fire alarm
1513 system that activates the occupant notification system in accordance with Section 907.6
1514 shall be installed in Group R-2 occupancies where:

- 1515 1. Any dwelling unit or sleeping unit is located three or more stories above the
1516 lowest level of exit discharge;
- 1517 2. Any dwelling unit or sleeping unit is located more than one story below the
1518 highest level of exit discharge of exits serving the dwelling unit or sleeping
1519 unit; or
- 1520 3. The building contains more than 16 dwelling units or sleeping units.

1521 Listed system-type automatic detectors shall be installed within interior corridors serving
1522 as the primary access and egress for dwelling units, and unseparated common areas such
1523 as recreational room, laundry rooms and similar areas. Heat detection may be installed in
1524 lieu of smoke detection in areas that are not suitable for smoke detection in accordance
1525 with NFPA 72 (2013 edition), Sections 17.1.7, and 17.1.8.

1528 **Exceptions:**

- 1529 1. A fire alarm system is not required in buildings not more than two stories in
1530 height where all dwelling units or sleeping units and contiguous attic and
1531 crawl spaces are separated from each other and public or common areas by
1532 at least 1-hour fire partitions and each dwelling unit or sleeping unit has an
1533 exit directly to a public way, exit court or yard.
- 1534 2. Manual fire alarm boxes are not required throughout the building when all
1535 the following conditions are met:
- 1536 2.1. The building is equipped throughout with an automatic sprinkler
1537 system in accordance with Section 903.3.1.1 or Section 903.3.1.2;
- 1538 2.2. The notification appliances will automatically activate throughout the
1539 notification zones upon sprinkler water flow; and
- 1540 3. A separate fire alarm system is not required in buildings that do not have
1541 interior corridors serving dwelling units and are protected by an approved
1542 automatic sprinkler system installed in accordance with 903.3.1.1 or
1543 903.3.1.2, provided that sprinkler system activation results in a local alarm
1544 designed to notify all occupants, and dwelling units have a means of egress
1545 door opening directly to an exterior exit access that leads directly to the
1546 exists or are served by open ended corridors as defined in Section 202 and
1547 designed in accordance with Section 1027.6, Exception 3.

1548 **907.5.2.1.1 Average sound pressure.** The audible alarm notification appliances shall
1549 provide a sound pressure level of 15 decibels (dBA) above the average ambient sound
1550 level or 5 dBA above the maximum sound level having a duration of not less than 60
1551 seconds, whichever is greater, in every occupiable space, including occupiable balconies
1552 within the building.

1553 **907.6.1 Wiring.** Wiring shall comply with the requirements of NFPA 70 and NFPA 72.
1554 Wireless protection systems utilizing radio-frequency transmitting devices shall comply
1555 with the special requirements for supervision of low-power wireless systems in NFPA 72.

1556 **907.6.1.1 Surge protection devices.** Surge protection devices (SPDs) for fire alarm
1557 circuits shall be in accordance with Sections 907.6.1.1 through 907.6.1.3.

1558 SPDs shall be listed for the repeated limiting of transient voltage surges on 60 Hertz
1559 power circuits not exceeding 1,000 Volts in accordance with UL 1449, *Standard for*
1560 *Surge Protective Devices*. SPDs for power-limited and non-power-limited fire alarm
1561 circuits shall be listed in accordance with UL 497B *Protectors for Data Communications*
1562 *and Fire Alarm Circuits*.

1563 **907.6.1.2 Circuits extending beyond one building.** Non-power-limited and power-
1564 limited signaling system circuits that extend beyond building and routed outdoors shall be
1565 provided with surge protection devices (SPDs) in accordance with Article 760.32 of the
1566 Electrical Code.

1567 **907.6.1.3 Fire Alarm Equipment.** An SPD shall be installed on the dedicated AC
1568 branch circuit connected to any piece of fire alarm equipment that requires a dedicated
1569 AC branch circuit.

1570 **907.6.1.4 Signaling Line Circuit (SLC) Protection.** Each SLC shall be provided with an
1571 SPD at the connection to the panel that controls the SLC.

1572 **907.6.2.1 Protection of fire alarm control unit and notification power supplies.** In
1573 areas that are not continuously occupied, a single smoke detector shall be provided at the
1574 location of each fire alarm control unit, notification appliance circuit power extenders,
1575 and supervising station transmitting equipment.

1576 **Exceptions:**

- 1577 1. Where ambient conditions prohibit installation of automatic smoke
1578 detection, when approved, a heat detector shall be permitted.

1579 **907.6.7 Annunciation and control.** The main fire alarm control panel or a full function
1580 remote annunciator shall be installed at the main entrance or at an approved location near
1581 the main entrance of buildings with fire alarm systems.

1582 **909.5 Smoke barrier construction.** Smoke barriers required for passive smoke control
1583 and a smoke control system using the pressurization method shall comply with Section
1584 709 of the International Building Code. Smoke barriers shall be constructed and sealed
1585 to limit leakage areas exclusive of protected openings. The maximum allowable leakage
1586 area shall be the aggregate area calculated using the following leakage area ratios:

- 1587 1. Exterior walls: $A/A_w = 0.00035$ (includes construction cracks, and cracks
1588 around windows and doors)
- 1589 2. Stairwell walls: $A/A_w = 0.00035$ (includes construction cracks but not cracks
1590 around windows or doors)
- 1591 3. Elevator shaft walls: $A/A_w = 0.0018$ (includes construction cracks but not
1592 cracks around doors)
- 1593 4. Floors: $A/A_F = 0.00017$ (includes construction cracks and gaps around
1594 penetrations)

1595 Where:

1596 $A =$ Total leakage area, square feet (m^2)

1597 A_F = Unit floor or roof area of barrier, square feet (m^2)

1598 A_w = Unit wall area of barrier, square feet (m^2)

1599 The leakage area ratios shown do not include openings due to gaps around doors and
1600 operable windows. The total leakage area of the smoke barrier shall be determined in
1601 accordance with Section 909.5.1 and tested in accordance with Section 909.5.2.

1602 **909.10.2 Ducts.** Duct materials and joints shall be capable of withstanding the probable
1603 temperatures and pressures to which they are exposed as determined in accordance with
1604 Section 909.10. Shafts constructed of gypsum board or gypsum panel products are not
1605 allowed. Ducts shall be constructed and supported in accordance with the Mechanical
1606 Code. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance
1607 with nationally accepted practices. Measured leakage shall not exceed 5 percent of design
1608 flow. Results of such testing shall be a part of the documentation procedure. Ducts shall
1609 be supported directly from fire-resistance-rated structural elements of the building by
1610 substantial, noncombustible supports.

1611 **Exception:** Flexible connections, for the purpose of vibration isolation, complying
1612 with the Mechanical Code and that are constructed of approved fire-resistance-
1613 rated materials.

1614 **909.12.4 Automatic Control.** Where completely automatic control is required or used,
1615 the automatic-control sequences shall be initiated from an appropriately zoned automatic
1616 sprinkler system complying with Section 903.3.1.1, an automatic smoke detection system
1617 complying with 907.2.13, manual controls that are readily accessible to the fire
1618 department and any smoke detectors required by the engineering analysis.

1619 **909.18.8 Testing for smoke control.** Smoke control systems shall be tested by a special
1620 inspector.

1621 **909.20 Smokeproof enclosures.** Where required by Section 1023.12 of the International
1622 Building Code, a smokeproof enclosure shall be constructed in accordance with this
1623 section. A smokeproof enclosure shall consist of a pressurized interior exit stairway or
1624 ramp that is enclosed in accordance with the applicable provisions of Building Code
1625 Section 1023 and a pressurized vestibule meeting the requirements of this section. Where
1626 access to the roof is required, such access shall be from the smokeproof enclosure where
1627 a smokeproof enclosure is required.

1628
1629 **909.20.1 Access.** Access to the stairway or ramp shall be by way of a vestibule. The
1630 minimum dimension of the vestibule shall be not less than the required width of the
1631 corridor leading to the vestibule but shall not have a width of less than 44 inches (1118
1632 mm) and shall not have a length of less than 72 inches (1829 mm) in the direction of
1633 egress travel.
1634

1635 **909.20.2.1 Door closers.** Doors in a smokeproof enclosure shall be self-closing
1636 and self-latching.
1637

1638 **909.20.2 Construction.** The smokeproof enclosure shall be separated from the remainder
1639 of the building by not less than 2-hour fire barriers constructed in accordance with
1640 Section 707 of the Building Code or horizontal assemblies constructed in accordance
1641 with Section 711 of the Building Code, or both. Openings are not permitted other than
1642 the required means of egress doors. The vestibule shall be separated from the stairway or
1643 ramp by not less than 2-hour fire barriers constructed in accordance with Section 707 of
1644 the Building Code or horizontal assemblies constructed in accordance with Section 711
1645 of the Building Code, or both.
1646

1647 **909.20.3 Pressurized stair and entrance vestibule systems.** The provisions of Sections
1648 909.20.3.1 through 909.20.3.4 shall apply to smokeproof enclosures using a pressurized
1649 stair and pressurized entrance vestibule.
1650

1651 **909.20.3.1 Pressurization system.** Using fans with motor speeds controlled by variable-
1652 frequency drives, the stair and entrance vestibules shall be pressurized to accommodate
1653 two conditions:

- 1654 1. All stair and entrance vestibule doors closed.
- 1655 2. All stair and entrance vestibule doors closed plus all stair tower exterior
1656 ground floor level doors opened.

1657 Validation of the pressurization fan sizes shall include the analysis described in Fire Code
1658 Section 909.4 under both winter and summer conditions using the most recent ASHRAE
1659 climatic data tables for Austin, Texas. Use of algebraic equations for sizing of
1660 pressurization fans shall be acceptable only for simple idealized buildings that are served
1661 with only a stair and entrance vestibule pressurization system. Sizing of pressurization
1662 fans for buildings that include multiple types of mechanical smoke control systems,
1663 mixed-use occupancies or are very tall buildings shall be performed using computer
1664 modeling software.
1665

1666 **909.20.3.2 Pressure difference.** Under the two conditions listed in Section 909.20.3.1,
1667 the stairs shall be pressurized to not less than 0.05 inch of water (12.44 Pa) positive
1668 pressure relative to the entrance vestibule. The entrance vestibule shall be pressurized to
1669 not less than 0.05 inch of water (12.44 Pa) positive pressure relative to the fire floor.
1670 The pressure difference across the closed door from the stair to vestibule shall be
1671 balanced to within 10-percent of the pressure difference across the door from the
1672 vestibule to the building. The minimum allowable total pressure difference across the
1673 smokeproof enclosure shall be not less than 0.10 inch of water. The pressure difference
1674 across smokeproof enclosure doors shall not exceed 30 pounds (133 N) maximum force
1675 to begin opening the door.
1676

1677 **909.20.3.3 Dampered relief opening.** A relief vent sized at 5,000 cfm and an opening
1678 point of 0.35 inch of water (field adjustable) shall be provided at the upper portion of the
1679 stair shaft.

1680
1681 **909.20.3.4 Pressurization systems.** Smokeproof enclosure pressurization systems shall
1682 be independent of other building ventilation systems. The equipment, control wiring,
1683 power wiring and ductwork shall comply with one of the following:

- 1684
1685 1. Equipment, control wiring, power wiring and ductwork shall be located
1686 exterior to the building and directly connected to the smokeproof enclosure or
1687 connected to the smokeproof enclosure by ductwork enclosed by not less than
1688 2-hour fire barriers constructed in accordance with Section 707 of the
1689 Building Code or horizontal assemblies constructed in accordance with
1690 Section 711 of the Building Code, or both.
- 1691
1692 2. Equipment, control wiring, power wiring and ductwork shall be located
1693 within the smokeproof enclosure with intake or exhaust directly from and to
1694 the outside or through ductwork enclosed by not less than 2-hour fire barriers
1695 constructed in accordance with Section 707 of the Building Code or
1696 horizontal assemblies constructed in accordance with Section 711 of the
1697 Building Code, or both.
- 1698
1699 3. Equipment, control wiring, power wiring and ductwork shall be located
1700 within the building if separated from the remainder of the building, including
1701 other mechanical equipment, by not less than 2-hour fire barriers constructed
1702 in accordance with Section 707 of the Building Code or horizontal assemblies
1703 constructed in accordance with Section 711 of the Building Code, or both.

1704
1705 **Exception:** Control wiring and power wiring located outside of a 2-hour
1706 fire barrier construction shall be protected using any one of the following
1707 methods:

- 1708
1709 1. Cables used for survivability of required critical circuits shall be listed in
1710 accordance with UL 2196 and shall have a fire-resistance rating of not
1711 less than 2 hours.
- 1712
1713 2. Where encased with not less than 2 inches (51 mm) of concrete.

- 1715 3. Electrical circuit protective systems shall have a fire-resistance rating of
1716 not less than 2 hours. Electrical circuit protective systems shall be
1717 installed in accordance with their listing requirements.
1718

1719 **909.22.6 Components bypassing weekly test.** Where components of the smoke control
1720 system are bypassed by the preprogrammed weekly test required by Section 909.12.1,
1721 such components shall be tested annually. The system shall be tested under standby
1722 power conditions.

1723 **912.1 Installation.** Fire department connections shall be installed in accordance with the
1724 NFPA standard applicable to the system design and shall comply with Sections 912.1.1
1725 through 912.7.

1726 **912.1.1 Number of Hose Connections.** Fire department connections (FDC's) shall
1727 include a minimum of two 2½ inch (63.5 mm) female National Standard Hose Thread
1728 (NST) inlet connections. Where system design flow rates exceed 500 gpm (1,893 lpm), a
1729 minimum of one FDC inlet connection shall be installed for each 250 gpm (946 lpm) or
1730 portion thereof.

1731 **Exception:** A single 2½ inch FDC inlet shall be provided for NFPA 13R
1732 automatic sprinkler systems.

1733 **912.4 Access.** Immediate access to fire department connections shall be maintained at all
1734 times and without obstruction by fences, bushes, trees, walls or any other fixed or
1735 moveable object for a minimum of 3 feet (914 mm). Access to fire department
1736 connections shall be approved by the fire chief.

1737 **Exception:** Fences, where provided with an access gate equipped with a sign
1738 complying with the legend requirements of Section 912.5 and a means of
1739 emergency operation. Locks, if installed shall be openable by use of a fire
1740 department Knox Key. The gate and means of emergency operation shall be
1741 approved by the fire chief and maintained operational at all times.

1742 **912.4.1 Locking fire department connection caps.** The fire chief is authorized to
1743 require locking caps on fire department connections for water-based fire protection
1744 systems. The locking caps shall be manufactured by an approved manufacturer and used
1745 and maintained as designed.

1746 **912.4.1.2 Locking fire department connection caps in existing buildings or
1747 structures.** The fire chief is authorized to require locking caps on fire department
1748 connections (FDC) for water-based fire protection systems serving existing buildings
1749 where the fire department has observed obstructions placed in the FDC or where the FDC
1750 is missing caps. The locking caps shall be manufactured by an approved manufacturer
1751 and used and maintained as designed.

1752 **912.5.1 Fire Department Connection Placard – for existing structures.** In addition to
1753 the signage required in 912.5.1, an all-weather, permanent, system placard shall be placed
1754 in a visible location adjacent to the fire department connection on all structures with a fire
1755 protection system requiring pressures exceeding 150psi. The placard text shall be white
1756 reflective letters, 1 ½ inch minimum height, on either a red or black background. The
1757 placard shall contain the following information:

- 1758 1. Required system pressure at FDC inlet;
- 1759 2. Area of building served by FDC; and
- 1760 3. System PRV locations.

1761 **914.5.3 Compartment smoke control system.** Where compartmentation is required by
1762 Section 405.4 of the Building Code, each compartment shall have an independent smoke
1763 control system. The system shall be automatically activated and capable of manual
1764 operation from the firefighter's smoke control panel in accordance with Section 907.2.18.

1765 **916.1 Gas detection systems.** Gas detection systems required by this code shall comply
1766 with Sections 916.2 through 916.11. When prescribed by other adopted standards, vapor
1767 detector systems shall comply with Section 916.

1768 Carbon monoxide detection systems shall comply with Section 915.

1769 Carbon dioxide gas detectors for insulated liquid carbon dioxide systems used in
1770 beverage dispensing application shall comply with Section 5307.3.

1771 **916.4 Power connections.** Gas detection systems supplies shall be in accordance with
1772 Section 907.6.2. Carbon dioxide gas detectors ~~or~~ for beverage dispensing applications
1773 shall be permitted to be cord connected to an unswitched receptacle using an approved
1774 restraining means that secures the plug to the receptacle.

1775 **916.5 Emergency and standby power.** Standby or emergency power shall be provided
1776 in accordance with Section 1203.2.7. The gas detection system shall initiate a supervisory
1777 signal at an approved location if the secondary power supply is interrupted.

1778 **916.6 Gas detector locations.** Gas detectors shall be installed ~~in~~ at approved storage or
1779 use locations where leaking gases are expected to accumulate. Gases or vapors that
1780 present a health hazard and are stored or used outside of gas rooms, gas cabinets or
1781 exhausted enclosures shall be located based on the vapor density of the gas @ NTP.

1782 **916.6.1 Gas detector selection.** Gas detectors shall selected be based on the physical
1783 hazard or health hazard of the hazardous material being measured.

1784 **916.7 Gas sampling.** Gas sampling shall be performed continuously. Sample analysis
1785 shall be processed immediately after sampling, except as follows:

- 1793 1. For HPM gases, sample analysis shall be performed at intervals not
1794 exceeding 30 minutes.
1795 2. For highly toxic and toxic gases, sample analysis shall be performed at
1796 intervals not exceeding 5 minutes, in accordance with Section 6004.2.2.7.
1797 3. Where a less frequent or delayed sampling interval is approved.
1798

1799 **916.8 System activation.** A gas detection alarm shall be initiated where any detector
1800 detects a concentration of gas exceeding the following thresholds:

- 1801 1. For flammable gases, a gas concentration exceeding 25 percent of the lower
1802 flammability limit (LFL).
1803 2. For nonflammable gases, a gas concentration exceeding its Permissible
1804 Exposure Limit or 8-hour Time-Weighted Average, unless a different
1805 threshold is specified by the section of this code requiring a gas detection
1806 system.
1807 3. For simple asphyxiant gases, a gas concentration equal to or less than 19.5%
1808 volume of oxygen in air at NTP.
1809

1810 Upon activation of a gas detection alarm, alarm signals or other required responses shall
1811 be as specified by the section of this code requiring a gas detection system. Audible and
1812 visible alarm signals associated with a gas detection alarm shall be distinct from fire
1813 alarm and carbon monoxide alarm signals.
1814

1815 **916.10 Fire alarm system connections.** Gas detectors and gas detection systems
1816 connected to fire alarm systems shall be in accordance with NFPA 72.
1817

1818 **1001.1 Scope.** The provisions of this chapter shall specify the requirements of means of
1819 egress and shall apply to the design, installation of means of egress. For those
1820 requirements, refer to the Building Code. Refer to section 1032 of the Fire Code for
1821 maintenance of the means of egress.

1822 **1032.2 Reliability.** Required exit accesses, exits or exit discharges shall be continuously
1823 maintained free from obstructions or impediments to full instant use in the case of fire or
1824 other emergency when the areas served by such exits are occupied. Security devices,
1825 including drop bars, affecting means of egress shall require approval of the fire chief.
1826 Doors utilizing drop bars must have signage on the exterior of the door stating "Door
1827 equipped with drop bar". Doors utilizing drop bars must have signage on the interior of
1828 the door stating "Drop bar must be removed when building is occupied". When security
1829 devices are not in use, they must be secured in a manner where unauthorized use is
1830 prevented, such as:

- 1831 1. Locking bar in a keeper near the door.
1832 2. Securing bar in an office, locked closet, or similar location not accessible to the
1833 general public.

1834 Approval to use security devices outside the scope of this code may be revoked for
1835 failure to meet the letter and intent of these rules.

1836 **1102.1 Supplemental Definitions.** The definitions in the 2021 Fire Code are adopted as
1837 published except that supplemental definitions are added or amended. The following
1838 supplemental definitions are defined in Section 202.1.1. For the purposes of this chapter
1839 and as used elsewhere in this code, these definitions shall have the meanings shown in
1840 Section 202.1.1.

1841 **INDEPENDENT EXIT/INDEPENDENT STAIRWAY/INDEPENDENT EXIT**
1842 **RAMP.**

1843 **1103.4.1 Group I-2 and I-3 occupancies.** *This section is deleted in its entirety.*

1844 **1103.4.8 Occupancies other than Group I-2 and I-3.** *This section is deleted in its*
1845 *entirety.*

1846 **1103.4.9 Waste and linen chutes.** *This section is deleted in its entirety.*

1847 **1103.5.56 Group B ambulatory health care facilities.** An automatic sprinkler system
1848 shall be installed throughout all existing fire areas containing a Group B ambulatory
1849 health care facility occupancy when the facility is designed to allow either of the
1850 following conditions to exist at any time:

- 1851 1. Four or more care recipients are incapable of self-preservation.
- 1852 2. One or more care recipients who are incapable of self-preservation are
1853 located at other than the level of exit discharge serving such occupancy.

1854 **1103.6.1 Existing multiple story buildings.** Existing structures with occupied floors
1855 located more than 50 feet (15,240 mm) above or below the lowest level of fire
1856 department access shall be equipped with standpipes installed in accordance with Section
1857 905. The standpipes shall have an approved fire department connection with hose
1858 connections at each floor level above or below the lowest level of fire department access.
1859 The fire chief is authorized to approve the installation of manual standpipe systems to
1860 achieve compliance with this section where the system is demonstrated to be capable of
1861 providing the required hose flow and pressure at the highest standpipe outlet while the
1862 fire department is providing the water supply to the fire department connection (FDC) at
1863 a maximum FDC inlet pressure of 150 psi (10.3 bar).

1864 **1103.7.6 Group R-2.** An automatic or manual fire alarm system that activates the
1865 occupant notification system in accordance with Section 907.6 shall be installed in
1866 existing Group R-2 occupancies more than three stories in height or with more than 16
1867 dwelling or sleeping units. A plan for achieving compliance shall be completed by the
1868 owner within 12 months of the discovery of the deficiency. Compliance shall be
1869 achieved within 24 months of the discovery of the deficiency.

1870 **Exceptions:**

- 1871 1. A fire alarm system is not required in existing R-2 occupancies where each
1872 living unit is separated from other contiguous living units by fire barriers
1873 having a fire-resistance rating of not less than 0.75 hour, and where each
1874 living unit has either its own independent exit or its own independent
1875 stairway or ramp discharging at grade. When conditions warrant, the fire
1876 chief is authorized to accept an alternate minimum distance from the egress
1877 path to nearby doors and windows of apartments.
- 1878 2. A separate fire alarm system is not required in buildings that are equipped
1879 throughout with an approved supervised automatic sprinkler system installed
1880 in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm
1881 to notify all occupants.
- 1882 3. A fire alarm system is not required in buildings that do not have interior
1883 corridors serving dwelling units and are protected by an approved automatic
1884 sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2,
1885 provided that dwelling units either have a means of egress door opening
1886 directly to an exterior exit access that leads directly to the exits or are served
1887 by open-ended corridors designed in accordance with Section 1023.6,
1888 Exception 4.

1889 **1103.8.3 Power source.** In Group R occupancies, single-station smoke alarms shall
1890 receive their primary power from the building wiring provided that such wiring is served
1891 from a commercial source and shall be equipped with a battery backup. Smoke alarms
1892 with integral strobes that are not equipped with battery backup shall be connected to an
1893 emergency electrical system. Smoke alarms shall emit a signal when the batteries are
1894 low. Wiring shall be permanent and without a disconnecting switch other than as required
1895 for overcurrent protection. Listed single-station battery-operated smoke alarms installed
1896 or replaced shall be replaced with a non-replaceable, non-removable battery that can
1897 power the smoke alarm for a minimum of 10 years.

1898 **Exceptions:**

- 1899 1. Smoke alarms are permitted to be solely battery operated in existing
1900 buildings in locations where smoke alarms were not required to be powered
1901 by the building wiring under the code in effect at the time of construction
1902 and where no construction is taking place.
- 1903 2. Smoke alarms are permitted to be solely battery operated in buildings that
1904 are not served from a commercial power source.
- 1905 3. Smoke alarms are permitted to be solely battery operated in existing areas of
1906 buildings in locations where smoke alarms were not required to be powered

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by the building wiring under the code in effect at the time of construction and undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure.

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

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

1207.1.1 Scope. Energy Storage System (ESS) having capacities exceeding the values in Table 1207.1.1 shall comply with this section.

**TABLE 1207.1.1
ENERGY STORAGE SYSTEM (ESS) THRESHOLD QUANTITIES**

TECHNOLOGY	ENERGY CAPACITY ^a
Capacitor ESS	3 kWhr
Flow Batteries ^b	20 kWhr
Lead-acid batteries, all types	See Section 1207.1.2, item 3
Lithium-ion batteries	20 kWhr
Nickel metal hydride (Ni-MH)	70 kWhr
Nickel-cadmium batteries (Ni-Cd)	See Section 1207.1.2, item 3
Other battery technologies	10 kWhr
Other electrochemical ESS technology	3 kWhr

a. Energy capacity is the total energy capable of being stored (nameplate rating), not the usable energy rating. For units rated in amp-hours, kWhr shall equal rated voltage time amp-hour rating divided by 1,000

b. Shall include vanadium, zinc-bromine, polysulfide-bromide and other flowing electrolyte-type technologies.

1207.1.2 Permits. Permits shall be obtained for ESS as follows:

1. Construction permits shall be obtained for stationary ESS installations and mobile ESS charging and mobile station covered by Section 1207.10.1. Permits shall be obtained in accordance with Section 105.5.22.
2. Operational permits shall be obtained for stationary ESS installations and mobile ESS charging and mobile station covered by Section 1207.1.1 that employ Capacitor ESS, Lithium-ion batteries, Ni-MH, or other electrochemical ESS technologies. Permits shall be obtained in accordance with Section 105.5.22
3. Operational permits for stationary ESS installations utilizing fifteen or more U.S. gallons of corrosive electrolyte in flooded lead-acid, valve regulated lead-acid batteries or Ni-Cd batteries be obtained in accordance with Section 105.5.22 based on Health Hazard Category 3 liquids.

1207.1.6 Fire Remediation. Where a fire other event has damaged the ESS and ignition or re-ignition is possible, the system owner, agent or lessee shall take the following actions, at their expense, to mitigate the hazard or remove damaged equipment from the premise to an approved location.

1949 **1207.1.6.1 Fire Mitigation Personnel.** Where, in the opinion of the fire chief, it is
1950 essential for public safety that trained personnel be on-site to respond to possible ignition
1951 or re-ignition of a damaged ESS, the system owner, agent or lessee shall immediately
1952 dispatch one or more fire mitigation personnel to the premises, as required, at their
1953 expense. Fire mitigation personnel responsible for the preparation of the
1954 Decommissioning Plan and in accordance with Section 1207.2.3, shall be approved. The
1955 personnel shall remain on duty continuously until the damaged energy storage equipment
1956 is removed from the premises and located to an approved location, or earlier if the fire
1957 mitigation personnel can demonstrate to the fire chief that the public safety hazard is
1958 mitigated.

1959
1960 **1207.1.6.3 Responsibility for Unauthorized Discharge.** An incident that requires fire
1961 remediation shall be treated as an Unauthorized Discharge. The person, firm or
1962 corporation responsible for an unauthorized discharge shall institute and complete all
1963 actions necessary to remedy the effects of such unauthorized discharge, whether sudden
1964 or gradual, at no cost to the jurisdiction, in accordance with Section 5003.3.1.5.

1965
1966 **1207.1 General.** The provisions in this section are applicable to stationary and mobile
1967 energy storage systems (ESS). Battery-electric vehicles using technology identified in
1968 Table 1207.1.1 and marked with a label complying with 49 CFR 567.4 that certifies
1969 compliance with the Federal Motor Vehicle Safety Standards are subject to the Fire
1970 Remediation provisions in Section 1207.1.6, including responsibility for an Unauthorized
1971 Discharge.

1972
1973 **1207.4.7 Toxic and highly toxic gases.** ESS that have the potential to release toxic and
1974 highly toxic gas during charging, discharging and normal use conditions are prohibited.

1975
1976 **1207.5.3. Elevation.** Electrochemical ESS shall not be located in the following areas:

- 1977 1. Where the floor is located more than 20 feet above the lowest level of fire
1978 department vehicle access.
1979
1980 2. Where the floor is located below the lowest level of exit discharge.

1981
1982 **Exceptions**

- 1983 1. Lead-acid and nickel-cadmium battery systems less than 50 VAC and 60 VDC.
1984

1985 **1207.5.4 Fire detection.** An approved automatic smoke detection system or radiant
1986 energy-sensing fire detection system complying with Section 907.2 shall be installed in

rooms, indoor areas and walk-in units containing electrochemical ESS. An approved radiant energy-sensing fire detection system shall be installed to protect open parking garage and rooftop installations. Alarm signals from detection systems shall be transmitted to a central station, proprietary or remote station service in accordance with NFPA 72, or where approved to a constantly attended location.

Exception: Lead-acid battery ESS with an electrolyte volume of 50 US gallons or less.

TABLE 1207.6 - ELECTROCHEMICAL ESS TECHNOLOGY SPECIFIC REQUIREMENTS

COMPLIANCE REQUIRED ^b		BATTERY TECHNOLOGY				OTHER ESS AND BATTERY TECHNOLOGIES ^b	CAPACITOR ESS ^b
Feature	Section	Lead-Acid	Ni-CD & Ni-MH	Lithium-Ion	Flow		
Exhaust ventilation	1207.6.1	Yes	Yes	No	Yes	Yes	Yes
Explosion control	1207.6.3	No	Yes ^a	Yes	No	Yes	Yes
Safety caps	1207.6.4	Yes	Yes	No	No	Yes	Yes
Spill control & neutralization	1207.6.2	Yes ^c	Yes ^c	No	Yes	Yes	Yes
Thermal runaway	1207.6.5	Yes ^d	Yes	Yes ^e	No	Yes ^e	Yes
Thermal runaway detection system	1207.6.7	No	No	Yes	No	No	No

b. Applicable to vented-type (i.e., flooded) nickel-cadmium and lead-acid batteries.

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- c. Not required for vented-type (i.e., flooded) lead-acid batteries.
- d. Thermal runaway protection is permitted to be part of a battery management system that has been evaluated with battery as part of the evaluation to UL 1973.

1207.6.2.3 Special provisions for Lead-Acid ESS. The requirements of Section 1207.6.2 shall apply only when the aggregate capacity of multiple vessels exceeds 50 gallons or lead-acid and nickel-cadmium battery systems operating at less than 50 VAC and 60 VDC.

1207.6.6 Thermal Runaway Detection System

1207.6.6.1 When Required. A thermal runaway detection system shall be provided for lithium-ion battery storage systems with an energy capacity greater than 20 kWh.

EXCEPTION: Group R-3 & R-4 occupancies.

1207.6.6.1 Approvals. Devices designed to detect the thermal runaway of a lithium-ion cell containing a flammable or combustible liquid shall be listed in accordance with UL 2075, *Gas and Vapor Detectors and Sensors*.

1207.6.6.2 Performance. The thermal runaway detector shall activate upon detection of gas vapors produced by flammable or combustible liquid in a lithium-ion cell at the start of a thermal runaway event. Upon detection of a thermal runaway event the detection system shall shutdown the ESS rack releasing flammable or combustible gas vapors and transmit a supervisory fire alarm signal. Detection of a thermal runaway event shall activate the mechanical ventilation when it is provided as method of explosion control.

Thermal runaway detectors shall operate independently of the ESS Energy Storage Management System.

1207.6.6.3 Annunciation. The thermal runaway detector shall be capable of identifying the ESS rack where thermal runaway occurred.

1207.9.1 Rooftop Installations. For the purpose of Table 1207.9, rooftop ESS are prohibited on the roof of buildings 30 feet or more above the lowest level of fire department vehicle access.

2038 **CHAPTER 23 MOTOR FUEL-DISPENSING FACILITIES, REPAIR GARAGES,**
2039 **AND AUTOMOBILE WRECKING YARDS.**

2040 **2301.1 Scope.** Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing
2041 facilities, fleet vehicle motor fuel-dispensing facilities, automobile wrecking yards, and
2042 repair garages shall be in accordance with this chapter and the Building Code, the
2043 Plumbing Code and the Mechanical Code. Such operations shall include both operations
2044 that are accessible to the public and private operations.

2045 **2304.1 Supervision of dispensing.** The dispensing of fuel at motor fuel-dispensing
2046 facilities shall be conducted by a qualified attendant who is a Texas Commission on
2047 Environmental Quality (TCEQ) certified UST Operator or shall be under the supervision
2048 of a qualified attendant who is a TCEQ certified UST Operator at all times or shall be in
2049 accordance with Section 2304.3.

2050 **2304.2 Attended self-service motor fuel-dispensing facilities.** Attended self-service
2051 motor fuel-dispensing facilities shall comply with Sections 2304.2.1 through 2304.2.5.
2052 Attended self-service motor fuel-dispensing facilities shall have at least one TCEQ
2053 certified UST Operator on duty while the facility is open for business. The attendant's
2054 primary function shall be to supervise, observe and control the dispensing of fuel. The
2055 attendant shall prevent the dispensing of fuel into containers that do not comply with
2056 Section 2304.4.1, control sources of ignition, give immediate attention to accidental spills
2057 or releases, and be prepared to use fire extinguishers.

2058 **2305.1.3 Tank fill connections.** Delivery of flammable liquids to tanks shall be made by
2059 means of approved liquid- and vapor-tight connections between the delivery hose and
2060 tank fill pipe. Where tanks are equipped with any type of vapor recovery system, all
2061 connections required to be made for the safe and proper functioning of the particular
2062 vapor recovery process shall be made. Such connections shall be made liquid and vapor
2063 tight and remain connected throughout the unloading process. Vapors shall not be
2064 discharged at grade level during delivery.

2065 **2305.2.1 Inspections.** Flammable and combustible liquid fuel dispensing and
2066 containment equipment shall be inspected at least once every sixty days in accordance
2067 with the regulations of the TCEQ in order to verify that it is in proper working order and
2068 not subject to leakage.

2069 **2305.3 Spill control.** Provisions shall be made to prevent liquids spilled during
2070 dispensing operations from flowing into buildings or off of the property on which the
2071 tank is located. Acceptable methods include, but shall not be limited to, grading
2072 driveways, raising doorsills, or other approved means.

2073 **2306.7.6.2 Testing.** The automatic closing function of automatic closing fuel delivery
2074 hose nozzles that dispense Class I, II, and III liquids shall be tested an annual basis.

2075 **Section 2312 AUTOMOBILE WRECKING YARDS**

2076 **2312.1 Scope.** Automobile wrecking yards shall comply with this section and the
2077 Building Code. Rubbish handling operations are addressed in Chapter 3 (*General*
2078 *Requirements*).

2079 **2312.2 Fire apparatus access roads.** Fire apparatus access roads shall be constructed
2080 and maintained throughout the site in accordance with Section 503.

2081 **2312.3 Welding and cutting.** Welding and cutting operations shall be in accordance
2082 with Chapter 35 (*Welding and Other Hot Work*).

2083 **2312.4 Housekeeping.** Combustible rubbish accumulated on the site shall be collected
2084 and stored in approved containers, rooms or vaults of noncombustible materials.
2085 Combustible vegetation, cut or uncut, shall be removed when determined by the chief to
2086 be a fire hazard.

2087 **2312.5 Fire protection.** Offices, storage buildings and vehicles used for site operations
2088 shall each be provided with at least one portable fire extinguisher with a rating of not less
2089 than 4-A:40-B:C. When required by the chief, additional portable fire extinguishers shall
2090 be provided in specific use areas in accordance with NFPA 10.

2091 **2312.6 Tires.** Tires shall be stored on racks in an approved manner or shall be piled in
2092 accordance with Chapter 34 (*Tire Rebuilding and Tire Storage*).

2093 **2312.7 Burning operations.** The burning of salvage vehicles and salvage or waste
2094 materials shall be in accordance with Chapter 3 (*General Requirements*) and regulations
2095 adopted by the Texas Commission on Environmental Quality.

2096 **2312.8 Motor Vehicle fluids and hazardous materials.**

2097 **2312.8.1 General.** The storage, use and handling of motor vehicle fluids and
2098 hazardous materials, such as those used to operate air bags and electrical systems,
2099 shall be in accordance with Section 2312 (*Automobile Wrecking Yards*), Section
2100 2311 (*Repair Garages*), Chapter 50 (*Hazardous Materials – General Provisions*),
2101 and Chapter 57 (*Flammable and Combustible Liquids*).

2102 **2312.8.2 Motor Vehicle Fluids.** Motor vehicle fluids shall be drained from
2103 salvage vehicles when such fluids are leaking. Storage and handling of motor
2104 vehicle fluids shall be done in an approved manner. Flammable and combustible
2105 liquids shall be stored and handled in accordance with Section 2311 (*Repair*
2106 *Garages*), Chapter 50 (*Hazardous Materials – General Provisions*), and Chapter
2107 57 (*Flammable and Combustible Liquids*).

2108 **2312.8.3 Mitigation for Vehicle Fluid Leaks.** Supplies or equipment capable of
2109 mitigating leaks from fuel tanks, crankcases, brake systems and transmissions shall be

2110 kept available on site. Single-use plugging, diking and absorbent materials shall be
2111 disposed of as hazardous waste and removed from the site in a manner approved by
2112 federal, state or local requirements.

2113 **2312.8.4 Air Bag Systems.** Removed air bag systems shall be handled and stored in
2114 accordance with Chapter 50 (*Hazardous Materials – General Provisions*).

2115 **2312.8.5 Lead-acid Batteries.** Lead-acid batteries shall be removed from salvage
2116 vehicles when such batteries are leaking. Lead-acid batteries that have been removed
2117 from vehicles shall be stored in an approved manner.

2118 **2312.8.6. Container Destruction.** Destruction of vehicle containers containing liquids or
2119 gases defined as flammable or combustible by this code is prohibited unless the
2120 containers are properly drained and the by-product stored or disposed of in accordance
2121 with Chapter 50 (*Hazardous Materials – General Provisions*), are filled with an inert
2122 material or purged, and at the time of destruction, have a vapor content less than 25
2123 percent of the by-product's lower explosive limit or an oxygen content of less than 10
2124 percent.

2125 **2403.5 Mixing and Blending Area.** Mixing, blending, and similar operations involving
2126 less than 10 gallons of Class I or Class II liquids, outside of a room approved for inside
2127 use, dispensing and mixing in accordance with 5705.3.7, must be performed in an area
2128 meeting the following requirements:

- 2129 1. All electrical service within 10 feet of the mixing operations must meet the
2130 Class I, Division II requirements of the Electrical Code.
- 2131 2. Ventilation for the area must be adequate to maintain flammable vapors
2132 under 25 percent of the lower explosive limit of the most volatile material in
2133 use. A line of site partition of one-hour construction must separate the
2134 mixing and blending operations from other spray finishing operations and
2135 flammable liquids storage.

2136 **2701.4 Existing buildings and existing fabrication areas.** Existing buildings and
2137 existing *fabrication areas* shall comply with this chapter.

2138
2139 **Exceptions:**

- 2140 1. Transportation and handling of HPM in *corridors* and enclosures
2141 for *stairways* and *ramps* shall be allowed where in compliance with Section
2142 2705.3.2 and the Building Code.
- 2143 2. The aggregate quantity of flammable, pyrophoric, toxic and highly toxic gases in a
2144 single fabrication area allowed in Table 2704.2.2.1 Footnote d. shall be limited to
2145 9000 cubic feet at NTP.
2146
2147

2148
2149 **3103.5 Use periods.** Temporary tents, air supported, air-inflated or tensioned membrane
2150 structures of any size that are independent of and separated by at least 20 feet (6096 mm)
2151 from any building as specified in Section 2403.8.2 shall not be erected for a period of
2152 more than 180 days within a 12-month period on a single premises. Temporary tents, air
2153 supported, air-inflated or tensioned membrane structures of any size that are in any way
2154 attached to or within 20 feet (6096 mm) of a building shall not be issued a permit for a
2155 continuous period of more than 30 days or for a total of more than 90 days within a 12-
2156 month period on a single premises. Tents, air supported, air-inflated or tensioned
2157 membrane structures used for periods exceeding these limits shall be considered
2158 buildings or structures regulated by the Building Code and shall be required to be erected
2159 under a building permit and obtain a certificate of occupancy.
2160

2161 **3103.8.2 Location.** Tents or membrane structures shall not be located within 20 feet
2162 (6096 mm) of lot lines, buildings, other tents or membrane structures, parked vehicles or
2163 internal combustion engines. For the purpose of determining required distances, support
2164 ropes and guy wires shall be considered as part of the temporary membrane structure, or
2165 tent.
2166

2167 **Exceptions:**

- 2168 1. Separation distance between membrane structures and tents not used for
2169 cooking, is not required when the aggregate floor area does not exceed
2170 15,000 square feet (1394 m²).
- 2171 2. Membrane structures or tents need not be separated from buildings when all
2172 of the following conditions are met:
- 2173 2.1. The aggregate floor area of the membrane structure or tent shall not
2174 exceed 10,000 square feet (929 m²).
- 2175 2.2. The aggregate floor area and total height of the building and
2176 membrane structure or tent shall not exceed the allowable floor area
2177 or the allowable height, in stories or feet, including increases as
2178 indicated in the Building Code.
- 2179 2.3. Required means of egress are provided for both the building and the
2180 membrane structure or tent including travel distances.
- 2181 2.4. Fire apparatus access roads are provided in accordance with Section
2182 503.
- 2183 2.5. Occupant load is, for the purposes of complying with Chapters 9 and
2184 10 of the Building Code and Fire Code, based on the aggregate of the
2185 building floor area and the area under the membrane structure or tent.

2186 **5001.1.2 Purpose.** This chapter regulates the handling and storage of hazardous materials
2187 in aboveground storage facilities. Underground storage facilities are regulated by City
2188 Code Chapter 6-2 (*Hazardous Materials*).

2189 **5001.2 Material classification.** Hazardous materials are those chemicals or substances
2190 defined as such in this code. Definitions of hazardous materials shall apply to all
2191 hazardous materials, including those materials regulated elsewhere in this code.
2192 Appendix E contains descriptions and examples of materials included in hazard
2193 categories.

2194 **5001.2.3 Radioactive Materials.** Storage of radioactive materials shall be in
2195 accordance with the provisions set forth by the Texas Department of State Health
2196 Services, Radiation Control Program.

2197 **5001.5 Permits.** No person, firm, or corporation may store, dispense, use, or handle
2198 hazardous materials in more than the quantities named in Section 105.6 unless a valid
2199 permit has been issued under this chapter.

2200 When required by the fire chief, permit holders shall apply for approval to permanently
2201 close a storage, use or handling facility. Such application shall be submitted at least 30
2202 days prior to the termination of the storage, use or handling of hazardous materials. The
2203 fire chief is authorized to require that the application be accompanied by an approved
2204 facility closure plan in accordance with Section 5001.6.3.

2205 **5001.5.1 Hazardous Materials Management Plan.** Where required by the fire
2206 chief, an application for a permit shall include a Hazardous Materials Management
2207 Plan (HMMP). The HMMP shall include a facility site plan clearly designating the
2208 following:

- 2209 1. locations of and access to each storage and use area;
- 2210 2. maximum amount of each material stored or used in each area and the range
2211 of container sizes used;
- 2212 3. location of emergency equipment, including emergency isolation and
2213 mitigation valves and devices, and product conveying piping containing
2214 liquids or gases, other than utility-owned fuel gas lines and low-pressure fuel
2215 gas lines. The normal position of valves (on/off or open/closed) shall be
2216 provided for position indicating valves;
- 2217 4. location where liaison will meet emergency responders;
- 2218 5. facility evacuation meeting point locations;
- 2219 6. the general purpose of other areas within the building;

- 2220 7. storage plan showing the intended storage arrangement, including the
2221 location and dimensions of aisles, the location of all aboveground and
2222 underground tanks and their appurtenances including, but not limited to,
2223 sumps, vaults, below-grade treatment systems and piping;
- 2224 7. the hazard classes in each area;
- 2225 8. locations of all control areas and Group H occupancies; and
- 2226 9. emergency exits.

2227 The plans shall be legible and drawn approximately to scale. Separate distribution
2228 systems are allowed to be shown on separate pages.

2229 **5001.5.2 Hazardous Materials Inventory Statement (HMIS).** Where required by
2230 the fire chief, an application for a permit shall include an HMIS, such as Superfund
2231 Amendments and Reauthorization Act of 1986 (SARA) Title III, Tier II Report or
2232 other approved statement. The HMIS shall include the following information:

- 2233 1. manufacturer's name;
- 2234 2. chemical names, product or trade names, hazardous ingredients;
- 2235 3. United Nations (UN), North America (NA) and the Chemical Abstract
2236 Service (CAS) identification number (as applicable and as available);
- 2237 4. maximum quantities stored or used on-site at one time, including amounts in
2238 use-closed systems and amounts in use-open systems;
- 2239 5. location where stored or used;
- 2240 6. container sizes; and
- 2241 7. hazard classifications including the NFPA 704 rating of each chemical.

2242 **5001.7 Permit Procedure.** A hazardous materials permit shall be granted after:

- 2243 1. The applicant has filed with the Fire Department a completed hazardous
2244 materials permit application, in accordance with Section 5001.5 and this
2245 section; and
- 2246 2. The applicant has paid the application fee set by separate ordinance.

2247 **5001.7.1 Application.** A Hazardous Materials Permit Application shall include the
2248 following:

- 2249 1. general information including the name, address, and telephone number of
2250 the facility, the number of employees, hours of operation, and a name and
2251 emergency telephone number of the primary emergency contact person;
- 2252 2. an HMMP in accordance with Section 5001.5.1 which includes a facility site
2253 plan and a storage map, which shall identify the location of hazardous
2254 materials storage areas, and access to the materials; and
- 2255 3. a Hazardous Materials Inventory Statement (HMIS) in accordance with
2256 Section 5001.5.2.

2257 **5001.7.1.1** The facility site plan required in Section 5001.5.1 may be omitted
2258 from applications when, in the opinion of the fire chief, the plan will not
2259 provide additional information necessary to prevent an actual or potential
2260 hazard to the public health, safety, or welfare (including the health, safety, or
2261 welfare of firefighters) or to facilitate the fire department's response in the
2262 event of an emergency involving hazardous materials at the facility.

2263 **5001.7.2 Permit Required.** No person, firm, or corporation may install, repair,
2264 abandon, remove, place temporarily out of service, close, or substantially modify a
2265 storage facility or other area required to be permitted under this chapter without a
2266 permit. Section 5001.6.3 also applies.

2267 **Exceptions:**

- 2268 1. Routine maintenance.
- 2269 2. For emergency repair work performed on an emergency basis,
2270 application for permit shall be made within two working days of
2271 commencement of work.
- 2272 3. Businesses with an annual permit through the Development Services
2273 Department may perform work in accordance with the provisions of
2274 the Building Code and rules governing the facilities.

2275 Permit holders shall apply for approval to close bulk storage, use, or handling
2276 facility at least 30 days before the termination of the storage, use, or handling of
2277 hazardous materials. The applicant shall include any change or alteration of the
2278 facility closure plan filed under Section 5001.6.3 of this chapter. This 30 day
2279 period may be waived by the chief.

2280 **5001.7.3 Permit Effective Date.** The fire department shall grant or deny a permit
2281 application no later than 60 days after receipt of the completed application. The
2282 Department will provide written confirmation to the applicant demonstrating
2283 receipt of the application within 30 days of receipt of the application. If the

2284 department fails to grant or deny the permit within 60 days, the permit is
2285 considered to be issued and in effect. The fire department may inspect the business
2286 for satisfactory storage and use of hazardous materials. The operation of a facility
2287 under a permit issued before inspection constitutes the permission of the facility
2288 owner/operator for the chief to enter on the facility for the purpose of conducting
2289 the required inspection. Refusal to allow the inspection shall constitute a prima
2290 facie cause to revoke the permit under Section 105.6.

2291 **5001.7.4 Permit Term and Renewal.** A permit is granted for a term of three years
2292 from the date of issuance. Permits may be renewed every three years on the
2293 anniversary of permit issuance. At the discretion of the fire chief, a permit may be
2294 issued for a shorter period. The fee assessed for the permits shall be prorated for
2295 the appropriate time. If a permit is issued for a shorter period at the request of the
2296 applicant, an additional handling fee may be assessed, not to exceed the actual cost
2297 of clerical processing time.

2298 **5001.7.5 Annexation Procedure.** A facility brought under regulation by this
2299 chapter through annexation shall file a permit application with the fire department
2300 no later than 90 days after the effective date of annexation. The department shall
2301 grant or deny a permit application submitted under this subsection no later than six
2302 months after receipt of the completed application. If the department fails to grant
2303 or deny the permit within the period, the permit is considered to be issued and in
2304 effect. The fire department shall inspect the business for satisfactory storage or use
2305 of hazardous materials. The operation of a facility under a permit issued before
2306 inspection constitutes the permission of the facility owner/operator for the fire
2307 chief to enter on the facility for the purpose of conducting the required inspection.
2308 Refusal to allow the inspection shall constitute a prima facie cause to revoke the
2309 permit under Section 105.5 (*Revocation*).

2310 **5001.7.6 Permit Denial.** If the fire department denies a permit, the department
2311 shall notify the applicant in writing of the action. The notification must include a
2312 statement of the department's reasons for the action.

2313 **5001.7.7 Transfer.** A permit may be transferred to a new owner or operator of a
2314 business at the same location if the new owner or operator by letter to the fire
2315 department accepts responsibility for all obligations under this chapter at the time
2316 of the transfer of the business. All permit transfers are subject to the approval of
2317 the fire chief.

2318 **5001.7.8 Fees.** No permit may be granted, renewed or continued in effect until the
2319 fee set by separate ordinance has been paid. The fee shall be paid at the time an
2320 application is filed.

2321 **5001.7.9 Amendment.** Any information required to be submitted by this chapter
2322 shall be amended or supplemented no later than 30 days after the occurrence of an
2323 event that would render the information inaccurate. Unless the change(s) would
2324 affect the ability of emergency response personnel to safely respond to an
2325 emergency, an amendment or supplement is not required to record:

- 2326 1. minor changes in the quantities of hazardous materials stored;
- 2327 2. the temporary storage of hazardous materials at the facility; or
- 2328 3. a temporary change of hazardous materials storage location.

2329 **5002.1 Supplemental Definitions.** The definitions in the 2021 International Fire Code
2330 are adopted as published except that supplemental definitions are added or amended. The
2331 following supplemental definitions are defined in Section 202.1.1. For the purposes of
2332 this chapter and as used elsewhere in this code, these definitions shall have the meanings
2333 shown in Section 202.1.1.

2334 **PERMANENT STORAGE.**

2335 **PERMIT.**

2336 **PROCESS VESSEL.**

2337 **Table 5003.1.1(1) Footnote i**

- 2338 i. The maximum allowable quantity for fuel oil storage may be increased in
2339 accordance with Section 605.4.1.

2340 **5003.2.2.3 Emergency isolation.** Where gases or liquids having a hazard ranking of
2341 Health Class 3 or 4, Flammability Class 4 or Instability Class 3 or 4 in accordance with
2342 NFPA 704 are carried in pressurized piping above 15 pounds per square inch gauge
2343 (psig) (103 kPa), an approved means of leak detection and emergency shutoff or excess
2344 flow control shall be provided. Where the piping originates from within a hazardous
2345 material storage room or area, the excess flow control shall be located within the storage
2346 room or area. Where the piping originates from a bulk source, the excess flow control
2347 shall be located as close to the bulk source as practical.

2348 **Exceptions:**

- 2349 1. Piping for inlet connections designed to prevent backflow.
- 2350 2. Piping for pressure relief devices.

2351 **5003.2.4.3 Indoor Tank Filling.** Aboveground stationary tanks used for the indoor
2352 storage of hazardous materials shall be filled using one of the liquid transfer methods in

2353 Section 5005.1.10. The transfer of hazardous materials to indoor stationary tanks from
2354 tank vehicles shall be done from a liquid tight remote fill connection located outdoors.
2355 Fill connections shall be not more than five feet above the finished ground level, in an
2356 approved location in close proximity to the parked delivery vehicle. Connections shall be
2357 five feet away from building openings. Such connections shall be closed and liquid tight
2358 when not in use and shall be properly identified.

2359 **5003.3.1.5 Responsibility for cleanup.** The person, firm or corporation responsible for
2360 an unauthorized discharge shall institute and complete all actions necessary to remedy the
2361 effects of such unauthorized discharge, whether sudden or gradual, at no cost to the
2362 jurisdiction. When deemed necessary by the fire chief, cleanup may be initiated by the
2363 fire department or by an authorized individual or firm. Costs associated with such
2364 cleanup shall be borne by the owner, operator or other person responsible for the
2365 unauthorized discharge. Such costs shall include but shall not be limited to:

- 2366 1. chemical absorbent or adsorbent materials;
- 2367 2. chemical neutralizers;
- 2368 3. chemical resistant suits, gloves, or boots;
- 2369 4. chemical containment drums;
- 2370 5. vapor suppression foams;
- 2371 6. containment tools;
- 2372 7. chemical detection devices; and
- 2373 8. personnel costs for incident related overtime activities.

2381 **5003.9.8 Separation of incompatible materials.** Incompatible materials in storage and
2382 storage of materials that are incompatible with materials in use shall be separated when
2383 the stored materials are in containers having a capacity of more than five pounds (2 kg) or
2384 0.5 gallon (2 L). Separation shall be accomplished by:

- 2385 1. Segregating incompatible materials in storage by a distance of not less than
2386 20 feet (6096 mm).

2387 **Exception:** Segregation of less than exempt amounts of corrosive and
2388 oxidizing materials, when such materials are necessary to maintain
2389 swimming pools for Group R occupancies, may be accomplished by a
2390 minimum separation of five feet (1524 mm).

- 2391 2. Isolating incompatible materials in storage by a noncombustible partition
2392 extending not less than 18 inches (457 mm) above and to the sides of the
2393 stored material.
- 2394 3. Storing liquid and solid materials in hazardous material storage cabinets.
- 2395 4. Storing compressed gases in gas cabinets or exhausted enclosures in
2396 accordance with Sections 5003.8.5 and 5003.8.6. Materials that are
2397 incompatible shall not be stored within the same cabinet or exhausted
2398 enclosure.

2399 **5004.2 Spill control and secondary containment for liquid and solid hazardous**
2400 **materials.** Tanks, rooms, buildings or areas used for the storage of liquid or solid
2401 hazardous materials shall be provided with spill control and secondary containment in
2402 accordance with Sections 5004.2.1 through 5004.2.3.

2403 **Exceptions:**

- 2404 1. Outdoor storage of containers on approved containment pallets in
2405 accordance with Section 5004.2.3.
- 2406 2. Liquids that are a gas at NTP.

2407 **5004.2.1 Spill control for hazardous material liquids.** Tanks, rooms, buildings or areas
2408 used for the storage of hazardous material liquids in excess of the lesser of the maximum
2409 allowable quantities established by Tables 5003.1.1(1) and 5003.1.1(2) or limits
2410 specifically set in Chapters 51 through 67 shall be provided with spill control to prevent
2411 the flow of liquids to adjoining areas. Floors in indoor locations and similar surfaces in
2412 outdoor locations shall be constructed to contain a spill from the largest single vessel by
2413 one of the following methods:

- 2414 1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in
2415 outdoor locations.
- 2416 2. Liquid-tight floors in indoor locations or similar areas in outdoor locations
2417 provided with liquid-tight raised or recessed sills or dikes.
- 2418 3. Sumps and collection systems.
- 2419 4. Other approved engineered systems.

2420 Except for surfacing, the floors, sills, dikes, sumps and collection systems shall be
2421 constructed of noncombustible material, and the liquid-tight seal shall be compatible with
2422 the material stored. When liquid-tight sills or dikes are provided, they are not required at
2423 perimeter openings having an open-grate trench across the opening that connects to an
2424 approved collection system.

2425 **5004.2.2 Secondary containment for hazardous material liquids and solids.** Where
2426 required by Table 5004.2.2 tanks, buildings, rooms or areas used for the storage of
2427 hazardous materials liquids or solids shall be provided with secondary containment in
2428 accordance with this section when the quantity of materials exceeds the maximum
2429 allowable quantity as established by Tables 5003.1.1(1) and 5003.1.1(2) or limits
2430 specifically set in Chapters 51 through 67.

2431 **5004.2.2.1 Containment and drainage methods.** The tank, building, room or area shall
2432 contain or drain the hazardous materials and fire protection water through the use of one
2433 of the following methods:

- 2434 1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in
2435 outdoor locations.
- 2436 2. Liquid-tight floors in indoor locations or similar areas in outdoor locations
2437 provided with liquid-tight raised or recessed sills or dikes.
- 2438 3. Sumps and collection systems.
- 2439 4. Drainage systems leading to an approved location.
- 2440 5. Other approved engineered systems.

2441
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2443
2444
2445 **5004.2.2.2 Incompatible materials.** Incompatible materials used in open systems shall
2446 be separated from each other in the secondary containment system. Incompatible
2447 materials are allowed to be combined when they have been rendered acceptable by an
2448 approved means for discharge into the public sewer.

2449 **5004.2.2.5 Monitoring.** An approved monitoring method shall be provided to detect
2450 hazardous materials in the secondary containment system. The monitoring method is
2451 allowed to be visual inspection of the primary or secondary containment, or other
2452 approved means. Where secondary containment is subject to the intrusion of water, a
2453 monitoring method for detecting water shall be provided. Where monitoring devices are
2454 provided, they shall be connected to an approved visual or audible alarm.

2455 Leak-detecting devices must be tested annually by the owner or occupant of the property
2456 on which the devices are located. Test results shall be maintained on the premises and be
2457 available to the fire chief on request.

2458 **5004.2.2.6 Drainage system design.** Drainage systems shall be in accordance with the
2459 Plumbing Code and all of the following:

- 2460 1. The slope of floors to drains in indoor locations, or similar areas in outdoor
2461 locations shall not be less than 1 percent.

- 2462 2. Drains from indoor storage areas shall be sized to carry the volume of the
2463 fire protection water as determined by the design density discharged from
2464 the automatic fire-extinguishing system over the minimum required system
2465 design area or area of the room or area in which the storage is located,
2466 whichever is smaller.
- 2467 3. Drains from outdoor storage areas shall be sized to carry the volume of the
2468 fire flow and the volume of a 24-hour rainfall as determined by a 25-year
2469 storm.
- 2470 4. Materials of construction for drainage systems shall be compatible with the
2471 materials stored.
- 2472 5. Incompatible materials used in open systems shall be separated from each
2473 other in the drainage system. Incompatible materials are allowed to be
2474 combined when they have been rendered acceptable by an approved means
2475 for discharge into the public sewer.
- 2476 6. Drains, including overflow from secondary containment, shall terminate in
2477 an approved location away from buildings, valves, means of egress, fire
2478 access roadways, adjoining property storm drains, waterways and critical
2479 environmental features (CEF's). Tanks shall be set back at 150 feet (45,720
2480 mm) from any recognized waterway or CEF.

2481 **5005.1.8.1** Gas cabinets, exhausted enclosures, and exhaust ducts with a cross sectional
2482 dimension of 10 inches or greater shall be internally sprinklered.

2483 **5306.2 Interior supply location.** Medical gases shall be stored in areas dedicated to the
2484 storage of such gases without other storage or uses. Where containers of medical gases in
2485 quantities greater than 300 ft³ (8.5 m³) and less than 1500 ft³ (42.5 m³) are located inside
2486 buildings, they shall be in a 1-hour exterior room, a 1-hour interior room or a gas cabinet
2487 in accordance with Section 5306.2.1, 5306.2.2, or 5306.2.3, respectively. Where
2488 containers of medical gases in excess of 1500 ft³ (42.5 m³) and less than 3,000 ft³ (85 m³)
2489 are located inside a building, they shall be protected by a local application fire sprinkler
2490 system in addition to the room or cabinet enclosure required by 5306.2.1, 5306.2.2 or
2491 5306.2.3. Rooms or areas where medical gases are stored or used in quantities exceeding
2492 3000 ft³ (85 m³) per control area shall be in accordance with the Building Code for high-
2493 hazard Group H occupancies.

2494 **5306.2.1 One-hour exterior rooms.** A 1-hour exterior room shall be a room or enclosure
2495 separated from the remainder of the building by fire barriers constructed in accordance
2496 with Section 707 of the Building Code or horizontal assemblies constructed in
2497 accordance with Section 711 of the Building Code, or both, with a fire-resistance rating
2498 of not less than 1 hour. Openings between the room or enclosure and interior spaces shall
2499 be self-closing smoke- and draft-control assemblies having a fire protection rating of not

2500 less than 1 hour. Rooms shall have at least one exterior wall that is provided with at least
2501 two vents. Each vent shall not be less than 72 square inches (0.046 m²) in area. One vent
2502 shall be within 12 inches (304.8 mm) of the floor and one shall be within 12 inches
2503 (304.8 mm) of the ceiling. Rooms containing medical gases in excess of 1500 ft³ (42.5
2504 m³) and less than 3,000 ft³ (85 m³) shall be provided with at least one local application
2505 automatic sprinkler to provide container cooling in case of fire.

2506 **5306.2.2 One-hour interior room.** When an exterior wall cannot be provided for the
2507 room, the room shall be exhausted through a duct to the exterior. Supply and exhaust
2508 ducts shall be enclosed in a 1-hour-rated shaft enclosure from the room to the exterior.
2509 Approved mechanical ventilation shall comply with the Mechanical Code and be
2510 provided at a minimum rate of 1 cubic foot per minute per square foot [0.00508 m³/(s ×
2511 m²)] of the area of the room. Rooms containing medical gases in excess of 1500 ft³ (42.5
2512 m³) and less than 3,000 ft³ (85 m³) shall be provided with at least one local application
2513 automatic sprinkler to provide container cooling in case of fire.

2514 **5306.2.3 Gas cabinets.** Gas cabinets shall be constructed in accordance with Section
2515 5003.8.6 and the following:

- 2516 1. The average velocity of ventilation at the face of access ports or windows
2517 shall not be less than 200 feet per minute (61 m/s) with a minimum of 150
2518 feet per minute (46 m/s) at any point of the access port or window.
- 2519 2. Connected to a ducted exhaust system with exhaust ducts enclosed in a 1-
2520 hour shaft enclosure to the exterior.
- 2521 3. Internally sprinklered when the quantity of medical gases exceeds 1500 ft³
2522 (42.5 m³).

2523 **5306.3 Exterior supply locations.** Oxidizer medical gas systems located on the exterior
2524 of a building shall be located in accordance with Section 6304.2.1.

2525 **5404.2 Outdoor storage.** Outdoor storage of corrosive materials shall be in accordance
2526 with Sections 5001, 5003, 5004 and this chapter.

2527 **Exception:** Up to 10 gallons of corrosive liquids may be stored outside of
2528 buildings without spill control, drainage, and secondary containment provided:

- 2529 1. The volume of individual containers is less than five gallons;
- 2530 2. The containers are constructed of metal or plastic; and
- 2531 3. The containers are located a minimum of 10 feet from property lines, exit
2532 openings, and storm water drains.

2533 **5404.2.1 Above-ground outside storage tanks.** Above-ground outside storage tanks of
2534 corrosive liquids shall be provided with secondary containment in accordance with
2535 Section 5004.2.2.

2536 **5504.3.1.1 Stationary Containers.** Stationary containers shall be separated from
2537 exposure hazards in accordance with the provisions applicable to the type of fluid
2538 contained and the minimum separation distance indicated in Table 5504.3.1.1. Storage of
2539 flammable cryogenic fluids, including liquefied natural gas (LNG), in aggregate
2540 quantities exceeding 15,000 gallons (56,781 L) water capacity is prohibited outside of a
2541 light industry (LI) zoning district except as provided in this section.

2542 The placement of aboveground or below ground containers of flammable cryogenic
2543 fluids, including liquefied natural gas (LNG), in aggregate quantities exceeding 15,000
2544 gallon water (56,781 L) capacity may be considered for other locations on a case-by-case
2545 basis provided zoning issues, secondary containment, and fire exposures are satisfactorily
2546 addressed including the identification of hazard ratings in accordance with Appendix F.
2547 Where the nearest off-site exposure(s) is(are) less than 500 feet (152.4 m) from the
2548 container(s) the placement may be permitted outside of a light industry (LI) zoning
2549 district by the fire chief only after notification of owners/occupants of properties within
2550 500 feet (152.4 m), requesting their input in order to assess the potential effect on the
2551 community. Notice to adjacent property owners shall be accomplished in accordance with
2552 the established procedures outlined in the Title 25 (*Land Development*) for notice of
2553 applications and administrative actions or decisions.

2554 **5601.2.4 Financial responsibility.** Before a permit is issued, the applicant shall submit
2555 proof of a public liability insurance policy, in the principal sum of \$5,000,000 for
2556 personal injuries and \$5,000,000 for property damage. The policy shall be current and
2557 shall name the City as an additional insured for the purpose of the payment of all
2558 damages to persons or property that arise from, or are caused by, the conduct of any act
2559 authorized by the permit upon which any judicial judgment results. The fire chief is
2560 authorized to specify a greater or lesser amount when, in his or her opinion, conditions at
2561 the location of use indicate a greater or lesser amount is required. Government entities
2562 shall be exempt from this bond requirement.

2563 **Exception:** The insurance requirements for fireworks and pyrotechnics are as follows:
2564

- 2565 • Aerial displays must carry a Certificate of Insurance for a minimum of \$1,000,000
2566 (bodily injury) and \$500,000 (property damage).
- 2567 • Non-aerial displays must carry a Certificate of Insurance for a minimum of
2568 \$500,000 (bodily injury) and \$300,000 (property damage). The City of Austin
2569 must be named as co-insured on the policy.
- 2570 • The *fire chief* is authorized to specify a greater or lesser amount when, in his or her
2571 opinion, conditions at the location of use indicate a greater or lesser amount is
2572 required.

2573 **5601.2.4.1 Blasting.** Before approval to do blasting is issued, the applicant for approval
2574 shall submit a certificate of insurance in such form, amount and coverage as determined
2575 by the legal department of the jurisdiction to be adequate in each case to indemnify the
2576 jurisdiction against any and all damages arising from permitted blasting.

2577 **5601.2.4.2 Fireworks display.**

2578 The permit holder shall furnish a certificate of insurance in an amount deemed adequate
2579 by the *fire chief* for the payment of all potential damages to a person or persons or to
2580 property by reason of the permitted display, and arising from any acts of the permit
2581 holder, the agent, employees or subcontractors.

2582 **5601.2.5 Permit application, review and fees.** Blasting permit application, review and
2583 fees shall be in accordance with Sections 5601.2.5.1, 5601.2.5.2 and 5601.2.5.3

2584 **5601.2.5.1 Permit application.** To obtain a permit, the blaster must file with the fire
2585 chief an application at least 120 days in advance of the proposed work date. Each
2586 application must describe the proposed work, the location of the work, and the other
2587 pertinent information as may be required.

2588 **5601.2.5.2 Permit review.** The fire chief may require written comments on each permit
2589 application from the various affected City departments. When in the opinion of the fire
2590 chief the departments have a valid objection to the issuance of a permit, no permit may
2591 be approved until the objection has been resolved to the satisfaction of the fire chief.

2592 **5601.2.5.3 Permit Fees.** Permits authorized by the provisions of Section 5601.2.5 may
2593 be issued only on payment of the appropriate fee, which is set by separate ordinance.
2594 City departments are not required to pay permit fees when engaged in the work
2595 described in this section.

2596 **5601.2.6 Permit Denial.** When in the opinion of the fire chief there is a substantial
2597 danger to life, health, or property in the immediate area exposed to the blasting,
2598 fireworks display or use of pyrotechnic materials for which a permit is being requested,
2599 the request shall be denied.

2600 **5601.4 Qualifications.** Persons in charge of magazines, blasting, fireworks display, or
2601 pyrotechnic special effect operations shall not be under the influence of alcohol or drugs
2602 that impair sensory or motor skills, shall not be less than 21 years of age and shall
2603 demonstrate knowledge of all safety precautions related to the storage, handling or use
2604 of *explosives, explosive materials* or fireworks. Persons actively involved in or
2605 responsible for blasting, fireworks displays, or the production of pyrotechnic special
2606 effects or displays shall meet all applicable federal, state and local license requirements
2607 for the work or activity being performed. Persons actively involved in blasting must
2608 also meet the following:

- 2609 1. have no felony convictions or two or more misdemeanors within two years
2610 preceding the date of application for a permit, containing intoxication as an
2611 element of the offense; and
- 2612 2. have no revoked, suspended, or terminated blaster's license, or any criminal
2613 action involving blasting activities pending in a federal, state, or municipal
2614 court of law.

2615 **5607.4 Restricted hours.** Surface-blasting operations shall only be conducted during
2616 daylight hours between sunrise and sunset. Other blasting shall be performed during
2617 daylight hours unless otherwise *approved* by the *fire chief*. Prior written approval is
2618 required for blasting to be conducted on Sunday, legal holidays, or between the hours of
2619 5:00 p.m. and 8:00 a.m. on other days.

2620 **5607.5 Notification.** All blasting operations must be preceded by a pre-blast notification
2621 to the owners or managers of all affected premises. The range of the pre-blast
2622 notification shall be at the discretion of the blaster and as required by the permit.
2623 Where blasting is being conducted in the vicinity of utility lines or rights-of-way, the
2624 blaster shall notify the appropriate representatives of the Austin Utility Location and
2625 Coordination Committee and the Austin Transportation Department not less than 120
2626 days in advance of blasting, specifying the location and intended time of such blasting.
2627 Verbal notices shall be confirmed with written notice.

2628 **Exception:** In an emergency situation, the time limit shall not apply
2629 where *approved*.

2630 **5607.11.1** Approved blasting machines must be used. All other equipment is prohibited.

2631 **5607.12.1** Only blasting trunk wire of 18 gauge minimum may be used while
2632 conducting blasting operations under permits.

2633 **5607.14 Post-blast procedures.** After the blast, the following procedures shall be
2634 observed.

- 2635 1. Persons shall not return to the blast area until allowed to do so by the fire chief
2636 upon a recommendation from the blaster in charge.
- 2637 2. The blaster shall allow sufficient time for smoke and fumes to dissipate and for
2638 dust to settle before returning to or approaching the blast area.
- 2639 3. The blaster shall inspect the entire blast site for misfires before allowing other
2640 personnel to return to the blast area.

2641 **5607.16 Particle velocity limits and air overpressures.** Particle velocities and air
2642 overpressures shall be in accordance with this section and Chapter 11 of NFPA 495.
2643 Particle velocities, frequencies, or air overpressure in excess of the prescribed limits

2644 shall require the immediate suspension of blasting and initiation of corrective measures.
2645 The fire chief may grant or require deviations from these limits as required to
2646 adequately protect the public safety.

2647 **5607.16.1 Particle velocity.** Particle velocities shall not exceed 1.7 inches per second.
2648 Monitoring of particle velocities for all blasting operations shall be carried out as
2649 required in this section. When particle velocities exceed 0.5 inches per second, blast
2650 frequencies shall also be monitored.

2651 **5607.16.2 Air overpressures.** Air overpressures shall not exceed the value specified
2652 in Chapter 11 of NFPA 495.

2653 **5607.17 Blast Monitoring.** A blast monitor, such as a seismic blast recording machine,
2654 is required during all blasting operations for which a permit is issued by the City.
2655 Particle velocity shall be recorded in three mutually perpendicular axes. The maximum
2656 particle velocity shall be the maximum of any of the three axes. Blast monitoring shall
2657 be performed by an independent company, experienced in planning and implementing
2658 blast monitoring programs. The blast monitoring company shall prepare monitoring
2659 plans and shall be responsible for ensuring that the monitor sensors are placed properly
2660 and that the measuring and recording instruments function properly. The monitoring
2661 company shall prepare blast monitoring reports. All monitoring reports shall carry the
2662 seal of an engineer licensed in the State of Texas and shall be retained on file by the
2663 permit holder. These reports shall be submitted to the Fire Department.

2664 **Exception:** When, in the opinion of the fire chief, the damage to structures or
2665 buildings due to blasting operations is unlikely, the requirements of this
2666 subsection may be waived.

2667 **5607.18 Conditions of Approval.** The fire chief shall set other conditions for the
2668 approval of the application that are necessary to adequately protect public health and
2669 safety. These conditions may include, but are not limited to, reduced allowable particle
2670 velocities, reduced allowable air overpressure, additional monitoring, increased
2671 insurance protection, hours of operation, type and amount of explosives used,
2672 evacuations or shelter-in-place for occupants in adjacent structures, and engineered
2673 blasting plans.

2674 **5703.4 Spill Control, Drainage Control, and Secondary Containment.**

2675 **5703.4.1 General.** Tanks, buildings, rooms, and areas used for storage, dispensing,
2676 use, mixing, or handling of Class I, II, and III-A liquids shall be provided with a
2677 means to control spillage and to contain or drain spillage and fire protection water
2678 as set forth in Section 5004.2.

2679 **Exception:** Up to 10 gallons of Class I, II, and III liquids may be stored
2680 outside of buildings without spill control, drainage, and secondary
2681 containment, provided:

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

5703.4.2 Spill Control. When spill control is required, floors of rooms, buildings or areas containing flammable or combustible liquids must be sloped; constructed with sumps and collection systems; recessed a minimum of four inches (101.6 mm); provided with a liquid-tight, raised sill to a minimum height of four inches (101.6 mm) to prevent the flow of liquids to adjoining areas; or otherwise constructed to contain a spill from the largest single container or tank. The floor and sill must be constructed of noncombustible material and must be liquid-tight. The liquid-tight seal must be compatible with the material being stored. When raised sills are provided, they are not required at perimeter openings that are provided with an open-grate trench across the opening that connects to an approved drainage control system.

5703.4.3 Drainage Control.

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

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

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

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

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

1. The system must be designed to handle the maximum worst-case spill from the single largest container plus the volume of fire protection water from the system over the minimum design area for a water flow duration of 20 minutes; and

- 2719 2. Overflow control from the neutralizer or treatment system must direct
2720 liquid leakage and fire protection water to a safe location away from
2721 buildings, material, or fire-protection control valves, means of egress,
2722 adjoining properties or fire apparatus access roadways.

2723 **5703.4.4 Secondary Containment.** When secondary containment is required:

- 2724 1. Drains must be directed to a containment system or other location designed
2725 as secondary containment for flammable or combustible liquids and fire-
2726 protection water; or
- 2727 2. The room, building or area must be designed to provide secondary
2728 containment of flammable and combustible liquids and fire-protection water
2729 through the use of recessed floors or liquid-tight, raised sills.

2730 **5703.4.4.1 Sizing of Indoor Containment.** Secondary containment must be
2731 designed to retain the spill from the largest single container plus the design flow
2732 rate of the sprinkler system for the area of the room or area in which the storage
2733 is located or the sprinkler system design area, whichever is smaller. The
2734 containment capacity must be capable of containing the water flow from a
2735 discharge having a duration of 20 minutes.

2736 **5703.4.4.2 Sizing of Outdoor Containment.** If the storage area is open to
2737 rainfall, the secondary containment shall be designed to accommodate the
2738 volume of the largest container or tank plus a 24-hour rainfall as determined by
2739 a 25-year storm.

2740 **Exception:** Listed tanks constructed with an integral method of secondary
2741 containment.

2742 **5703.4.4.3 Construction of Secondary Containment.** The floor and walls of
2743 the secondary containment must be constructed of noncombustible material and
2744 must be liquid-tight. The liquid-tight seal must be compatible with the material
2745 being stored. In addition to these requirements, walls must be constructed in
2746 accordance with Section 5004.2.

2747 **5703.4.4.4 Overflow.** Overflow control from the secondary containment system
2748 must direct liquid leakage and fire-protection water to a safe location away
2749 from buildings, material or fire-protection control valves, means of egress, fire
2750 apparatus access roadways, adjoining properties, storm drains, waterways, and
2751 critical environmental features (CEFs). Tanks shall be set back at least 150 feet
2752 from any recognized waterway or CEF.

2753 **5703.4.4.5 Monitoring and Leak Detection.**

2754 **5703.4.4.5.1 Method.** A monitoring method capable of detecting hazardous
2755 material leakage from the primary containment into the secondary

2756 containment must be provided. When visual inspection of the primary
2757 containment is not practical, other approved means of monitoring are
2758 allowed. When double walled tanks are used to provide secondary
2759 containment for Class I and II liquids, automatic leak detection devices must
2760 be provided. When secondary containment is subject to the intrusion of
2761 water, a monitoring method for detecting the water must be provided. When
2762 monitoring devices are provided, they must be connected to distinct visual or
2763 audible alarms.

2764 **5703.4.4.5.2 Testing.** Leak-detecting devices shall be tested annually by the
2765 owner or occupant of the property on which they were located. Test results
2766 shall be maintained on the premises and available to the fire chief on
2767 request.

2768 **5704.2.9.6.1 Locations where above-ground tanks are prohibited.** Storage of Class I
2769 and II liquids in above-ground tanks outside of buildings is prohibited outside of a major
2770 industry (MI) district.

2771 **Exceptions:**

- 2772 1. The storage of up to 12,000 gallons (45,425 L) of Class I and II liquids
2773 within the limits defined as Light Industrial is allowable provided the tank is
2774 listed and labeled “protected aboveground tank,” and is installed in
2775 accordance with Section 5704.2.9.7 and its listing. The product shall be a
2776 noncorrosive, nonreactive liquid having a specific gravity equal to or less
2777 than one.
- 2778 2. The storage of up to 1,100 gallons (4,164 L) of Class I and II liquids at
2779 construction sites is allowed provided the tank is listed, labeled, and installed
2780 in accordance with its listing.
- 2781 3. The placement of aboveground storage tanks at other locations or of greater
2782 capacity may be considered on a case-by-case basis provided zoning issues,
2783 secondary containment, and fire exposures are satisfactorily addressed. The
2784 placement of aboveground tanks of Class I and II liquids in aggregate
2785 quantities exceeding 12,000 gallons (45,425 L) water capacity, where the
2786 nearest off-site exposure(s) is (are) less than 500 feet (152.4 m) from the
2787 tank(s), may be permitted by the fire chief only after notification of
2788 owners/occupants of properties within 500 feet (152.4 m) requesting their
2789 input in order to assess the potential effect on the community. Notice to
2790 adjacent property owners shall be accomplished in accordance with the
2791 established procedures outlined in the Title 25 (*Land Development*) for
2792 notice of applications and administrative actions or decisions.

2793 **5704.2.10 Drainage and diking.** The area surrounding a tank or group of tanks shall be
2794 provided with drainage control or shall be diked to prevent accidental discharge of liquid
2795 from endangering adjacent tanks, adjoining property, reaching waterways, or CEF's.

2796 **Exceptions:**

- 2797 1. For tank installations having an aggregate volume of less than 50,000
2798 gallons, the fire chief is authorized to alter or waive these requirements
2799 based on a technical report which demonstrates that such tank or group of
2800 tanks does not constitute a hazard to other tanks, waterways, CEF's, or
2801 adjoining property, after consideration of special features such as
2802 topographical conditions, nature of occupancy and proximity to buildings on
2803 the same or adjacent property, capacity, and construction of proposed tanks
2804 and character of liquids to be stored, and nature and quantity of private and
2805 public fire protection provided.
- 2806 2. Drainage control and diking is not required for listed secondary containment
2807 tanks.

2808 **5704.2.10.1 Volumetric capacity.** The volumetric capacity of the diked area shall
2809 not be less than the greatest amount of liquid that can be released from the largest
2810 tank within the diked area plus a 24-hour rainfall as determined by a 25-year storm.
2811 The capacity of the diked area enclosing more than one tank shall be calculated by
2812 deducting the volume of the tanks other than the largest tank below the height of
2813 the dike.

2814 **5704.2.11.1 Location.** Flammable and combustible liquid storage tanks located
2815 underground shall be in accordance with all of the following:

- 2816 1. Tanks shall be located with respect to existing foundations and supports such
2817 that the loads carried by the latter cannot be transmitted to any portion of the
2818 area excavated for the installation of the tank.
- 2819 2. The distance from any part of an excavated area intended for the installation
2820 of a tank for storing liquids to the nearest wall of a basement, pit, cellar, or
2821 lot line shall not be less than five feet (1523 mm).
- 2822 3. A minimum distance of two feet (610 mm), shell to shell, shall be
2823 maintained between underground tanks.

2824 **5704.2.11.2 Depth and cover.** Excavation for underground storage tanks shall be
2825 made with due care to avoid undermining of foundations of existing structures.
2826 Underground tanks shall be set on firm foundations and surrounded with at least
2827 two feet (610 mm) of noncorrosive inert material, such as clean sand or pea gravel
2828 well tamped in place or in accordance with the manufacturer's installation
2829 instructions. Tanks shall be covered with a minimum of two feet (610 mm) of earth
2830 or shall be covered by not less than one foot (305 mm) of earth, on top of which

2831 shall be placed a slab of reinforced concrete not less than four inches (102 mm)
2832 thick.

2833 When underground tanks are, or are likely to be, subjected to traffic, they shall be
2834 protected against damage from vehicles passing over them by at least three feet
2835 (915 mm) of earth cover, or 18 inches (457 mm) of well-tamped earth plus six
2836 inches (152 mm) of reinforced concrete, or eight inches (203 mm) of asphaltic
2837 concrete. When asphaltic or reinforced concrete paving is used as part of the
2838 protection, it shall extend at least two feet (610 mm) horizontally beyond the
2839 outline of the tank in all directions.

2840 For tanks built in accordance with Section 5704.2.7, the burial depth and the height
2841 of the vent line shall be such that the static head imposed at the bottom of the tank
2842 will not exceed 10 psig (68.9 kPa) if the fill or vent pipe is filled with liquid.

2843 If the depth of cover exceeds seven feet (2134 mm) or the manufacturer's
2844 specifications, reinforcements shall be provided in accordance with the tank
2845 manufacturer's recommendations.

2846 Nonmetallic underground tanks shall be installed in accordance with the
2847 manufacturer's instructions. The minimum depth of cover shall be as specified
2848 above in this section.

2849 **5704.2.11.4.1 Inventory control.** Daily inventory records shall be maintained for
2850 underground storage tank systems. Fill and withdrawal amounts shall be reconciled
2851 monthly.

2852 **5803.1.1 Special limitations for indoor storage and use.** Flammable gases shall not be
2853 stored or used in Group A, E, I or R occupancies or in offices in Group B
2854 occupancies.

2855
2856 **Exceptions.**

- 2857 1. Cylinders of nonliquefied compressed gases not exceeding a capacity of
2858 250 cubic feet (7.08 m³) or liquefied gases not exceeding a capacity of 40
2859 pounds (18 kg) each at normal temperature and pressure (NTP) used for
2860 maintenance purposes, patient care or operation of equipment.
- 2861 2. Food service operations in accordance with Section 6103.2.1.7.
- 2862

2863 **6003.1.4.1 Floors.** In addition to the requirements set forth in Section 5004.12, floors of
2864 storage shall be of liquid-tight construction.

2865 **6101.2 Permits.** The requirements in this chapter for permits to store or use hazardous
2866 materials within the City are applicable to a permit to store, use, handle, or dispense LP-
2867 gas, or to install or maintain an LP-gas container.

2868 Permits shall be required as set forth in Section 105.6. As noted in Section 105.6.21.7 of
2869 these amendments, a permit is not required for non-commercial use at a single family
2870 residence. However, the information concerning location and exposures, as outlined in
2871 the Fire Protection Criteria Manual, shall be provided to the Fire Department by the
2872 owner of the residence.

2873 Where a single container is over 2,000 gallon (7571 L) or the aggregate capacity of
2874 containers is over 4,000 gallons (15,142 L) water capacity, the installer shall submit plans
2875 for the installation.

2876 Distributors shall not fill an LP-gas container for which a permit is required unless a
2877 permit for installation has been issued for that location by the fire chief.

2878 **6103.2.1.2 Construction and temporary heating.** Portable LP-gas containers are
2879 allowed to be used in buildings or areas of buildings undergoing construction or for
2880 temporary heating as set forth in Sections 6.20.4, 6.20.5 and 6.20.8 of NFPA 58.

2881 **6103.2.2 Industrial vehicles and floor maintenance machines.** LP-gas containers on
2882 industrial vehicles and floor maintenance machines shall comply with Sections 11.14 and
2883 11.15 of NFPA 58.

2884 **6104.2 Maximum capacity within established limits.** The storage of LP-gas in
2885 aggregate quantities greater than 2000 gallons (7571 L) water capacity is not permitted
2886 within the city. The storage of LP-gas in aboveground or below ground containers,
2887 greater than 24 gallons (91 L) water capacity and up to a maximum of 2000 gallons (7571
2888 L) water capacity, is prohibited outside of Major Industry (MI) or Light Industry (LI)
2889 districts. Location of containers within a Light Industry zoning district may be approved
2890 by the fire chief, subject to zoning and fire exposure concerns being satisfactorily
2891 addressed.

2892 **Exceptions:**

- 2893 1. The fire chief may approve the placement of aboveground or below ground
2894 containers for single family residential, multi-family residential or
2895 commercial occupancies on a case-by-case basis, provided the container and
2896 appurtenances are listed and installed in accordance with that listing, and
2897 issues such as zoning and fire exposures are satisfactorily addressed.
2898 Guidance for evaluating locations for acceptability is published in the Fire
2899 Protection Criteria Manual.
- 2900 2. Where the nearest off-site exposure(s) is(are) less than 1,000 feet (304.8 m)
2901 from the tank(s), the fire chief may approve the placement of aboveground
2902 or below ground containers of LP-gas in aggregate quantities exceeding
2903 2000 gallon water capacity only after notification of owners/occupants
2904 within 1,000 feet (304.8 m) of the tank(s) to assess the potential effect on the
2905 community. Notice to adjacent property owners and occupants shall be
2906 accomplished in accordance with the established procedures outlined in the

2907 Title 25 (*Land Development*) for notice of applications and administrative
2908 actions or decisions, with the exception that notice shall be made to a
2909 distance of 1000 feet (304.8 m).

2910 **6104.3.2 Special hazards.** LP-gas containers shall also be located with respect to special
2911 hazards including, but not limited to, above-ground flammable or combustible liquid
2912 tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines as
2913 specified in Sections 6.4 and 6.5 of NFPA 58.

2914 **6104.4 Multiple LP-gas container installations.** Multiple LP-gas container installations
2915 with a total water storage capacity of more than 180,000 gallons (681 300 L) [150,000-
2916 gallon (567 750 L) LP-gas capacity] shall be subdivided into groups containing not more
2917 than 180,000 gallons (681 300 L) in each group. Such groups shall be separated by a
2918 distance of not less than 50 feet (15 240 mm), unless the containers are protected in
2919 accordance with one of the following:

- 2920 1. Mounded in an approved manner.
- 2921 2. Protected with approved insulation on areas that are subject to impingement of
2922 ignited gas from pipelines or other leakage.
- 2923 3. Protected by firewalls of approved construction.
- 2924 4. Protected by an approved system for application of water as specified in Table
2925 6.4.1.2 of NFPA 58.
- 2926 5. Protected by other approved means.

2927 Where one of these forms of protection is provided, the separation shall not be less than
2928 25 feet (7620 mm) between LP-gas container groups.

2929 **6107.2 Smoking and other sources of ignition.** “No Smoking” signs complying with
2930 Section 310 shall be posted when required by the fire chief. Smoking within 25 feet
2931 (7620 mm) of a point of transfer, while filling operations are in progress at LP-gas
2932 containers or vehicles, shall be prohibited.

2933 Control of other sources of ignition shall comply with Chapter 3 of this code and Section
2934 6.23 of NFPA 58.

2935 **6108.1 General.** Fire protection shall be provided for installations having LP-gas storage
2936 containers with a water capacity of more than 4,000 gallons (15,140 L), as required by
2937 Section 6.29 of NFPA 58.

2938 **6109.11.2 Construction.** The construction of such buildings and rooms shall comply
2939 with requirements for Group H occupancies in the Building Code, Chapter 10 of NFPA
2940 58 and both of the following:

- 2941 1. Adequate vents shall be provided to the outside at both top and bottom, located at
2942 least five feet (1524 mm) from building openings.
- 2943 2. The entire area shall be classified for the purposes of ignition source control in
2944 accordance with Section 6.23 of NFPA 58.

2945 **6303.1.1.1.2.1** A maximum of 110 pounds (49.9 kg) of solid Class 3 oxidizer is allowed
 2946 in nonresidential detached storage adjacent to Group R occupancies, when such materials
 2947 are necessary for maintenance purposes associated with swimming pools. The oxidizers
 2948 shall be stored in approved containers and in an approved manner.

2949 **CHAPTER 80 REFERENCED STANDARDS**

2950 This chapter lists the standards that are referenced in various sections of this document
 2951 and the 2021 International Fire Code. The standards within Chapter 80 of the published
 2952 2021 International Fire Code and the amendments adopted by the City are listed herein
 2953 and in the published code by the promulgating agency of the standard, the standard
 2954 identification, the effective date and title, and the section or sections of this document that
 2955 reference the standard. The references specifically amended below replace the reference
 2956 within the published code. All other references remain as published by the ICC. The
 2957 application of the referenced 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—2019 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—2019 Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.	903.3.1.3, 903.3.5.1.1
13R—2019 Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height.	903.3.1.2, 903.3.5.2 903.3.5.1.2, 903.4
14 — 2019 Installation of Standpipe and Hose Systems	905.2, 905.4.2, 905.6.2,

	905.8
30 — 2021 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 — 2020 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—2019 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 – 2019 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 for Emergency Response", 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 704-2017 does not apply or provides insufficient guidance, e.g. oxidizers. Sections 105.5.21 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 metal failure while under pressure or because of heat from external fire. As a result, the degree of hazard assigned for the same material can vary when assessed by different people of equal competence.

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

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PART 2. This ordinance takes effect on September 1, 2021.

PASSED AND APPROVED

_____, 2021 § _____
 § _____
 § _____
 Steve Adler
 Mayor

APPROVED: _____
 Anne L. Morgan
 City Attorney

ATTEST: _____
 Jannette S. Goodall
 City Clerk

