ORDINANCE NO. 035, 2014
OF THE COUNCIL OF THE CITY OF FORT COLLINS
AMENDING CHAPTER 9 OF THE CODE OF THE CITY OF FORT COLLINS
AND ADOPTING BY REFERENCE THE
2012 INTERNATIONAL FIRE CODE, WITH AMENDMENTS

WHEREAS, the City has previously adopted the 2006 International Fire Code ("IFC"), with amendments in order to minimize the human suffering and property loss from fire; and

WHEREAS, the 2012 edition of the IFC represents the most current version now available; and

WHEREAS, a Fire Code Review Committee, formed by the Poudre Fire Authority ("PFA") in 2012 for the purpose of reviewing the 2012 IFC, has unanimously recommended that the jurisdictions being served by the PFA adopt the 2012 IFC with certain amendments tailored to the circumstances in Fort Collins and jurisdictions served by the PFA; and

WHEREAS, the Fire Prevention staff of the PFA, working in conjunction with the Fire Code Review Committee, has also reviewed the 2012 IFC and the amendments proposed by the Committee and has recommended that the jurisdictions being served by the PFA adopt the 2012 IFC with the local amendments; and

WHEREAS, at its January 28, 2014, meeting, the PFA Board of Directors approved Resolution 14-2 recommending that the 2012 IFC with the local amendments be adopted by those jurisdictions being served by the PFA; and

WHEREAS, the City Council has determined that it is in the best interests of the health, safety and welfare of the City and its citizens that the 2012 IFC with the local amendments in substantially the form recommended by the Fire Code Review Committee and the PFA staff be adopted.

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

Section 1. That Section 9-1 of the Code of the City of Fort Collins is hereby amended to read as follows:

Sec. 9-1. Adoption of the International Fire Code, 2012 Edition.

Pursuant to the authority conferred by Article II, Section 7 of the Charter and by Section 31-16-20 l et seq., C.R.S., there is hereby adopted by reference as the fire code of the City, for the purposes of safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises, International Fire Code, ~~2006~~2012 Edition, as promulgated by the International Code Council, Inc. Except as any portion of this fire code is herein after added to, deleted, modified or amended in this Chapter, this fire code shall include all

articles and appendices in the International Fire Code, ~~2006~~2012 Edition. Not less than three (3) copies of this fire code shall be on file in the office of the Fire Marshal and may be inspected at regular business hours and purchased from the Fire Prevention Bureau at a price not to exceed ~~eighty-seven dollars ($87.)~~ninety-seven dollars ($97.) per copy. The provisions of this fire code shall be controlling within the limits of the City of Fort Collins.

Section 2. That Section 9-2 of the Code of the City of Fort Collins is hereby repealed in its entirety and reenacted to read as follows:

Sec. 9-2. Amendments, additions, and deletions.

The following articles, sections, divisions, subsections and appendices of the International Fire Code, 2012 Edition, are hereby added, amended, deleted and renumbered to read as follows:

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

"**101.1 Title.** These regulations shall be known as the *Fire Code* of the City of Fort Collins, hereinafter referred to as 'this code.'"

(2) *Sections 103.4 Liability* and *103.4.1 Legal defense* are hereby amended to read as follows:

"**103.4 Liability.** The *fire code official*, member of the board of appeals, officer 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 all 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, unless such act or omission is willful and wanton, as provided in the Colorado Governmental Immunity Act, Section 24-10-101 *et seq*., C.R.S."

"**103.4.1 Legal defense.** Any suit instituted against any officer or employee because of an act or omission performed by that officer or employee ~~in the lawful discharge of duties and under the provisions of this code~~ during the performance of his or her duties and within the scope of his or her employment, unless such act or omission is willful and wanton, as provided in the Colorado Governmental Immunity Act, Section 24-10-101 *et seq.* C.R.S., shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The *fire 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; and any officer of the department of fire prevention, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith."

(3) *Section 108.1Board of appeals established* is hereby amended to read as follows:

"**108.1 Board of appeals established.** In order to hear and decide appeals of orders, decisions or determinations made by the *fire code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals to be known as the Fire Board of Appeals. The members of the City of Fort Collins Building Review Board, as appointed from time to time, shall constitute the Fire Board of Appeals. ~~The board of appeals shall be appointed by the governing body and shall hold office at its pleasure.~~ The *fire code official* shall be an ex officio member of said board but shall have no vote on any matter before the board. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *fire code official*. Application for an appeal to the board and all process and procedures for an appeal shall be as stipulated in the International Building Code, Section 113 as amended and adopted by the City of Fort Collins. This section shall not be applicable to the appeal of fees or fine amounts, which shall be appealed to the City Manager pursuant to Chapter 2, Article VI of the City Code."

(4) *Section 108.3* is hereby deleted in its entirety.

(5) *Section 109.4 Violation penalties* is hereby amended to read as follows:

"**109.4 Violation penalties.** Persons 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, repair or do work in violation of the *approved construction documents* or directive of the *fire code official*, or of a permit or certificate used under provisions of this code, shall be guilty of a misdemeanor, ~~punishable by a fine of not more than [amount] dollars or by imprisonment not exceeding [number of days], or both such fine and imprisonment~~and upon conviction shall be subject to the penalties, costs and orders as provided by Section l-15 of the City Code. Each day that a violation continues is deemed a separate offense."

(6) *Section 113.2 Schedule of permit fees* is hereby amended to read as follows:

"113.2 Schedule of permit fees. A fee for each permit shall be paid as required, in accordance with the schedule as established by the ~~applicable governing authority~~Poudre Fire Authority."

(7) *Section 113.3 Work commencing before permit issuance* is hereby amended to read as follows:

"113.3 Work commencing before permit issuance. ~~Any person who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall be subject to an additional fee established by the applicable governing authority, which shall be in addition to the required permit fees.~~ In addition to the penalties set forth in Section 109.4, any person who, before obtaining the necessary permit(s), commences any construction of, or work on, a building, structure, fire protection system, fire alarm

system, or fire extinguishing 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 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 same such subsequent violation committed within 180 days of a previous violation. Said fees and fines may be appealed to the City Manager pursuant to Chapter 2, Article VI of the City Code."

(8) *Section 202, Definitions,* is hereby amended by the addition of a new definition "FIRE CONTAINMENT AREA" which reads as follows:

"FIRE CONTAINMENT AREA. A portion of a story or basement which is totally enclosed by not less than one-hour fire-resistive construction and as prescribed in Section 709, entitled 'Fire Partitions' and Section 710, entitled 'Smoke Barriers' of the International Building Code as adopted by the City of Fort Collins. Openings other than doors and ducts shall be protected as specified in Section 715.5 of the International Building Code as adopted by the City of Fort Collins and shall be limited to a maximum of 25 percent of any one wall. Self-closing devices may be used in place of automatic closing devices on doors unlikely to be fixed open during normal conditions. Examples are doors at toilet rooms, closets and small storage rooms and similar areas."

(9) *Section 307.2.2 Time and atmospheric restrictions* is hereby added to read as follows:

"**307.2.2 Time and atmospheric restrictions.** Open burning shall only be performed when time and atmospheric conditions comply with the limits set forth in the Open Burning Permit."

(10) *Section 507.2 Type of water supply* is hereby amended to read as follows:

"**507.2 Type of water supply.** A water supply shall consist of ~~reservoirs~~ pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required sustainable fire flow."

(11) *Section 605.11.3.2.1 Residential buildings with hip roof layouts* is hereby amended to read as follows:

"**605.11.3.2.1 Residential buildings with hip roof layouts.** Panels/modules installed on residential buildings with hip roof layouts shall be located in a manner that provides a 3-foot-wide (914 mm) clear access pathway from the eave to the ridge on each roof slope where panels/modules are located. ~~The access pathway shall be located at a structurally strong location on the building capable of supporting the live load of fire fighters accessing the roof.~~

Exceptions:

1. These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.
2. These requirements shall not apply to roofs where each panel/module array area on the roof is 1,000 square feet (92.90 m²) or less in size, no continuous section of panels/modules is larger than 150 feet in length or width, a clear access pathway of not less than 12-inch-width is provided along each side of all horizontal ridges, and a clear access pathway of not less than 30-inch-width is provided from the eave to the ridge of one roof slope where panels/modules are located.
3. These requirements shall not apply to roofs where each panel/module array area on the roof is 1,000 square feet (92.90 m²) or less in size, no continuous section of panels/modules is larger than 150 feet in length or width, a clear access pathway of not less than 12-inch-width is provided along each side of all horizontal ridges, panels/modules are placed on both sides of a hip, and a clear access pathway of not less than 18-inch-width is provided along each side of such hip.
4. These requirements shall not apply to roofs where the total combined area of solar array does not exceed 33% as measured in plan view of the total roof area of the structure."

(12) *Section 605.11.3.2.2 Residential buildings with a single ridge* is hereby amended to read as follows:

"**605.11.3.2.2 Residential buildings with a single ridge.** Panels/modules installed on residential buildings with a single ridge shall be located in a manner that provides two, 3-foot-wide (914 mm) clear access pathways from the eave to the ridge on each roof slope where panels/modules are located.

Exceptions:

1. This requirement shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.
2. This requirement shall not apply to roofs where each panel/module array area on the roof is 1,000 square feet (92.90 m²) or less in size, no continuous section of panels/modules is larger than 150 feet in length or width, and a clear access pathway of not less than 12-inch-width is provided along each side of the horizontal ridge provided that:

   a. The total combined area of solar array does not exceed 33% as measured in plan view of the total roof area of the structure; or
   b. A 30-inch-wide clear access path is provided from the eave to the ridge of a roof slope where panels/modules are located."

(13) *Section 605.11.3.2.3 Residential buildings with roof hips and valleys* is hereby amended to read as follows:

"**605.11.3.2.3 Residential buildings with roof hips and valleys.** Panels/modules installed on residential buildings with roof hips and valleys shall be located no closer than 18 inches (457 mm) to a hip or a valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley that is of equal length, the panels shall be permitted to be placed directly adjacent to the hip or valley. In addition, a 12-inch-wide clear access pathway shall be provided along each side of any horizontal ridge."

Exceptions:

1. ~~These~~This requirement shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.
2. This requirement shall not apply to roofs where a 30-inch-wide clear access pathway is provided from the eave to the ridge as well as 12-inch-wide clear access pathways along each side of any horizontal ridge.

(14) *Section 605.11.3.2.5 Pathways* is hereby added to read as follows:

"**605.11.3.2.5 Pathways.** All access pathways required under this Section 605.11.3.2 shall be provided in a structurally strong location on the building capable of supporting the live load of firefighters accessing the roof."

(15) *Section 702.1 Definitions* is hereby amended to read as follows:

702.1 Definitions. The following terms are defined in Chapter 2:

DRAFTSTOP.
FIRE-RESISTANT JOINT SYSTEM.
FIREBLOCKING.
FIRE CONTAINMENT AREA.

(16) *Table 903.1 Maximum Allowable Fire Containment Area* is hereby added to read as follows:

"TABLE 903.1
MAXIMUM ALLOWABLE FIRE-CONTAINMENT AREA
(IN SQUARE FEET)
Types of Construction

Occupancy	***I A***	***I B***	***II A***	***II B***	***III A***	***III B***	***IV-HT***	***V A***	***V B***
A1	10,000	10,000	NP	NP	NP	NP	NP	NP	NP
A2,	10,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
A3, 4	10,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
B, F1, S1, S2, M, U	10,000	10,000	7,000	5,000	7,000	5,000	7,000	7,000	5,000

F2	20,000	20,000	10,000	7,000	10,000	7,000	10,000	10,000	5,000
E	10,000	10,000	7,000	5,000	7,000	5,000	7,000	7,000	5,000

NP = Not Permitted

Exception:

S2 Open parking garages in accordance with Section 406.5"

(17) *Section 903.2 Where required,* is hereby amended by adding a second exception to read as follows:

"2. Except for Group R Occupancies an automatic sprinkler system shall be installed in all buildings which are not divided into fire containment areas as specified in Table 903.1."

(18) *Section 903.2.11.1.3 Basements* is hereby amended to read as follows:

"**903.2.11.1.3 Basements.** Where any portion of a *basement* is located more than 75 feet (22 860 mm) from openings required by Section 903.2.11.1, ~~or where walls, partitions or other obstructions are installed that restrict the application of water from hose streams,~~ the *basement* shall be equipped throughout with an *approved automatic sprinkler system.*"

(19) *Section 903.3.1.2 NFPA 13R sprinkler systems* is hereby amended to read as follows:

"**903.3.1.2 ~~NFPA 13R~~ Group R sprinkler systems.** *Automatic sprinkler systems* in Group R occupancies up to and including four stories in height shall be ~~permitted to be~~ installed throughout in accordance with ~~NFPA 13R~~ Section 903.3.1.1."

(20) *Subsection 904.11.6.4 Existing automatic fire extinguishing systems* is hereby added to read as follows:

"**904.11.6.4 Existing automatic fire extinguishing systems.** Where changes in the cooking media, positioning of cooking equipment or replacement of cooking equipment occur in existing commercial cooking systems, the automatic fire extinguishing system shall be required to comply with the applicable provisions of Sections 904.11 through 904.11.4."

(21) *Section 907.2.11 Single- and multiple-station smoke alarms* is hereby amended by adding a second paragraph thereto to read as follows:

"When one or more sleeping rooms are added or created in existing Group R Occupancies, the entire building shall be provided with smoke detectors located and installed as required for new Group R Occupancies described herein."

(22) *Section 907.8.6 Excessive false alarms* is hereby added to read as follows:

"**907.8.6 Excessive false alarms.** An excessive number of false alarms shall be defined as two alarm activations for a fire alarm system within a 60-day period, provided that any such activations are not the result of a cause reasonably beyond the control of the owner, tenant or operator of the building. In the event of an excessive number of false alarms, the fire code official may order the building owner, tenant or operator of the building, or party responsible for the building to take reasonable actions necessary to prevent false alarms. These actions may include: repair or replacement of the faulty alarm components, addition of tamper proof devices, modification of system design, or repair of other building components which affect alarm system performance. The fire code official may also require the building owner, tenant or operator or party responsible for the building to obtain an approved maintenance contract with a qualified fire alarm maintenance technician as required by NFPA 72 to provide continuous maintenance service of the system."

(23) *Section 908.7 Carbon monoxide alarms* is hereby amended by deleting the exception:

~~**Exception:**~~

~~*Sleeping units* or *dwelling units* which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:~~
~~1. The *sleeping unit* or *dwelling unit* is located more than one story above or below any story which contains a fuel-burning appliance or an attached garage;~~
~~2. The *sleeping unit* or *dwelling unit* is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and~~
~~3. The building is equipped with a common area carbon monoxide alarm system.~~

(24) *Section 1007.3 Stairways, Exceptions 1, 2* are hereby amended to read as follows:

Exceptions:

1. The clear width of 48 inches (1219 mm) between *handrails* is not required in buildings not more than 4 stories above grade plane equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.

2. *Areas of refuge* are not required at *stairways* in buildings not more than 4 stories above grade plane equipped throughout by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.

(25) *Section 1007.4 Elevators* is hereby amended by adding a new *Exception 5* to read as follows:

"5. Elevators in buildings not more than 4 stories above grade plane are not required to be considered an accessible means of egress when the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2."

(26) *Section 1007.8 Two-way communication Exception 1* is hereby amended to read as follows:

"**Exception:**

1. Two-way communication systems are not required at the elevator landing ~~where the two-way communication system is provided within *areas of refuge* in accordance with Section 1007.6.3~~ of buildings not required to provide areas of refuge in accordance with Section 1007.4."

(27) *Section 1008.1.5 Floor elevation* is hereby amended by adding a second paragraph to read as follows:

"All exterior steps, slabs, walks, decks and patios serving as exterior door landings or exterior stairs shall be adequately and permanently secured in place by approved methods to prevent such landings or stairs from being undermined or subject to significant displacement due to improper placement of supporting backfill or due to inadequate anchoring methods."

(28) *Section 1008.1.5 Floor elevation* is hereby further amended by adding a new *Exception 6* to read as follows:

"6. Exterior doors serving individual dwelling units, other than the main entrance door to a dwelling unit, may open at one intervening exterior step that is equally spaced between the interior floor level above and exterior landing below, provided that the step has a minimum tread depth of 12 inches, a maximum riser height of 7 ¾ inches (7.75"), and a minimum width equal to the door width, and further provided that the door does not swing over the step."

(29) *Section 1009.15 Handrails* is hereby amended to read as follows:

"1009.15 Handrails. Stairways of more than one riser shall have *handrails* on each side and shall comply with Section 1012. Where glass is used to provide the *handrail*, the *handrail* shall also comply with Section 2407 of the International Building Code, as amended and adopted by the City of Fort Collins."

(30) *Section 1013.8 Window sills* is hereby amended to read as follows:

"1013.8 Window sills. In Occupancy Groups R-2 and R-3, one- and two-family and multiple-family dwellings, where the opening of the sill portion of an operable window is

located more than 72 inches (1829 mm) above the finished grade or other surface below, the lowest part of the clear opening of the window shall be at a height not less than ~~36 inches (915 mm)~~24 inches (304.8 mm) above the finished floor surface of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch-diameter (102 mm) sphere where such openings are located within 36 inches (915 mm) of the finished floor."

Exceptions:

1. Operable windows where the sill portion of the opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F 2006.
2. Windows whose openings will not allow a 4-inch diameter (102 mm) sphere to pass through the opening when the ~~opening~~window is in its largest opened position.
3. Openings that are provided with non-removable window fall prevention devices that comply with ASTM F 2090.
4. Windows that are provided with non-removable window opening control devices that comply with Section 1013.8.1.
5. Emergency escape and rescue windows shall be installed per Section 1029.

(31) *Section 1013.9 Below grade openings* is hereby added to read as follows:

"**1013.9 Below grade openings**. All area wells, stair wells and light wells attached to any building that are located less than 36 inches from the nearest intended walking surface and deeper than 36 inches below the surrounding ground level, creating an opening with a horizontal dimension greater than 24 inches measured perpendicular from the building, with the side walls of such well having a slope steeper than 2 horizontal to 1 vertical, shall be protected with guardrails conforming to this Section around the entire opening, or be provided with an equivalent barrier.

Exceptions:

1. The access side of stairways need not be barricaded.
2. Area wells provided for emergency escape and rescue windows may be protected with approved grates or covers that comply with Section 1029.4 of this code.
3. Covers and grates may be used over stairways and other openings used exclusively for service access or for admitting light or ventilation."

(32) *Section 1029.1 General, Exception* 1 is hereby amended to read as follows:

"**Exception:**

1. Basements with a ceiling height of less than ~~80 inches (2032 mm)~~72 inches (1828.8 mm) shall not be required to have *emergency escape and rescue openings*."

(33) *Section 1029.3.1 Minimum height from floor* is hereby added to read as follows:

"**1029.3.1 Minimum height from floor.** *Emergency escape and rescue openings* shall have the bottom of the clear opening not less than 24 inches (609.6 mm) measured from the floor."

(34) *Section 1029.5 Window wells* is hereby amended by adding an exception to read as follows:

"**Exception:**

With the window in the full open position, the bottom window well step may encroach a maximum of 12 inches (304 mm) into the minimum horizontal projection, provided the well meets the following criteria:

1. The bottom of the well is not less than 36 inches wide (914 mm), centered horizontally on the openable portion of the emergency escape and rescue door or window, and
2. An unobstructed clear horizontal projection of 36 inches (914 mm) is maintained at the centerline of the openable portion of the emergency escape and rescue door or window."

(35) *Section 5601.1.3Fireworks* is hereby amended to read as follows:

"5601.1.3 Fireworks. The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

Exceptions:

1. Storage and handling of fireworks as allowed in Section 5604.
2. ~~Manufacture, assembly and testing of fireworks as allowed in Section 5605.~~
3. The use of fireworks for ~~fireworks~~ display as allowed in Section 5608."
4. ~~The possession, storage, sale, handling and use of specific types of Division 1.4G fireworks where allowed by applicable law, ordinances and regulations, provided such fireworks comply with CPSC 16 CFR Parts 1500 and 1507 and DOTn 49 CFR Parts 100-185, for consumer fireworks.~~

(36) *Appendix A* is hereby deleted in its entirety.

(37) *Appendix B* is hereby deleted in its entirety and readopted to read as follows:

APPENDIX B
FIRE-FLOW REQUIREMENTS
FOR BUILDINGS

SECTION B101 GENERAL

"**B101.1 Scope.** The procedure for determining fire-flow requirements for buildings or portions of buildings hereafter constructed shall be in accordance with this appendix. This appendix does not apply to structures other than buildings."

SECTION B102 DEFINITIONS

"**B102.1 Definitions.** For the purpose of this appendix, certain terms are defined as follows:

FIRE-FLOW. The flow rate of a water supply, measured at 20 pounds per square inch (psi) (138 kPa) residual pressure, that is available for firefighting.

FIRE-FLOW CALCULATION AREA. The floor area, in square feet (m^2), used to determine the required fire flow."

SECTION B103 MODIFICATIONS

"**B103.1 Decreases.** The fire chief is authorized to reduce the fire-flow requirements for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire-flow requirements is impractical."

B103.2 Increases. The fire chief is authorized to increase the fire-flow requirements where conditions indicate an unusual susceptibility to group fires or conflagrations. An increase shall not be more than twice that required for the building under consideration.

B103.3 Areas without water supply systems. For information regarding water supplies for fire-fighting purposes in rural and suburban areas in which adequate and reliable water supply systems do not exist, the fire code official is authorized to utilize NFPA 1142 or the *International Wildland-Urban Interface Code."*

SECTION B104 FIRE-FLOW CALCULATION AREA

"**B104.1 General.** The fire-flow calculation area shall be the total floor area of all floor levels within the exterior walls, and under the horizontal projections of the roof of a building, except as modified in Section B104.3."

"**B104.2 Area separation.** Portions of buildings which are separated by fire walls without openings, constructed in accordance with the International Building Code, are allowed to be considered as separate fire-flow calculation areas."

"**B104.3 Type 1A and Type 1B construction.** The fire-flow calculation area of buildings constructed of Type 1A and Type 1B construction shall be the area of the three largest successive floors.

Exception:

Fire-flow calculation area for open parking garages shall be determined by the area of the largest floor."

SECTION B105 FIRE-FLOW REQUIREMENTS FOR BUILDINGS

"**B105.1 One- and two-family dwellings.** The minimum fire-flow requirements for one- and two-family dwellings shall be 1,000 gallons per minute in urban areas and 500 gallons per minute in rural areas.

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."

"**B105.2 Buildings other than one- and two-family dwellings.** The minimum fire-flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.

Exception:

A reduction in required fire-flow of up to 75 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2. The resulting fire-flow shall not be less than 1,500 gallons per minute (5678 L/min) for the prescribed duration as specified in Table B105."

TABLE B105

APPLICATION	FIRE FLOW REQUIREMENTS (gpm)	SPACING BETWEEN HYDRANTS (feet)	MAXIMUM DISTANCE FROM ANY POINT ON A STREET OR ROAD FRONTAGE TO A HYDRANT (feet)
Commercial	1500	600	300
Urban Residential	1000	800	400
Rural Residential	500	800	400

SECTION B106 REFERENCED STANDARDS

"ICC IBC—12 International Building Code B104.2, Table B105.1
ICC IWUIC—12 International Wildland-Urban Interface Code B103.3
NFPA 1142—12 Standard on Water Supplies for Suburban and Rural Fire Fighting B103.3"

(38) *Appendix C* is hereby deleted in its entirety and readopted to read as follows:

SECTION C101 GENERAL

"**C101.1 Scope.** Fire hydrants shall be provided in accordance with this appendix for the protection of buildings, or portions of buildings, hereafter constructed."

SECTION C102 LOCATION

"**C102.1 Fire hydrant locations.** Fire hydrants shall be provided along required fire apparatus access roads and adjacent public streets."

SECTION C103 NUMBER OF FIRE HYDRANTS

"**C103.1 Fire hydrants available.** The number of fire hydrants available to a complex or subdivision shall not be less than that determined by the spacing requirements listed in Table B105 when applied to fire apparatus access roads and perimeter public streets from which fire operations could be conducted."

SECTION C104 CONSIDERATION OF EXISTING FIRE HYDRANTS

"**C104.1 Existing fire hydrants.** Existing fire hydrants on public streets are considered to be available. Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are established to prevent obstruction of such roads."

SECTION C105 DISTRIBUTION OF FIRE HYDRANTS

"**C105.1 Hydrant spacing.** The average spacing between fire hydrants shall not exceed that listed in Table B105.

Exception:

1. The fire chief is authorized to accept a deficiency of up to 10 percent where existing fire hydrants provide all or a portion of the required fire hydrant service.

2. Regardless of the average spacing, fire hydrants shall be located such that all points on streets and access roads adjacent to a building are within the distances listed in Table B105."

(39) *Appendix D* is hereby deleted in its entirety and readopted to read as follows.

APPENDIX D
FIRE APPARATUS ACCESS ROADS

SECTION D101 - GENERAL.

"D10l.1 Scope. Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*."

SECTION D102 - REQUIRED ACCESS.

"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 80,000 pounds (36,287 kg)."

"D102.2 Access road construction. All access roadways must be all-weather driving surfaces capable of supporting fire apparatus. Surface shall be asphalt, concrete, or compacted road base.

Compacted road base or chip shall only be used for a temporary emergency access. Temporary access shall be available as long as the site is under construction. Thereafter, permanent fire lanes shall be accessible and unobstructed at all times. All permanent points of access shall be hard decks consisting of asphalt or concrete designed to HS 20 or support 40 ton. All required access roads must be installed and serviceable before above-ground construction begins.

SECTION D103 - MINIMUM SPECIFICATIONS.

"D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm) exclusive of shoulders. (See Figure D103.1)."

"D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Exception:

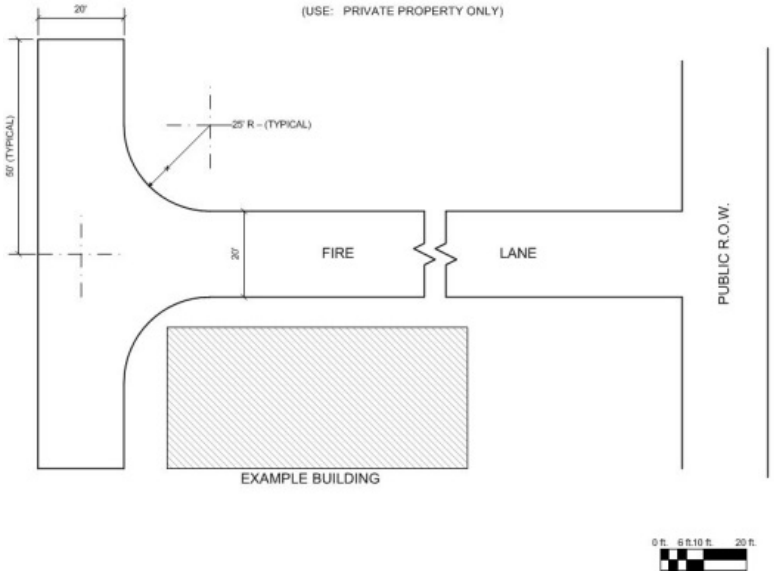
Grades steeper than 10 percent as approved by the fire code official."

"D103.3 Turning radius. The minimum turning radius shall be 25 feet inside radius and 50 feet outside radius."

Figure D 103.1

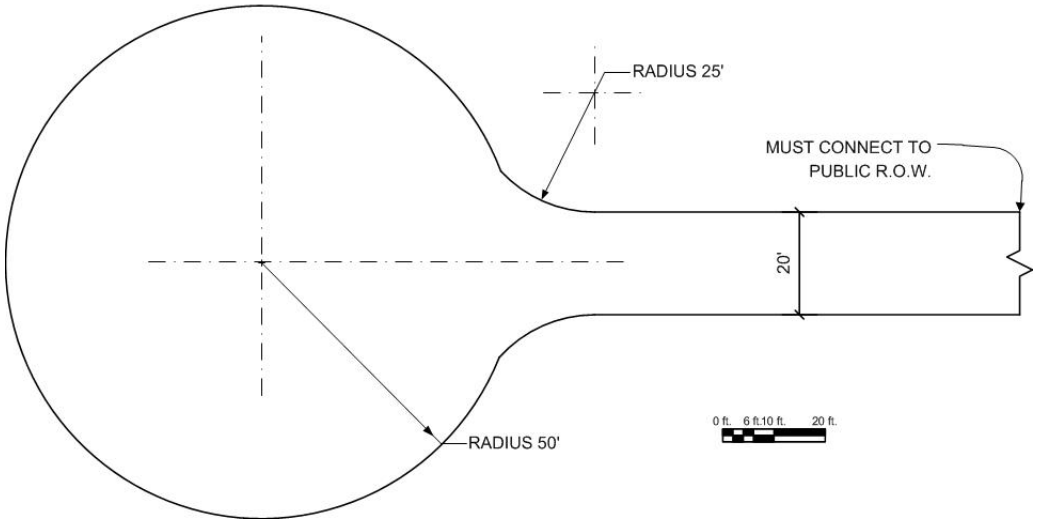
100' HAMMERHEAD
EMERGENCY ACCESS EASEMENT

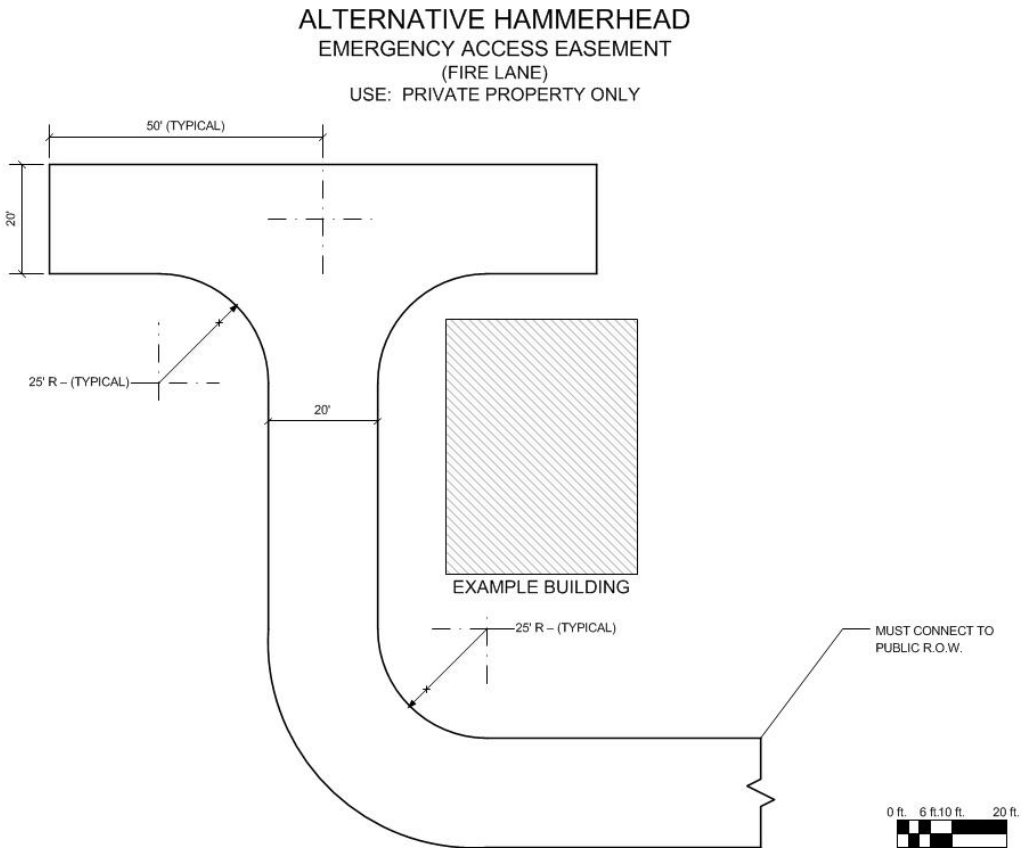
(USE: PRIVATE PROPERTY ONLY)



100' DIAMETER
CUL-DE-SAC

FOR USE ON PUBLIC OR PRIVATE PROPERTY





"D103.4 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4."

TABLE D103.4
REQUIREMENTS FOR DEAD-END
FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	**WIDTH (feet)**	**TURNAROUNDS REQUIRED**
0-150	20	None required
151-660	20	100-foot hammerhead, 100-foot Cul-de-sac in accordance with Figure D103.1
Over 660	Special Approval Required	

"D103.4.1 Second Point of Access Required. A second point of access shall be required when the primary access roadway exceeds 660 feet in length, measured as the hose would lay."

"D103.4.2 Third Point of Access Required. A third point of access shall be required when any access road exceeds a distance of 1,320 feet (1/4 mile) in length, measured as the hose would lay."

"D103.4.3 Fourth Point of Access Required. A fourth point of access shall be required when access road exceeds a distance of 2,640 feet (1/2 mile) in length, measured as the hose would lay."

"D103.4.4 Access location. Where two or more points of access are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line."

"D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means by which the gate may be opened by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools or when a key box containing the key(s) to the lock is installed at the gate location.
7. Gate design and locking device specifications shall be submitted for approval by the fire code official prior to installation.
8. Electric gate operators, where provided, shall be listed in accordance with UL325.
9. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200."

"D103.6 Signs. Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING-FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required."

Figure D103.6

"D103.6.1 Roads 20 to 26 feet in width. Fire apparatus access roads 20 to 26 feet wide (6096 to 7925 mm) shall be posted on both sides as a fire lane."

"D103.6.2 Roads more than 26 feet in width. Fire apparatus access roads more than 26 feet wide (7925 mm) to 32 feet wide (9754mm) shall be posted on one side of the road as a fire lane."

SECTION D104 - COMMERCIAL AND INDUSTRIAL DEVELOPMENTS

"D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall provide fire apparatus access for each structure at least 30 feet in width."

"D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m²) shall be provided with two separate and approved fire apparatus access roads."

Exception:

Projects having a gross building area of up to 124,000 square feet (11,520 m²) that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems."

"D104.3 Remoteness. Where two access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses."

SECTION D105 - AERIAL FIRE APPARATUS ACCESS ROADS

"D105.1 Where required. Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet (9144 mm), approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be

determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater."

"D105.2 Width. Fire apparatus access roads shall have a minimum unobstructed width of 30 feet (7925 mm) in the immediate vicinity of any building or portion of building more than 30 feet (9144 mm) in height."

"D105.3 Proximity to building. At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet (4572 mm) and a maximum of 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building."

"D105.4 Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the *fire code official*."

SECTION D106 - MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS

"D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped, throughout the entire project, with two separate and approved fire apparatus access roads.

Exception:

Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2."

"D106.2 Projects having more than 200 dwelling units. Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system."

SECTION D107 - ONE- OR TWO-FAMILY RESIDENTIAL DEVELOPMENTS

"D107.1 One- or two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with separate and approved fire apparatus access roads and shall meet the requirements of Section D104.3.

Exceptions:

1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an

approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.3, access from two directions shall not be required.

2. The number of dwelling units on a single fire apparatus access road shall not exceed 30 dwelling units unless fire apparatus access roads will connect with future development, as determined by the fire code official."

SECTION D108 - REFERENCED STANDARDS

ASTM F 2200—05 Standard Specification for Automated Vehicular Gate Construction
ICC IFC—12 International Fire Code
UL 325—02 Door, Drapery, Gate, Louver, and Window Operators and Systems, with Revisions through February 2006

(40) *Appendix H* is hereby adopted in its entirety.

(41) *Appendix I* is hereby adopted in its entirety.

Introduced, considered favorably on first reading, and ordered published this 4th day of March, A.D. 2014, and to be presented for final passage on the 18th day of March, A.D. 2014.

_____
Mayor

ATTEST:

_____
City Clerk

Passed and adopted on final reading on this 18th day of March, A.D. 2014.

_____
Mayor

ATTEST:

_____
City Clerk