

ORDINANCE NO.

AN ORDINANCE REPEALING AND REPLACING ARTICLE 7 OF CITY CODE CHAPTER 25-12 (TECHNICAL CODES) RELATING TO THE INTERNATIONAL FIRE CODE AND LOCAL AMENDMENTS; AND CREATING OFFENSES.

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

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

ARTICLE 7. FIRE CODE

§ 25-12-171 INTERNATIONAL FIRE CODE.

(A) The International Fire Code and Appendices B and F, 2021 Edition, published by the International Code Council (“2021 International Fire Code”), are adopted and incorporated by reference into this section with the changes described in Subsection (B) and amendments in Section 25-12-173 (*Local Amendments to the International Fire Code*).

(B) The following sections of the 2021 International Fire Code 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		503.2.6	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				

17 (C) The following definitions in the 2021 International Fire Code 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	

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

21 **§ 25-12-172 CITATIONS TO THE FIRE CODE.**

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

26 **§ 25-12-173 LOCAL AMENDMENTS TO THE INTERNATIONAL FIRE CODE.**

27 Each provision in this section is a substitute for the identically numbered provision
28 deleted by Section 25-12-171(B),(C) (*International Fire Code*) or is an addition to the
29 2021 International Fire Code.

30 **[A]101.1 Title.** These regulations shall be known as the Fire Code.

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

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

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

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

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

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

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

- 61 1. the prevention of fires;
- 62 2. the suppression or extinguishment of dangerous or hazardous fires;
- 63 3. the storage, use and handling of hazardous materials;
- 64 4. the installation and maintenance of automatic, manual and other private
65 fire alarm systems and fire-extinguishing equipment;
- 66 5. the maintenance and regulation of fire escapes;
- 67 6. the maintenance of fire protection and the elimination of fire hazards on
68 land and in buildings, structures and other property, including those under
69 construction;
- 70 7. the maintenance of means of egress; and
- 71 8. the investigation of the cause, origin and circumstances of fire and
72 unauthorized releases of hazardous materials.

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

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

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

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

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

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

103 **105.5.3 Amusement buildings.** Not adopted.

104 **105.5.4 Aviation facilities.** Not adopted.

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

107 **105.5.6 Cellulose nitrate film.** Not adopted.

108 **105.5.7 Combustible dust-producing operations.** Not adopted.

109 **105.5.8 Combustible fibers.** Not adopted.

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

112 **105.5.10 Covered and open mall buildings.** Not adopted.

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

115 **105.5.12 Cutting and welding.** Not adopted.

116 **105.5.13 Dry Cleaning.** Not adopted.

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

119 **105.5.16 Explosives.**

120 **105.5.16.1 Blasting.** An operational permit is required to use explosives or blasting
121 agents at an addressed location for a specified period, which is based on the class of

122 permit. Chapter 56 (*Explosives and fireworks*) establishes additional requirements for a
123 blasting operational permit.

124 1. Class A: 45 days

125 2. Class B: 120 days

126 3. Class C: 1 year

127 4. Class D: 10 days

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

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

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

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

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

146 **105.5.19 Floor finishing.** Not adopted.

147 **105.5.20 Fruit and crop ripening.** Not adopted.

148 **105.5.21 Fumigation and insecticidal fogging.** Not adopted.

149 **105.5.22 Hazardous Materials.**

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

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

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

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

105.6.21.1.4 Compressed gases, liquefied compressed gases and cryogenic fluids.

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>

165 **105.5.22.3** An operational permit is required to dispense liquid fuels, regardless of hazard
166 classification, from tank vehicles into the fuel tanks of motor vehicles at commercial,
167 industrial, governmental or manufacturing establishments. A person may not dispense
168 liquid fuels of any kind from tank vehicles into the fuel tanks of motor vehicles at a
169 residence.

170 **105.5.22.4** The criteria for the rating of hazardous materials are contained in NFPA
171 Standard No. 704 (See Appendix F). The fire chief uses NFPA Standard No. 704 to
172 assign hazard ratings to hazardous materials. If the NFPA Fire Protection Handbook
173 assigns a material a hazard rating, then that rating is used. When a rating is not provided,
174 the fire chief uses NFPA 704, information contained in Material Safety Data Sheets
175 (MSDS), Appendix E, or other commonly accepted published standards of nationally
176 recognized organizations/authors to classify hazardous materials.

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

181 **105.5.22.6** The state of a material (liquid, solid, gas) is based on its physical state at NTP.

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

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

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

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

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

196 **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

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

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

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

210 **105.5.22.7.8** Any material contained in a process vessel, except when the process
211 vessel is being used for permanent storage.

212 **105.5.22.7.9** Any material stored in an underground tank that complies with the
213 permit requirements of the Development Services Department, or its successor
214 department, and with the reporting requirements of the U.S. Environmental
215 Protection Agency (EPA) Emergency Planning and Community Right-to-Know

216 Act (EPCRA), also known as Title III of the Superfund Amendments and
217 Reauthorization Act (SARA Title III), and if applicable, with the requirements of
218 the Texas Hazard Communication Act.

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

222 **105.5.22.7.11.** Carbon dioxide systems utilizing high pressure cylinders that are
223 not associated with beverage dispensing applications.

224 **105.5.23 HPM facilities.** HPM facilities, including Group H-5 occupancies are required
225 to obtain a hazardous materials permit and must comply with Section 105.6.21.

226 **105.5.24 High-piled storage.** A triennial operational permit is required to use a building
227 or portion thereof as a high-piled storage area that exceeds 500 square feet (46m²).

228 **105.5.25 Hot work.** Not adopted.

229 **105.5.26 Industrial ovens.** Not adopted.

230 **105.5.27 Lumber yards and woodworking plants.** Not adopted.

231 **105.5.28 Liquid- or gas-fueled vehicles in assembly buildings.** Not adopted.

232 **105.5.29 LP-Gas.** An operational permit is required for liquefied petroleum gas and must
233 comply with Section 105.6.21 (Hazardous materials).

234 **105.5.30 Magnesium.** Not adopted.

235 **105.5.31 Miscellaneous combustible storage.** Not adopted.

236 **105.5.33 Motor fuel-dispensing facilities.** Not adopted.

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

242 **Exception:** Recreational fires

243 **105.5.35 Open flames and torches.** Not adopted.

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

247 **105.5.37 Organic coatings.** An operational permit is required for organic coatings and
248 must comply with Section 105.6.21 (*Hazardous materials*).

249 **105.5.39 Places of assembly.** An operational permit or appropriate certificate of
250 occupancy is required to operate a place of assembly.

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

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

257 **105.5.41 Private fire hydrants.** Not adopted.

258 **105.5.42 Pyrotechnic special effects material.** An operational permit is required to use
259 and handle pyrotechnic special effects material.

260 **105.5.43 Pyroxylin plastic.** Not adopted.

261 **105.5.44 Refrigeration equipment.** Not adopted.

262 **105.5.45 Repair garages and motor fuel-dispensing facilities.** Not adopted.

263 **105.5.46 Rooftop heliports.** Not adopted.

264 **105.5.47 Spraying or dipping.** Not adopted.

265 **105.5.48. Storage of scrap tires and tire byproducts.** Not adopted.

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

270 **Exceptions:**

- 271 1. Tents used exclusively for recreational camping purposes.
- 272 2. Funeral tents and curtains or extensions attached thereto, when used for
273 funeral services.
- 274 3. Tents that are not attached to, or located within 20 feet (6096 mm) of, a
275 building shall not require a permit unless the tent is in excess of 400 square
276 feet (37 m²).
- 277 4. Tents open on all sides which comply with all of the following:

- 278 4.1 Individual tents having a maximum size of 700 square feet (65 m²).
- 279 4.2 The aggregate area of multiple tents placed side by side without a
280 firebreak clearance of not less than 12 feet (3658mm) shall not exceed
281 700 square feet (65 m²) total.
- 282 4.3 A minimum clearance of 20 feet (6096 mm) to structures and other
283 tents shall be provided.
- 284 5. Inflatable playground equipment at one- or two- family residences.
- 285 6. Inflatable playground equipment used for less than 24 hours at places of
286 worship or education facilities (for ages served by the 6th grade and younger)
287 when located a minimum of 20 feet from the nearest building.

288 **105.5.50 Tire-rebuilding plant.** Not adopted.

289 **105.5.51 Waste handling.** Not adopted.

290 **105.5.52 Wood Products.** Not adopted.

291 **105.6 Required construction permits.** The fire code official may issue construction
292 permits for work as described in Section 105.7.1.

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

297 **105.6.2 Temporary membrane structures and tents.** A construction permit is
298 required to erect an air supported temporary membrane structure or tent having an
299 area in excess of 100 square feet (9.3 m²) or an aggregate area of multiple tents
300 placed side by side in excess of 400 square feet (37 m²).

301 **Exceptions:**

- 302 1. Tents used exclusively for recreational camping purposes.
- 303 2. Funeral tents and curtains or extensions attached thereto, when used
304 for funeral services.
- 305 3. Tents that are not attached in any way to or within 20 feet (6096 mm)
306 of a building shall not require a permit unless the tent is in excess of
307 400 square feet (37 m²).
- 308 4. Tents open on all sides, which comply with all of the following;

- 309 4.1 Individual tents having a maximum size of 700 square feet (65
310 m²).
- 311 4.2 The aggregate area of multiple tents placed side by side without
312 a fire break clearance of not less than 12 feet (3658 mm) shall
313 not exceed 700 square feet (65 m²) total.
- 314 4.3 A minimum clearance of 20 feet (3658 mm) to structures and
315 other tents shall be provided.
- 316 5. Inflatable playground equipment at one- or two- family residences.
- 317 6. Inflatable playground equipment used for less than 24 hours at places
318 of worship or education facilities (for ages served by the 6th grade and
319 younger) when located a minimum of 20 feet from the nearest
320 building.
- 321

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

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

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

340 **[A] 106.2.1 Information on construction documents.** Construction documents shall be
341 drawn to scale, be on suitable material, and in a media acceptable to the City of Austin
342 Development Services Department, or its successor department and the Austin Fire
343 Department. Scale of reference shall be based on standard US empirical or SI units. A

344 person who submits a shop drawing to the Fire Department that is drawn to a scale other
345 than 1/8"=1' or 1/4"=1' must pay a fee, set by a separate ordinance, for non-standard
346 drawing scales. Construction documents shall be of sufficient clarity to indicate the
347 location, nature and extent of the work proposed and must show, in detail, that the work
348 will conform to the provisions of this code and relevant laws, ordinances, rules and
349 regulations as determined by the fire code official.

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

361 **Section 107 FEES**

362
363 **[A] 107.1 Fees.** A permit shall not be issued until the fees have been paid.

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

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

372
373 **[A] 107.5 Related fees.** The payment of the fee for the construction, alteration,
374 removal or demolition of work done in connection to or concurrently with the work or
375 activity authorized by a permit shall not relieve the applicant or holder of the permit
376 from the payment of other fees that are prescribed by law.

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

380 **108.2.3 Re-inspections.** When previously identified violations have not been corrected, a
381 fee shall be assessed for a construction related re-inspection requested by the applicant or

382 contractor. When a scheduled inspection fails, or is cancelled with less than a 24 hour
383 notice, due to the fact that the applicant or contractor was not capable of nor prepared for
384 the inspection to be conducted, a re-inspection fee shall be assessed. The re-inspection
385 fee shall be in an amount set by separate ordinance. No subsequent inspections shall be
386 made until the required fees have been paid and required documentation submitted.

387 **111.1 Appeals.** Appeals are handled consistent with Chapter 25-1, Article 7, Division 1
388 (*Appeals*).

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

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

400 **112.3.3 Prosecution of violations.**

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

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

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

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

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

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

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

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

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

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

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

442 **[M] COMMERCIAL COOKING APPLIANCES.** Appliances used in a commercial
443 food service establishment for heating or cooking food and which produce grease vapors,
444 steam, fumes, smoke or odors that are required to be removed through a local exhaust
445 ventilation system. Such appliances include deep fat fryers; upright broilers; griddles;
446 broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens;
447 barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food
448 service establishment shall include any building or a portion thereof used for the
449 preparation and serving of food for more than 6 hours per week, including food services
450 within a residential board and care facility if the facility serves 12 or more residents.

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

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

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

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

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

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

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

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

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

484 **LEGITIMATE COOKING FIRE.** A fire kindled within the confines of an appliance or
485 structure manufactured or built for the express purpose of cooking meals for consumption

486 by human. Incidental cooking or warming of foods with an open recreational fire shall
487 not be considered a “legitimate cooking fire”.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

558 **Exception:** Compliance with Section 903.3.1.3 is not required for adult care and
559 childcare facilities that are within the proprietor's single-family home, provided
560 that the home was constructed and occupied as a residence prior to October 1,
561 2010.

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

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

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

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

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

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

576 **Exceptions:**

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

582 **307.2 Permit required.** A permit shall be obtained from the fire department emergency
583 prevention division in accordance with Section 105.6 prior to kindling a fire for
584 recognized silvicultural or range or wildlife management practices, prevention or control

585 of disease or pests, a warming fire, a rubbish fire, or a bonfire. Application for such
586 approval shall only be presented by and permits issued to the owner of the land upon
587 which the fire is to be kindled. Rubbish includes waste material from the construction or
588 demolition of buildings. For additional requirements concerning trench burning, see
589 Section 308.5. For mobile incinerators, see Section 308.6. For agricultural burning see
590 Section 308.7.

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

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

598 **Exceptions:**

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

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

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

614 **308.5 Trench Burners.** In addition to the provisions of Section 307 of the Fire Code, all
615 trench burners in the City shall comply with the following:

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

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

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

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

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

- 650 4. No burning is permitted during periods of high fire hazard weather
651 conditions.

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

- 656 1. All other materials, including but not limited to paper, roofing, shingles,
657 insulation, wiring, treated wood products, metal products, chemicals,
658 plastics, tires and other real or synthetic rubber materials may not be burned
659 in the pit. Flammable or combustible liquids may not be burned except for
660 ignition purposes.
- 661 2. Suitable fire protection shall be present on the site where the trench burner is
662 located during operation. Suitable fire protection consists of a trailer or tank
663 truck fitted with a water tank capable of transporting a 500 gallon water
664 supply to any location on the job site and an approved water delivery system
665 consisting of a pump, at least 100 feet of rubber booster hose having a
666 minimum diameter of three-fourths inch, and either a straight stream or
667 adjustable spray nozzle.
- 668 3. The pit must be closed and filled with dirt within 48 hours after the trench
669 burner operations are discontinued.
- 670 4. Combustible material may not be placed in the trench any higher than three
671 feet below the surface level.
- 672 5. Every trench burner must be attended when in operation. The trench burner
673 shall be completely extinguished before being left unattended.

674 **308.5.5 Permit Application.** The permit application must contain the following:

- 675 1. The name, address, and phone number of the individual or entity that owns
676 the trench burner unit.
- 677 2. The name, address, and phone number of the individual or entity responsible
678 for the operation of the trench burner unit.
- 679 3. A description of the site to be cleared, and the name, address and telephone
680 number of the owner of the property.

- 681 4. An operating schedule including initial date of operation and expected
682 number of weeks of operation.
- 683 5. A copy of the Texas Commission on Environmental Quality permit issued
684 for the construction of the unit, if a permit is required.
- 685 6. A statement from the applicant confirming the applicant will inform the
686 Watershed Protection Department, or its successor department, of the dates
687 the trench burner will be operating.
- 688 7. A description of the type and quantity of petroleum product utilized to ignite
689 the trench burner. If this is to be stored at the site, then the manner of storage
690 and quantity to be stored must be described. The method of igniting the
691 trench burner must be described.
- 692 8. Proof that the applicant has current liability insurance in the amount of
693 \$1,000,000 for personal injuries, and \$500,000 for property damage any
694 time the trench burner is in use.
- 695 9. The payment of the permit fee as established by the City Council.
- 696 10. Certification from the Development Services Department, or its successor
697 department, as required by Article 308.5.6 of this code.
- 698 11. A construction permit from the Texas Commission on Environmental
699 Quality must be obtained if required by Commission rule. If the trench
700 burner is exempt from the Commission permit requirements all conditions of
701 the exemption must be complied with.

702 **308.5.6 Environmental Protection.** The Development Services Department, or its
703 successor department, shall require the following before the issuance of certification:

- 704 1. The bottom of the trench is located at a minimum distance of 50 feet from
705 the water table;
- 706 2. No fissures are located inside or adjacent to the trench;
- 707 3. Ignition fuel shall be limited to combustible liquids, as defined by this code.
708 Approval shall also be granted where an alternative to the use of
709 combustible liquids is used to ignite the trench;
- 710 4. The method of igniting the trench ensures no amount of combustible liquid
711 greater than necessary to ignite the trench will be used; and,

- 712 5. The manner of storage of the product at the site is designed to prevent any
713 leak or accidental discharge, and where applicable, the hazardous materials
714 storage and registration requirements are met; and
- 715 6. An environmental review shall be conducted of the watershed of Lake
716 Austin, Lake Travis, or with the aquifer-related watershed of Barton,
717 Williamson, Slaughter, Big Bear, Little Bear and Onion Creek, including the
718 Edwards Aquifer recharge zone North and South of the Colorado River, all
719 as shown on the hazardous materials storage and registration map on file in
720 the Office of the City Clerk.

721 **308.6 Mobile Incinerators.** All mobile incinerators in the City must comply with the
722 following:

723 **308.6.1 Construction.** Each mobile incinerator must be constructed as follows:

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

- 744 7. Any design not in compliance with the criteria and appropriate nationally
745 recognized standards must have the construction reviewed and submitted as
746 an alternative method under the seal of a registered professional engineer or
747 a recognized testing laboratory.

748 **308.6.2 Location.** No mobile incinerator may be located:

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

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

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

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

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

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

786 **308.6.5 Permit Application.** The permit application must contain the following:

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

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

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

810 **308.7 Agricultural Burning.** In addition to the provisions of Section 307 of the Fire
811 Code, all agricultural burning in the City shall comply with the following:

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

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

823 **308.7.3 Burning bans.** Burning shall not be permitted during any weather related
824 burn bans.

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

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

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

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

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

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

848 **Exceptions:**

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

857 **401.3 Emergency responder notification.** Notification of emergency responders shall
858 be in accordance with Sections 401.3.1 through 401.3.4.

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

865 **401.3.2 Alarm activations.** Upon activation of a fire alarm signal, employees or
866 staff shall immediately notify the fire department.

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

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

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

885 **401.3.4.2** Failure to maintain and provide records of internal responses will
886 result in revocation of the facility's procedural approach to reporting.

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

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

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

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

899 **408.2.1 Permit Duration.** The duration of the TCOU permit shall not exceed 14
900 calendar days.

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

904 **408.4 Fire Watch.** The Fire Marshal's Office may require a fire watch or standby if
905 additional fire and life safety hazards are identified during plan review.

906 **409 FIRST RESPONDER EMERGENCY PLANS**

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

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

913 **409.2.1 Existing Buildings.** Existing buildings shall have 3 years to submit
914 building floor plan of AFD.

915 **409.3 Plan Requirements.** Building floor plans submitted to AFD shall contain the
916 following information, as applicable:

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

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

927 **503.1.1 Buildings and facilities.** Approved fire apparatus access roads shall be
928 provided for every facility, building or portion of a building hereafter constructed
929 or moved into or within the jurisdiction. The fire apparatus access road shall
930 comply with the requirements of this section and shall extend to within 150 feet
931 (45 720 mm) of all portions of the facility and all portions of the exterior walls of
932 the first story of the building as measured by an approved route around the exterior
933 of the building or facility.

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Exceptions:

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

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

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

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

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

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

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

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

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

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Exceptions.

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

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

996 **503.2.6 Bridge and elevated surfaces.** Where a bridge or an elevated surface is part of a
997 fire apparatus access road, the bridge shall be constructed and maintained in accordance
998 with AASHTO HB-17 or the latest addition of AASHTO Load and Resistance Factor
999 Design accepted by the Texas Department of Transportation. Bridges and elevated
1000 surfaces shall be designed for a live load sufficient to carry the imposed loads of fire

1001 apparatus. Vehicle load limits shall be posted at both entrances to bridges where required
1002 by the fire chief. A designated fire lane shall be maintained for the purpose of vehicle
1003 access and shall prohibit obstructions as per Section 503.3. The entire bridge deck or
1004 elevated surface shall be designed and maintained to support fire apparatus operations as
1005 required and approved by the fire chief.

1006 **503.2.6.1 Operational and outrigger loads.** Where an elevated surface or
1007 structure or portions of a structure are subject to operational loads with deployment
1008 of outriggers utilizing a crane, lift or ladder, the structure shall be designed and
1009 maintained to support the following independent static loading conditions as
1010 required and approved by the fire chief: 1) a load of 43,200 pounds on one
1011 outrigger and 2) a load of 28,600 pounds on each of two adjacent outriggers with
1012 18 feet of separation on centers (the total load is 57,200 pounds.) The contact area
1013 of each outrigger is 24 inches × 24 inches. In addition to verifying that special
1014 inspections per the Building Code, the design engineer of record shall make
1015 periodic construction observations and upon substantial completion of the work,
1016 the design engineer shall provide the fire chief an engineer's letter of concurrence
1017 that the work and materials were installed in substantial conformance with the fire
1018 chief's record document.

1019 **503.3 Designation, Location, and Maintenance of Fire Zones Official Records.** All
1020 fire apparatus access roads required by Sections 503.1.1 and 3206.6 and that are out of
1021 the public right-of-way, are designated as fire zones or fire lanes, to maintain the required
1022 unobstructed clearance in accordance with Section 503.2.1 as amended. The fire
1023 department will keep records of the designation and location of fire zones and fire lanes.

1024 **Exception:** Fire apparatus access roads between aisles of parking or under porte
1025 cocheres need not be designated as fire zones.

1026 **503.3.1 Tow Away Zones.** All fire zones and fire lanes shall be designated
1027 as tow away zones. The designation of the fire zones or fire lanes does not
1028 make the City responsible for the maintenance of the fire zones or fire lanes
1029 on private property, but the owner of the property continues to be
1030 responsible for the maintenance of the area.

1031 **503.3.2 Signs and Identification Markers Designating Fire Zones/Fire**
1032 **Lanes.** After designation of a fire zone or fire lane under this article, the fire
1033 chief shall give notice of the designation to the owner of the property,
1034 directing the owner to cause, at the expense of the owner, markings to be
1035 painted on any areas designated as a fire zone or fire lane. The markings
1036 must be red with white stenciling reading "FIRE ZONE/TOW AWAY
1037 ZONE" or "FIRE LANE/TOW AWAY ZONE" in lettering at least three

1038 inches in height. The stenciling shall be at intervals of 35 feet or less. In
1039 addition, the owner shall cause signs to be posted at both ends of a fire zone
1040 or fire lane and at each entry and exit point which constitutes a portion of the
1041 fire zone or fire lane. Alternative marking of fire zones and fire lanes may be
1042 approved by the fire chief provided fire zones or fire lanes are clearly
1043 identified at both ends and at intervals not to exceed 35 feet and are clearly
1044 marked "Tow Away Zones" at least every 35 feet. The signs shall be
1045 installed with the top of the sign no higher than eight feet above grade and
1046 no less than five feet above grade.

1047 **503.4.1. Traffic calming devices.** Geometric street features intended to mitigate unsafe
1048 traffic conditions such as speeding or excessive cut-through traffic shall be designed to
1049 address both traffic safety and emergency access requirements. Approved street features
1050 shall mitigate the traffic conditions identified by the city traffic engineer while providing
1051 for adequate emergency vehicle access to the satisfaction of the fire department.

1052 **503.7 Persons authorized to Issue Citations.** A citation for a charge of parking,
1053 standing, or stopping in a fire zone or fire lane in violation of this article may be issued
1054 by a licensed peace officer employed by the City, an employee of the Fire Department
1055 designated by the fire chief, an employee of the City authorized to issue tickets for
1056 parking violations by the City Code, or a private security guard employed by an agency
1057 operating under either a license or a letter of authority issued by the Texas Board of
1058 Private Investigators and Private Security Agencies, and who is employed by the owner
1059 or lessee of the property on which a fire zone has been established.

1060 **504.1 Required Access.** Exterior doors and openings required by the code or the
1061 International Building Code shall be maintained accessible for emergency access by the
1062 fire department. An approved access walkway constructed of approved materials at least
1063 36 inches in width leading from fire apparatus access roads to exterior openings shall be
1064 provided when required by the fire chief. The walkway shall be constructed in
1065 accordance with Section 1003.4.

1066 **505.1 Address identification.** New and existing buildings shall be provided with
1067 approved address identification in accordance with the Fire Protection Criteria Manual.

1068 **505.3 Premise Hazard Identification Signs.** Structures that the fire chief deems to have
1069 the potential to present an unusual level of hazard to firefighters during fire ground
1070 operations shall be identified such that it is readily identifiable to responding fire
1071 department personnel. Such structures may or may not present obvious dangers to the
1072 occupants of the building when no fire is present. Potentially hazardous structures may
1073 be identified as prescribed by this code, by the Building Code, or by fire department
1074 safety policies and procedures.

1075 **505.3.1 Hazardous Address Numbering.** Structures that are required to be
1076 readily identifiable by responding fire department personnel shall have unique
1077 address numbering signs. The signs shall be installed on all sides of the building
1078 facing emergency vehicle access established in accordance with Section 503 or
1079 facing an approach directly from public rights-of-way. Signs will consist of the
1080 address numbers of the building in 8-inch tall white numbers on a solid red
1081 background. The address numbers will be oriented vertically. The signage will be
1082 reflective to be visible at night, weather resistant and permanent.

1083 **507.3 Fire flow.** Fire flow requirements for buildings or portions of buildings and
1084 facilities shall be determined in accordance with Appendix B of the Fire Code.

1085 **507.4 Water supply test.** The fire department emergency prevention division shall be
1086 notified prior to the water supply test. Water supply tests shall be conducted by or
1087 witnessed by the fire department emergency prevention division.

1088 **507.5.1 Where required.** Where a portion of the facility or building hereafter
1089 constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from
1090 the nearest hydrant on a fire apparatus access road or more than 500 feet (152 m) from
1091 secondary hydrants needed to supply the minimum fire flow, as measured by an approved
1092 route around the exterior of the facility or building, on-site fire hydrants and mains shall
1093 be provided where required by the fire chief.

1094 **Exceptions:**

- 1095 1. For Group R-3 and Group U occupancies, the distance requirement shall be
1096 600 feet (183 m).
- 1097 2. For buildings equipped throughout with an approved automatic sprinkler
1098 system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the
1099 distance requirement for all required fire hydrants shall be 500 feet (152 m).

1100 **507.5.3 Private fire service mains and water tanks.** Private fire service mains,
1101 including private fire hydrants and water tanks, shall be inspected, tested and maintained
1102 consistent with NFPA 25, *Standard for Inspection, Testing and Maintenance of Water-*
1103 *Base Fire Protection Systems*; the *Fire Criteria Manual* and the American Water Works
1104 Association (AWWA) Manual M-17, *Installation, Field Testing and Maintenance of Fire*
1105 *Hydrants* at the following intervals:

- 1106 1. Private fire hydrants (all types): Inspection annually and after each operation; flow
1107 test and maintenance annually to ensure proper functioning in accordance with the
1108 following:

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- a. Private fire hydrants shall be flushed annually. Chlorine residual tests will be performed on all private hydrant systems not separated from potable water uses by an approved back-flow prevention device. The unseparated hydrants shall be flushed until the free chlorine residual meets or exceeds the 0.2 mg/l minimum established by the Texas Commission on Environmental Quality in Section 290.46(f)(1) of the Rules and regulations for Public Water Systems. Chlorine residual shall be determined using the N,N-diethyl-p-phenylenediamine (DPD) method.
- b. Static testing shall be performed in accordance with AWWA Manual M-17, Installation, Field Testing and Maintenance of Fire Hydrants, Chapter 4.
- c. Flow tests shall be conducted in accordance with Manual M-17, Installation, Field Testing and Maintenance of Fire Hydrants, Chapter 6.

2. Fire service main piping: Inspection of exposed, annually; flow test every 5 years.
3. Fire service main piping strainers: Inspection and maintenance after each use.

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

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

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

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

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

1141 **507.6.1 Special inspections.** Austin Water Utility shall inspect private property to
1142 identify each existing private fire hydrant connected to the City's potable water
1143 distribution system. The owner of the property or the water service customer shall bear
1144 the costs and the responsibility to provide a flushing and maintenance program in
1145 accordance with Section 507.5.3 or to provide backflow prevention protection in
1146 accordance with Chapter 15-1 (*Cross-Connection Regulations*).

1147 Further modifications shall be made by, and at the expense of, the property owner or
1148 water service customer as necessary to correct any water supply deficiencies (flow or
1149 pressure) resulting from the installation of required backflow prevention protection
1150 assemblies.

1151 **508.1.6 Required Features.** The fire command center shall comply with NFPA 72 and
1152 shall contain the following features:

1153 Items 1 through 6 remain unchanged.

- 1154 7. Controls for unlocking stairway doors simultaneously. Stairways doors shall be
1155 physically unlocked by UL listed fire alarm system components. The unlocking
1156 means shall be a red light switch mounted on the wall in the command room with
1157 appropriate signage or other approved method.

1158 Items 8 through 13.3 remain unchanged.

1159 **13.4** Exit access stairway and exit stairway information that includes: number of exit
1160 access stairways and exit stairways in building, each exit access stairway and exit
1161 stairway designation and floors served; location where each exit access stairway
1162 and exit stairway discharges; interior exit stairways that are pressurized; exit
1163 stairways provided with emergency lighting; each exit stairway that allows reentry;
1164 exit stairways providing roof access; elevator information that includes: number of
1165 elevator banks, elevator bank designation, elevator car numbers and respective
1166 floors that they serve; location of elevator machine rooms, control rooms and
1167 control spaces; location of sky lobby; location of freight elevator banks; location of
1168 the Fire-fighters Service Access Elevator banks when applicable; and location of
1169 Occupant Evacuation Elevator banks when applicable.

1170 Items 14 through 18 remain unchanged.

1171 **510.1 Emergency responder communication coverage in buildings.** Approved in-
1172 building, two-way emergency responder communication coverage for emergency
1173 responders shall be provided in all new buildings. In-building, two-way emergency
1174 responder communication coverage within the building shall be based on the existing
1175 coverage levels of the public safety communication systems utilized by the jurisdiction,

1176 measured at the exterior of the building. This section shall not require improvement of
1177 the existing public safety communication systems.

1178 **Exceptions:** Where it is determined by the fire chief that the radio coverage system
1179 is not needed.

1180 **605.4 Fuel oil storage systems.** Fuel oil storage systems for building heating
1181 systems shall be installed and maintained in accordance with this code. Tanks and fuel-oil
1182 piping systems shall be installed in accordance with the Mechanical Code. Aboveground
1183 storage tanks and piping for generators shall comply Chapter 57.

1184
1185 **605.4.1.2 Fuel oil storage for stationary generators.** Aboveground outdoor fuel oil
1186 storage for stationary generators in quantities exceeding 660 gallons shall meet the
1187 following requirements.

- 1188
1189 (1) All storage must be located 50 ft. from a property line that is or can be built
1190 upon, including the opposite side of a public way.
1191 (2) For installations storing all fuel oil in UL 2085 Aboveground Storage Tank, the
1192 distance from a property line that is or can be built upon, including the opposite
1193 side of a public way shall be in accordance with NFPA 30.
1194 (3) All tank openings shall be above the tank liquid level
1195 (4) All installations exceeding an aggregate volume of 20,000 gallons (75708 L) shall
1196 be subject to public notification requirements of Section 5704.2.9.6.1, Exception 3.
1197

1198 **605.4.2 Fuel oil storage inside buildings.** Fuel oil storage inside buildings shall comply
1199 with Sections 605.4.2.2 through 605.4.2.8 and Chapter 57.

1200
1201 **605.4.2.1 Approval** Indoor fuel oil storage tanks shall be in accordance with UL 80, UL
1202 142 or UL 2085.

1203
1204 **605.4.2.2 Quantity limits.** One or more fuel oil storage tanks containing Class II or
1205 III *combustible liquid* shall be permitted in a building. The aggregate capacity of all tanks
1206 shall not exceed the following:

- 1207
1208 (1) 120 gallons of Class II combustible liquid in unsprinklered buildings where
1209 stored in a tank complying with UL 80, UL 142 or UL 2085.
1210 (2) 330 gallons of Class III combustible liquid in unsprinklered buildings where
1211 stored in a tank complying with UL 80, UL 142 or UL 2085.
1212 (3) 660 gallons (2498 L) in buildings equipped with an *automatic*
1213 *sprinkler* system in accordance with Section 903.3.1.1, where stored in a tank
1214 complying with UL 80, UL 142 or UL 2085.

- 1215 (4) 3,000 gallons (11 356 L) in a building equipped with an automatic sprinkler
1216 system in accordance with Section 9-3.1.1, when all of the following are met:
1217 (a) All storage is in protected aboveground tanks complying with UL 2085
1218 and Section 5704.2.9.7.
1219 (b) Tanks are listed as secondary containment tanks as required by UL
1220 2085 and the secondary containment is monitored visually or
1221 automatically.
1222 (c) All storage is located 6 stories or less above the lowest level of fire
1223 department access.
1224 (d) All piping for the tanks above the ground level have welded
1225 connections except where replaceable components are installed
1226

1227 **605.4.2.3 Restricted use and connection.** Tanks installed in accordance with Section
1228 605.4.2 shall be used only to supply fuel oil to fuel-burning equipment, generators or fire
1229 pumps installed in accordance with Section 605.4.2.5. Connections between tanks and
1230 equipment supplied by such tanks shall be made using closed piping systems In
1231 accordance with the Mechanical Code. Closed piping systems for generators shall comply
1232 with Chapter 57.
1233

1234 **605.4.2.6 Separation.** Rooms containing fuel oil tanks for internal combustion engines
1235 shall be separated from the remainder of the building by *fire barriers, horizontal*
1236 *assemblies*, or both, with a minimum 1-hour *fire-resistance rating* with 1-hour fire-
1237 protection-rated *opening protectives* constructed in accordance with the Building Code.
1238

1239 **[M] 609.2 Where required.** A Type I hood shall be installed at or above all commercial
1240 cooking appliances and domestic cooking appliances used for commercial purposes that
1241 produce grease vapors.

1242 **Exception:** A Type I hood shall not be required for an electric cooking appliance
1243 where an approved testing agency provides documentation that the appliance
1244 effluent contains less than 5 mg/m³ or less of grease when tested at an exhaust flow
1245 rate of 500 CFM (0.236 m³/s) in accordance with UL 710B. The appliance
1246 component controls and safety interlocks shall be inspected in accordance with the
1247 manufacturer installation instructions by qualified service personnel a minimum of
1248 once every 6 months and results of the inspection shall be available on the
1249 premises for review by the fire chief. When provided, automatic fire extinguishing
1250 systems shall be in accordance with Section 904.12.

1251 **611 Automated External Defibrillator (AED) in High-Rise Buildings**

1252 **611.1 Locations.** All buildings that have occupied floors located more than 75 feet (22
1253 860 mm) above the lowest level of fire department vehicle access shall have at least
1254 one Automated External Defibrillator (AED) located on each occupied level.

1255 **Exception:** The provisions of this section shall not apply to the following
1256 buildings and structures:

- 1257 (1) Airport traffic control towers in accordance with Section 412.2 of the
1258 Building Code.
- 1259 (2) Open parking garages in accordance with Section 406.5 of the Building
1260 Code.
- 1261 (3) Group A-5 occupancies in accordance Section 303.6 of the Building Code.
- 1262 (4) Group H-1, H-2 or H-3 in accordance with Section 415 of the Building
1263 Code.

1264 **611.2 Type.** All AEDs used in high-rise buildings must be of the type approved by the
1265 United States Food and Drug Administration (FDA).

1266 **611.3 Accessibility.** All AEDs must be available for public use.

- 1267 1. All AEDs shall be located in the elevator lobby unless otherwise approved
1268 by the fire chief.
- 1269 2. Standard industry accepted signs shall mark the location of each AED.

1270 **611.4 Maintenance.** All AEDs shall be maintained and tested according to
1271 manufacturer recommendations.

- 1272 1. Maintenance records shall be kept for a period of 1 year.
- 1273 2. Disposable supplies (Defibrillation pads) shall be replaced upon their
1274 expiration date or following use.

1275 **611.5 Medical Direction.** A licensed physician shall be involved to ensure
1276 compliance with the requirements of the Health and Safety Code, chapter 779,
1277 Automated External Defibrillators.

1278 **611.6 Training.** The person or entity that acquires an AED shall ensure that users are
1279 trained in cardiopulmonary resuscitation (CPR) and use of the automated external
1280 defibrillator (AED) in a course approved by the Texas Department of State Health
1281 Services

1282 **611.7 Notifying Emergency Medical Services Providers.** Upon acquisition of an
1283 AED, the person or entity shall notify the Fire Department AED Coordinator of the
1284 existence, location and type of AED.

1285 **901.6 Inspection, testing and maintenance.** Fire detection, alarm, and extinguishing
1286 systems, mechanical smoke exhaust systems, mechanical smoke control systems and
1287 smoke and heat vent systems shall be maintained in an operative condition at all times,
1288 and shall be replaced or repaired where defective. Non-required fire protection systems
1289 and equipment shall be inspected, tested and maintained or removed.

1290 **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

1291 **901.6.3 Records.** Records of all system inspections, tests and maintenance required by
1292 the referenced standards shall be maintained on the premises for a minimum of three
1293 years and shall be copied to the fire chief upon request.

1294 **903.2.1.6 Assembly occupancies on roofs.** Where an occupied roof has an assembly
1295 occupancy with an occupant load exceeding 100 for Group A-2 and 300 for other Group
1296 A occupancies, all floors between the occupied roof and the level of exit discharge shall
1297 be equipped with an automatic sprinkler system in accordance with Section 903.3.1.1.

1298 **Exception:** Open parking garages of Type I or II construction.

1299 **903.2.4.2 Group F-1 distilled spirits and beverages.** An automatic sprinkler system
1300 shall be provided throughout a Group F-1 fire area used for the manufacture or mixing of

1301 over 20% by volume (15.8% by weight) of ethyl alcohol distilled spirits in an aqueous
1302 solution in a volume exceeding the Maximum Allowable Quantity per Control Area.

1303 **[BG] 903.2.8.1.1 Group R-1 Bed and Breakfast occupancies.** Compliance with Section
1304 903.2.8 (*Group R*) is not required for a single structure Group R-1 Bed and Breakfast
1305 occupancy as defined in Section 25-2-781 (*Bed and Breakfast Residential Use Structures*
1306 *Classified*) when the owner resides within the Bed and Breakfast occupancy and provided
1307 that:

- 1308 (1) the structure is a detached single family home that was legally constructed
1309 and occupied as a single family residence prior to January 1, 2006;
- 1310 (2) the total number of sleeping rooms has not been increased after January 1,
1311 2006;
- 1312 (3) the residence is protected by a monitored residential style fire/security
1313 system with an appropriate automatic smoke detection system installed
1314 throughout the residence with occupant notification devices in accordance
1315 with Section 907.5; and
- 1316 (4) the residential style fire/security system shall be inspected, tested and
1317 maintained in accordance with Section 907.8.

1318 **903.3.1.1.1 Exempt locations.** When approved, automatic sprinkler protection shall not
1319 be required in the following rooms or areas where such rooms or areas are protected with
1320 an approved automatic fire detection system in accordance with Section 907.2 that will
1321 respond to visible or invisible particles of combustion. Sprinklers shall not be omitted
1322 from a room merely because it is damp, of fire-resistance-rated construction or contains
1323 electrical equipment.

- 1324 (1) Provision remains unchanged.
- 1325 (2) Transformer rooms owned and operated by an electric utility and separated from
1326 the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies
1327 having a fire-resistance rating of not less than two hours. The automatic fire
1328 detection system for exempt locations is not required.
- 1329 (3) Provision remains unchanged.
- 1330 (4) Provision remains unchanged.
- 1331 (5) Provision remains unchanged.

1332 **903.3.1.2.1 Balconies and decks.** Sprinkler protection shall be provided for exterior
1333 balconies, decks and ground floor patios of dwelling units and sleeping units where the
1334 either of the following conditions exists:

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- (1) the building is of Type V construction, or of Type III construction if the balcony or deck is framed with wood, provided there is a roof or deck above; or
- (2) exterior balconies, decks, and ground floor patios of dwelling units and sleeping units are constructed in accordance with Section 705.2.3.1, Exception 3 of the Building Code.

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

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

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

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

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

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

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

903.3.9 Flexible Sprinkler Hose Fittings. Flexible hoses used in automatic sprinkler systems shall be limited in length to a maximum of 6 feet. The extinguishing agent shall pass through a maximum of one 6-foot section before discharging from the sprinkler orifice (head). Approval of shop drawing submittals shall be required for all uses of flexible hose sprinkler piping, and where more than one flexible hose sprinkler drop is

1368 used in a remodel application, the adequacy of the water supply shall be verified by
1369 hydraulic calculations.

1370 **903.4.2 Alarms.** A listed fire alarm bell, located on the exterior of the building in an
1371 approved location, shall be connected to each automatic sprinkler system. The fire alarm
1372 bell shall be activated by water flow equivalent to the flow of a single sprinkler of the
1373 smallest orifice size installed in the system. Where a fire alarm system is installed,
1374 actuation of the automatic sprinkler system shall actuate the building fire alarm system.

1375 **904.9 Halon systems.** Halogenated extinguishing systems shall be installed, maintained,
1376 and periodically inspected and tested in accordance with NFPA 12A and their listing.
1377 The conditions of approval of all Halon automatic fire-extinguishing systems shall
1378 include (i) a demonstration of need acceptable to the fire chief detailing a critical need for
1379 the system such as a direct effect on life safety that cannot be adequately addressed by
1380 other types of suppression systems, and (ii) an approved method of testing that does not
1381 include the intentional release of Halon gas.

1382 **904.13 Commercial cooking systems.** The automatic fire-extinguishing system for
1383 commercial cooking systems shall be of a type recognized for protection of commercial
1384 cooking equipment and exhaust systems of the type and arrangement protected. Each pre-
1385 engineered automatic dry- and wet-chemical extinguishing system shall be tested in
1386 accordance with UL 300 and listed and labeled for its intended application. Other types
1387 of extinguishing systems shall be listed and labeled for specific use as protection for
1388 commercial cooking operations. The system shall be installed in accordance with this
1389 code, its listing and the manufacturer's installation instructions. Automatic fire
1390 suppression systems of the following types shall be installed in accordance with the
1391 referenced standard indicated, as follows:

- 1392 1. Carbon-dioxide extinguishing systems, NFPA 12.
- 1393 2. Automatic sprinkler system, NFPA 13.
- 1394 3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
- 1395 4. Dry-chemical extinguishing systems, NFPA 17.
- 1396 5. Wet-chemical extinguishing systems, NFPA 17A.

1397 **Exception 1:** Factory-built commercial cooking recirculating systems that are
1398 tested in accordance with UL 710B, and listed and installed in accordance with
1399 Section 304.1 of the Mechanical Code.

1400 **Exception 2:** With the concurrence of the building official, commercial cooking
1401 equipment used intermittently for periods which total less than 6 hours per week
1402 may be served by a Type II ventilation hood without fixed fire suppression. A
1403 portable fire extinguisher rated for commercial cooking applications shall be
1404 provided.

1405 **904.13 Domestic cooking systems facilities. in Group I-2 Condition 1.** Cooktops and
1406 ranges installed in the following occupancies shall be protected in accordance with
1407 Section 904.14.1:

- 1408 (1) In Group I-1 occupancies where domestic cooking facilities are installed in
1409 accordance with Section 420.9 of the Building Code.
- 1410 (2) In Group I-2 occupancies where domestic cooking facilities are installed in
1411 accordance with Section 407.2.7 of the Building Code

1412 **Exception:** I-2 Foster Care facilities providing care for 6 or fewer children 2.5
1413 years of age or younger.

1414 **905.1 General.** Standpipe systems shall be provided in new buildings and structures in
1415 accordance with this section. Fire hose threads used in connection with new fire
1416 standpipe systems shall be approved and shall be National Standard Hose Thread. Except
1417 as otherwise approved by the fire chief, existing standpipe fire hose threads shall be
1418 national standard hose thread. The location of fire department hose connections shall be
1419 approved. In buildings used for high-piled combustible storage, hose connections shall be
1420 in accordance with Chapter 32 (*High-Piled Combustible Storage*).

1421 **905.1.1 Hose.** With the concurrence of the building official, hoses need not be
1422 installed or maintained on standpipes of any class when the occupancy does not
1423 provide training in the use of standpipe hose and the employees, residents, or other
1424 regular occupants of the occupancy are trained or instructed to evacuate and
1425 evacuation drills are conducted at intervals agreed on by the owner or agent and
1426 the fire department.

1427 **905.4 Location of Class I standpipe hose connections.** Class I standpipe hose
1428 connections shall be provided in all of the following locations:

- 1429 (1) In every required interior exit stairway, a hose connection shall be provided
1430 for each story above and below grade plane. Hose connections shall be
1431 located at the intermediate floor landing unless otherwise approved by the
1432 fire chief.

1433 *Items 2 through 4 and item 6 remain unchanged*

- 1434 (5) Where the roof has a slope less than four units vertical in 12 units horizontal
1435 (33.3-percent slope), a hose connection shall be located to serve the roof or
1436 at the highest landing of a stairway with stair access to the roof provided in
1437 accordance with Section 1009.16. An additional hose connection shall be
1438 provided at the top of the most hydraulically remote standpipe for testing
1439 purposes.

1440 **905.5.3 Class II system hose.** If installed, the minimum diameter for standpipe hose
1441 shall be 1½-inch (38 mm) and such hose shall be listed for this service.

1442 **907.2 Where required, new buildings and structures.** An approved manual, automatic
1443 or manual and automatic fire alarm system installed in accordance with the provisions of
1444 this code and NFPA 72 shall be provided in new buildings and structures in accordance
1445 with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance
1446 with Section 907.6, unless other requirements are provided by another section of this
1447 code. The fire alarm control panel or a full function remote annunciator shall be installed
1448 at the main entrance for use by fire department personnel.

1449 A minimum of one manual fire alarm box shall be provided in an approved location to
1450 initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or
1451 water-flow detection devices. Where other sections of this code allow elimination of fire
1452 alarm boxes due to sprinklers, a single fire alarm box shall be installed. The manual fire
1453 alarm box is required to provide a means for fire watch personnel to initiate an alarm
1454 during a sprinkler system impairment event.

1455 **Exceptions:**

- 1456 1. The manual fire alarm box is not required for fire alarm systems dedicated to
1457 elevator recall control and supervisory service.
- 1458 2. Automatic heat detection required by this section shall not be required if
1459 automatic sprinkler protection installed in accordance with Section 903.3.1.1
1460 or 903.3.1.2 is provided and connected to the building fire alarm system.
- 1461 3. Where ambient conditions prohibit installation of automatic smoke
1462 detection, other approved automatic fire detection may be allowed.
- 1463 4. Duct smoke detectors installed in accordance with applicable mechanical
1464 code requirements for stand-alone operation, located in separate lease
1465 spaces, occupied or vacant, of shell buildings need not be connected to the
1466 fire alarm control panels (FACP) where the FACP is only required for the
1467 sprinkler monitoring system.

1468 **907.2.1.3 Electrical Shunt for Amplified Sound Conditions.** For venues with
1469 amplified music or sound systems, in Group A occupancies having an occupant load of
1470 300 or more, electrical shunts shall be provided to de-energize the music or sound
1471 systems upon alarm activation as necessary to demonstrate compliance with the audibility
1472 requirements of NFPA 72.

1473 **907.2.3.1 Common Areas within a Group E Day Care Occupancies.** Group E day care
1474 occupancies shall be provided with a fire alarm system in accordance with Section
1475 907.2.3 and shall be protected by smoke detectors installed in accordance with this
1476 section, the listing of the detectors and NFPA 72, and shall activate notification in
1477 accordance with Section 907.5. Detectors shall be placed throughout all corridors of all
1478 floors containing the day care facility, in lounges, and in each room occupied by children.

1479 **Exceptions:**

- 1480 1. A day care housed within and serving the students of a Group E occupancy,
1481 such as a public charter or private school, grades K-12, is permitted to
1482 comply with the alarm and detection requirements of Section 907.2.3.
- 1483 2. Group E day cares serving 12 or fewer children located in a state licensed or
1484 registered Child-Care Home, provided that the dwelling is protected with
1485 interconnected hard wired smoke alarms located as required by this section,
1486 907.2.3.1, and powered as required for a new home in accordance with the
1487 International Residential Code and NFPA 72 or battery operated in
1488 accordance with Section 1103.8.3 and maintained in accordance with
1489 Section 1103.8.4. When such day cares serve hearing impaired children,
1490 parents, or guardians, the smoke alarms shall be listed for both audible and
1491 visual alarm service.

1492 **907.2.6.4 Common Areas within Group I-4 Day Care Occupancies.** Group I-4 day
1493 care occupancies shall be protected by a fire alarm system which monitors smoke
1494 detectors installed in accordance with this section, the listing of the detectors and NFPA
1495 72 and activates notification devices in accordance with Section 907.5. Detectors shall
1496 be placed on each story in front of doors to the stairways throughout the corridors of all
1497 floors containing the day care facility, lounges and each room used by occupants
1498 receiving custodial care.

1499 **907.2.8.2 Automatic smoke detection system.** An automatic smoke detection system
1500 that activates the occupant notification system in accordance with Section 907.6 shall be
1501 installed throughout all group R-1 occupancies. Listed system-type automatic detectors
1502 shall be installed within interior corridors serving sleeping units and unseparated areas

1503 such as recreational rooms, laundry rooms, and similar areas served by interior corridors
1504 providing access to and egress from sleeping units.

1505 **Exception:** An automatic smoke detection system is not required in buildings that
1506 do not have interior corridors serving sleeping units, where each sleeping unit has a
1507 means of egress door opening directly to an exit or to an exterior exit access, an
1508 egress balcony or similar exit access that leads directly to an exit.

1509 **907.2.9 Group R-2.** Fire alarm systems and smoke alarms shall be installed in Group R-2
1510 occupancies as required in Sections 907.2.9.1 thru 907.2.9.2.

1511 **907.2.9.1 Manual and automatic fire alarm system.** A manual and automatic fire alarm
1512 system that activates the occupant notification system in accordance with Section 907.6
1513 shall be installed in Group R-2 occupancies where:

- 1514 1. Any dwelling unit or sleeping unit is located three or more stories above the
1515 lowest level of exit discharge;
- 1516 2. Any dwelling unit or sleeping unit is located more than one story below the
1517 highest level of exit discharge of exits serving the dwelling unit or sleeping
1518 unit; or
- 1519 3. The building contains more than 16 dwelling units or sleeping units.

1520 Listed system-type automatic detectors shall be installed within interior corridors serving
1521 as the primary access and egress for dwelling units, and unseparated common areas such
1522 as recreational room, laundry rooms and similar areas. Heat detection may be installed in
1523 lieu of smoke detection in areas that are not suitable for smoke detection in accordance
1524 with NFPA 72 (2013 edition), Sections 17.1.7, and 17.1.8.

1525 **Exceptions:**

- 1526 1. A fire alarm system is not required in buildings not more than two stories in
1527 height where all dwelling units or sleeping units and contiguous attic and
1528 crawl spaces are separated from each other and public or common areas by
1529 at least 1-hour fire partitions and each dwelling unit or sleeping unit has an
1530 exit directly to a public way, exit court or yard.
- 1531 2. Manual fire alarm boxes are not required throughout the building when all
1532 the following conditions are met:
 - 1533 2.1. The building is equipped throughout with an automatic sprinkler
1534 system in accordance with Section 903.3.1.1 or Section 903.3.1.2;

1535 2.2. The notification appliances will automatically activate throughout the
1536 notification zones upon sprinkler water flow; and

- 1537 3. A separate fire alarm system is not required in buildings that do not have
1538 interior corridors serving dwelling units and are protected by an approved
1539 automatic sprinkler system installed in accordance with 903.3.1.1 or
1540 903.3.1.2, provided that sprinkler system activation results in a local alarm
1541 designed to notify all occupants, and dwelling units have a means of egress
1542 door opening directly to an exterior exit access that leads directly to the
1543 exists or are served by open ended corridors as defined in Section 202 and
1544 designed in accordance with Section 1027.6, Exception 3.

1545 **907.5.2.1.1 Average sound pressure.** The audible alarm notification appliances shall
1546 provide a sound pressure level of 15 decibels (dBA) above the average ambient sound
1547 level or 5 dBA above the maximum sound level having a duration of not less than 60
1548 seconds, whichever is greater, in every occupiable space, including occupiable balconies
1549 within the building.

1550 **907.6.1 Wiring.** Wiring shall comply with the requirements of NFPA 70 and NFPA 72.
1551 Wireless protection systems utilizing radio-frequency transmitting devices shall comply
1552 with the special requirements for supervision of low-power wireless systems in NFPA 72.

1553 **907.6.1.1 Surge protection devices.** Surge protection devices (SPDs) for fire alarm
1554 circuits shall be in accordance with Sections 907.6.1.1 through 907.6.1.3.

1555 SPDs shall be listed for the repeated limiting of transient voltage surges on 60 Hertz
1556 power circuits not exceeding 1,000 Volts in accordance with UL 1449, *Standard for*
1557 *Surge Protective Devices*. SPDs for power-limited and non-power-limited fire alarm
1558 circuits shall be listed in accordance with UL 497B *Protectors for Data Communications*
1559 *and Fire Alarm Circuits*.

1560 **907.6.1.2 Circuits extending beyond one building.** Non-power-limited and power-
1561 limited signaling system circuits that extend beyond building and routed outdoors shall be
1562 provided with surge protection devices (SPDs) in accordance with Article 760.32 of the
1563 Electrical Code.

1564 **907.6.1.3 Fire Alarm Equipment.** An SPD shall be installed on the dedicated AC
1565 branch circuit connected to any piece of fire alarm equipment that requires a dedicated
1566 AC branch circuit.

1567 **907.6.1.4 Signaling Line Circuit (SLC) Protection.** Each SLC shall be provided with an
1568 SPD at the connection to the panel that controls the SLC.

1569 **907.6.2.1 Protection of fire alarm control unit and notification power supplies.** In
1570 areas that are not continuously occupied, a single smoke detector shall be provided at the
1571 location of each fire alarm control unit, notification appliance circuit power extenders,
1572 and supervising station transmitting equipment.

1573 **Exceptions:**

- 1574 1. Where ambient conditions prohibit installation of automatic smoke
1575 detection, when approved, a heat detector shall be permitted.

1576 **907.6.7 Annunciation and control.** The main fire alarm control panel or a full function
1577 remote annunciator shall be installed at the main entrance or at an approved location near
1578 the main entrance of buildings with fire alarm systems.

1579 **909.5 Smoke barrier construction.** Smoke barriers required for passive smoke control
1580 and a smoke control system using the pressurization method shall comply with Section
1581 709 of the International Building Code. Smoke barriers shall be constructed and sealed
1582 to limit leakage areas exclusive of protected openings. The maximum allowable leakage
1583 area shall be the aggregate area calculated using the following leakage area ratios:

- 1584 1. Exterior walls: $A/A_w = 0.00035$ (includes construction cracks, and cracks
1585 around windows and doors)
- 1586 2. Stairwell walls: $A/A_w = 0.00035$ (includes construction cracks but not cracks
1587 around windows or doors)
- 1588 3. Elevator shaft walls: $A/A_w = 0.0018$ (includes construction cracks but not
1589 cracks around doors)
- 1590 4. Floors: $A/A_F = 0.00017$ (includes construction cracks and gaps around
1591 penetrations)

1592 Where:

1593 A = Total leakage area, square feet (m^2)

1594 A_F = Unit floor or roof area of barrier, square feet (m^2)

1595 A_w = Unit wall area of barrier, square feet (m^2)

1596 The leakage area ratios shown do not include openings due to gaps around doors and
1597 operable windows. The total leakage area of the smoke barrier shall be determined in
1598 accordance with Section 909.5.1 and tested in accordance with Section 909.5.2.

1599 **909.10.2 Ducts.** Duct materials and joints shall be capable of withstanding the probable
1600 temperatures and pressures to which they are exposed as determined in accordance with

1601 Section 909.10. Shafts constructed of gypsum board or gypsum panel products are not
1602 allowed. Ducts shall be constructed and supported in accordance with the Mechanical
1603 Code. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance
1604 with nationally accepted practices. Measured leakage shall not exceed 5 percent of design
1605 flow. Results of such testing shall be a part of the documentation procedure. Ducts shall
1606 be supported directly from fire-resistance-rated structural elements of the building by
1607 substantial, noncombustible supports.

1608 **Exception:** Flexible connections, for the purpose of vibration isolation, complying
1609 with the Mechanical Code and that are constructed of approved fire-resistance-
1610 rated materials.

1611 **909.12.4 Automatic Control.** Where completely automatic control is required or used,
1612 the automatic-control sequences shall be initiated from an appropriately zoned automatic
1613 sprinkler system complying with Section 903.3.1.1, an automatic smoke detection system
1614 complying with 907.2.13, manual controls that are readily accessible to the fire
1615 department and any smoke detectors required by the engineering analysis.

1616 **909.18.8 Testing for smoke control.** Smoke control systems shall be tested by a special
1617 inspector.

1618 **909.20 Smokeproof enclosures.** Where required by Section 1023.12 of the International
1619 Building Code, a smokeproof enclosure shall be constructed in accordance with this
1620 section. A smokeproof enclosure shall consist of a pressurized interior exit stairway or
1621 ramp that is enclosed in accordance with the applicable provisions of Building Code
1622 Section 1023 and a pressurized vestibule meeting the requirements of this section. Where
1623 access to the roof is required, such access shall be from the smokeproof enclosure where
1624 a smokeproof enclosure is required.

1625 **909.20.1 Access.** Access to the stairway or ramp shall be by way of a vestibule. The
1626 minimum dimension of the vestibule shall be not less than the required width of the
1627 corridor leading to the vestibule but shall not have a width of less than 44 inches (1118
1628 mm) and shall not have a length of less than 72 inches (1829 mm) in the direction of
1629 egress travel.
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1631 **909.20.2.1 Door closers.** Doors in a smokeproof enclosure shall be self-closing
1632 and self-latching.
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1634 **909.20.2 Construction.** The smokeproof enclosure shall be separated from the remainder
1635 of the building by not less than 2-hour fire barriers constructed in accordance with
1636 Section 707 of the Building Code or horizontal assemblies constructed in accordance
1637 with Section 711 of the Building Code, or both. Openings are not permitted other than
1638

1639 the required means of egress doors. The vestibule shall be separated from the stairway or
1640 ramp by not less than 2-hour fire barriers constructed in accordance with Section 707 of
1641 the Building Code or horizontal assemblies constructed in accordance with Section 711
1642 of the Building Code, or both.

1643
1644 **909.20.3 Pressurized stair and entrance vestibule systems.** The provisions of Sections
1645 909.20.3.1 through 909.20.3.4 shall apply to smokeproof enclosures using a pressurized
1646 stair and pressurized entrance vestibule.

1647
1648 **909.20.3.1 Pressurization system.** Using fans with motor speeds controlled by variable-
1649 frequency drives, the stair and entrance vestibules shall be pressurized to accommodate
1650 two conditions:

- 1651 1. All stair and entrance vestibule doors closed.
- 1652 2. All stair and entrance vestibule doors closed plus all stair tower exterior
1653 ground floor level doors opened.

1654 Validation of the pressurization fan sizes shall include the analysis described in Fire Code
1655 Section 909.4 under both winter and summer conditions using the most recent ASHRAE
1656 climatic data tables for Austin, Texas. Use of algebraic equations for sizing of
1657 pressurization fans shall be acceptable only for simple idealized buildings that are served
1658 with only a stair and entrance vestibule pressurization system. Sizing of pressurization
1659 fans for buildings that include multiple types of mechanical smoke control systems,
1660 mixed-use occupancies or are very tall buildings shall be performed using computer
1661 modeling software.

1662
1663 **909.20.3.2 Pressure difference.** Under the two conditions listed in Section 909.20.3.1,
1664 the stairs shall be pressurized to not less than 0.05 inch of water (12.44 Pa) positive
1665 pressure relative to the entrance vestibule. The entrance vestibule shall be pressurized to
1666 not less than 0.05 inch of water (12.44 Pa) positive pressure relative to the fire floor.
1667 The pressure difference across the closed door from the stair to vestibule shall be
1668 balanced to within 10-percent of the pressure difference across the door from the
1669 vestibule to the building. The minimum allowable total pressure difference across the
1670 smokeproof enclosure shall be not less than 0.10 inch of water. The pressure difference
1671 across smokeproof enclosure doors shall not exceed 30 pounds (133 N) maximum force
1672 to begin opening the door.

1673
1674 **909.20.3.3 Dampened relief opening.** A relief vent sized at 5,000 cfm and an opening
1675 point of 0.35 inch of water (field adjustable) shall be provided at the upper portion of the
1676 stair shaft.

1678 **909.20.3.4 Pressurization systems.** Smokeproof enclosure pressurization systems shall
1679 be independent of other building ventilation systems. The equipment, control wiring,
1680 power wiring and ductwork shall comply with one of the following:
1681

- 1682 1. Equipment, control wiring, power wiring and ductwork shall be located
1683 exterior to the building and directly connected to the smokeproof enclosure or
1684 connected to the smokeproof enclosure by ductwork enclosed by not less than
1685 2-hour fire barriers constructed in accordance with Section 707 of the
1686 Building Code or horizontal assemblies constructed in accordance with
1687 Section 711 of the Building Code, or both.
1688
- 1689 2. Equipment, control wiring, power wiring and ductwork shall be located
1690 within the smokeproof enclosure with intake or exhaust directly from and to
1691 the outside or through ductwork enclosed by not less than 2-hour fire barriers
1692 constructed in accordance with Section 707 of the Building Code or
1693 horizontal assemblies constructed in accordance with Section 711 of the
1694 Building Code, or both.
1695
- 1696 3. Equipment, control wiring, power wiring and ductwork shall be located
1697 within the building if separated from the remainder of the building, including
1698 other mechanical equipment, by not less than 2-hour fire barriers constructed
1699 in accordance with Section 707 of the Building Code or horizontal assemblies
1700 constructed in accordance with Section 711 of the Building Code, or both.
1701

1702 **Exception:** Control wiring and power wiring located outside of a 2-hour
1703 fire barrier construction shall be protected using any one of the following
1704 methods:
1705

- 1706 1. Cables used for survivability of required critical circuits shall be listed in
1707 accordance with UL 2196 and shall have a fire-resistance rating of not
1708 less than 2 hours.
1709
- 1710 2. Where encased with not less than 2 inches (51 mm) of concrete.
1711

- 1712 3. Electrical circuit protective systems shall have a fire-resistance rating of
1713 not less than 2 hours. Electrical circuit protective systems shall be
1714 installed in accordance with their listing requirements.
1715

1716 **909.22.6 Components bypassing weekly test.** Where components of the smoke control
1717 system are bypassed by the preprogrammed weekly test required by Section 909.12.1,
1718 such components shall be tested annually. The system shall be tested under standby
1719 power conditions.

1720 **912.1 Installation.** Fire department connections shall be installed in accordance with the
1721 NFPA standard applicable to the system design and shall comply with Sections 912.1.1
1722 through 912.7.

1723 **912.1.1 Number of Hose Connections.** Fire department connections (FDC's) shall
1724 include a minimum of two 2½ inch (63.5 mm) female National Standard Hose Thread
1725 (NST) inlet connections. Where system design flow rates exceed 500 gpm (1,893 lpm), a
1726 minimum of one FDC inlet connection shall be installed for each 250 gpm (946 lpm) or
1727 portion thereof.

1728 **Exception:** A single 2½ inch FDC inlet shall be provided for NFPA 13R
1729 automatic sprinkler systems.

1730 **912.4 Access.** Immediate access to fire department connections shall be maintained at all
1731 times and without obstruction by fences, bushes, trees, walls or any other fixed or
1732 moveable object for a minimum of 3 feet (914 mm). Access to fire department
1733 connections shall be approved by the fire chief.

1734 **Exception:** Fences, where provided with an access gate equipped with a sign
1735 complying with the legend requirements of Section 912.5 and a means of
1736 emergency operation. Locks, if installed shall be openable by use of a fire
1737 department Knox Key. The gate and means of emergency operation shall be
1738 approved by the fire chief and maintained operational at all times.

1739 **912.4.1 Locking fire department connection caps.** The fire chief is authorized to
1740 require locking caps on fire department connections for water-based fire protection
1741 systems. The locking caps shall be manufactured by an approved manufacturer and used
1742 and maintained as designed.

1743 **912.4.1.2 Locking fire department connection caps in existing buildings or**
1744 **structures.** The fire chief is authorized to require locking caps on fire department
1745 connections (FDC) for water-based fire protection systems serving existing buildings
1746 where the fire department has observed obstructions placed in the FDC or where the FDC

1747 is missing caps. The locking caps shall be manufactured by an approved manufacturer
1748 and used and maintained as designed.

1749 **912.5.1 Fire Department Connection Placard – for existing structures.** In addition to
1750 the signage required in 912.5.1, an all-weather, permanent, system placard shall be placed
1751 in a visible location adjacent to the fire department connection on all structures with a fire
1752 protection system requiring pressures exceeding 150psi. The placard text shall be white
1753 reflective letters, 1 ½ inch minimum height, on either a red or black background. The
1754 placard shall contain the following information:

- 1755 1. Required system pressure at FDC inlet;
- 1756 2. Area of building served by FDC; and
- 1757 3. System PRV locations.

1758 **914.5.3 Compartment smoke control system.** Where compartmentation is required by
1759 Section 405.4 of the Building Code, each compartment shall have an independent smoke
1760 control system. The system shall be automatically activated and capable of manual
1761 operation from the firefighter’s smoke control panel in accordance with Section 907.2.18.

1762 **916.1 Gas detection systems.** Gas detection systems required by this code shall comply
1763 with Sections 916.2 through 916.11. When prescribed by other adopted standards, vapor
1764 detector systems shall comply with Section 916.

1765 Carbon monoxide detection systems shall comply with Section 915.

1766 Carbon dioxide gas detectors for insulated liquid carbon dioxide systems used in
1767 beverage dispensing application shall comply with Section 5307.3.

1768 **916.4 Power connections.** Gas detection systems supplies shall be in accordance with
1769 Section 907.6.2. Carbon dioxide gas detectors ~~or~~ for beverage dispensing applications
1770 shall be permitted to be cord connected to an unswitched receptacle using an approved
1771 restraining means that secures the plug to the receptacle.

1772 **916.5 Emergency and standby power.** Standby or emergency power shall be provided
1773 in accordance with Section 1203.2.7. The gas detection system shall initiate a supervisory
1774 signal at an approved location if the secondary power supply is interrupted.

1775 **916.6 Gas detector locations.** Gas detectors shall be installed ~~in~~ at approved storage or
1776 use locations where leaking gases are expected to accumulate. Gases or vapors that
1777 present a health hazard and are stored or used outside of gas rooms, gas cabinets or
1778 exhausted enclosures shall be located based on the vapor density of the gas @ NTP.

1785 **916.6.1 Gas detector selection.** Gas detectors shall selected be based on the physical
1786 hazard or health hazard of the hazardous material being measured.

1787
1788 **916.7 Gas sampling.** Gas sampling shall be performed continuously. Sample analysis
1789 shall be processed immediately after sampling, except as follows:

- 1790 1. For HPM gases, sample analysis shall be performed at intervals not
1791 exceeding 30 minutes.
- 1792 2. For highly toxic and toxic gases, sample analysis shall be performed at
1793 intervals not exceeding 5 minutes, in accordance with Section 6004.2.2.7.
- 1794 3. Where a less frequent or delayed sampling interval is approved.

1795
1796 **916.8 System activation.** A gas detection alarm shall be initiated where any detector
1797 detects a concentration of gas exceeding the following thresholds:

- 1798 1. For flammable gases, a gas concentration exceeding 25 percent of the lower
1799 flammability limit (LFL).
- 1800 2. For nonflammable gases, a gas concentration exceeding its Permissible
1801 Exposure Limit or 8-hour Time-Weighted Average, unless a different
1802 threshold is specified by the section of this code requiring a gas detection
1803 system.
- 1804 3. For simple asphyxiant gases, a gas concentration equal to or less than 19.5%
1805 volume of oxygen in air at NTP.

1806
1807 Upon activation of a gas detection alarm, alarm signals or other required responses shall
1808 be as specified by the section of this code requiring a gas detection system. Audible and
1809 visible alarm signals associated with a gas detection alarm shall be distinct from fire
1810 alarm and carbon monoxide alarm signals.

1811
1812 **916.10 Fire alarm system connections.** Gas detectors and gas detection systems
1813 connected to fire alarm systems shall be in accordance with NFPA 72.

1814
1815 **1001.1 Scope.** The provisions of this chapter shall specify the requirements of means of
1816 egress and shall apply to the design, installation of means of egress. For those
1817 requirements, refer to the Building Code. Refer to section 1032 of the Fire Code for
1818 maintenance of the means of egress.

1819 **1032.2 Reliability.** Required exit accesses, exits or exit discharges shall be continuously
1820 maintained free from obstructions or impediments to full instant use in the case of fire or
1821 other emergency when the areas served by such exits are occupied. Security devices,
1822 including drop bars, affecting means of egress shall require approval of the fire chief.
1823 Doors utilizing drop bars must have signage on the exterior of the door stating “Door
1824 equipped with drop bar”. Doors utilizing drop bars must have signage on the interior of

1825 the door stating “Drop bar must be removed when building is occupied”. When security
1826 devices are not in use, they must be secured in a manner where unauthorized use is
1827 prevented, such as:

- 1828 1. Locking bar in a keeper near the door.
- 1829 2. Securing bar in an office, locked closet, or similar location not accessible to the
1830 general public.

1831 Approval to use security devices outside the scope of this code may be revoked for
1832 failure to meet the letter and intent of these rules.

1833 **1102.1 Supplemental Definitions.** The definitions in the 2021 Fire Code are adopted as
1834 published except that supplemental definitions are added or amended. The following
1835 supplemental definitions are defined in Section 202.1.1. For the purposes of this chapter
1836 and as used elsewhere in this code, these definitions shall have the meanings shown in
1837 Section 202.1.1.

1838 **INDEPENDENT EXIT/INDEPENDENT STAIRWAY/INDEPENDENT EXIT** 1839 **RAMP.**

1840 **1103.4.1 Group I-2 and I-3 occupancies.** *This section is deleted in its entirety.*

1841 **1103.4.8 Occupancies other than Group I-2 and I-3.** *This section is deleted in its*
1842 *entirety.*

1843 **1103.4.9 Waste and linen chutes.** *This section is deleted in its entirety.*

1844 **1103.5.56 Group B ambulatory health care facilities.** An automatic sprinkler system
1845 shall be installed throughout all existing fire areas containing a Group B ambulatory
1846 health care facility occupancy when the facility is designed to allow either of the
1847 following conditions to exist at any time:

- 1848 1. Four or more care recipients are incapable of self-preservation.
- 1849 2. One or more care recipients who are incapable of self-preservation are
1850 located at other than the level of exit discharge serving such occupancy.

1851 **1103.6.1 Existing multiple story buildings.** Existing structures with occupied floors
1852 located more than 50 feet (15,240 mm) above or below the lowest level of fire
1853 department access shall be equipped with standpipes installed in accordance with Section
1854 905. The standpipes shall have an approved fire department connection with hose
1855 connections at each floor level above or below the lowest level of fire department access.
1856 The fire chief is authorized to approve the installation of manual standpipe systems to

1857 achieve compliance with this section where the system is demonstrated to be capable of
1858 providing the required hose flow and pressure at the highest standpipe outlet while the
1859 fire department is providing the water supply to the fire department connection (FDC) at
1860 a maximum FDC inlet pressure of 150 psi (10.3 bar).

1861 **1103.7.6 Group R-2.** An automatic or manual fire alarm system that activates the
1862 occupant notification system in accordance with Section 907.6 shall be installed in
1863 existing Group R-2 occupancies more than three stories in height or with more than 16
1864 dwelling or sleeping units. A plan for achieving compliance shall be completed by the
1865 owner within 12 months of the discovery of the deficiency. Compliance shall be
1866 achieved within 24 months of the discovery of the deficiency.

1867 **Exceptions:**

- 1868 1. A fire alarm system is not required in existing R-2 occupancies where each
1869 living unit is separated from other contiguous living units by fire barriers
1870 having a fire-resistance rating of not less than 0.75 hour, and where each
1871 living unit has either its own independent exit or its own independent
1872 stairway or ramp discharging at grade. When conditions warrant, the fire
1873 chief is authorized to accept an alternate minimum distance from the egress
1874 path to nearby doors and windows of apartments.
- 1875 2. A separate fire alarm system is not required in buildings that are equipped
1876 throughout with an approved supervised automatic sprinkler system installed
1877 in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm
1878 to notify all occupants.
- 1879 3. A fire alarm system is not required in buildings that do not have interior
1880 corridors serving dwelling units and are protected by an approved automatic
1881 sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2,
1882 provided that dwelling units either have a means of egress door opening
1883 directly to an exterior exit access that leads directly to the exits or are served
1884 by open-ended corridors designed in accordance with Section 1023.6,
1885 Exception 4.

1886 **1103.8.3 Power source.** In Group R occupancies, single-station smoke alarms shall
1887 receive their primary power from the building wiring provided that such wiring is served
1888 from a commercial source and shall be equipped with a battery backup. Smoke alarms
1889 with integral strobes that are not equipped with battery backup shall be connected to an
1890 emergency electrical system. Smoke alarms shall emit a signal when the batteries are
1891 low. Wiring shall be permanent and without a disconnecting switch other than as required
1892 for overcurrent protection. Listed single-station battery-operated smoke alarms installed

1893 or replaced shall be replaced with a non-replaceable, non-removable battery that can
1894 power the smoke alarm for a minimum of 10 years.

1895 **Exceptions:**

- 1896 1. Smoke alarms are permitted to be solely battery operated in existing
1897 buildings in locations where smoke alarms were not required to be powered
1898 by the building wiring under the code in effect at the time of construction
1899 and where no construction is taking place.
- 1900 2. Smoke alarms are permitted to be solely battery operated in buildings that
1901 are not served from a commercial power source.
- 1902 3. Smoke alarms are permitted to be solely battery operated in existing areas of
1903 buildings in locations where smoke alarms were not required to be powered
1904 by the building wiring under the code in effect at the time of construction
1905 and undergoing alterations or repairs that do not result in the removal of
1906 interior walls or ceiling finishes exposing the structure.

1907 **1103.8.4 Smoke Alarm Service Life.** Single-station battery-operated smoke alarms shall
1908 be replaced when the smoke alarm has been in service for ten years.

1909 **1103.9 Carbon monoxide alarms.** When interior work requiring a building permit is
1910 done in existing Group I-1, I-2, I-4, and R occupancies, they shall be equipped with
1911 carbon monoxide alarms in accordance with Section 915 in the unit(s) in which the work
1912 was performed, except that the carbon monoxide alarms shall be allowed to be solely
1913 battery operated.

1914 **1207.1.1 Scope.** Energy Storage System (ESS) having capacities exceeding the values in
1915 Table 1207.1.1 shall comply with this section.
1916
1917

**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.

1945 **1207.1.6.1 Fire Mitigation Personnel.** Where, in the opinion of the fire chief, it is
1946 essential for public safety that trained personnel be on-site to respond to possible ignition
1947 or re-ignition of a damaged ESS, the system owner, agent or lessee shall immediately
1948 dispatch one or more fire mitigation personnel to the premises, as required, at their
1949 expense. Fire mitigation personnel responsible for the preparation of the
1950 Decommissioning Plan and in accordance with Section 1207.2.3, shall be approved. The
1951 personnel shall remain on duty continuously until the damaged energy storage equipment
1952 is removed from the premises and located to an approved location, or earlier if the fire
1953 mitigation personnel can demonstrate to the fire chief that the public safety hazard is
1954 mitigated.

1955 **1207.1.6.3 Responsibility for Unauthorized Discharge.** An incident that requires fire
1956 remediation shall be treated as an Unauthorized Discharge. The person, firm or
1957 corporation responsible for an unauthorized discharge shall institute and complete all
1958 actions necessary to remedy the effects of such unauthorized discharge, whether sudden
1959 or gradual, at no cost to the jurisdiction, in accordance with Section 5003.3.1.5.

1960 **1207.1 General.** The provisions in this section are applicable to stationary and mobile
1961 energy storage systems (ESS). Battery-electric vehicles using technology identified in
1962 Table 1207.1.1 and marked with a label complying with 49 CFR 567.4 that certifies
1963 compliance with the Federal Motor Vehicle Safety Standards are subject to the Fire
1964 Remediation provisions in Section 1207.1.6, including responsibility for an Unauthorized
1965 Discharge.

1966 **1207.4.7 Toxic and highly toxic gases.** ESS that have the potential to release toxic and
1967 highly toxic gas during charging, discharging and normal use conditions are prohibited.

1968 **1207.5.3. Elevation.** Electrochemical ESS shall not be located in the following areas:

- 1969 1. Where the floor is located more than 20 feet above the lowest level of fire
1970 department vehicle access.
- 1971 2. Where the floor is located below the lowest level of exit discharge.

1972 **Exceptions**

- 1973 1. Lead-acid and nickel-cadmium battery systems less than 50 VAC and 60 VDC.

1974 **1207.5.4 Fire detection.** An approved automatic smoke detection system or radiant
1975 energy-sensing fire detection system complying with Section 907.2 shall be installed in
1976 rooms, indoor areas and walk-in units containing electrochemical ESS. An approved
1977 radiant energy-sensing fire detection system shall be installed to protect open parking
1978 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.

c. Not required for vented-type (i.e., flooded) lead-acid batteries.

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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.

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

2301.1 Scope. Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities, automobile wrecking yards, and repair garages shall be in accordance with this chapter and the Building Code, the

2021 Plumbing Code and the Mechanical Code. Such operations shall include both operations
2022 that are accessible to the public and private operations.

2023 **2304.1 Supervision of dispensing.** The dispensing of fuel at motor fuel-dispensing
2024 facilities shall be conducted by a qualified attendant who is a Texas Commission on
2025 Environmental Quality (TCEQ) certified UST Operator or shall be under the supervision
2026 of a qualified attendant who is a TCEQ certified UST Operator at all times or shall be in
2027 accordance with Section 2304.3.

2028 **2304.2 Attended self-service motor fuel-dispensing facilities.** Attended self-service
2029 motor fuel-dispensing facilities shall comply with Sections 2304.2.1 through 2304.2.5.
2030 Attended self-service motor fuel-dispensing facilities shall have at least one TCEQ
2031 certified UST Operator on duty while the facility is open for business. The attendant's
2032 primary function shall be to supervise, observe and control the dispensing of fuel. The
2033 attendant shall prevent the dispensing of fuel into containers that do not comply with
2034 Section 2304.4.1, control sources of ignition, give immediate attention to accidental spills
2035 or releases, and be prepared to use fire extinguishers.

2036 **2305.1.3 Tank fill connections.** Delivery of flammable liquids to tanks shall be made by
2037 means of approved liquid- and vapor-tight connections between the delivery hose and
2038 tank fill pipe. Where tanks are equipped with any type of vapor recovery system, all
2039 connections required to be made for the safe and proper functioning of the particular
2040 vapor recovery process shall be made. Such connections shall be made liquid and vapor
2041 tight and remain connected throughout the unloading process. Vapors shall not be
2042 discharged at grade level during delivery.

2043 **2305.2.1 Inspections.** Flammable and combustible liquid fuel dispensing and
2044 containment equipment shall be inspected at least once every sixty days in accordance
2045 with the regulations of the TCEQ in order to verify that it is in proper working order and
2046 not subject to leakage.

2047 **2305.3 Spill control.** Provisions shall be made to prevent liquids spilled during
2048 dispensing operations from flowing into buildings or off of the property on which the
2049 tank is located. Acceptable methods include, but shall not be limited to, grading
2050 driveways, raising doorsills, or other approved means.

2051 **2306.7.6.2 Testing.** The automatic closing function of automatic closing fuel delivery
2052 hose nozzles that dispense Class I, II, and III liquids shall be tested an annual basis.

2055 **Section 2312 AUTOMOBILE WRECKING YARDS**

2056 **2312.1 Scope.** Automobile wrecking yards shall comply with this section and the
2057 Building Code. Rubbish handling operations are addressed in Chapter 3 (*General*
2058 *Requirements*).

2059 **2312.2 Fire apparatus access roads.** Fire apparatus access roads shall be constructed
2060 and maintained throughout the site in accordance with Section 503.

2061 **2312.3 Welding and cutting.** Welding and cutting operations shall be in accordance
2062 with Chapter 35 (*Welding and Other Hot Work*).

2063 **2312.4 Housekeeping.** Combustible rubbish accumulated on the site shall be collected
2064 and stored in approved containers, rooms or vaults of noncombustible materials.
2065 Combustible vegetation, cut or uncut, shall be removed when determined by the chief to
2066 be a fire hazard.

2067 **2312.5 Fire protection.** Offices, storage buildings and vehicles used for site operations
2068 shall each be provided with at least one portable fire extinguisher with a rating of not less
2069 than 4-A:40-B:C. When required by the chief, additional portable fire extinguishers shall
2070 be provided in specific use areas in accordance with NFPA 10.

2071 **2312.6 Tires.** Tires shall be stored on racks in an approved manner or shall be piled in
2072 accordance with Chapter 34 (*Tire Rebuilding and Tire Storage*).

2073 **2312.7 Burning operations.** The burning of salvage vehicles and salvage or waste
2074 materials shall be in accordance with Chapter 3 (*General Requirements*) and regulations
2075 adopted by the Texas Commission on Environmental Quality.

2076 **2312.8 Motor Vehicle fluids and hazardous materials.**

2077 **2312.8.1 General.** The storage, use and handling of motor vehicle fluids and
2078 hazardous materials, such as those used to operate air bags and electrical systems,
2079 shall be in accordance with Section 2312 (*Automobile Wrecking Yards*), Section
2080 2311 (*Repair Garages*), Chapter 50 (*Hazardous Materials – General Provisions*),
2081 and Chapter 57 (*Flammable and Combustible Liquids*).

2082 **2312.8.2 Motor Vehicle Fluids.** Motor vehicle fluids shall be drained from
2083 salvage vehicles when such fluids are leaking. Storage and handling of motor
2084 vehicle fluids shall be done in an approved manner. Flammable and combustible
2085 liquids shall be stored and handled in accordance with Section 2311 (*Repair*
2086 *Garages*), Chapter 50 (*Hazardous Materials – General Provisions*), and Chapter
2087 57 (*Flammable and Combustible Liquids*).

2088 **2312.8.3 Mitigation for Vehicle Fluid Leaks.** Supplies or equipment capable of
2089 mitigating leaks from fuel tanks, crankcases, brake systems and transmissions shall be
2090 kept available on site. Single-use plugging, diking and absorbent materials shall be
2091 disposed of as hazardous waste and removed from the site in a manner approved by
2092 federal, state or local requirements.

2093 **2312.8.4 Air Bag Systems.** Removed air bag systems shall be handled and stored in
2094 accordance with Chapter 50 (*Hazardous Materials – General Provisions*).

2095 **2312.8.5 Lead-acid Batteries.** Lead-acid batteries shall be removed from salvage
2096 vehicles when such batteries are leaking. Lead-acid batteries that have been removed
2097 from vehicles shall be stored in an approved manner.

2098 **2312.8.6. Container Destruction.** Destruction of vehicle containers containing liquids or
2099 gases defined as flammable or combustible by this code is prohibited unless the
2100 containers are properly drained and the by-product stored or disposed of in accordance
2101 with Chapter 50 (*Hazardous Materials – General Provisions*), are filled with an inert
2102 material or purged, and at the time of destruction, have a vapor content less than 25
2103 percent of the by-product's lower explosive limit or an oxygen content of less than 10
2104 percent.

2105 **2403.5 Mixing and Blending Area.** Mixing, blending, and similar operations involving
2106 less than 10 gallons of Class I or Class II liquids, outside of a room approved for inside
2107 use, dispensing and mixing in accordance with 5705.3.7, must be performed in an area
2108 meeting the following requirements:

- 2109 1. All electrical service within 10 feet of the mixing operations must meet the
2110 Class I, Division II requirements of the Electrical Code.
- 2111 2. Ventilation for the area must be adequate to maintain flammable vapors
2112 under 25 percent of the lower explosive limit of the most volatile material in
2113 use. A line of site partition of one-hour construction must separate the
2114 mixing and blending operations from other spray finishing operations and
2115 flammable liquids storage.

2116 **2701.4 Existing buildings and existing fabrication areas.** Existing buildings and
2117 existing *fabrication areas* shall comply with this chapter.

2118 **Exceptions:**

- 2119 1. Transportation and handling of HPM in *corridors* and enclosures
2120 for *stairways* and *ramps* shall be allowed where in compliance with Section
2121 2705.3.2 and the Building Code.

- 2122
- 2123 2. The aggregate quantity of flammable, pyrophoric, toxic and highly toxic gases in a
2124 single fabrication area allowed in Table 2704.2.2.1 Footnote d. shall be limited to
2125 9000 cubic feet at NTP.

2126 **3103.5 Use periods.** Temporary tents, air supported, air-inflated or tensioned membrane
2127 structures of any size that are independent of and separated by at least 20 feet (6096 mm)
2128 from any building as specified in Section 2403.8.2 shall not be erected for a period of
2129 more than 180 days within a 12-month period on a single premises. Temporary tents, air
2130 supported, air-inflated or tensioned membrane structures of any size that are in any way
2131 attached to or within 20 feet (6096 mm) of a building shall not be issued a permit for a
2132 continuous period of more than 30 days or for a total of more than 90 days within a 12-
2133 month period on a single premises. Tents, air supported, air-inflated or tensioned
2134 membrane structures used for periods exceeding these limits shall be considered
2135 buildings or structures regulated by the Building Code and shall be required to be erected
2136 under a building permit and obtain a certificate of occupancy.

2137 **3103.8.2 Location.** Tents or membrane structures shall not be located within 20 feet
2138 (6096 mm) of lot lines, buildings, other tents or membrane structures, parked vehicles or
2139 internal combustion engines. For the purpose of determining required distances, support
2140 ropes and guy wires shall be considered as part of the temporary membrane structure, or
2141 tent.

2142 **Exceptions:**

- 2143 1. Separation distance between membrane structures and tents not used for
2144 cooking, is not required when the aggregate floor area does not exceed
2145 15,000 square feet (1394 m²).
- 2146 2. Membrane structures or tents need not be separated from buildings when all
2147 of the following conditions are met:
- 2148 2.1. The aggregate floor area of the membrane structure or tent shall not
2149 exceed 10,000 square feet (929 m²).
- 2150 2.2. The aggregate floor area and total height of the building and
2151 membrane structure or tent shall not exceed the allowable floor area
2152 or the allowable height, in stories or feet, including increases as
2153 indicated in the Building Code.
- 2154 2.3. Required means of egress are provided for both the building and the
2155 membrane structure or tent including travel distances.

2156 2.4. Fire apparatus access roads are provided in accordance with Section
2157 503.

2158 2.5 Occupant load is, for the purposes of complying with Chapters 9 and
2159 10 of the Building Code and Fire Code, based on the aggregate of the
2160 building floor area and the area under the membrane structure or tent.

2161 **5001.1.2 Purpose.** This chapter regulates the handling and storage of hazardous materials
2162 in aboveground storage facilities. Underground storage facilities are regulated by City
2163 Code Chapter 6-2 (*Hazardous Materials*).

2164 **5001.2 Material classification.** Hazardous materials are those chemicals or substances
2165 defined as such in this code. Definitions of hazardous materials shall apply to all
2166 hazardous materials, including those materials regulated elsewhere in this code.
2167 Appendix E contains descriptions and examples of materials included in hazard
2168 categories.

2169 **5001.2.3 Radioactive Materials.** Storage of radioactive materials shall be in
2170 accordance with the provisions set forth by the Texas Department of State Health
2171 Services, Radiation Control Program.

2172 **5001.5 Permits.** No person, firm, or corporation may store, dispense, use, or handle
2173 hazardous materials in more than the quantities named in Section 105.6 unless a valid
2174 permit has been issued under this chapter.

2175 When required by the fire chief, permit holders shall apply for approval to permanently
2176 close a storage, use or handling facility. Such application shall be submitted at least 30
2177 days prior to the termination of the storage, use or handling of hazardous materials. The
2178 fire chief is authorized to require that the application be accompanied by an approved
2179 facility closure plan in accordance with Section 5001.6.3.

2180 **5001.5.1 Hazardous Materials Management Plan.** Where required by the fire
2181 chief, an application for a permit shall include a Hazardous Materials Management
2182 Plan (HMMP). The HMMP shall include a facility site plan clearly designating the
2183 following:

- 2184 1. locations of and access to each storage and use area;
- 2185 2. maximum amount of each material stored or used in each area and the range
2186 of container sizes used;
- 2187 3. location of emergency equipment, including emergency isolation and
2188 mitigation valves and devices, and product conveying piping containing

- 2189 liquids or gases, other than utility-owned fuel gas lines and low-pressure fuel
2190 gas lines. The normal position of valves (on/off or open/closed) shall be
2191 provided for position indicating valves;
- 2192 4. location where liaison will meet emergency responders;
 - 2193 5. facility evacuation meeting point locations;
 - 2194 6. the general purpose of other areas within the building;
 - 2195 7. storage plan showing the intended storage arrangement, including the
2196 location and dimensions of aisles, the location of all aboveground and
2197 underground tanks and their appurtenances including, but not limited to,
2198 sumps, vaults, below-grade treatment systems and piping;
 - 2199 7. the hazard classes in each area;
 - 2200 8. locations of all control areas and Group H occupancies; and
 - 2201 9. emergency exits.

2202 The plans shall be legible and drawn approximately to scale. Separate distribution
2203 systems are allowed to be shown on separate pages.

2204 **5001.5.2 Hazardous Materials Inventory Statement (HMIS).** Where required by
2205 the fire chief, an application for a permit shall include an HMIS, such as Superfund
2206 Amendments and Reauthorization Act of 1986 (SARA) Title III, Tier II Report or
2207 other approved statement. The HMIS shall include the following information:

- 2208 1. manufacturer's name;
- 2209 2. chemical names, product or trade names, hazardous ingredients;
- 2210 3. United Nations (UN), North America (NA) and the Chemical Abstract
2211 Service (CAS) identification number (as applicable and as available);
- 2212 4. maximum quantities stored or used on-site at one time, including amounts in
2213 use-closed systems and amounts in use-open systems;
- 2214 5. location where stored or used;
- 2215 6. container sizes; and
- 2216 7. hazard classifications including the NFPA 704 rating of each chemical.

2217 **5001.7 Permit Procedure.** A hazardous materials permit shall be granted after:

- 2218 1. The applicant has filed with the Fire Department a completed hazardous
2219 materials permit application, in accordance with Section 5001.5 and this
2220 section; and
- 2221 2. The applicant has paid the application fee set by separate ordinance.

2222 **5001.7.1 Application.** A Hazardous Materials Permit Application shall include the
2223 following:

- 2224 1. general information including the name, address, and telephone number of
2225 the facility, the number of employees, hours of operation, and a name and
2226 emergency telephone number of the primary emergency contact person;
- 2227 2. an HMMP in accordance with Section 5001.5.1 which includes a facility site
2228 plan and a storage map, which shall identify the location of hazardous
2229 materials storage areas, and access to the materials; and
- 2230 3. a Hazardous Materials Inventory Statement (HMIS) in accordance with
2231 Section 5001.5.2.

2232 **5001.7.1.1** The facility site plan required in Section 5001.5.1 may be omitted
2233 from applications when, in the opinion of the fire chief, the plan will not
2234 provide additional information necessary to prevent an actual or potential
2235 hazard to the public health, safety, or welfare (including the health, safety, or
2236 welfare of firefighters) or to facilitate the fire department's response in the
2237 event of an emergency involving hazardous materials at the facility.

2238 **5001.7.2 Permit Required.** No person, firm, or corporation may install, repair,
2239 abandon, remove, place temporarily out of service, close, or substantially modify a
2240 storage facility or other area required to be permitted under this chapter without a
2241 permit. Section 5001.6.3 also applies.

2242 **Exceptions:**

- 2243 1. Routine maintenance.
- 2244 2. For emergency repair work performed on an emergency basis,
2245 application for permit shall be made within two working days of
2246 commencement of work.

- 2247 3. Businesses with an annual permit through the Development Services
2248 Department may perform work in accordance with the provisions of
2249 the Building Code and rules governing the facilities.

2250 Permit holders shall apply for approval to close bulk storage, use, or handling
2251 facility at least 30 days before the termination of the storage, use, or handling of
2252 hazardous materials. The applicant shall include any change or alteration of the
2253 facility closure plan filed under Section 5001.6.3 of this chapter. This 30 day
2254 period may be waived by the chief.

2255 **5001.7.3 Permit Effective Date.** The fire department shall grant or deny a permit
2256 application no later than 60 days after receipt of the completed application. The
2257 Department will provide written confirmation to the applicant demonstrating
2258 receipt of the application within 30 days of receipt of the application. If the
2259 department fails to grant or deny the permit within 60 days, the permit is
2260 considered to be issued and in effect. The fire department may inspect the business
2261 for satisfactory storage and use of hazardous materials. The operation of a facility
2262 under a permit issued before inspection constitutes the permission of the facility
2263 owner/operator for the chief to enter on the facility for the purpose of conducting
2264 the required inspection. Refusal to allow the inspection shall constitute a prima
2265 facie cause to revoke the permit under Section 105.6.

2266 **5001.7.4 Permit Term and Renewal.** A permit is granted for a term of three years
2267 from the date of issuance. Permits may be renewed every three years on the
2268 anniversary of permit issuance. At the discretion of the fire chief, a permit may be
2269 issued for a shorter period. The fee assessed for the permits shall be prorated for
2270 the appropriate time. If a permit is issued for a shorter period at the request of the
2271 applicant, an additional handling fee may be assessed, not to exceed the actual cost
2272 of clerical processing time.

2273 **5001.7.5 Annexation Procedure.** A facility brought under regulation by this
2274 chapter through annexation shall file a permit application with the fire department
2275 no later than 90 days after the effective date of annexation. The department shall
2276 grant or deny a permit application submitted under this subsection no later than six
2277 months after receipt of the completed application. If the department fails to grant
2278 or deny the permit within the period, the permit is considered to be issued and in
2279 effect. The fire department shall inspect the business for satisfactory storage or use
2280 of hazardous materials. The operation of a facility under a permit issued before
2281 inspection constitutes the permission of the facility owner/operator for the fire
2282 chief to enter on the facility for the purpose of conducting the required inspection.
2283 Refusal to allow the inspection shall constitute a prima facie cause to revoke the
2284 permit under Section 105.5 (*Revocation*).

2285 **5001.7.6 Permit Denial.** If the fire department denies a permit, the department
2286 shall notify the applicant in writing of the action. The notification must include a
2287 statement of the department's reasons for the action.

2288 **5001.7.7 Transfer.** A permit may be transferred to a new owner or operator of a
2289 business at the same location if the new owner or operator by letter to the fire
2290 department accepts responsibility for all obligations under this chapter at the time
2291 of the transfer of the business. All permit transfers are subject to the approval of
2292 the fire chief.

2293 **5001.7.8 Fees.** No permit may be granted, renewed or continued in effect until the
2294 fee set by separate ordinance has been paid. The fee shall be paid at the time an
2295 application is filed.

2296 **5001.7.9 Amendment.** Any information required to be submitted by this chapter
2297 shall be amended or supplemented no later than 30 days after the occurrence of an
2298 event that would render the information inaccurate. Unless the change(s) would
2299 affect the ability of emergency response personnel to safely respond to an
2300 emergency, an amendment or supplement is not required to record:

- 2301 1. minor changes in the quantities of hazardous materials stored;
- 2302 2. the temporary storage of hazardous materials at the facility; or
- 2303 3. a temporary change of hazardous materials storage location.

2304 **5002.1 Supplemental Definitions.** The definitions in the 2021 International Fire Code
2305 are adopted as published except that supplemental definitions are added or amended. The
2306 following supplemental definitions are defined in Section 202.1.1. For the purposes of
2307 this chapter and as used elsewhere in this code, these definitions shall have the meanings
2308 shown in Section 202.1.1.

2309 **PERMANENT STORAGE.**

2310 **PERMIT.**

2311 **PROCESS VESSEL.**

2312 **Table 5003.1.1(1) Footnote i**

- 2313 i. The maximum allowable quantity for fuel oil storage may be increased in
2314 accordance with Section 605.4.1.

2315 **5003.2.2.3 Emergency isolation.** Where gases or liquids having a hazard ranking of
2316 Health Class 3 or 4, Flammability Class 4 or Instability Class 3 or 4 in accordance with
2317 NFPA 704 are carried in pressurized piping above 15 pounds per square inch gauge
2318 (psig) (103 kPa), an approved means of leak detection and emergency shutoff or excess
2319 flow control shall be provided. Where the piping originates from within a hazardous
2320 material storage room or area, the excess flow control shall be located within the storage
2321 room or area. Where the piping originates from a bulk source, the excess flow control
2322 shall be located as close to the bulk source as practical.

2323 **Exceptions:**

- 2324 1. Piping for inlet connections designed to prevent backflow.
- 2325 2. Piping for pressure relief devices.

2326 **5003.2.4.3 Indoor Tank Filling.** Aboveground stationary tanks used for the indoor
2327 storage of hazardous materials shall be filled using one of the liquid transfer methods in
2328 Section 5005.1.10. The transfer of hazardous materials to indoor stationary tanks from
2329 tank vehicles shall be done from a liquid tight remote fill connection located outdoors.
2330 Fill connections shall be not more than five feet above the finished ground level, in an
2331 approved location in close proximity to the parked delivery vehicle. Connections shall be
2332 five feet away from building openings. Such connections shall be closed and liquid tight
2333 when not in use and shall be properly identified.

2334 **5003.3.1.5 Responsibility for cleanup.** The person, firm or corporation responsible for
2335 an unauthorized discharge shall institute and complete all actions necessary to remedy the
2336 effects of such unauthorized discharge, whether sudden or gradual, at no cost to the
2337 jurisdiction. When deemed necessary by the fire chief, cleanup may be initiated by the
2338 fire department or by an authorized individual or firm. Costs associated with such
2339 cleanup shall be borne by the owner, operator or other person responsible for the
2340 unauthorized discharge. Such costs shall include but shall not be limited to:

- 2341 1. chemical absorbent or adsorbent materials;
- 2342
- 2343 2. chemical neutralizers;
- 2344
- 2345 3. chemical resistant suits, gloves, or boots;
- 2346
- 2347 4. chemical containment drums;
- 2348
- 2349 5. vapor suppression foams;
- 2350

- 2351 6. containment tools;
2352
2353 7. chemical detection devices; and
2354
2355 8. personnel costs for incident related overtime activities.

2356 **5003.9.8 Separation of incompatible materials.** Incompatible materials in storage and
2357 storage of materials that are incompatible with materials in use shall be separated when
2358 the stored materials are in containers having a capacity of more than five pounds (2 kg) or
2359 0.5 gallon (2 L). Separation shall be accomplished by:

- 2360 1. Segregating incompatible materials in storage by a distance of not less than
2361 20 feet (6096 mm).

2362 **Exception:** Segregation of less than exempt amounts of corrosive and
2363 oxidizing materials, when such materials are necessary to maintain
2364 swimming pools for Group R occupancies, may be accomplished by a
2365 minimum separation of five feet (1524 mm).

- 2366 2. Isolating incompatible materials in storage by a noncombustible partition
2367 extending not less than 18 inches (457 mm) above and to the sides of the
2368 stored material.
- 2369 3. Storing liquid and solid materials in hazardous material storage cabinets.
- 2370 4. Storing compressed gases in gas cabinets or exhausted enclosures in
2371 accordance with Sections 5003.8.5 and 5003.8.6. Materials that are
2372 incompatible shall not be stored within the same cabinet or exhausted
2373 enclosure.

2374 **5004.2 Spill control and secondary containment for liquid and solid hazardous**
2375 **materials.** Tanks, rooms, buildings or areas used for the storage of liquid or solid
2376 hazardous materials shall be provided with spill control and secondary containment in
2377 accordance with Sections 5004.2.1 through 5004.2.3.

2378 **Exceptions:**

- 2379 1. Outdoor storage of containers on approved containment pallets in
2380 accordance with Section 5004.2.3.
- 2381 2. Liquids that are a gas at NTP.

2382 **5004.2.1 Spill control for hazardous material liquids.** Tanks, rooms, buildings or areas
2383 used for the storage of hazardous material liquids in excess of the lesser of the maximum
2384 allowable quantities established by Tables 5003.1.1(1) and 5003.1.1(2) or limits
2385 specifically set in Chapters 51 through 67 shall be provided with spill control to prevent
2386 the flow of liquids to adjoining areas. Floors in indoor locations and similar surfaces in
2387 outdoor locations shall be constructed to contain a spill from the largest single vessel by
2388 one of the following methods:

- 2389 1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in
2390 outdoor locations.
- 2391 2. Liquid-tight floors in indoor locations or similar areas in outdoor locations
2392 provided with liquid-tight raised or recessed sills or dikes.
- 2393 3. Sumps and collection systems.
- 2394 4. Other approved engineered systems.

2395 Except for surfacing, the floors, sills, dikes, sumps and collection systems shall be
2396 constructed of noncombustible material, and the liquid-tight seal shall be compatible with
2397 the material stored. When liquid-tight sills or dikes are provided, they are not required at
2398 perimeter openings having an open-grate trench across the opening that connects to an
2399 approved collection system.

2400 **5004.2.2 Secondary containment for hazardous material liquids and solids.** Where
2401 required by Table 5004.2.2 tanks, buildings, rooms or areas used for the storage of
2402 hazardous materials liquids or solids shall be provided with secondary containment in
2403 accordance with this section when the quantity of materials exceeds the maximum
2404 allowable quantity as established by Tables 5003.1.1(1) and 5003.1.1(2) or limits
2405 specifically set in Chapters 51 through 67.

2406 **5004.2.2.1 Containment and drainage methods.** The tank, building, room or area shall
2407 contain or drain the hazardous materials and fire protection water through the use of one
2408 of the following methods:

- 2409 1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in
2410 outdoor locations.
 - 2411 2. Liquid-tight floors in indoor locations or similar areas in outdoor locations
2412 provided with liquid-tight raised or recessed sills or dikes.
 - 2413 3. Sumps and collection systems.
- 2414
2415
2416

- 2417 4. Drainage systems leading to an approved location.
- 2418
- 2419 5. Other approved engineered systems.

2420 **5004.2.2.2 Incompatible materials.** Incompatible materials used in open systems shall
2421 be separated from each other in the secondary containment system. Incompatible
2422 materials are allowed to be combined when they have been rendered acceptable by an
2423 approved means for discharge into the public sewer.

2424 **5004.2.2.5 Monitoring.** An approved monitoring method shall be provided to detect
2425 hazardous materials in the secondary containment system. The monitoring method is
2426 allowed to be visual inspection of the primary or secondary containment, or other
2427 approved means. Where secondary containment is subject to the intrusion of water, a
2428 monitoring method for detecting water shall be provided. Where monitoring devices are
2429 provided, they shall be connected to an approved visual or audible alarm.

2430 Leak-detecting devices must be tested annually by the owner or occupant of the property
2431 on which the devices are located. Test results shall be maintained on the premises and be
2432 available to the fire chief on request.

2433 **5004.2.2.6 Drainage system design.** Drainage systems shall be in accordance with the
2434 Plumbing Code and all of the following:

- 2435 1. The slope of floors to drains in indoor locations, or similar areas in outdoor
2436 locations shall not be less than 1 percent.
- 2437 2. Drains from indoor storage areas shall be sized to carry the volume of the
2438 fire protection water as determined by the design density discharged from
2439 the automatic fire-extinguishing system over the minimum required system
2440 design area or area of the room or area in which the storage is located,
2441 whichever is smaller.
- 2442 3. Drains from outdoor storage areas shall be sized to carry the volume of the
2443 fire flow and the volume of a 24-hour rainfall as determined by a 25-year
2444 storm.
- 2445 4. Materials of construction for drainage systems shall be compatible with the
2446 materials stored.
- 2447 5. Incompatible materials used in open systems shall be separated from each
2448 other in the drainage system. Incompatible materials are allowed to be
2449 combined when they have been rendered acceptable by an approved means
2450 for discharge into the public sewer.

2451 6. Drains, including overflow from secondary containment, shall terminate in
2452 an approved location away from buildings, valves, means of egress, fire
2453 access roadways, adjoining property storm drains, waterways and critical
2454 environmental features (CEF's). Tanks shall be set back at 150 feet (45,720
2455 mm) from any recognized waterway or CEF.

2456 **5005.1.8.1** Gas cabinets, exhausted enclosures, and exhaust ducts with a cross sectional
2457 dimension of 10 inches or greater shall be internally sprinklered.

2458 **5306.2 Interior supply location.** Medical gases shall be stored in areas dedicated to the
2459 storage of such gases without other storage or uses. Where containers of medical gases in
2460 quantities greater than 300 ft³ (8.5 m³) and less than 1500 ft³ (42.5 m³) are located inside
2461 buildings, they shall be in a 1-hour exterior room, a 1-hour interior room or a gas cabinet
2462 in accordance with Section 5306.2.1, 5306.2.2, or 5306.2.3, respectively. Where
2463 containers of medical gases in excess of 1500 ft³ (42.5 m³) and less than 3,000 ft³ (85 m³)
2464 are located inside a building, they shall be protected by a local application fire sprinkler
2465 system in addition to the room or cabinet enclosure required by 5306.2.1, 5306.2.2 or
2466 5306.2.3. Rooms or areas where medical gases are stored or used in quantities exceeding
2467 3000 ft³ (85 m³) per control area shall be in accordance with the Building Code for high-
2468 hazard Group H occupancies.

2469 **5306.2.1 One-hour exterior rooms.** A 1-hour exterior room shall be a room or enclosure
2470 separated from the remainder of the building by fire barriers constructed in accordance
2471 with Section 707 of the Building Code or horizontal assemblies constructed in
2472 accordance with Section 711 of the Building Code, or both, with a fire-resistance rating
2473 of not less than 1 hour. Openings between the room or enclosure and interior spaces shall
2474 be self-closing smoke- and draft-control assemblies having a fire protection rating of not
2475 less than 1 hour. Rooms shall have at least one exterior wall that is provided with at least
2476 two vents. Each vent shall not be less than 72 square inches (0.046 m²) in area. One vent
2477 shall be within 12 inches (304.8 mm) of the floor and one shall be within 12 inches
2478 (304.8 mm) of the ceiling. Rooms containing medical gases in excess of 1500 ft³ (42.5
2479 m³) and less than 3,000 ft³ (85 m³) shall be provided with at least one local application
2480 automatic sprinkler to provide container cooling in case of fire.

2481 **5306.2.2 One-hour interior room.** When an exterior wall cannot be provided for the
2482 room, the room shall be exhausted through a duct to the exterior. Supply and exhaust
2483 ducts shall be enclosed in a 1-hour-rated shaft enclosure from the room to the exterior.
2484 Approved mechanical ventilation shall comply with the Mechanical Code and be
2485 provided at a minimum rate of 1 cubic foot per minute per square foot [0.00508 m³/(s ×
2486 m²)] of the area of the room. Rooms containing medical gases in excess of 1500 ft³ (42.5
2487 m³) and less than 3,000 ft³ (85 m³) shall be provided with at least one local application
2488 automatic sprinkler to provide container cooling in case of fire.

2489 **5306.2.3 Gas cabinets.** Gas cabinets shall be constructed in accordance with Section
2490 5003.8.6 and the following:

- 2491 1. The average velocity of ventilation at the face of access ports or windows
2492 shall not be less than 200 feet per minute (61 m/s) with a minimum of 150
2493 feet per minute (46 m/s) at any point of the access port or window.
- 2494 2. Connected to a ducted exhaust system with exhaust ducts enclosed in a 1-
2495 hour shaft enclosure to the exterior.
- 2496 3. Internally sprinklered when the quantity of medical gases exceeds 1500 ft³
2497 (42.5 m³).

2498 **5306.3 Exterior supply locations.** Oxidizer medical gas systems located on the exterior
2499 of a building shall be located in accordance with Section 6304.2.1.

2500 **5404.2 Outdoor storage.** Outdoor storage of corrosive materials shall be in accordance
2501 with Sections 5001, 5003, 5004 and this chapter.

2502 **Exception:** Up to 10 gallons of corrosive liquids may be stored outside of
2503 buildings without spill control, drainage, and secondary containment provided:

- 2504 1. The volume of individual containers is less than five gallons;
- 2505 2. The containers are constructed of metal or plastic; and
- 2506 3. The containers are located a minimum of 10 feet from property lines, exit
2507 openings, and storm water drains.

2508 **5404.2.1 Above-ground outside storage tanks.** Above-ground outside storage tanks of
2509 corrosive liquids shall be provided with secondary containment in accordance with
2510 Section 5004.2.2.

2511 **5504.3.1.1 Stationary Containers.** Stationary containers shall be separated from
2512 exposure hazards in accordance with the provisions applicable to the type of fluid
2513 contained and the minimum separation distance indicated in Table 5504.3.1.1. Storage of
2514 flammable cryogenic fluids, including liquefied natural gas (LNG), in aggregate
2515 quantities exceeding 15,000 gallons (56,781 L) water capacity is prohibited outside of a
2516 light industry (LI) zoning district except as provided in this section.

2517 The placement of aboveground or below ground containers of flammable cryogenic
2518 fluids, including liquefied natural gas (LNG), in aggregate quantities exceeding 15,000
2519 gallon water (56,781 L) capacity may be considered for other locations on a case-by-case
2520 basis provided zoning issues, secondary containment, and fire exposures are satisfactorily

2521 addressed including the identification of hazard ratings in accordance with Appendix F.
2522 Where the nearest off-site exposure(s) is(are) less than 500 feet (152.4 m) from the
2523 container(s) the placement may be permitted outside of a light industry (LI) zoning
2524 district by the fire chief only after notification of owners/occupants of properties within
2525 500 feet (152.4 m), requesting their input in order to assess the potential effect on the
2526 community. Notice to adjacent property owners shall be accomplished in accordance with
2527 the established procedures outlined in the Title 25 (*Land Development*) for notice of
2528 applications and administrative actions or decisions.

2529 **5601.2.4 Financial responsibility.** Before a permit is issued, the applicant shall submit
2530 proof of a public liability insurance policy, in the principal sum of \$5,000,000 for
2531 personal injuries and \$5,000,000 for property damage. The policy shall be current and
2532 shall name the City as an additional insured for the purpose of the payment of all
2533 damages to persons or property that arise from, or are caused by, the conduct of any act
2534 authorized by the permit upon which any judicial judgment results. The fire chief is
2535 authorized to specify a greater or lesser amount when, in his or her opinion, conditions at
2536 the location of use indicate a greater or lesser amount is required. Government entities
2537 shall be exempt from this bond requirement.
2538

2539 **Exception:** The insurance requirements for fireworks and pyrotechnics are as follows:

- 2540 • Aerial displays must carry a Certificate of Insurance for a minimum of \$1,000,000
2541 (bodily injury) and \$500,000 (property damage).
- 2542 • Non-aerial displays must carry a Certificate of Insurance for a minimum of
2543 \$500,000 (bodily injury) and \$300,000 (property damage). The City of Austin
2544 must be named as co-insured on the policy.
- 2545 • The *fire chief* is authorized to specify a greater or lesser amount when, in his or her
2546 opinion, conditions at the location of use indicate a greater or lesser amount is
2547 required.

2548 **5601.2.4.1 Blasting.** Before approval to do blasting is issued, the applicant for approval
2549 shall submit a certificate of insurance in such form, amount and coverage as determined
2550 by the legal department of the jurisdiction to be adequate in each case to indemnify the
2551 jurisdiction against any and all damages arising from permitted blasting.

2552 **5601.2.4.2 Fireworks display.**

2553 The permit holder shall furnish a certificate of insurance in an amount deemed adequate
2554 by the *fire chief* for the payment of all potential damages to a person or persons or to
2555 property by reason of the permitted display, and arising from any acts of the permit
2556 holder, the agent, employees or subcontractors.

2557 **5601.2.5 Permit application, review and fees.** Blasting permit application, review and
2558 fees shall be in accordance with Sections 5601.2.5.1, 56012.5.2 and 5601.2.5.3

2559 **5601.2.5.1 Permit application.** To obtain a permit, the blaster must file with the fire
2560 chief an application at least 120 days in advance of the proposed work date. Each
2561 application must describe the proposed work, the location of the work, and the other
2562 pertinent information as may be required.

2563 **5601.2.5.2 Permit review.** The fire chief may require written comments on each permit
2564 application from the various affected City departments. When in the opinion of the fire
2565 chief the departments have a valid objection to the issuance of a permit, no permit may
2566 be approved until the objection has been resolved to the satisfaction of the fire chief.

2567 **5601.2.5.3 Permit Fees.** Permits authorized by the provisions of Section 5601.2.5 may
2568 be issued only on payment of the appropriate fee, which is set by separate ordinance.
2569 City departments are not required to pay permit fees when engaged in the work
2570 described in this section.

2571 **5601.2.6 Permit Denial.** When in the opinion of the fire chief there is a substantial
2572 danger to life, health, or property in the immediate area exposed to the blasting,
2573 fireworks display or use of pyrotechnic materials for which a permit is being requested,
2574 the request shall be denied.

2575 **5601.4 Qualifications.** Persons in charge of magazines, blasting, fireworks display, or
2576 pyrotechnic special effect operations shall not be under the influence of alcohol or drugs
2577 that impair sensory or motor skills, shall not be less than 21 years of age and shall
2578 demonstrate knowledge of all safety precautions related to the storage, handling or use
2579 of *explosives*, *explosive materials* or fireworks. Persons actively involved in or
2580 responsible for blasting, fireworks displays, or the production of pyrotechnic special
2581 effects or displays shall meet all applicable federal, state and local license requirements
2582 for the work or activity being performed. Persons actively involved in blasting must
2583 also meet the following:

- 2584 1. have no felony convictions or two or more misdemeanors within two years
2585 preceding the date of application for a permit, containing intoxication as an
2586 element of the offense; and
- 2587 2. have no revoked, suspended, or terminated blaster's license, or any criminal
2588 action involving blasting activities pending in a federal, state, or municipal
2589 court of law.

2590 **5607.4 Restricted hours.** Surface-blasting operations shall only be conducted during
2591 daylight hours between sunrise and sunset. Other blasting shall be performed during

2592 daylight hours unless otherwise *approved* by the *fire chief*. Prior written approval is
2593 required for blasting to be conducted on Sunday, legal holidays, or between the hours of
2594 5:00 p.m. and 8:00 a.m. on other days.

2595 **5607.5 Notification.** All blasting operations must be preceded by a pre-blast notification
2596 to the owners or managers of all affected premises. The range of the pre-blast
2597 notification shall be at the discretion of the blaster and as required by the permit.
2598 Where blasting is being conducted in the vicinity of utility lines or rights-of-way, the
2599 blaster shall notify the appropriate representatives of the Austin Utility Location and
2600 Coordination Committee and the Austin Transportation Department not less than 120
2601 days in advance of blasting, specifying the location and intended time of such blasting.
2602 Verbal notices shall be confirmed with written notice.

2603 **Exception:** In an emergency situation, the time limit shall not apply
2604 where *approved*.

2605 **5607.11.1** Approved blasting machines must be used. All other equipment is prohibited.

2606 **5607.12.1** Only blasting trunk wire of 18 gauge minimum may be used while
2607 conducting blasting operations under permits.

2608 **5607.14 Post-blast procedures.** After the blast, the following procedures shall be
2609 observed.

- 2610 1. Persons shall not return to the blast area until allowed to do so by the fire chief
2611 upon a recommendation from the blaster in charge.
- 2612 2. The blaster shall allow sufficient time for smoke and fumes to dissipate and for
2613 dust to settle before returning to or approaching the blast area.
- 2614 3. The blaster shall inspect the entire blast site for misfires before allowing other
2615 personnel to return to the blast area.

2616 **5607.16 Particle velocity limits and air overpressures.** Particle velocities and air
2617 overpressures shall be in accordance with this section and Chapter 11 of NFPA 495.
2618 Particle velocities, frequencies, or air overpressure in excess of the prescribed limits
2619 shall require the immediate suspension of blasting and initiation of corrective measures.
2620 The fire chief may grant or require deviations from these limits as required to
2621 adequately protect the public safety.

2622 **5607.16.1 Particle velocity.** Particle velocities shall not exceed 1.7 inches per second.
2623 Monitoring of particle velocities for all blasting operations shall be carried out as

2624 required in this section. When particle velocities exceed 0.5 inches per second, blast
2625 frequencies shall also be monitored.

2626 **5607.16.2 Air overpressures.** Air overpressures shall not exceed the value specified
2627 in Chapter 11 of NFPA 495.

2628 **5607.17 Blast Monitoring.** A blast monitor, such as a seismic blast recording machine,
2629 is required during all blasting operations for which a permit is issued by the City.
2630 Particle velocity shall be recorded in three mutually perpendicular axes. The maximum
2631 particle velocity shall be the maximum of any of the three axes. Blast monitoring shall
2632 be performed by an independent company, experienced in planning and implementing
2633 blast monitoring programs. The blast monitoring company shall prepare monitoring
2634 plans and shall be responsible for ensuring that the monitor sensors are placed properly
2635 and that the measuring and recording instruments function properly. The monitoring
2636 company shall prepare blast monitoring reports. All monitoring reports shall carry the
2637 seal of an engineer licensed in the State of Texas and shall be retained on file by the
2638 permit holder. These reports shall be submitted to the Fire Department.

2639 **Exception:** When, in the opinion of the fire chief, the damage to structures or
2640 buildings due to blasting operations is unlikely, the requirements of this
2641 subsection may be waived.

2642 **5607.18 Conditions of Approval.** The fire chief shall set other conditions for the
2643 approval of the application that are necessary to adequately protect public health and
2644 safety. These conditions may include, but are not limited to, reduced allowable particle
2645 velocities, reduced allowable air overpressure, additional monitoring, increased
2646 insurance protection, hours of operation, type and amount of explosives used,
2647 evacuations or shelter-in-place for occupants in adjacent structures, and engineered
2648 blasting plans.

2649 **5703.4 Spill Control, Drainage Control, and Secondary Containment.**

2650 **5703.4.1 General.** Tanks, buildings, rooms, and areas used for storage, dispensing,
2651 use, mixing, or handling of Class I, II, and III-A liquids shall be provided with a
2652 means to control spillage and to contain or drain spillage and fire protection water
2653 as set forth in Section 5004.2.

2654 **Exception:** Up to 10 gallons of Class I, II, and III liquids may be stored
2655 outside of buildings without spill control, drainage, and secondary
2656 containment, provided:

- 2657 1. The volume of individual containers is less than 5 gallons;
- 2658 2. The containers are constructed of metal or plastic; and,

- 2659 3. The containers are located a minimum of 10 feet from property
2660 lines, exit openings, and storm water drains.

2661 **5703.4.2 Spill Control.** When spill control is required, floors of rooms, buildings
2662 or areas containing flammable or combustible liquids must be sloped; constructed
2663 with sumps and collection systems; recessed a minimum of four inches (101.6
2664 mm); provided with a liquid-tight, raised sill to a minimum height of four inches
2665 (101.6 mm) to prevent the flow of liquids to adjoining areas; or otherwise
2666 constructed to contain a spill from the largest single container or tank. The floor
2667 and sill must be constructed of noncombustible material and must be liquid-tight.
2668 The liquid-tight seal must be compatible with the material being stored. When
2669 raised sills are provided, they are not required at perimeter openings that are
2670 provided with an open-grate trench across the opening that connects to an
2671 approved drainage control system.

2672 **5703.4.3 Drainage Control.**

2673 **5703.4.3.1 General.** When drainage control is required, rooms, buildings or
2674 areas must be provided with a drainage system to direct the flow of liquids
2675 to an approved location or treatment system, or be provided with secondary
2676 containment for the flammable and combustible liquids and fire protection
2677 water.

2678 **5703.4.3.2 Sizing.** Drains shall be sized to carry the sprinkler system design
2679 flow rate over the sprinkler system design area. The slope of drains may not
2680 be less than one percent. The drains must be liquid-tight. Materials used to
2681 construct drainage systems must be compatible with the stored materials.

2682 **5703.4.3.3 Incompatible Materials.** Incompatible materials must be
2683 separated from each other in drainage systems.

2684 **Exception:** Incompatible materials are allowed to be combined when
2685 they have been rendered acceptable for discharge by an approved
2686 means into the public sewer.

2687 **5703.4.3.4 Neutralizers and Treatment Systems.** Drainage systems for
2688 spillage and fire-protection water which are directed to a neutralizer or
2689 treatment system shall comply with the following:

- 2690 1. The system must be designed to handle the maximum worst-case spill
2691 from the single largest container plus the volume of fire protection
2692 water from the system over the minimum design area for a water flow
2693 duration of 20 minutes; and

- 2694 2. Overflow control from the neutralizer or treatment system must direct
2695 liquid leakage and fire protection water to a safe location away from
2696 buildings, material, or fire-protection control valves, means of egress,
2697 adjoining properties or fire apparatus access roadways.

2698 **5703.4.4 Secondary Containment.** When secondary containment is required:

- 2699 1. Drains must be directed to a containment system or other location designed
2700 as secondary containment for flammable or combustible liquids and fire-
2701 protection water; or
- 2702 2. The room, building or area must be designed to provide secondary
2703 containment of flammable and combustible liquids and fire-protection water
2704 through the use of recessed floors or liquid-tight, raised sills.

2705 **5703.4.4.1 Sizing of Indoor Containment.** Secondary containment must be
2706 designed to retain the spill from the largest single container plus the design flow
2707 rate of the sprinkler system for the area of the room or area in which the storage
2708 is located or the sprinkler system design area, whichever is smaller. The
2709 containment capacity must be capable of containing the water flow from a
2710 discharge having a duration of 20 minutes.

2711 **5703.4.4.2 Sizing of Outdoor Containment.** If the storage area is open to
2712 rainfall, the secondary containment shall be designed to accommodate the
2713 volume of the largest container or tank plus a 24-hour rainfall as determined by
2714 a 25-year storm.

2715 **Exception:** Listed tanks constructed with an integral method of secondary
2716 containment.

2717 **5703.4.4.3 Construction of Secondary Containment.** The floor and walls of
2718 the secondary containment must be constructed of noncombustible material and
2719 must be liquid-tight. The liquid-tight seal must be compatible with the material
2720 being stored. In addition to these requirements, walls must be constructed in
2721 accordance with Section 5004.2.

2722 **5703.4.4.4 Overflow.** Overflow control from the secondary containment system
2723 must direct liquid leakage and fire-protection water to a safe location away
2724 from buildings, material or fire-protection control valves, means of egress, fire
2725 apparatus access roadways, adjoining properties, storm drains, waterways, and
2726 critical environmental features (CEFs). Tanks shall be set back at least 150 feet
2727 from any recognized waterway or CEF.

2728 **5703.4.4.5 Monitoring and Leak Detection.**

2729 **5703.4.4.5.1 Method.** A monitoring method capable of detecting hazardous
2730 material leakage from the primary containment into the secondary
2731 containment must be provided. When visual inspection of the primary
2732 containment is not practical, other approved means of monitoring are
2733 allowed. When double walled tanks are used to provide secondary
2734 containment for Class I and II liquids, automatic leak detection devices must
2735 be provided. When secondary containment is subject to the intrusion of
2736 water, a monitoring method for detecting the water must be provided. When
2737 monitoring devices are provided, they must be connected to distinct visual or
2738 audible alarms.

2739 **5703.4.4.5.2 Testing.** Leak-detecting devices shall be tested annually by the
2740 owner or occupant of the property on which they were located. Test results
2741 shall be maintained on the premises and available to the fire chief on
2742 request.

2743 **5704.2.9.6.1 Locations where above-ground tanks are prohibited.** Storage of Class I
2744 and II liquids in above-ground tanks outside of buildings is prohibited outside of a major
2745 industry (MI) district.

2746 **Exceptions:**

- 2747 1. The storage of up to 12,000 gallons (45,425 L) of Class I and II liquids
2748 within the limits defined as Light Industrial is allowable provided the tank is
2749 listed and labeled “protected aboveground tank,” and is installed in
2750 accordance with Section 5704.2.9.7 and its listing. The product shall be a
2751 noncorrosive, nonreactive liquid having a specific gravity equal to or less
2752 than one.
- 2753 2. The storage of up to 1,100 gallons (4,164 L) of Class I and II liquids at
2754 construction sites is allowed provided the tank is listed, labeled, and installed
2755 in accordance with its listing.
- 2756 3. The placement of aboveground storage tanks at other locations or of greater
2757 capacity may be considered on a case-by-case basis provided zoning issues,
2758 secondary containment, and fire exposures are satisfactorily addressed. The
2759 placement of aboveground tanks of Class I and II liquids in aggregate
2760 quantities exceeding 12,000 gallons (45,425 L) water capacity, where the
2761 nearest off-site exposure(s) is (are) less than 500 feet (152.4 m) from the
2762 tank(s), may be permitted by the fire chief only after notification of
2763 owners/occupants of properties within 500 feet (152.4 m) requesting their
2764 input in order to assess the potential effect on the community. Notice to
2765 adjacent property owners shall be accomplished in accordance with the

2766 established procedures outlined in the Title 25 (*Land Development*) for
2767 notice of applications and administrative actions or decisions.

2768 **5704.2.10 Drainage and diking.** The area surrounding a tank or group of tanks shall be
2769 provided with drainage control or shall be diked to prevent accidental discharge of liquid
2770 from endangering adjacent tanks, adjoining property, reaching waterways, or CEF's.

2771 **Exceptions:**

- 2772 1. For tank installations having an aggregate volume of less than 50,000
2773 gallons, the fire chief is authorized to alter or waive these requirements
2774 based on a technical report which demonstrates that such tank or group of
2775 tanks does not constitute a hazard to other tanks, waterways, CEF's, or
2776 adjoining property, after consideration of special features such as
2777 topographical conditions, nature of occupancy and proximity to buildings on
2778 the same or adjacent property, capacity, and construction of proposed tanks
2779 and character of liquids to be stored, and nature and quantity of private and
2780 public fire protection provided.
- 2781 2. Drainage control and diking is not required for listed secondary containment
2782 tanks.

2783 **5704.2.10.1 Volumetric capacity.** The volumetric capacity of the diked area shall
2784 not be less than the greatest amount of liquid that can be released from the largest
2785 tank within the diked area plus a 24-hour rainfall as determined by a 25-year storm.
2786 The capacity of the diked area enclosing more than one tank shall be calculated by
2787 deducting the volume of the tanks other than the largest tank below the height of
2788 the dike.

2789 **5704.2.11.1 Location.** Flammable and combustible liquid storage tanks located
2790 underground shall be in accordance with all of the following:

- 2791 1. Tanks shall be located with respect to existing foundations and supports such
2792 that the loads carried by the latter cannot be transmitted to any portion of the
2793 area excavated for the installation of the tank.
- 2794 2. The distance from any part of an excavated area intended for the installation
2795 of a tank for storing liquids to the nearest wall of a basement, pit, cellar, or
2796 lot line shall not be less than five feet (1523 mm).
- 2797 3. A minimum distance of two feet (610 mm), shell to shell, shall be
2798 maintained between underground tanks.

2799 **5704.2.11.2 Depth and cover.** Excavation for underground storage tanks shall be
2800 made with due care to avoid undermining of foundations of existing structures.

2801 Underground tanks shall be set on firm foundations and surrounded with at least
2802 two feet (610 mm) of noncorrosive inert material, such as clean sand or pea gravel
2803 well tamped in place or in accordance with the manufacturer's installation
2804 instructions. Tanks shall be covered with a minimum of two feet (610 mm) of earth
2805 or shall be covered by not less than one foot (305 mm) of earth, on top of which
2806 shall be placed a slab of reinforced concrete not less than four inches (102 mm)
2807 thick.

2808 When underground tanks are, or are likely to be, subjected to traffic, they shall be
2809 protected against damage from vehicles passing over them by at least three feet
2810 (915 mm) of earth cover, or 18 inches (457 mm) of well-tamped earth plus six
2811 inches (152 mm) of reinforced concrete, or eight inches (203 mm) of asphaltic
2812 concrete. When asphaltic or reinforced concrete paving is used as part of the
2813 protection, it shall extend at least two feet (610 mm) horizontally beyond the
2814 outline of the tank in all directions.

2815 For tanks built in accordance with Section 5704.2.7, the burial depth and the height
2816 of the vent line shall be such that the static head imposed at the bottom of the tank
2817 will not exceed 10 psig (68.9 kPa) if the fill or vent pipe is filled with liquid.

2818 If the depth of cover exceeds seven feet (2134 mm) or the manufacturer's
2819 specifications, reinforcements shall be provided in accordance with the tank
2820 manufacturer's recommendations.

2821 Nonmetallic underground tanks shall be installed in accordance with the
2822 manufacturer's instructions. The minimum depth of cover shall be as specified
2823 above in this section.

2824 **5704.2.11.4.1 Inventory control.** Daily inventory records shall be maintained for
2825 underground storage tank systems. Fill and withdrawal amounts shall be reconciled
2826 monthly.

2827 **5803.1.1 Special limitations for indoor storage and use.** Flammable gases shall not be
2828 stored or used in Group A, E, I or R occupancies or in offices in Group B
2829 occupancies.

2830 **Exceptions.**

- 2831 1. Cylinders of nonliquefied compressed gases not exceeding a capacity of
2832 250 cubic feet (7.08 m³) or liquefied gases not exceeding a capacity of 40
2833 pounds (18 kg) each at normal temperature and pressure (NTP) used for
2834 maintenance purposes, patient care or operation of equipment.
- 2835 2. Food service operations in accordance with Section 6103.2.1.7.

2836 **6003.1.4.1 Floors.** In addition to the requirements set forth in Section 5004.12, floors of
2837 storage shall be of liquid-tight construction.

2838 **6101.2 Permits.** The requirements in this chapter for permits to store or use hazardous
2839 materials within the City are applicable to a permit to store, use, handle, or dispense LP-
2840 gas, or to install or maintain an LP-gas container.

2841 Permits shall be required as set forth in Section 105.6. As noted in Section 105.6.21.7 of
2842 these amendments, a permit is not required for non-commercial use at a single family
2843 residence. However, the information concerning location and exposures, as outlined in
2844 the Fire Protection Criteria Manual, shall be provided to the Fire Department by the
2845 owner of the residence.

2846 Where a single container is over 2,000 gallon (7571 L) or the aggregate capacity of
2847 containers is over 4,000 gallons (15,142 L) water capacity, the installer shall submit plans
2848 for the installation.

2849 Distributors shall not fill an LP-gas container for which a permit is required unless a
2850 permit for installation has been issued for that location by the fire chief.

2851 **6103.2.1.2 Construction and temporary heating.** Portable LP-gas containers are
2852 allowed to be used in buildings or areas of buildings undergoing construction or for
2853 temporary heating as set forth in Sections 6.20.4, 6.20.5 and 6.20.8 of NFPA 58.

2854 **6103.2.2 Industrial vehicles and floor maintenance machines.** LP-gas containers on
2855 industrial vehicles and floor maintenance machines shall comply with Sections 11.14 and
2856 11.15 of NFPA 58.

2857 **6104.2 Maximum capacity within established limits.** The storage of LP-gas in
2858 aggregate quantities greater than 2000 gallons (7571 L) water capacity is not permitted
2859 within the city. The storage of LP-gas in aboveground or below ground containers,
2860 greater than 24 gallons (91 L) water capacity and up to a maximum of 2000 gallons (7571
2861 L) water capacity, is prohibited outside of Major Industry (MI) or Light Industry (LI)
2862 districts. Location of containers within a Light Industry zoning district may be approved
2863 by the fire chief, subject to zoning and fire exposure concerns being satisfactorily
2864 addressed.

2865 **Exceptions:**

- 2866 1. The fire chief may approve the placement of aboveground or below ground
2867 containers for single family residential, multi-family residential or
2868 commercial occupancies on a case-by-case basis, provided the container and
2869 appurtenances are listed and installed in accordance with that listing, and
2870 issues such as zoning and fire exposures are satisfactorily addressed.

2871 Guidance for evaluating locations for acceptability is published in the Fire
2872 Protection Criteria Manual.

- 2873 2. Where the nearest off-site exposure(s) is(are) less than 1,000 feet (304.8 m)
2874 from the tank(s), the fire chief may approve the placement of aboveground
2875 or below ground containers of LP-gas in aggregate quantities exceeding
2876 2000 gallon water capacity only after notification of owners/occupants
2877 within 1,000 feet (304.8 m) of the tank(s) to assess the potential effect on the
2878 community. Notice to adjacent property owners and occupants shall be
2879 accomplished in accordance with the established procedures outlined in the
2880 Title 25 (*Land Development*) for notice of applications and administrative
2881 actions or decisions, with the exception that notice shall be made to a
2882 distance of 1000 feet (304.8 m).

2883 **6104.3.2 Special hazards.** LP-gas containers shall also be located with respect to special
2884 hazards including, but not limited to, above-ground flammable or combustible liquid
2885 tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines as
2886 specified in Sections 6.4 and 6.5 of NFPA 58.

2887 **6104.4 Multiple LP-gas container installations.** Multiple LP-gas container installations
2888 with a total water storage capacity of more than 180,000 gallons (681 300 L) [150,000-
2889 gallon (567 750 L) LP-gas capacity] shall be subdivided into groups containing not more
2890 than 180,000 gallons (681 300 L) in each group. Such groups shall be separated by a
2891 distance of not less than 50 feet (15 240 mm), unless the containers are protected in
2892 accordance with one of the following:

- 2893 1. Mounded in an approved manner.
2894 2. Protected with approved insulation on areas that are subject to impingement of
2895 ignited gas from pipelines or other leakage.
2896 3. Protected by firewalls of approved construction.
2897 4. Protected by an approved system for application of water as specified in Table
2898 6.4.1.2 of NFPA 58.
2899 5. Protected by other approved means.

2900 Where one of these forms of protection is provided, the separation shall not be less than
2901 25 feet (7620 mm) between LP-gas container groups.

2902 **6107.2 Smoking and other sources of ignition.** “No Smoking” signs complying with
2903 Section 310 shall be posted when required by the fire chief. Smoking within 25 feet
2904 (7620 mm) of a point of transfer, while filling operations are in progress at LP-gas
2905 containers or vehicles, shall be prohibited.

2906 Control of other sources of ignition shall comply with Chapter 3 of this code and Section
2907 6.23 of NFPA 58.

2908 **6108.1 General.** Fire protection shall be provided for installations having LP-gas storage
2909 containers with a water capacity of more than 4,000 gallons (15,140 L), as required by
2910 Section 6.29 of NFPA 58.

2911 **6109.11.2 Construction.** The construction of such buildings and rooms shall comply
2912 with requirements for Group H occupancies in the Building Code, Chapter 10 of NFPA
2913 58 and both of the following:

- 2914 1. Adequate vents shall be provided to the outside at both top and bottom, located at
2915 least five feet (1524 mm) from building openings.
- 2916 2. The entire area shall be classified for the purposes of ignition source control in
2917 accordance with Section 6.23 of NFPA 58.

2918 **6303.1.1.1.2.1** A maximum of 110 pounds (49.9 kg) of solid Class 3 oxidizer is allowed
2919 in nonresidential detached storage adjacent to Group R occupancies, when such materials
2920 are necessary for maintenance purposes associated with swimming pools. The oxidizers
2921 shall be stored in approved containers and in an approved manner.

2922 CHAPTER 80 REFERENCED STANDARDS

2923 This chapter lists the standards that are referenced in various sections of this document
2924 and the 2021 International Fire Code. The standards within Chapter 80 of the published
2925 2021 International Fire Code and the amendments adopted by the City are listed herein
2926 and in the published code by the promulgating agency of the standard, the standard
2927 identification, the effective date and title, and the section or sections of this document that
2928 reference the standard. The references specifically amended below replace the reference
2929 within the published code. All other references remain as published by the ICC. The
2930 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.
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	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.

2945 **APPENDIX F HAZARDOUS MATERIALS, HAZARD RANKING**

2946 **F101.2 General.** The hazard rating of a material is required to be included in the
2947 hazardous materials inventory and shall be determined by evaluating the potential for
2948 harm and the relative toxicity of the material or mixture of materials as a whole. NFPA
2949 Standard 704, "Standard System for the Identification of the Fire Hazards of Materials for
2950 Emergency Response", shall be used to the extent possible in identifying degree of
2951 hazard and is declared to be part of this code as if set forth in full in this section. MSDS's,
2952 published data (Irving Sax, etc.), Table F101.2, or Appendix E shall be used when NFPA
2953 704-2017 does not apply or provides insufficient guidance, e.g. oxidizers. Sections
2954 105.5.21 and 5001.2 also include applicable requirements.

2955 As noted in Section 4.2 of NFPA 704, there could be specific reasons to alter the degree
2956 of hazard assigned to a specific material; for example, ignition temperature, flammable
2957 range or susceptibility of a container to rupture by an internal combustion explosion or to
2958 metal failure while under pressure or because of heat from external fire. As a result, the
2959 degree of hazard assigned for the same material can vary when assessed by different
2960 people of equal competence.

2961 The hazard rankings assigned to each class represent reasonable minimum hazard levels
2962 for a given class based on the use of criteria established by NFPA 704. Specific cases of
2963 use or storage may dictate the use of higher degrees of hazard in certain cases.

2964 **PART 2.** This ordinance takes effect on September 1, 2021.

2965 **PASSED AND APPROVED**

2966
2967 §
2968 §
2969 _____, 2021 § _____

2970 Steve Adler
2971 Mayor
2972

2973
2974 **APPROVED:** _____

ATTEST: _____

2975 Anne L. Morgan
2976 City Attorney

Jannette S. Goodall
City Clerk