

ORDINANCE NO. \_\_\_\_\_

AN ORDINANCE AMENDING THE LAND DEVELOPMENT CODE OF THE CITY OF IRVING, TEXAS, BY AMENDING SECTIONS 8B-9 THROUGH 8B-11, ADOPTING THE 2021 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE AS THE ENERGY CONSERVATION CODE FOR THE CITY OF IRVING, TEXAS; PROVIDING LOCAL AMENDMENTS, ADDITIONS, AND DELETIONS THERETO; ADOPTING PENALTY PROVISIONS; AND PROVIDING FOR SEVERABILITY, SAVINGS, AND AN EFFECTIVE DATE.

WHEREAS, the North Central Texas Council of Governments encourages local jurisdictions to adopt the 2021 International Codes; and

WHEREAS, the Construction Board of Appeals, among its other duties, has been created to obtain public comment on the periodic update of the code; and

WHEREAS, the Construction Board of Appeals has conducted a public meeting to receive public comments from persons affected by the proposed amendments to the code, and recommends adoption of the 2021 International Energy Conservation Code as the energy conservation code for the City with the following local amendments;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That Chapter 8B entitled “Building Codes” of The Land Development Code of the City of Irving, Texas, is hereby amended by amending Sections 8B-9, 8B-10, and 8B-11 to read as follows:

**Sec. 8B-9. International Energy Conservation Code.**

The 2021 edition of the International Energy Conservation Code is adopted as the energy conservation code of the City of Irving, Texas, as amended herein.

**Sec. 8B-10. Local Amendments, additions, and deletions to the 2021 edition of the International Energy Conservation Code.**

Amendments included in this section are intended to be specific code provisions. If there is a conflict between a provision in the published 2021 International Energy Conservation Code and this section, the specific provisions of this section shall control. Amendments, modifications, and deletions to the 2021 International Energy Conservation Code are adopted as follows:

- a) Commercial Provisions Chapter 1 (Scope and Administration), Section C101.1 is amended to read as follows:

**C101.1 Title.** These regulations shall be known as the Energy Conservation Code of the City of Irving, hereinafter referred to as “this code” or “IECC.”

- b) Commercial Provisions Chapter 1 (Scope and Administration), Section C102 (Alternative Materials, Design, and Methods of Construction and Equipment) is amended to add C102.1.2 read as follows:

**C102.1.2 Alternative compliance.** A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance.

- c) Commercial Provisions Chapter 4 (Commercial Energy Efficiency), Section C402 (Building Envelope Requirements), Subsection C402.5.2 is amended to read as follows:

**C402.5.2 Dwelling and sleeping unit enclosure testing.** The building thermal envelope shall be tested in accordance with ASTM E779, ANSI/RESNET/ICC 380, ASTM E1827 or an equivalent method approved by the code official. The measured air leakage shall not exceed 0.30 cfm/ft<sup>2</sup> (1.5 Us m<sup>2</sup>) of the testing unit enclosure area at a pressure differential of 0.2 inch water gauge (50 Pa). Where multiple dwelling units or sleeping units or other occupiable conditioned spaces are contained within one building thermal envelope, each unit shall be considered an individual testing unit, and the building air leakage shall be the weighted average of all testing unit results, weighted by each testing unit's enclosure area. Units shall be tested separately with an unguarded blower door test as follows:

1. Where buildings have fewer than eight testing units, each testing unit shall be tested.
2. For buildings with eight or more testing units, the greater of seven units or 20 percent of the testing units in the building shall be tested, including a top floor unit, a ground floor unit, a middle floor unit, and a unit with the largest testing unit enclosure area. For each tested unit that exceeds the maximum air leakage rate, an additional two three units shall be tested, including a mixture of testing unit types and locations.

- d) Residential Provisions Chapter 1 (Scope and Administration), Section R101.1 is amended to read as follows:

**R101.1 Title.** These regulations shall be known as the Energy Conservation Code of the City of Irving, hereinafter referred to as “this code” or “IECC.”

- e) Residential Provisions Chapter 1 (Scope and Administration), Section R102.1 is amended to add R102.1.2 read as follows:

**R102.1.2 (N1101.4.1) Alternative compliance.** A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance. Regardless of the program or the path to compliance, each 1- and 2-family dwelling

shall be tested for air and duct leakage as prescribed in Section R402.4.1.2 (N1102.4.1.2) and R403.3.3 (N1103.3.3) respectively.

- f) Residential Provisions Chapter 1 (Scope and Administration), Section R105.2 is amended to read as follows:

**R105.2 Required Inspections.** The code official or his or her designated agent, upon notification, shall make the inspections set forth in Sections R105.2.1 through R105.2.6.

**R105.2.1 Footing and foundation inspection.** Inspections associated with footings and foundations shall verify compliance with the code as to R-value, location, thickness, depth of burial and protection of insulation as required by the code and approved plans and specifications.

**R105.2.2 Framing and Air Barrier rough-in inspection.** Inspections at framing and rough-in shall be made before application of interior finish insulation and shall verify compliance with the code as to air leakage controls as required by the code; and approved plans and specifications.

**R105.2.3 Insulation and Fenestration rough-in inspection.** Inspections at framing and rough-in shall be made before application of interior finish and shall verify compliance with the code as to: types of insulation and corresponding R-values and their correct location and proper installation; fenestration properties such as U-factor and SHGC and proper installation.

**R105.2.4 Plumbing rough-in inspection.** Inspections at plumbing rough-in shall verify compliance as required by the code and approved plans and specifications as to types of insulation and corresponding R-values and protection and required controls.

**R105.2.5 Mechanical rough-in inspection.** Inspections at mechanical rough-in shall verify compliance as required by the code and approved plans and specifications as to installed HVAC equipment type and size, required controls, system insulation and corresponding R-value, system air leakage control, programmable thermostats, dampers, whole-house ventilation, and minimum fan efficiency.

**Exception:** Systems serving multiple dwelling units shall be inspected in accordance with Section C105.2.4.

**R105.2.6 Final inspection.** The building shall have a final inspection and shall not be occupied until approved. The final inspection shall include verification of the installation of all required building systems, equipment and controls and their proper operation and the required number of high-efficacy lamps and fixtures.

- g) Residential Provisions Chapter 2 (Definitions), Section R202 (N1101.6) amended to add the following definitions:

**DYNAMIC GLAZING.** Any fenestration product that has the fully reversible ability to change its performance properties, including U-factor, solar heat gain coefficient (SHGC), or visible transmittance (VT).

**PROJECTION FACTOR.** The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device.

- h) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R401.2.5 (Additional Energy efficiency) is deleted in its entirety.
- i) Residential Provisions Chapter 4 (Residential Energy Efficiency), Table R402.1.2 is amended to replace the following requirements:

<i>Climate Zone</i>	<i>Fenestration U-Factor<sup>f</sup></i>	<i>Ceiling U-Factor</i>
<i>2</i>	<i>.40</i>	<i>0.29</i>
<i>3</i>	<i>0.32</i>	<i>0.29</i>

- j) Residential Provisions Chapter 4 (Residential Energy Efficiency), Table R402.1.3 is amended to replace the following requirements:

<i>Climate Zone</i>	<i>Fenestration U-Factor<sup>b,i</sup></i>	<i>Ceiling R-Value</i>	<i>Wood Frame Wall R-Value</i>	<i>Slab R-Value &amp; Depth</i>
<i>2</i>	<i>.40</i>	<i>42</i>	<i>13 or 0 + 10</i>	<i>0</i>
<i>3</i>	<i>0.32</i>	<i>42</i>	<i>19 or 13+3ci, 0+15</i>	<i>0</i>

- k) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R402.4 (Air leakage), Subsection 402.4.1 (Building Thermal Envelope) is amended to add R402.4.1.4 to read as follows:

**R402.4.1.4 Sampling options for R2 multifamily dwelling units.** For buildings with eight or more testing units that must be tested as required by R402.4.1.2 or R402.4.1.3, the greater of seven units or 20 percent of the testing units in the building shall be tested, including a top floor unit, a ground floor unit, a middle floor unit, and a unit with the largest testing unit enclosure area. For each tested unit that exceeds the maximum air leakage rate, an additional three units shall be tested, including a mixture of testing unit types and locations. Where buildings have fewer than eight testing units, each testing unit shall be tested.

- l) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R402.4 (Air leakage), Subsection R402.4.6 is amended to read as follows:

**R402.4.6 Electrical and communication outlet boxes (air-sealed boxes).** Electrical and communication outlet boxes installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces.

- m) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R403 (Systems), Subsection R403.3 (Ducts) is amended to add R403.3.8 to read as follows:

**R403.3.8 Sampling options for R2 multifamily dwelling units.** For buildings with eight or more testing units that must be tested as required by R403.3.5, the greater of seven units or 20 percent of the testing units in the building shall be tested, including a top floor unit, a ground floor unit, a middle floor unit, and a unit with the largest testing unit floor area. For each tested unit that exceeds the maximum duct leakage rate, an additional three units shall be tested, including a mixture of testing unit types and locations. Where buildings have fewer than eight testing units, each testing unit shall be tested.

- n) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R403.6 (Mechanical Ventilation) is amended to add R403.6.4 to read as follows:

**R403.6.4 Sampling options for R2 multifamily dwelling units.** For buildings with eight or more testing units that must be tested as required by R403.6.3, the greater of seven units or 20 percent of the testing units in the building shall be tested, including a top floor unit, a ground floor unit, a middle floor unit, and a unit with the largest testing unit floor area. For each tested unit that does not meet the minimum ventilation rate, an additional three units shall be tested, including a mixture of testing unit types and locations. Where buildings have fewer than eight testing units, each testing unit shall be tested.

- o) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R404.2 (Interior Lighting Controls) is deleted in its entirety.

- p) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R405.2 is amended to read as follows:

**R405.2 Performance-based compliance.** Compliance based on total building performance requires that a proposed design meets all of the following:

1. The requirements of the sections indicated within Table R405.2.
2. The building thermal envelope greater than or equal to levels of efficiency and solar heat gain coefficients in Table R402.1.1 or R402.1.3 of the 2009 International Energy Conservation Code.
3. An annual energy cost that is less than or equal to the annual energy cost of the 2021 standard reference design or 8% less than the annual energy cost of the 2018 standard reference design. Energy prices shall be taken from a source approved by the code official, such as the Department of Energy, Energy Information Administration's State Energy Data System Prices and Expenditures reports. Code officials shall be permitted to require time-of-use pricing in energy cost calculations.

Exception: The energy use based on source energy expressed in Btu or Btu per square foot of conditioned floor area shall be permitted to be substituted for the energy cost. The source energy multiplier for electricity shall be 3.16. The source energy multiplier for fuels other than electricity shall be 1.1.

- q) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R406 (Energy Rating Index Compliance Alternative), Subsection 406.5 (ERI-based Compliance), Table R406.5 (N1106.5) is amended to replace the requirements for climate zones 2 and 3 to read as follows:

**TABLE R406.5 (N1106.5)<sup>2</sup>  
MAXIMUM ENERGY RATING INDEX**

CLIMATE ZONE	ENERGY RATING INDEX
2	59
3	59

<sup>2</sup> The table is effective from September 1, 2022 to August 31, 2025.

**TABLE R406.5 (N1106.5)<sup>3</sup>  
MAXIMUM ENERGY RATING INDEX**

CLIMATE ZONE	ENERGY RATING INDEX
2	57
3	57

<sup>3</sup> The table is effective from September 1, 2025 to August 31, 2028.

**TABLE R406.5 (N1106.5)<sup>3</sup>  
MAXIMUM ENERGY RATING INDEX**

CLIMATE ZONE	ENERGY RATING INDEX
2	55
3	55

<sup>4</sup> This table is effective on or after September 1, 2028.

- r) Residential Provisions Chapter 4 (Residential Energy Efficiency), Section R408 (Additional Efficiency Package Options) is deleted in its entirety.

**Sec. 8B-11. Penalty.**

- a) A person commits an offense if the person violates a provision of the 2021 International Energy Conservation Code as adopted and amended by the City of Irving, allows another person to violate a provision of the 2021 International Energy Conservation Code, as adopted and amended by the City of Irving, or fails to perform an act required of the person by the 2021 International Energy Conservation Code, as adopted and amended by the City of Irving. A person commits a separate offense each day or portion of a day during which the violation is committed, allowed, or continued.
- b) An offense described in Section 8B-11(a) is a class “C” misdemeanor and shall be punishable by a fine not to exceed \$500.00. However, a fine for the violation of a provision of this chapter that governs fire safety, zoning, or public health and sanitation, including dumping or refuse, may not exceed \$2,000.00.
- c) The penalties provided for in this section are in addition to any other enforcement remedies that the city may have under other city ordinances or state law.

SECTION 2. That terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance

should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

SECTION 3. That it is the intent of the Irving City Council that pending prosecutions, brought under the previous code, which this ordinance replaces, should continue under the terms and penalties of said code and be saved from dismissal as if said prior ordinances had not been repealed.

SECTION 5. That this ordinance shall become effective on February 13, 2023.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS,  
on \_\_\_\_\_.