

## City Code – Title 9, Chapter 9, Energy Conservation Code

### Proposed Amendments (**DRAFT 7/3/24**)

- Amend City Code, Title 9, Chapter 9, Energy Conservation Code, Table of Contents (portions altered), as follows:

SECTION:

~~9-9-12: IECC Energy Code Amendment, Section C402.5, Air Leakage Thermal Envelope (Mandatory), Add Exception~~

9-9-12: IECC Energy Code Amendment, Section C402.1.1, Low Energy Buildings, Add Exemptions 4. and 5.

~~9-9-14: IECC Energy Code Amendment, Table C404.5.1, Piping Volume And Maximum Piping Lengths~~

9-9-~~15~~14: IECC Energy Code Amendment, Section R101.1, Title

9-9-~~16~~15: IECC Energy Code Amendment, Section R104.2, Schedule Of Permit Fees

9-9-~~17~~16: IECC Energy Code Amendment, Section R104.5, Refunds

9-9-~~18~~17: IECC Energy Code Amendment, Section R108, Stop Work Order

9-9-~~19~~18: IECC Energy Code Amendment, Section R109, Board Of Appeals Process

9-9-~~20~~19: IECC Energy Code Amendment, Add Section R110, Violations

9-9-~~21~~20: IECC Energy Code Amendment, Section R201.3, Terms Defined In Other Codes

9-9-~~22~~21: IECC Energy Code Amendment, Section R202, General Definitions, Code Official

9-9-22: IECC Energy Code Amendment, Section R202, General Definitions, Conditioned Space

**9-9-24: IECC Energy Code Amendment, Table R402.1.2, Insulation And Fenestration Requirements By Component, Add Footnotes J And K**

**9-9-26: IECC Energy Code Amendment, Section R402.4.1.2, Testing, Add Exception**

~~9-9-29: IECC Energy Code Amendment, Section R403.3.1, Duct Insulation Requirements~~

~~9-9-30: IECC Energy Code Amendment, Delete Section R403.3.6, Ducts Buried Within Ceiling Insulation~~

~~9-9-31: IECC Energy Code Amendment, Delete Section R403.3.7, Ducts Located In Conditioned Space~~

~~9-9-32: IECC Energy Code Amendment, Section R403.5.3, Hot Water Pipe Insulation (Prescriptive)~~

~~9-9-33: IECC Energy Code Amendment, Section R404.1, Lighting Equipment (Mandatory)~~

~~9-9-34: IECC Energy Code Amendment, Section R406.3, Energy Rating Index~~

~~9-9-35: IECC Energy Code Amendment, Table R406.4, Maximum Energy Rating Index~~

- Delete City Code Section 9-9-12, IECC Energy Code Amendment, Section C402.5, Air Leakage-Thermal Envelope (Mandatory), Add Exception, and replace as follows:

**~~9-9-12: IECC ENERGY CODE AMENDMENT, SECTION C402.5, AIR LEAKAGE-THERMAL ENVELOPE (MANDATORY), ADD EXCEPTION:~~**

~~Add the following Exception to Section C402.5, Air Leakage Thermal Envelope (Mandatory):~~

~~**Exception:** For buildings having over fifty thousand (50,000) square feet of conditioned floor area, air leakage testing shall be permitted to be conducted on less than the whole building, provided the following portions of the building are tested and their measured air leakage is area-weighted by the surface areas of the building envelope:~~

~~— 1. The entire floor area of all stories that have any spaces directly under a roof.~~

—2. The entire floor area of all stories that have a building entrance or loading dock.

—3. Representative above-grade wall sections of the building totaling at least twenty-five percent (25%) of the above-grade wall area enclosing the remaining conditioned space. Floor area tested under items 1 and 2 of this Exception shall not be included in the twenty-five percent (25%) of above-grade wall sections tested under item 3 of this Exception.

**9-9-12: IECC Energy Code Amendment, Section C402.1.1, Low-Energy Buildings, Add Exemptions 4. And 5.**

Add two additional exemption items to Section C402.1.1 as follows:

4. Accessory utility and storage buildings and sports practice buildings accessory to A, B, and E occupancies where buildings maintain no heating or cooling or where intermittent heating and cooling systems are installed.

5. Buildings for domestic water wells, irrigation wells, sewer pump facilities, and sewer lift station buildings where equipment produces internal heat loads and where intermittent heating or cooling is provided to prevent freezing or overheating of equipment.

- Delete City Code 9-9-14, IECC Energy Code Amendment, Table C404.5.1, Piping Volume and Maximum Piping Lengths, then renumber subsequent Sections:

**9-9-14: IECC ENERGY CODE AMENDMENT, TABLE C404.5.1, PIPING VOLUME AND MAXIMUM PIPING LENGTHS:**

Repeal Table C404.5.1, Piping Volume and Maximum Piping Lengths and replace with the following:

TABLE C404.5.1

PIPING VOLUME AND MAXIMUM PIPING LENGTHS

Nominal Pipe Size (inches)	Volume (liquid ounces per foot length)	Maximum Piping Length (feet)	
		Public lavatory faucets	Other fixtures and appliances
5/8	2	7	32

<del>3/4</del>	<del>3</del>	<del>5</del>	<del>21</del>
<del>7/8</del>	<del>4</del>	<del>N/A – non-standard size</del>	<del>16</del>
<del>1</del>	<del>5</del>	<del>3</del>	<del>13</del>
<del>1-1/4</del>	<del>8</del>	<del>2</del>	<del>8</del>
<del>1-1/2</del>	<del>11</del>	<del>1</del>	<del>6</del>
<del>2 or larger</del>	<del>18</del>	<del>1</del>	<del>4</del>

~~For SI: 1 inch = 25.4 mm; 1 foot = 304.8 mm; 1 liquid ounce = 0.030 L; 1 gallon = 128 ounces~~

Then renumber all subsequent Sections 9-9-14 through 9-9-21.

- After renumbered City Code Section 9-9-21, add a new Section 9-9-22, IECC Energy Code Amendment, R202, General Definitions, Conditioned Space, to read as follows:

**9-9-22: IECC ENERGY CODE AMENDMENT, SECTION R202, GENERAL DEFINITIONS, CONDITIONED SPACE:**

Add the following to the definition of “Conditioned Space”:

This definition shall not apply to garage spaces or other similar spaces where heating or cooling is installed for frost protection or intermittent use.

- Amend City Code 9-9-23, IECC Energy Code Amendment, Table R402.1.2, Insulation and Fenestration Requirements by Component, as follows:

In the fifth column of the existing amended Table R402.1.2 in City Code, strike footnote k from the header “Ceiling R-Value” and change the value number below from “49” to “38”.

Ceiling R-Value <sup>k</sup>
<del>49</del> 38

- Amend City Code 9-9-24, IECC Energy Code Amendment, Table R402.1.2, Insulation and Fenestration Requirements by Component, Add Footnotes J and K, as follows:

**9-9-24: IECC ENERGY CODE AMENDMENT, TABLE R402.1.2, INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT, ADD FOOTNOTES J AND K:**

Add footnote j to the title of table R402.1.2 - Insulation and Fenestration Requirements by Component. Add footnote j underneath table R402.1.2 after footnote i to read as follows:

j. For residential log home building thermal envelope construction requirements see section R402.6.

~~Add footnote k to the Ceiling R-Value header of table R402.1.2, and below table R402.1.2 to read as follows:~~

~~—k. The Ceiling R-Value in Climate Zone 5 may be reduced to R-38 when the Wood Frame Wall R-Value is increased to R-21 and the Fenestration U-Factor is reduced to 0.31.~~

➤ Amend City Code 9-9-26, IECC Energy Code Amendment, Section R402.4.1.2, Testing, as follows:

**9-9-26: IECC ENERGY CODE AMENDMENT, SECTION R402.4.1.2, TESTING, ADD EXCEPTION:**

~~**R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding five (5) air changes per hour in Climate Zones 1 and 2, and four (4) air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with RESNET/ICC 380, ASTM E779, or ASTM E1827 and reported at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.~~

~~—During testing:~~

~~—1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed.~~

~~—2. Dampers shall be closed, but not sealed, including exhaust, intake, makeup air, backdraft and flue dampers.~~

~~—3. Interior doors shall be open.~~

- ~~—4. Exterior openings for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.~~
- ~~—5. Heating and cooling system(s) shall be turned off.~~
- ~~—6. HVAC ducts shall not be sealed.~~
- ~~—7. Supply and return registers shall not be sealed.~~

Add the following exception to Section R402.4.1.2, Testing:

**Exception. Visual Inspection.** The permit holder will determine at the time of permit application the method of determining building envelope tightness. A visual inspection shall be considered acceptable in lieu of testing when the items listed in Table R402.4.1.1, applicable to the method of construction, are field verified.

- Delete City Code 9-9-29, IECC Energy Code Amendment, Section R403.3.1, Duct Insulation Requirements.

#### **~~9-9-29: IECC ENERGY CODE AMENDMENT, SECTION R403.3.1, DUCT INSULATION REQUIREMENTS:~~**

~~Delete Section R403.3.1 and replace with the following:~~

**~~R403.3.1 Duct insulation requirements.~~** ~~Supply and return ducts located in an attic space shall have an R-value of not less than R-8.~~

- Delete City Code 9-9-30, IECC Energy Code Amendment, Section R403.3.6, Ducts Buried Within Ceiling Insulation.

#### **~~9-9-30: IECC ENERGY CODE AMENDMENT, DELETE SECTION R403.3.6, DUCTS BURIED WITHIN CEILING INSULATION:~~**

~~Delete Section R403.3.6 Ducts buried within ceiling insulation.~~

- Delete City Code 9-9-31, IECC Energy Code Amendment, Section R403.3.7, Duct Located In Conditioned Space.

#### **~~9-9-31: IECC ENERGY CODE AMENDMENT, DELETE SECTION R403.3.7, DUCTS LOCATED IN CONDITIONED SPACE:~~**

~~Delete Section R403.3.7 Ducts located in conditioned space.~~

- Delete City Code 9-9-32, IECC Energy Code Amendment, Section R403.5.3, Hot Water Pipe Insulation (Prescriptive).

~~**9-9-32: IECC ENERGY CODE AMENDMENT, SECTION R403.5.3, HOT WATER PIPE INSULATION (PRESCRIPTIVE):**~~

~~**R403.5.3 Hot water pipe insulation (Prescriptive).** Insulation for hot water piping with a thermal resistance, R-value, of not less than R-3 shall be applied to the following:~~

- ~~— 1. Piping serving more than one (1) dwelling unit.~~
- ~~— 2. Piping located outside the conditioned space.~~
- ~~— 3. Piping located under a floor slab.~~
- ~~— 4. Buried piping.~~
- ~~— 5. Supply and return piping in recirculation systems other than demand recirculation systems.~~

- Delete City Code 9-9-33, IECC Energy Code Amendment, Section R404.1, Lighting Equipment (Mandatory).

~~**9-9-33: IECC ENERGY CODE AMENDMENT, SECTION R404.1, LIGHTING EQUIPMENT (MANDATORY):**~~

~~**R404.1 Lighting equipment (Mandatory).** A minimum of seventy-five percent (75%) of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or a minimum seventy-five percent (75%) of the permanently installed lighting fixtures shall contain only high-efficacy lamps.~~

- Delete City Code 9-9-34, IECC Energy Code Amendment, Section R406.3, Energy Rating Index.

~~**9-9-34: IECC ENERGY CODE AMENDMENT, SECTION R406.3, ENERGY RATING INDEX:**~~

~~**R406.3 Energy Rating Index.** The Energy Rating Index (ERI) shall be determined in accordance with RESNET/ICC 301. Energy used to recharge or refuel a vehicle used for transportation on roads that are not on the building site shall not be included in the ERI reference design or the rated design.~~

- Delete City Code 9-9-35, IECC Energy Code Amendment, Section R406.4, Table R406.4, Maximum Energy Rating Index.

~~**9-9-35: IECC ENERGY CODE AMENDMENT, TABLE R406.4, MAXIMUM ENERGY RATING INDEX:**~~

~~The Energy Rating Index value for Climate Zone 5 shall be amended to read as follows:~~

~~TABLE R406.4  
—MAXIMUM ENERGY RATING INDEX~~

<del>CLIMATE ZONE</del>	<del>ENERGY RATING INDEX<sup>a</sup></del>
<del>5</del>	<del>61</del>
<del>a.—Where on-site renewable energy is included for compliance using the ERI analysis of Section R406.4, the building shall meet the mandatory requirements of Section R406.2, and the building thermal envelope shall be greater than or equal to the levels of efficiency and SHGC in Table R402.1.2 or Table R402.1.4 of the 2015 International Energy Conservation Code.</del>	