

ORDINANCE NO. 022, 2014  
OF THE COUNCIL OF THE CITY OF FORT COLLINS  
AMENDING CHAPTER 5, ARTICLE IV OF THE CODE OF THE  
CITY OF FORT COLLINS FOR THE PURPOSE OF REPEALING THE  
*2009 INTERNATIONAL FUEL GAS CODE (IFGC)* AND ADOPTING THE  
*2012 INTERNATIONAL FUEL GAS CODE*, WITH AMENDMENTS

WHEREAS, since 1924, the City has reviewed, amended and adopted the latest nationally recognized building standards available for the times; and

WHEREAS, upon recommendation of City staff, the City Council has determined that it is in the best interests of the City to align the five interconnected basic construction codes under one publication year; and

WHEREAS, the five interconnected basic construction codes are the *International Building Code*, *International Residential Code*, *International Mechanical Code*, *International Fuel Gas Code*, and *International Energy Conservation Code*; and

WHEREAS, the City Council has determined that the 2012 publication year of the five interconnected basic construction codes ought to be adopted and that their counterpart codes previously adopted should be repealed, both in order to align the publication years of the codes and also because the 2012 publications contain improvements in construction code regulation; and

WHEREAS, City staff has conducted a significant public outreach program, working with the regulated construction industry and building professionals; and

WHEREAS, the adoption of the five interconnected basic construction codes has been presented to and recommended by the Affordable Housing Board, the Commission on Disability, the Air Quality Advisory Board, the Natural Resources Advisory Board, the Building Review Board, the Electric Board, the Landmark Preservation Commission and the Water Board; and

WHEREAS, the City Council has determined that it is in the best interest of the health, safety and welfare of the City and its citizens that the *2009 International Fuel Gas Code*, as amended be repealed, and that in its place, the *2012 International Fuel Gas Code* be adopted, with amendments.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That Section 5-111 of the Code of the City of Fort Collins is hereby amended to read as follows:

**Sec. 5-111. Adoption of standards for fuel gas piping, equipment and accessories.**

Pursuant to the power and authority conferred on the City Council by Section 31-16-202, C.R.S., and Article II, Section 7 of the Charter, the City Council hereby repeals the 2003<sup>9</sup> *International Fuel Gas Code* (2003<sup>9</sup> IFGC), and adopts, as the fuel gas code of the City, the 2009<sup>12</sup> *International Fuel Gas Code* (2009<sup>12</sup> IFGC), published by the International Code Council, which shall have the same force and effect as though set forth in full herein. The subject matter of the 2009<sup>12</sup> *International Fuel Gas Code* (2009<sup>12</sup> IFGC) adopted herein includes comprehensive regulations governing the design, installation, maintenance, alteration and inspection of fuel gas piping systems, fuel gas utilization equipment and related accessories for the purposes of protecting public health, safety and general welfare.

Section 2. That Section 5-112 Code of the City of Fort Collins is hereby repealed and reenacted to read in its entirety as follows:

**Sec. 5-112 Amendments and deletions to code.**

The 2012 *INTERNATIONAL FUEL GAS CODE* adopted herein is hereby amended in the following respects:

(1) *Section 101.1 Title* is hereby amended to read as follows:

“**101.1 Title.** These regulations shall be known as the *Fuel Gas Code* of **the City of Fort Collins**, hereinafter referred to as “this code.”

(2) *Section 102.8 reference codes and standards*, is hereby amended to read as follows:

“**Section 102.8 reference codes and standards** The codes and standards referenced in this codes shall be those that are listed in ~~Chapter 8~~ **Section 101.4 of the adopted *International Building Code, entitled ‘Referenced codes’*** and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference ~~and as further regulated in Sections 102.8.1 and 102.8.2.~~

(3) *Section 103 Department of inspection* is hereby amended in its entirety to read as follows:

**SECTION 103**

**DEPARTMENT OF INSPECTION**

~~[A] 103.1 General. The department of inspection is hereby created and the executive official in charge thereof shall be known as the code official.~~

~~[A] 103.2 Appointment. The code official shall be appointed by the chief appointing authority of the jurisdiction.~~

~~[A] 103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the code official shall have the authority to appoint a deputy code official, other related technical officers, inspectors and other employees. Such employees shall have powers as delegated by the code official.~~

~~[A] 103.4 Liability. The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent~~

law or ordinance, shall not thereby be rendered liable personally, and is hereby relieved from personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties. Any suit instituted against any officer or employee 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 jurisdiction until the final termination of the proceedings. The code official 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.

**“SECTION 103 – CODE ADMINISTRATION**

**103.1 Entity charged with code administration shall be as determined in accordance with Section 103 of the adopted *International Building Code*, entitled ‘Code Administration’.”**

(4) *Section 106.6 Fees* is hereby amended in its entirety to read as follows:

~~A] 106.6 Fees.~~ A permit shall not be issued until the fees prescribed in Section 106.6.2 have been paid, nor shall an amendment to a permit be released until the additional fee, if any, due to an increase of the mechanical system, has been paid.

~~[A] 106.6.1 Work commencing before permit issuance.~~ Any person who commences work on a mechanical system before obtaining the necessary permits shall be subject to 100 percent of the usual permit fee in addition to the required permit fees.

~~[A] 106.6.2 Fee schedule.~~ The fees for mechanical work shall be as indicated in the following schedule. [JURISDICTION TO INSERT APPROPRIATE SCHEDULE]

~~[A] 106.6.3 Fee refunds.~~ The code official shall authorize the refunding of fees as follows:

1. The full amount of any fee paid hereunder which was erroneously paid or collected.
2. Not more than [SPECIFY PERCENTAGE] percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.
3. Not more than [SPECIFY PERCENTAGE] percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended. The code official shall not authorize the refunding of any fee paid, except upon written application filed by the original permittee not later than 180 days after the date of fee payment.

**“SECTION 106.6 FEES**

**106.6 Payment of fees.** All items relating to fees shall be as specified in Section 109 of the adopted *International Building Code*, entitled ‘Fees’.”

(5) *Section 108.4 Violation penalties*, is hereby amended to read as follows:

**“108.4 Violation penalties.** Persons who shall violate a provision of this code, fail to comply with any of the requirements thereof or erect, install, alter or repair work in violation of the *approved construction documents* or directive of the code official, or of a

permit or certificate issued under the provisions of this code, shall be guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. **misdemeanor subject to the penalties and fines specified in Section 1-15 of the City Code.** Each day that a violation continues after due notice has been served shall be deemed a separate offense.”

(6) **Section 108.4.1 Work commencing before permit issuance** is hereby added to read as follows:

**“108.4.1 Work commencing before permit issuance. In addition to the penalties set forth in 108.4, any person or firm who, before obtaining the necessary permit(s), commences any construction of, or work on, a building, structure, electrical, gas, mechanical or plumbing system that is not otherwise exempted from obtaining a permit, shall be subject to a fine in addition to the standard prescribed permit fee. Said fine shall be equal in amount to the permit fee, except that it shall not be less than \$50 nor more than \$1,000 for the first such violation. A person or firm committing the same such violation repeatedly shall be subject to a fine equal to double the amount of the permit fee or double the amount of the fee imposed for the preceding violation, whichever is greater, for every such subsequent violation committed within 180 days of a previous violation. Said fines may be appealed to the City Manager pursuant to Chapter 2, Article VI of the City Code.”**

(7) **Section 109.1 General** is hereby added to read as follows:

**“109.1 General. Appeals of decisions, determinations and interpretations of this code shall be made pursuant to the applicable provisions of Section 113 of the adopted International Building Code, entitled ‘Board of Appeals’.”**

(8) **Section 301.3 Listed and labeled** is hereby amended by deleting the last sentence to read as follows:

**“301.3 Listed and labeled. Appliances regulated by this code shall be listed and labeled for the application in which they are used unless otherwise approved in accordance with Section R104.11. The approval of unlisted appliances in accordance with Section R104.11 shall be based upon approved engineering evaluation.”**

(9) **Section 303.3 Prohibited locations** is hereby amended by deleting Exceptions "3" and "4"

~~3. A single wall-mounted unvented room heater is installed in a bathroom and such unvented room heater is equipped as specified in Section 621.6 and has an input rating not greater than 6,000 Btu/h (1.76 kW). The bath room shall meet the required volume criteria of Section 304.5.~~

~~4. A single wall-mounted unvented room heater is installed in a bedroom and such unvented room heater is equipped as specified in Section 621.6 and has an input rating~~

~~not greater than 10,000 Btu/h (2.93 kW). The bedroom shall meet the required volume criteria of Section 304.5.~~

(10) *Section 303.5.1 Natural Draft Appliances locations*, is hereby added to read as follows:

**“303.5.1 Natural Draft Appliances locations.** For new *multi-family buildings* and new appliances within additions to *multi-family buildings*, *natural draft appliances* shall not be located within the *building thermal envelope* or be located in a space where the only access to that space is from sleeping rooms, bathrooms, toilet rooms, storage closets, or surgical rooms.”

**Exceptions:**

1. Where *natural draft appliances* are located in an enclosed mechanical room and sealed to air flow from adjoining conditioned area and the following conditions are met:

- a. The access to the mechanical room is through a self-closing, gasketed door.
- b. No other exhaust appliances are located within the mechanical room.
- c. The mechanical room is provided with outside combustion air as specified in this code.
- d. The isolation of the mechanical room from adjoining conditioned areas is verified with a differential-pressure test performed by an *approved agency*.
- e. Such *natural draft appliances* pass a combustion safety test under worst-case depressurization conditions conducted by an *approved agency*, in accordance with Building Performance Institute (BPI) Technical Standards for the Heating Professional.
- f. Documentation of satisfactory testing results is submitted to the *Building Official* prior to approval.

2. *Natural draft* fireplaces that pass a combustion safety test under worst-case depressurization conditions conducted by an *approved agency*, in accordance with the Building Performance Institute (BPI) Technical Standards for the Heating Professional, prior to approval.”

(11) *Section 304.11 Combustion air ducts item #1 exception* is hereby amended to read as follows:

**Exception:**

“Where the installation of galvanized steel ducts is not practical due to existing finish materials within dwelling units that are undergoing alteration or reconstruction, unobstructed stud and joist spaces shall not be prohibited from conveying combustion air, provided that not more than one required fireblock is removed.”

(12) *Section 304.11 Combustion air ducts*, is hereby amended by adding item #9 to read as follows:

“9. All combustion air openings or ducts shall be readily identifiable with an approved label or by other means warning persons that obstruction of such openings or ducts may cause fuel-burning equipment to release combustion products and dangerous levels of carbon monoxide into the building.”

(13) *Section 305.1 General* is hereby amended by deleting the second paragraph and replacing it to read as follows:

~~Unlisted appliances approved in accordance with Section 301.3 shall be limited to uses recommended by the manufacturer and shall be installed in accordance with the manufacturer’s instructions, the provisions of this code and the requirements determined by the code official.~~

“Where natural draft appliances are replaced in existing multi-family buildings, all appliances with a draft hood shall pass a combustion safety test under natural conditions, conducted by an approved agency in accordance with the Building Performance Institute (BPI) Technical Standards for the Heating Professional. Such appliances shall also be combustion safety tested under worst-case depressurization conditions, by an approved agency in accordance with Building Performance Institute (BPI) Technical Standards for the Heating Professional. Should an appliance not pass such test, a disclosure form reporting the test results shall be provided to the dwelling unit owner. A copy of such disclosure form, signed by the homeowner, shall be submitted to the Building Official prior to approval.”

(14) *Section 305.3 Elevation of ignition source* is hereby amended to read as follows:

**“305.3 Elevation of ignition source.** Electrical devices, equipment and appliances having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor in hazardous locations and public garages, private garages, repair garages, motor fuel-dispensing facilities and parking garages. For the purpose of this section, rooms or spaces that are not part of the living space of a dwelling unit and that communicate directly with a private garage through openings shall be considered to be part of the private garage.”

~~**Exception:** Elevation of the ignition source is not required for appliances that are listed as flammable vapor ignition resistant.~~

(15) *Section 308.4.5 Clearance from supply ducts* is hereby amended to read as follows:

**“308.4.5 Clearance from supply ducts.** Supply air ducts connecting to listed central heating furnaces where the bonnet temperature exceeds 150°F (68°C), shall have the same minimum clearance to combustibles as required for the furnace supply plenum for a distance of not less than 3 feet (914 mm) from the supply plenum. Clearance is not required beyond the 3-foot (914 mm) distance.”

(16) *Section 404.9 Above-ground piping outdoors* is hereby amended to read as follows:

“**404.9 Above-ground piping outdoors.** All piping installed outdoors shall be elevated not less than ~~3 1/2 inches (152 mm)~~ **6 inches (152 mm)** above ground and where installed across roof surfaces, shall be elevated not less than 3 1/2 inches (89 mm) above the roof surface. Piping installed above ground, outdoors, and installed across the surface of roofs shall be securely supported and located where it will be protected from physical damage. Where passing through an outside wall, the piping shall also be protected against corrosion by coating or wrapping with an inert material. Where piping is encased in a protective pipe sleeve, the annular space between the piping and the sleeve shall be sealed.”

(17) *Section 404.12 Minimum burial depth* is hereby amended to read as follows:

“**404.12 Minimum burial depth.** Underground piping systems shall be installed a minimum depth of ~~12 inches (305 mm)~~ **18 inches (457 mm)** below grade, except as provided for in Section 404.10.1.”

(18) *Section 404.12.1 Individual outside appliances*, is hereby amended to read as follows:

“**404.12.1 Individual outside appliances.** Individual lines to outside lights, grills or other appliances shall be installed a minimum of ~~8 inches (203 mm)~~ **18 inches (457 mm)** below finished grade.

**Exception:**

**Approved materials installed a minimum of 6 inches (152 mm) below finished grade when covered with a concrete slab 3 1/2 inches (88.9 mm) in minimum thickness.”**

(19) *Section 404.15 Outlet closure* is hereby amended to read as follows:

“**404.15 Outlet closures.** Gas outlets **and fittings which allow for future gas line expansion** that do not connect to appliances shall be **provided with an approved gas shutoff valve with the end** capped gas-tight.

**Exception:**

**1. Listed and labeled** flush-mounted-type quick disconnect devices and *listed and labeled* gas convenience *outlets* shall be installed in accordance with the manufacturer’s installation instructions.

**2. Drip/dirt legs installed at the floor level at appliances.”**

(20) *Section 405.1 General* is hereby amended to read as follows:

“**405.1 General.** Changes in direction of **rigid metallic** pipe **specified in Section 403.4** shall be permitted to be made **only** by the use of fittings and factory bends ~~or field bends.~~”

(21) *Section 405.2 Metallic pipe* is hereby deleted in its entirety:

~~**405.2 Metallic pipe.** Metallic pipe bends shall comply with the following:~~

- ~~1. Bends shall be made only with bending tools and procedures intended for that purpose.~~
- ~~2. All bends shall be smooth and free from buckling, cracks or other evidence of mechanical damage.~~
- ~~3. The longitudinal weld of the pipe shall be near the neutral axis of the bend.~~
- ~~4. Pipe shall not be bent through an arc of more than 90 degrees (1.6 rad).~~
- ~~5. The inside radius of a bend shall be not less than six times the outside diameter of the pipe.~~

(22) *Section 406.4.1 Test pressure* is hereby amended to read as follows:

“**406.4.1 Test pressure.** The test pressure to be used shall be not less than one and one-half times the proposed maximum working pressure, but not less than ~~3 psig (20 kPa gauge)~~, **10 psig (67 kPa gauge)** irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.”

(23) *Section 409.5.2 Vented decorative appliances and room heaters* is hereby amended to read as follows:

“**409.5.2 Vented decorative appliances and room heaters.** Shutoff valves for vented decorative appliances, room heaters and decorative appliances for installation in vented fireplaces shall be permitted to be installed in an area remote from the appliances where such valves are provided with ready access. Such valves shall be permanently identified and shall serve no other appliance. **Remote valves shall be operable on the same floor as the appliance served and within 12 feet (3.66 m) of the appliance as measured along the floor line.** The piping from the shutoff valve to within 6 feet (1829 mm) of the appliance shall be designed, sized and installed in accordance with Sections 401 through 408.”

(24) *Section 410.3 Venting of regulators* is hereby amended to read as follows:

“**410.3 Venting of regulators.** Pressure regulators that require a vent shall be vented directly to the outdoors. The vent shall be designed to prevent the entry of insects, water and foreign objects. **Vents shall not terminate within 3 feet (0.916 m) of openings into the building.**”

(25) *Section 501.8 Appliances not required to be vented* is hereby amended by deleting items #8 and #10:



8. Room heaters *listed* for unvented use.

10. Other appliances *listed* for unvented use and not provided with flue collars.

(26) *Section 503.2.2 Well-ventilated spaces*, is hereby deleted.

~~**503.2.2 Well-ventilated spaces.** Where located in a large and well-ventilated space, industrial appliances shall be permitted to be operated by discharging the flue gases directly into the space.~~

(27) *Section 503.5.6.1 Chimney lining* is hereby amended by deleting the exception:

**503.5.6.1 Chimney lining.** Chimneys shall be lined in accordance with NFPA 211.

~~**Exception:** Where an existing chimney complies with Sections 503.5.6 through 503.5.6.3 and its sizing is in accordance with Section 503.5.5, its continued use shall be allowed where the *appliance* vented by such chimney is replaced by an *appliance* of similar type, input rating and efficiency.~~

(28) *Section 503.6.5 Minimum height* is hereby amended by the addition of the last sentence to read as follows:

**“503.6.5 Minimum height.** A Type B or L gas vent shall terminate at least 5 feet (1524 mm) in vertical height above the highest connected *appliance draft hood* or *flue collar*. A Type B-W gas vent shall terminate at least 12 feet (3658 mm) in vertical height above the bottom of the wall *furnace*. **All gas vents shall terminate a minimum of 22 inches (559 mm) above the surface or grade directly below.”**

(29) *Section 614.4 Exhaust installation* is hereby amended to read as follows:

**“614.4 Exhaust installation.** Exhaust ducts for clothes dryers shall terminate on the outside of the building and shall be equipped with a backdraft damper. **Dryer exhaust duct terminations shall not be located within 36 inches (914 mm) of exterior openings into conditioned spaces, crawl spaces and attics.** Screens shall not be installed at the duct termination. Ducts shall not be connected or installed with sheet metal screws or other fasteners that will obstruct the flow. Clothes dryer exhaust ducts shall not be connected to a vent connector, vent or chimney. Clothes dryer exhaust ducts shall not extend into or through ducts or plenums.”

(30) *Section 614.6.5.2 Manufacturer’s instructions* is hereby deleted in its entirety:

~~**Section 614.6.5.2 Manufacturer’s instructions** The maximum length of the exhaust duct shall be determined by the dryer manufacturer’s installation instructions. The code official shall be provided with a copy of the installation instructions for the make and model of the dryer. Where the exhaust duct is to be concealed, the installation instructions shall be provided to the code official prior to the concealment inspection. In~~

the absence of fitting equivalent length calculations from the clothes dryer manufacturer, Table 614.6.5.1 shall be utilized.

(31) *Section 621 Unvented room heaters*, is hereby deleted in its entirety:

**SECTION 621 (IFGC)  
UNVENTED ROOM HEATERS**

~~**621.1 General.** Unvented room heaters shall be tested in accordance with ANSI Z21.11.2 and shall be installed in accordance with the conditions of the listing and the manufacturer's installation instructions. Unvented room heaters utilizing fuels other than fuel gas shall be regulated by the *International Mechanical Code*.~~

~~**621.2 Prohibited use.** One or more unvented room heaters shall not be used as the sole source of comfort heating in a *dwelling unit*.~~

~~**621.3 Input rating.** Unvented room heaters shall not have an input rating in excess of 40,000 Btu/h (11.7 kW).~~

~~**621.4 Prohibited locations.** Unvented room heaters shall not be installed within occupancies in Groups A, E and I. The location of unvented room heaters shall also comply with Section 303.3.~~

~~**621.5 Room or space volume.** The aggregate input rating of all unvented appliances installed in a room or space shall not exceed 20 Btu/h per cubic foot (207 W/m<sup>3</sup>) of volume of such room or space. Where the room or space in which the appliances are installed is directly connected to another room or space by a doorway, archway or other opening of comparable size that cannot be closed, the volume of such adjacent room or space shall be permitted to be included in the calculations.~~

~~**621.6 Oxygen depletion safety system.** Unvented room heaters shall be equipped with an oxygen depletion sensitive safety shutoff system. The system shall shut off the gas supply to the main and pilot burners when the oxygen in the surrounding atmosphere is depleted to the percent concentration specified by the manufacturer, but not lower than 18 percent. The system shall not incorporate field adjustment means capable of changing the set point at which the system acts to shut off the gas supply to the room heater.~~

~~**621.7 Unvented decorative room heaters.** An unvented decorative room heater shall not be installed in a factory built *fireplace* unless the *fireplace* system has been specifically tested, *listed* and *labeled* for such use in accordance with UL 127.~~

~~**621.7.1 Ventless firebox enclosures.** Ventless firebox enclosures used with unvented decorative room heaters shall be *listed* as complying with ANSI Z21.91.~~

(32) *Section 623.3.1 Kitchens with gas cooking* is hereby added to read as follows:

**“623.3.1 Kitchens with gas cooking. Gas cooking appliances in residential kitchens shall be supplied with an exhaust system vented to the outside. Ducts serving kitchen exhaust systems shall not terminate in an attic or *crawl space* or areas inside the building and shall not induce or create a negative pressure in excess of negative 3 Pa or adversely affect gravity-vented appliances.”**

(33) *Section 630.3 Combustion and ventilation air* is hereby amended to read as follows:

**“630.3 (IFGS) Combustion and ventilation air.** Where ~~unvented~~ infrared heaters are installed, natural or mechanical means shall provide outdoor ventilation air at a rate of not less than 4 cfm per 1,000 Btu/h (0.38 m<sup>3</sup>/min/kW) of the aggregate input rating of all such heaters installed in the space. Exhaust openings for removing flue products shall be above the level of the heaters.”

(34) *Section 636 Outdoor decorative appliances* is hereby amended to read as follows:

**“636.1 General.** Permanently fixed-in-place outdoor decorative appliances shall be tested in accordance with ANSI Z21.97 and shall **be provided with a flame safeguard device and** be installed in accordance with the manufacturer’s instructions. **Appliances shall not be located beneath or within 10 feet (3048 mm) of combustible construction.”**

(35) *Chapter 8 REFERENCED STANDARDS* is hereby amended by adding the following additional referenced standard in alphabetical sequence:

**BPI - Building Performance Institute**  
**107 Hermes Road, Suite 110**  
**Malta, NY 12020**

**BPI 104 Envelope Professional Standard and BPI Technical Standards for the Heating Professional**  
**Referenced in Amended 12 IFGC Section 303.5.1 Natural Draft Appliances Locations and Section 305.1 General**

Introduced, considered favorably on first reading, and ordered published this 21st day of January, A.D. 2014, and to be presented for final passage on the 4th day of February, A.D. 2014.

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

Passed and adopted on final reading on the 4th day of February, A.D. 2014.

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Mayor

ATTEST:

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City Clerk