

**An Ordinance of the City of Plano, Texas, repealing in its entirety City of Plano Ordinance No. 2018-11-14 codified as Article XVIII, Energy Conservation Code, of Chapter 6 of the Code of Ordinances; and adopting the 2021 Edition of the International Energy Conservation Code, with certain additions, deletions and amendments, as the Energy Conservation Code of the City of Plano; and providing a repealer clause, a severability clause, a savings clause, a penalty clause, a publication clause and an effective date.**

**WHEREAS**, on November 26, 2018, by Ordinance No. 2018-11-14, the City Council of the City of Plano amended Ordinance No. 2016-3-7 to reflect changes to the International Energy Conservation Code, and such were codified as Article XVIII, Energy Conservation Code, of Chapter 6 of the Code of Ordinances of the City of Plano (“City”); and

**WHEREAS**, on November 16, 2021 the Building Standards Commission held a public hearing to discuss the adoption of the 2021 Edition of the International Energy Conservation Code, a publication of the International Code Council (I.C.C.), and to receive input from the general public and all persons who may be affected by the proposed adoption; and

**WHEREAS**, upon recommendation of the Building Standards Commission and upon full review and consideration of all matters attendant and related thereto, the City Council is of the opinion that the 2021 Edition of the International Energy Conservation Code, and the additions, deletions, and amendments thereto, should be approved and adopted as the Energy Conservation Code of the City.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PLANO, TEXAS, THAT:**

**Section I.** Ordinance No. 2018-11-14, duly passed and approved by the City Council of the City of Plano on November 26, 2018, is hereby repealed in its entirety.

**Section II.** A new Article XVIII, Energy Conservation Code, of Chapter 6 of the Code of Ordinances of City of Plano is hereby adopted and shall read in its entirety as follows:

## **“ARTICLE XVIII. ENERGY CONSERVATION CODE**

### **DIVISION 1. GENERALLY**

#### **Sec. 6-684. Penalty.**

Any violation of the provisions or terms of this ordinance by any person, firm or corporation shall be a misdemeanor offense and shall be subject to a fine in accordance with Section 1-4(a) of the City Code of Ordinances for each offense. Every day a violation continues shall constitute a separate offense.

## **Sec. 6-685. Adopted.**

The 2021 Edition of the International Energy Conservation Code, a publication of the International Code Council (I.C.C.), is hereby adopted and designated as the Energy Conservation Code of the City to the same extent as if such Code were copied verbatim in this Article, subject to deletions, additions, and amendments prescribed in this Article. A copy of the 2021 Edition of the International Energy Conservation Code is on file in the office of the City Secretary.

## **DIVISION 2. AMENDMENTS**

### **Sec. 6-686. Deletions, Additions, Amendments.**

The following deletions, additions, and amendments to the International Energy Conservation Code adopted herein are hereby approved and adopted:

**Section C102.1;** *change section C102.1 by adding a new Section C102.1.2 to 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.

**Section C402.5.2;** *change 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 L/s 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 three units shall be tested, including a mixture of testing unit types and locations.

**Section R102;** *change section R102.1 by adding a new Section R102.1.2 (N1101.4.1) to 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 one- and two-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.

**Section R105.2;** *change 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 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, and 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-efficiency lamps and fixtures.

**Section R202 (N1101.6);** *change Section R202 by adding the following two definitions:*

**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.

**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).

**Section R401.2.5;** *delete Section R401.2.5 “Additional energy efficiency” in its entirety.*

**Table R402.1.2;** *change a portion of Table R402.1.2 “Maximum Assembly U-Factors and Fenestration Requirements” to read as follows (remainder of Table is unchanged):*

Climate Zone	Fenestration U-Factor <sup>f</sup>	Ceiling U-Factor
3	0.32	0.29

**Table R402.1.3;** *change a portion of Table R402.1.3 “Insulation Minimum R-Values and Fenestration Requirements by Component” to read as follows (remainder of Table is unchanged):*

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

**Section R402.4.1;** *change Section R402.4.1 by adding a new Section 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 Sections R402.1.2 or R402.1.3, 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.

**Section R403.3;** *change Section R403.3 by adding a new Section 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 Section 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.

**Section R403.6;** *change Section R403.6 by adding a new Section 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 Section 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 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.

**Section R404.2;** *Section R404.2 “Interior lighting controls” is deleted in its entirety.*

**Section R405.2;** *change 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. 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.

**Table R406.5;** *change a portion of Table R406.5 “Maximum Energy Rating Index” to read as follows (remainder of Table is unchanged):*

**TABLE R406.5 <sup>1</sup>**  
**MAXIMUM ENERGY RATING INDEX**

<b>CLIMATE ZONE</b>	<b>ENERGY RATING INDEX</b>
3	63

<sup>1</sup> This table is effective until August 31, 2022.

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

<b>CLIMATE ZONE</b>	<b>ENERGY RATING INDEX</b>
3	59

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

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

<b>CLIMATE ZONE</b>	<b>ENERGY RATING INDEX</b>
3	57

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

**TABLE R406.5 <sup>4</sup>**  
**MAXIMUM ENERGY RATING INDEX**

<b>CLIMATE ZONE</b>	<b>ENERGY RATING INDEX</b>
3	55

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

**Section 408;** delete the section in its entirety.”

**Section III.** All provisions of the Code of Ordinances of the City of Plano in conflict with the provisions of this Ordinance are hereby repealed, and all other provisions of the Code of Ordinances of the City of Plano, not in conflict with the provisions of this Ordinance, shall remain in full force and effect.

**Section IV.** It is the intention of the City Council that this Ordinance, and every provision thereof, shall be considered severable, and the invalidity or unconstitutionality of any section, clause, provision or portion of this Ordinance shall not affect the validity or constitutionality of any other portion of this Ordinance.

**Section V.** The repeal of any Ordinance or part of Ordinances effectuated by the enactment of this Ordinance shall not be construed as abandoning any action now pending under or by virtue of such Ordinance or as discontinuing, abating, modifying or altering any penalty accruing or to accrue, or as affecting any rights of the municipality under any section or provisions of any Ordinances at the time of passage of this Ordinance.

**Section VI.** Any violation of the provisions or terms of this ordinance by any person, firm or corporation shall be a misdemeanor offense and shall be subject to a fine in accordance with Section 1-4(a) of the City Code of Ordinances for each offense. Every day a violation continues shall constitute a separate offense.

**Section VII.** This Ordinance shall become effective February 1, 2022 and after its passage and publication as required by law.

**DULY PASSED AND APPROVED** this, the 24<sup>th</sup> day of January, 2022.

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John B. Muns, MAYOR

ATTEST:

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Lisa C. Henderson, CITY SECRETARY

APPROVED AS TO FORM:

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Paige Mims, CITY ATTORNEY