

CARBON MONOXIDE DETECTION AMENDMENTS

2014 GENERAL SESSION

STATE OF UTAH

Chief Sponsor: Jim Dabakis

House Sponsor: Larry B. Wiley

LONG TITLE

General Description:

This bill amends provisions of Title 15A, Chapter 5, State Fire Code Act, relating to carbon monoxide detection.

Highlighted Provisions:

This bill:

- ▶ requires that certain buildings or structures used for educational purposes for students through grade 12 be equipped with carbon monoxide detection in accordance with the provisions of this bill; and
- ▶ makes technical and conforming changes.

Money Appropriated in this Bill:

None

Other Special Clauses:

None

Utah Code Sections Affected:

AMENDS:

15A-5-204, as last amended by Laws of Utah 2013, Chapter 199

15A-5-205.5, as enacted by Laws of Utah 2013, Chapter 199

Be it enacted by the Legislature of the state of Utah:

Section 1. Section **15A-5-204** is amended to read:

15A-5-204. Amendments and additions to IFC related to fire protection systems.

For IFC, Fire Protection Systems:

30 (1) IFC, Chapter 9, Section 901.2, Construction Documents, is amended to add the
31 following at the end of the section: "The code official has the authority to request record
32 drawings ("as built") to verify any modifications to the previously approved construction
33 documents."

34 (2) IFC, Chapter 9, Section 901.4.6, Pump and Riser Room Size, is deleted and
35 replaced with the following: "Pump and Riser Room Size. Fire pump and automatic sprinkler
36 system riser rooms shall be designed with adequate space for all installed equipment necessary
37 for the installation and to provide sufficient working space around the stationary equipment.
38 Clearances around equipment shall be in accordance with manufacturer requirements and not
39 less than the following minimum elements:

40 901.4.6.1 A minimum clear and unobstructed distance of 12 inches shall be provided
41 from the installed equipment to the elements of permanent construction.

42 901.4.6.2 A minimum clear and unobstructed distance of 12 inches shall be provided
43 between all other installed equipment and appliances.

44 901.4.6.3 A clear and unobstructed width of 36 inches shall be provided in front of all
45 installed equipment and appliances, to allow for inspection, service, repair or replacement
46 without removing such elements of permanent construction or disabling the function of a
47 required fire-resistance-rated assembly.

48 901.4.6.4 Automatic sprinkler system riser rooms shall be provided with a clear and
49 unobstructed passageway to the riser room of not less than 36 inches, and openings into the
50 room shall be clear and unobstructed, with doors swinging in the outward direction from the
51 room and the opening providing a clear width of not less than 34 inches and a clear height of
52 the door opening shall not be less than 80 inches.

53 901.4.6.5 Fire pump rooms shall be provided with a clear and unobstructed
54 passageway to the fire pump room of not less than 72 inches, and openings into the room shall
55 be clear, unobstructed and large enough to allow for the removal of the largest piece of
56 equipment, with doors swinging in the outward direction from the room and the opening
57 providing a clear width of not less than 68 inches and a clear height of the door opening shall

58 not be less than 80 inches."

59 (3) IFC, Chapter 9, Section 903.2.1.2, Group A-2, is amended to add the following
60 subsection: "4. An automatic fire sprinkler system shall be provided throughout Group A-2
61 occupancies where indoor pyrotechnics are used."

62 (4) IFC, Chapter 9, Section 903.2.2, Ambulatory Health Care Facilities, is amended as
63 follows: On line two delete the words "all fire areas floor" and replace with the word
64 "buildings" and delete the last paragraph.

65 (5) IFC, Chapter 9, Section 903.2.4, Group F-1, Subsection 2, is deleted and rewritten
66 as follows: "A Group F-1 fire area is located more than three stories above the lowest level of
67 fire department vehicle access."

68 (6) IFC, Chapter 9, Section 903.2.7, Group M, Subsection 2, is deleted and rewritten as
69 follows: "A Group M fire area is located more than three stories above the lowest level of fire
70 department vehicle access."

71 (7) IFC, Chapter 9, Section 903.2.8 Group R, is amended to add the following:
72 "Exception: Detached one- and two-family dwellings and multiple single-family dwellings
73 (townhouses) constructed in accordance with the International Residential Code for one- and
74 two-family dwellings."

75 (8) IFC, Chapter 9, Section 903.2.8, Group R, is amended to add a second exception as
76 follows: "Exception: Group R-4 fire areas not more than 4,500 gross square feet and not
77 containing more than 16 residents, provided the building is equipped throughout with an
78 approved fire alarm system that is interconnected and receives its primary power from the
79 building wiring and a commercial power system."

80 (9) IFC, Chapter 9, Section 903.2.9, Group S-1, Subsection 2, is deleted and rewritten
81 as follows: "A Group S-1 fire area is located more than three stories above the lowest level of
82 fire department vehicle access."

83 (10) IFC, Chapter 9, Section 903.3.1.1 is amended by adding the following subsection:
84 "903.3.1.1.2 Antifreeze Limitations. Antifreeze used in a new automatic sprinkler system
85 installed in accordance with NFPA 13 may not exceed a maximum concentration of 38%

86 premixed propylene glycol or 48% premixed glycerin, and the capacity of the system may not
87 exceed 150 gallons."

88 (11) IFC, Chapter 9, Section 903.3.1.2 is amended by adding the following subsection:
89 "903.3.1.2.2 Antifreeze Limitations. Antifreeze used in a new automatic sprinkler system
90 installed in accordance with NFPA 13R may not exceed a maximum concentration of 38%
91 premixed propylene glycol or 48% premixed glycerin, and the capacity of the system may not
92 exceed 150 gallons."

93 (12) IFC, Chapter 9, Section 903.3.1.3 is amended by adding the following subsection:
94 "903.3.1.3.1 Antifreeze Limitations. Antifreeze used in a new automatic sprinkler system
95 installed in accordance with NFPA 13D may not exceed a maximum concentration of 38%
96 premixed propylene glycol or 48% premixed glycerin, and the capacity of the system may not
97 exceed 150 gallons."

98 (13) IFC, Chapter 9, Section 903.3.5, Water supplies, is amended as follows: On line
99 six, after the word "Code", add "and as amended in Utah's State Construction Code".

100 (14) IFC, Chapter 9, Section 903.5 is amended to add the following subsection:
101 "903.5.1 Tag and Information. A tag shall be attached to the riser indicating the date the
102 antifreeze solution was tested. The tag shall also indicate the type and concentration of
103 antifreeze solution by volume with which the system is filled, the name of the contractor that
104 tested the antifreeze solution, the contractor's license number, and a warning to test the
105 concentration of the antifreeze solutions at yearly intervals."

106 (15) IFC, Chapter 9, Section 904.11, Commercial cooking systems, is deleted and
107 rewritten as follows: "The automatic fire extinguishing system for commercial cooking systems
108 shall be of a type recognized for protection of commercial cooking equipment and exhaust
109 systems. Pre-engineered automatic extinguishing systems shall be tested in accordance with
110 UL300 and listed and labeled for the intended application. The system shall be installed in
111 accordance with this code, its listing and the manufacturer's installation instructions. The
112 exception in Section 904.11 is not deleted and shall remain as currently written in the IFC."

113 (16) IFC, Chapter 9, Section 904.11.3, Carbon dioxide systems, and Section

114 904.11.3.1, Ventilation system, are deleted and rewritten as follows:

115 (a) "Existing automatic fire extinguishing systems used for commercial cooking that
116 use dry chemical are prohibited and shall be removed from service."

117 (b) "Existing wet chemical fire extinguishing systems used for commercial cooking
118 that are not UL300 listed and labeled are prohibited and shall be either removed or upgraded to
119 a UL300 listed and labeled system."

120 (17) IFC, Chapter 9, Section 904.11.4, Special provisions for automatic sprinkler
121 systems, is amended to add the following subsection: "904.11.4.2 Existing automatic fire
122 sprinkler systems protecting commercial cooking equipment, hood, and exhaust systems that
123 generate appreciable depth of cooking oils shall be replaced with a UL300 system that is listed
124 and labeled for the intended application."

125 (18) IFC, Chapter 9, Section 904.11.6.2, Extinguishing system service, is amended to
126 add the following: "Exception: Automatic fire extinguishing systems located in occupancies
127 where usage is limited and less than six consecutive months may be serviced annually if the
128 annual service is conducted immediately before the period of usage, and approval is received
129 from the AHJ."

130 (19) IFC, Chapter 9, Section 905.3.9 is a new subsection as follows: "Open Parking
131 Garages. Open parking garages shall be equipped with an approved Class I manual standpipe
132 system when fire department access is not provided for firefighting operations to within 150
133 feet of all portions of the open parking garage as measured from the approved fire department
134 vehicle access. Class I manual standpipe shall be accessible throughout the parking garage
135 such that all portions of the parking structure are protected within 150 feet of a hose
136 connection.

137 Exception: Open parking garages equipped throughout with an automatic sprinkler
138 system in accordance with Section 903.3.1.1."

139 (20) IFC, Chapter 9, Section 905.8, Dry Standpipes, Exception is deleted and rewritten
140 as follows: "Where subject to freezing conditions and approved by the fire code official."

141 (21) IFC, Chapter 9, Section 905.11, Existing buildings, and IFC, Chapter 11, Section

142 1103.6, Standpipes, are deleted.

143 (22) In IFC, Chapter 9, Section 906.1, Where Required, the exception under paragraph
144 1 is deleted and rewritten to read: "Exception: In new and existing Group A, B, and E
145 occupancies equipped with quick response sprinklers, portable fire extinguishers shall be
146 required only in locations specified in items 2 through 6.

147 (23) IFC, Chapter 9, Section 907.2.3 Group E:

148 (a) The first sentence is deleted and rewritten as follows: "A manual fire alarm system
149 that initiates the occupant notification system in accordance with Section 907.5 and installed in
150 accordance with Section 907.6 shall be installed in Group E occupancies."

151 (b) Exception number 3, on line five, delete the words, "emergency voice/alarm
152 communication system" and replace with "occupant notification system."

153 (24) IFC, Chapter 9, 907.8, Inspection, testing, and maintenance, is amended to add the
154 following sentences at the end of the section: "Increases in nuisance alarms shall require the
155 fire alarm system to be tested for sensitivity. Fire alarm systems that continue after sensitivity
156 testing with unwarranted nuisance alarms shall be replaced as directed by the AHJ."

157 (25) IFC, Chapter 9, Section 908.7, Carbon Monoxide Alarms, is deleted and rewritten
158 as follows:

159 "908.7 Carbon Monoxide Detection.

160 908.7.1 Groups R-1, R-2, R-3, R-4, I-1, and I-4. Carbon monoxide [~~alarms~~] detection
161 shall be installed on each habitable level of a dwelling unit or a sleeping unit in Groups R-1,
162 R-2, R-3, R-4, I-1, and I-4 occupancies that are equipped with [~~fuel-burning appliances~~] a
163 fuel-burning appliance.

164 [~~908.7.1~~] 908.7.1.1 If more than one carbon monoxide detector is required, [~~they~~] the
165 carbon monoxide detectors shall be interconnected as required in IFC, Chapter 9, Section
166 907.2.11.3.

167 [~~908.7.2~~] 908.7.1.2 In new construction, a carbon monoxide detector shall receive its
168 primary power as required under IFC, Chapter 9, Section 907.2.11.4.

169 [~~908.7.3~~] 908.7.1.3 Upon completion of the installation, [~~the~~] a carbon monoxide

170 detector system ~~[with]~~ shall meet the requirements listed in NFPA 720, Installation of Carbon
171 Monoxide Detection and Warning Equipment and UL 2034, Standard for Single and Multiple
172 Carbon Monoxide Alarms.

173 908.7.2 Group E. A carbon monoxide detection system shall be installed in new
174 buildings that contain Group E occupancies in accordance with IFC, Chapter 9, Sections
175 908.7.2.1 through 908.7.2.6. A carbon monoxide detection system shall be installed in existing
176 buildings that contain Group E occupancies in accordance with IFC, Chapter 11, Section
177 1103.9.

178 908.7.2.1 Where required. In Group E occupancies, a carbon monoxide detection
179 system shall be provided where a fuel-burning appliance, a fuel-burning fireplace, or a
180 fuel-burning forced air furnace is present.

181 908.7.2.2 Detection equipment. Each carbon monoxide detection system shall be
182 installed in accordance with NFPA 720 and the manufacturer's instructions, and be listed as
183 complying with UL 2034 and UL 2075.

184 908.7.2.3 Locations. Each carbon monoxide detection system shall be installed in the
185 locations specified in NFPA 720.

186 908.7.2.4 Combination detectors. A combination carbon monoxide/smoke detector is
187 an acceptable alternative to a carbon monoxide detection system if the combination carbon
188 monoxide/smoke detector is listed in accordance with UL 2075 and UL 268.

189 908.7.2.5 Power source. Each carbon monoxide detection system shall receive primary
190 power from the building wiring if the wiring is served from a commercial source. If primary
191 power is interrupted, each carbon monoxide detection system shall receive power from a
192 battery. Wiring shall be permanent and without a disconnecting switch other than that required
193 for over-current protection.

194 908.7.2.6 Maintenance. Each carbon monoxide detection system shall be maintained
195 in accordance with NFPA 720. A carbon monoxide detection system that becomes inoperable
196 or begins to produce end-of-life signals shall be replaced."

197 (26) IFC Section 908.7.1 is renumbered to [~~908.7.4~~] 908.7.3.

198 Section 2. Section **15A-5-205.5** is amended to read:

199 **15A-5-205.5. Amendments to Chapter 11 of IFC.**

200 (1) In IFC, Chapter 11, Section 1103.2 Emergency Responder Radio Coverage in
201 Existing Buildings, is amended as follows: On line two after the title, the following is added:
202 "When required by the fire code official".

203 (2) IFC, Chapter 11, Section 1103.5, Sprinkler Systems, is amended to add the
204 following new subsection: "1103.5.3 Group A-2. An automatic fire sprinkler system shall be
205 provided throughout existing Group A-2 occupancies where indoor pyrotechnics are used."

206 (3) IFC, Chapter 11, Section 1103.6, Standpipes, is deleted.

207 (4) In IFC, Chapter 11, 1103.7, Fire Alarm Systems, is deleted and rewritten as
208 follows: "1103.7, Fire Alarm Systems. The following shall have an approved fire alarm system
209 installed in accordance with Utah Administrative Code Section R710-4:

210 1. a building with an occupant load of 300 or more persons that is owned or operated
211 by the state;

212 2. a building with an occupant load of 300 or more persons that is owned or operated
213 by an institution of higher education; and

214 3. a building with an occupant load of 50 or more persons that is owned or operated by
215 a school district, private school, or charter school.

216 Exception: the requirements of this section do not apply to a building designated as an
217 Institutional Group I (as defined in IFC 202) occupancy."

218 (5) IFC, Chapter 11, 1103.7.1 Group E, 1103.7.2 Group I-1, 1103.7.3 Group I-2,
219 1103.7.4 Group I-3, 1103.7.5 Group R-1, 1103.7.5.1 Group R-1 Hotel and Motel Manual Fire
220 Alarm System, 1103.7.5.1.1 Group R-1 Hotel and Motel Automatic Smoke Detection System,
221 1103.7.5.2 Group R-1 Boarding and Rooming Houses Manual Fire Alarm System, 1103.7.5.2.1
222 Group R-1 Boarding and Rooming Houses Automatic Smoke Detection System, 1103.7.6
223 Group R-2 and 1103.7.7 Group R-4, are deleted.

224 (6) IFC, Chapter 11, Section 1103.9, Carbon Monoxide Alarms, is deleted and
225 rewritten as follows:

226 "1103.9 Carbon Monoxide Detection.
227 1103.9.1 Groups R-2, R-3, R-4, I-1, and I-4. Carbon monoxide [alarms] detection
228 shall be installed on each habitable level of a dwelling unit or a sleeping unit in existing
229 Groups R-2, R-3, R-4, I-1, and I-4 occupancies that are equipped with [~~fuel-burning appliances~~]
230 a fuel-burning appliance.
231 [~~908.7.1~~] 1103.9.1.1 If more than one carbon monoxide detector is required, they shall
232 be interconnected as required in IFC, Chapter 9, Section 907.2.11.3.
233 [~~908.7.2~~] 1103.9.1.2 In new construction, a carbon monoxide detector shall receive its
234 primary power as required under IFC, Chapter 9, Section 907.2.11.4.
235 [~~908.7.3~~] 1103.9.1.3 Upon completion of the installation, the carbon monoxide
236 detector system [~~with~~] shall meet the requirements listed in NFPA 720, Installation of Carbon
237 Monoxide Detection and Warning Equipment and UL 2034, Standard for Single and Multiple
238 Carbon Monoxide Alarms.
239 1103.9.2 Group E. Carbon monoxide detection shall be installed in existing buildings
240 that contain Group E occupancies in accordance with IFC, Chapter 9, Sections 908.7.2.1
241 through 908.7.2.6."