



WORKSESSION MEMORANDUM

DEPARTMENT	PRESENTED BY	DATE
Administration	Christy Doon - Interim City Administrator	November 20, 2023

ITEM

Discussion with Chaffee County regarding the adoption of the 2021 IECC and other associated codes

BACKGROUND

The City of Salida, though an IGA, utilizes the Chaffee County Building Department to provide the same services to Salida. Section 2 of our IGA with the County regarding Building Department services states that both parties agree that the “existing Building Codes of the City and County remain substantially similar and no changes to the City Codes are required until such time as the City and County adopt new Codes, recognizing that there are some local amendments which each jurisdiction has independently adopted.”

Furthermore, Section 4 states that the “City shall, within 90 days, adopt changes to their Building Code to reflect changes to the County Code as adopted by the County from time to time. The County shall work with the City during the Code adoption process to ensure adopted Codes are acceptable to both entities.”

In 2021, through Resolution 2021-02, the City of Salida Council expressed its support of the adoption of either the 2018 or the 2021 version of the International Energy Conservation Code and urging Chaffee County and its building department to formally adopt the same.

In 2022 the State Legislature passed [HB22-1362](#) requiring all local governments to transition to the 2021 International Energy Conservation Code during their next building code update, or by January 1, 2026, which ever happens first. In late 2022/early 2023, Chaffee County began holding community meetings to start conversations regarding the updates to the various codes which would be affected by the adoption of the 2021 IECC.

The City and County have the option to also make amendments within a choice of 3 sets of requirements: Electric Ready, Electric Preferred and Electric Required.

The Salida Fire Department plans to update to the 2021 International Fire Code. By moving to the new code set, the city will align not only with Chaffee County but also with the Colorado Division of Fire Prevention and Control. Colorado Division of Fire Prevention and Control frequently performs the city’s fire sprinkler inspections. We will continue to have amendments in place that will be included in the adoption of the new fire code. One substantial code amendment is the definition of residential group R-3. With this amendment, all R-3 occupancies would be required to have fire sprinklers. This allows four units or less buildings not to be required to have fire sprinklers.

Questions the Council may wish to consider or discuss during the work session:

1. What are the increased sustainability aspects of the new code, including any electric amendment?
2. What are the costs to design and construction or affordable housing units with the adoption of these codes?

Attachments:

2021 International Building Code Amendments
Electric Preferred Code Amendments Fact Sheet

Electric Preferred Amendments Template
Electric Preferred Presentation

The text in black identifies code amendments that were passed with the adoption of the 2015 series of I codes. We are proposing to continue with these code amendments with this current adoption. The text in blue are new proposed amendments for the 2021 series of I codes.

Exhibit A to Ordinance 2023-01

Amendments to the 2021 International Building Code

Adopted by reference as if set out in length the “International Building Code, 2021 Edition”, Chapters 1 – 35 including Appendix Chapters C, [G](#), [H](#) and [I](#) as published by the International Code Council Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795. The following amendments are made to the International Building Code, 2021 Edition.

CHAPTER 1 SCOPE AND ADMINISTRATION

SECTION 101 SCOPE AND GENERAL REQUIREMENTS

[A] 101.1 Title.

[Amend this subsection to read as follows:]

These regulations shall be known as the *Building Code* of Chaffee County, Colorado, hereinafter referred to as “this code.”

[A] 101.4.3 Plumbing.

[Delete:] “*International Private Sewage Disposal Code*” and replace with “*Chaffee County On-Site Wastewater Treatment System Regulations*.”

SECTION 103 CODE COMPLIANCE AGENCY

[A] 103.1 Creation of enforcement agency.

[Add to section:] “*Chaffee County Building Safety Department*”

SECTION 105 PERMITS

[A] 105.1.1 Annual Permit.

[Delete this subsection in its entirety.]

[A] 105.1.2 Annual Records.

[Delete this subsection in its entirety.]

[A] 105.2 Work exempt from permits.

Building:

[Delete in entirety and replace with:]

1. "One-story detached accessory structures used as tool sheds, storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet. **Such structures shall not be used as habitable spaces, sleeping rooms or for vehicle storage. Structures that have a roof overhang greater than 24", measured on a horizontal plane from the exterior wall, shall be subject to permitting.**

Any electrical, mechanical or plumbing work performed on such structures shall require permitting and inspection."

[Add to the beginning of this exception:]

5. "Other than cisterns for fire and domestic water supply tanks..."

SECTION 107

CONSTRUCTION DOCUMENTS

[A] 107.2.1 Information on construction documents.

[Add:] "Plans shall also include location of utilities, private well and wastewater sites, ditches, rivers, lakes, drainages, slopes greater than 30%, accesses and road grades at access to Rights-of-way."

SECTION 113

MEANS OF APPEAL

[A] 113.1 General.

All references to the Board of Appeals shall be amended to read the Board of Review, as appointed by the Chaffee County Board of County Commissioners.

**CHAPTER 2
DEFINITIONS**

SECTION 202

DEFINITIONS

[Add the following:]

BEDROOM. See Sleeping room.

SLEEPING ROOM. A sleeping room or bedroom herein is defined as a habitable space, which may be used for sleeping which contains a closet 16 inches or greater in depth, an emergency escape and rescue opening and a smoke alarm.

**CHAPTER 3
OCCUPANCY CLASSIFICATION AND USE**

**SECTION 310
RESIDENTIAL GROUP R**

[A] 310.4 Residential Group R-3. Residential Group R-3 occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I including:

Change to *“Buildings that do not contain more than **four** dwelling units.”*

(All other text in this section to remain unchanged.)

**CHAPTER 5
GENERAL BUILDING HEIGHTS AND AREAS**

**SECTION 502
BUILDING ADDRESS**

[F] 502.1 Address identification.

[Delete this subsection in its entirety and amend to read as follows:]

All buildings, new and existing (when required) shall be provided with an approved permanent address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address signage placed at the roadway, street or driveway shall be placed a minimum of thirty (30) inches above the grade. Address identification characters shall contrast with their background and be reflective. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches in height with a stroke width of not less than ½ inch. Where required by the code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign shall be used to identify the structure. Address identification shall be posted at the start of construction (prior to the first required inspection.) The permanent address identification shall be completed and installed prior to the final building inspection and shall thereafter be maintained by the property owner.

Exception:

1. Alteration of the character height and stroke width requirements may be approved by the Fire Protection District having jurisdiction authority.

**CHAPTER 9
FIRE PROTECTION AND LIFE SAFETY SYSTEMS**

**SECTION 903
AUTOMATIC SPRINKLER SYSTEMS**

[F] **903.2.8 Group R.** An *automatic sprinkler system* installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R *fire area*.

[Add:] **“Exception: Group R-3 portions of buildings not more than 3 stories above grade plane and not required to be provided with an automatic sprinkler system by other sections of this code.”**

(All other text in this section to remain unchanged.)

**CHAPTER 15
ROOF ASSEMBLIES AND ROOFTOP STRUCTURES**

**SECTION 1503
WEATHER PROTECTION**

[Add new subsection to read as follows:]

1503.2.2 Penetrations.

Roof jacks, vents and similar roof penetrations shall not be located less than 24 inches from the center of a valley to the closest edge of the penetration.

**CHAPTER 16
STRUCTURAL DESIGN**

**SECTION 1604
GENERAL DESIGN REQUIREMENTS**

1604.1 General.

[Amend to read as follows:]

Commercial building structures and all portions thereof shall be designed by a Colorado Licensed Architect or Engineer. This shall include without limitation: soils, footings, foundations, structural building design, calculations, loads, energy, electrical, mechanical, plumbing and elevators. All plan submittals, as identified above, shall bear the stamp and signature of the appropriate Colorado Licensed Architect or Engineer, except as provided in Article 27 of the National Electric Code. The *Building Official* may waive these requirements when in accordance with Colorado State statutes.

**SECTION 1608
SNOW LOADS**

1608.1 General.

[Add:] *“, but in no case shall they be permitted to be reduced to less than 35 pounds per square foot.”*

1608.2 Ground snow loads.

[Amend to read as follows:]

The ground snow loads to be used in determining the design snow loads for roofs shall be determined in accordance with Figure 1608.2(1), the Chaffee County Snow Load Zones Map and the Elevation and Snow Load Zone Table. Ground snow loads for sites at elevations above the limits indicated in Figure 1608.2(1) and for all sites within the CS areas shall be determined from the Chaffee County Snow Load Zones Map and the Elevation and Snow Load Zone Table. Design snow loads may be reduced in accordance with ASCE 7, but in no case shall they be permitted to be reduced to less than 35 pounds per square foot.

1609.3. Basic design wind speed. [Replace this section to read:]

“The basic design wind speed, V, in mph, within the entirety of Chaffee County, Colorado, shall be 115 miles per hour (ultimate design wind speed.)

1809.5 Frost protection. Except where otherwise protected from frost, foundations and other permanent supports of buildings or structures shall be protected from frost by one or more of the following methods:

1. [Delete in its entirety and replace with:]

1. Extending a minimum of 24 inches below finished grade for locations up to 8,000 feet of elevation above sea level, a minimum of 30 inches below finished grade for locations with an elevation between 8,001 – 10,000 feet above sea level and 36 inches below finished grade for locations with an elevation of greater than 10,000 feet above sea level.

(All other text in this section to remain unchanged.)

**CHAPTER 27
ELECTRICAL**

**SECTION 2701
GENERAL**

2701.1 Scope.

[Delete subsection in its entirety and replace to read as follows:]

The provisions of the National Electric Code (NEC) , adopted by the State of Colorado and the Chaffee County Board of County Commissioners, shall apply to the installation of electrical systems, including without limitation: alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

**CHAPTER 29
PLUMBING SYSTEMS**

**SECTION 2901
GENERAL**

[P] 2901.1 Scope.

[Delete:]

“International Private Sewage Disposal Code” and replace with “Chaffee County On-Site Wastewater Treatment Regulations.”

**CHAPTER 33
SAFEGUARDS DURING CONSTRUCTION**

**SECTION 3303
DEMOLITION**

3303.1 Construction documents.

[Add to end of subsection to read as follows:]

It shall be the responsibility of the owner, owner’s authorized agent, permit applicant or contractor to comply with State of Colorado regulations with regard to demolition and the removal of asbestos or lead-based paint. A permit for demolition and/or asbestos remediation is required to be issued prior to the start of demolition or remediation.

**CHAPTER 35
REFERENCED STANDARDS**

Referenced Standards.

Delete references to *“IPSDC-21 International Private Sewage Disposal Code”*.

Exhibit B to Ordinance 2023-01

Amendments to the 2021 International Residential Code

Adopted by reference as if set out in length the “International Residential Code, 2021 Edition”, Chapters 1 – 44 including [Appendix Chapters AA, AB, AC, AG, AH, AJ, AN and AQ](#) as published by the International Code Council Inc., 4501 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795. The following amendments are made to the International Residential Code, 2021 Edition.

CHAPTER 1

SCOPE AND ADMINISTRATION

SECTION R101

SCOPE AND GENERAL REQUIREMENTS

R101.1 Title. [Amend this subsection to read as follows:]

These provisions shall be known as the *Residential Code for One- and Two-Family Dwellings and Townhouses not more than three (3) stories in height above grade plane with a separate means of egress and their accessory structures of Chaffee County, Colorado*, and shall be cited as such and will be referred to herein as “this code.”

SECTION R102

APPLICABILITY

R102.4.1 Conflicts.

[Delete subsection in its entirety and amend to read as follows:]

[When conflicts occur between provisions of this code and referenced codes and standards, the provisions of the most current version of the National Electric Code \(NEC\), as adopted by the Chaffee County Board of County Commissioners, shall apply. The National Electric Code shall apply to the installation of electrical systems, including without limitation: alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto and reference the most current version of the National Electric Code \(NEC\), as adopted by the Chaffee County Board of County Commissioners.](#)

SECTION R105

PERMITS

R105.2 Work exempt from permit.

[Delete #1 & replace with the following and add #11.:]

1. “One-story detached accessory structures used as tool sheds, storage sheds, playhouses and similar uses, provided the floor area does not exceed 200 square feet. [Such structures shall not be used as habitable spaces, sleeping rooms or for vehicle storage. Structures that have a roof overhang greater than 24”, measured on a horizontal plane from the exterior wall, shall be subject to permitting.](#) Any electrical, mechanical or plumbing work performed on such structures shall require permitting and inspection.”

[#11. “Temporary membrane structures such as canopies or tents used for residential events.”](#)

SECTION R108

FEES

R108.5 Refunds.

[Delete entire section & add:]

The *building official* may authorize the refunding of any fee paid hereunder which was erroneously paid or collected. The *building official* may authorize the refunding of not more than 80% of the permit fee paid when no work has been done under a permit issued in accordance with the code. The *building official* may authorize refunding of not more than 80% of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or cancelled before any plan review has been done. The *building official* shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of the fee payment.

SECTION R109

INSPECTIONS

R109 Inspections.

[Add new subsections R109.1.1.1 Damp proofing and R109.1.1.2 Foundation drainage:]

R109.1.1.1 Damp proofing.

All required damp proofing shall be inspected prior to backfill and shall remain exposed and uncovered until inspection approval is received.

R109.1.1.2 Foundation drains.

All required foundation drains shall be inspected prior to backfill and shall remain exposed and uncovered until inspection approval is received.

SECTION R112

BOARD OF APPEALS

R112.1 General.

All references to the Board of Appeals shall be changed to read the Board of Review as appointed by the Chaffee County Board of County Commissioners.

CHAPTER 2 DEFINITIONS

SECTION R202 DEFINITIONS

[Add the following:]

BEDROOM. See Sleeping Room.

SLEEPING ROOM. A sleeping room or bedroom herein is defined as a habitable space, which may be used for sleeping which contains a closet 16 inches or greater in depth, an emergency escape and rescue opening and a smoke alarm.

TINY HOME. A *dwelling* that is permanently constructed on a vehicle chassis, is designed for long-term residency, includes electrical, mechanical or plumbing services that are fabricated, formed or assembled at a location other than the site of the completed home, is not self-propelled and that is 400 square feet or less in floor area excluding *lofts*. A Tiny Home may be installed on a temporary or permanent foundation.

TINY HOUSE. A *dwelling* that is 400 square feet or less in floor area excluding *lofts*. A Tiny House may only be installed on a permanent foundation.

CHAPTER 3 BUILDING PLANNING

SECTION R301 BUILDING PLANNING

Table R301.2(1)

Climatic and Geographic Design Criteria.

[Shall be amended to read:]

Ground Snow Load: In accordance with Snow Load Map and Elevation/Zone Table

Wind Speed: 115 mph (ultimate design wind speed)

Topographic Effects: No

Special Wind Region: No

Wind-borne Debris Zone: No

Seismic Design Category: C unless geotechnical study indicates otherwise

Weathering: Severe

Frost Line Depth:

0 feet to 8,000 feet above sea level – 24" below finished grade

8,001 feet to 10,000 feet above sea level – 30" below finished grade

10,001 feet and above – 36" below finished grade

Termite: None to slight

Ice Barrier Underlayment Required: Yes, per 2021 International Residential Code R905.1.2
Flood Hazards: Entered NFI Program 02/10/87 through Resolution 1987-7, Flood Insurance Study Dated 03/04/87, Panel Numbers all begin with 08015C and are followed by; 0025, 0075, 0100, 0150, 0200, 0300, 0304, 0307, 0308, 0309, 0315, 0328, 0330, 0335, 0340, 0425, 0428, 0429, 0430, 0435, 0445, 0455, 0460, 0465, 0470, 0541, 0542, 0555, 0560, 0562, 0566, 0568, 0568, 0580, 0585, 0588, 0589, 0591, 0592, 0593, 0594, 0611, 0613, 0615, 0625, 0660, 0677, 0680 all followed by suffix D (48 panels plus index)
Air Freezing Index: 1,500
Mean Annual Temp: 40 ° F.

Manual J Design Criteria

Elevation: 7300

Latitude: 38°

Altitude Correction Factor:

8,000 ft. – 0.75

9,000 ft. – 0.72

10,000 ft. – 0.69

12,000 ft. – 0.63

Daily Range: H

Coincident Wet Bulb: 55° F.

Indoor Summer Design Relative Humidity: 45%

Indoor Winter Design Dry-bulb Temperature: 70° F.

Summer Design Gains: 2 BTUH/Hr./SF or 0.5W/SF

Indoor Summer Design Dry-bulb Temperature: 75° F.

Outdoor Winter Design Dry-bulb Temperature: -10° F.

Outdoor Summer Design Dry-bulb Temperature: 90° F.

Heating Temperature Difference: 80° F.

Cooling Temperature Difference: 15° F.

SECTION R302

FIRE-RESISTANT CONSTRUCTION

R302.13 Fire Protection of Floors.

[Delete subsection in its entirety.]

SECTION R313

AUTOMATIC FIRE SPRINKLER SYSTEMS

R313.1 Townhouse automatic fire sprinkler systems.

[Delete in its entirety.]

R313.2 One and two-family dwellings automatic sprinkler systems.

[Delete in its entirety.]

**SECTION R315
CARBON MONOXIDE ALARMS**

R315.3 Location.

[Amend this subsection to read as follows:]

Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping room or area, within 15 feet of the entrance to each sleeping room or area. Alarms shall be installed in dwelling units which contain fuel-fired appliances and in dwelling units with an attached garage that has an opening that communicates with the dwelling unit. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

**SECTION 319
SITE ADDRESS**

R319.1 Address identification.

[Delete subsection in its entirety and amend to read as follows:]

All buildings, new and existing (when required) shall be provided with an approved permanent address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address signage placed at the roadway, street or driveway shall be placed a minimum of thirty (30) inches above the grade. Address identification characters shall contrast with their background and be reflective. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches in height with a stroke width of not less than ½ inch. Where required by the code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign shall be used to identify the structure. Address identification shall be posted at the start of construction (prior to the first required inspection.) The permanent address identification shall be completed and installed prior to the final building inspection and shall thereafter be maintained by the property owner.

Exception:

1. Alteration of the character height and stroke width requirements may be approved by the Fire Protection District having jurisdiction authority.

**CHAPTER 4
FOUNDATIONS**

**SECTION R402
MATERIALS**

R402.1 Wood Foundations.

[Amend this subsection to read as follows:]

Wood foundation systems shall be designed by a Colorado Licensed Architect or Engineer.

**SECTION R403
FOOTINGS**

R403.1 General.

[Delete last sentence and replace with:]

“Footings shall be designed by a Colorado Licensed Architect or Engineer or be designed and constructed in accordance with the Chaffee County Minimum Footing and Foundation Requirements contained in Exhibit M.”

R403.1.4.1 Frost Protection.

[Delete #3 and #4 and replace with:]

3. Constructed in accordance with the Chaffee County Minimum Footing and Foundation Requirements contained in Exhibit M.
4. Erected on solid rock using a design prepared by a Colorado Licensed Architect or Engineer.

**SECTION R404
FOUNDATION AND RETAINING WALLS**

R404.1.3 Concrete foundation walls.

[Delete entire section and replace with:]

Concrete foundation walls that support light-frame walls shall be designed by a Colorado Licensed Architect or Engineer or be designed and constructed in accordance with the Chaffee County Minimum Footing and Foundation Requirements contained in Exhibit M. Concrete foundation walls that support above-grade concrete walls that are within the applicability limits of Section R608.2 shall be designed by a Colorado Licensed Architect or Engineer or be designed and constructed in accordance with the Chaffee County Minimum Footing and Foundation Requirements contained in Exhibit M. Concrete foundation walls that support above-grade concrete walls that are not within the applicability limits of Section R608.2 shall be designed by a Colorado Licensed Architect or Engineer.

**CHAPTER 5
FLOORS**

**SECTION R507
EXTERIOR DECKS**

R507.2.4 Flashing.

[Add the following sentence:]

Water-resistive barrier shall be placed between the deck ledger and the structure substrate.

R507.3.1 Minimum size.

[Delete entire subsection and replace with the following:]

“Footings for decks shall be designed by a Colorado Licensed Architect or Engineer or be designed and

constructed in accordance with the Chaffee County Minimum Footing and Foundation Requirements contained in Exhibit M.”

R507.3.2 Minimum depth.

[Delete the entire subsection and replace with the following:]

“Deck footings shall be extended below the frost line as specified in Table R301.2.”

R507.9.2 Lateral connection.

[Delete the entire subsection:]

**CHAPTER 9
ROOF ASSEMBLIES**

**SECTION R903
WEATHER PROTECTION**

R903.2.3 Penetrations.

[Add new subsection to read as follows:]

Roof jacks, vents and similar roof penetrations shall not be located less than 24 inches from the center of a valley to the closest edge of the penetration.

**CHAPTER 10
CHIMNEYS AND FIREPLACES**

**SECTION R1004
FACTORY-BUILT FIREPLACES**

R1004.4 Unvented gas log heaters.

[Delete this subsection in its entirety.]

**CHAPTER 24
FUEL GAS**

**SECTION G2406 (303)
APPLIANCE LOCATION**

G2406.2 (303.3) Prohibited locations.

[Delete Exception 3. In its entirety.]

[Delete Exception 4. In its entirety.]

SECTION G2414 (403)

PIPING MATERIALS

G2414.3 (403.4.3) Copper or copper-alloy tubing.

[Delete entire subsection and replace with the following:]

Copper and copper-alloy piping shall not be used on natural gas systems.

SECTION G2445 (621)

UNVENTED ROOM HEATERS

G2445 (621) Unvented room heaters.

[Delete the entire section and replace with the following:]

Unvented room heaters are prohibited.

CHAPTER 25 PLUMBING ADMINISTRATION

SECTION 2503

INSPECTION AND TESTS

P2503.6 Shower liner test.

[Delete this subsection in its entirety.]

CHAPTER 26 GENERAL PLUMBING REQUIREMENTS

SECTION P2601

GENERAL

P2601.1 Scope.

[Delete this subsection in its entirety and amend to read as follows:]

The provisions of this chapter and the *2021 International Plumbing Code*, as amended and adopted by the State of Colorado and as adopted by the Chaffee County Board of County Commissioners shall govern the installation of plumbing, appliances, equipment and plumbing systems. If there is a conflict between this code and the *2021 International Plumbing Code*, as amended and adopted by the State of Colorado and the Chaffee County Board of County Commissioners, the more restrictive shall govern.

SECTION P2602

INDIVIDUAL WATER SUPPLY AND SEWAGE DISPOSAL

P2602.1 General.

[Delete:] "*International Sewage Disposal Code*" and replace with "*Chaffee County On-site Wastewater Treatment System Regulations*."

SECTION P2603
STRUCTURAL AND PIPING PROTECTION

P2603.5.1 Sewer Depth.

[Complete subsection to read;]

Building sewers that connect to private sewage disposal systems shall not be less than 24 inches below finished grade at the point of septic tank connection. Building sewers shall not be less than 24 inches below grade. *When site restrictions negate the ability to comply with this minimum depth requirement, an alternate design shall be submitted to the building official for approval.*

CHAPTER 29
WATER SUPPLY AND DISTRIBUTION

SECTION P2901
GENERAL

P2901.1 Potable water required.

[Delete from subsection:]

...treated rainwater, treated graywater or

SECTION P2904
DWELLING UNIT FIRE SPRINKLER SYSTEMS

P2904.1 General.

[Add to the beginning of this subsection.]

Automatic fire sprinkler systems are not required to be installed in one- or two-family dwellings and townhouses. Automatic fire sprinkler systems that are installed in one- and two-family dwellings and townhouses shall comply with the regulations and requirements of Section P2904.

SECTION P2913
RECLAIMED WATER SYSTEMS

P2913.1 General.

[Add as last sentence to subsection:]

The use and application of non-potable water shall comply with laws, rules and ordinances applicable in the jurisdiction.

CHAPTER 30
SANITARY DRAINAGE

SECTION P3009
GRAYWATER SOIL ABSORPTION SYSTEMS

[Delete this section in its entirety:]

APPENDIX AQ
TINY HOUSES

SECTION AQ102
DEFINITIONS

AQ102.1 General.

[Add the following definitions to this subsection:]

TINY HOME. A *dwelling* that is permanently constructed on a vehicle chassis, is designed for long-term residency, includes electrical, mechanical or plumbing services that are fabricated, formed or assembled at a location other than the site of the completed home, is not self-propelled and that is 400 square feet or less in floor area excluding *lofts*. A Tiny Home may be installed on a temporary or permanent foundation.

TINY HOUSE. A *dwelling* that is 400 square feet or less in floor area excluding *lofts*. A Tiny House may only be installed on a permanent foundation.

Exhibit C to Ordinance 2023-01

Amendments to the 2021 International Fire Code

Adopted by reference as if set out in length the “International Fire Code, 2021 Edition” Chapters 1 – 80 including Appendix Chapters B, C, D, H and I as published by the International Code Council Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois 60478-5795. The following amendments are made to the International Fire Code, 2021 Edition.

SECTION 101

SCOPE AND ADMINISTRATION

SECTION 101

SCOPE AND GENERAL REQUIREMENTS

[A] 101.1 Title.

[Amend subsection to read as follows:]

These regulations shall be known as the *Fire Code* of Chaffee County, Colorado, hereinafter referred to as “this code.”

SECTION 102

APPLICABILITY

[A] 102.1 Construction and design provisions.

[Add as last sentence to this subsection.]

This Fire Code shall not apply to structures governed by the International Residential Code, specifically one- and two-family dwellings and townhouses or to those agricultural and other buildings exempt from building permits. Existing buildings and structures built in compliance with the codes in effect at the time of construction are not subject to the requirements of this code, except for commercial, industrial or multi-family residential structures being renovated or altered.

SECTION 103

CODE COMPLIANCE AGENCY

[A] 103.1 Creation of agency.

[Delete subsection in its entirety and amend to read as follows:]

The Chaffee County Building Safety Department is hereby established as the Authority Having Jurisdiction (AHJ) with respect to the structure related portions of active permits. The Chaffee County Fire Protection District and South Arkansas Fire Protection District are hereby established as the Authority Having Jurisdiction (AHJ) within their respective boundaries for all other provisions of this code, specifically including fire suppression supply requirements.

**SECTION 105
PERMITS**

[A] 105.1 General.

[Add to beginning of subsection to read as follows:]

The Chaffee County Building Safety Department is responsible for the issuance of construction permits in accordance with the requirements of the Building Codes as adopted by Chaffee County. When conflicts between the Chaffee County Building Codes and the Fire Code requirements for application, issuance, posting, inspection and enforcement for construction permits occur, the adopted Chaffee County Building Codes shall govern.

**SECTION 111
MEANS OF APPEALS**

[A] 111.1 Board of Appeals.

[Add as last sentence of this subsection.]

The Board of Appeals shall be the Chaffee County Board of Review, as appointed by the Chaffee County Board of County Commissioners.

[A] 111.3 Qualifications.

[Delete this subsection in its entirety.]

**SECTION 202
GENERAL DEFINITIONS**

[BG] Group R, Residential

[BG] Residential Group R-3.

[Amend to read as follows:]

Buildings that do not contain more than four dwelling units.

[All other text in this section to remain unchanged]

**SECTION 307
OPEN BURNING, RECREATIONAL FIRES AND
PORTABLE OUTDOOR FIREPLACES**

307.1 General.

[Delete entire subsection and amend to read as follows;]

All open burning shall be in accordance with [Ordinance 2018-03](#), as adopted by the Chaffee County Board of County Commissioners.

307.2 Permit Required.

[Delete subsection in its entirety.]

307.3 Extinguishment authority.

[Delete subsection in its entirety.]

**CHAPTER 5
FIRE SERVICE FEATURES**

**SECTION 505
PREMISES IDENTIFICATION**

505.1 Address identification.

[Delete subsection in its entirety and amend to read as follows:]

All buildings, new and existing (when required) shall be provided with an approved permanent address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address signage placed at the roadway, street or driveway shall be placed a minimum of thirty (30) inches above the grade. Address identification characters shall contrast with their background and be reflective. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches in height with a stroke width of not less than ½ inch. Where required by the code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign shall be used to identify the structure. Address identification shall be posted at the start of construction (prior to the first required inspection.) The permanent address identification shall be completed and installed prior to the final building inspection and shall thereafter be maintained by the property owner.

Exception:

1. Alteration of the character height and stroke width requirements may be approved by the Fire Protection District having jurisdiction authority.

**SECTION 510
EMERGENCY RESPONDER
COMMUNICATION COVERAGE**

**SECTION 510
EMERGENCY RESPONDER RADIO COVERAGE**

[Delete section in its entirety and amend to read as follows:]

The Fire Chief of the Authority Having Jurisdiction (AHJ) may require signal boosters if deemed necessary.

**CHAPTER 9
FIRE PROTECTION AND LIFE SAFETY SYSTEMS**

**SECTION 903
AUTOMATIC SPRINKLER SYSTEMS**

903.2.8 Group R.

[Amend this subsection to read as follows:]

An *automatic sprinkler system* installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R *fire area*.

Exception: Group R-3 portions of buildings not more than 3 stories above grade plane and not required to be provided with an automatic sprinkler system by other sections of this code.

APPENDIX C FIRE HYDRANT LOCATIONS AND DISTRIBUTION

SECTION C103 FIRE HYDRANT SPACING

C103.3 Maximum spacing.

[Add to this subsection to read as follows:]

Exception: The Fire Chief may grant an exception to hydrant spacing requirements when, in the opinion of the Fire Chief, there are extenuating circumstances and the increase of hydrant spacing does not limit suppression capabilities.

[All other text in this section to remain unchanged.]

APPENDIX D FIRE APPARATUS ACCESS ROADS

SECTION D102 REQUIRED ACCESS

D102.1 Access and loading.

[Add to this subsection to read as follows:]

Exception: The Fire Chief may grant an exception to fire apparatus access requirements when, in the opinion of the Fire Chief, there are extenuating circumstances, and the decrease does not limit response and suppression capabilities.

[All other text in this section to remain unchanged]

Exhibit D to Ordinance 2023-01

Amendments to the 2021 International Fuel Gas Code

Adopted by reference as if set out in length the “International Fuel Gas Code”, 2021 Edition Chapters 1 – 8 and [Appendix Chapter A](#) as published by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, along with certain additions, revisions and deletions adopted by the Colorado State Plumbing Board, identified as 3 CCR 721-1. The following amendments are made to the International Fuel Gas Code, 2021 Edition.

CHAPTER 1 SCOPE AND ADMINISTRATION

SECTION 101 (IFGC) SCOPE AND GENERAL REQUIREMENTS

[A] 101.1 Title.

[Amend this subsection to read as follows;]

These regulations shall be known as the Fuel Gas Code of Chaffee County, Colorado, hereinafter referred to as “this code”.

CHAPTER 3 GENERAL REGULATIONS

SECTION 303 (IFGC) APPLIANCE LOCATION

303.3 Prohibited locations.

[Delete Exceptions 3. and 4.]

CHAPTER 4 GAS PIPING INSTALLATIONS

SECTION 403 (IFGS) PIPING MATERIALS

403.3.3 Copper and copper alloy.

[Delete subsection in its entirety and replace with the following:]

[Copper and copper alloy pipe shall not be used on natural gas systems.](#)

403.4.3 Copper and copper alloy tubing.

[Delete subsection in its entirety and replace with the following:]

[Copper and copper alloy tubing shall not be used on natural gas systems.](#)

SECTION 404 (IFGS)
PIPING SYSTEM INSTALLATION

404.2 CSST.

[Add a sentence to read as follows;]

Installation of CSST must be performed by a qualified installer that meets all applicable qualifications of the authority having jurisdiction (AHJ). Qualified certification must be submitted to the building official prior to the inspection of any installed CSST.

404.20 Testing of piping.

[Amend subsection to read as follows;]

Before any system of piping is put in service or concealed, it shall be permitted with the authority having jurisdiction (AHJ) and shall be tested and inspected by the authority having jurisdiction (AHJ) to ensure it is gastight. Testing, inspection and purging of piping systems shall comply with Section 406.

SECTION 406 (IFGS)
IINSPECTION, TESTING AND PURGING

406.1.1 Inspections.

[Amend subsection to read as follows;]

Inspection shall consist of visual examination during or after manufacture, fabrication, assembly or pressure tests. Inspection shall be performed by the authority having jurisdiction (AHJ) or by an agency or third-party having approval of the *building official*.

406.1.2 Repairs and additions.

[Amend 2nd paragraph to read as follows;]

Minor repairs and additions are not required to be tested provided the piping is accessible, limited to a maximum of eight joints and has a total developed length of not more than 6 feet.

406.6.4 Placing appliances and equipment in operation.

{Amend subsection to read as follows:}

Gas piping or equipment that has been out of service for a period of longer than six (6) months shall be permitted to be placed in operation only after the piping system has been inspected, tested and purged per Section 406 (IFGS) of the *2021 International Fuel Gas Code* and found to be free from leakage.

[Add new subsection to read as follows:]

406.6.5 Disconnected piping systems.

When existing piping is disconnected from the source of supply (gas meter removed, gas tank removed, etc.) for more than six (6) months, the piping shall be retested and inspected in accordance with the requirements of Section 406 (IFGS) of the *2021 International Fuel Gas Code*.

**CHAPTER 6
SPECIFIC APPLIANCES**

**SECTION 614 (IFGC)
CLOTHES DRYER EXHAUST**

614.3 Cleaning access.

[Delete subsection in its entirety.]

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

[Delete the entire section and replace to read as follows:]

[Unvented room heaters are prohibited.](#)

Exhibit E to Ordinance 2023-01

Amendments to the 2021 International Mechanical Code

Adopted by reference as if set out in length the “International Mechanical Code, 2021 Edition Chapters 1 – 15 and [Appendix A](#) as published by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795. The following amendments are made to the International Mechanical Code, 2021 Edition.

CHAPTER 1 SCOPE AND ADMINISTRATION

SECTION 101 SCOPE AND GENERAL REQUIREMENTS

Section 101.1 Title.

[Amend to read as follows:]

These regulations shall be known as the Mechanical Code of Chaffee County, Colorado, hereinafter referred to as “this code”.

CHAPTER 5 EXHAUST SYSTEMS

SECTION 504 CLOTHES DRYER EXHAUST

504.3 Cleanout.

[Delete subsection in its entirety.]

CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES, AND SOLID FUEL-BURNING EQUIPMENT

SECTION 903 FACTORY-BUILT FIREPLACES

903.3 Unvented gas log heaters.

[Delete this subsection in its entirety.]

Exhibit F to Ordinance 2023-01

Amendments to the 2021 International Plumbing Code

Adopted by reference as if set out in length the “International Plumbing Code, 2021 Edition”, Chapters 1 – 15 including Appendix Chapters B, C and E as published by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, along with certain additions, revisions and deletions adopted by the Colorado State Plumbing Board, identified as 3 CCR 720-1. The following amendments are made to the International Plumbing Code, 2021 Edition.

CHAPTER 1 ADMINISTRATION

SECTION 101 SCOPE AND GENERAL REQUIREMENTS

[A] 101.1 Title.

[Amend this subsection to read as follows:]

These regulations shall be known as the *Plumbing Code* of Chaffee County, Colorado hereinafter referred to as “this code.”

SECTION 102 APPLICABILITY

[A] 102.1 General.

[Add as last sentence to this subsection:]

Where there is a conflict between the International Building Code, the International Residential Code and this code, this code shall govern.

SECTION 113 MEANS OF APPEALS

[A] 113.1 General.

All references to the Board of Appeals shall be changed to read the Board of Review as appointed by the Chaffee County Board of County Commissioners.

[A] 113.3 Qualifications.

The reference to the Board of Appeals shall be changed to read the Board of Review as appointed by the Chaffee County Board of County Commissioners.

**CHAPTER 3
GENERAL REGULATIONS**

**SECTION 312
TESTS AND INSPECTIONS**

312.1 Required tests.

[Delete the following words and sentences:]

“for piping systems other than plastic” and “After the plumbing fixtures have been set and their traps filled with water, the entire drainage system shall be submitted to final tests. The code official shall require the removal of any cleanouts if necessary to ascertain whether the pressure has reached all parts of the system.”

312.3 Drainage and vent air test.

[Delete the words:]

“Plastic piping shall not be tested using air.”

312.4 Drainage and vent final test.

[Delete this subsection in its entirety:]

312.5 Water supply system test.

[Delete the words:]

“for piping systems other than plastic”

312.6 Gravity sewer test.

[Delete this subsection in its entirety.]

312.7 Forced sewer test.

[Delete this subsection in its entirety.]

312.9 Shower liner test.

[Delete this subsection in its entirety.]

312.10.1 Inspections.

[Add as last sentence to this subsection to read as follows:]

The premise owner or responsible party shall have the backflow prevention assembly tested by a certified cross-connection control technician at the time of installation, repair or relocation.

**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

**SECTION 608
PROTECTION OF POTABLE WATER SUPPLY**

608.18 Protection of individual water supplies.

[Delete this subsection in its entirety and amend to read as follows:]

Water wells are regulated by the Colorado Division of Water Resources.

CHAPTER 9
VENTS

SECTION 903
VENT TERMINALS

903.1.1 Roof extension unprotected.

[Amend subsection to read as follows:]

Open vent pipes that extend through the roof shall be terminated not less than 12 inches above the roof.

903.2 Frost closure.

[Delete this subsection in its entirety.]

CHAPTER 10
TRAPS, INTERCEPTORS AND SEPARATORS

SECTION 1003
INTERCEPTORS AND SEPARATORS

Section 1003.1 Where required.

[Add to this subsection to read as follows:]

Exception: Where special regulations exist by the local wastewater and/or sanitation district into which the grease trap or interceptor effluent is transported and/or treated. These regulations may supersede this requirement.

Exhibit G to Ordinance 2023-01

Amendments to the 2021 International Energy Conservation Code

Adopted by reference as if set out in length the “International Energy Conservation Code, 2021 Edition”, Chapters 1 [CE] - 6 [CE] and Chapter 1 [RE] - 6 [RE], as published by the International Code Council, Inc., 4051 Flossmoor Road, Country Club Hills, Illinois, 60478-5795. The following amendments are made to the International Energy Conservation Code, 2021 Edition.

CHAPTER 1 [CE] SCOPE AND ADMINISTRATION

SECTION C101 SCOPE AND GENERAL REQUIREMENTS

C101 Title.

[Amend subsection to read as follows:]

This code shall be known as the *Energy Conservation Code* of Chaffee County, Colorado and shall be cited as such. It is referred to herein as “this code.”

CHAPTER 1 [RE] SCOPE AND ADMINISTRATION

SECTION R101 SCOPE AND GENERAL REQUIREMENTS

R101 Title.

[Amend subsection to read as follows:]

This code shall be known as the *Energy Conservation Code* of Chaffee County, Colorado and shall be cited as such. It is referred to herein as “this code.”

Exhibit H to Ordinance 2023-01

Amendments to the 2021 International Existing Building Code

Adopted by reference as if set out in length the “International Existing Building Code, 2021 Edition”, Chapters 1 – 16 including Appendix B as published by the International code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795. The following amendments are made to the International Existing Building Code.

CHAPTER 1

SCOPE AND ADMINISTRATION

SECTION 101

SCOPE AND GENERAL REQUIREMENTS

[A] 101.1 Title. [Amend to read as follows:]

These regulations shall be known as the *Existing Building Code* of Chaffee County, Colorado, hereinafter referred to as “this code.”

SECTION 112

MEANS OF APPEAL

[A] 112.1 General. [Amend as follows:]

All references to the Board of Appeals shall be changed to read the Board of Review as appointed by the Chaffee County Board of County Commissioners.

[A] 112.3 Qualifications. [Amend as follows:]

All references to the Board of Appeals shall be changed to read the Board of Review as appointed by the Chaffee County Board of County Commissioners.

Exhibit I to Ordinance 2023-01

Amendments to the 2021 International Property Maintenance Code

Adopted by reference as if set out in length the “International Property Maintenance Code, 2021 Edition”, Chapters 1-8 as published by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795. The following amendments are made to the International Property Maintenance Code, 2021 Edition.

CHAPTER 1 SCOPE AND ADMINISTRATION

PART 1 – SCOPE AND ADMINISTRATION

SECTION 101

SCOPE AND GENERAL REQUIREMENTS

[A] 101.1 Title.

[Amend this subsection to read as follows:]

These regulations shall be known as the *International Property Maintenance Code* of Chaffee County, Colorado, hereinafter referred to as “this code.”

PART 2 – ADMINISTRATION AND ENFORCEMENT

SECTION 103

CODE COMPLIANCE AGENCY

[A] 103.1 Creation of Agency.

[Amend this subsection to read as follows:]

The official in charge shall be known as the code official. The Chaffee County Building Safety Department and the code official shall oversee the implementation, administration and enforcement of the provisions of this code.

SECTION 107

MEANS OF APPEAL

107.1 General.

[Delete the following:]

“board of appeals” and replace with “Board of Review as appointed by the Chaffee County Board of County Commissioners.

107.3 Qualifications.

[Delete the following:]

“board of appeals” and replace with “Board of Review as appointed by the Chaffee County Board of County Commissioners.

SECTION 108

BOARD OF APPEALS

[A] 108.1 Membership of board.

[Delete the following.]

“board of appeals” and replace with “Board of Review as appointed by the authority having jurisdiction (AHJ).”

Exhibit J to Ordinance 2023-01

Amendments to the 2021 International Swimming Pool and Spa Code

Adopted by reference as if set out in length the “International Swimming Pool and Spa Code, 2021 Edition” Chapters 1- 11 as published by the International Code Council Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795. The following amendments are made to the International Swimming Pool and Spa Code, 2021 Edition.

CHAPTER 1 SCOPE AND ADMINISTRATION

PART 1 – SCOPE AND ADMINISTRATION

SECTION 101

SCOPE AND GENERAL REQUIREMENTS

[A] 101.1 Title.

[Amend this subsection to read as follows;]

These regulations shall be known as the *Swimming Pool and Spa Code* of Chaffee County, Colorado, hereinafter referred to as “this code.”

PART 2 – ADMINISTRATION AND ENFORCEMENT

SECTION 103 CODE

COMPLIANCE AGENCY

[A] 103.1 Creation of agency.

[Amend this subsection to read as follows:]

The official in charge shall be known as the code official. The Chaffee County Building Safety Department and the code official shall oversee the implementation, administration and enforcement of the provisions of this code.

SECTION 111

MEANS OF APPEAL

[A] 111.1 General.

[Delete the following:]

“board of appeals” and replace with “Board of Review as appointed by the Chaffee County Board of County Commissioners.

[A] 111.3 Qualifications.

[Delete the following:]

“board of appeals” and replace with “Board of Review as appointed by the Chaffee County Board of County Commissioners.

SECTION 112

BOARD OF APPEALS

[A] 112.1 Membership of board.

[Delete the following:]

“board of appeals” and replace with “Board of Review as appointed by the Chaffee County Board of County Commissioners.

Exhibit K to Ordinance 2023-01

Amendments to the 2021 International Wildland-Urban Interface Code

Adopted by reference as if set out in length the “International Wildland-Urban Interface Code, 2021 Edition” Chapters and [Appendix A](#) as published by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795. The following amendments are made to the International Mechanical Code, 2021 Edition.

CHAPTER 1 SCOPE AND ADMINISTRATION

PART 1 – GENERAL PROVISIONS

SECTION 101

SCOPE AND GENERAL REQUIREMENTS

Section 101.1 Title.

[Amend to read as follows:]

[These regulations shall be known as the *Wildland-Urban Interface Code of Chaffee County, Colorado*, hereinafter referred to as “this code”.](#)

PART 2 – ADMINISTRATION AND ENFORCEMENT

SECTION 103

CODE COMPLIANCE AGENCY

[A] 103.1 Creation of agency.

[Amend this subsection to read as follows:]

[The official in charge shall be known as the code official. The Chaffee County Building Safety Department and the code official shall oversee the implementation, administration and enforcement of the provisions of this code.](#)

SECTION 106

PERMITS

[A] 106.3 Work exempt from permit.

[Delete this subsection in its entirety and amend to read as follows:]

[Unless otherwise provided in the requirements of the *International Building Code*, the *International Residential Code* or the *International Fire Code*, a permit shall not be required for the following:](#)

- [1. One-story detached accessory structures used as tools sheds, storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet for non-residential use or 200 square feet](#)

for residential use. Such structures shall not be used as habitable spaces, sleeping rooms or for vehicle storage. Structures that have a roof overhang greater than 24", measured on a horizontal plane from the exterior wall, shall be subject to permitting. Any electrical, mechanical or plumbing work performed on such structures shall require permitting and inspection.

2. Fences not over 7 feet high.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code, as amended and adopted, or any other adopted codes, laws or ordinances of this jurisdiction.

Exempt structures must adhere to the required setback distance for property lines and shall not be located within the individual lot identified defensible space.

Structures exempt from permits shall be located a minimum of 20 feet from any structure.

The code official is authorized to stipulate conditions for permits. Permits shall not be issued where public safety would be at risk, as determined by the code official.

SECTION 111

CERTIFICATE OF COMPLETION

[A] 111.1 General.

[Delete this subsection in its entirety and amend to read as follows:]

The certificate of occupancy shall not be issued until a statement of compliance/completion is received by the code official. This statement shall stipulate that the building, structure or premises meet the requirements for code compliance with this code, as amended and adopted. The statement of compliance/completion shall be prepared and submitted by the *responsible party*, as defined in Section 603 subsection 603.2.3. The code official is authorized to accept reports submitted by approved third-party agencies, provided that such agencies satisfy the requirements as to qualifications and reliability and have the approval of the code official.

Exception: Reports submitted to the code official by the Fire Chief or the Fire Chief's authorized representative of the Fire District having authority.

SECTION 113

MEANS OF APPEALS

[A] 113.1 General.

[Delete the following:]

"board of appeals" and replace with "Board of Review as appointed by the Chaffee County Board of County Commissioners.

[A] 113.3 Qualifications.

[Delete the following:]

“board of appeals” and replace with “Board of Review as appointed by the Chaffee County Board of County Commissioners.

**CHAPTER 3
WILDLAND-URBAN INTERFACE AREAS**

**SECTION 301
GENERAL**

301.1 Scope.

[Delete this subsection in its entirety and amend to read as follows:]

The provisions of this chapter shall establish and identify the wildland-urban interface area.

301.2 Objective.

[Delete this subsection in its entirety:]

**SECTION 302
WILDLAND-URBAN INTERFACE AREA DESIGNATIONS**

302.1 Declaration.

[Delete this subsection in its entirety and amend to read as follows:]

The Chaffee County Board of County Commissioners shall declare the wildland-urban interface area within the jurisdiction. The wildland-urban interface area shall be the area of unincorporated Chaffee County, as defined by the Chaffee County Land Use Code, Section 7.1.10 as adopted by the Chaffee County Board of County Commissioners and the Chaffee County Wildfire Risk Map (Exhibit K-1).

302.3 Review of wildland-urban interface areas.

[Delete this subsection in its entirety and amend to read as follows:]

Reevaluation and recommended modification of the wildland-urban interface area may be performed as deemed necessary by the Chaffee County Board of County Commissioners.

**CHAPTER 4
WILDLAND-URBAN INTERFACE AREA REQUIREMENTS**

**SECTION 402
APPLICABILITY**

402.1.1 Access.

[Delete this subsection in its entirety and amend to read as follows:]

New subdivisions (subdivisions created after the adoption of this code) shall be provided with fire apparatus access roads in accordance with the Chaffee County Land Use Code, the *International Fire Code* and access requirements in accordance with Section 403.

402.1.2 Water supply.

[Delete this subsection in its entirety and amend to read as follows:]

New subdivisions (subdivisions created after the adoption of this code) shall provide water supply in accordance with the Chaffee County Land Use code.

402.2 Individual structures.

[Delete this subsection in its entirety and amend to read as follows:]

Individual structures shall comply with Section 402.2.1.

402.2.2 Water supply.

[Delete this subsection in its entirety:]

402.3 Existing conditions.

[Delete this subsection in its entirety:]

SECTION 403

ACCESS

403.2.1 Dimensions.

[Delete this subsection in its entirety and amend to read as follows:]

Driveways shall provide a clear minimum width of 14 feet and a minimum unobstructed height of 14 feet.

403.2.2 Length.

[Delete this subsection in its entirety and amend to read as follows:]

Driveways in excess of 150 feet in length shall be provided with turnarounds for emergency vehicles as specified in 403.2.4. Driveways in excess of 400 feet in length shall be provided with turnouts as specified in 403.2.5 in addition to turnarounds.

403.2.5 Turnouts.

[Delete this subsection in its entirety and amend to read as follows:]

Driveways in excess of 400 feet and at every 400 feet thereafter shall be provided with turnouts. Turnouts shall be a minimum of 10 feet in width and shall be a minimum of 30 feet in length. Driveway turnouts shall be comprised of such material and be constructed to support the weight requirements of a fire apparatus vehicle.

403.6 Address markers. [Delete this entire subsection and amend to read as follows:]

All buildings, new and existing (when required) shall be provided with an approved permanent address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address signage placed at the roadway, street or driveway shall be placed a minimum of thirty (30) inches above the grade. Address identification characters shall contrast with their background and be reflective. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches in height with a stroke width of not less than ½ inch. Where required by the code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or

other sign shall be used to identify the structure. Address identification shall be posted at the start of construction (prior to the first required inspection.) The permanent address identification shall be completed and installed prior to the final building inspection and shall thereafter be maintained by the property owner.

Exception:

1. Alteration of the character height and stroke width requirements may be approved by the Fire Protection District having jurisdiction authority.

403.7 Grade.

[Add the following subsections to read as follows:]

403.7.1 Fire apparatus access roads.

The gradient (slope) for fire apparatus access roads shall not exceed the maximum approved per the Chaffee County Land Use Code, as adopted by the Chaffee County Board of County Commissioners.

403.7.2 Driveways.

The average gradient (slope) for driveways shall not exceed eight percent (8%). Certification of the driveway gradient must be provided to the code official prior to or as part of a certificate of completion. This certification shall be prepared, signed and sealed by a Colorado Professional Licensed Surveyor, a Colorado licensed Engineer or Architect or by an approved third-party agency. The code official is authorized to accept reports of approved third-party agencies, provided that such agencies satisfy the requirements as to qualifications and reliability and have the approval of the code official. Where this requirement cannot be met due to site restrictions, internal fire sprinklers shall be installed within the habitable space of the structure. Automatic fire sprinkler systems that are installed in one- and two-family dwellings and townhouses shall comply with the regulations and requirements of Section P2904.

SECTION 404

WATER SUPPLY

[Delete this section in its entirety:]

SECTION 405

FIRE PROTECTION PLAN

[Delete this subsection in its entirety:]

**CHAPTER 5
SPECIAL BUILDING CONSTRUCTION REGULATIONS**

SECTION 501

GENERAL

501.1 Scope.

[Delete this subsection in its entirety and amend to read as follows:]

Buildings, structures and additions to existing buildings within the Chaffee County Wildfire Hazard

Mitigation area shall be constructed in accordance with the *International Building Code*, the *International Residential Code*, this code, as amended, and all other codes as adopted by the Chaffee County Board of County Commissioners.

Exceptions:

1. One-story detached accessory residential structures used as tool sheds, storage sheds, playhouses or similar uses with a floor area of less than 200 square feet and having a roof overhang of 24" or less, measured on a horizontal plane from the exterior wall.
2. One-story detached accessory non-residential structures used as tool sheds, storage sheds, playhouses or similar uses with a floor area of less than 120 square feet and having a roof overhang of 24" or less, measured on a horizontal plane from the exterior wall.
3. Detached residential greenhouses with a floor area of not more than 600 square feet.
4. Agricultural use structures for which an agricultural permit exemption has been granted by the code official.

Structures identified in the above-listed exceptions shall adhere to the required setback distance for property lines as identified in the Chaffee County Land Use Code and shall not be located within the individual lot identified defensible space.

Structures exempt from permits shall be located a minimum of 20 feet from any structure.

501.2 Objective.

[Delete this subsection in its entirety and amend to read as follows:]

The objective of this chapter is to establish minimum standards to locate, design and construct buildings and structures or portions thereof located or to be located within the Chaffee County Wildfire Hazard Mitigation area for the protection of life and property, to resist damage from wildfires and to mitigate building and structure fires from spreading to wildland fuels.

SECTION 502

FIRE HAZARD SEVERITY

502.1 General.

[Delete this section in its entirety and amend to read as follows:]

The fire hazard of building sites for buildings hereafter constructed, modified or relocated into wildland-urban interface areas shall be established in accordance with the Chaffee County Wildfire Risk Map (Exhibit K-1). Fire hazard severity designations shall be amended to follow the area designations as identified by the Chaffee County Wildfire Risk Map (Exhibit K-1).

Class 1 = Extreme Risk

Class 2 = High Risk

Class 3 = Moderate Risk

502.2 Fire hazard severity reduction.

[Delete this subsection in its entirety.]

SECTION 503

IGNITION-RESISTANT CONSTRUCTION AND MATERIAL

503. General.

[Delete this subsection in its entirety and amend to read as follows:]

Buildings and structures hereafter constructed, modified or relocated into or within the wildland-urban interface area shall meet the construction requirements in accordance with the Chaffee County Land Use code and this adopted code. Class 1 (Extreme Risk), Class 2 (High Risk) and Class 3 (Moderate Risk) ignition resistant construction shall be in accordance with Sections 504, 505 and 506 respectively. Materials required to be ignition resistant materials shall comply with the requirements of Section 503.2.

SECTION 504

CLASS 1 - EXTREME RISK IGNITION-RESISTANT CONSTRUCTION

504.1 General.

[Delete this subsection in its entirety and amend to read as follows:]

Ignition resistant construction for areas designated as Extreme Risk shall be in accordance with Sections 504.2 through 504.11.

504.2 Roof assembly.

[Delete this subsection in its entirety and amend to read as follows:]

Roofs shall have a roof assembly that complies with a Class A rating when tested in accordance with ASTM E108 or UL 790. This will apply to any construction under permit, residential or commercial, to include new construction, additions, alterations, repairs or replacements.

Exceptions:

1. Unchanged
2. Unchanged
3. Unchanged

504.2.1 Roof valleys.

[Delete this subsection and amend to read as follows:]

Any construction under permit, residential or commercial, to include new construction, additions, alterations, repairs or replacements, where roof valleys are provided, shall have valley flashings of not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of 72-pound (32.4kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D3909 running the full length of the valley.

504.3 Protection of eaves.

[Delete this subsection in its entirety and amend to read as follows:]

Eaves and soffits, on residential and commercial new construction buildings only, shall be protected on the exposed underside by one of the following methods or materials:

1. Tested assemblies having an approved 1-hr. fire-resistance rating (i.e. 2 layers 5/8" Type X gypsum board)
2. Nominal 2" solid wood (T&G)
3. Nominal 2" solid wood fire blocking installed from the top of the exterior wall to the underside of the

roof sheathing.

4. Ignition-resistant materials in accordance with Section 503.2 of this chapter
5. Non-combustible materials
6. Fire-retardant-treated-wood (FRTW) materials
7. Heavy timber construction

504.4 Gutters and downspouts.

[No change]

504.5 Exterior walls.

[Delete #5 and amend to read as follows:]

5. Ignition-resistant materials complying with Section 503.2 on the exterior side. These materials may include, but are not limited to, fiber cement siding, 3 coat stucco, masonry, brick and manufactured stone.

504.6 Underfloor enclosure.

[Delete this subsection in its entirety.]

504.7 Appendages and projections.

[Delete this subsection in its entirety and amend to read as follows:]

Exposed exterior deck surfaces, stair treads, stair risers, handrail system assemblies and guardrail system assemblies shall be of ignition resistant materials.

504.7.1 Underfloor areas.

[Delete this subsection in its entirety.]

504.8 Exterior glazing.

[No change]

504.9 Exterior doors.

[Delete this subsection in its entirety.]

504.10 Vents.

[Delete this subsection in its entirety and amend to read as follows:]

Vent screens shall be 1/4" screen or otherwise specifically designed to prevent the intrusion of fire embers.

504.10.1 Vent locations.

[Delete this subsection in its entirety and amend to read as follows.]

Attic ventilation vents located in soffits, in eave overhangs, between rafters at eaves or in other overhang areas shall be specifically designed to prevent the intrusion of fire embers. Gable end and dormer vents shall be located not less than 10 feet from lot lines. Underfloor ventilation openings shall be located as close to grade as possible.

504.11 Detached structures.

[Delete the text 50 feet from this subsection and replace it with 20 feet.]

504.11.1 Underfloor areas.

[Delete this subsection in its entirety.]

SECTION 505

CLASS 2 – HIGH RISK IGNITION-RESISTANT CONSTRUCTION

505.1 General. Delete this subsection in its entirety and amend to read as follows:]

Ignition resistant construction for areas designated as High Risk shall be in accordance with Sections 505.2 through 505.11.

505.2 Roof assembly.

[Delete this subsection in its entirety and amend to read as follows:]

Roofs shall have a roof assembly that complies with a Class A rating when tested in accordance with ASTM E108 or UL 790. This will apply to any construction under permit, residential or commercial, to include new construction, additions, alterations, repairs or replacements.

505.2.1 Roof valleys.

[Delete this subsection and amend to read as follows:]

Any construction under permit, residential or commercial, to include new construction, additions, alterations, repairs or replacements, where roof valleys are provided, shall have valley flashings of not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of 72-pound (32.4kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D3909 running the full length of the valley.

505.3 Protection of eaves.

[Delete this subsection in its entirety and amend to read as follows:]

Eaves and soffits, on residential and commercial new construction buildings only, shall be protected on the exposed underside by one of the following methods or materials:

1. Solid materials with a minimum thickness of $\frac{3}{4}$ ".
2. Tested assemblies having an approved 1-hr. fire-resistance rating (i.e. 2 layers 5/8" Type X gypsum board)
3. Nominal 2" solid wood (T&G)
4. Nominal 2" solid wood fire blocking installed from the top of the exterior wall to the underside of the roof sheathing.
5. Ignition-resistant materials in accordance with Section 503.2 of this chapter
6. Non-combustible materials
7. Fire-retardant-treated-wood (FRTW) materials
8. Heavy timber construction. Exposed rafter tails shall not be permitted unless constructed of heavy timber materials.

505.4 Gutters and downspouts.

[No change]

505.5 Exterior walls.

[Delete #5 and amend to read as follows:]

5. Ignition-resistant materials complying with Section 503.2 on the exterior side. These materials may include, but are not limited to, fiber cement siding, 3 coat stucco, masonry, brick and manufactured stone.

505.6 Underfloor enclosure.

[Delete this subsection in its entirety.]

505.7 Appendages and projections.

[Delete this subsection in its entirety and amend to read as follows:]

Exposed exterior deck surfaces, stair treads, stair risers, handrail system assemblies and guardrail system assemblies shall be of ignition resistant materials.

505.7.1 Underfloor areas.

[Delete this subsection in its entirety.]

505.8 Exterior glazing.

[No change]

505.9 Exterior doors.

[Delete this subsection in its entirety.]

505.10 Vents.

[Delete this subsection in its entirety and amend to read as follows:]

Vent screens shall be 1/4" screen or otherwise specifically designed to prevent the intrusion of fire embers.

505.10.1 Vent locations.

[Delete this subsection in its entirety and amend to read as follows.]

Attic ventilation vents located in soffits, in eave overhangs, between rafters at eaves or in other overhang areas shall be specifically designed to prevent the intrusion of fire embers. Gable end and dormer vents shall be located not less than 10 feet from lot lines. Underfloor ventilation openings shall be located as close to grade as possible.

505.11 Detached structures.

[Delete the text 50 feet from this subsection and replace it with 20 feet.]

505.11.1 Underfloor areas.

[Delete this subsection in its entirety.]

SECTION 506

CLASS 3 – MODERATE RISK IGNITION-RESISTANT CONSTRUCTION

506.1 General.

Ignition resistant construction for areas designated as Moderate Risk shall be in accordance with Sections 506.2 through 506.4.

506.2 Roof assembly.

[Delete this subsection in its entirety and amend to read as follows:]

Roofs shall have a roof assembly that complies with a Class A rating when tested in accordance with ASTM E108 or UL 790. This will apply to any construction under permit, residential or commercial, to include new construction, additions, alterations, repairs or replacements.

506.2.1 Roof valleys.

[Delete this subsection and amend to read as follows:]

Any construction under permit, residential or commercial, to include new construction, additions, alterations, repairs or replacements, where roof valleys are provided, shall have valley flashings of not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of 72-pound (32.4kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D3909 running the full length of the valley.

506.3 Underfloor enclosure.

[Delete this subsection in its entirety.]

506.4 Gutters and downspouts.

[No change]

SECTION 507

REPLACEMENT OR REPAIR OF ROOF COVERINGS

507.1 General.

[Delete this subsection in its entirety and amend it to read as follows:]

Any roof replacement or repair under permit, to include additions, alterations, repair or replacements shall have a roof assembly that complies with a Class A rating when tested in accordance with ASTM E108 or UL 790.

CHAPTER 6 FIRE PROTECTION REQUIREMENTS

SECTION 601

GENERAL

601.1 Scope.

[Delete this subsection in its entirety and amend it to read as follows:]

The provisions of this chapter establish general requirements for new buildings, new structures and premises hereafter constructed, modified, located or relocated into or within the wildland-urban interface areas.

SECTION 602

AUTOMATIC SPRINKLER SYSTEMS

[Delete this section in its entirety:]

SECTION 603

DEFENSIBLE SPACE

603.1 Objective.

[No change]

603.2 Fuel Modification.

[Delete this subsection in its entirety and amend to read as follows:]

Buildings and structures hereafter constructed, modified or relocated into or within the wildland-urban interface area shall comply with the defensible space requirements contained in Table 603.2. For all other purposes the fuel modification distances shall be 30 feet or to the lot line, whichever is less.

603.2.3 Responsible party.

[Delete this subsection in its entirety and amend to read as follows:]

Persons owning, leasing, controlling, operating or maintaining buildings or structures requiring defensible spaces are responsible for modifying or removing non-fire resistive vegetation on the property owned, leased or controlled by said person. The responsible party shall be delegated as the person responsible for meeting the provisions of the following subsections:

603.2.2 Trees.

603.2.3 Ground cover.

SECTION 604

MAINTENANCE OF DEFENSIBLE SPACE

604.1 General.

[No change]

604.2 Modified area.

[No change]

604.3 Responsibility.

[Add to the end of this subsection to read as follows:]

The responsible party shall be delegated as the person responsible for meeting the provisions of the following subsections;

604.4 Trees.

604.4.1 Chimney clearance.

604.4.2 Deadwood removed.

SECTION 605

SPARK ARRESTORS

605.1 General.

[Delete this subsection in its entirety and amend to read as follows:]

Buildings and structures hereafter constructed, modified or relocated into or within the wildland-urban interface area that contain chimneys serving fireplaces, barbecues, incinerators or decorative heating appliances in which solid or liquid fuel s used, shall be provided with a spark arrestor. Spark arrestors shall be constructed of woven or welded wire screening of 12 USA standard gage wire (0.1046 inch) (2.66 mm) having openings not exceeding ½" (12.7 mm).

605.2 Net free area.

[No change]

SECTION 606
LIQUIFIED PETROLEUM-GAS INSTALLATIONS

606.1 General.

[No change]

606.2 Location of containers or tanks.

[No change]

SECTION 607
STORAGE OF FIREWOOD AND COMBUSTIBLE MATERIALS

607.1 General.

[May delete subsection in its entirety after discussion with the Forest Health Council. The Building Safety Department does not have any means with which to enforce this subsection.]

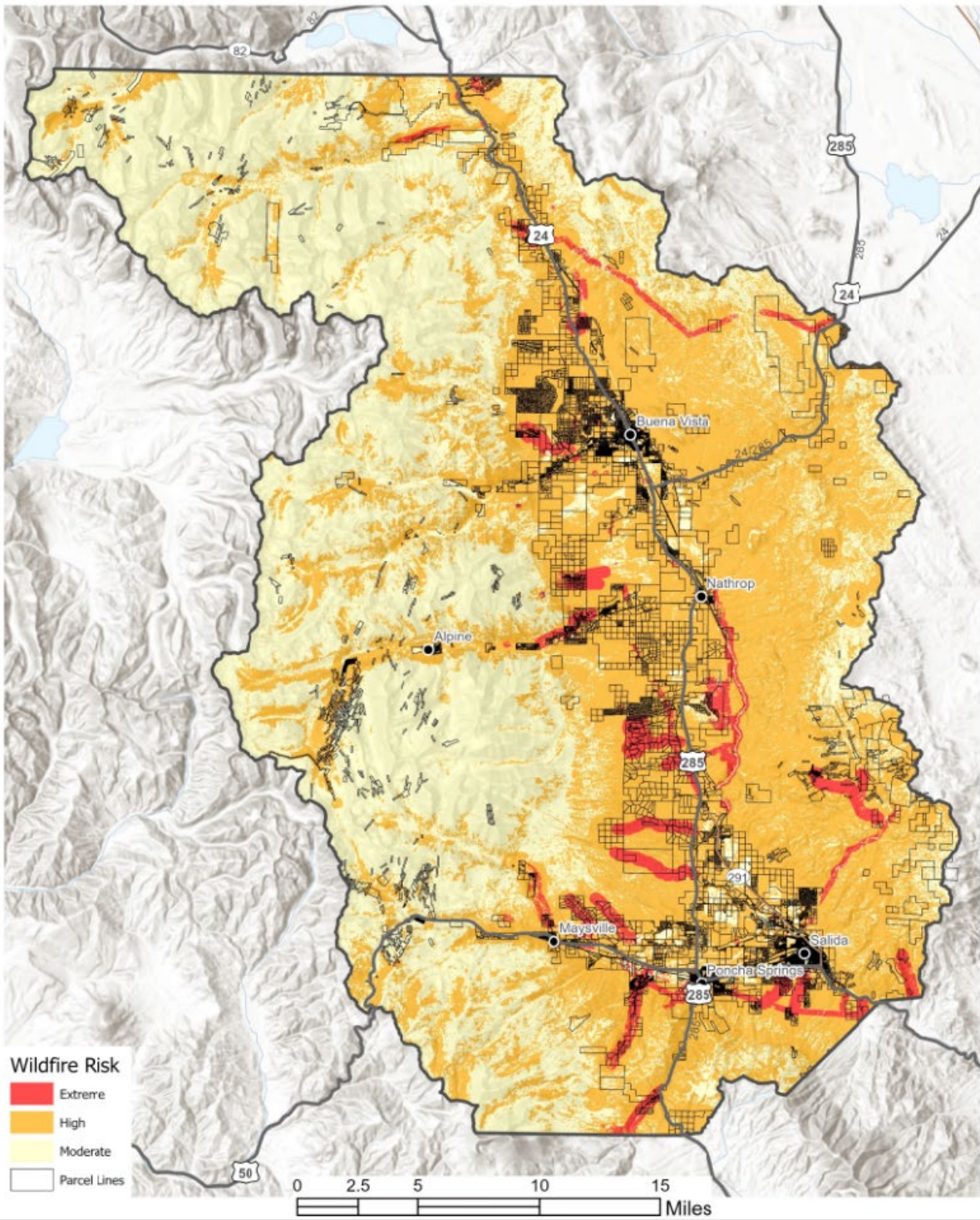
607.2 Storage for off-site use.

[May delete subsection in its entirety after discussion with the Forest Health Council. The Building Safety Department does not have any means with which to enforce this subsection.]

CHAPTER 7
REFERENCED STANDARDS

[No changes to this chapter:]

Exhibit K-1 Chaffee County Wildfire Risk Map



Wildfire Risk Map Chaffee County

Exhibit L to Ordinance 2023-01

Permit Fee Schedule

L-1- Commercial Building Permit Fees and Residential Building Permit Fees (Includes Roofing Permit Fees)

1. Valuation Determination for New Construction. With respect to all buildings, the "Valuation" for new construction shall be determined by reference to the Building Valuation Data provided by the International Code Council (ICC). The Square Foot Construction Costs Table shall be used along with the occupancy group and type of construction to determine a per square foot cost of a project. Such amount shall then be multiplied by the gross area to determine Valuation. The calculation illustrated as follows:

$$SQUARE FOOT COST (per table) \times GROSS AREA = VALUATION$$

The Square Foot Construction Costs Table is available from the Building Department and from the ICC. Such table is updated periodically. The updated table shall be effective for the purposes of determining Valuation as soon as it is published by the ICC.

(<http://www.iccsafe.org/cs/techservices/>)(see Building Valuation Data, page 2 in the PDF Format link). Alternately, total construction costs may be used for the valuation when information satisfactory to the Director of Development Services is submitted such as bids or detailed construction cost estimates.

2. Valuation for dirt floor structure. With respect to arena or stable structures or any other non-insulated, unheated, dirt floor building without interior finishing, an amount equal to two-thirds (2/3) of the lowest cost from such table shall be used (currently, that cost is Group U, Type V-B, or Footnote e, the cost for unfinished basements). Such amount shall then be multiplied by the gross area to determine Valuation. The calculation is illustrated as follows:

$$SQUARE FOOT COST (see note above) \times GROSS AREA = VALUATION$$

3. Calculating permit fees for buildings used for storage only and classified as S-1 or S-2 occupancy When a building is used for an S-1 or S-2 occupancy and one or more of the following trades are omitted from the project, a 15% discount for each system shall be deducted from the tabulated value: electrical, mechanical, plumbing, and interior finish. The total discount shall not exceed 50% no matter the number of trades omitted.
4. Valuation Determination for Additions, Alterations, Repairs and Roofing. With respect to additions, alterations, repairs and roofing, the "Valuation" shall be determined by the Building Department. Alternatively, the Valuation may be determined using evidence supplied by the applicant, provided such evidence includes material, labor, profit and overhead and the Building Official determines that such evidence reasonably reflects rates

in the area at the time of application. A reasonable amount must be estimated for labor, regardless of who is providing the labor.

5. Calculation of Permit fee. The Permit Fee shall be calculated by multiplying the Valuation by a Fee Adjustment Factor to determine the Permit Fee. The calculation is illustrated as follows:

$$\text{VALUATION} \times \text{FEE ADJUSTMENT FACTOR} = \text{PERMIT FEE}$$

If more than one use or type of construction applies to a project, each area with differing characteristics shall be considered separately, then the fee for all portions shall be added together to determine the total permit fee.

6. Fee Adjustment Factor. The Fee Adjustment Factor shall be .007 for all projects.
7. Mobile and Modular Homes. Mobile homes and I.R.C. modular homes that are placed on private property (not in mobile home parks) must be placed on a footing/foundation. The fee will be assessed at 30% of the building permit fee that is currently being charged for a conventionally built dwelling of equal size. Work started without a permit will be subject to an investigation fee equal to the permit fee.
8. Reinspection Fee, Plan Change Review Fee and Minimum Fee. The reinspection fee shall be \$100 per inspection. The plan change review fee shall be \$50 per hour (one hour minimum). The minimum building permit fee shall be \$110.00, and the minimum roofing permit fee shall be \$100. Demolition permits shall be \$100.00.

L-2- Electrical Permit Fees

General

- (1) Fees are tied to the State schedule and are reviewed annually and may be adjusted as the State does.
- (2) If a permit application is not filed in advance of the commencement of an installation, the inspection fee shall be twice the amount computed (CRS 12-23-117(3))
- (3) Fees are based on Sections A,B, C, and D as noted below.
- (4) If a permit has expired after the Rough In Inspection and an inspection is still required for a Final Inspection, a new permit is required to complete the Trim Out. Either compute the remaining cost of the outdated permit with Labor, Equipment, and Material or pay a flat fee of \$135.00.

A.) Residential wiring and extensive residential remodeling, as regulated in the IRC, shall be computed on square footage (based in enclosed living space)

Residential wiring only, for one or two family dwelling, or townhouse	<u>FEE</u>
Living Area	
(a) not more than 1000 square feet	\$135.00
(b) 1001 square feet to not more than 1500 square feet	\$202.00
(c) 1501 square feet to not more than 2000 square feet	\$270.00
(d) Per 100 square feet in excess of 2000 square feet	\$13.50

Example: Residential is 2235 square feet.

The base fee for 2000 sq ft (of the 2235 sq. ft. total) is \$270.00 (see Item (c) above)	\$270.00
The remaining 235 sq. ft. is rounded up per section (d) above, to 300 sq. ft. (3 x 13.50 =40.50)	<u>\$ 40.50</u>
Total fee due is:	<u>\$310.50</u>

B) All other fees including some residential installations that are not based on square footage (not in a living area, i.e. garage, shop and photovoltaic, etc.). Fees in this section are calculated from the total cost to customer, including electrical materials, items and labor – whether provided by the contractor or property owner. Use this chart for all commercial installations. Such fees shall be computed as follows (See 'D' below for the permit fees for a mobile/modular home and travel trailer parks).

Valuation of Installation: (based on cost to customer of labor, equipment, material, and items):

	<u>FEE</u>
a) Not more than \$2,000.00	<u>\$135.00</u>
b) \$2001.00 and above	\$135.00 + \$13.50 per thousand / or fraction thereof.

Example: The cost of the installation is \$5,150.00 (round up to \$6,000.00)

The base fee is calculated from section (b) above: 6 X \$13.50 = \$81.00 Plus \$135.00 **the total fee is \$216.00**

C.) Solar Fees

Solar panel fees are calculated using a cost of \$4.00 per watt to come up with a valuation so that it is possible to calculate the permit fee. Please note that the fee for a **Residential Unit will not exceed \$500.00 and a Commercial Unit will not exceed \$1,000.00.**

Example: Actual watts for a Solar Panel are 5500 watts. Take the 5500 x \$4.00 = \$22,000.00. Then take 22 x \$10.00 = \$220.00 + base fee of \$65.00

Total fee would be 22 x \$10.00 + \$65.00 = \$285.00

D) Miscellaneous Fees (No Base Fee Required)

Mobile/Modular home/travel trailer Parks per space	\$135.00
Temporary Construction Meter / Heat Release	\$65.00
Electric Well Line	\$65.00
Re-inspection fee	\$100.00
Partial Inspection Fee or Extra Inspection Fee	\$100.00

**Required Inspections are (1) A service underground system; (2) A rough-in prior to insulation and drywall; and (3) A final prior to occupancy.*

L-3 Mechanical Permit Fees (Includes Fuel Gas Permit Fees)

A) RESIDENTIAL INSTALLATION: new construction, remodel, addition.

Base Fee	\$ 25.00
Installation or relocation of each forced-air or gravity-type furnace or burner Including ducts and vents attached to such appliance, up to and including 100,000 Btu/h	\$ 75.00
Installation or relocation of each forced-air or gravity-type furnace or burner, including ducts and vents attached to such appliance, over 100,000 Btu/h	\$ 95.00
Installation, relocation, or replacement of each appliance vent installed and not included in an appliance permit	\$ 50.00
Installation or relocation of each boiler, water heater, gas fireplaces or compressor up to and including 3 HP , or each absorption system up to and including 100,000 Btu/h	\$ 45.00
Installation or relocation of each boiler or compressor over 3 HP or each absorption system over 100,000 Btu/h	\$ 50.00
Inspection of high efficiency flue (each system)	\$ 50.00
For each air handling unit up to and including 10,000 cfm including attached ducts <small>Note: This fee shall not apply to an air handling unit which is a portion of a factory assembled appliance, cooling unit, evaporative cooler or absorption unit for which a permit is required elsewhere in the code.</small>	\$ 45.00
For each air handling unit over 10,000 cfm	\$ 50.00
For each evaporative cooler other than portable type	\$ 30.00
Installation of each hood which is served by mechanical exhaust including the ducts	\$ 75.00
Appliances or equipment regulated by this code not classed in other appliance categories, for which no other fee is listed in this code. (i.e. Pellet or Wood burning Stoves and Wood Fireplaces.)	\$ 50.00
Fuel gas piping system (number of outlets)	No. x \$ 20.00
Fuel gas pressure regulator	No. x \$ 30.00

TOTAL

The use of an existing flue system will require compliance with current adopted codes.

B) FLAT FEE PERMIT: No Base fee required.

Bonding inspection of CSST by electrical inspector	\$100.00
Backflow preventer – Lawn Irrigation	\$100.00
Mobile/Modular home connection (1 trip – sewer, water, gas)	\$100.00

C) MISCELLANEOUS FEES:

Re-inspection Fee	\$100.00
Partial/Extra Inspections Fee	\$100.00

D) Commercial Installations:

Valuation (Total contract amount) of labor & materials; Fee is \$20.00 per thousand (round to next thousand) plus \$25.00 base fee. (EXAMPLE: VALUATION is \$8400.00 (round up to \$9000.00)
 $9 \times \$20.00 = \$180.00 + \$25.00 = \text{Total Fee } \205.00)

L-4 -Plumbing Permit Fees (Includes Fuel Gas Permit Fees)

A) RESIDENTIAL INSTALLATION: new construction, remodel, addition.	
Plumbing Fixtures (Tub, Shower, Toilet, Sink, Bidet, Clothes Washer, Dishwasher.)	\$20.00 x number of fixtures
Fuel Gas Piping Only System (by number of outlets i.e. furnace, water heater, Fireplace, dryer, stove etc.) Complete Gas Calculations Required	\$20.00x number of fixtures
Fuel Gas Pressure Regulator	\$30.00x number of fixtures

PLUS BASE FEE \$ 65.00

B) RESIDENTIAL SPECIAL INSPECTIONS:	FLAT FEES
Bonding Inspection of CSST by Electrical Inspector	\$100.00
Water Heater Replacement (Tank type or on demand)	\$100.00
Backflow Preventer (or new installation for yard or fire sprinkler system)	\$100.00
Water/Sewer service (exterior water/sewer service per inspection)	\$100.00
Mobile home lot connections / Modular (one trip – sewer, water & gas)	\$100.00
Trim Only Permit (only allowed if plumbing rough inspection has been completed)	\$100.00

C)Commercial Installations:

Valuation (Total Contract Amount) of labor & materials; fee is \$20.00 per thousand (rounded up to the next thousand) plus \$65.00 base fee. (EXAMPLE: VALUATION is \$8,400.00(round to \$9,000.00)

9 x \$20.00= \$180.00+\$65.00= Total Fee \$245.00)

L-5 - Building Plan Review Fees

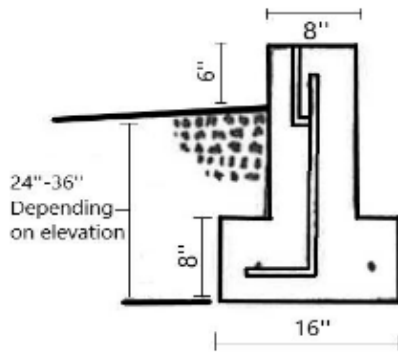
For permits requiring plan review, a plan review fee equal to 10% of the building permit fee shall be charged.

Building Plan Review under the Chaffee County Building Code (other than in conjunction with a building permit application) - \$250

Exhibit M to Ordinance 2023-01

Chaffee County Minimum Footing/Foundation Requirements

Page #1 See Page 2 for depth and other details



Perimeter Foundation

REINFORCEMENT-

FOOTING- 2 #4 (1/2 inch) continuous, lapped 16 inches bent around corners.

CONCRETE FOUNDATION- Horizontally 1 #4 at 2 Ft. on center

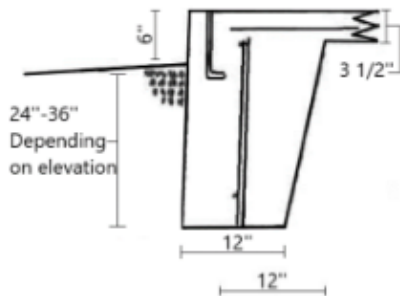
Vertically 1 #4 at 3 Ft on center

BLOCK FOUNDATION- Horizontally joint reinforcement every other course.

Vertically 1 #4 at 3 ft on center (32" O.C)

FOUNDATION BOLTS- 1/2 inch Embedded a minimum of 7". Spaced maximum 6 Ft on center. One within 12" of each end at sill plate joints (minimum 2 in each sill plate)

6 inch width max. 6' height supporting 1 floor and 1 roof
Rebar minimum #4 2' OC each way (with minimum 2 horizontal)

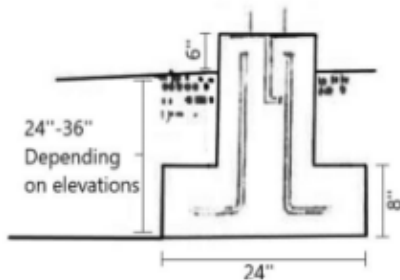


Monolithic Foundation

Monolithic foundation must be into undisturbed soil. All vegetation must be removed under slab . Any till used must be clean and properly compacted.

REINFORCEMENT- Horizontally 2 #4 (1/2 inch) continuous lapped 16" and bent around corners. Provide vertical rebar to support the horizontal rebar in proper position. 6"x6" welded wire mech with 6" laps.

FOUNDATION BOLTS- Same as above.



Patio, Deck, Carport Column Pad

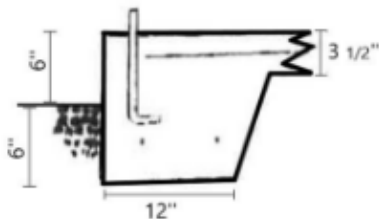
Design may be square or circular

REINFORCEMENT- 2 #4 (1/2 inch) rebar if connecting two pours together.

Column base or other type of approved connector is needed.

Concrete above grade is only needed when using a wood post that is untreated or not of a type with natural resistance to decay.

Decks (without roof) that are less than 4' high may use 12" diameter concrete without spread footing, if supporting less than 50 sq. ft.



Detached Single Story Accessory Structure

Under 400 Sq. Ft.

Monolithic foundation must be into undisturbed soil. All vegetation must be removed under slab . Any till used must be clean and properly compacted.

REINFORCEMENT- Horizontally 2 #4 (1/2 inch) continuous lapped 16" and bent around corners. 6"x6" welded wire mech with 6" laps.

FOUNDATION BOLTS- Same as above.

Chaffee County Minimum Footing/ Foundation Requirements

Page M-2

All Foundation systems must have cast in place perimeter footings with the exception of professionally designed systems, open carports, patios and decks.

Footings/Foundation systems must meet the minimum requirements herein unless required to be designed by the building official. Example: Some structures will need larger footings because of heavier loads.

All footings adjacent to the slopes must comply with applicable codes (2015 I.R.C Section R403 and 2015 I.B.C Section 1808) and this information must be provided with the application.

Concrete shall have a minimum compressive strength of 3000 psi at 28 days. Concrete exposed to the weather must be air-entrained with not less than 5% or more than 7%.

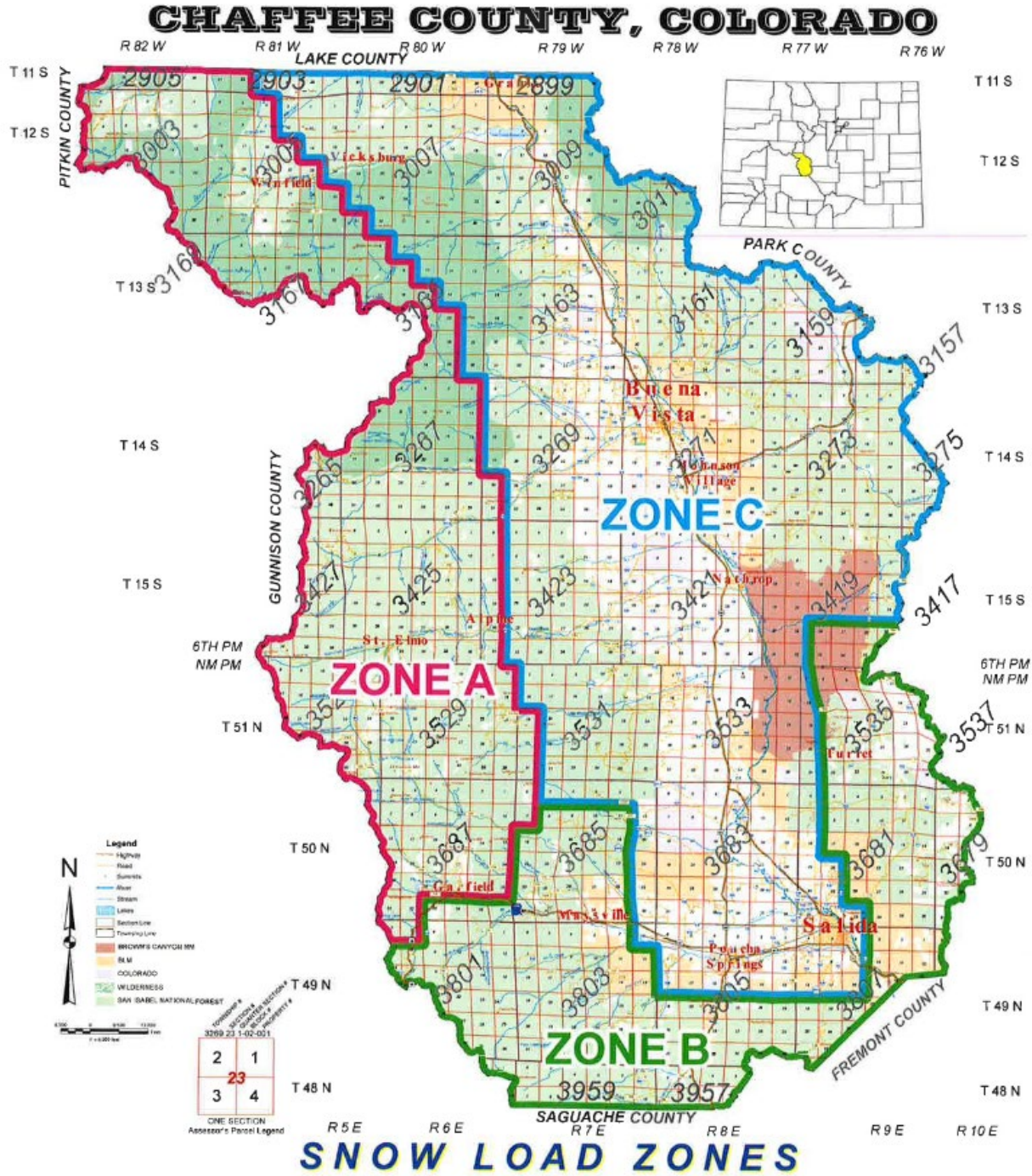
All reinforcement must be clean and properly supported in place (no rocks or bricks) for inspection. Bent verticals and anchor bolts must be onsite for inspection.

Minimum Footing Depths

Up to 8,000 Feet elevation above sea level	24 inches below finished grade
8,001-10,000 Feet elevations above sea level	30 inches below finished grade
Above 10,000 Feet above sea level	36 inches below finished grade

The bottom of the footing will need to be placed at the greatest depth that is indicated for your specific site. The elevation of the site shall be determined by Google Earth, a Professional Land Surveyor or a Professional Engineer.

Exhibit N to Ordinance 2023-01



Altitude	A	B	C
7000	50	40	40
7100	52	40	40
7200	54	41.5	40
7300	56	43	40
7400	58	45	40
7500	60	47	40
7600	62.25	49	40
7700	64.5	51	40
7800	66.75	53	40
7900	69	55	40
8000	71.25	57	40
8100	73.5	59	43
8200	76	61	46
8300	78.5	63	49
8400	81	65	52
8500	83.5	67.5	54
8600	86	70	56
8700	88.5	72.5	58
8800	91	75	60
8900	93.5	77.5	62
9000	96	80	64
9100	99	82.5	66
9200	102	85	68
9300	105	87.5	70
9400	108	90	72.5
9500	111	92.5	75
9600	114	95	77.5
9700	117	97.5	80
9800	120	100	82.5
9900	123.5	102.5	85
10000	127	105	87.5
10100	130.5	108	90
10200	134	111	92.5
10300	137.5	114	95
10400	141	117	97.5
10500	144.5	120	100
10600	148	123	102.5
10700	151.5	126	105
10800	155	129	107.5
10900	158.5	132	110
11000	162	135	113
11100	166	138	116
11200	170	141.5	119
11300	174	145	122
11400	178	148.5	125
11500	182	152	128

Basic snow design loads

In pounds per square foot

In no case shall the roof snow load be reduced to less than 35psf

2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

ELECTRIFICATION AMENDMENT OPTIONS

TOWN OF ESTES PARK
OCT 2023

1

AGENDA

- Current Estes Park codes & state requirements
- Overview of electrification options
- Deeper dive on electric-preferred

2

Current Estes Park Energy Code



2021 IECC + Colorado Model Solar & Electric Ready Code

Colorado requirements



2021 IECC + Colorado Model Solar *
Electric Ready Code (July 2023)

“Low Energy & Carbon Code” based on
2024 IECC and appendices (July 2026)

3

WHY THE INCREASED INTEREST IN ELECTRIFICATION?

WAS:







- Coal-dominated electric grid
- Low/stable natural gas prices
- Lack of awareness
- Poor performance in cold temps
- Too expensive
- No recognition of climate urgency

Now:

- ➔ ○ Renewables-dominated electric grid
- ➔ ○ High/unstable natural gas prices
- ➔ ○ Heat pump sales surpassed furnaces
- ➔ ○ Decent performance in cold temps
- ➔ ○ Lower costs, tons of incentives
- ➔ ○ Recognition of climate urgency

4

SPECTRUM OF OPTIONS

-  **Electric-Ready:** Pre-wiring and panel capacity for future electric systems
-  **Electric-Preferred:** Extra efficiency or renewable requirements for new construction with natural gas
-  **Electric-Only for Certain Loads:** Electric heating and water heating
-  **Electric-Only with Exceptions:** Allowing natural gas for commercial kitchens, process loads, labs, hospitals, sanitation equipment, critical infrastructure
-  **Electric-Only:** No fossil fuels allowed in new construction
-  **Embedded in Efficiency Targets:** Heat pumps help meet aggressive efficiency req's

5

Electric-Preferred

Electric-preferred still choice between all-electric and natural gas...

...but homes and buildings with natural gas must provide extra efficiency to make up for extra emissions

 Many flexible options

6

AMENDMENT SPECIFICS

RESIDENTIAL

- Prescriptive Path:
 - 2 extra efficiency packages
- Performance Path:
 - 2 extra efficiency packages or 80% of standard reference design
- Energy Rating Index (e.g. HERS)
 - 52 instead of 55

COMMERCIAL

- All Paths:
 - Extra efficiency options totaling 10 points

More insulation, more efficient HVAC, more efficient water heating, better duct design, better sealing against draftiness, etc.

7

Who has electric-preferred or stronger?

Electric preferred

- Avon
- Boulder (through HERS)
- Boulder County (through HERS)
- Denver (residential)
- Eagle (in progress)
- Eagle County (in progress)
- Erie
- Longmont (in progress)
- Minturn
- Northglenn
- Superior

Stronger

- Aspen (in progress)
- Crested Butte
- Denver (commercial)
- Golden (in progress)
- Lafayette
- Louisville

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COSTS OF ELECTRIC-PREFERRED

(residential single-family)

All-electric

- Multiple studies show the costs can be **roughly the same** as mixed fuel
 - Equipment costs more
 - Save on natural gas piping
- Builder & contractor trainings underway to increase familiarity & reduce costs

Mixed fuel

- Electric-ready wiring
 - \$300 for water heater, \$300 for stove, \$0 for heat pump
- Two additional efficiency packages
 - \$467-\$1,453 each

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Reliability & Grid capacity

CAN THE GRID SUPPORT THE EXTRA LOAD?

- Grid was built for high summer cooling loads
- ➔ Plenty to spare for winter heating
- Electric utilities are planning for this
- Large-scale transition won't happen overnight

WHAT IF THERE'S A POWER OUTAGE?

- Heat pumps and heat pump water heaters won't work
- ➔ But neither will gas furnaces or gas water heaters

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**QUESTIONS
&
DISCUSSION**

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SWEEP
SOUTHWEST ENERGY EFFICIENCY PROJECT

DRAFT AMENDMENTS FOR 2021 IECC ADOPTION

From: Northwestern Metro Area/Boulder County Codes Cohort

C/o: Southwest Energy Efficiency Project, Lotus Engineering and Sustainability, Shums Coda, Mozingo Code Group

Version: Explanatory Version 3.0 (Electric-preferred only)

Version Date: October 13, 2023

About This File: This document contains the electric-preferred amendments to the 2021 International Energy Conservation Code. This file is in addition to the adoption of Colorado’s Model Solar and Electric Ready Code, required by law. This is the “Explanatory” version which includes short notes about each amendment as well as tracked changes (strikeouts and underlines) showing what changed from the base code. A “Clean” version is available separately.

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Background: The Colorado Department of Local Affairs (DOLA) and the Colorado Energy Office provided grant funding to local governments in the northwest Denver metro area, Boulder County area, and Eagle County area to collaboratively review and adopt the most recent energy code – the 2021 International Energy Conservation Code (IECC) – along with regionally-aligned and consistent supporting amendments. Primary goals included reducing energy use and climate emissions in the built environment; improving region-wide consistency for builders, developers, and contractors; and streamlining workload for budget-constrained building departments. Participating communities included Erie, Lafayette, Boulder County, Northglenn, Superior, Louisville (mentor community); Eagle, Eagle County, Avon, and Minturn. The Code Cohort was jointly led and supported by Lotus Engineering and Sustainability, the Southwest Energy Efficiency Project (with support from the U.S. Department of Energy), Shums Coda (with support from Xcel Energy), and Mozingo Code Group.

**[COMMUNITY NAME]
ORDINANCE NO. [INSERT]**

AN ORDINANCE AMENDING THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE

WHEREAS, the [Board] recognizes that adopting supporting amendments to the 2021 International Energy Conservation Code will improve the construction and maintenance of the built environment and will thereby promote the health, safety, resiliency, affordability, sustainability, and general welfare of our community; and

WHEREAS, buildings are responsible for 40 percent of greenhouse gas emissions in the United States, and reducing building greenhouse emissions is essential for reducing the impacts of climate change, including mitigating local disaster events such as wildfires, droughts, and other severe weather; and

WHEREAS, [Community] desires to collaborate with other Colorado communities to adopt a consistent version of the 2021 International Energy Conservation Code supporting amendments;

NOW, THEREFORE, BE IT ORDAINED BY THE [BOARD] OF [COMMUNITY] the following:

Section 1. The [Board] hereby makes and adopts the determinations and findings contained in the recitals set forth above.

Section 2. Title [xx] Chapter [xx] of the Code of Ordinances, [Community], Colorado, is hereby repealed and replaced with the following.

Section xx. The Colorado Model Solar and Electric Ready Code, as developed by the Colorado Energy Code Board and published by the Colorado Energy Office, is hereby adopted.

Section xx. The International Energy Conservation Code, 2021 Edition, (the "IECC"), as published by the International Code Council, 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, a copy of which is on file and open for inspection in the office of the [city/town/county] clerk, is hereby adopted by reference subject to the additions, amendments, and appendices set forth herein.

The IECC is amended as follows:

COMMERCIAL

This adds definitions to accommodate all-electric buildings.

1. **Section C202 GENERAL DEFINITIONS** is amended to add or revise the following definitions in alphabetical order:

ALL-ELECTRIC BUILDING. A building and building site that contains no combustion equipment, or plumbing for combustion equipment, and that uses heat pump technology as the primary supply for heating, cooling, and service water heating loads.

MIXED-FUEL BUILDING. A building and building site that contains combustion equipment, or plumbing for combustion equipment, for space heating, cooling, water heating (including pools and spas), cooking, or clothes drying.

This adds electric-preferred for commercial buildings selecting the Total Building Performance path.

2. Section C401.2.1, International Energy Conservation Code, item 2, is amended to read as follows:

2. Total Building Performance. The Total Building Performance option requires compliance with Section C407 and, for mixed fuel buildings, 10 credits from Tables C406.1(1) through C406.1(5).

This adds electric-preferred for commercial buildings selecting ASHRAE 90.1.

3. Section C401.2.2 ASHRAE 90.1 is amended to read as follows:

C401.2.2 ASHRAE 90.1. Commercial buildings shall comply with the requirements of ANSI/ASHRAE/IESNA 90.1 and, for mixed fuel buildings, 10 credits from Tables C406.1(1) through C406.1(5).

This ensures that renewable energy used to meet the exemption is not also double-counted towards compliance with C406.

4. C404.2.1 High input service water-heating systems, item 1 under exceptions, is amended to read as follows:

1. Where not less than 50 percent of the annual *service water heating* requirement is provided by *on-site renewable energy* or site-recovered energy not including any capacity used for compliance with Section C406 of this code, the minimum thermal efficiency requirements of this section shall not apply.

This is part of electric-ready. It ensures sufficient physical space for future electric water heating systems. It only applies to water heaters with a clear path to electrification presently and exempts systems that don't.

5. Section C404.10 is added as follows:

C404.10 Water heating equipment location. Water heaters with *combustion equipment* shall be located in a space with the following characteristics:

1. Minimum dimensions of 3 feet by 3 feet by 7 feet high.
2. Minimum volume of 760 cubic feet, or the equivalent of one 16-inch by 24-inch grill to a heated space and one 8-inch duct of no more than 10 feet in length for cool exhaust air.
3. Contains a condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance, installed within 3 feet of the water heater.

Exceptions:

1. Instantaneous water heaters located within 10 feet of the point of use.
2. Water heats with an input capacity of more than 300,000 Btu/h.

This disallows gas-powered lighting. Gas lighting is rarely used anymore, but this adds assurance that it can't be.

6. Section C405.5.3 Gas lighting is amended to read as follows:

Section C405.5.3. Gas lighting. Gas fired lighting appliances ~~shall not be equipped with continuously burning pilot ignition systems~~ are not permitted.

This is the electric-preferred section. To encourage electrification of buildings while allowing for mixed-fuel construction, mixed fuel buildings are required to achieve more efficiency credits (20 instead of 10).

7. Section C406.1 Additional energy efficiency credit requirements, first sentence, is amended to read as follows with the other parts of the paragraph and section to remain:

C406.1 Additional energy efficiency credit requirements. New *all-electric buildings* shall achieve a total of 10 credits and new *mixed-fuel buildings* shall achieve a total of 20 credits from Tables C406.1(1) through C406.1(5) where the table is selected based on the use group of the building and from credit calculations as specified in relevant subsections of C406.

Continuing with electric preferred, this fixes a problem where fossil fuel water heaters were given more credits than high-efficiency electric.

8. TABLE C406.1(2) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP R AND I OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B are amended to read as follows:

TABLE C406.1(2)

ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP R AND I OCCUPANCIES

SECTION	CLIMATE ZONE 5B
C406.7.3: Efficient fossil fuel water heater ^b	<u>9</u> <u>3</u>
C406.7.4: Heat pump water heater ^b	<u>5</u> <u>9</u>

9. TABLE C406.1(3) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP E OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B are amended to read as follows:

**TABLE C406.1(3)
ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP E OCCUPANCIES**

SECTION	CLIMATE ZONE 5B
C406.7.3: Efficient fossil fuel water heater ^a	3 <u>N/A</u>
C406.7.4: Heat pump water heater ^a	4 <u>3</u>

a. For schools with showers or full-service kitchens.

10. TABLE C406.1(5) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR OTHER OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B are amended to read as follows:

**TABLE C406.1(5)
ADDITIONAL ENERGY EFFICIENCY CREDITS FOR OTHER^a OCCUPANCIES**

SECTION	CLIMATE ZONE 5B
C406.7.3: Efficient fossil fuel water heater ^b	<u>9</u> <u>3</u>
C406.7.4: Heat pump water heater ^b	<u>5</u> <u>9</u>

a. Other occupancies include all groups except Groups B, E, I, M, and R.

b. For occupancy groups listed in Section 406.7.1

This adds the thermal energy certification, slab insulation, and radiant heating insulation to the Total Building Performance pathway, to match the other pathways.

11. TABLE C407.2 REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE is retained in its entirety and amended to add the following items:

**TABLE C407.2
REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE**

SECTION	TITLE
Envelope	

<u>C401.3</u>	<u>Thermal envelope certificate</u>
<u>C402.2.4</u>	<u>Slabs-on-grade</u>
<u>C402.2.6</u>	<u>Insulation of radiant heating system</u>

RESIDENTIAL

This shows mechanical and service water heating details on the construction documents.

12. **Section R103.2 Information on construction documents**, is amended by modifying item 6 as follows:

6. Mechanical and service water heating systems and equipment types, sizes, fuel source, and efficiencies.

This adds definitions to accommodate all-electric buildings.

13. **Section R202 GENERAL DEFINITIONS** is amended to add the following definitions in alphabetical order:

ALL-ELECTRIC BUILDING. A *building* and building site that contains no *combustion equipment*, or plumbing for *combustion equipment*, and that uses heat pump technology as the primary supply for heating, cooling, and service water heating loads.

MIXED-FUEL BUILDING. A *building* and building site that contains *combustion equipment*, or plumbing for *combustion equipment*, for space heating, cooling, water heating (including pools and spas), cooking, or clothes drying.

This encourages electrification and more evenly weighs the impact of the additional efficiency credits by requiring a mixed-fuel home to select three packages whereas an all-electric home selects one. Of the three packages required for the mixed-fuel home, one must address the envelope (improved envelope or reduced infiltration plus better ventilation) while the remaining two impact HVAC (better equipment or more efficient ducts) and water-heating (better equipment) requirements.

14. Section R401.2.5 Additional energy efficiency is amended as follows:

R401.2.5 Additional energy efficiency. This section establishes additional requirements applicable to all compliance approaches to achieve additional energy efficiency.

1. For buildings complying with Section R401.2.1, ~~one of the additional efficiency package options shall be installed according to Section R408.2~~ the building shall meet one of the following:
 - 1.1. For *all-electric buildings*, one of the additional efficiency package options shall be installed according to Section R408.2.
 - 2.2. For *mixed-fuel buildings*, three of the additional efficiency packages shall be installed, at least one of which addresses the envelope.
2. For buildings complying with Section R401.2.2, the building shall meet one of the following:
 - 2.1. For *all-electric buildings*, one of the additional efficiency package options in Section R408.2 shall be installed without including such measures in the proposed design under Section R405.

- 2.2. For mixed-fuel buildings, three of the additional efficiency packages shall be installed, at least one of which addresses the envelope, without including such measures in the proposed design under Section R405.
- 2.3. For all-electric buildings, the proposed design of the building under Section R405.3 shall have an annual energy cost that is less than or equal to 95 percent of the annual energy cost of the standard reference design.
- 2.4. For mixed-fuel buildings, the proposed design of the building under Section R405.3 shall have an annual energy cost that is less than or equal to 80 percent of the annual energy cost of the standard reference design.
3. For buildings complying with the Energy Rating Index alternative Section R401.2.3, the Energy Rating Index value shall be at least 5 percent less than the Energy Rating Index target specified in Table R406.5.

The options selected for compliance shall be identified in the certificate required by Section R401.3.

This adds fuel sources and electric-ready information to the certificate.

15. Section R401.3 Certificate, item 4, is amended and new items 8 and 9 are added as follows:

R401.3 Certificate. A permanent certificate shall be completed by the builder or other approved party and posted on a wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels. The certification shall indicate the following:

4. The types, sizes, fuel sources, and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace or baseboard electric heater is installed in the residence, the certificate shall indicate “gas-fired unvented room heater,” “electric furnace” or “baseboard electric heater,” as appropriate. An efficiency shall not be indicated for gas-fired unvented room heaters, electric furnaces and electric baseboard heaters.
8. The fuel sources for cooking and clothes drying equipment.
9. Where combustion equipment is installed, the certificate shall indicate information on the installation of additional electric infrastructure including which equipment and/or appliances include additional electric infrastructure, capacity reserved on the electrical service panel for replacement of each piece of combustion equipment and/or appliance.

This and the next are part of electric-ready. They ensure sufficient physical space for future electric water heating systems.

16. Section R403.5 Service hot water systems is amended as follows:

R403.5 Service hot water systems. Energy conservation measures for service hot water systems shall be in accordance with Sections R403.5.1 through ~~R403.5.3~~ R403.5.4.

17. Section R403.5.4 Water heating equipment location is added as follows:

R403.5.4 Water heating equipment location. Water heaters with *combustion equipment* shall be located in a space with the following characteristics:

1. Minimum dimensions of 3 feet by 3 feet by 7 feet high.

2. Minimum volume of 760 cubic feet, or the equivalent of one 16-inch by 24-inch grill to a heated space and one 8-inch duct of no more than 10 feet in length for cool exhaust air.
3. Contains a condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance, installed within 3 feet of the water heater.

Exceptions:

1. Water heaters with an input capacity of greater than 300,000 Btu/h that serves multiple dwelling units or sleeping units.

This prohibits fuel gas lighting. This type of lighting is rare.

18. Section R404.1.1 Fuel gas lighting is amended to read as follows:

Section R404.1.1. Fuel gas lighting. Fuel gas lighting systems ~~shall not have continuously burning pilot lights~~ are prohibited.

This adds electric-ready wiring for combustion equipment.

19. A new Section R404.4 Additional electric infrastructure is added as follows:

R404.4 Additional electric infrastructure. All combustion equipment shall be installed in accordance with Section R403.5.4 and shall be provided with a junction box that is connected to an electrical panel by continuous raceways and conductors that meet the following requirements:

1. The junction box, raceway, and bus bar in the electric panel and conductors serving the electric panel and future equipment shall be sized to accommodate electric equipment sized to serve the same load as the combustion equipment.
2. The panel shall have reserved physical space for a dual-pole circuit breaker.
3. The junction box and electrical panel directory entry for the dedicated circuit breaker space shall have labels stating “For future electric equipment.”
4. The junction box shall allow for the electric equipment to be installed within the same place of the combustion equipment that it replaces.

Exceptions:

1. Fossil fuel space heating equipment where a 208/240-volt electrical circuit with a minimum capacity of 40 amps exists for space cooling equipment.
2. Water heating equipment with an input capacity greater than 300,000 Btu/h that serves multiple dwelling units or sleeping units.

This adds electric-ready to the Total Building Performance table.

20. Table R405.2 Requirements for Total Building Performance adds a new row under Mechanical as follows:

TABLE R405.2 REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE

SECTION	TITLE
Mechanical	
<u>R403.5.4</u>	<u>Water heating equipment location</u>

This adds electric-ready to the ERI mandatory requirements table.

21. Table R406.2 Requirements for Energy Rating Index adds a new row under Mechanical as follows:

TABLE R406.2 REQUIREMENTS FOR ENERGY RATING INDEX

SECTION	TITLE
Mechanical	
<u>R403.5.4</u>	<u>Water heating equipment</u>

This incorporates electric-preferred into the ERI path.

22. Section R406.5 ERI-based compliance is amended as follows:

R406.5 ERI-based compliance. Compliance based on an ERI analysis requires that the rated proposed design and confirmed built dwelling be shown to have an ERI less than or equal to the appropriate value for the proposed all-electric or mixed-fuel building as indicated in Table R406.4 when compared to the ERI reference design.

TABLE R406.5 MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ALL-ELECTRIC BUILDING	<u>MIXED FUEL BUILDING</u>
5	55	<u>52</u>