

City of Wheat Ridge local amendments to the
2018 International Fire Code

Sec. 5-86. Fire Code.

(a) *Adoption.* The International Fire Code, 2018 Edition, is hereby adopted by reference and incorporated into this article as though fully set forth herein as the fire code of the City of Wheat Ridge. One copy of said International Fire Code shall be filed in the office of the city clerk and may be inspected during regular business hours. Except as otherwise provided hereafter, such code is adopted in full, including the outline of contents and index contained herein. Only the following Appendices are hereby adopted by reference: Appendices B, C, D, F, H, I, K, L and M. The 2018 International Fire Code shall be known as the "I.F.C." or the "fire code" and may be cited and referred to as such.

(b) *Amendments.* The International Fire Code adopted by this section is amended as follows. Section numbers referred to herein refer to and correspond with the section numbers of the 2018 International Fire Code.

103.4.1 Legal Defense. Amend to read in its entirety:

103.4.1 Legal Defense. Any suit instituted against any officer or employee of any fire protection district or any officer or employee of the City of Wheat Ridge because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the fire protection district or City by which he or she is employed by the legal representative of the fire protection district or City by which he or she is employed until the final termination of the proceedings. The fire code official, city officer or employee or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code; and any officer or employee of the department of fire prevention or the City, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or reason of any acts or omission in the performance of official duties in connection therewith.

105.6.51 Assisted Living Facilities is added as follows:

105.6.51 Assisted living facilities. An operational permit is required to operate an assisted living facility.

105.6.52 Door Side Trash Collection is added as follows:

105.6.52 Door Side Trash Collection. An operational permit is required to operate door side trash collection in R-2 occupancies.

105.6.53 Sheltering in A and E Occupancies is added as follows:

105.6.53 Sheltering in A and E occupancies. An operational permit is required to operate sheltering in A and E occupancies for one night or more.

108 Board of Appeals is amended as follows:

108.1 Board of appeals established. Appeals of decisions and determinations made by the Building Official or the fire code official shall comply with the process and procedures set forth in City of Wheat Ridge Municipal Code Sections 2-59 and 5-25.

108.2 Limitations on authority. Is unchanged and adopted as written.

108.3 Qualifications. Is deleted in its entirety.

109.4 Violation penalties. Amend to read in its entirety:

109.4 Violation penalties. Any person or entity who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense. The denial, suspension, revocation, or restriction of any permit or other privilege conferred by this code shall not be regarded as a penalty for purposes of this chapter.

111.1 Order is amended as follows:

111.1 Order. Whenever the building code official or fire code official finds any work regulated by this Code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the building code official or fire code official, with the concurrence of the other code official, is authorized to issue a stop work order.

111.4 Failure to comply is amended as follows:

111.4 Failure to comply. Upon notice from the fire code official, work that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or visibly posted at the work site. The notice shall state the conditions under which the work is authorized to resume. Where an emergency exists, the fire code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than 60 dollars or not more than 1000 dollars.

Chapter 2 is amended as follow:

Occupancy Classification, Assembly Group A:

Amend: Accessory with places of religious worship to read as follows:

1. Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100 per room or space are not considered separate occupancies.
2. Rooms and spaces within places of religious worship providing overnight homeless sheltering for fewer than 50 occupants, for less than 16 continuous hours, shall be classified as part of the primary occupancy notwithstanding any other provisions of this code which would disallow overnight occupancy in such rooms or spaces, and provided the aggregate area used for sleeping is less than 10,000 square feet and has all of the following:
 - a) exiting and emergency lighting
 - b) operational smoke alarms and carbon monoxide alarms in all sleeping areas
 - c) a minimum of one awake attendant
 - d) an emergency plan.

An operational permit and an *approved emergency plan* for such use may be required on an annual basis through the governing Fire Code Official subject to review of compliance with these provisions.

Amend: Institutional Group I-1 to read as follows: Institutional Group I-1 occupancy shall include buildings, structures or portions thereof for more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care. Buildings of Group I-1 shall be classified as a Condition 2 unless approved by the building and fire code official as a Condition 1. This group shall include, but not be limited to the following:

Amend Residential Group R-4 to read as follows: Residential Group R-4 shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and received custodial care. Buildings of Group R-4 shall be classified as a Condition 2 unless approved by the building and fire code official as a Condition 1. This group shall include, but not be limited to the following:

315 General Storage is amended by adding the following subsection:

315.3.5 Marking maximum permitted storage height. Identification of the maximum approved storage height shall be provided in areas where stacked or shelved storage of materials occurs. The maximum approved height will be based upon the requirements of Chapter 32. Maximum storage height identification shall consist of a minimum of a four (4) inch (101.6 mm) stripe on a contrasting background shall be placed at the maximum storage height as determined by Chapter 32 above the finished floor and clearly labeled with the designation: *“No Storage Above This Line.”*

503.2 Specifications is amended to read as follows:

503.2 Specifications. Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.2.1 through 503.2.8, and Appendix D.

503.2.1 Dimensions is amended to read as follows:

503.2.1 Dimensions-Public and Private Streets. Public and private streets that are used for fire apparatus access shall have an unobstructed width that meets the dimensions and parking

restrictions as set forth by the *Street Standards* adopted by the City of Wheat Ridge; and an unobstructed vertical clearance of not less than thirteen (13) feet six (6) inches (4115 mm).

503.2.1 Dimensions is amended by adding the following subsection:

503.2.1.1 Dimensions-Private Drives. Fire apparatus access that is designated as a private drive shall have an unobstructed width of not less than twenty-four (24) feet (7315 mm) and an unobstructed vertical clearance of not less than thirteen (13) feet six (6) inches (4115 mm).

503.2.3 Surface is amended to read as follows:

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be paved so as to provide all-weather driving capabilities.

503.2.4 Turning Radius shall be amended to read as follows:

503.2.4 Turning Radius. The required turning radius of a fire apparatus access road shall be an inside radius of 27 feet and an outside radius of 50 feet or as determined by the fire code official. Computer modeling may be required to establish that each fire district's apparatus can adequately maneuver the proposed access roads.

503.2.8 Angles of approach and departure shall be amended to read as follows:

503.2.8 Angles of approach and departure. The angles of approach and departure for fire apparatus access roads shall be no greater than 10% or within the limits established by the fire code official based on the fire district's apparatus.

507.5.1.1 Hydrant for automatic sprinkler systems and standpipe systems is amended to read as follows:

Section 507.5.1.1 Hydrant for automatic sprinkler systems and standpipe systems. Buildings equipped with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and/or standpipe system installed in accordance with Section 905 shall have a fire hydrant a minimum of 50 feet and a maximum of 100 feet of the fire department connection.

Exception: The distance shall be permitted to exceed 100 feet where approved by the fire code official.

510.4.1.1 Minimum signal strength into the building shall be amended to read as follows:

Section 510.4.1.1 Minimum signal strength into the building. The minimum inbound signal strength into the building shall be -85dBm to provide usable voice communications throughout the coverage area. The inbound signal level shall be sufficient to provide not less than a Delivered Audio Quality (DAQ) of 3.0 or an equivalent Signal-to-Interference-Plus-Noise Ratio (SINR) applicable to the technology for either analog or digital signals.

510.4.1.2 Minimum signal strength out of the building shall be amended to read as follows:

510.4.1.2 Minimum signal strength out of the building. The minimum outbound signal strength out of the building shall be -90 dBm to provide usable voice communications throughout the coverage area to the fire district's radio system when transmitted from within the building. The outbound signal level shall be sufficient to provide not less than a DAQ of 3.0 or an equivalent SINR applicable to the technology for either analog or digital signals.

510.4.1.3 System performance shall be amended to read as follows:

510.4.1.3 System performance. If the field signal strength outside the building where received antenna system for the in-building system is located is less than the -85dBm, then the minimum required in-building field of strength shall equal the field of strength being delivered to the receiving antenna of the building.

901.4.6 Pump and riser room size shall be amended to read as follows:

901.4.6 Pump and riser room size. Where provided, fire pump rooms and *automatic sprinkler system* riser rooms shall be designed with adequate space for all equipment necessary for the installation, as defined by the manufacturer, with sufficient working space around the stationary equipment. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspection, service, repair or replacement without removing such elements of permanent construction or

disabling the function of a required fire-resistance-rated assembly. Fire pump and *automatic sprinkler system* riser rooms shall be provided with doors and unobstructed passageways large enough to allow removal of the largest piece of equipment. The room shall provide a minimum of 36 square feet working space around a fire pump or *automatic sprinkler system* riser.

901.6 Inspection, testing and maintenance shall be amended to read as follows:

901.6 Inspection, testing and maintenance. Fire detection and alarm systems, emergency alarm systems, gas detection systems, fire-extinguishing systems, mechanical smoke exhaust systems and smoke and heat vents shall be maintained in an operative condition at all times and shall be replaced or repaired where defective. Non-required *fire protection systems* and equipment shall be inspected, tested and maintained or removed. The removal of any non-required fire protection system or equipment shall be *approved* by the fire district.

903.1 General is amended by adding the following subsection:

903.1.2 Location of sprinkler control valves. When automatic sprinkler systems are required within a building and the system serves more than one tenant space, the main control valves shall be located within an approved room that is accessible directly from the building exterior. The door to said room shall be not less than three (3) feet (914 mm) in width by six (6) feet eight (8) inches (203.2 mm) in height. The door to said room shall be identified as required in section 509.1. The size of the room shall meet the size requirements per Section 901.4.6.

903.1.2 Multi-tenant buildings. In buildings that have warehouse space(s) that have the ability to allow high-piled combustible storage per Chapter 32 shall have a fire line installed with a main that runs the length of the building for future addition of fire sprinkler systems.

903.4.2 Alarms shall be amended to read as follows:

903.4.2 Alarms. An approved audible/visual appliance, located on the exterior of the building in an approved location, shall be connected to each automatic sprinkler system. Such sprinkler water-flow alarm appliances shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.

903.4.2 Alarms is amended by adding the following subsection:

903.4.2.1 Audible and visual signals. Audible and visual fire alarm notification devices shall be connected to every automatic sprinkler system. Such audible and visual devices shall be activated throughout the building upon water flow. When buildings have multiple tenant spaces, notification devices shall be installed in accordance with Section 907.5 in each tenant space.

904 Alternative Automatic Fire-Extinguishing Systems is amended by adding the following subsection:

904.13 Domestic cooking systems. Cooktops and ranges installed in the following occupancies shall be protected in accordance with Section 904.13.1.

1. Unchanged
2. Unchanged
3. Unchanged
4. In Group R-4 occupancies where domestic cooking facilities are installed in accordance with Section 407.2.6 of the International Building Code.

906.1 Where required shall be amended to read as follows:

906.1 Where required. Portable fire extinguishers shall be installed in all of the following locations:

1. In new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.
Exceptions:
1-6. Unchanged
7. In Group A, and B occupancies equipped throughout with an approved automatic fire sprinkler system with quick response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.

907.6 Installation and monitoring is amended by adding the following subsection:

907.11 Security systems. Fire alarm panels and security alarm panels shall be separate and not combined.

912.3.1 Locking fire department connection caps is amended to read as follows:

912.3.1 Locking fire department connection caps. Approved locking fire department connection caps shall be installed on fire department connections on all new water-based fire protection systems. Installation of approved locking fire department connection caps shall be required on existing water-based fire protection systems where there is a history of missing caps or interior obstructions of the fire department connection.

3310.1 Required access shall be amended to read as follows and subsection added:

3310.1 Required access. Approved fire apparatus access for firefighting and emergency medical services is required to all construction or demolition sites. Access shall be provided to within 150 feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building. When approved by the fire code official, temporary fire apparatus access can be installed during construction of sites not consisting of one- and two-family dwellings and where practical difficulty exists with providing permanent access during construction. Permanent fire apparatus access shall be provided prior to occupancy. Approved temporary access shall be installed as set forth in Section 3310.1.1 through 3310.1.3.

3310.1.1 Installation timing. The required access shall be installed prior to above ground construction and/or the storage of combustible materials on-site, all access and water supplies for fire fighting vehicles shall be provided to construction or demolition sites as shown on the approved site plan in their entirety.

Section 3310.1.2 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 24 feet and vertical clearance of not less than 13 feet 6 inches.

3310.1.3 Surface. Fire apparatus access roads shall have an all-weather surface consisting of the first lift of asphalt, concrete, or Class 6 road base. The surface shall be capable of supporting an 85,000-pound imposed load. Documentation from a licensed geotechnical engineer attesting that the surface will support the required imposed load and all-weather capability shall be provided.

5307.1 General shall be amended to read as follows:

5307.1 General. *Compressed gases* in storage or use not regulated by the material-specific provisions of Chapters 6, 54, 55 and 60 through 67, including asphyxiant, irritant and radioactive gasses, shall comply with this section in addition to other requirements of this chapter. The provisions of this chapter shall apply to new or existing systems.

5307.3 Insulated liquid carbon dioxide systems used in beverage dispensing applications this section shall be amended to read as follows:

5307.3 Liquid carbon dioxide systems used in beverage dispensing applications.

6109.13 Protection of containers shall delete the exception from this section.

5704.2.9.6.1 Locations where above-ground tanks are prohibited is amended to read as follows:

5704.2.9.6.1 Locations where above-ground tanks are prohibited. The storage of Class I and II liquids in above-ground tanks shall conform to the geographic limits established by Sections 26-805 and 26-806 of the Wheat Ridge Municipal Code.

5706.2.4.4 Locations where above-ground tanks are prohibited is amended to read as follows:

5706.2.4.4 Locations where above-ground tanks are prohibited. The storage of Class I and II liquids in above-ground tanks shall conform to the geographic limits established by Sections 26-805 and 26-806 of the Wheat Ridge Municipal Code.

5806.2 Limitations is amended to read as follows:

5806.2 Limitations. Storage of flammable cryogenic fluids in stationary containers outside of buildings shall conform to the geographic limits established by Sections 26-805 and 26-806 of the Wheat Ridge Municipal Code.

6104.2 Maximum capacity within established limits is amended to read as follows:

6104.2 Maximum capacity within established limits. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons within the City of Wheat Ridge.

Chapter 80 Referenced standards

8001 Adoption of standards and subsection shall be added as follows:

8001 Adoption of standards.

8001.1 NFPA standards. In every case where this code references a standard published by the National Fire Protection Association (NFPA), the most current edition of the referenced standard is hereby adopted. The most current edition of the references NFPA standard shall become effective on January 1st following publication and release of the standard.

Table B105.1(1) shall be amended to reflect the following table:

TABLE B105.1(1)

REQUIRED FIRE-FLOW FOR ONE-AND TWO-FAMILY DWELLINGS, Group R-3 and R-4 BUILDINGS AND TOWNHOUSES

FIRE-FLOW CALCULATION AREA (square feet)	AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE-FLOW (gallons per minute)	FLOW DURATION (hours)
0-3,600	No automatic sprinkler system	1,000	1
3,601 and greater	No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1 (2) at the reduced flow rate
0-3,600	Section 903.3.1.3 of the <i>International Fire Code</i> or Section P2904 of the <i>International Residential Code</i>	1,000	½

3,601 and greater	Section 903.3.1.3 of the <i>International Fire Code</i> or Section P2904 of the <i>International Residential Code</i>	½ value in Table B105.1(2) ^a	1
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For SI: 1 gallon per minute = 3.785 L/min.

- a. The reduced fire-flow shall not be less than 1,000 gallons per minute.

Table B105.2) shall be amended to reflect the following table:

TABLE B105.2

REQUIRED FIRE-FLOW FOR BUILDINGS OTHER THAN ONE-

AND TWO-FAMILY DWELLINGS, Town Homes, Group R-3 and R-4 BUILDINGS

AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE-FLOW (gallons per minute)	FLOW DURATION (hours)
No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1 (2)
Section 903.1.1 of the <i>International Fire Code</i>	50% of the value in Table B105.1 (2) ^a	Duration in Table B105.1 (2) at the reduced flow rate
Section 903.1.2 of the <i>International Fire Code</i>	50% of the value in Table B105.1 (2) ^b	Duration in Table B105.1 (2) at the reduced flow rate

For SI: 1 gallon per minute = 3.785 L/min.

- b. The reduced fire-flow shall not be less than 1,500 gallons per minute.
c. The reduced fire-flow shall not be less than 1,500 gallons per minute.

Appendix D Section D102.1 Access and loading is amended to read as follows:

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 85,000 pounds (38636 kg).

Section 10. Section 5-87 of the Code, concerning the International Fuel Gas Code, is hereby repealed and reenacted to read in its entirety as follows: