

SUBJECT: **ORDINANCE 1907, SERIES 2025 – AN ORDINANCE ADOPTING BY REFERENCE THE 2024 INTERNATIONAL BUILDING CODE, 2024 INTERNATIONAL RESIDENTIAL CODE, 2024 INTERNATIONAL ENERGY CONSERVATION CODE, 2024 INTERNATIONAL MECHANICAL CODE, 2024 INTERNATIONAL FUEL GAS CODE, 2024 INTERNATIONAL FIRE CODE, 2024 INTERNATIONAL EXISTING BUILDING CODE, 2024 INTERNATIONAL PLUMBING CODE, 2024 INTERNATIONAL PROPERTY MAINTENANCE CODE, 2024 INTERNATIONAL SWIMMING POOL AND SPA CODE, AND THE 1997 UNIFORM HOUSING CODE – SECOND READING AND PUBLIC HEARING (advertised *Boulder Daily Camera* 10/12/2025 and 10/26/2025)**

DATE: **NOVEMBER 3, 2025**

PREPARED BY: **ROB ZUCCARO, COMMUNITY DEVELOPMENT DIRECTOR
CHAD ROOT, CHIEF BUILDING OFFICIAL**

PRESENTED BY: **ROB ZUCCARO, COMMUNITY DEVELOPMENT DIRECTOR
CHAD ROOT, CHIEF BUILDING OFFICIAL**

SUMMARY:

Attached for consideration on second reading is an ordinance adopting the following building codes:

- 2024 International Building Code
- 2024 International Residential Code
- 2024 International Mechanical Code
- 2024 International Fuel Gas Code
- 2024 International Plumbing Code
- 2024 International Fire Code
- 2024 International Energy Conservation Code
- 2024 International Property Maintenance Code
- 2024 International Existing Building Code
- 2024 International Swimming Pool and Spa Code
- 1997 Uniform Housing Code (adds to the City's authority if needed to abate dangerous buildings).

The proposed ordinance adopts each of these codes by reference and specifies local amendments to these codes within the Municipal Code, Title 15, Building and Construction. The proposed ordinance also adopts State-mandated building codes by reference, including the State's electric ready and solar reading building codes. Staff have worked with the Building Code Board of Appeals (BCBOA), which serves as the designated advisory board to City Council on building code adoptions, to develop the proposal.

The I-Code series is updated every three years. The City has typically skipped an adoption cycle, and thus adopted new codes every six years. It is common for municipalities not to adopt new codes during each three-year code cycle. This is a way to provide more predictability for businesses and the development community so that they are not having to adapt to new code requirements as frequently.

Changes Following First Reading

Staff added new language under Section 9 of the ordinance (Code Section 15.18.010.B) that brings forward existing code provisions for original homeowners impacted by the Marshall Fire to opt out of building to the 2024 International Energy Conservation Code and instead build to the 2018 International Energy Conservation Code. This applies to those who lost their home, sustained major structural damage, or sustained smoke, heat, water, ash, or other damage, and expires on December 31, 2028.

BACKGROUND / PRIOR DISCUSSIONS:

City Council reviewed the proposed code adoption package during a Discussion/Direction session at its August 26, 2025 meeting.

Link: [August 26, 2025 City Council Memo](#).

At this meeting, City Council provided staff direction on key policy items, including which version of the International Energy Conservation Code version was desired to be included for consideration in the final adoption draft. The two primary options included:

1. Adoption of the 2024 International Energy Conservation Code with minimal local amendments, supported by the City's BCBOA (Attachment No. 2).
2. Adoption of the 2024 International Energy Conservation Code with amendments developed by a regional code Cohort that includes more stringent energy conservation standards and favors all-electric space and water heating systems.

Council directed staff to include the first option, the 2024 International Energy Conservation Code supported by the City's BCBOA, in the adoption draft.

The other primary policy question discussed was whether to maintain the residential fire sprinkler requirements included in the 2024 International Residential Code. The Louisville Fire Protection District has recommended that the City adopt these standards (Attachment No. 2). Council directed staff to include these standards in the adoption draft.

City Council passed the proposed ordinance on first reading on its October 7, 2025, meeting without amendments.

ANALYSIS:

2024 I-Code Series

The International Code Council updates the I-Codes on a three-year cycle to improve safety, address changes in building science and technology, resolve feasibility issues, ensure legal compliance of the codes, and reflect best practices in the building industry. The codes are

meant to set a minimum standard to protect health, safety, and the environment. Development of the codes each cycle includes input and consensus from across the country and many industries. Each local jurisdiction may adopt the codes with local amendments. These amendments can address local preferences and ensure compliance with state-level regulations and must comply with other legal standards and federal regulations. There are numerous changes between the City-adopted 2018 I-Codes and the 2024 I-Codes. Attachment No. 3 is a summary of some of the major changes between these code versions.

Based on comments received at the August 26, 2025, meeting, an amendment has been added to the 2024 International Energy Conservation Code to exempt detached Accessory Dwelling Units (ADUs) and ADUs that are additions to existing homes from having to meet a minimum HERS (Home Energy Rating System) standard. ADUs will only be subject to the prescriptive energy efficiency standards due to the difficulty in modeling smaller occupied residential structures such as ADUs. Detached ADUs and ADUs that are additions to existing homes will also be exempt from having to meet the residential sprinkler requirements.

International Energy Conservation Code Options

The BCBOA recommendation is to adopt the 2024 International Energy Conservation Code with minimal amendments. The code would allow Prescriptive Compliance or Simulated Building Performance paths for commercial development and Prescriptive Compliance, Simulated Building Performance, or Energy Rating Index pathways for residential development. There are mandatory minimum performance standards for the thermal envelope of the building regardless of the pathway used, which are not included in the Cohort code version. This version of the code would not include mandatory all-electric heat pump space and water heating for commercial development or include mandatory energy modeling standards as exists in the City's current version of the 2021 International Energy Conservation Code.

Adoption of this code version would be more straightforward to administer and could be considered more business-friendly and easier to use and implement for design professionals and builders working in Louisville. The base code has been vetted nationally and would still provide improved building efficiency and carbon reduction compared to previous base code versions.

The Cohort code version is developed with an electric-preferred approach but does not mandate all-electric buildings. The amendments are designed to provide an efficiency baseline using compliance modeling and minimum targets that measure energy use of the building, recognizing efficiencies and carbon reduction gained by all-electric construction. The code also addresses the federal preemptions on fuel-fired appliances through electric-preferred approach. Overall, the Cohort code represents more aggressive standards for building efficiency and carbon reduction.

The Cohort code is currently being promoted by the Denver Regional Council of Governments (DRCOG) for adoption by the 59 member jurisdictions. Potential benefits of regional cooperation on uniform code adoption include ensuring a level playing field and costs for development under the code within the Denver Metro area. The code would also promote the health and environmental benefits of energy efficiency and all-electric buildings regionally.

The City's Sustainability Advisory Board (LSAB) has provided a letter to City Council recommending approval of the Cohort code (Attachment No. 4). LSAB notes that the Cohort code "aligns most closely with the City's adopted Sustainability Action Plan and will ensure stronger long-term outcomes for our community." Figure 1 below lists the code adoption status of each of the Cohort jurisdictions. Currently, the City of Golden has adopted the Cohort code package, and several other jurisdictions are scheduled for consideration of adoption in the future.

Figure 1: Cohort Code Adoption Status

Metro Regional Building Policy Cohort Adoption Status				
Jurisdiction	Current Code	Intended Code	Bringing to Council	Adoption (Tentative)
Boulder County	2021 IECC with electric-ready	2024 IECC with amendments	Q4 2025	Q1 2026
City of Boulder	2021 IECC with all-electric	N/A	N/A	N/A
Broomfield	2021 IECC with electric-readiness	2024 IECC or MLECC	Q2 2026	Q2 2026
Berthoud	2021 IECC	TBD	TBD	TBD
Brighton	2021 IECC	TBD	Q2 2026	Q2 2026
Denver	2021 IECC with electric-preferred/required	N/A	N/A	N/A
Edgewater	2021 IECC with electric-readiness	TBD	TBD	TBD
Erie	2021 IECC with electric-preferred	Cohort package or MLECC	Early 2026	Mid 2026
Golden	Cohort package	N/A	N/A	N/A
Lafayette	2021 IECC with all-electric	2024 IECC with all-electric		Q3 2026
Longmont	2021 IECC with EV-ready, PV-ready	Cohort package	Q3 2025	Q1-Q2 2026
Louisville	2021 IECC with electric-ready/all-electric	2024 IECC	Q3 2025	Q4 2025
Northglenn	2021 IECC with electric-preferred	Cohort package	Q4 2025	Q4 2025
Superior	2021 IECC with electric-preferred	Cohort package or MLECC	Q4 2025	Q4 2025
Thornton	2021 IECC with electric-readiness	TBD	TBD	TBD
Westminster	2021 IECC with electric-readiness	TBD	2026	2026

Residential Sprinkler Requirements

Residential fire sprinkler requirements differ from commercial fire sprinklers in that they are designed to control the fire long enough for occupants to escape whereas a commercial system is also designed to control and extinguish a fire to minimize damage to property. The limited scope of the system allows it to be more cost-effective than commercial systems and causes less property damage when they are triggered.

According to a 2024 publication from the National Fire Protection Association that studied residential fires from 2017 to 2021, residential fire sprinklers were shown to have the following benefits:

- They were effective in controlling the fire 98% of the time that they were activated, with a 95% activation rate when fires were large enough to trigger the sprinklers.
- Only one sprinkler activated in 85% of fires, limiting water damage from the activation.
- Civilian deaths and injuries were 89% and 31% lower than in homes without sprinklers.
- Property loss per fire was 55% lower than in homes without sprinklers.
- Firefighter injury rate was 48% lower than in homes without sprinklers.

Cost Estimates for Residential Sprinkler Installation

The Home Builders Association of Metro Denver has submitted comments estimating the cost for installation of residential fire sprinklers to be \$4.50 per square foot, plus \$1 per square foot for design drawings. For a 2,500 square foot home, the total cost would be \$13,750. If the home costs \$250 per square foot to build, this equals 2.2% of the construction cost.

Another cost consideration is that many insurance companies encourage installation of residential fire sprinkler systems and provide a discount for homes with systems.

2025 COUNCIL WORK PLAN:

This item is not on the 2025 City Council Workplan but has been an anticipated project this year.

FISCAL IMPACT:

Budgeted?: **No**

Staff does not anticipate that the amendment package recommended by the BCBOA will have a fiscal impact on the City.

ALTERNATIVE(S):

- Adopt Ordinance No. 1907, Series 2025 on second reading as drafted.
- Adopt Ordinance No. 1907, Series 2025 on second reading with specific amendments to the ordinance.
- Continue the second reading public hearing on Ordinance No.1907, Series 2025 with direction to staff to make any desired amendments and bring back the ordinance draft for further review.

RECOMMENDATION:

Staff recommends approval of Ordinance No. 1907, Series 2025 as drafted.

ATTACHMENT(S):

1. Ordinance No. 1907, Series 2025
2. LFPD Letter Regarding Residential Fire Sprinkler Adoption
3. 2018 and 2024 I-Code Comparison Summary
4. LSAB Letter Recommending Cohort Code Adoption
5. Presentation Slides

Second Reading Amendments

Ordinance No. 1907, Series 2025 is revised to read as follows (second reading amendments are shown in **bold underline** and ~~**bold strikeout**~~):

ORDINANCE NO. 1907

AN ORDINANCE ADOPTING BY REFERENCE THE 2024 INTERNATIONAL BUILDING CODE, 2024 INTERNATIONAL RESIDENTIAL CODE, 2024 INTERNATIONAL MECHANICAL CODE, 2024 INTERNATIONAL FUEL GAS CODE, 2024 INTERNATIONAL FIRE CODE, 2024 INTERNATIONAL EXISTING BUILDING CODE, 2024 INTERNATIONAL PLUMBING CODE, 2024 INTERNATIONAL PROPERTY MAINTENANCE CODE, 2024 INTERNATIONAL SWIMMING POOL AND SPA CODE, THE 1997 UNIFORM HOUSING CODE, AND THE 2024 INTERNATIONAL ENERGY CONSERVATION CODE

WHEREAS, the City Council has from time-to-time adopted certain building and construction standards; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare to adopt by reference thereto the updated editions of the above-referenced codes; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said codes; and

WHEREAS, the updated editions of the above-referenced codes have been submitted to the City Council in writing and the City Council has determined that such codes should be adopted as herein set forth.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Chapter 15.04 of the Louisville Municipal Code is hereby repealed and re-enacted to read as follows:

Chapter 15.04

INTERNATIONAL BUILDING CODE

- Sec. 15.04.010. Adoption.
- Sec. 15.04.020. Amendments to the 2024 International Building Code.
- Sec. 15.04.030. Appendices adopted.

Sec. 15.04.040.	Section 101.1 amended—Title.
Sec. 15.04.050.	Section [A]104.1 amended—General.
Sec. 15.04.060.	Section [A]105.5 amended—Permit expiration.
Sec. 15.04.070.	Section 1010.1.9.4 amended— Locks and latches.
Sec. 15.04.080.	Section 1030.1 amended—General emergency escape and rescue.
Sec. 15.04.190.	Section 1604.8.3 amended—Decks.
Sec. 15.04.100.	Section 1609.3.2 added—Wind loads.
Sec. 15.04.110.	Section 1608.2 amended—Ground snow loads.
Sec. 15.04.120.	Section 1809.5 amended—Frost protection.
Sec. 15.04.130.	Section 2704 added-Lithium Energy Storage Systems (ESS)
Sec. 15.04.140.	Section 3001.1 amended— Scope.
Sec. 15.04.150.	Copies available.
Sec. 15.04.160.	Violations and penalties.
Sec.15.04.170.	Fireplace Installation.
Sec.15.04.180.	Design Handbook for Downtown Louisville to apply.
Sec. 15.04.190.	Industrial and Commercial Development Design Standards and Guidelines to apply.

Sec. 15.04.010.- Adoption.

The International Building Code, 2024 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The purpose and subject matter of the International Building Code include regulating construction aspects of building through comprehensive provisions and standards regulating the erection, construction, enlargement, alteration, equipping, use, height, area, and maintenance of buildings and structures and providing greater safety to the public by uniformity in building laws. Except as otherwise provided in this chapter, the International Building Code, 2024 Edition, is adopted in full, including the table of contents, index, and appendices. Any reference to the International Building Code within this chapter shall be to the 2024 Edition of such code. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the, the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.04.020. – Amendments to the 2024 International Building Code.

The following amendments set forth in sections 15.04.040 through 15.04.140 are made to the 2024 International Building Code.

Sec. 15.04.030. - Appendices adopted.

The following appendices of the 2024 International Building Code are hereby specifically adopted; any appendices not listed are not adopted:

Appendix C, Group U – Agricultural Buildings; Appendix F, Rodent proofing; Appendix I, Patio Covers; Appendix J, Grading; Appendix K, Administrative Provisions; Appendix N, Replicable Buildings and Appendix P, Sleeping Lofts

Sec. 15.04.040. - Section [A]101.1 amended—Title.

Section [A]101.1 of the International Building Code is amended to insert "the City of Louisville" so the section will read:

[A]101.1 Title. These regulations shall be known as the Building Code of the City of Louisville, hereinafter referred to as "this code."

Sec.15.40.050.- Section [A]104.1 amended—General.

Section [A]104.1 of the International Building Code is amended to read as follows:

[A]104.1 General. The building official is hereby authorized and directed to enforce the provisions of this code. The building official shall have the authority to render interpretations of this code and other International Code Council codes and has the ability to adopt policies and procedures in order to clarify the application of their provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code but should give latitude for good science and engineering practices. Buildings shall meet the City of Louisville Fire Hardening Code.

Sec. 15.04.060. - Section [A]105.5 amended—Permit expiration.

The first paragraph of *Section [A]105.5* of the International Building Code is hereby amended to read as follows:

[A]105.5 Expiration. Except for permits for alterations involving only one discipline, every permit issued by the Building Official under the provisions of this code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Every permit for alterations involving only one discipline which is issued by the Building Official under the provisions of this code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 90 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 90 days. Before such work can be recommenced, a new permit shall be first obtained. If a new Code has been adopted the new permit will incorporate all new codes and fees. Permits are automatically extended 180 days from a passed Foundation Inspection and a Passed Framing Inspection.

Sec. 15.04.070.- Section 1010.2.4 Amended—Locks and latches.

Section 1010.2.4 of the International Building Code is amended to read as follows:

1010.2.4. Locks and Latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exist. Except for Group A Occupancies shall only have Panic hardware no deadbolts or other locks are allowed on any doors in group A occupancies.

1.Places of detention or restraint.

2. In Group I-1, Condition 2 and Group I-2 occupancies where the clinical needs of persons receiving care require containment or where persons receiving care pose a security threat, provided that all clinical staff can readily unlock doors at all times, and all such locks are keying to keys carried by all clinical staff at all times or all clinical staff have the codes or other means necessary to operate the locks at all times.

3. Locking devices are permitted on doors to balconies, decks or other exterior spaces of 250 square feet (23.23m²) or less, serving a private office space.

4. In buildings in Occupancy Groups B, F, M and S, the main door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:

4.1. The doors are the main exterior doors to the building, or the doors are the main doors to the tenant space.

4.2. The locking device is readily distinguishable as locked.

4.3. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters one inch (25 mm) high on a contrasting background.

4.4. The use of the key-operated locking device is revocable by the Fire Code Official for due cause.

5. Manual bolts, automatic flush bolts and constant latching bolts on the inactive leaf of a pair of doors in accordance with Table 1010.2.4, provided that the inactive leaf does not have a doorknob, panic hardware, or similar operating hardware.

6. Single exit doors complying with Section 1006.2.1 or 1006.3.4 from individual dwelling or sleeping units of Group R occupancies and equipped with a night latch, dead bolt or security chain that requires a second releasing motion, provided that such devices are openable from the inside without the use of a key or tool.

7. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

8. Doors serving roofs not intended to be occupied shall be permitted to be locked, preventing entry to the building from the roof.

9. Other than egress courts, where occupants must egress from an exterior space through the building for means of egress, exit access doors shall be permitted to be equipped with an approved locking device where installed and operated in accordance with all of the following:

9.1. The maximum occupant load shall be posted where required by Section 1004.9. Such sign shall be permanently affixed inside the building and shall be posted in a conspicuous space near all the exit access doorways.

9.2. A weatherproof telephone or two-way communication system installed in accordance with Sections 1009.8.1 and 1009.8.2 shall be located adjacent to not less than one required exit access door on the exterior side.

9.3. The egress door locking device is readily distinguishable as locked and shall be key operated locking device.

9.4. A clear window or glazed door opening, not less than 5 square feet (0.46m²) in area, shall be provided at each exit access door to determine if there are occupants using the outside area.

9.5. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters one inch (25 mm) high on a contrasting background.

9.6. The occupant load of the occupied exterior area shall not exceed 49 occupants in accordance with Section 1004.

10. Locking devices are permitted on doors to balconies, decks or other exterior spaces serving individual dwelling or sleeping units.

Sec.15.04.080.- Section 1031.1 Amended—General emergency escape and rescue.

Section 1030.1 of the International Building Code is amended to read as follows:

1030.1 General. In addition to the means of egress required by this chapter, emergency escape and rescue openings shall be provided in the following occupancies:

1. Group R-2 occupancies located in stories with only one exit or access to only one exit as permitted by Tables 1006.3.4(1) and 1006.3.4(2).

2. Group R-3 and R-4 occupancies. Basements and sleeping rooms below the fourth story above grade plane shall have not fewer than one exterior emergency escape and rescue opening in accordance with this section. Where basements contain one or more sleeping rooms, emergency escape and rescue openings shall be required in each sleeping room, but also be required in adjoining areas of the basement. Such openings shall open directly into a public way or to a yard or court that opens to a public way.

3. Exceptions: Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue openings. Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court or exterior exit balcony that opens to a public way. Basements without habitable spaces and having not more than 200 square feet (18.6 m2) in

floor area shall not be required to have emergency escape and rescue openings.

Sec.15.04.090.- Section 1604.8.3 amended—Decks.

Section 1604.8.3 of the International Building Code is amended to read as follows:

1604.8.3 Decks. Decks that are structurally supported from an existing structure shall be engineered by a structural engineer that is licensed with the State of Colorado and designed to meet the Louisville Fire Hardening Code. Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads as applicable. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self-supporting. This section shall govern over the IECC to ensure proper connection of deck top structure. Connections of decks with cantilevered framing members to exterior walls or other framing members shall be designed for both of the following:

1. The reactions resulting from the dead load and live load specified in Table 1607.1, or the snow load specified in Section 1608, in accordance with Section 1605, acting on all portions of the deck.
2. The reactions resulting from the dead load and live load specified in Table 1607.1, or the snow load specified in Section 1608, in accordance with Section 1605, acting on the cantilevered portion of the deck, and no live load or snow load on the remaining portion of the deck.

Sec. 15.04.100. - Section 1609.3.2 added—Wind loads.

The following *Section 1609.3.2* is added to the 2024 International Building Code:

1609.3.2. Wind Speeds. The minimum basic wind speed for determining wind pressure shall be in accordance with this Section 1609 and the Colorado Front Range Gust Map Study ASCE 7-10. Will be determined by the ASCE hazard tool at <https://ascehazardtool.org/>

Sec. 15.04.110. - Section 1608.2 amended—Ground snow loads.

Section 1608.2 of the International Building Code is amended by the addition of the following sentence inserted at the end of the section:

The ground and roof snow load shall be determined by the ASCE hazard tool at <https://ascehazardtool.org/>

Sec. 15.04.120. - Section 1809.5 amended—Frost protection.

Item 1 of *Section 1809.5* of the International Building Code shall be amended to read as follows:

Extending 36 inches below finished grade;

Sec. 15.04.130.- Section 2704 added- Energy Storage Systems ESS

Chapter 27 of the International Building Code is amended by the addition of a new *Section 2704* to reads as follows:

2704. Lithium Energy Storage Systems (ESS).

2704.1 Lithium Energy Storage Systems (ESS). Energy storage systems shall not be installed inside the thermal building envelope of a commercial structure, primary residence, or Accessory Dwelling Unit (ADU). The ESS shall be installed on the outside of the thermal envelope or in an exterior insulated shed attached or detached to the building envelope to protect from extreme heat and cold . The ESS shall have electrical disconnects within 3 to 6 ft of the ESS. Installation of an ESS in garages that are attached to a residence or ADU must have One Hour Fire rated walls and ceiling and or an approved Fire Suppression system in the garage. The ESS shall be installed on the wall farthest away from the residence inside the garage the ESS shall have a Heat Detector that is tied into the Smoke Detectors and shall have a flashing light on the battery with the fault.

EXCEPTION:

1. Commercial Buildings with a 1 hour rated room where mechanical ventilation is separate from the rest of the building and shall have a Heat Detector at each battery with a flashing light on the battery with the fault.

Sec.15.04.140.- Section 3001.1 amended—Scope.

Section 3001.1 of the International Building Code is amended to read as follows:

3001.1 Scope. This chapter governs the design, construction, installation, alteration and repair of elevators and conveying systems and

their components. All elevators that serve accessible residential units shall have secondary means of power such as a generator to maintain operation while primary power is down.

15.04.150. - Copies available.

At least one copy of the 2024 International Building Code and one copy of each secondary code pertaining thereto, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.04.160. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Sec. 15.04.170. - Fireplace installation.

A. Any new or remodeled fireplace to be installed or constructed in any dwelling in the city shall be one of the following:

1. A gas appliance;
2. An electric device; or
3. A fireplace or fireplace insert that meets the most stringent emissions standards for wood stoves established by C.R.S. Title 25, Article 7 and the Colorado Department of Public Health and Environment Air Quality Control Commission Regulations or any other clean burning device that is approved by the Air Quality Control Commission Regulations.

B. It is unlawful for any person to install or construct any new or remodeled fireplace which does not comply with this section. Any person

convicted of a violation of this section shall be subject to the penalty provided in section 1.28.010.

Sec. 15.04.180. - Design Handbook for Downtown Louisville to apply.

Any addition, remodeling, relocation, construction, or other improvement within Downtown Louisville and requiring a building permit, sign permit, or any other permit from the city shall comply with all requirements of the Design Handbook for Downtown Louisville, as adopted and amended from time to time.

Sec. 15.04.190. - Industrial and Commercial Development Design Standards and Guidelines to apply.

Any addition, remodeling, relocation, construction, or other improvement to an industrial property or project within the city and requiring a building permit, sign permit, or any other permit from the city shall comply with the requirements of City of Louisville Industrial Development Design Standards and Guidelines (IDDSG) and the Commercial Development Design Standards and Guidelines (CDDSG) as adopted and amended from time to time.

Section 2. Chapter 15.05 of the Louisville Municipal Code is hereby repealed and re-enacted to read as follows:

Chapter 15.05

INTERNATIONAL RESIDENTIAL CODE

- Sec. 15.05.010. Adoption.
- Sec. 15.05.020. Appendices adopted.
- Sec. 15.05.030. Amendments to the 2024 International Residential Code.
- Sec. 15.05.040. Section R101.1 amended - Title.
- Sec. 15.05.050. Section R105.2 amended - Work exempt from permit.
- Sec. 15.05.060. Section R105.2.1 amended—Emergency repairs.
- Sec. 15.05.070. Section R108.2 amended- Schedule of permit fees.
- Sec. 15.05.080. Section 108.3 amended—Building permit valuations.
- Sec. 15.05.090. Section R110.1 amended—Use and occupancy.
- Sec. 15.05.100. Section R110.4 amended—Temporary certificate of occupancy.
- Sec. 15.05.110. Table R301.2(1) revised - Climate and Geography Design Table.

Sec.15.05.120.	Section R309.2 amended- One and Two family Dwelling Automatic Sprinklers Systems.
Sec.15.05.130.	Section 404.1.6 amended- Foundation Height above finished grade of non-combustible surface.
Sec.15.05.140.	Section R507.1 amended- Decks.
Sec. 15.05.150	Section R703.1 amended- Exterior Wall Covering.
Sec. 15.05.160	Section R806 amended-Roof Ventilation
Sec. 15.05.170	Section R 902.1 amended-Roofing Material.
Sec. 15.05.180	Section R903.4 amended- Roof Drainage.
Sec. 15.05.190.	Section N 1101 deleted –Energy Efficiency.
Sec. 15.05.200.	Section M1503.3 amended--Exhaust Discharge.
Sec. 15.05.210.	Section G2427.4.1 amended—Plastic Piping.
Sec. 15.05.220	Section M1905 added—Energy Storage Systems.
Sec. 15.05.230.	Reserved.
Sec. 15.05.240.	Section P2503.5.1 amended—Rough plumbing.
Sec. 15.05.250.	Section P2603.6.1 amended—Sewer depth.
Sec. 15.05.260.	Section P3103.1 amended—Roof extension.
Sec. 15.05.270.	Fireplace installation.
Sec. 15.05.280.	Chapters 34-43 deleted.
Sec. 15.05.290.	Copies available.
Sec. 15.05.300.	Violations and penalties.

Sec. 15.05.010. - Adoption.

The International Residential Code for One- and Two-Family Dwellings, 2024 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The subject matter of the International Residential Code is to regulate and govern the construction, alteration, movement, enlargement, replacement, repair, equipment, location, removal and demolition of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with separate means of egress in the City of Louisville, and providing for the issuance of permits and collection of fees therefor. Except as otherwise provided in this chapter, the International Residential Code, 2024 Edition, is adopted in full, including the table of contents, index, and appendices. Any reference to the International Residential Code within this chapter shall be to the 2024 Edition of such code. Structures shall meet the City of Louisville's Fire Hardening Code. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All

buildings and structures under scope of this code adoption shall also comply with the, the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.05.020.- Appendices adopted.

The following appendices of the International Residential Code are hereby specifically adopted; any appendices not listed are not adopted: BB Tiny Houses, BC-Accessory Dwelling Units, BE-Radon Control Methods, BG-Sound Transmission, BI-Light Straw-Clay Construction, BJ-Strawbale Construction, BK- Cob Construction (Monolithic Adobe), BL-Hemp-Lime Construction (Hempcrete), BM-3D-Printed Building Construction, BN-Extended Plate wall Construction, CC-Recommendation Procedure for Safety Inspections of an Existing Appliance Installation.

Sec. 15.05.030. - Amendments to the International Residential Code.

The following amendments set forth in sections 15.05.040 through 15.05.280 are made to the International Residential Code.

Sec. 15.05.040. - Section R101.1 amended—Title.

Section R101.1 of the International Residential Code is amended to insert "the City of Louisville" so the section will read:

R101.1 Title. These provisions shall be known as the Residential Code for One- and Two-Family Dwellings of the City of Louisville and shall be cited as such and will be referred to herein as this code.

Sec. 15.05.050.- Section R105.2 amended—Work exempt from permit.

The following paragraphs are added to the Building portion of *Section R105.2* of the International Residential Code:

11. PERMIT NOT REQUIRED. A Building Permit will NOT be required for the renovation, remodel and/or repair of an existing single-family residence only where:

- a) The work is to be done by the owner or occupant, and
- b) The size of the structure will not be increased, and

c) The structural members (design) i.e., foundations, underpinning, bearing, or framing, will not be altered or changed, and

d) The scope of the work will exclude any electrical, plumbing or heating, and

e) The TOTAL COST of labor and materials will not exceed \$2,500.00, and

f) All codes as adopted by the City of Louisville and the State of Colorado shall be adhered to. Failure to do so will result in a double fee required permit.

12. Windows that are being replaced in a like-for-like situation with no structural changes to the building do not need a building permit. This is for only those structures that fall under the International Residential Code and are owner occupied.

Sec. 15.05.060.- Section R105.2.1 amended—Emergency repairs.

Section R105.2.1 of the International Residential Code is hereby amended to read as follows:

R105.2.1 Emergency repairs. Where repairs to a structure, equipment replacements and other repairs must be performed in an emergency situation, a permit application shall be submitted within the next working business day to the building official. During a large-scale event such as a hail or wind storm event or tornado, requirements for roofing permits maybe deferred or suspended until such time as provided by the building official.

Sec. 15.05.070.- Section R108.2 amended—Schedule of permit fees.

Section R108.2 of the International Residential Code is amended to read as follows:

R108.2 Schedule of permit fees. For buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid in accordance with a fee schedule adopted by resolution of the City Council from time to time.

Sec. 15.05.080.- Section 108.3 amended—Building permit valuations.

Section 108.3 of the International Residential Code is amended to read as follows:

108.3 Building permit valuations. The applicant for a permit shall provide an estimated permit value at time of application. Permit valuations shall include total value of work, including materials and labor, for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment and permanent systems. If, in the opinion of the building official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the building official. Final building permit valuation shall be set by the building official.

Sec. 15.05.90.- Section R110.1 amended—Use and occupancy.

Section R110.1 of the International Residential Code is amended to read as follows:

R110.1 Use and occupancy.

A. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the building official has issued a certificate of occupancy therefore as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other city ordinances. Certificates purporting to give authority to violate or cancel the provisions of this code or other city ordinances shall not be valid.

B. Exceptions:

1. Certificates of occupancy are not required for work exempt from permits under Section R105.2.

2. Cabins, agricultural and accessory buildings and miscellaneous permits shall not receive certificates of occupancy; a letter of completion will be given upon request.

Sec. 15.05.100. - Section R110.4 amended—Temporary certificate of occupancy.

Section R110.4 of the 2024 International Residential Code is amended to read as follows:

R110.4 Temporary Certificate of Occupancy. There will be a \$600 fee for a temporary certificate of occupancy if approved by the Chief Building Official. A Temporary Certificate of Occupancy shall be valid for 180 days. If a permanent Certificate of Occupancy is issued within the first 30 days, all but \$40 will be refunded. If a permanent Certificate of Occupancy is issued after the first 30 days but prior to the 180-day expiration, \$100 shall be refunded for each full 30-day period remaining out of the original 180-day validity period of the Temporary Certificate of Occupancy.

Sec. 15.05.110.- Table R301.2(1) revised - Climate and Geography Design Table

Table R301.2(1) of the 2024 International Residential Code is filled in as follows:

Based on ASCE Hazard Tool Website <https://ascehazardtool.org/>

TABLE R301.2 (1) CLIMATE AND GEOGRAPHIC DESIGN CRITERIA for Wind Speed and Snow Load use ASCE Hazard Tool. http://ascehazardtool.org/													
GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP	ICE BARRIER UNDERLAY MENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	Speed (mph)	Topographic effects	Special wind region	Windborne debris zone		Weathering	Frost line depth	Termite					
ASCE Hazard	ASCE Hazard	Yes	YES	"C" Unless Proven	B	Severe -5B	36	Slight	1 Degree	Yes	2012	1000-2000	47 Degrees
MANUAL J DESIGN CRITERIA													
Elevation		Latitude	Winter heating	Summer Cooling	Altitude correction factor		Indoor design temp.	Design temp. cooling	Heating temperature difference				
5385		40 North	0	91	0.84		70	75	69				
Cooling temperature difference		Wind velocity heating	Wind velocity cooling	Coincident wet bulb	Daily range		Winter humidity	Summer humidity					
16		15 MPH	7.5 MPH	59	High		50%	30%					

Sec.15.05.120. Section R309.2 amended- One- and Two-Family Dwelling Automatic Sprinkler Systems

Section R309.2 of the International Residential Code is amended to read as follows:

R309.2 One- and two-family dwellings automatic sprinkler systems.
An automatic sprinkler system shall be installed in one- and two-family *dwellings*.

Exceptions:

1. An automatic sprinkler system shall not be required for ADUs, *additions* or *alterations* to *existing buildings* that are not already provided with a sprinkler system.

2. An automatic fire sprinkler system shall not be required when the dwelling is greater than 25 feet from the property line.

Sec. 15.05.130. Section 404.1.6 amended- Height above finished grade

Section 404.1.6 of the International Residential Code is hereby amended to read as follows:

R404.1.6 Height above finished grade.
Concrete and masonry foundation walls shall extend above the non-combustible finished *grade* adjacent to the foundation at all points not less than 4 inches (102 mm) where *masonry veneer* is used and not less than 6 inches (152 mm) elsewhere.

Sec.15.05.140.- Section R507.1 amended—Decks.

Section R507.1 of the International Residential Code is amended to read as follows:

R507.1 Decks. Wood-framed decks shall comply with the standards set forth in this section. All decks that are structurally supported from an existing residential home shall be engineered by a structural engineer that is licensed with the State of Colorado unless the deck is 30" or less above grade.

Sec. 15.05.150 Section R703.1 amended-Exterior Wall Covering

Section R703.1 of the International Residential Code is amended to read as follows:

R703.1 General. Exterior walls shall provide the *building* with a weather-resistant exterior wall envelope. Exterior siding shall meet the Fire Home Hardening Code.

Exceptions:

1. Log walls designed and constructed in accordance with the provisions of [ICC 400](#).
2. Historic Structures

Sec.15.05.160 section R806 amended- Roof Ventilation

Section R806 of the International Residential Code is amended to read as follows:

R806.1 Ventilation required. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross *ventilation* for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire mesh with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/8 inch maximum. Openings in roof framing members shall conform to the requirements of [Section R802.7](#). Required ventilation openings shall open directly to the outside air and shall be protected to prevent the entry of birds, rodents, snakes and other similar creatures.

Sec.15.05.170. Section R902.1 amended- Roofing Material

Section R902.1 of the International Residential Code is amended to read as follows:

R902.1 Roof Assemblies. Roof decks shall be covered with materials as set forth in [Section R904](#) or with roof coverings as set forth in [Section R905](#). Class A roof coverings shall be installed and shall be tested in accordance with ASTM E108 or [UL 790](#). The roof assembly shall be listed and identified as to class by an approved testing agency.

Exceptions:

1. Class A *roof assemblies* include those with coverings of brick, masonry and exposed concrete *roof deck*.
2. Class A *roof assemblies* include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible roof decks.

3. Class A *roof assemblies* include minimum 16 ounces per square foot (4.882 kg/m²) copper sheets installed over combustible roof decks.
4. Class A *roof assemblies* include slate installed over *underlayment* over combustible roof decks.

Sec. 15.05.180. section R903.4 amended-Roof Drainage

Section R903.4 of the International Residential Code is amended to read as follows:

R903.4 Roof drainage. Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Gutters shall be metal and shall have gutter guards installed on all new and replaced gutters.

Sec. 15.05.190.- Section N1101 deleted--Energy Efficiency

Section N1101 of the International Residential Code is deleted and the City's Adopted Energy Code will be used for the Energy Efficiency for this section.

Sec. 15.05.200.- Section M1503.3 amended — Exhaust Discharge

Chapter 15 of the International Residential Code is amended by amending *Section M1503.3* to read as follows:

M1503.3 Exhaust discharge. Domestic cooking exhaust *equipment* shall discharge to the outdoors through a duct. The duct shall have a smooth interior surface, shall be airtight, shall be equipped with a backdraft damper and shall be independent of all other exhaust systems. Ducts serving domestic cooking exhaust *equipment* shall not terminate in an *attic* or *crawl space* or areas inside the *building*. Make up air is required for all domestic cooking exhaust equipment.

Sec. 15.05.210.-Section G2427.4.1 amended – Plastic Piping.

Section G2427.4.1 of the International Residential Code is amended to read as follows:

G2427.4.1 Plastic piping. Where plastic piping is used to vent an appliance, the appliance shall be listed for use with such venting materials, and the appliance manufacturer's installation instructions shall identify the specific plastic piping material. The plastic pipe venting materials shall be labeled in accordance with the product standards specific by the appliance manufacturer or shall be listed in accordance with UL 1738.

All exhaust plastic vent applications and applications that use positive pressure to push exhaust gasses through any type of a PVC, Plastic Pipe assembly shall be pressure tested at appliance and the termination on the roof to ensure the exhaust system does not leak using either of the following methods:

1. 10 ft water column above last glued fitting
2. 5 psi of air and must be inspected to ensure it holds the pressure for 15 minutes
3. -5 psi Vacuum test shall be evacuated of air by a vacuum-type pump to achieve a uniform gauge pressure of -5 pounds per square inch of negative pressure and must hold a -5 psi for 15 minutes

Sec 15.05.220.- Section M1905 added – Energy Storage Systems

Chapter 15 of the International Residential Code is amended by adding a new *Section M1905* to read as follows:

M1905 Lithium Energy Storage Systems (ESS). Energy storage systems shall not be installed inside the thermal building envelope of a commercial structure, primary residence, or Accessory Dwelling Unit (ADU). The ESS shall be installed on the outside of the thermal envelope or in an exterior insulated shed attached or detached to the building envelope to protect from extreme heat and cold. The ESS shall have electrical disconnects within 3 to 6 ft of the ESS. Installation of an ESS in garages that are attached to a residence or ADU must have One Hour Fire rated walls and ceiling and or an approved Fire Suppression system in the garage. The ESS shall be installed on the wall farthest away from the residence inside the garage the ESS shall have a Heat Detector that is tied into the Smoke Detectors and shall have a flashing light on the battery with the fault.

Sec. 15.05.230.- Reserved

Sec. 15.05.240.- Section P2503.5.1 amended—Rough plumbing.

Section P2503.3.1 of the International Residential Code is amended to read as follows:

P2503.5.1 Rough plumbing. DWV systems shall be tested on completion of the rough piping installation by water or by five pounds per square inch (psi) of air, or a negative of a 5 psi vacuum and shall show no evidence of leakage for a minimum of 15 minutes.

Sec. 15.05.250.- Section P2603.6.1 amended—Sewer depth.

The number "36" is inserted in two locations of *Section P2603.6.1* of the International Residential Code so that the section will read as follows:

P2603.6.1. Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of 36 inches below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 36 inches below grade.

Sec. 15.05.260.- Section P3103.1 amended—Roof extension.

The number "12" is inserted in two locations of *Section P3103.1* of the International Residential Code so that the section will read as follows:

P3103.1. Roof extension. All open vent pipes which extend through a roof shall be terminated at least 12 inches above the roof or 12 inches above the anticipated snow accumulation, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet (2134 mm) above the roof.

Sec. 15.05.270.- Fireplace installation.

A. Any new or remodeled fireplace to be installed or constructed in any dwelling in the city shall be one of the following:

1. A gas appliance.
2. An electric device; or
3. A fireplace or fireplace insert that meets the most stringent emissions standards for wood stoves established by C.R.S. Title 25, Article 7 and the Colorado Department of Public Health and Environment Air Quality Control Commission Regulations or any other clean burning device that is approved by the Air Quality Control Commission Regulations.

B. It is unlawful for any person to install or construct any new or remodeled fireplace which does not comply with this section. Any person convicted of a violation of this section shall be subject to the penalty provided in section 1.28.010.

Sec. 15.05.280.- Chapters 34-43 deleted.

Chapters 34 through 43 of the International Residential Code are hereby deleted in their entirety and replaced with the National Electrical Code, as adopted by the city.

Sec. 15.05.290.- Copies available.

At least one copy of the International Residential Code, 2024 edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.05.300.- Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 3. Chapter 15.08 of the Louisville Municipal Code is hereby repealed and re-enacted to read as follows:

Chapter 15.08

2024 INTERNATIONAL MECHANICAL CODE

- Sec. 15.08.010. Adoption.
- Sec. 15.08.020. Amendments to the 2024 International Mechanical Code.
- Sec. 15.08.030. Section 101.1 amended -Title.
- Sec. 15.08.040. Section 505.4 amended-Make up air required.
- Sec. 15.08.050. Section 804.1.1 added- Vent Pipe Testing.
- Sec. 15.08.060. Section 901 amended—Solid fuel-burning equipment.
- Sec. 15.08.070. Copies available.
- Sec. 15.08.080. Violations and penalties.

Sec. 15.08.010. - Adoption.

The International Mechanical Code, 2024 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The purpose and subject matter of the International Mechanical Code include minimum standards relating to the mechanical installations in or in connection with the construction, alteration and repair of new and existing structures including design, construction, installation, quality of materials, locations, operation, and maintenance or use of heating, ventilation, cooling refrigeration systems, incinerators and other miscellaneous heat-producing appliances. The International Mechanical Code, 2024 Edition, is adopted in full, including the outline table of contents and index; but no appendices to such code are adopted. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the, the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.08.020. - Amendments to the 2024 International Mechanical Code.

The following amendments set forth in sections 15.08.030 through 15.08.060 are made to the 2024 International Mechanical Code.

Sec. 15.08.030. - Section 101.1 amended—Title.

Section 101.1 of the International Mechanical Code is amended to insert "the City of Louisville" so the section will read:

101.1 Title. These regulations shall be known as the Mechanical Code of the City of Louisville, hereinafter referred to as this code.

Sec. 15.08.040.- Section 505.4 amended- Make up air required

Section 504.4 of the International Mechanical Code is amended to read as follows:

Section 505.4. Exhaust hoods capable of exhausting air to the exterior of the building need make up air.

Sec. 15.08.050. - Section 804.1.1 added- Vent Pipe Testing

Section 804.1.1 of the International Mechanical Code is amended to read as follows:

Section 804.1.1 All exhaust plastic vent applications and applications that use positive pressure to push exhaust gasses thru any type of a PVC, Plastic Pipe assembly shall be pressure tested at appliance and the termination on the roof to ensure the exhaust system does not leak using either of the following:

4. 10 ft water column above last glued fitting
5. 5 psi of air and must be inspected to ensure it holds the pressure for 15 minutes
6. -5 psi of negative pressure and must hold a -5 psi for 15 minutes

Sec. 15.08.060. - Section 901 amended—Solid fuel-burning equipment.

Section 901 of the International Mechanical Code is amended to add the following new subsection:

Section 901.5. Solid Fuel-Burning Equipment. No permit shall be issued for the installation of a solid-fuel-burning fireplace stove, fireplace insert or wood stove appliance unless the appliance fully conforms with the requirements for emission testing, certification and labeling promulgated pursuant to C.R.S. Title 25, Article 7 and the Colorado Department of Public Health and Environment Air Quality Control Commission Regulations. All such appliances to be installed must be certified by the Air Quality Control Commission to meet the emissions standards set forth in Section IV of Regulation No. 4 of Volume 1 of the state air quality control commission as EPA Phase II or Colorado Phase III solid-fuel-burning devices.

Sec. 15.08.070. - Copies available.

At least one copy of the International Mechanical Code, 2024 Edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.08.080. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 4. Chapter 15.10 of the Louisville Municipal Code is hereby repealed and re-enacted to read as follows:

Chapter 15.10

2024 INTERNATIONAL FUEL GAS CODE

- Sec. 15.10.010. Adoption.
- Sec. 15.10.020. Amendments to the 2024 International Fuel Gas Code.
- Sec. 15.10.030. Section 101.1 amended—Title.
- Sec. 15.10.040. Copies available.
- Sec. 15.10.050. Violations and penalties.

Sec. 15.10.010. - Adoption.

The International Fuel Gas Code, 2024 edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The purpose and subject matter of the International Fuel Gas Code include minimum standards relating to the mechanical installations in or in connection with the construction, alteration and repair of new and existing structures including design, construction, installation, quality of materials, locations, operation, and maintenance or use of fuel-gas piping systems, fuel-gas utilization equipment and related accessories. The International Fuel Gas Code, 2024 Edition, is adopted in full, including the outline table of contents and index; but no appendices to such code are adopted. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the, the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.10.020. - Amendments to the 2024 International Fuel Gas Code.

The following amendments set forth in section 15.10.030 are made to the 2024 International Fuel Gas Code.

Sec. 15.10.030. - Section 101.1 amended—Title.

Section 101.1 of the International Fuel Gas Code is amended to insert "the City of Louisville" so the section will read:

101.1 Title. These regulations shall be known as the Fuel Gas Code of the City of Louisville, hereinafter referred to as this code.

Sec. 15.10.040. - Copies available.

At least one copy of the International Fuel Gas Code, 2024 Edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.10.050. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 5. Chapter 15.12 of the Louisville Municipal Code is hereby repealed and re-enacted to read as follows:

Chapter 15.12

INTERNATIONAL FIRE CODE

Sec. 15.12.010. Adoption.

Sec. 15.12.020. Appendices adopted.

Sec. 15.12.030.	Amendments to the 2024 International Fire Code.
Sec. 15.12.040.	Section 101.1 amended— Title.
Sec. 15.12.050.	Section 103.1 amended- Creation of Agency.
Sec. 15.12.060.	Section 104.1 amended- General.
Sec. 15.12.070.	Section 105.5.58 added- Valet Trash.
Sec. 15.12.080.	Section 105.6.26 added-Access Control or Delayed Systems.
Sec. 15.12.090.	Section 113.4 amended— Violation Penalties.
Sec. 15.12.100.	Section 304.1.1 amended - Valet Trash.
Sec. 15.12.110.	Section 308.1.6.7 amended—Sky lanterns.
Sec. 15.12.120.	Section 315.3.1 amended— Ceiling clearance.
Sec. 15.12.130.	Section 401.3.2- Alarm Activations.
Sec. 15.12.140.	Section 503.2.3 amended— Surface.
Sec. 15.12.150.	Section 506.1 amended-- Key boxes required.
Sec. 15.12.160.	Section 510.4.2.5.1 deleted- Single Supervisory Input.
Sec. 15.12.170.	Section 510.5.1 amended- Mounting of doner antenna(s).
Sec. 15.12.180.	Section 807.5.2.2 amended- Artwork Corridors.
Sec. 15.12.190.	Section 807.5.2.3 amended- Artwork in Classrooms.
Sec. 15.12.200.	Section 807.5.5.2 amended- Art in Corridors.
Sec. 15.12.210.	Section 807.5.5.3 amended- Artwork in Classrooms.
Sec. 15.12.220.	Section 903.2.1 amended- Automatic fire Sprinklers.
Sec. 15.12.230.	Section 903.3.8 deleted- Limited Area Sprinkler systems.
Sec. 15.12.240.	Section 903.4.3 amended- Alarms.
Sec. 15.12.250.	Section 907.7.4 added- Graphic Map.
Sec. 15.12.260.	Section 1010.1.9.4 amended— Locks and latches.
Sec. 15.12.270.	Section 1207.1.3 added- Lithium Energy Storage Systems (ESS).
Sec. 15.12.280.	Fire lane requirements.
Sec. 15.12.290.	Fire lane specifications.
Sec. 15.12.300.	Placement of fire hydrants.
Sec. 15.12.310.	Standards of reference.
Sec. 15.12.320.	Copies available.
Sec. 15.12.330.	Violations and penalties.

Sec. 15.12.010. - Adoption.

The International Fire Code, 2024 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of this Code. The purpose and subject matter of the International Fire Code include minimum standards relating to the storage, handling, and use of hazardous substances, materials and devices, and providing greater safety and protection to the public from conditions hazardous to life or property in the occupancy of buildings or premises. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the, the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.12.020.- Appendices adopted.

The following appendices of the 2024 International Fire Code are hereby specifically adopted; any appendices not listed are not adopted: Appendix B, Fire-Flow Requirements for Buildings; Appendix C, Fire Hydrant Locations and Distribution; Appendix D, Fire Apparatus Access Roads; Appendix E, Hazard Categories; Appendix I, Noncompliant Conditions; Appendix O Valet Trash and Recycling Collection in R-2 Occupancies.

Sec. 15.12.030. - Amendments to the 2024 International Fire Code.

The following amendments set forth in sections 15.12.040 through 15.12.270 are made to the 2024 International Fire Code.

Sec. 15.12.040. - Section 101.1 amended—Title.

Section 101.1 of the International Fire Code is amended to insert "the City of Louisville" so that the section will read:

101.1 Title. These regulations shall be known as the Fire Code of the City of Louisville, hereinafter referred to as this code.

Sec.15.12.050.-Section 103.1 amended- Creation of Agency.

Section 103.1 of the International Fire Code is amended to read as follows:

103.1 Creation of Agency. The Louisville Fire Protection District, Fire Prevention Division and the official in charge thereof shall be known as the *fire code official*. A function of this division shall be the implementation, administration and enforcement of the provisions of the code on behalf of the City of Louisville.

Sec. 15.12.060. - Section 104.1 amended—General.

Section 104.1 of the International Fire Code is amended to read as follows:

104.1 General. The Fire Marshal and Chief Building Official are hereby authorized to enforce the provisions of this code. The Fire Marshal and Chief Building Official shall each have the authority to render interpretations of this code as the Fire Code Official and to adopt policies, procedures, rules and regulations in order to clarify the application of its provisions. Such interpretations, policies, procedures, rules and regulations shall be in compliance with the intent and purpose of this code, and shall not have the effect of waiving requirements specifically provided for in this code. Structures shall meet the requirements of the City of Louisville Fire Hardening Code.

Sec. 15.12.070.- Section 105.5.58 added—Valet Trash.

Section 105.5.58 of the International Fire Code is added and reads as follows:

105.5.58 Valet Trash. An operational permit is required for the operation of a valet trash service in all buildings within the City of Louisville.

Sec. 15.12.080.- Section 105.6.26 added—Access Control or Delayed Systems.

Section 105.6.26 Access Control or Delayed Systems of the International Fire Code is added and reads as follows:

105.6.26 Access Control or Delayed Systems. A construction permit is required to install or modify access control or delayed egress systems.

Sec. 15.12.090. - Section 113.4 amended— Violation Penalties.

Section 113.4 of the International Fire Code is deleted in its entirety and replaced with the following:

113.4 Violations Penalties. It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the

provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Sec.15 12.100.- Section 304.1.1 amended -Valet Trash.

Section 304.1.1 of the International Fire Code is amended to read as follows:

304.1.1- Valet Trash. Valet trash collection shall be permitted only in buildings equipped with automatic sprinkler systems where approved. The owner and valet trash collection service provider shall comply with the rules and limitations established by the jurisdiction.

Sec. 15.12.110.- Section 308.1.6.7 amended—Sky lanterns.

Section 308.1.6.7 of the International Fire Code is amended to read as follows:

308.1.6.7 Sky lanterns. Sky lanterns are prohibited because of climatic conditions.

Sec. 15.12.120. - Section 315.3.1 amended—Ceiling clearance.

Section 315.3.1 of the International Fire Code is amended to read as follows:

315.3.1 Ceiling clearance. Storage shall be maintained two feet (610 mm) or more below the ceiling in non-sprinklered areas of buildings or not less than 18 inches (457 mm) below sprinkler head deflectors in sprinklered areas of buildings. In areas with storage there shall be a red line added at 18 inches or 24 inches below the ceiling with language above the red line stating, "NO STORAGE ABOVE THIS LINE."

Sec.15.12.130.- Section 401.3.2 amended-Alarm Activations.

Section 401.3.2 of the International Fire Code is amended to read as follows:

401.3.2. Alarm activations. Upon activation of a fire alarm signal, employees or staff shall immediately notify the fire department. In settings other than prescribed maintenance, fire notification systems are not permitted to be silenced or reset by occupants prior to fire department arrival.

Sec. 15.12.140. - Section 503.2.3 amended—Surface.

Section 503.2.3 of the International Fire Code is amended to read as follows:

Section 503.2.3. Surface. Fire apparatus access roads shall be designed and constructed of hard surface, i.e., asphalt or concrete, to withstand the weight of fire apparatus and such surfaces must be able to support the weight of the heaviest fire apparatus of the fire district serving the property. The grade of a fire apparatus access road shall not exceed seven percent. A property owner or contractor may obtain a temporary waiver of the requirement to construct a hard surface fire apparatus access road during the construction of a land use development from the Fire Marshal. The waiver shall include an engineered plan for the alternative construction method of the access road and a plan for the continued maintenance of the access road during the period of project construction. Upon completion of the project and prior to the issuance of a certificate of occupancy, any fire apparatus access road shall be constructed of permanent hard surface.

Sec.15.12.150.- Section 506.1 amended—Key Boxes required.

Section 506.1 of the International Fire Code is amended to read as follows:

506.1. Key Boxes Required. All new commercial construction requires a key box to be installed. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the Fire Code Official.

Sec.15.12.160.- Section 510.4.2.5.1 deleted- Single Supervisory Input

Section 510.4.2.5.1- of the International Fire Code is deleted in its entirety

Sec. 15.12.170.- Section 510.5.1 amended – Mounting of the donor antenna(s)

Section 510.5.1 of the International Fire Code is amended to read as follows:

510.5.1. Mounting of donor antenna(s). To maintain proper alignment with the system design donor site, donor antennas shall be permanently affixed on the building. The antenna installation shall be in

accordance with the applicable requirements in the *International Building Code* for weather protection of the building envelope.

Sec.15.12.180.- Section 807.5.2.2 amended – Artwork in Corridors.

Section 807.5.2.2 of the International Fire Code is amended to read as follows:

807.5.2.2. Artwork in Corridors. Artwork and teaching materials shall be limited on the walls of corridors to not more than 20 percent of the wall area. Three-dimensional artwork made of combustible materials and hanging decorations that impact the fire sprinkler system or create a hazard for first responders are prohibited.

Sec.15.12.190. – Section 807.5.2.3 amended—Artwork in Classrooms.

Section 807.5.2.3 of the International Fire Code is amended to read as follows:

807.5.2.3. Artwork and teaching materials shall be limited on the walls of classrooms to not more than 50 percent of the wall area. Three-dimensional artwork made of combustible materials and hanging decorations that impact the fire sprinkler system or create a hazard for first responders are prohibited.

Sec.15.12.200.-Section 807.5.5.2 amended-Art in Corridors

Section 807.5.5.3 of the International Fire Code is amended to read as follows:

807.5.5.3. *Artwork in Corridors.* Artwork and teaching materials shall be limited on the walls of corridors to not more than 20 percent of the wall area. Three-dimensional artwork made of combustible materials and hanging decorations that impact the fire sprinkler system or create a hazard for first responders are prohibited

Sec.15.12.210.- Section 807.5.5.3 amended- Artwork in Classrooms

Section 807.5.5.3 of the International Fire Code is amended to read as follows:

807.5.5.3. *Art work in Classrooms.* Artwork and teaching materials shall be limited on the walls of classrooms to not more than 50 percent of the wall area. Three-dimensional artwork made of combustible materials and hanging decorations that impact the fire sprinkler system or create a hazard for first responders are prohibited

Sec. 15.12.220. – Section 903.2.1 amended—Automatic fire sprinklers.

Section 903.2.1 of the International Fire Code is amended as follows:

A. Each new commercial and residential structure is required to have a fire suppression system designed for the Occupancy Group of that structure, unless the requirement is waived by both the Chief Building Official and Fire Marshal.

B. Exceptions: U Occupancies are not required to have fire suppression systems unless they exceed 5,000 square feet.

C. This section 903.2.1 shall only apply to new construction.

Sec. 15.12.230.- Section 903.3.8 deleted-Limited area sprinkler systems.

Section 903.3.8 of the International Fire Code is deleted in its entirety

Sec.15.12.240.- Section 903.4.3 amended-Alarms

Section 903.4.3 of the International Fire Code is amended to read as follows:

903.4.3. Alarms. Approved audible/visible notification appliances shall be provided for every building or structure with an automatic sprinkler system. Waterflow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a waterflow switch is required by Section 903.4.1 to be electrically supervised, such sprinkler waterflow alarm devices shall be powered by a fire alarm control unit or, where provided, a fire alarm system. Alarm devices shall be provided in the interior of the building in accordance with NFPA 72 and on the exterior of the building in an approved location. Actuation of the automatic sprinkler system shall actuate occupant notification devices.

Exception: Automatic sprinkler systems protecting one-and two-family dwellings.

Sec.15.12.250.- section 907.7.4 added- Graphic Map

Section 907.7.4 of the International Fire Code is added to read as follows:

907.7.4. Graphic Map. A graphic map showing the locations of initiating devices with corresponding device identification information shall be provided at the fire alarm panel and annunciator panels. Modifications to system impacting the graphic map will require updating at final inspection.

Sec. 15.12.260. - Section 1010.1.9.4 amended—Locks and latches.

Section 1010.1.9.4 of the International Fire Code is amended to read as follows:

1010.1.9.4. Locks and latches shall be permitted to prevent operation of doors where any of the following exist. Except for Group A Occupancies that shall only have Panic hardware no deadbolts or other locks are allowed on any doors in group A occupancies.

1. Places of detention or restraint.
2. In Group I-1, Condition 2 and Group I-2 occupancies where the clinical needs of persons receiving care require containment or where persons receiving care pose a security threat, provided that all clinical staff can readily unlock doors at all times, and all such locks are keying to keys carried by all clinical staff at all times or all clinical staff have the codes or other means necessary to operate the locks at all times.
3. Locking devices are permitted on doors to balconies, decks or other exterior spaces of 250 square feet (23.23m²) or less, serving a private office space.
4. In buildings in Occupancy Groups B, F, M and S, the main door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - 4.1. The doors are the main exterior doors to the building, or the doors are the main doors to the tenant space.
 - 4.2. The locking device is readily distinguishable as locked.
 - 4.3. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters one inch (25 mm) high on a contrasting background.
 - 4.4. The use of the key-operated locking device is revocable by the Fire Code Official for due cause.
5. Manual bolts, automatic flush bolts and constant latching bolts on the inactive leaf of a pair of doors in accordance with Table 1010.2.4, provided that the inactive leaf does not have a doorknob, panic hardware, or similar operating hardware.
6. Single exit doors complying with Section 1006.2.1 or 1006.3.4 from individual dwelling or sleeping units of Group R occupancies and equipped with a night latch, dead bolt or security chain that requires a second releasing motion, provided that such devices are openable from the inside without the use of a key or tool.

7. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

8. Doors serving roofs not intended to be occupied shall be permitted to be locked, preventing entry to the building from the roof.

9. Other than egress courts, where occupants must egress from an exterior space through the building for means of egress, exit access doors shall be permitted to be equipped with an approved locking device where installed and operated in accordance with all of the following

9.1. The maximum occupant load shall be posted where required by Section 1004.9. Such sign shall be permanently affixed inside the building and shall be posted in a conspicuous space near all the exit access doorways.

9.2. A weatherproof telephone or two-way communication system installed in accordance with Sections 1009.8.1 and 1009.8.2 shall be located adjacent to not less than one required exit access door on the exterior side.

9.3. The egress door locking device is readily distinguishable as locked and shall be key operated locking device.

9.4. A clear window or glazed door opening, not less than 5 square feet (0.46m²) in area, shall be provided at each exit access door to determine if there are occupants using the outside area.

9.5. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters one inch (25 mm) high on a contrasting background.

9.6. The occupant load of the occupied exterior area shall not exceed 49 occupants in accordance with Section 1004.

10. Locking devices are permitted on doors to balconies, decks or other exterior spaces serving individual dwelling or sleeping units.

Sec. 15.12.270.- Section 1207.1.3 added – Lithium Electrical Energy Storage Systems (ESS)

Section 1207.1.3 of the International Fire Code is added to read as follows:

Section 1207.1.3.- Lithium Energy Storage Systems (ESS). Energy storage systems shall not be installed inside the thermal building

envelope of a commercial structure, primary residence, or Accessory Dwelling Unit (ADU). The ESS shall be installed on the outside of the thermal envelope or in an exterior insulated shed attached or detached to the building envelope to protect from extreme heat and cold . The ESS shall have electrical disconnects within 3 to 6 ft of the ESS. Installation of an ESS in garages that are attached to a residence or ADU must have One Hour Fire rated walls and ceiling and or an approved Fire Suppression system in the garage. The ESS shall be installed on the wall farthest away from the residence inside the garage the ESS shall have a Heat Detector that is tied into the Smoke Detectors and shall have a flashing light on the battery with the fault.

EXCEPTION:

1. Commercial Buildings with a 1 hour rated room where mechanical ventilation is separate from the rest of the building and shall have a heat detector at each battery with a flashing light on the battery with the fault.

Sec. 15.12.280. - Fire lane requirements.

A. Fire lanes are required in accordance with Appendix D of the 2024 International Fire Code.

B. In addition to the requirements of Appendix D, no platted street in a multifamily, industrial, business or commercial development ending in a cul-de-sac or some other design shall exceed 300 feet in length without providing secondary fire lane access.

C. In addition to the requirements of Appendix D, no platted street in a single-family area ending in a cul-de-sac or some other design shall exceed 500 feet in length without providing secondary fire lane access.

D. In addition to the requirements of Appendix D, single-family residences which are located more than 150 feet from the closest public street right-of-way shall provide a fire lane from the street to the residence.

Sec. 15.12.290. - Fire lane specifications.

Fire lanes shall comply with the specifications in Appendix D of the International Fire Code. In addition to the requirements of Appendix D, an emergency access fire lane which is required to be installed in an area as secondary access must be as remote as possible from the main access and provide access to all parts of the development. No emergency access fire lane shall exceed 300 feet in length.

Sec. 15.12.300. - Placement of fire hydrants.

A. Fire hydrants shall be placed at each street intersection and on each side of any divided highway, roadway or street, wherever possible.

B. In a residential area, there shall be no more than 500 feet of vehicle travel distance between hydrants. No residential unit shall be more than 250 feet of vehicle travel distance from the nearest hydrant.

C. In multifamily, industrial, business or commercial areas, there shall be no more than 300 feet of vehicle travel distance between hydrants. No building shall be more than 150 feet of travel distance from the nearest hydrant.

D. All water mains serving two or more fire hydrants or two or more fire service water lines shall have a looped water distribution system with approved sectional valves being provided.

E. The barrel of a fire hydrant shall be set perpendicular to the ground or the designed final grade with the lowest discharge outlet 18 inches above grade.

F. A minimum of three feet of clearance space shall be maintained around the circumference of a fire hydrant except as otherwise required or approved by the city.

G. The minimum required residual pressure for a water supply to any given area shall be 20 pounds per square inch (psi). In the event that a minimum water pressure of 20 psi cannot be obtained in any given area, large water mains shall be installed with closer than the required minimum spacing of fire hydrants to increase flow.

Sec. 15.12.310. - Standards of reference.

Standards of reference for the International Fire Code are:

The 2024 Edition of the International Wild Land-Urban Interface Code.

The most current edition of the NFPA Life Safety Code.

The most current edition of the NFPA Codes and Standards.

Sec. 15.12.320. - Copies available.

At least one copy of the International Fire Code, 2024 Edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays

and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.12.330. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 6. Chapter 15.14 of the Louisville Municipal Code is hereby repealed and re-enacted to read as follows:

Chapter 15.14

INTERNATIONAL EXISTING BUILDING CODE

- Sec. 15.14.010. Adoption.
- Sec. 15.14.020. Section 101.1 amended - Title.
- Sec. 15.14.030. Copies available.
- Sec. 15.14.040. Violations and penalties.

Sec. 15.14.010. - Adoption.

The International Existing Building Code, 2024 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The subject matter of the International Existing Building Code is to regulate and govern existing buildings and installation of electrical, plumbing, mechanical, lighting, energy conservation systems and power systems in the City of Louisville and providing for the issuance of permits and collection of fees therefor. The International Existing Building Code, 2024 Edition, is adopted in full, including the outline table of contents and index; but no appendices to such code are adopted. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the, the Colorado Model Electric Ready and Solar-Ready Code,

the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.14.020. - Section 101.1 amended—Title.

Section 101.1 of the 2024 International Existing Building Code is amended to insert "the City of Louisville" so the section will read:

101.1 Title. These regulations shall be known as the 2024 Existing Building Code of the City of Louisville, hereinafter referred to as "this code."

Sec. 15.14.030. - Copies available.

At least one copy of the International Existing Building Code, 2024 Edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.14.040. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 7. Chapter 15.16 of the Louisville Municipal Code hereby repealed and re-enacted to read as follows:

Chapter 15.16

2024 INTERNATIONAL PLUMBING CODE

Sec. 15.16.010. Adoption.

Sec. 15.16.020. Amendments to the 2024 International Plumbing Code.

Sec. 15.16.030.	Section 101.1 amended -Title.
Sec. 15.16.060.	Section 114.4 amended -Violations.
Sec. 15.16.070.	Section 115.5 added—Stop work orders.
Sec. 15.16.080.	Section 305.4.1 amended—Sewer depth.
Sec. 15.16.090.	Section 312.3 amended -Drainage and vent air test.
Sec. 15.16.100.	Section 608.14.10 added—Testing backflow prevention assemblies.
Sec. 15.16.110.	Section 903.1 amended—Roof extension.
Sec. 15.16.120.	Section 1003.3.2 amended—Food waste grinders.
Sec. 15.16.130.	Copies available.
Sec. 15.16.140.	Violations and penalties.

Sec. 15.16.010. - Adoption.

The International Plumbing Code, 2024 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is adopted by reference thereto and incorporated into and made part of the Louisville Municipal Code. The purpose and subject matter of the International Plumbing Code include regulation of plumbing installations in or in connection with new and existing structures and provision of international plumbing standards for the purpose of protecting the public health, safety and general welfare. The International Plumbing Code, 2024 Edition, is adopted in full, including the outline table of contents and index; but no appendices to such code are adopted. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.16.020. - Amendments to the 2024 International Plumbing Code.

The following amendments set forth in sections 15.16.030 through 15.16.120 are made to the 2024 International Plumbing Code.

Sec. 15.16.030. - Section 101.1 amended—Title.

Section 101.1 of the 2024 International Plumbing Code is amended to insert "the City of Louisville" so the section will read:

101.1 Title. These regulations shall be known as the Plumbing Code of the City of Louisville, hereinafter referred to as "this code."

Sec. 15.16.060. - Section 114.4 amended—Violations.

Section 114.4 of the International Plumbing Code is deleted in its entirety and replaced with the following:

114.4 Violations. It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Sec. 15.16.070. - Section 115.5 added—Stop work orders.

Section 115.5 of the International Plumbing Code is added to read as follows:

Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to the penalty provided in section 1.28.010.

Sec. 15.16.080. - Section 305.4.1 amended—Sewer depth.

The number "36" is inserted in two locations so that *Section 305.4.1* of the 2024 International Plumbing Code will read as follows:

305.4.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of 36 inches below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 36 inches below grade.

Sec.15.16.090.- Section 312.3 amended—Drainage and vent air test.

Section 312.3 of the International Plumbing Code is amended to read as follows:

312.3 Drainage and vent air test. Plastic piping can be tested only to five pounds per square inch (psi) for DWV plastic piping if air testing in lieu of 10 foot water test above last glued fitting.

Sec. 15.16.100. – Section 608.14.10 added—Testing backflow prevention assemblies.

A new *Section 608.14.10* is added to the 2024 International Plumbing Code, to read as follows:

608.14.10 Testing backflow Prevention Assemblies. The premises owner or responsible person shall have the backflow prevention assembly tested by a certified backflow assembly tester at the time of installation, repair, or relocation.

Sec. 15.16.110. - Section 903.1.1 amended—Roof extension.

Section 903.1.1 of the International Plumbing Code is amended to read as follows:

903.1.1 Roof Extension. All open vent pipes that extend through a roof shall be terminated at least 12 inches above the roof, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet above the roof. The anticipated snow depth is 6 inches.

Sec. 15.16.120. – Section 1003.3.2 amended—Food waste grinders.

Section 1003.3.2 of the International Plumbing Code is amended to read as follows:

1003.3.2 Food Waste Grinders.

A. Unless specifically required or permitted by the code official, no food waste grinder or dishwasher shall be connected to or discharge into any grease trap. Where food waste grinders connect to grease interceptors, the grease interceptor shall be sized and rated for the discharge of the food waste grinder.

B. Exception: Special regulations by the Public Works Department may supersede this requirement.

Sec. 15.16.130. - Copies available.

At least one copy of the 2024 International Plumbing Code, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.16.140. - Violations and penalties.

It is unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any plumbing or cause or permit such work to be done, in violation of the provisions of this chapter or the terms of the code adopted and incorporated in this chapter, or to otherwise violate or fail to comply with this chapter or such code. Any person convicted of a violation of any provision of this chapter or of the provisions of the code adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 8. Title 15 of the Louisville Municipal Code is hereby amended by the addition of a new Chapter 15.17 to read as follows:

Chapter 15.17

INTERNATIONAL SWIMMING POOLAND SPA CODE (ISPSC)

- Sec. 15.17.010. Adoption.
- Sec. 15.17.020. Section 101.1 amended—Title.
- Sec. 15.17.030. Copies available.
- Sec. 15.17.040. Violations and penalties.

Sec. 15.17.010. - Adoption.

The International Swimming Pool and Spa Code, 2024 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The subject matter of the International Swimming Pool and Spa Code is to regulate and govern the requirements for the design, construction, alteration, repair and maintenance of swimming pools, spas, hot tubs and aquatic facilities. This includes public swimming pools, public spas, public exercise spas, aquatic recreation facilities, on ground storable residential

pools, permanent inground residential pools, permanent residential spas. Permanent residential exercise spas, portable residential spas and portable residential exercise spas in the City of Louisville and providing for the issuance of permits and collection of fees therefor. The International Swimming Pool and Spa Code 2024 Edition, is adopted in full, including the outline table of contents and index; but no appendices to such code are adopted. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the, the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.17.020. - Section 101.1 amended—Title.

Section 101.1 of the 2024 International Swimming Pool and Spa Code is amended to insert "the City of Louisville" so the section will read:

101.1 Title. These regulations shall be known as the 2024 International Swimming Pool and Spa Code of the City of Louisville, hereinafter referred to as "this code."

Sec. 15.17.030. - Copies available.

At least one copy of the International Swimming Pool and Spa Code, 2024 Edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.17.040. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 9. Chapter 15.18 of the Louisville Municipal Code is hereby repealed and re-enacted to read as follows:

Chapter 15.18

2024 INTERNATIONAL ENERGY CONSERVATION CODE

- Sec. 15.18.010. Adoption.
- Sec. 15.18.020. Amendments to the 2024 International Energy Conservation Code.
- Sec. 15.18.030. Appendices adopted.
- Sec. 15.18.040. Section C101.1/R101.1 amended — Title.
- Sec. 15.18.050. Section C104.1/R104.1 amended—Permit Expiration.
- Sec. 15.18.060. Section C401.2.1 amended—Energy Conservation Code.
- Sec. 15.18.070. Section C401.4 added- Mandatory Requirements.
- Sec. 15.18.080. Section C402.1.4 Deleted- Component performance method.
- Sec. 15.18.090. Section C402.5 Deleted and Replaced Table Building Envelope Fenestration.
- Sec. 15.18.100. Section C405.1.2 added- Energy Storage Systems ESS.
- Sec. 15.18.110. Section R401.4 Added-Mandatory Requirements for Residential Buildings.
- Sec. 15.18.120. Section R402.1 Amended- General.
- Sec. 15.18.130. Section R402.1 Deleted and Replaced- Insulation and Fenestration.
- Sec. 15.18.140. Section R402.1.5 Deleted- Component performance alternative.
- Sec.15.18.150. Section R402.5.1. Deleted and Replaced- Building Thermal Envelope.
- Sec.15.18.160. Section R406.3 Deleted and Replaced- Thermal Envelope
- Sec.15.18.170. Section R406.5 Deleted and Replaced- ERI based compliance.
- Sec.15.18.180. Section R502.1 Amended- General.
- Sec.15.18.190. Copies available.
- Sec.15.18.200. Violations and penalties.

Sec. 15.18.010.- Adoption.

- A.** The International Energy Conservation Code, 2024 Edition,

published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The purpose and subject matter of the International Energy Code include regulating construction aspects of building through comprehensive provisions and standards regulating the erection, construction, enlargement, alteration, equipping, use, area, and maintenance of buildings and structures and providing minimum efficiency requirements for buildings that result in the maximum level of energy efficiency that is safe, technologically feasible, and life cycle cost effective, considering economic feasibility, including potential cost and savings for consumers and building owners with a return on investment. Optional requirements that lead to achievement of zero energy buildings, presently, and through glidepaths that achieve zero energy buildings by 2030 and achievements of additional policy goals as identified by the Energy and Carbon Advisory Council. Requirements contained in this code will include but not limited to, the minimum prescriptive insulation and U value requirements as adopted by the city as a foundation to the performance-based pathways. This code will include adopted appendices and non-adopted appendices incorporating additional energy efficiency and greenhouse gas reduction resources developed by the ICC and others. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this intent. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

B. The International Energy Conservation Code, 2018 Edition (the "2018 IECC"), published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The subject matter of the International Energy Conservation Code is to regulate and govern energy efficient building envelopes and the installation of energy efficient mechanical, lighting and power systems in the City of Louisville, and to provide for the issuance of permits and collection of fees therefor. The International Energy Conservation Code, 2018 Edition, is adopted in full, including the outline table of contents and index; but no appendices to such code are adopted. The 2018 IECC, as amended by this chapter, shall apply to major structural repair or rebuilding of those residential properties within the city that sustained fire damage from the Marshall Fire, or for repair or rebuilding of a

primary residential structure that sustained smoke, heat, water, ash or other damage from the Marshall Fire, as approved by the chief building official or their designee at the time of building permit issuance upon a finding that all of the following requirements are met:

1. The building permit application is for major structural repair or rebuilding of a residence that sustained fire damage from the Marshall Fire, or for repair or rebuilding of a primary residential structure that sustained smoke, heat, water, ash or other damage from the Marshall Fire;

2. The building permit application has been filed by the owner of record of the property, or an authorized representative, and such person was the owner of record on December 30, 2021;

3. The building permit application was filed on or before December 31, 2028; and

4. The applicant certifies that a financial hardship prevents completion of the work to be performed in accordance with the 2021 IECC due to inadequate insurance coverage.

Sec. 15.18.020. – Amendments to the 2024 International Energy Conservation Code.

The following amendments set forth in sections 15.18.040 through 15.18.190 are made to the 2024 International Energy Code.

Sec. 15.18.030. - Appendices adopted.

The following appendices of the 2024 International Energy Conservation Code are hereby specifically adopted; any appendices not listed are not adopted:

Sec. 15.18.040. – C101.1 & R101.1 amended—Title.

Section C101.1 and R101.1 of the International Energy Conservation Code is amended to insert "the City of Louisville" so the section will read:

C101.1 and R101.1 Title. These regulations shall be known as the Building Code of the City of Louisville, hereinafter referred to as "this code."

Sec. 15.18.050. - Section C106.7 and R106.7 added—Permit expiration.

The last paragraph of *Section C106.7* and *R106.7* of the International Energy Conservation Code is hereby added to read as follows:

C106.7 and R106.7 Expiration. Except for permits for alterations involving only one discipline, every permit issued by the Building Official

under the provisions of this code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Every permit for alterations involving only one discipline which is issued by the Building Official under the provisions of this code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 90 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 90 days. Before such work can be recommenced, a new permit shall be first obtained. If a new Code has been adopted the new permit will incorporate all new codes and fees.

Sec. 15.18.060.- Section C401.2.1 Amended— International Energy Conservation Code.

Section C401.2.1 of the International Energy Conservation Code is amended to read as follows:

C401.2.1 International Energy Conservation Code. Commercial Buildings shall comply with the prescriptive compliance path for insulation and U values as listed in table C401.4, C402.1.3, C402.5 as a minimum for any simulated building performance options. **Simulated Building Performance.** The Simulated Building Performance option must incorporate the minimum prescriptive R Values and U-Factors before using the simulated building performance option that requires compliance with section C407.

Sec. 15.18.070.- Section C401.4 Added- Mandatory Requirements

Section C401.4 of the International Energy Conservation Code is added to read as follows:

C401.4 Mandatory Requirements for Commercial Buildings. Commercial buildings must comply with Table C401.4.

Table C401.4 (Mandatory)
Requirements for Commercial Buildings

Title	IECC Section
Air leakage	C402.6
Calculation of heating and cooling loads	C403.1.1
Data centers	C403.1.2
System Design	C403.2

Heating and cooling equipment efficiency	C403.3
Heating and cooling system controls	C403.4, except C403.4.3, C403.4.4, C403.4.5
Economizer fault detection and diagnostics	C403.5.5
Ventilation and exhaust systems	C403.7, except C403.7.4.1
Fan and fan controls	C403.8, except C403.8.6
Large diameter ceiling fans	C403.9
Refrigeration equipment performance	C403.12
Construction of HVAC system elements	C403.13
Mechanical systems located outside of the building thermal envelope	C403.14
Service water heating	C404
Electrical power and lighting systems	C405, except C405.3
Maintenance information and system commissioning	C408

Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method, is hereby deleted and replaced with the following:

Table C402.1.3 (Mandatory)
Opaque Thermal Envelope Insulation Component of an Average Minimum Requirements, R-Value Method in following locations:

Roof C402.2.3	
Insulation entirely above roof deck	R-49/ R-49 ci
Metal buildings	R-21 + R-11 LS
Attic and other	R-49
Walls. Above grade C402.2.2	
Mass	R-21/ R-21 ci
Metal buildings	R-21 + <u>R-10ci</u>
Metal framed	R-21+ <u>R-10ci</u>
Wood framed and other	R-27/ R-20 + R-5 ci
Walls, Below grade C402.2.5	
Below-grade wall ^b	R-10 ci

Floors C402.2.3	
Mass	R-21
Joist/framing	R-38
Slab-on-grade floors C402.2.4	
Unheated	R-20 for 24" below
Heated	R-15 for 36" below + R-5 full slab

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 4.88 kg/m², 1 pound per cubic foot = 16 kg/m³.

NR = No Requirement, LS = Liner System.

a. Where using *R*-value compliance method, a thermal spacer block shall be provided,

b. Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for heated slabs.

Sec. 15.18.080.- Section C402.1.4 Deleted-. Component performance method

Section C402.1.4 Component performance method, is hereby deleted in its entirety.

Sec. 15.18.90.- Table C402.5 Deleted and Replaced-

Table C402.5 Building Envelope Fenestration Maximum U-Factor and SHGC Requirements, is hereby deleted and replaced with the following:

Table C402.5 Building Thermal Envelope Fenestration Maximum	
Vertical Fenestration	
Maximum U-Factor Fixed/Operable	0.34/0.45
Maximum SHGC	0.33
Entrance Doors	0.63
Maximum air leakage rate for curtain walls and storefront glazing	.06 cfm/ft ²
Skylights	
Maximum U-Factor	0.50
Maximum SHGC	0.40
Maximum Air leakage rate	.20 cfm/ft ²

Sec. 15.18.100.- Section C405.1.2 added- Energy Storage Systems ESS

Section C405.1.2 of the International Energy Conservation Code is amended by the addition of a new *Section C405.1.2* to read as follows:

C405.1.2. Lithium Energy Storage Systems (ESS).

C405.1.2 Lithium Energy Storage Systems (ESS). Energy storage systems shall not be installed inside the thermal building envelope of a commercial structure, primary residence, or Accessory Dwelling Unit (ADU). The ESS shall be installed on the outside of the thermal envelope or in an exterior insulated shed attached or detached to the building envelope to protect from extreme heat and cold. The ESS shall have electrical disconnects within 3 to 6 ft of the ESS. The installation of an ESS in garages that are attached to a residence or ADU must have One Hour Fire rated walls and ceiling and or an approved Fire Suppression system in the garage. The ESS shall be installed on the wall farthest away from the residence inside the garage the ESS shall have a Heat Detector that is tied into the Smoke Detectors and shall have a flashing light on the battery with the fault.

EXCEPTION:

2. Commercial Buildings with a 1 hour rated room where mechanical ventilation is separated from the rest of the building and shall have a Heat Detector at each battery with a flashing light on the battery with the fault.

Sec.15.18.110.- Section R401.4 Added- Mandatory Requirements for Residential Buildings

Section R401.4 of the International Energy Conservation Code is added to read as follows:

R401.4 Mandatory requirements for residential buildings. Residential building must comply with the following sections from the 2024 International Energy Conservation Code found in Table R401.4 and Section R401.2.

Table R401.4
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.4
Access hatches and doors	R402.2.5

Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Mechanical system located outside thermal envelope	R403.9
Energy consumption of pools and spas	R403.10
Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

Sec.15.18.120.- Section R402.1 Amended- General

Section R402.1 General, is hereby amended to read as follows:

R402.1 General. The minimum building thermal envelope standards shall comply with the requirements of Section R402.1.1 and Table R402.1.2 including when using the Energy Rating Index.

Sec.15.18.130.- Section R402.1 Deleted and Replaced- Insulation and Fenestration

Section R402.1.2 Insulation and fenestration, is hereby deleted and replaced with the following:

R402.1.2 Insulation and fenestration. New and replacement assemblies shall have R-values and U-factors of insulation materials equal to or greater than that specified in Table R402.1.2 including if using an alternative path is specified such as an ANSI/RESNET/ICC 301 or HERS energy rating index of 50 or less. ADUs are exempt from having a HERS rating and will be built using the mandatory requirements of table R402.1.2

Table R402.1.2

Mandatory Requirements

Minimum Insulation and Max Fenestration Requirements by Component

Roof	R-60
Above grade walls	<u>R-30 or R-20 & R-5 ci</u>
Below grade walls	R-21/ R-19 ci
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40
<u>Hot Water Pipes</u>	<u>R-3</u>
<u>Warm Air Ducts</u>	<u>R-8</u>

Sec.15.18.140.- Section R402.1.5 Deleted- Component performance alternative

Section R402.1.5 Total UA alternative, is hereby deleted in its entirety.

Sec.15.18.150.- Section R402.5.1. Deleted and Replaced- Building thermal envelope

Section R402.5.1. Testing, is hereby deleted and replaced to read as follows:

Section R402.5.1 Building thermal envelope All new buildings or dwelling units that are heated or cooled, and additions over 500 square feet shall be tested for air leakage. The building thermal envelope shall comply with section R402.5.1.1 through R402.5.1.3. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

Sec.15.18.160.- Section R406.3 Deleted and Replaced- Thermal Envelope

Section R406.3 Building Thermal envelope, is hereby deleted and replaced to read as follows:

R406.3 Building thermal envelope. The building thermal envelope shall be greater or equal to the standards in Table R406.3.

Exception: The Building Official may grant an exception to the minimum standards of this table for remodels if demonstrated by the applicant that there are practical difficulties that cannot be reasonably overcome to meet the standards and that the highest standard possible is achieved.

Table R406.3
Mandatory Requirements
Minimum Insulation and Maximum Fenestration Requirements by
Component

Roof	R-60
Above grade walls	<u>R-30 or R-20 & R-5 ci</u>
Below grade walls	R-21/ R-19 ci
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40
Heated Water Pipes	R-3
Heated air Ducts	R-8

Sec.15.18.170.- Section R406.5 Deleted and Replaced- ERI based compliance

Section R406.5 ERI- based compliance, is hereby deleted and replaced to read as follows:

R406.5 ERI-based compliance. Compliance based on the ERI analysis shall have a score of 50 or less without including OPP. ERI based compliance shall meet all of the minimum standards of table R406.3

Sec.15.18.180.- Section R502.1 Amended- General

Section R502.1. General, is hereby amended to read as follows:

Additions to an existing building, building system or portion thereof shall conform to the provisions of table R402.1.2 as those provisions relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. Additions shall not create unsafe or hazardous conditions or overload existing building systems. An addition shall be deemed to comply with this code where the addition alone complies, where the existing building and addition comply with this code as a single building, or where the building with the addition does not use more energy than the existing building. Additions shall be in accordance with Section R502.2 or R502.3.

15.18.190. - Copies available.

At least one copy of the 2024 International Energy Conservation Code and one copy of each secondary code pertaining thereto, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City offices are closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.18.200. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 10. Chapter 15.21 of the Louisville Municipal Code hereby repealed and re-enacted to read as follows:

Chapter 15.21

INTERNATIONAL PROPERTY MAINTENANCE CODE

- Sec. 15.21.010. Adoption.
- Sec. 15.21.020. Section 101.1 amended—Title.
- Sec. 15.21.030. Copies available.

Sec. 15.21.040. Violations and penalties.

Sec. 15.21.010. - Adoption.

The International Property Maintenance Code, 2024 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The subject matter of the International Existing Building Code is to regulate and govern existing buildings and installation of electrical, plumbing, mechanical, lighting, energy conservation systems and power systems in the City of Louisville, and providing for the issuance of permits and collection of fees therefor. The International Property Maintenance Code, 2024 Edition, is adopted in full, including the outline table of contents and index; but no appendices to such code are adopted. The provision of this code adoption shall not be deemed to nullify any provisions of local, state or federal laws. All buildings and structures under scope of this code adoption shall also comply with the, the Colorado Model Electric Ready and Solar-Ready Code, the Colorado Plumbing Code, the Colorado Fuel Gas Fuel Gas Code and the Colorado Electric Code, as adopted by the City of Louisville Colorado. Where, in any specific case, the codes specify different requirements, the most restrictive shall apply.

Sec. 15.21.020. - Section 101.1 amended—Title.

Section 101.1 of the 2024 International Property Maintenance Code is amended to insert "the City of Louisville" so that the section will read:

101.1 Title. These regulations shall be known as the 2024 Property Maintenance Code of the City of Louisville, hereinafter referred to as "this code."

Sec. 15.21.030. - Copies available.

At least one copy of the International Property Maintenance Code, 2024 Edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The City Clerk shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at <https://codes.iccsafe.org/public/collections/I-Codes>.

Sec. 15.21.040. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 11. Title 15 of the Louisville Municipal Code is hereby amended by the addition of a new Chapter 15.23 to read as follows:

Chapter 15.23

1997 UNIFORM HOUSING CODE

- Sec. 15.23.010. Adoption.
- Sec. 15.23.020. Section 101 amended- Title.
- Sec. 15.23.030. Copies available.
- Sec. 15.23.040. Violations and penalties.

Sec. 15.23.010.- Adoption.

The 1997 Uniform Housing Code, 1997 Edition, published by the International Code Council, 500 New Jersey Avenue, NW, 6th Floor, Washington, D.C. 20001, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The subject matter of the 1997 Uniform Housing Code is to provide the building official with proper legal steps to provide minimum standards to safe-guard life limb, health, property and public welfare by regulating and controlling the use and occupancy, location, and maintenance of all residential buildings and structures within the City of Louisville, and to provide for the issuance of permits and collection of fees therefor. The 1997 Uniform Housing Code, 1997 Edition, is adopted in full, including the outline table of contents and index; but no appendices to such code are adopted.

Sec. 15.23.020.- Section 101 amended—Title.

Section 101 of the 1997 Uniform Housing Code is amended to read as follows:

101 Title. These regulations shall be known and may be cited as the 1997 Uniform Housing Code for the City of Louisville. The Code Official will be considered the health officer.

Sec. 15.23.030. - Copies available.

At least one copy of the 1997 Uniform Housing Code as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays and days City is closed. The Building Official shall maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price.

Sec. 15.23.040. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 12. If any article, section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 13. The repeal or modification of any provision of any prior ordinance by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 14. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

**INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED
PUBLISHED** this _____ day of _____, 2025.

Christopher M. Leh, Mayor

ATTEST:

Genny Kline, City Clerk

PUBLIC HEARING AND SECOND READING WILL BE THE ____ DAY OF _____, 2025, AT 6:00 P.M. AT LOUISVILLE CITY HALL, 749 MAIN STREET, LOUISVILLE, CO 80027.

PASSED AND ADOPTED ON SECOND AND FINAL READING, this ____ day of _____, 2025.

Christopher M. Leh, Mayor

ATTEST:

Genny Kline, City Clerk

APPROVED AS TO FORM:
Kelly PC, City Attorney

Kathleen M. Kelly



LOUISVILLE FIRE
PROTECTION DISTRICT

"OUR FAMILY SERVING YOUR FAMILY"

895 VIA APPIA WAY LOUISVILLE, CO 80027
HEADQUARTERS: 303.666.6595 | FAX: 303.666.7659
LOUISVILLEFIRE.COM

Dear City Councilmembers,

We are reaching out to share our agreement with the City Staff's recommendation of adopting the International Residential Code to include the residential fire sprinkler provisions. One of our fundamental responsibilities is life safety and the inclusion of fire sprinklers in homes helps save lives. Residential fire sprinklers in new homes will help protect both residents and first responders. Home construction materials and what we store and use at home is changing and has become more combustible. Fire sprinklers give residents the time necessary to get out and help the firefighters going in. We want to highlight that the residential fire sprinkler provision was adopted by The City of Louisville in 2014 without complaint to our district but was removed. Many of our neighboring partners do have this requirement in place. Below is a list of the jurisdictions that are in our neighboring vicinity that require residential fire sprinklers.

Neighboring Agencies Requiring

- Unincorporated Boulder County
- Town of Superior
- City of Lafayette
- City and County of Broomfield
- Town of Erie
- City of Westminster
- City of Lafayette
- City of Boulder

The fire district supports the adoption of the new IRC without this removal. We support the protection of those who seek to make this City a future home.

Thank you for considering the safety of our citizens.

Sincerely,



John Willson
Fire Chief



Jennifer Henderson

Division Chief of Risk Reduction, Fire Marshal

Significant changes from 2018 to the 2024 ICodes

The 2024 International Residential Code is a comprehensive code comprising all building, plumbing, mechanical, fuel gas, and energy conservation requirements for one- and two-family dwellings and townhouses up to three stories. Important 2024 IRC changes include:

- Imaginary lot lines are added for calculating fire separation distance when considering multiple dwellings on a single lot
- Shared accessory rooms are an option in two-family dwellings.
- Many requirements for energy storage systems are added.
- New protection requirements for storage batteries in garages are added.
- Sleeping loft requirements added for habitable attic style lofts and tiny home style lofts now have maximum size limits to meet an exception.
- Reinforcement of the floor below guards at a mezzanine is now required.
- The final test of the DWV system may be visual.
- Air exhaust openings now allowed near operable windows and doors.
- A2L refrigerants are added as an option for cooling equipment.
- Solvent cement joints for CPVC pipe are allowed above and below ground.
- Snow, wind, and seismic maps updated.
- Accessibility in care facilities clarified.
- 2018 Requires Residential Sprinklers Louisville amended them out. The 2024 codes as written by ICC requires Fire Sprinklers. This is approved by the Fire District to protect Life Limb and Safe well being of the residence of Louisville.
- ESS Energy Storage system requirements of location to be placed. ESS was not in 2018
- PVC used for gas vented appliances must be tested under pressure.
- 2024 Appendix's allows for wider range of Building Materials to be used. Such as tiny Homes, ADU's, Light Straw-Clay Construction, Straw Bale Construction, COB Construction (Monolithic Adobe), Hemp Lime (Hempcrete) Construction, 3-D Printed Building Construction.

The 2024 International Building Code applies to all buildings except detached one- and two-family dwellings and townhouses up to three stories. Important 2024 IBC changes include:

- Duties and powers of the building official: Section 104 regulating duties of the building official and the approach for reviewing for code compliance has been significantly updated to reflect the current manner that alternate materials, designs and methods are evaluated.
- For the first time ever, the 2024 IBC includes provisions for tornado loadings.
- Updated wind, earthquake, and snow loads.
- The updated design rain loads are now based on the summation of the static head, the hydraulic head, and the ponding head.
- Updates to Risk Categories including Photovoltaic (PV) panel systems and facilities providing power generation.
- Updated and expanded provisions for Temporary Structures.
- New provisions regarding the wind resistance of aggregate-surfaced roofs.
- Roof Coverings: Updated provisions for underlayment.
- New special inspection provisions for metal building systems.
- New provisions for structural concrete reinforced with glass-fiber reinforcement.
- Concrete: Chapter 19 on Concrete has been Updated and reformatted.
- Masonry: TMS 402 and TMS 602 references have been updated to the latest 2022 editions.
- Increased the allowable height of a Group R-2 occupancy building with an NFPA 13R sprinkler system.
- Occupiable space requirements now apply if a roof is usable for anything more than maintenance or repair and occupants must have access to multiple egress options from a story based on the occupant load and the story requirements.
- Adult changing tables regulations are added where they are required in large assembly and mercantile, college lecture hall/classroom buildings and highway rest stops, or provided.

- Fire-resistance-rated Wall Continuity: Updates on how supporting construction for exterior walls is to be fire-resistance-rated, especially in the case of a parapet.
- Openings in Shaft Enclosures: Additional exceptions are provided for shaft enclosures, including new allowances for openings and penetrations.
- Carbon Monoxide Detection: Carbon monoxide (CO) detection is now required in all occupancies where a CO-producing device is present. Detection and notification can be addressed in several ways.
- Vapor retarders: Several updates have been made to the vapor retarder provisions for consistency with the IRC and IECC. The changes also provide additional options and better guidance for allowable types and locations of permitted vapor retarders.
- Vertical and lateral Flame propagation compliance methods: Clarification has been provided as to when testing in accordance with NFPA 285, related to vertical and lateral flame propagation, is required. Previously this information was scattered in a variety of locations within Chapters 14 and 26.
- New Appendix P sets forth the scoping limitations and technical criteria for sleeping lofts that are provided within Group R dwelling units and sleeping units.
- ESS Energy Storage system requirements of location to be placed was not in 2018

The 2024 International Plumbing Code provides minimum regulations for plumbing facilities and allows for the acceptance of new and innovative products, materials, and systems. Plumbing and plumbing fixture related accessibility provisions and requirements from the ICC A117.1 Accessibility Standard are also included. Important 2024 IPC changes include:

- Provisions added for support of buried piping beneath building where expansive soil conditions exist.
- Requirement added for tracer wire for buried plastic sewer piping.
- Option added for vacuum testing of DWV piping.

- Plumbing fixture requirements significantly updated for various Group I occupancies.
- Exception added for allowing special locking mechanism for doors to multiple-user toilet facilities.
- Plastic pans for gas-fired water heaters required to be tested in accordance with ASTM E84 or UL 723.
- Showerhead flow limited to 2.0 gpm with performance complying with high efficiency requirements.
- Installation standards added for solvent-cemented plastic piping joints.
- Standards added for chemical waste piping materials.

The 2024 International Mechanical Code establishes minimum regulations for mechanical systems using prescriptive and performance-related provisions that allow the use of new and innovative materials, methods and designs. Important 2024 IMC changes include:

- Provisions prohibiting the use of domestic ductless range hoods in Groups I-1 and I-2 were removed.
- An identification requirement was added for Group A2L and B2L refrigerants.
- The requirements for machinery rooms containing Group A2L refrigerants were changed and Group B2L refrigerants were added to the provisions.
- Limits for the use of Group A1 and A2L refrigerants changed in high probability systems used for human comfort, unless permitted as excepted.
- UL 2158A Standard was added to the requirements for commercial dryer exhaust.
- Ventilation requirements for outpatient healthcare facilities to match the requirements in ASHRAE 62.1-2019.
- Addition of a new minimum landing at the roof hatch for personnel to safely use the hatch when accessing the roof for repair and maintenance.
- Addition of a new testing option for grease ductwork.
- Requirements for steam baths were added.

- A new standard requirement for refrigeration systems containing carbon dioxide was added

The 2024 International Fuel Gas Code (IFGC®) addresses the design and installation of fuel gas systems and gas-fired appliances through prescriptive and performance requirements. Important 2024 IFGC® changes include:

- [BS] 302.3.1 Engineered wood products. Sections 302.3.2, 302.3.3, and 302.3.4 have all been deleted.
- 304.1 General. The entire section is new for the 2024 Codes. Existing code language has been deleted.
- 304.12 Protection from fumes and gases. Existing code language has been deleted. The entire section is new for the 2024 Codes.
- 403.6 Workmanship and defects. Existing code language has been rewritten and additional code language has been added for the 2024 Codes.
- Appendix C - C105.2, Test for combustion air and vent drafting for natural draft and Category I appliances. Existing code language has been deleted. The entire section is new for the 2024 Codes (appendices are voluntary and apply only if specifically adopted)

The 2024 International Existing Building Code encourages the use and reuse of existing buildings. This code covers repair, alteration, addition and change of occupancy for existing buildings and historic buildings to achieve appropriate levels of safety without requiring full compliance with new construction requirements. Important 2024 IEBC® changes include:

- Occupiable roofs. The concept of occupiable roofs requirements has been incorporated in a variety of locations to correlate with the IBC.
- Storm Shelters. The requirements have been coordinated with revisions in the IBC and ICC 500, clarifying that where constructed, storm shelters shall comply with IBC Section 423.
- Risk category increase. Clarifies how risk categories should be assigned for structural design where the addition and the existing building have different uses.

- Smoke compartment requirements. Existing Group I-1, condition 2 occupancies and ambulatory care facilities may be required to divide stories into no fewer than two smoke compartments for more substantial additions and alterations.
- Adult Changing stations. Where additional toilet facilities are being added and IBC Section 1110.4.1 would require adult changing stations, Section 306.7.15 would require that at least one accessible family or assisted use toilet room must contain one.
- Exterior wall covering and wall envelopes sprinkler requirement. Section 309.2.1 has been added to require that if combustible exterior wall envelopes or coverings are installed on a high-rise building, the building must be equipped throughout with a sprinkler system. There are some exceptions for smaller installations and when only a combustible water resistive barrier is installed.
- Owner's responsibility at construction sites. Section 1502 was added to address the need for the owner to properly develop, implement and maintain a site safety plan during construction. A site safety director must be designated who is responsible for conducting daily fire safety inspections.
- Non-required automatic sprinkler system. A section has been added to Chapter 10 (under the change of occupancy classification requirements) to allow removal of a nonrequired existing automatic sprinkler system if several criteria are met.
- APPENDIX E TEMPORARY EMERGENCY USES. This new appendix was created to provide guidance for designers, engineers, architects, and fire and building officials to allow temporary emergency uses of existing buildings with respect to the minimum code requirements. This appendix is intended to serve as a template or checklist for use during an emergency that references the relevant code requirements.

The 2024 International Fire Code (IFC®) addresses regulations affecting or relating to structures, processes, premises and safeguards for life safety and fire hazards. Important 2024 IFC changes include:

- Energy Storage Systems (ESS) and Lithium-ion Batteries:

- The 2024 IFC significantly expands regulations for ESS and lithium-ion batteries, including those used in testing, research, manufacturing, storage, and sales. Fire sprinklers are now required in Group B, F-1, M, and S-1 occupancies that use or store these batteries, regardless of whether they are part of an ESS.
- Carbon Monoxide Detection: The 2024 IFC, along with the 2024 IBC, mandates carbon monoxide (CO) detection or alarms in all occupancies where CO-producing devices are present.
- Powered Micromobility Devices: The 2024 IFC includes a new section addressing the hazards associated with charging these devices.
- A2L Refrigerants: The 2024 IFC acknowledges the use of A2L (flammable) refrigerants while implementing safety measures.
- Distilled Spirits and Wine Storage: Fire protection requirements for these storage areas have been refined based on data from FM Global.
- Outdoor Assembly Events Added section 3107 is New
- Temporary Heating and Cooking Operations is New Chapter 41
- Other Notable Changes: The 2024 IFC also addresses valet trash collection (now requiring approval), inflatable amusement devices, temporary heating and cooking operations, and the Emergency Responder Communications Enhancement System (ERCES).

The 2024 International Property Maintenance Code (IPMC®) provides requirements for continued use and maintenance of buildings, site conditions, swimming pools, plumbing, mechanical, electrical and fire protection systems in existing residential and nonresidential structures.

The 2024 International Swimming Pool and Spa Code (ISPSC®) is a comprehensive swimming pool code coordinated with the current requirements in the I-Codes and ANSI standards. Developed with the Pool and Hot Tub Alliance (PHTA) [formerly The Association of Pool & Spa Professionals (APSP)], to establish minimum regulations for public and residential pools, spas, and hot tubs, the ISPSC also contains a reference that mandates the requirements within PHTA/ICC-7 Standard for Suction Entrapment Avoidance.

Memorandum

To: Louisville City Council Members

From: Louisville Sustainability Advisory Board

Date: September 10, 2025

Re: Recommendation to Adopt the Cohort Code Package with the 2024 IECC Base

Dear Council Members,

We would like to begin by thanking the City Council for holding a special session on August 26, 2025, to discuss the 2024 IECC packages. We appreciate the time and thoughtful consideration you have given to this important decision for Louisville's future. We also want to acknowledge the concerns raised during the meeting regarding the viability and implementation of this code package. While we understand these concerns, the Louisville Sustainability Advisory Board (LSAB) believes that the Cohort Code Package aligns most closely with the City's adopted Sustainability Action Plan and will ensure stronger long-term outcomes for our community.

The Cohort Code Package was created through a collaborative process involving building code officials and sustainability professionals from across the Denver region who have been working together since 2018 to determine the best path forward. Their expertise and regional perspective make this package not only technically sound but also regionally consistent, providing Louisville with a proven framework to advance energy efficiency, resilience, and climate goals.

Why the Cohort Code Package is the Best Choice for Louisville:

- **Readiness for the Low Energy and Carbon Code (LECC)**
 - The Cohort Code Package positions Louisville to be prepared for the state's Low Energy and Carbon Code (LECC), which will apply to any code updates, including minor adjustments such as safety updates, made after June 30, 2026. The LECC is expected to be more stringent than the 2024 International Energy Conservation Code (IECC) base code, meaning that adopting only the base code could require Louisville to undergo another round of revisions as soon as next year. By adopting the Cohort Package now, Louisville can stay ahead of this transition, reduce regulatory uncertainty, and avoid the costs and challenges of multiple code changes in quick succession.
- **Regional Leadership and Consistency**
 - Golden has already adopted the Cohort Code Package, and Northglenn is considering adoption. Additionally, see attached for the schedule at which other municipalities are planning to adopt the code. By following suit, Louisville will remain regionally aligned, reduce confusion for the building industry, and demonstrate leadership in meeting climate and sustainability goals. In addition, many Denver Regional Council of Governments (DRCOG) member municipalities are expected to consider code changes, including minor tweaks, after June 30, 2026, when the LECC will take effect. This makes it more likely

that they, too, will adopt the Cohort Package—further strengthening regional consistency and momentum.

- **Alignment with Louisville’s Sustainability Plan and Adopted Climate Action Goals (Res. 18-2024)**
 - Louisville has set ambitious climate and energy goals, including reducing greenhouse gas emissions and transitioning to clean energy. The Cohort Code Package directly supports these objectives by incentivizing all-electric construction, encouraging heat pump adoption, and driving higher efficiency standards across all building types.
- **Protecting Residents and Businesses from Long-Term Costs**
 - By prioritizing energy-efficient construction and electrification now, Louisville residents and businesses will save on long-term utility bills and avoid the financial burden of future retrofits required to meet federal regulations. This approach ensures affordability and resilience for our community in the decades ahead.
- **Strengthening Community Resilience**
 - Adopting this package will reduce Louisville’s reliance on fossil fuels, improve indoor air quality, and support the local green workforce. These benefits make our community more resilient to both climate change and energy price volatility, while also improving quality of life for residents.
- **Ensuring Fairness in Energy Use**
 - The package includes stronger standards for large homes over 5,000 square feet, which typically have disproportionately higher energy consumption. This ensures that our code treats energy efficiency equitably across all building sizes and reduces strain on Louisville’s energy infrastructure.
- **Flexibility for Builders While Maintaining Strong Outcomes**
 - Multiple compliance pathways are included, giving builders and developers flexibility to choose the approach that works best for their projects. This balance of rigor and adaptability makes implementation more feasible while keeping efficiency outcomes strong.

The Louisville Sustainability Advisory Board strongly recommends adoption of the Cohort Code Package with the 2024 IECC Base. This package reflects years of expert collaboration across the region, is consistent with Louisville’s Sustainability Plan and City Council adopted climate action goals, and is the most effective path to achieving our city’s climate, economic, and community resilience goals.

We thank you for your careful deliberation on this matter and for your continued leadership in advancing Louisville’s sustainability and climate goals. The LSAB stands ready to assist in outreach, education, and implementation as Louisville takes this important step forward.

Sincerely,
Louisville Sustainability Advisory Board

2024 International Code Series (I-Code)

Adoption – Second Reading and Public Hearing

November 3, 2025

*Presented by: Rob Zuccaro, Community Development Director
and Chad Root, Chief Building Official*

2024 I-Code Series

- Would Replace Current 2018 I-Codes and Local Amendments
 - ✓ 2024 International Building Code
 - ✓ 2024 International Residential Code
 - ✓ 2024 International Mechanical Code
 - ✓ 2024 International Fuel Gas Code
 - ✓ 2024 International Plumbing Code
 - ✓ 2024 International Fire Code
 - ✓ 2024 International Energy Conservation Code
 - ✓ 2024 International Property Maintenance Code
 - ✓ 2024 International Existing Building Code
 - ✓ 2024 International Swimming Pool and Spa Code
 - ✓ 1997 Uniform Housing Code

2024 I-Code Series

- Codes Adopted by Reference, with Local Amendments Listed in LMC Title 15, Building and Construction
- Staff Has Worked with BCBOA on Initial Draft of Code Package, with Local Amendments
- August 26, 2025 City Council Discussion/Direction
 - ✓ International Energy Conservation Code Amendment Package
 - BCBOA Recommended Option with Minimal Amendments
 - Regional Cohort Code Option with Electric-Preferred
 - ✓ Residential Fire Sprinklers

2024 I-Code Series

- I-Codes Updated Every Three Years – City Last Updated to 2018 I-Codes, with interim Update to 2021 Energy Conservation Code
- Codes Set Minimum Standards to Protect Health, Safety, and the Environment
- Three-Year I-Code Updates Include Input and Consensus from Across the Country and Building Industry Interests
- Reflects Updates to Building Science and Technology, Industry Best Practices, Feasibility and Cost Considerations, and Legal Compliance

International Energy Conservation Code

- Primary IECC Options Considered:
 - ✓ Adopt BCBOA Code Package Based on 2024 IECC
 - Requires Mandatory Minimum Standards for Thermal Envelope
 - Allows Multiple Compliance Pathways
 - More Straight Forward and Easier to Administer for Building Community
 - Relies on Base Code that has been Nationally Vetted
 - ✓ Adopt Regional Cohort Code Package Based on 2024 IECC
 - Strongly Incentivizes All-Electric Heat Pump Use
 - Addresses Concerns for Limitations on Regulated Gas-Fired Appliances
 - More Stringent Standards for Large Homes
 - Provides Multiple Compliance Pathways

Residential Fire Sprinklers

- City Initially Adopted Fire Sprinkler Requirements with 2018 I-Codes But Later Amended out As Part of Marshall Fire Amendments to Save Costs on Rebuilding
- LFPD Has Submitted Letter Recommending Adoption of Residential fire Sprinkler Requirements with 2024 I-Codes
- Other Communities that Require Residential Fire Sprinklers:
 - ✓ Boulder County
 - ✓ Town of Superior
 - ✓ City of Lafayette
 - ✓ City and County of Broomfield
 - ✓ Town of Erie
 - ✓ City of Westminster
 - ✓ City of Boulder

Residential Fire Sprinklers

- Statistics from 2024 NFPA Publication
 - ✓ Effective in Controlling Fire 98% of Time
 - ✓ Only One Sprinkler Activated in 85% of Fires, Limiting Water Damage
 - ✓ Civilian Deaths and Injuries 89% and 31% Lower Than In Homes Without Fire Sprinklers
 - ✓ Property Loss 55% Lower Than In Homes Without Fire Sprinklers
 - ✓ Firefighter Injury Rate 48% Lower Than In Homes Without Fire Sprinklers
- Cost Estimated at Around \$1.65 Per Sq. Ft. for New Construction
 - ✓ For 2,500 Sq. Ft. Home, Cost Estimated at \$4,125
 - ✓ If Home Costs \$250 per Sq. Ft. to Build, Equates to 0.7% of Cost of Home

Alternatives

- Adopt Ordinance No. 1904, Series 2025 on second reading as drafted.
- Adopt Ordinance No. 1904, Series 2025 on second reading with specific amendments to the ordinance.
- Continue the second reading public hearing on Ordinance No.1904, Series 2025 with direction to staff to make any desired amendments and bring back the ordinance draft for further review.

Staff Recommendation

- Staff Recommends Approval of Ordinance 1904, Series 2025 as Drafted.