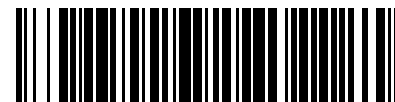




City of Chicago



O2016-5623

Office of the City Clerk

Document Tracking Sheet

Meeting Date:	7/20/2016
Sponsor(s):	Emanuel (Mayor)
Type:	Ordinance
Title:	Amendment of Municipal Code Chapters 13-20, 13-172, 18-13 and 18-28 regarding energy conservation
Committee(s) Assignment:	Committee on Health and Environmental Protection

ALTA



OFFICE OF THE MAYOR
CITY OF CHICAGO

RAHM EMANUEL
MAYOR

July 20, 2016

TO THE HONORABLE, THE CITY COUNCIL
OF THE CITY OF CHICAGO

Ladies and Gentlemen:

At the request of the Commissioner of Buildings, I transmit herewith an ordinance updating Chapter 18-13 of the Municipal Code regarding energy conservation.

Your favorable consideration of this ordinance will be appreciated.

Very truly yours,

Mayor

ORDINANCE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICAGO:

SECTION 1. Title 18 of the Municipal Code of Chicago is hereby amended by repealing existing Chapter 18-13 and by inserting in its place a new Chapter 18-13, as follows:

CHAPTER 18-13 ENERGY CONSERVATION

ARTICLE 1. GENERAL REQUIREMENTS

18-13-100 Referenced codes and standards.

The following codes and standards are adopted by reference and, unless otherwise modified by this chapter, shall be considered part of the requirements of this chapter to the extent of each prescribed reference: *2015 International Energy Conservation Code*, including, but not limited to, *IECC—Commercial Provisions* (hereinafter known as “IECC 2015 - CE”) and *IECC—Residential Provisions* (hereinafter known as “IECC 2015 - RE”); *ANSI/ASHRAE/IES Standard 90.1-2013*, including all published errata and excluding published Addenda that encompass ASHRAE 90.1-2013 (hereinafter known as “ANSI/ASHRAE 90.1-2013”); *Appendix RA Recommended Procedure for Worst-Case Testing of Atmospheric Venting Systems Under R402.4 or R405 Conditions < 5 ACH₅₀* (hereinafter known as “Appendix RA”); and *Appendix RB Solar-Ready Provisions – Detached One- and Two-family Dwellings, Multiple Single-family Dwellings (Townhouses)* (hereinafter known as “Appendix RB”). Provided, however, that Appendix RA is informative only; compliance with its provisions is not mandatory. Provided further, that compliance with Appendix RB is mandatory only if a city agency specifically requires compliance with Appendix RB in connection with a particular project. If differences occur between the provisions of this chapter and the referenced standards, the provisions of this chapter shall apply.

The standards referenced in Chapter 6 of IECC 2015 – CE and of IECC 2015 – RE shall be considered part of the requirements of this chapter to the extent of each prescribed reference.

18-13-110 Definitions in referenced codes and standards.

As used in the referenced codes and standards:

“Code official” shall mean the City of Chicago “Department of Buildings” or “Building Commissioner”.

“Registered design professional” shall mean the registered design professional of record on the building permit application.

“International Building Code”, “International Mechanical Code”, or references to other publications of the International Code Council family of codes, as used within the text of the *2015 International Energy Conservation Code*, shall mean the Municipal Code of Chicago and Chicago Building Code, unless specifically stated otherwise in this chapter.

ARTICLE 2. COMMERCIAL PROVISIONS

18-13-200. Chapter 1 [CE] of IECC—Adopted with modifications. The provisions of Chapter 1 [CE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modifications:

1. **C101.1 Title.** Revise to read:

C101.1 Title. This Chapter 18-13 shall be known as the City of Chicago Energy Conservation Code.

2. **C101.5 Compliance.** Revise to read:

C101.5 Compliance. “*Commercial buildings shall meet the provisions of IECC 2015 – CE as amended herein. Minimum compliance shall be demonstrated by submission of one of the following:*

1. Compliance forms published in the ASHRAE 90.1 User's Manual; or
2. Compliance Certificates generated by the U.S. Department of Energy's COMcheck™ Code compliance tool; or
3. Other comparable compliance materials that meet or exceed, the compliance forms published in the ASHRAE 90.1 User's Manual or the U.S. Department of Energy's COMcheck™ Code compliance tool as approved by the Building Commissioner; and
4. Documentation, as determined by the Building Commissioner, as to compliance with this chapter.”

3. **C107 Fees.** Delete C107.1 through 107.5, inclusive. Revise C107.1 to read:

C107.1. Fees. Fees shall be determined in accordance with Chapter 13-32 of the Municipal Code of Chicago.

4. **C108 Stop Work Orders.** Delete C108.1 through C108.4, inclusive. Revise C108.1 to read:

C.108.1 Stop work orders. Stop work orders shall be governed by Section 13-12-080 of the Municipal Code of Chicago.”

5. **C109 Board of Appeals.** Delete C109.1 through C109.3, inclusive. Revise C109.1 to read:

C109.1. General. Appeals of orders or decisions of the Building Commissioner shall be governed by Chapter 13-24 of the Municipal Code of Chicago.

18-13-210 Chapter 2 [CE] of IECC—Adopted with modifications. The provisions of Chapter 2 [CE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modifications:

1. **C201.5 Italicization of defined terms.** Add the following new requirement:

C201.5 Italicization of defined terms. Defined terms are italicized to indicate that such term is a defined term.

2. **C202 General Definitions.** Add the following new definition:

AUTHORITY HAVING JURISDICTION (“AHJ”). The City of Chicago Department of Buildings or Building Commissioner or the Building Commissioner’s assignee.

3. **C202 GENERAL DEFINITIONS.** Revise to read:

CODE OFFICIAL. The City of Chicago Department of Buildings or Building Commissioner.

4. **C202 GENERAL DEFINITIONS.** Revise to read:

HISTORIC BUILDING. Any building or structure that is one or more of the following:

1. Designated under the Chicago Landmarks Ordinance as a “Chicago Landmark” or recommended for such designation by the Commission on Chicago Landmarks.
2. Identified as a contributing building or structure to any district designated under the Chicago Landmarks Ordinance as a “Chicago Landmark” or recommended for such designation by the Commission on Chicago Landmarks.
3. Color coded red in the *Chicago Historic Resources Survey* published in 1996.
4. Listed, or certified as eligible for listing, by the State Historic Preservation Officer or Keeper of the National Register of Historic Places in the National Register of Historic Places.

5. Certified as a contributing resource within a National-Register listed or state-designated historic district.

5. C202 GENERAL DEFINITIONS. Revise to read:

REGISTERED DESIGN PROFESSIONAL. The registered design professional of record on the building permit application.

18-13-220 Chapter 3 [CE] of IECC—Adopted with modifications. The provisions of Chapter 3 [CE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modification:

1. **Section C301 Climate Zones.** Delete C301.1 through 301.4, inclusive. Revise C301.1 to read:

C301.1 General. Wherever the term “climate zone(s)” is used, the term shall mean “Climate Zone 5” as defined in Table C301.1.

18-13-230 Chapter 4 [CE] of IECC—Adopted with modification. The provisions of Chapter 4 [CE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modifications:

1. **C402.2.2 Roof assembly.** Revise to read:

C402.2.2 Roof assembly. The minimum thermal resistance (*R*-value) of the insulating material installed either between the roof framing or continuously on the *roof assembly* shall be as specified in Table 402.1.3, based on construction materials used in the *roof assembly*. Skylight curbs shall be insulated to the level of roofs with insulation entirely above deck or R-5, whichever is less.

Exceptions:

1. Continuously insulated *roof assemblies* where the thickness of insulation varies 1 inch (25 mm) or less and where the area weighted *U-Factor* is equivalent to the same assembly with the *R*-value specified in Table C402.1.3.
2. Where tapered insulation is used with insulation entirely above the deck, the *R*-value where the insulation thickness varies 1 inch (25 mm) or less from the minimum thickness of tapered insulation shall comply with the *R*-value specified in Table C402.1.3.

3. Unit skylight curbs included as a component of a skylight listed and labeled in accordance with NFRC 100 shall not be required to be insulated.
 4. For roofs on existing buildings with a slope of less than 2.5 units vertical in 12 units horizontal (2.5:12), refer to Section C503.1 exceptions).
 5. For roofs on existing buildings, refer to Section C503.2 or C504.2.
2. **C402.3 Roof solar reflectance and thermal emittance.** Delete existing C402.3. Insert a new C402.3, titled “Urban heat island provisions”:

C402.3 Urban heat island provisions. The following are exempt from the reflectance requirements:

1. The portion of the roof acting as a substructure for and covered by a rooftop deck, or vegetation associated with an extensive or intensive green roof as defined by the U.S. Environmental Protection Agency (“USEPA”), or by photovoltaic and solar thermal equipment.
2. A rooftop deck covering a maximum of 1/3 of the rooftop total gross area.

The remainder of the roof area must meet the reflectance requirements set forth in this section.

3. **Table C402.3 MINIMUM ROOF REFLECTANCE AND EMITTANCE OPTIONS.** Delete existing Table C402.3.
4. **C402.3.1 Aged roof solar reflectance.** Delete existing C402.3.1. Insert a new C402.3.1, titled “Solar reflectance”:

C402.3.1 Solar reflectance. All roof exterior surfaces shall have a minimum solar reflectance as specified in Section C402.3.2 through C402.3.5 when (i) tested in accordance with ASTM E903 or ASTM E1918, (ii) tested with a portable reflectometer at near ambient conditions, (iii) labeled by the Cool Roof Rating Council, or (iv) labeled as an Energy Star qualified roof product. Any product that has been rated by the Cool Roof Rating Council or by Energy Star s shall display a label verifying the rating of the product.

5. **C402.3.2 Low-sloped roofs.** Insert a new C402.3.2, as follows:

C402.3.2 Low-sloped roofs. Roofing materials used in roofs with slopes of a rise of 0 units in a horizontal length of 12 units (0:12 pitch) up to and including roofs with slopes of a rise of 2 units in a horizontal length of 12 units (2:12 pitch) (“low-sloped”) shall meet the following requirements:

1. Low-sloped roofs permitted on or after April 22, 2009 in conjunction with a new building or structure shall utilize roofing products that meet or exceed an initial reflectance value of 0.72 or a three-year installed reflectance value of 0.5 as determined by the Cool Roof Rating Council or by Energy Star.

Exception: Where more than 50% of the total gross area of the low-sloped roof is covered with vegetation associated with an extensive or intensive green roof as defined by the USEPA, the remainder of the roof shall have a reflectance value of a minimum of 0.30. The rooftop deck exception in C402.3 applies.

Exception: Ballasted roofs with a minimum of 15 lbs/sq. ft. of ballast over the entire roof surface may have a reflectance value of a minimum of 0.30. For purposes of this section, "ballast" shall mean river rock aggregate or larger, pavers or other means of weighing down a roofing membrane over a substrate to resist wind uplift.

6. **C402.3.3 Medium-sloped roofs.** Insert a new C402.3.3:

C402.3.3 Medium-sloped roofs. Roofing materials used in roofs with slopes of over a rise of 2 units in a horizontal length of 12 units (2:12 pitch) up to and including roofs with slopes of a rise of 5 units in a horizontal length of 12 units (5:12 pitch) ("medium-sloped") shall have an initial solar reflectance of 0.15 or greater.

7. **C402.3.4 Multiple-sloped roofs.** Insert a new C402.3.4:

C402.3.4 Multiple-sloped roofs. Roofs with multiple slopes shall be subject to those requirements applicable to the slope which covers the largest area of the building footprint.

8. **C402.3.5 Steep roofs.** Insert a new C402.3.4:

C402.3.5 Steep roofs. Roofs with slopes greater than a rise of 5 units in a horizontal length of 12 units (5:12 pitch) shall be exempt from any initial solar reflectance requirements.

9. **C402.5.1. Air Barriers.** Revise to read:

C402.5.1 Air Barriers. A continuous *air barrier* shall be provided throughout the building thermal envelope. The *air barriers* shall be permitted to be located on the inside or outside of the building envelope, located within the assemblies composing the envelope, or any combination thereof. The *air barrier* shall

comply with Sections C502.5.1.1 and C502.5.1.2. For roof *air barriers* on existing buildings, refer to Section C503.1 or C504.2.

10. C402.5.1.1 Air barrier construction. Revise to read:

C402.5.1.1 Air barrier construction. The *continuous air barrier* shall be constructed to comply with the following items (1) through (3), inclusive. The *air barrier* shall be continuous for all assemblies that are the thermal envelope of the building and across the joints and assemblies.

1. *Air barrier* joints and seams shall be sealed, including sealing at joints between dissimilar materials. The joints and seals shall be securely installed in or on the joint for its entire length so as not to dislodge, loosen or otherwise impair its ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation.
2. Penetrations of the *air barrier* shall be caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Paths for air leakage from the building to the space between the roof deck and roof covering used *air barrier*, shall be caulked, gasketed or otherwise covered with a moisture vapor-permeable material. Joints and seals associated with penetrations shall be sealed in the same manner or taped or covered with moisture vapor-permeable wrapping material. Sealing materials shall be appropriate to the construction materials being sealed and shall be securely installed around the penetration so as not to dislodge, loosen or otherwise impair the penetrations' ability to resist positive and negative pressure from wind, stack effect and mechanical *ventilation*. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.
3. Recessed lighting fixtures shall comply with Section C402.5.8. Where similar objects are installed that penetrate the *air barrier*, provisions shall be made to maintain the integrity of the *air barrier*. Light fixtures installed within environmental air spaces shall meet the requirements of the Chicago Building Code.

18-13-240 Chapter 5 [CE] of IECC—Adopted with modification. The provisions of Chapter 5 [CE] of the International Energy Conservation Code are hereby adopted by reference and shall apply with the following modifications:

1. **C501.4 Compliance.** Delete existing text. Revise to read:

C501.4 [Reserved].

2. C501.6 Historic buildings. Revise to read:

C501.6 Historic buildings. Provisions of this code relating to the construction, repair, alteration, restoration and movement of structures, and *change of occupancy* shall be mandatory for *historic buildings* unless the Commission on Chicago Landmarks demonstrates that compliance with that provision would threaten, degrade or destroy the historic form, fabric or function of the building.

3. C502.1 General. Revise to read:

C502.1 General. Additions to an existing building, building system or portion thereof shall conform to the provisions of this code 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 an unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building, or if the building with the addition uses no more energy than the existing building. Additions shall comply with C502.2 and C402.3.

Additions complying with ANSI/ASHRAE/IESNA 90.1 need not comply with C402, C403, C404, and C405, but shall comply with C402.3.

4. C503 Alterations. Revise to read:

C503.1 General. *Alterations* to any building or structure shall comply with the requirements of the code for new construction. *Alterations* shall be such that the existing building or structure is no less conforming to the provisions of this code than the existing building or structure was prior to the *alteration*. *Alterations* to an existing building, building system or portion thereof shall conform to the provisions of this code as those provisions relate to new construction without requiring the unaltered portions of the existing building or building system to comply with this code. *Alterations* shall not create an unsafe or hazardous condition or overload existing building systems.

Alterations complying with ANSI/ASHRAE/IESNA 90.1, need not comply with Sections C402, C403, C404 and C405, but shall comply with C402.3.

Exception: The following *alterations* need not comply with the requirements for new construction, provided the energy use of the building is not increased:

1. Storm windows installed over existing *fenestration*.

2. Surface-applied window film installed on existing single-pane *fenestration* assemblies reducing solar heat gain provided the code does not require the glazing or *fenestration* to be replaced.
 3. Existing ceiling, wall or floor cavities exposed during construction, provided that these cavities are filled with insulation.
 4. Construction where the existing roof, wall or floor cavity is not exposed.
 5. *Roof recover*, except for the urban heat island provisions in C503.3.1.
 6. *Air barriers* shall not be required for *roof recover* and *roof replacement* where the *alterations* or renovations to the building do not include *alterations*, renovations or *repairs* to the remainder of the building envelope.
 7. [*Reserved*].
 8. For *roof replacement* on existing buildings with a roof slope of less than 2 units vertical in 12 units horizontal (2:12), and where the roof covering is removed and insulation remains, and where the required R-value cannot be provided due to thickness limitations presented by existing rooftop conditions, (including heating, ventilating and air-conditioning equipment, low door or glazing heights, parapet heights, weep holes, and roof flashing heights not meeting the manufacturer's specifications), the maximum thickness of insulation compatible with the available space and existing uses shall be installed. Insulation used shall be minimum R-5 per inch. In areas where flashing may be terminated a minimum of 8 inches above the roof covering (including required insulation) insulation shall be a minimum of R-30ci.
 9. *R-value* for roof assemblies with tapered insulation above deck with slope greater than 1/8 units vertical in 12 units horizontal (1/8:12) shall average R-30ci.
5. **C503.3.1.1 Roof reflectance – Low slope roofs.** Insert a new C503.3.1.1:
- C503.3.1.1 Roof reflectance – Low slope roof.** Full or partial replacements or retrofits of existing low-sloped roofs originally permitted prior to April 22, 2009 by substituting the original materials or roofing system with new materials shall utilize roofing products that meet or exceed an initial reflectance value of 0.72 or a three-year installed reflectance value of 0.5 as determined by the Cool Roof Rating Council or Energy Star.

Exception: Where more than 50% of the total gross area of the low-sloped roof is covered with vegetation associated with an extensive or intensive green roof as defined by the USEPA, the remainder of the roof shall have a reflectance value of a minimum of 0.30. The rooftop deck exception in C402.3 applies.

Exception: Where an existing ballasted roof is replaced with a ballasted roof, one of the following two sets of requirements must be met: (i) the reflectance value for the entire roof shall be a minimum of 0.30 and a minimum of 15 lbs/sq. ft. of ballast coverage over the entire roof shall be provided, or (ii) the reflectance value shall be a minimum of 0.72 or a three-year installed reflectance value of 0.5 as determined by the Cool Roof Rating Council or Energy Star.

Exception: When roof systems with a slope of a rise of a maximum 1/4 unit in a horizontal length of 12 units (1/4:12 pitch) are replaced with a built-up roofing system, the top layer aggregate must have a minimum reflectance of 0.3. The exposed top layer of aggregate must substantially cover the roof area, such that the maximum exposure of the underlying water-repellent layer is no more than 5% of the total area of the roof.

6. **C503.3.1.2 Roof reflectance – Medium slope roofs.** Insert a new C503.3.1.2:

C503.3.1.2 Roof reflectance – Medium slope roofs. Full replacement or partial replacement of 50% or more of the gross medium-sloped roof area over the preceding 36 months by substituting the original materials or roofing system with new materials shall meet the required reflectance values in C402.3.

Exception: Partial replacement of an existing roof of less than 50% of the gross medium-sloped roof area within the preceding 36 months must meet the required reflectance value in effect when the roof was originally permitted.

7. **C503.3.1.3 Roof reflectance – Multiple slope roofs.** Insert a new C503.3.1.3:

C503.3.1.3 Roof reflectance – multiple slope roofs. Roofs with multiple slopes shall be subject to those requirements applicable to the slope which covers the largest area of the building footprint.

8. **C504.1 General.** Revise to read:

C504.1 General. Buildings and structures, and parts thereof, shall be repaired in compliance with Section C501.3 and this section. Work on non-damaged components that is necessary for the required *repair* of damaged components shall be considered part of the *repair* and shall not be subject to the requirements for *alterations* in this chapter. Routine maintenance required by C501.3,

ordinary *repairs* exempt from *permit* and abatement of wear due to normal service conditions shall not be subject to the requirements for *repairs* in this section.

Where a building was constructed to comply with ANSI/ASHRAE/IESNA 90.1, repairs shall comply with the standard and need not comply with C402, C403, C404 and C405, but shall comply with C402.3.

9. **C5-4.3 Roof repair – Roof reflectance.** Add a new C504.3:

C504.3 Roof repair – Roof reflectance. Where an existing low-sloped roof is repaired to mend, fix, patch, cure, refurbish or otherwise salvage a portion of an existing roof in order to maintain or extend the life span of such roof, the portion of the roof that is repaired shall meet or exceed the reflectance value in effect when the roof was originally permitted.

18-13-250 Chapter 6 [CE] of IECC—Adopted without modification. The provisions of Chapter 6 [CE] of the International Energy Conservation Code are adopted by reference and shall apply without modification.

ARTICLE 3. RESIDENTIAL PROVISIONS

18-13-300. Chapter 1 [RE] of IECC – Adopted with modifications. The provisions of Chapter 1 [RE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modifications:

1. **R101.1 Title.** Revise to read:

R101.1 Title. This Chapter 18-13 shall be known as the City of Chicago Energy Conservation Code.

2. **R101.5 Compliance.** Revise to read:

R101.5 Compliance. *Residential buildings* shall meet the provisions of IECC 2015 – RE as amended herein. Minimum compliance shall be demonstrated by submission of one of the following:

1. Compliance Certificates generated by the U.S. Department of Energy's REScheck™ Code compliance tool; or
2. Other comparable compliance materials that meet or exceed the U.S. Department of Energy's REScheck™ Code compliance tool as approved by the Building Commissioner; or
3. Department of Buildings provided checklist for prescriptive compliance path; and

4 A signed attestation by the Registered Energy Professional as to compliance with the energy code and documentation as determined by the Commissioner as to compliance with the amendments contained in this chapter.

3. **R107 Fees.** Delete existing R107.1 through R107.5, inclusive. Revise R107.1 to read:

R107.1 Fees. Fees shall be determined in accordance with Chapter 13-32 of the Municipal Code of Chicago.

4. **R108 Stop Work Order.** Delete existing R108.1 through R108.4, inclusive. Revise R108.1 to read:

R108.1 Stop work order. Stop work orders shall be governed by Section 13-12-080 of the Municipal Code of Chicago.

5. **R109 Board of Appeals.** Delete existing R109.1 through R 109.3, inclusive. Revise R109.1 to read:

R109.1 General. Appeals of orders or decisions of the Building Commissioner shall be governed by Chapter 13-24 of the Municipal Code of Chicago.

18-13-310 Chapter 2 [RE] of IECC—Adopted with modifications. The provisions of Chapter 2 [RE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modifications:

1. **R201.5 Italicization of defined terms.** Add the following new requirement:

R201.5 Italicization of defined terms. Defined terms are italicized to indicate that the italicized term is a defined term.

2. **R202 GENERAL DEFINITIONS.** Add the following new definition:

AUTHORITY HAVING JURISDICTION (“AHJ”). The City of Chicago Department of Buildings or Building Commissioner or the Building Commissioner’s assignee.

3. **R202 GENERAL DEFINITIONS.** Revise the definition of “**HISTORIC BUILDING**” to read:

HISTORIC BUILDING. Any building or structure that is one or more of the following:

1. Designated under the Chicago Landmarks Ordinance as a “Chicago Landmark” or recommended for such designation by the Commission on Chicago Landmarks.
 2. Identified as a contributing building or structure to any district designated under the Chicago Landmarks Ordinance as a “Chicago Landmark” or recommended for such designation by the Commission on Chicago Landmarks.
 3. Color coded red in the *Chicago Historic Resources Survey* published in 1996.
 4. Listed, or certified as eligible for listing, by the State Historic Preservation Officer or Keeper of the National Register of Historic Places in the National Register of Historic Places.
 5. Certified as a contributing resource within a National-Register listed or state-designated historic district.
4. **R202 GENERAL DEFINITIONS.** Add the following new definition:
- LOCAL EXHAUST.** An exhaust system that uses one or more fans to exhaust air from a specific room or rooms within a dwelling.
5. **R202 GENERAL DEFINITIONS.** Revise the definition of “**RESIDENTIAL BUILDING**” to read:
- RESIDENTIAL BUILDING.** A detached one-family or two-family dwelling, or any building that is four stories or less in height above grade that contains multiple *dwelling units*, in which the occupants reside on a primarily permanent basis, such as a townhouse, row house, apartment house, convent, monastery, rectory, fraternity or sorority house, dormitory, or rooming house.
6. **R202 GENERAL DEFINITIONS.** Revise the definition of “**WHOLE HOUSE MECHANICAL VENTILATION SYSTEM**” to read:
- WHOLE HOUSE MECHANICAL VENTILATION SYSTEM.** An exhaust system, supply system, or combination thereof that is designed in accordance with R403.6 to mechanically exchange indoor air for outdoor air when operating continuously or through a programmed intermittent schedule to satisfy the whole house *ventilation* rate. Means shall be taken to prevent infiltration when the whole house mechanical *ventilation* system is not operating.

18-13-320 Chapter 3 [RE] of IECC—Adopted with modifications. The provisions of Chapter 3 [RE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modification:

- SECTION R301 CLIMATE ZONES.** Delete R301.1 through R3-1.4. Revise R301.1 to read:

R301.1 General. Whenever the term “climate zone(s)” is used, the term shall mean “Climate Zone 5” as defined in Table R301.1.

18-13-330 Chapter 4 [RE] of IECC—Adopted with modifications. The provisions of Chapter 4 [RE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modifications:

- R401.2 Compliance.** Revise R401.2 to read:

R401.2 Compliance.

Projects shall comply with one of the following:

- Sections R401 through R404.
 - Section R405 and the provisions of Sections R401 through R404 labeled “Mandatory.”
 - With the concurrence of the Building Commissioner, an alternative method, an energy rating index (ERI) approach in Section R406 and the provisions of Sections R401 through R404 labeled “Mandatory”.
- R401.2.1 Tropical zone.** Delete in its entirety.
 - TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT.** Revise to read:

TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

Climate Zone	Fenestration U-Factor ^b	Skylight ^b U-Factor	Glazed Fenestration SHGC ^b	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value ^f	Floor R-Value	Basement ^c Wall R-Value	Slab ^d R-Value and Depth	Crawl space ^c Wall R-Value
5 and Marine 4	0.32	0.55	NR	49	20 or 13+5 ^h	13/17	30 ^g	10/13	10 and 2 ft	15/19

^a *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.

b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.

d. R-5 shall be added to the required slab edge *R*-values for heated slabs. Insulation depth shall be 2 feet.

e. Or insulation sufficient to fill the framing cavity. R-19 minimum.

f. The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation.

g. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.

4. TABLE R402.1.4 EQUIVALENT *U*-FACTORS. Revise to read:

**TABLE R402.1.4
EQUIVALENT *U*-FACTORS^a**

Climate Zone	Fenestration <i>U</i> -Factor	Skylight <i>U</i> -Factor	Ceiling <i>U</i> -Factor	Frame Wall <i>U</i> -Factor	Mass Wall <i>U</i> -Factor ^b	Floor <i>U</i> -Factor	Basement Wall <i>U</i> -Factor	Crawl Space Wall <i>U</i> -Factor
5 and Marine 4	0.32	0.55	0.026	0.060	0.082	0.033	0.059	0.055

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.

b. When more than half the insulation is on the interior, the mass wall *U*-factors shall be a maximum of 0.065 in Climate Zone 5 and Marine 4.

5. R402.1.6 Roof solar reflectance and thermal emittance. Insert a new R402.1.6.1:

R402.1.6.1 Urban heat island provisions. The following are exempt from the reflectance requirements:

1. The portion of the roof acting as a substructure for and covered by a rooftop deck, or vegetation associated with an extensive or intensive green roof as defined by the U.S. Environmental Protection Agency ("USEPA"), or by photovoltaic and solar thermal equipment.
2. A rooftop deck covering a maximum of 1/3 of the rooftop total gross area.

The remainder of the roof area shall meet the reflectance requirements set forth in this section.

6. R402.1.6.2 Solar reflectance. Insert a new R402.1.6.2:

R402.1.6.2 Solar reflectance.

All roof exterior surfaces shall have a minimum solar reflectance as specified in Section R402.1.6.1 through R402.1.6.6 when: (i) tested in accordance with ASTM

E903 or ASTM E1918; (ii) tested with a portable reflectometer at near ambient conditions, (iii) labeled by the Cool Roof Rating Council, or (iv) labeled as an Energy Star qualified roof product. Any product that has been rated by the Cool Roof Rating Council or by Energy Star shall display a label verifying the rating of the product.

7. **R402.1.6.3 Low-sloped roofs.** Insert a new R402.1.6.3:

R402.1.6.3 Low-sloped roofs.

Roofing materials used in roofs with slopes of a rise of 0 units in a horizontal length of 12 units (0:12 pitch) up to and including roofs with slopes of a rise of 2 units in a horizontal length of 12 units (2:12 pitch) ("low-sloped") shall meet the following requirements:

1. Low-sloped roofs permitted on or after April 22, 2009 in conjunction with a new building or structure shall utilize roofing products that meet or exceed an initial reflectance value of 0.72 or a three-year installed reflectance value of 0.5 as determined by the Cool Roof Rating Council or by Energy Star.

Exception: Where more than 50% of the total gross area of the low-sloped roof is covered with vegetation associated with an extensive or intensive green roof as defined by the USEPA, the remainder of the roof shall have a reflectance value of a minimum of 0.30. The rooftop deck exception in R402.1.6.1 applies.

Exception: Ballasted roofs with a minimum of 15 lbs/sq. ft. of ballast over the entire roof surface may have a reflectance value of a minimum of 0.30. For purposes of this section, "ballast" shall mean river rock aggregate or larger, pavers or other means of weighing down a roofing membrane over a substrate to resist wind uplift.

8. **R402.1.6.4 Medium-sloped roofs.** Insert a new R402.1.6.4:

R402.1.6.4 Medium-sloped roofs. Roofing materials used in roofs with slopes of over a rise of 2 units in a horizontal length of 12 units (2:12 pitch) up to and including roofs with slopes of a rise of 5 units in a horizontal length of 12 units (5:12 pitch) ("medium-sloped") shall have an initial solar reflectance of 0.15 or greater.

9. **R402.1.6.5 Multiple-sloped roofs.** Insert a new R402.1.6.5:

R402.1.6.5 Multiple-sloped roofs: Roofs with multiple slopes shall be subject to those requirements applicable to the slope which covers the largest area of the building footprint.

10. **R402.1.6.6 Steep roofs.** Insert a new R402.1.6.6:

R402.1.6.6 Steep roofs. Roof with slopes greater than a rise of 5 units in a horizontal length of 12 units (5:12 pitch) shall be exempt from any initial solar reflectance requirements.

11. **R402.2.2.2 Ceilings without attic spaces.** Revise to read:

R402.2.2 Ceilings without attic spaces. Where Section R402.1.2 would require insulation levels above R-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements of Section R402.1.2 shall be limited to 500 square feet (46 m²) or 20 percent of the total insulated ceiling area, whichever is less. This reduction shall not apply to the *U-factor* alternative approach in Section R402.1.4 and the total UA alternative in Section R402.1.5.

Exception: For roofs on existing buildings with slope less than 2.5 units vertical in 12 units horizontal (2.5:12), refer to Section R503.1.1.

12. **R402.2.9 Basement walls.** Revise to read:

R402.2.9 Basement walls. Walls associated with conditioned basements shall be insulated from the top of the *basement wall* down to 10 feet (3048 mm) below grade or to within six-inches (152 mm) of the basement floor, whichever is less. Walls associated with unconditioned basements shall meet this requirement unless the floor overhead is insulated in accordance with Sections R402.1.2 and R402.2.8.

Exception: Walls associated with conditioned basements may be insulated from the top of the *basement wall* down to 4 feet (1219 mm) below grade when the Basement Wall R-value is at least 15/19, (Basement Wall *U-Factor* of 0.050).

13. **R402.4.1.2 Testing.** Revise to read:

R402.4.1.2 Testing. One- and two-family dwellings and townhouses, four stories or less in height, shall be tested and verified as having an air leakage rate not exceeding five air changes per hour (ACH). Each dwelling unit shall be provided with a whole house mechanical *ventilation* system designed in accordance with Section R403.6. Testing shall be conducted in accordance with 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, indicating the ACH, shall be signed by the party conducting the test and provided to the *code official*. Testing shall be performed at any time after all penetrations of the *building thermal envelope* have been sealed.

Exceptions:

1. For additions, alterations, renovations or repairs to existing buildings, building envelope tightness and insulation installation shall be considered acceptable when the items in Table R402.4.1.1, applicable to the method of construction, are field verified. Where required by the *code official*, an *approved* third party independent from the installer, shall inspect both air barrier and insulation installation criteria.
2. For heated attached private garages and heated detached private garages accessory to one- and two-family dwellings and townhouses not more than three stories above grade plane in height, building envelope tightness and insulation installation shall be considered acceptable when the items in Table R402.4.1.1, applicable to the method of construction, are field verified. Where required by the *code official*, an *approved* third party independent from the installer, shall inspect both *air barrier* and insulation installation criteria. Heated attached private garage space and heated detached private garage space shall be thermally isolated from all other habitable, conditioned spaces.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
 2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
 3. Interior doors, if installed at the time of the test, shall be open.
 4. Exterior doors for continuous *ventilation* systems and heat recovery ventilators shall be closed and sealed.
 5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
 6. Supply and return registers, if installed at the time of the test, shall be fully open.
14. **R402.4.4 Rooms containing fuel-burning appliances.** Delete R402.4.4 in its entirety.

15. **R403.6 Mechanical ventilation (Mandatory).** Revise to read:

R403.6 Mechanical ventilation (Mandatory). Where the air infiltration rate of a building or *dwelling unit* is five air changes per hour or less when tested in accordance with Section R402.4.1.2, the building or *dwelling unit* shall be provided with *ventilation* that meets the requirements of this section and the provisions of Chapter 18-28 of the Municipal Code of Chicago.

16. **R403.6.2 Recirculation of air.** Insert a new R403.6.1:

R403.6.2 Recirculation of air. Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another *dwelling unit* and shall be exhausted directly to the outdoors. Exhaust air from bathrooms and toilet rooms shall not discharge into an *attic*, crawl space or other areas inside the building.

17. **R403.6.3 Whole-house mechanical ventilation system.** Insert a new R403.6.3:

R403.6.3 Whole-house mechanical ventilation system. Whole-house mechanical *ventilation* systems shall be designed in accordance with Sections R403.6.4 through R403.6.6.

18. **R403.6.4 System design.** Insert a new R403.6.4:

R403.6.4 System design. The whole-house *ventilation* system shall consist of one or more supply or exhaust fans, or a combination of such, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered to provide supply *ventilation*.

19. **R403.6.5 System controls.** Insert a new R403.6.5:

R403.6.5 System controls. The whole-house mechanical *ventilation* system shall be provided with controls that enable manual override.

20. **R403.6.6 Mechanical ventilation rate.** Insert a new R403.6.6:

R403.6.6 Mechanical ventilation rate. The whole house mechanical *ventilation* system shall provide outdoor air at a continuous rate of not less than that determined in accordance with Table R403.6.6(1).

Exceptions:

1. The whole-house mechanical *ventilation* system is permitted to operate intermittently where the system has controls that enable operation for not less than 25-percent of each 4-hour segment and the ventilation rate prescribed in Table R403.6.6(1) is multiplied by the factor determined in accordance with Table R403.6.6(2).

2. The total required outdoor air *ventilation* rate (Q_{tot}) shall be as specified in Table 403.6.6(1) or calculated in accordance with Equation 4-1.

$$CFM_{total} = 0.01CFA + 7.5(Nbr + 1) \text{ (Equation 4-1)}$$

Where:

CFM_{total} = total required *ventilation* rate, (cfm)

CFA = conditioned floor area of residence, (ft²)

Nbr = number of bedrooms (not to be less than 1)

21. **R403.6.6.1 Different Occupant Density.** Insert a new R403.6.6.1:

R403.6.6.1 Different Occupant Density. Table R403.6.6(1) assumes two persons in a dwelling unit and an additional person for each additional bedroom. Where higher occupant densities are known, the airflow rate shall be increased by 7.5 cfm (3.5 L/s) for each additional person. Where *approved* by the authority having jurisdiction, lower occupant densities may be used.

22. **R403.6.6.2 Airflow Measurement.** Insert a new R403.6.6.2:

R403.6.6.2 Airflow Measurement. The airflow rate required is the quantity of outdoor *ventilation* air supplied and/or indoor air exhausted by the whole-house mechanical *ventilation* system installed, and shall be measured using a flow hood, flow grid, or other airflow measuring device. *Ventilation* airflow of systems with multiple operating modes shall be tested in all modes designed to meet Section R403.6.6. Where required by the *code official*, testing shall be conducted by an *approved* third party. A written report of the results of the test, indicating the verified airflow rate, shall be signed by the party conducting the test and provided to the *code official*.

23. **R403.6.7 Local exhaust rates.** Insert a new R403.6.7:

Local exhaust rates. Where part of a whole-house mechanical *ventilation* system designed in accordance with Section R403.6, local exhaust systems shall be designed to have the capacity to exhaust the minimum air flow rate determined in accordance with Table R403.6.7.

24. **TABLE R403.6.6(1).** Insert a new TABLE R403.6.6(1):

TABLE R403.6.6(1)
CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE

DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105

3,001 – 4,500	60	75	90	105	120
4,501 – 6,000	75	90	105	120	135
6,001 – 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

For SI: 1 square foot = 0.0929 m², 1 cubic foot per minute = 0.0004719 m³/s

25. **TABLE R403.6.6(2) INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS^{a,b}.** Insert a new TABLE 403.6.6(2):

TABLE R403.6.6(2)
INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS^{a,b}

RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	25%	33%	50%	66%	75%	100%
Factor ^a	4	3	2	1.5	1.3	1.0

a. For ventilation system run time values between those given, the factors are permitted to be determined by interpolation.

b. Extrapolation beyond the table is prohibited

26. **TABLE R403.6.7 MINIMUM REQUIRED LOCAL EXHAUST RATES FOR ONE- AND TWO-FAMILY DWELLINGS.** Insert a new TABLE R403.6.7:

TABLE R403.6.7
MINIMUM REQUIRED LOCAL EXHAUST RATES FOR ONE- AND TWO-FAMILY DWELLINGS

AREA TO BE EXHAUSTED	EXHAUST RATES
Kitchens	100 cfm intermittent or 25 cfm continuous
Bathrooms-Toilet Rooms	Mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous

For SI: 1 cubic foot per minute = 0.0004719 m³/s

27. **TABLE R405.5.2(1) SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS.** Revise to read:

TABLE R405.5.2(1)
SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
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<p style="text-align: center;">Air Exchange Rate</p>	<p>Air leakage rate of 5 air changes per hour in climate zones 4 and 5. Testing shall be conducted in accordance with ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inches w.g. (50 Pascal). The mechanical ventilation rate shall be in addition to the air leakage rate and the same as in the <i>proposed design</i>, but no greater than</p> $0.01 \times CFA + 7.5 \times (Nbr + 1)$ <p>where: <i>CFA</i> = conditioned floor area <i>Nbr</i> = number of bedrooms Energy recovery shall not be assumed for mechanical ventilation.</p>	<p>For residences that are not tested, the same air leakage rate as the standard reference design.</p> <p>For tested residences, the measured air exchange rate^a.</p> <p>The mechanical ventilation rate^b shall be in addition to the air leakage rate and shall be as proposed.</p>
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a Where required by the *code official*, testing shall be conducted by an *approved party*. Hourly calculations as specified in the ASHRAE *Handbook of Fundamentals*, or the equivalent shall be used to determine the energy loads resulting from infiltration.

b The combined air exchange rate for infiltration and mechanical ventilation shall be determined in accordance with Equation 43 of 2001 ASHRAE *Handbook of Fundamentals*, page 26.24 and the "Whole-house Ventilation" provisions of 2001 ASHRAE *Handbook of Fundamentals*, page 26.19 for intermittent mechanical ventilation.

28. R406.1 Scope. Revise to read:

R406.1 Scope. This section establishes an alternative compliance criteria using an Energy Rating Index (ERI) analysis. For purposes of clarification, the Illinois Department of Commerce and Economic Opportunity ("Department") declares that Section R406 of the 2015 International Energy Conservation Code affords an alternative form of compliance and is not a mandate on the Department to provide training to Section R406. This compliance criteria is not considered an alternative compliance path unless the Commissioner of the Department of Buildings approves its use in writing.

18-13-340 Chapter 5 [RE] of IECC—Adopted with modifications. The provisions of Chapter 5 [RE] of the International Energy Conservation Code are adopted by reference and shall apply with the following modifications:

1. R501.4 Compliance. Revise to read:

R501.4 [Reserved].

2. R501.6 Historic buildings. Revise to read:

R501.6 Historic buildings. Provisions of this code relating to the construction, repair, alteration, restoration and movement of structures, and *change of*

occupancy shall be mandatory for *historic buildings* unless the Commission on Chicago Landmarks demonstrates that compliance with that provision would threaten, degrade or destroy the historic form, fabric or function of the building.

3. R502.1.1.2 Heating and cooling systems. Revise to read:

R502.1.1.2 Heating and cooling systems. New heating, cooling and duct systems that are part of the addition shall comply with Sections R403.1, R403.2, R403.3, R403.5 and R403.6.

Exception: Where ducts from an existing heating and cooling system are extended to an addition, the new and existing duct systems shall not be required to be tested in accordance with Section R403.3.3. New duct systems shall be sealed in accordance with Section R403.3.2.

4. R503.1.1 Building envelope. Revise to read:

R503.1.1 Building envelope. Building envelope assemblies that are part of the alteration shall comply with Section R402.1.2 or R402.1.4, Section 402.1.6, Sections R402.2.1 through R402.2.12, R402.3.1, R402.3.2, R402.4.3 and R402.4.4.

Exceptions: The following alterations need not comply with the requirements for new construction provided the energy use of the building is not increased:

1. Storm windows installed over existing *fenestration*.
2. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are filled with insulation.
3. Construction where the existing roof, wall or floor cavity is not exposed.
4. *Roof recover*.

Exception: Compliance with the urban heat island provisions in Section 402.1.6 shall be required.

5. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.
6. For *roof replacement* on existing buildings with a roof slope of less than 2 units vertical in 12 units horizontal (2:12), and where the roof covering insulation remains, and where the required R-value cannot be provided due to thickness limitations presented by existing rooftop conditions, (including heating, ventilating and air-conditioning equipment, low door or glazing heights, parapet heights, weep holes, and roof flashing heights

not meeting the manufacturer's specifications), the maximum thickness of insulation compatible with the available space and existing uses shall be installed. Insulation used shall be minimum R-5 per inch. In areas where flashing may be terminated a minimum of 8 inches above the roof covering (including required insulation) insulation shall be a minimum of R-30.

7. R-value for roof assemblies with tapered insulation above deck with slope greater than 1/8 units vertical in 12 units horizontal (1/8:12) shall average R-30.
8. Surface-applied window film installed on existing single pane *fenestration* assemblies to reduce solar heat gain provided the code does not require the glazing or *fenestration* assembly to be replaced.

5. **R503.1.2 Heating and cooling systems.** Revise to read:

R503.1.2 Heating and cooling systems. New heating, cooling and duct systems that are part of the alteration shall comply with Sections R403.1, R403.2, R403.3 and R403.6.

Exception: Where ducts from an existing heating and cooling system are extended, the new and existing duct systems shall not be required to be tested in accordance with Section §403.3.3. Altered duct systems shall be sealed in accordance with Section R403.3.2.

6. **R504.2 Application.** Revise to read:

R504.2 Application. For the purposes of this code, the following shall be considered repairs:

1. Glass-only replacements in an existing sash and frame.
2. Roof repairs.
3. Insulation with new roof covering for roof slopes less than 2 units vertical in 12 units horizontal (2:12) inches only in areas where the tapered insulation is used above an existing roof covering to create slope between drains or upslope from obstructions to water flow.
4. Repairs where only the bulb and/or ballast within the existing luminaires in a space are replaced provided that the replacement does not increase the installed interior lighting power.

18-13-350 Chapter 6 [RE] of IECC—Adopted without modification. The provisions of Chapter 6 [RE] of the International Energy Conservation Code are adopted by reference and shall apply without modification.

SECTION 2. Section 13-20-014 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

13-20-014 Document review fees.

The building commissioner shall have the authority, pursuant to Section 2-22-040, to impose document review fees rather than the inspection fees specified in this Code which are assessed for annual, semiannual and periodic inspections required by this Code and for inspections of any type required under Chapter 18-13 of this Code.

(Omitted text is unaffected by this ordinance)

SECTION 3. Section 13-172-030 of the Municipal Code of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-172-030 Definitions.

The following words and terms shall, for the purposes of this chapter, have the meanings shown herein:

(Omitted text is unaffected by this ordinance)

“Ventilation” means the natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, ~~a room or any space, as defined in Section 13-176-010.~~

(Omitted text is unaffected by this ordinance)

SECTION 4 Section 13-172-060 of the Municipal Code of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-172-060 Light and ventilation required.

(Omitted text is unaffected by this ordinance)

(b) *Ventilation required.* Every room or space intended for human occupancy shall be provided with natural or mechanical ventilation; provided, however, that living, dining and sleeping rooms in family dwelling units shall be provided with natural ventilation. Natural ventilation shall not be substituted for mechanical ventilation in rooms or spaces where

mechanical ventilation is specifically required in Chapter ~~13-76~~ 18-13 or Chapter 18-28 of this Code.

(c) *Multi-purpose room exemption.* Notwithstanding ~~requirements of paragraphs (a) and (b) above of this section,~~ certain rooms in single-family and multi-family dwelling units in existing buildings constructed pursuant to a permit issued prior to April 1, 1998 may be considered multi-purpose rooms, and such rooms may be exempt from either the natural light or natural ventilation requirement ~~provided that~~ if all of the following requirements are met: ~~The exemption provided by this section shall not apply to any newly constructed building for which a permit was issued after April 1, 1998.~~

(i) when either natural ventilation or natural light is not provided, the room(s) are provided with mechanical ventilation in accordance with Table ~~13-176-070-A~~ 18-28-403.3 of this Code and artificial light in accordance with Section 13-172-080; and

(ii) the area of such undesignated room or rooms does not exceed 15 percent of the total floor area of the dwelling unit; and

(iii) any dwelling unit with a floor area up to 1,300 square feet has at least 1 bedroom, as well as areas or rooms designated for living and dining, in addition to the multi-purpose room(s); and

(iv) any dwelling unit with a floor area over 1,300 square feet has at least 2 bedrooms, as well as areas or rooms designated for living and dining, in addition to the multi-purpose room(s).

Provided, however, that the exemption for multi-purpose rooms set forth in this subsection (c) shall not apply to any newly constructed building for which a permit was issued after April 1, 1998.

SECTION 5. Section 13-172-100 of the Municipal Code of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-172-100 Mechanical ventilation.

Mechanical ventilation shall conform to the applicable requirements ~~of~~ set forth in Chapter ~~13-176~~ 18-13 and Chapter 18-28 of this Code.

SECTION 6. Section 13-172-110 of the Municipal Code of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-172-110 Ventilation of special spaces.

(Omitted text is unaffected by this ordinance)

(c) *Alternative mechanical ventilation.* Enclosed attic, rafter and crawl spaces which are not ventilated as herein required shall be equipped with a mechanical ventilation system conforming to the applicable requirements of the mechanical code listed set forth in Chapter 13-176, Chapter 13-180, Chapter 13-184 and Chapter 13-192 Chapter 18-28 of this Code.

SECTION 7. Section 13-172-140 of the Municipal Code of Chicago is hereby amended by deleting the language stricken through, as follows:

13-172-140 Obstruction of courts and yards.

(Omitted text is unaffected by this ordinance)

(b) *Maximum encroachment.* A part of any building or structure shall not extend into side courts, inner courts or yards required for light and ventilation of habitable and occupiable rooms unless permitted by Section 5-7-5 of the Chicago Zoning Ordinance. The encroachment shall not exceed 20 percent of the legal area of the yard or court which is required for light and ventilation purposes.

(Omitted text is unaffected by this ordinance)

SECTION 8. Table 18-28-403.3 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

**Table 18-28-403.3
Ventilating Requirements Based on Floor Area**

(Omitted text is unaffected by this ordinance)

Room Purpose	Vent Opening Percent of Floor Area		Mechanical Ventil. CFM/SF		Remarks
	Less Than	Not Less Than	S, Supply	E, Room Exhaust	
Private Dwellings (Single and Multiple)					
Living Quarters			NV	NV	See Chapter 13-172.
Living Quarters (Kitchen)	4	4	0 0	0 1.5	See Notes 1 and 4.
Toilet Rooms (residential)	4	4	0 0	0 1.5	See Notes 2 and 4.

Residential Dryers	NA	NA	0	B	See Notes 3 and 4.
<u>Multi-purpose rooms</u>	<u>NR</u>	<u>NR</u>	<u>0.3</u>	<u>0.3 or R.O.</u>	

(Omitted text is unaffected by this ordinance)

SECTION 9. Section 18-28-403.3.7 of the Municipal Code of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

18-28-403.3.7 Air-to-air heat recovery and air energy transfer equipment.

Air-to-air heat recovery and air energy transfer equipment and systems intended to recover either sensible heat (dry bulb temperature), latent heat (humidity ratio) or enthalpy (total heat) may be used if the equipment or system is connected to an exhaust system from which recirculated air is permitted. For systems which require all air to be exhausted directly to outside, such heat recovery may only be used if there is ~~zero~~ no more than 5% (five percent) communication between outside air and exhaust air for Class I or Class II air as defined by ASHRAE 62.1. All other applications shall be approved by the committee on standards and tests in accordance with Chapter 13-16, ~~Building Standards and Tests of this Code~~.

SECTION 10. This ordinance shall take full force and effect upon its passage and publication.