

2006/2007 PROPOSED CHANGES TO THE INTERNATIONAL ENERGY CONSERVATION CODE

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TENTATIVE ORDER OF DISCUSSION

2006-2007 PROPOSED CHANGES TO THE INTERNATIONAL ENERGY CONSERVATION CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation **does not** necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair.

EC1-06/07	EC48-06/07, Part I	EC98-06/07
EC2-06/07	EC49-06/07, Part I	EC99-06/07
EC3-06/07	EC50-06/07	EC100-06/07
EC4-06/07	EC51-06/07, Part I	EC101-06/07
EC5-06/07	EC57-06/07, Part I	EC102-06/07
EC6-06/07	EC52-06/07, Part I	EC103-06/07
EC7-06/07, Part I	EC53-06/07, Part I	EC104-06/07
G1-06/07, Part IV	EC54-06/07, Part I	EC105-06/07
EC8-06/07	EC55-06/07, Part I	EC106-06/07
EC9-06/07	EC56-06/07, Part I	EC107-06/07
EC10-06/07	EC58-06/07, Part I	EC108-06/07
EC11-06/07, Part I	EC59-06/07, Part I	EC109-06/07
EC12-06/07	EC60-06/07	EC110-06/07
EC13-06/07	EC61-06/07	EC111-06/07
EC14-06/07, Part I	EC62-06/07, Part I	EC112-06/07
EC15-06/07, Part I	EC63-06/07	EC113-06/07
EC16-06/07	EC64-06/07, Part I	EC114-06/07
EC17-06/07	EC65-06/07, Part I	EC115-06/07
EC18-06/07	EC66-06/07	EC116-06/07
EC19-06/07	EC67-06/07	EC117-06/07
G3-06/07, Part III	EC68-06/07	EC118-06/07
EC20-06/07	EC69-06/07	EC119-06/07
EC21-06/07	EC70-06/07	EC120-06/07
EC22-06/07	EC71-06/07	EC121-06/07
EC23-06/07	EC72-06/07	EC122-06/07
G221-06/07, Part III	EC73-06/07	EC123-06/07
EC24-06/07	EC74-06/07	EC124-06/07
EC25-06/07	EC75-06/07	EC125-06/07
EC26-06/07	EC76-06/07	EC126-06/07
EC27-06/07	EC77-06/07	EC127-06/07
EC28-06/07, Part I	EC78-06/07	EC128-06/07
EC29-06/07, Part I	EC79-06/07	EC129-06/07
EC30-06/07	EC80-06/07	EC130-06/07
EC31-06/07, Part I	EC81-06/07	EC131-06/07
EC32-06/07, Part I	EC82-06/07	EC132-06/07
EC33-06/07, Part I	EC83-06/07	EC133-06/07
EC34-06/07, Part I	EC84-06/07	
EC35-06/07, Part I	EC85-06/07	M100-06/07, Part II
EC36-06/07, Part I	EC86-06/07	
EC37-06/07, Part I	EC87-06/07	
EC38-06/07, Part I	EC88-06/07	
EC39-06/07	EC89-06/07	
EC40-06/07	EC90-06/07	
EC41-06/07, Part I	EC91-06/07	
EC42-06/07, Part I	EC92-06/07	
EC43-06/07, Part I	EC93-06/07	
EC44-06/07, Part I	EC94-06/07	
EC45-06/07, Part I	EC95-06/07	
EC46-06/07	EC96-06/07	
EC47-06/07, Part I	EC97-06/07	

EC1-06/07

101.2, 101.4.5, 101.5, 202, Chapter 4, 401.1, Chapter 5, 501.1, 502.1.1, 502.2, 502.2.1, 502.2.3, 502.2.4, 502.2.5, 502.2.6, 502.2.7, 502.3.2, Table 502.2(1), Table 502.2(3) (New)

Proponent: Chuck Murray, Washington State University, representing Northwest Energy Code Group

1. Revise as follows:

101.2 Scope. This code applies to low-rise and other residential buildings and ~~commercial~~ nonresidential buildings.

101.4.5 Mixed occupancy. Where a building includes both low-rise residential and ~~commercial~~ occupancies other spaces, each occupancy space shall be separately considered and meet the applicable provisions of Chapter 4 for low-rise residential and Chapter 5 for ~~commercial~~ other residential spaces and nonresidential spaces.

101.5 Compliance. Low-rise Residential buildings shall meet the provisions of Chapter 4. ~~Commercial~~ Other residential buildings and nonresidential buildings shall meet the provisions of Chapter 5.

SECTION 202 GENERAL DEFINITIONS

~~COMMERCIAL~~NONRESIDENTIAL BUILDING. All buildings or portions thereof that are not included in the definition of Residential Buildings.

2. Add new definition as follows:

RESIDENTIAL BUILDING. All buildings or portions thereof used primarily for living and sleeping. Residential spaces include, but are not limited to, dwelling units, hotel/motel guest rooms, dormitories, nursing homes, patient rooms in hospitals, lodging houses, fraternity/sorority houses, hostels, prisons, and fire stations. (See "Residential Building, Low-Rise".)

3. Revise as follows:

RESIDENTIAL BUILDING, LOW-RISE. For this code, includes R-3 buildings, as well as R-2 and R-4 buildings three stories or less in height above grade.

CHAPTER 4 RESIDENTIAL ENERGY EFFICIENCY FOR LOW-RISE RESIDENTIAL BUILDINGS

401.1 Scope. This chapter applies to low-rise residential buildings.

CHAPTER 5 COMMERCIAL ENERGY EFFICIENCY FOR NONRESIDENTIAL BUILDINGS AND RESIDENTIAL BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS

501.1 Scope. The requirements contained in this chapter are applicable to ~~commercial~~ nonresidential buildings, and residential buildings except low-rise residential buildings, or portions of commercial those buildings. These ~~commercial~~ buildings shall meet either the requirements of ANSI/ASHRAE/IESNA Standard 90.1, *Energy Standard for Buildings Except for Low-Rise Residential Buildings*, or the requirements contained in this chapter.

502.1.1 Insulation and fenestration criteria. The building thermal envelope shall meet the requirements of Tables 502.2(1), 502.2(3), and 502.3 based on the climate zone specified in Chapter 3. Buildings with a vertical fenestration area or skylight area that exceeds that allowed in Table 502.3 shall comply with the building envelope provisions of ASHRAE/IESNA 90.1.

502.2 Specific insulation requirements (Prescriptive). Opaque assemblies shall comply with Tables 502.2(1) and 502.2(3).

502.2.1 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 Tables 502.2(1) and 502.2(3), based on construction materials used in the roof assembly.

Exception: Continuously insulated roof assemblies where the thickness of insulation varies 1 inch (25.4 mm) or less and where the area weighted *U*-factor is equivalent to the same assembly with the *R*-value specified in Tables 502.2(1) and 502.2(3).

Insulation installed on a suspended ceiling with removable ceiling tiles shall not be considered part of the minimum thermal resistance of the roof insulation.

502.2.3 Above-grade walls. The minimum thermal resistance (R -value) of the insulating material(s) installed in the wall cavity between the framing members and continuously on the walls shall be as specified in Tables 502.2(1) and 502.2(3), based on framing type and construction materials used in the wall assembly. The R -value of integral insulation installed in concrete masonry units (CMU) shall not be used in determining compliance with Tables 502.2(1) and 502.2(3). "Mass walls" shall include walls weighing at least (1) 35 pounds per square foot (170 kg/m^2) of wall surface area or (2) 25 pounds per square foot (120 kg/m^2) of wall surface area if the material weight is not more than 120 pounds per cubic foot ($1,900 \text{ kg/m}^3$).

502.2.4 Below-grade walls. The minimum thermal resistance (R -value) of the insulating material installed in, or continuously on, the below-grade walls shall be as specified in Tables 502.2(1) and 502.2(3), and shall extend to a depth of 10 feet (3048 mm) below the outside finish ground level, or to the level of the floor, whichever is less.

502.2.5 Floors over outdoor air or unconditioned space. The minimum thermal resistance (R -value) of the insulating material installed either between the floor framing or continuously on the floor assembly shall be as specified in Tables 502.2(1) and 502.2(3), based on construction materials used in the floor assembly.

"Mass floors" shall include floors weighing at least (1) 35 pounds per square foot (170 kg/m^2) of floor surface area or (2) 25 pounds per square foot (120 kg/m^2) of floor surface area if the material weight is not more than 12 pounds per cubic foot ($1,900 \text{ kg/m}^3$).

502.2.6 Slabs on grade. The minimum thermal resistance (R -value) of the insulation around the perimeter of unheated or heated slab-on-grade floors shall be as specified in Tables 502.2(1) and 502.2(3). The insulation shall be placed on the outside of the foundation or on the inside of a foundation wall. The insulation shall extend downward from the top of the slab for a minimum distance as shown in the table or to the top of the footing, whichever is less, or downward to at least the bottom of the slab and then horizontally to the interior or exterior for the total distance shown in the table.

502.2.7 Opaque doors. Opaque doors (doors having less than 50 percent glass area) shall meet the applicable requirements for doors as specified in Tables 502.2(1) and 502.2(3) and be considered as part of the gross area of above-grade walls that are part of the building envelope.

502.3.2 Curtain wall, storefront glazing and commercial entrance doors. Curtain wall, storefront glazing and commercial-glazed swinging entrance doors and revolving doors shall be tested for air leakage at 1.57 pounds per square inch (psi) (75 Pa) in accordance with ASTM E 283. For curtain walls and storefront glazing, the maximum air leakage rate shall be 0.3 cubic feet per minute per square foot (cfm/ft^2) ($5.5 \text{ m}^3/\text{h} \times \text{m}^2$) of fenestration area. For commercial-glazed swinging entrance doors and revolving doors, the maximum air leakage rate shall be 1.00 cfm/ft^2 ($18.3 \text{ m}^3/\text{h} \times \text{m}^2$) of door area when tested in accordance with ASTM E 283.

**TABLE 502.2(1)
NONRESIDENTIAL BUILDING ENVELOPE REQUIREMENTS – OPAQUE ELEMENTS**

CLIMATE ZONE	1	2	3	4 except Marine	5 and Marine 4	6	7	8
Roofs								
Insulation entirely above deck	R-15 ci	R-15 ci	R-15 ci	R-15 ci	R-20 ci	R-20 ci	R-25 ci	R-25 ci
Metal buildings (with R-5 thermal blocks ^{a,b})	R-19 + R-10	R-19	R-19	R-19	R-19	R-19	R-19 + R-10	R-19 + R-10
Attic and other	R-30	R-30	R-30	R-30	R-30	R-30	R-38	R-38
Walls, Above Grade								
Mass	NR	NR	R-5.7 ci ^{c,e}	R-5.7 ci ^c	R-7.6 ci	R-9.5 ci	R-11.4 ci	R-13.3 ci
Metal building ²	R-13	R-13	R-13	R-13	R-13 + R-13	R-13 + R-13	R-13 + R-13	R-13 + R-13
Metal framed	R-13	R-13	R-13	R-13	R-13 + R-3.8 ci	R-13 + R-3.8 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci
Wood framed and other	R-13	R-13	R-13	R-13	R-13	R-13	R-13	R-13 + R-7.5 ci
Walls, Below Grade								
Below grade wall ^d	NR	NR	NR	NR	NR	NR	R-7.5 ci	R-7.5 ci
Floors								
Mass	NR	R-5 ci	R-5 ci	R-10 ci	R-10 ci	R-10 ci	R-15 ci	R-15 ci
Joist/Framing	NR	R-19	R-19	R-19	R-19	R-30	R-30	R-30
Slab-on-Grade Floors								
Unheated Slabs	NR	NR	NR	NR	NR	NR	NR	R-10 for 24 in. below
Heated Slabs	R-7.5 for 12 in. below	R-7.5 for 12 in. below	R-7.5 for 12 in. below	R-7.5 for 12 in. below	R-7.5 for 24 in. below	R-10 for 36 in. below	R-10 for 36 in. below	R-10 for 48 in. below
Opaque Doors								
Swinging	U – 0.70	U – 0.70	U – 0.70	U – 0.70	U – 0.70	U – 0.70	U – 0.70	U – 0.50
Roll-up or sliding	U – 1.45	U – 1.45	U – 1.45	U – 1.45	U – 1.45	U – 0.50	U – 0.50	U – 0.50

For SI: 1 inch = 25.4 mm

ci — Continuous Insulation

NR – No Requirement

- Thermal blocks are a minimum R-5 of rigid insulation, which extends 1-inch beyond the width of the purlin on each side, perpendicular to the purlin.
- Assembly descriptions can be found in Table 502.2(2)
- R-5.7 ci may be substituted with concrete block walls complying with ASTM C90, ungrouted or partially grouted at 32 in. or less on center vertically and 48 in. or less on center horizontally, with ungrouted cores filled with material having a maximum thermal conductivity of 0.44 Btu-in./h-² F.
- When heated slabs are placed below grade, below grade walls must meet the exterior insulation requirements for perimeter insulation according to the heated slab-on-grade construction.
- Insulation is not required for mass walls in Climate Zone 3A located below the “Warm-Humid” line, and in Zone 3B.

4. Add new table as follows:

**TABLE 502.2(3)
RESIDENTIAL EXCEPT LOW-RISE RESIDENTIAL
BUILDING ENVELOPE REQUIREMENTS – OPAQUE ELEMENTS**

CLIMATE ZONE	1	2	3	4 except Marine	5 and Marine 4	6	7	8
Roofs								
Insulation entirely above deck	R-15 ci	R-15 ci	R-15 ci	R-15 ci	R-20 ci	R-20 ci	R-25 ci	R-25 ci
Attic and other	R-38	R-38	R-38	R-38	R-38	R-38	R-38	R-38
Walls, Above Grade								
Mass	R-5.7 ci ^a	R-5.7 ci ^a	R-7.6 ci	R-9.5 ci	R-11.4 ci	R-11.4 ci	R-13.3 ci	R-15.2 ci
Metal framed	R-13	R-13	R-13 + R-3.8 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci	R-13 + R-10 ci
Wood framed and other	R-13	R-13	R-13	R-13	R-13	R-13 + R-3.8 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci
Walls, Below Grade								
Below grade wall ^b	NR	NR	NR	NR	NR	R-7.5 ci	R-7.5 ci	R-7.5 ci
Floors								
Mass	NR	R-5 ci	R-10 ci	R-10 ci	R-10 ci	R-15 ci	R-15 ci	R-15 ci
Joist/Framing	NR	R-19	R-30	R-30	R-30	R-30	R-30	R-38
Slab-on-Grade Floors								
Unheated Slabs	NR	NR	NR	NR	NR	NR	R-10 for 24 in. below	R-15 for 24 in. below
Heated Slabs	R-7.5 for 12 in. below	R-7.5 for 12 in. below	R-7.5 for 12 in. below	R-10 for 36 in. below	R-10 for 36 in. below	R-10 for 48 in. below	R-10 for 48 in. below	R-10 for 48 in. below
Opaque Doors								
Swinging	U – 0.70	U – 0.70	U – 0.70	U – 0.70	U – 0.70	U – 0.70	U – 0.50	U – 0.50
Roll-up or sliding	U – 1.45	U – 1.45	U – 0.50	U – 0.50	U – 0.50	U – 0.50	U – 0.50	U – 0.50

For SI: 1 inch = 25.4 mm

ci — Continuous Insulation

NR – No Requirement

- a. R-5.7 ci may be substituted with concrete block walls complying with ASTM C90, ungrouted or partially grouted at 32 in. or less on center vertically and 48 in. or less on center horizontally, with ungrouted cores filled with material having a maximum thermal conductivity of 0.44 Btu-in./h-² F.
- b. When heated slabs are placed below grade, below grade walls must meet the exterior insulation requirements for perimeter insulation according to the heated slab-on-grade construction.

Reason: Loads for residential buildings are different than commercial structures. The different loads result in different requirements for the building envelope. This proposal provides criteria for residential buildings (other than low-rise residential buildings) similar to Standard 90.1. Residential requirements for the opaque envelope included in the new TABLE 502.2(3) are the same as nonresidential requirements, except where Standard 90.1 is more stringent. Fenestration requirements are not changed in this proposal because the IECC already includes appropriate standards for both residential and nonresidential buildings based on available technology.

Add unique building envelope requirements for residential structures other than low-rise residential buildings.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

EC2–06/07

101.4

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Revise as follows:

101.4 Applicability. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be “new” because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

The purpose of this proposed change is to provide needed administrative provisions not currently in the IECC, the source text for which is Section 102.1 of the *International Building Code*, *International Existing Building Code*, *International Residential Code*, *International Mechanical Code*, *International Plumbing Code*, *International Private Sewage Disposal Code* and *International Fuel Gas Code* and Section 102.9 of the *International Fire Code*.

The proposal adds important provisions that deal, in the first sentence, with those instances where code provisions in different sections contain requirements that conflict with one another. Proper resolution of these unintended conflicts is to be made in favor of the most restrictive provision, i.e., the one that will provide the higher level of public safety.

The second sentence of the proposal adds an important provision that deals with provisions on the same topic that could be different in technical content. In such an instance, the specific provision (e.g., the one having the narrower scope of application) is to govern.

Editorially, this proposal corrects a matter of established code style which calls for all section headings to contain code text. Current Section 101.4 is nothing but a textless heading.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

EC3–06/07

101.4.2

Proponent: Chuck Murray, Washington State University, representing Northwest Energy Code Group

Revise as follows:

101.4.2 Historic buildings. The building official shall be permitted to modify the specific requirements of this code for historic buildings when the requirements of this code alter historically significant components of the building. This includes any building or structure that is Listed in the State or National Register of Historic Places; designated as a

historic property under local or state designation law or survey; certified as a contributing resource with a National Register Listed or locally designated historic district; or with an opinion or certification that the property is eligible to be Listed on the National or State Registers of Historic Places either individually or as a contributing building to a historic district by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, ~~are exempt from this code.~~

Reason: The exemption for historic structures should only be applied when the IECC requirements degrade the historic characteristics of the building. This submission provides the building official the latitude to determine when the energy code requirements would apply to a historic building.

One example of the application of the energy code to a historic structure might be insulating a roof when the membrane is torn off and replaced. The addition of insulation to the new roofing systems in most cases would not jeopardize the historic features of the building.

Several other examples are also given in the National Park Service, The Secretary of the Interior's Standards for the Treatment of Historic Properties, Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Building, 2001.

"Installing thermal insulation in attics and in unheated cellars and crawlspaces to increase the efficiency of the existing mechanical systems".

"Installing insulating material on the inside of masonry walls to increase energy efficiency where there is no character-defining interior molding around the windows or other interior architectural detailing"

*"Code requirements must also be met in **Reconstruction** projects. For code purposes, a reconstructed building may be considered as essentially new construction. Guidance for these sections is thus abbreviated, and focuses on achieving design solutions that do not destroy extant historic features and materials or obscure reconstructed features."*

When historic buildings are being renovated, energy efficiency features of this code must be included when they do not degrade the historic features of the structure.

Bibliography: National Park Service, *The Secretary of the Interior's Standards for the Treatment of Historic Properties, Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Building, 2001*

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC4-06/07

101.4.3

Proponent: Raymond J. Andrews, R.A., New York State Department of State Codes Division, representing himself

Revise as follows:

101.4.3 Additions, alterations, renovations or repairs. Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. Additions, alterations, renovations, or repairs 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.

Exceptions: The following need not comply provided the energy use of the building is not increased.

1. Storm windows installed over existing fenestration.
2. Glass only replacements in an existing sash and frame.
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.

Reason: This proposal clarifies compliance approaches for additions. This proposal gives the designer the option of using the addition along with the existing building to demonstrate compliance with the energy code. Either because the existing building was built energy efficient or because work is being done in the existing building that will increase its efficiency. Both compliance approaches are acceptable for new buildings.

This proposal would allow the existing buildings to be included in demonstrating compliance, because either energy efficient upgrades are taking place in the existing building or because the existing building was originally built energy efficient. The existing building and the new addition will meet the energy code, as if the entire building was new. This compliance path would rely on the overall U-value or an energy analysis to demonstrate compliance, same as new buildings.

Cost Impact: The code change proposal will not increase the cost of construction and in some cases will reduce the cost of construction, while maintaining the same level of energy efficiency for the entire building.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC5-06/07

101.4.3

Proponent: Chuck Murray, Washington State University, representing Northwest Energy Code Group

Revise as follows:

101.4.3 Additions, alterations, renovations or repairs. Additions, alterations, renovations or repairs to an existing buildings system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. Additions, alterations, renovations, or repairs shall not create an unsafe or hazardous condition or overload existing building systems.

Exceptions: The following need not comply provided the energy use of the building is not increased.

1. Storm windows installed over existing fenestration.
2. Glass only replacements in an existing sash and frame provided the U-factor and solar heat gain coefficient (SHGC) will be equal to or lower than before the glass replacement.
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, provided that any new cavities that are created are insulated.
5. Reroofing for roofs where neither the sheathing nor the insulation are exposed. 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. Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving door, provided, however, that an existing vestibule that separates a conditioned space from the exterior shall not be removed.
7. Alterations that replace less than 50% of the luminaries in a space provided that such alterations do not increase the installed interior lighting power.
8. Alterations that replace only the bulb and ballast within the existing luminaries in a space provided that the alteration does not increase the installed interior lighting power.

Reason: The addition and clarification of exceptions to Section 101.4.3 will encourage energy retrofits and clarify when compliance with the IECC will be required. Tenant improvement projects represent a large portion of the commercial building permits issued by jurisdictions. Often the goal of the projects is to increase the efficiency of the space. These added exceptions will allow and encourage these projects to occur without requiring compliance with the IECC. The following exceptions and clarifications have been added:

Exception 2 would allow a glass replacement to occur without requiring compliance with the IECC as long as the replacement glass is as, or more efficient as the existing glass.

For Exception 4, newly-created cavities should be insulated if the wall or floor does not comply with the code insulation requirements.

Reroofing brings up other issues, so roofs should be addressed in a separate exception. For Exception 5, no insulation would be required if a new roof covering layer is simply added on top of an existing roof covering (as allowed by IBC Section 1510). However, when the existing roof covering is removed, then the roof should be insulated either above or below.

Exception 6 clarifies existing door replacements between conditioned and unconditioned spaces and allows the door to be replaced without requiring a vestibule to be installed as part of the replacement. The exception does not allow the removal of an existing vestibule as part of the replacement.

Exception 7 allows for the replacement of up to 50% of the fixtures in a lighting retrofit before needing to comply with the IECC. Lighting retrofits that involve replacement and moving fixtures are common in alteration projects. Often the lighting retrofits involve replacing inefficient lighting fixtures with more efficient fixtures decreasing the energy load on the space.

Exception 8 allows for fixture retrofits where the fixture remains and the bulb and ballast are replaced with more efficient bulb/ballast combinations. This exception encourages lighting retrofits in existing buildings, which decreases the lighting load on the space, without the need to demonstrate compliance with the IECC.

Clarify the requirements for additions, alterations, renovations or repairs by adding more specific exceptions to the requirements.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC6-06/07

101.4.4

Proponent: Chuck Murray, Washington State University, representing Northwest Energy Code Group

Revise as follows:

101.4.4 Change in occupancy or use. ~~Buildings Spaces~~ undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with this code. Where the use in a space changes from one use in Table 505.5.2 to another use in Table 505.5.2, the installed lighting wattage shall comply with Section 505.5.

Reason: Change of occupancy requirements should focus on the space that is changing, not the entire building. This is much more manageable for the applicant and for the building official. For example, a ten-story building may have a change in occupancy in a street-level tenant that would increase the energy consumption in that tenant space. It is possible that the designer would then remodel the entire ten-story building to comply with the code. In this situation, however, it seems more appropriate for the upgrading to be done for the tenant space involved. Other spaces can be upgraded in the future as tenant spaces change. Lighting should comply when space use changes.

Base the change in occupancy requirements on modifications to the effected space rather than the entire building. Add specific requirements for lighting.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC7-06/07

101.4.4; IRC R102.7.2

Proponent: Chuck Murray, Washington State University, representing Northwest Energy Code Group

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Add new text as follows:

101.4.4 Change in space conditioning. Any nonconditioned space that is altered to become conditioned space shall be required to be brought into full compliance with this code.

(Renumber subsequent sections)

PART II – IRC

Add new text as follows:

R102.7.2 Change in space conditioning. Any nonconditioned space that is altered to become conditioned space shall be required to be brought into full compliance with Chapter 11 of this code.

Reason: (IECC) When nonconditioned spaces are converted to conditioned space, the impacts on the community energy resources are the same as new construction. As such, they should be required to meet the minimum standards set by the IECC for new construction.

This approach is consistent with ASHRAE Standard 90.1, 2004, Section 4.1.1.5.

(IRC) When nonconditioned spaces are converted to conditioned space, the impacts on the community energy resources are the same as new construction. As such, they should be required to meet the minimum standards included in chapter 11 of the IRC. For example, this provision would require a basement or bonus room to be insulated when space heating or cooling is added to these spaces. This provision would also apply when a garage is converted to a habitable space.

Cost Impact: The code change proposal will increase the cost of construction.

PART I – IECC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC8-06/07

101.5

Proponent: Thomas D. Culp, Birch Point Consulting LLC, representing Aluminum Extruders Council

Revise as follows:

101.5 Compliance. Residential buildings shall meet the provisions of Chapter 4. Commercial buildings shall meet the provisions of Chapter 5.

Exception: R-2 and R-4 buildings three stories or less in height above grade shall meet the provisions of either Chapter 4 in its entirety or Chapter 5 in its entirety.

Reason: The purpose of this proposal is to add an alternative pathway of compliance for certain residential building types which may have functional design requirements closer to commercial buildings. Currently, the definition of residential buildings which must comply with chapter 4 includes R-3 buildings, and R-2 and R-4 buildings three stories or less in height. This includes not just single- and dual-family detached homes, but also dormitories, apartments, long-term motels, and assisted care facilities. While many of these buildings can be built in a manner consistent with typical residential methods and requirements, there is also a large variation in buildings. Certain buildings will have special functionality or design requirements which are more appropriately covered under commercial methods and requirements. One example is dormitories or assisted care facilities with high abuse / durability / lifetime requirements. Another example includes larger (but not tall) multizone buildings which need complex HVAC systems. A third example includes apartment and dormitory buildings which have multi-story atriums or enclosed stairways which utilize curtainwall-type glazing systems. This proposal acknowledges that many of these R-2 and R-4 buildings bridge the boundary between residential and commercial buildings, and thus allow either chapter 4 or chapter 5 to be used for compliance.

In reviewing this proposal, it is appropriate to explore the differences in chapter 4 and 5, which differ in envelope, HVAC, and lighting requirements. First, chapter 5 gives more options for the different construction types used in commercial buildings, and as a result, envelope requirements vary from chapter 4. Some requirements are more stringent, whereas other requirements are less stringent. For example, the chapter 5 floor and slab requirements are generally more stringent in the southern zones, and equivalent in the northern zones. The wall and roof / ceiling requirements in chapter 5 are generally equivalent in the south, and somewhat less stringent in the north. The chapter 5 fenestration U-factor requirements are equivalent to chapter 4 for non-metal windows, and less stringent for metal-framed fenestration to acknowledge their use in high durability and structural applications. These differences in envelope requirements, whether more or less stringent, are justified given the different types of building construction.

A good example of the impact of different envelope requirements is the use of curtainwall-type glazing in multi-story atriums and enclosed stairways in dormitories and apartment buildings. In these cases, more structural framing is required which cannot always meet the prescriptive U-factor requirements of chapter 4 in zones 4-8. Previously, this was not a problem because trade-off procedures could be used to accommodate these products. However, the "hard limit" of section 402.5.1 now specifies that the fenestration U-factor can be no higher than 0.48 in zones 4-5 and 0.40 in zones 6-8, even when trade-offs are used to show equivalent total energy use of the overall building. Therefore, it is more appropriate to use the commercial requirements in chapter 5 for this commercial-style construction.

Beyond the envelope requirements, chapter 5 has much more comprehensive requirements with regards to building mechanical systems and lighting. Chapter 5 has additional requirements for temperature and humidity controls, HVAC system sizing and efficiencies, use of economizers, and duct insulation. Furthermore, chapter 5 has additional lighting efficiency and control requirements for hallways, lobbies, exteriors, and other non-dwelling unit areas which are not included in chapter 4. Thus, the use of chapter 5 for these types of buildings would provide more energy efficiency provisions than current practice under chapter 4.

Because of the simplicity of chapter 4, builders will continue to use the chapter 4 requirements for most R-2 and R-4 buildings which use typical residential-type construction. Although the envelope requirements in chapter 5 vary (some more stringent and some less stringent than chapter 4), the additional requirements in chapter 5 for mechanical systems and lighting would make its use a burden most builders would choose to avoid. However, for those R-2 and R-4 buildings which have functionality and construction closer to commercial-type buildings, this provision would allow those builders to use chapter 5, if they so choose.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC9-06/07

102.1.3, 102.1.3.1 (New), 202, Chapter 6

Proponents: Craig Conner, Building Quality, representing himself; Greg Carney, Glass Association of North America, Building Envelope Contractors Division; Greg Patzer, Aluminum Extruders Council

1. Revise as follows:

102.1.3 Fenestration product rating. U-factors of fenestration products (~~windows, doors and skylights~~) shall be determined in accordance with NFRC 100 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled U-factor shall be assigned a default U-factor from Table 102.1.3(1) or 102.1.3(2). The solar heat gain coefficient (SHGC) of glazed fenestration products (~~windows, glazed doors and skylights~~) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled SHGC shall be assigned a default SHGC from Table 102.1.3(3).

2. Add new text as follows:

102.1.3.1 Commercial building fenestration rating alternative. U-factors and SHGC for fenestration used in commercial buildings shall be permitted to be determined in accordance with AAMA 507-03 and documented by a certificate of compliance submitted to the code official by the glazing contractor or registered design professional.

3. Revise definition as follows:

SECTION 202 GENERAL DEFINITIONS

FENESTRATION. Skylights, roof windows, vertical windows (fixed or moveable), curtain wall, storefront glazing, opaque doors, glazed doors, glazed block, and combination opaque/glazed doors. Fenestration includes products with glass and non-glass glazing materials.

4. Add standard to Chapter 6 as follows:

AAMA

507-03 Rev. 4/2004 Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings

Reason: This proposal adds a useable method for complying with the IECC's commercial glazing U-factor and SHGC requirements, especially commercial glazing that is assembled in the field.

The existing section of the code specifies NFRC procedures for rating window U-factor and SHGC. The existing procedures (NFRC 100 and NFRC 200) were originally developed for residential windows. These procedures work well for residential windows, which are produced in a factory where the manufacturer produces the final product and knows the specifications for that product. NFRC labels are very commonly seen on residential windows.

In contrast, no workable procedure exists for rating commercial glazing, particularly for products that are glazed and/or assembled in the field. Although NFRC has added a procedure for site-built fenestration, the evidence that the existing procedures are not working for commercial buildings is the lack of NFRC labels on curtain wall and storefront fenestration in the field. Most commercial inspectors have never seen a single rating label on curtain wall or storefront windows.

Lacking a label, this section of the code assigns a default value for U-factors and SHGC from the tables in this section. A quick comparison of the default values with the code requirements in Table 502.3 shows that curtain wall and storefront fenestration would never meet the code requirements based on the default values. This fenestration will always fail the SHGC requirements in zones 1, 2 and 3; and always fail the U-factor requirements in zones 4 through 8.

Curtain wall and storefront fenestration, common types of commercial glazing, are assembled in the field. The specific combination of frame, glazing, and sizes are determined by the professional who designs the fenestration for a particular building. The glass fabricator assembles the glass and spacer into a sealed IG unit. This fabrication step alone can have many combinations of glass type (different low-e coatings, reflective coatings, tints, thickness, tempered, laminated, etc), spacer type, and gas fill. Similarly, the large variety of framing components leads to a huge number of possible configurations in the final product assembled in the field by the glazing contractor. To increase enforcement of the code for these commercial products, there is a need for a standard to more easily rate these products in a realistic, cost-effective, and simple manner.

With the AAMA 507-03 procedure, once the thermal test procedure has been performed then the AAMA 507-03 charts can be used for the specific fenestration size, glazing, and framing used. This system is by far the most cost effective because the glass and framing options are only tested once; then the charts and linear interpolation are used to quickly produce a value for each product.

The AAMA procedure uses the same test and computer simulation tools required by NFRC. From a technical perspective they are very similar and result in similar values for U-factor and SHGC. The main difference in the two procedures is that the AAMA procedure combines frame and glass ratings to provide an overall system rating without requiring additional project specific simulations and lab fees.

AAMA 507-03 can also be used to easily calculate performance of actual products with the real size and real spandrel area, not just some hypothetical model size from the NFRC procedure. Using the NFRC model size gives a comparative value which is not appropriate for estimating actual demands and HVAC sizing when the real product varies from the model size.

AAMA 507-03 is a simple, usable, and enforceable option for rating commercial windows, and is well suited to the process used to construct commercial fenestration.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: Results of review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC10-06/07

101.7 (New), 101.8 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

101.7 Subjects not regulated by this code. Where no applicable standards or requirements are set forth in this code, or are contained within other laws, codes, regulations, ordinances or policies adopted by the jurisdiction, compliance with applicable standards of other nationally recognized safety standards, as approved, shall be deemed as prima facie evidence of compliance with the intent of this code.

101.8 Matters not provided for. Requirements that are essential for the public safety of an existing or proposed activity, building or structure, or for the safety of the occupants thereof, which are not specifically provided for by this code shall be determined by the building official consistent with the necessity to establish the minimum requirements to safeguard the public health, safety and general welfare.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes

but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be “new” because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

Although both of these proposed sections provide a useful administrative provision, their content is very similar in that they both deal with those instances when the code or other adopted laws or standards simply do not provide adequate requirements for the protection of public safety. The primary difference between the two texts is that Section 102.7 uses any appropriate nationally recognized safety standard to fill the gap while Section 102.8 uses the judgement and authority of the code official.

Note that both of the proposed sections currently appear in the *International Fire Code*, as indicated in the individual reason statements below.
101.7: The purpose of this proposed change is to provide a needed administrative provision not currently in the IBC, the source text for which is Section 102.7 of the *International Fire Code* and Section 102.8 of the *ICC Electrical Code---Administrative Provisions*.

The section will provide the code official with an effective tool to accomplish the task of reasonable enforcement by providing guidance for situations in which no specific standard or requirement is designated in the code or otherwise adopted by the jurisdiction.

A similar correlating proposal has also been submitted to the *International Existing Building Code*, *International Residential Code*, *International Mechanical Code*, *International Plumbing Code*, *International Private Sewage Disposal Code*, *International Energy Conservation Code*, *International Property Maintenance Code*, *International Wildland-Urban Interface Code* and *International Fuel Gas Code*.

101.8: The purpose of this proposed change is to provide a needed administrative provision not currently in the IBC, the source text for which is Section 102.8 of the *International Fire Code* and Section 102.9 of the *International Fuel Gas Code*, *International Plumbing Code*, *International Mechanical Code*, and *International Private Sewage Disposal Code*.

Evolving technology in our society will sometimes result in a situation or circumstance that the code does not cover. The reasonable application of the code to such hazardous, unforeseen conditions will be provided through this section. Clearly, such a section is needed and the code official's experience and judgement must be used. The proposed section, however, would not override requirements that may be preferred when the code provides alternative methods. Additionally, the section can be used to implement the general performance-oriented language of the code in specific enforcement situations.

A similar correlating proposal has also been submitted to the *International Existing Building Code*, *International Residential Code*, *International Energy Conservation Code*, *International Property Maintenance Code* and *International Wildland-Urban Interface Code*.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC11-06/07

102.1.4 (New), Chapter 6; IRC N1101.6 (New), Chapter 43

Proponent: Chuck Murray, Washington State University, representing Northwest Energy Code Group

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

1. Add new text as follows:

102.1.4 Insulation product rating. The thermal resistance (*R-value*) of insulation shall be determined in accordance with CFR Title 16, Part 460 in units of h·ft²·°F/Btu at a mean temperature of 75°F.

2. Add standard to Chapter 6 as follows:

US FTC

R-value rule, May 31, 2005, CFR Title 16, Part 460

PART II – IRC

1. Add new text as follows:

N1101.6 Insulation product rating. The thermal resistance (*R-value*) of insulation shall be determined in accordance with the CFR Title 16, Part 460, in units of h·ft²·°F/Btu at a mean temperature of 75°F.

(Re-number subsequent sections)

2. Add standard to Chapter 43 as follows:

US FTC

R-value rule, May 31, 2005, CFR Title 16, Part 460

Reason: Currently there is no reference in the IECC for testing and listing of insulation R-values. The addition of this specification brings two important requirements to the code.

- First, the Federal Trade Commission R-value rule details specific test standards for insulation. The test standards are specific to the type of insulation and intended use. This clarifies any questions on the rating conditions to be used for insulation materials.

- Second, the text above specifies the rating temperature to be used when evaluating the R-value of the product, providing consistency not currently in the IECC. Insulation products sometimes list several R-values based on different test temperatures. This eliminates any question as to which R-value to use. The temperature selected is a standard rating condition.

The purpose of the proposed change is to provide a specific standard for the evaluation of insulation R-value.

Bibliography:

Federal Trade Commission 16 CFR Part 460 Labeling and Advertising of Home Insulation: Trade Regulation Rule; Final Rule, May 31, 2005

An electronic copy is available on line at:

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title16/16cfr460_main_02.tpl

Cost Impact: The code change will not increase the cost of construction.

PART I – IECC

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

PART II – IRC

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

EC12–06/07

102.2.1 (New), 102.2.2 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

102.2 Installation. (No change to current text.)

102.2.1 Approved materials and equipment. Materials, equipment and devices approved by the code official shall be constructed and installed in accordance with such approval

102.2.2 Used materials and equipment. The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless such elements have been reconditioned, tested and placed in good and proper working condition and approved by the code official.

102.2.3 ~~102.2.4~~ Protection of exposed foundation insulation. (No change to current text.)

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be “new” because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on energy conservation materials, systems and equipment. A section-by-section discussion follows:

102.2.1: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 104.9 of the *International Building Code*, *International Residential Code*, and *International Existing Building Code* and Section 104.7 of the *International Fire Code*.

This new provision would make it clear that once equipment and materials are approved by the code official, their installation must be conducted in full accord with that approval.

A similar correlating proposal has also been submitted to the *International Mechanical Code*, *International Plumbing Code*, *International Private Sewage Disposal Code*, *International Fuel Gas Code*, *International Property Maintenance Code*, and *International Wildland-Urban Interface Code*.

102.2.2: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 104.9.1 of the *International Existing Building Code*, Section 105.4 of the *International Fuel Gas Code*, *International Mechanical Code* and *International Property Maintenance Code*, Section 104.7.1 of the *International Fire Code* and Section 601.4 of the *ICC Electrical Code*---*Administrative Provisions*.

This section recognizes that the code criteria for materials and equipment have changed over the years and that evaluation of testing and materials technology has permitted the development of new criteria that the old materials may not satisfy. As a result, used materials are required to be evaluated in the same manner as new materials.

A similar correlating proposal has also been submitted to the *International Building Code*, *International Existing Building Code*, *International Fire Code*, *International Mechanical Code*, *International Plumbing Code*, *International Fuel Gas Code*, *International Property Maintenance Code*, and *International Private Sewage Disposal Code*.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

EC13–06/07

103.1, 103.1.1 through 103.2 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

SECTION 103 ALTERNATE MATERIALS—METHOD OF CONSTRUCTION, DESIGN OR INSULATING SYSTEMS

103.1 Alternative materials, methods, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction, design or insulating system not specifically prescribed by this code, provided that any such alternative design or insulating system has been approved. An alternative material or method of construction shall be approved where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. **General.** ~~This code is not intended to prevent the use of any material, method of construction, design or insulating system not specifically prescribed herein, provided that such construction, design or insulating system has been approved by the code official as meeting the intent of this code.~~

103.1.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

103.1.2 Required testing. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternate materials or methods, the code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction.

103.1.2.1 Test methods. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the code official shall approve the testing procedures.

103.1.2.2 Testing agency. All tests shall be performed by an approved agency.

103.1.2.3 Test reports. Reports of tests shall be retained by the code official for the period required for retention of public records.

103.1.3 ~~103.1.4~~ Above code programs. (No change to current text.)

103.2 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative provided the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the files of the department.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on alternative methods and materials provisions for the IECC. The purpose of this proposed change is to provide expanded administrative provisions and additional ones not currently in the IECC, the source text for which is Sections 104.10 and 104.11 of the *International Building Code, International Existing Building Code and International Residential Code*. A section-by-section discussion follows:

103.1: The purpose of this proposed change is to provide what the AHC-Admin felt is a more comprehensive approach to the subject of alternative materials than the current text and that is correlated with the I-Codes family, the source text for which is Section 104.11 of the *International Building Code, International Existing Building Code and International Residential Code*. Note that the IECC-specific “design or insulating system” language has been retained in the expanded text.

103.1.1: The source text for this section is Section 104.11.1 of the *International Building Code, International Existing Building Code and International Residential Code*. When an alternative material or method is proposed, it is incumbent upon the code official to determine whether this alternative is, in fact, an equivalent to the methods prescribed by the code. This section provides the code official with a useful administrative tool in considering alternative materials.

A research report issued by an authoritative agency is particularly useful in providing the code official with the technical basis for evaluation and approval of new and innovative materials and methods of construction. The use of authoritative research reports can greatly assist the code official by reducing the time-consuming engineering analysis necessary to review these materials and methods. Such reports are required to be supplied by an approved source, meaning a source that the code official considers to be reliable and accurate.

103.1.2 through 103.1.2.3: The source text for these sections is Section 104.11.2 of the *International Building Code, International Existing Building Code and International Residential Code*. These sections provide the code official with useful tools in formulating approvals of alternative materials. The code official must require the submission of any appropriate information and data to assist in the determination of equivalency before a permit can be issued. The type of information required includes test data in accordance with appropriate standards, evidence of compliance with the referenced standard specifications and design calculations. Failure to substantiate adequately a request for the use of an alternative is a valid reason for the code official to deny a request. Any tests submitted in support of an application must have been performed by an agency approved by the code official based on evidence that the agency has the technical expertise, test equipment and quality assurance to properly conduct and report the necessary testing. The test reports submitted to the code official must be retained in accordance with the requirements stated.

The proposed change also Aunpacks@ the single long paragraph of the source text that contains a number of separate enforcement elements that really should be set apart from one another to emphasize their importance in the code hierarchy. There are no technical changes being proposed to these source texts.

103.2: The source text for this section is Section 104.10 of the *International Building Code, International Existing Building Code and International Residential Code*. This section would allow the code official to amend or make exceptions to the code as needed where strict compliance is deemed to be impractical. Only the code official has authority to grant modifications. Consideration of a particular difficulty is to be based on the application of the owner and a demonstration that the intent of the code is accomplished.

This section is not intended to permit setting aside or ignoring a code provision; rather, it is intended to provide for the acceptance of equivalent protection. Such modifications would not, however, extend to actions that are necessary to correct violations of the code, such as the expense of correcting one. For the future protection of the code official as well as the permit holder granted the modification, adequate records must be kept of the details of all modifications given.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC14-06/07

103.1; IRC 104.11

Proponent: Thomas S. Zaremba, Roetzel & Andress, representing himself

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Revise as follows:

103.1 General. This code is not intended to prevent the use of any material, method of construction, design or insulating system not specifically prescribed herein, provided that such construction, design or insulating system has been approved by the code official ~~as meeting the intent of the code.~~ An alternative material, method, design, or system shall be approved where the code official finds that the proposed alternative is satisfactory and complies with the intent of this code when the health, security, and safety of the occupants and the equivalency in quality, strength, effectiveness, fire resistance and durability are considered.

PART II – IRC

Revise as follows:

R104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code when the health, security, and safety of the occupants and the equivalency in quality, strength, effectiveness, fire resistance and durability are considered. ~~and~~

that the material method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code. Compliance with the specific performance-based provisions of the *International Codes* in lieu of the specific requirements of this code shall also be permitted as an alternate.

Reason: The purpose of this proposal is to specify criteria to be used in determining the appropriateness of alternate materials, construction methods, designs and systems.

Since 9/11 and Katrina, architects, designers, builders and product manufacturers must consider previously unimagined forces when constructing buildings. This means that alternate designs, materials, and methods of construction will frequently be used in the field before they can be incorporated into the code. This proposal provides the building code official with specific criteria needed to assess these alternatives.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IECC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC15–06/07

103.1.1; IRC N1101.7

Proponent: Ken Nittler, Enercomp, Inc.

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Delete without substitution:

~~**103.1.1 Above code programs.** The code official or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program to exceed the energy efficiency required by this code. Buildings approved in writing by such an energy efficiency program shall be considered in compliance with this code.~~

PART II – IRC

Delete without substitution:

~~**N1101.7 Above code programs.** The building official or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program to exceed the energy efficiency required by this chapter. Buildings approved in writing by such an energy efficiency program shall be considered in compliance with this chapter.~~

Reason: The purpose of this proposal is to remove what could be a serious enforcement loophole where inappropriate “above code” programs are substituted for the meaningful requirements of this code. Some of the reasons this language should be removed include:

- This language is inappropriate in a building code. A search of the IRC finds no other code areas where substituting “above code” programs is allowed instead of following the code provisions.
- Removing this language does not prohibit “above code” programs it just requires that all homes meet the code directly.
- This language could undermine enforcement by forcing building departments to accept programs claimed to be “above code” because other jurisdictions are accepting programs.
- This language will create a special class of programs that operate outside the plan and field checking done by code enforcement. For example, an “above code” program that has no field inspection, or that skips mandatory features like air leakage sealing could be deemed to be equivalent

A further problem with this code language is that no guidance is provided about how to determine if the above code program in fact exceeds the code. It is not always simple to tell when a program is above code. For example, does an above code program require that every prescriptive feature be met and/or exceeded? Is it when one of the IECC performance approaches is exceeded?

- It is reasonable to believe that referencing a “national, state or local programs” should require that a reference standard be added to the code. Yet none is provided in the code. Without providing an actual reference appears to violate ICC rules on reference standards in section 3.6 of Council Policy #28 Code Development.
- The phrase “national, state or local programs” could allow virtually any program to qualify, not just government or other public interest entities. This could include non-third party programs that are not in the interests of the homebuyer.

A similar proposal was approved as submitted by the IECC and IRC committees in 2004/2005 and disapproved at the final hearing. The reasons given for approving this code change by the IECC committee stated that:

- The existing text provides no mention of what programs are covered by the provision.
- The building official already has the authority to approve such programs under the general alternate method provisions found in other sections.

- The existing text does not assure that the alternate program does exceed the performance required by the IECC.
- The committee previously recommended this text be deleted during the previous code change cycle.
- The IECC provisions of section 404 would also provide an additional way for these types of programs to be accepted already.

Homebuyers deserve the opportunity to buy homes that meet this energy code, not some other program that does not have the oversight of the building department. There is no reasonable explanation for why this practice is acceptable on Energy but not other chapters.

Cost Impact: The code change will not increase the cost of construction.

PART I – IECC

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

PART I – IRC

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

EC16–06/07

104.1, 104.3 through 104.5 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

**SECTION 104
 CONSTRUCTION DOCUMENTS**

104.1 General. Construction documents and other supporting data shall be submitted in one or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, The code official is authorized to require necessary construction documents to be prepared by a registered design professional.

Exception: The code official is authorized to waive the requirements for construction documents or other supporting data if the code official determines they are not necessary to confirm compliance with this code.

104.2 Information on construction documents. (No change to current text)

104.3 Examination of documents. The code official shall examine or cause to be examined the accompanying construction documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

104.3.1 Approval of construction documents. When the code official issues a permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "Reviewed for Code Compliance." Such approved construction documents shall not be changed, modified or altered without authorization from the code official. Work shall be done in accordance with the approved construction documents.

One set of construction documents so reviewed shall be retained by the code official. The other set shall be returned to the applicant, shall be kept at the site of work and shall be open to inspection by the code official or a duly authorized representative.

104.3.2 Previous approvals. This code shall not require changes in the construction documents, construction or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

104.3.3 Phased approval. The code official shall have the authority to issue a permit for the construction of a part of a energy conservation system before the entire construction documents for the whole system have been submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire energy conservation system will be granted.

104.4 Amended construction documents Changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

104.5 Retention of construction documents. One set of approved construction documents shall be retained by the code official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws.

One set of approved construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on construction documents. A section-by-section discussion follows:

104.1: The purpose of this proposed change is to provide correlation with Section 106.1 of the *International Building Code*, *International Residential Code* and *International Existing Building Code* and Section 106.3.1 of the *International Fuel Gas Code*, *International Mechanical Code* and *International Plumbing Code*.

The revisions to this section establish the requirement to provide the code official with construction drawings, specifications and other documents that are prepared by a registered design professional when required by state professional registration laws that apply to the preparation of construction documents.

104.3: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 106.3 of the *International Building Code*, *International Existing Building Code* and *International Residential Code*.

This section provides for examination of the construction documents by the code official or someone assigned by the code official to determine code compliance prior to issuance of a permit.

A similar correlating proposal has also been submitted to the *International Fire Code*.

104.3.1: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 106.3.1 of the *International Building Code*, *International Existing Building Code* and *International Residential Code* and Section 502.2 of the *ICC Electrical Code---Administrative Provisions*.

This provision would provide the code official with a useful administrative tool by requiring that construction documents on which the permit is based be stamped or otherwise endorse as "Reviewed for Code Compliance" by the code official. One set of approved and stamped construction documents must be kept on the construction site to serve as the basis for all subsequent inspections since inspections are to be performed with regard to the approved documents, not the code itself.

104.3.2: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 106.3.2 of the *International Building Code*, *International Existing Building Code* and *International Residential Code* and Section 502.2.1 of the *ICC Electrical Code---Administrative Provisions*.

This provision would provide the code official with a useful administrative tool to protect the continuity of permits issued under previous codes or code editions, as long as such permits are being actively executed subsequent to the effective date of the ordinance adopting this edition of the code.

A similar correlating proposal has also been submitted to the *International Fire Code*, *International Wildland-Urban Interface Code*, *International Mechanical Code*, *International Plumbing Code*, *International Private Sewage Disposal Code* and *International Fuel Gas Code*.

104.3.3: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 106.3.3 of the *International Building Code*, *International Existing Building Code* and *International Residential Code* and Section 502.2.2 of the *ICC Electrical Code---Administrative Provisions*.

This provision would provide the code official with a useful administrative tool by providing the authority to issue a partial permit to allow for the practice of "fast tracking" a job. The section makes it clear that any construction under a partial permit is "at the holder's own risk" and "without assurance that a permit for the entire structure will be granted." The code official is under no obligation to accept work or issue a complete permit in violation of the code, ordinances or statutes simply because a partial permit had been issued. The purpose is to proceed with construction while the design continues for other aspects of the work.

A similar correlating proposal has also been submitted to the *International Fire Code* and the *International Wildland-Urban Interface Code*.

104.4: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 106.4 of the *International Building Code*, *International Existing Building Code* and *International Residential Code* and Section 504.2 of the *ICC Electrical Code---Administrative Provisions*.

This provision would provide the code official with a useful administrative tool for dealing with the common problem of tracking revisions to construction documents during the construction process by requiring that amendments to the original approved construction documents must be filed before constructing the amended item. This will reduce the likelihood of a significant amendment not being submitted resulting in an activity or change that is not approved and that causes a needless delay in obtaining approval of the finished work.

A similar correlating proposal has also been submitted to the *International Mechanical Code*, *International Fire Code* and *International Private Sewage Disposal Code*.

104.5: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 106.5 of the *International Building Code*, *International Residential Code* and *International Existing Building Code*, Section 106.4.6 of the *International Fuel Gas Code* and *International Mechanical Code*, Section 106.5.6 of the *International Plumbing Code*, Section 106.3.6 of the *International Private Sewage Disposal Code* and Section 504.3 of the *ICC Electrical Code---Administrative Provisions*.

It is not unusual for state laws to establish records retention criteria and the goal of this change is to not only make the I-Code family consistent with such laws but also to provide a minimum post-construction retention period since the months immediately following construction completion is typically when most disputes arise that depend on the construction documents for resolution.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC17-06/07

104.2

Proponent: John Neff, Washington State Building Code Council

Revise as follows:

104.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documents are permitted to be submitted when approved by the code official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed. Details shall include, but are not limited to, insulation materials and their *R*-values; fenestration *U*-factors and SHGCs; area-weighted *U*-factor and SHGC calculations; mechanical system design criteria; mechanical and service water heating system and equipment efficiencies, types, sizes and efficiencies; economizer description; equipment and systems controls; fan motor hp and controls; duct sealing, duct and pipe insulation and location; lighting fixture schedule with wattages and control narrative; and air sealing details.

Reason: Section 104.2 is incomplete as it currently focuses on small residential projects and does not address important requirements for other buildings. The purpose of the proposed change is for clarification.

- Area-weighted *U*-factor and SHGC calculations are important for Sections 402.3.1 and 402.3.2.
- Mechanical system design criteria are important for Sections 403.6 and 803.2.2.
- Economizer requirements are in Sections 503.3.1 and 503.4.1.
- Fan motor control requirements are important for Section 503.4.2.
- Lighting wattages and controls are important for Section 505.

Cost Impact: The code change proposal will not increase the cost of construction as Section 104.2 already requires pertinent data on the construction documents. Compliance costs may be reduced due to fewer corrections during plan review that will need to be addressed.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC18-06/07

105.2, 105.5 through 105.8.1 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Revise as follows:

SECTION 105 INSPECTIONS

105.1 General. (No change to current text.)

105.2 Required approvals. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the code official. The code official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the code official. No work shall be done on any part of the building beyond the point indicated in each successive inspection without first obtaining the written approval of the code official. No construction shall be concealed without being inspected and approved.

105.3 Final inspection. (No change to current text.)

105.4 Reinspection. (No change to current text.)

105.5 Approved inspection agencies. The code official is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability

105.6 Inspection requests. It shall be the duty of the holder of the permit or their duly authorized agent to notify the code official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

105.7 Reinspection and testing. Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made so as to achieve compliance with this code. The work or installation shall then be resubmitted to the code official for inspection and testing.

105.8 Approval. After the prescribed tests and inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the code official.

105.8.1 Revocation. The code official is authorized to, in writing, suspend or revoke a notice of approval issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure, premise, or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on inspections of energy conservation systems. A section-by-section discussion follows:

105.2: The purpose of this proposed change is to provide correlation with Section 109.6 of the *International Building Code*, and *International Existing Building Code* and Section 109.4 of the *International Residential Code* which the AHC determined provided a more comprehensive treatment of the subject matter of this section, especially as to procedural matters in reporting inspection results to the permit holder.

A similar correlating proposal has been submitted to the *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code* and *International Private Sewage Disposal Code*.

105.5: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 109.4 of the *International Building Code*, *International Residential Code* and *International Existing Building Code* and Section 107.1.1 of the *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code*, and *International Private Sewage Disposal Code* and Section 702.5 of the *ICC Electrical Code---Administrative Provisions*.

This section makes it clear that the determination as to whether to accept an agency report rests with the code official and that the reporting agency must be acceptable to the code official.

105.6: The purpose of this proposed change is to provide a needed administrative provision not currently in the IMC, the source text for which is Section 109.5 of the *International Building Code*, Section 109.8 of the *International Existing Building Code*, Section 109.3 of the *International Residential Code* and Section 706.2 of the *ICC Electrical Code---Administrative Provisions*.

This section would provide the code official with a useful administrative tool that would make it clear that it is the responsibility of the permit holder to arrange for the required inspections when completed work is ready, thus providing sufficient time for the code official to schedule an inspection visit. It also establishes the responsibility for keeping work open for inspection and providing all means needed to accomplish the inspection.

A similar correlating proposal has also been submitted to the *International Fire Code*, *International Wildland-Urban Interface Code*, *International Plumbing Code*, *International Private Sewage Disposal Code*, *International Mechanical Code* and *International Fuel Gas Code*.

105.7: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 107.2.3 of the *International Fuel Gas Code* and *International Mechanical Code* and Section 107.3.3 of the *International Plumbing Code*.

This section provides that if a system or portion of an energy conservation system does not pass the initial test or inspection, the reasons for the failure must be corrected and the system must be reinspected.

105.8: This section, the source text for which is Section 107.3 of the *International Fuel Gas Code* and *International Mechanical Code* and Section 107.4 of the *International Plumbing Code*, and *International Private Sewage Disposal Code*, provides a needed administrative tool in the form of a notice of approval that the code official issues to indicate completion of an energy conservation installation. While certificates of occupancy for construction are traditionally under the purview of one of the construction codes, the notice of approval will fill a need with regard to application and enforcement of non-building codes.

105.8.1: This section, the source text for which is Section 110.4 of the *International Building Code*, *International Existing Building Code* and *International Residential Code* provides an important administrative tool by giving the code official the authority to revoke a certificate of completion for the reasons indicated in the text. The code official may also suspend the certificate until any code violations are corrected.

A similar correlating proposal has also been submitted to the *International Property Maintenance Code*, *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code* and *International Private Sewage Disposal Code*.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC19-06/07

107.1, 107.3 (New), 107.4 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Revise as follows:

SECTION 107 REFERENCED STANDARDS

107.1 General. The codes and standards referenced in this code shall be those listed in Chapter 6, and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference. The standards, and portions thereof, referred to in this code and listed in Chapter 6 shall be considered part of the requirements of this code to the extent of such reference.

Exception: Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and manufacturer's instructions shall apply.

107.2 Conflicting requirements. (No change to current text.)

107.3 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code

107.4 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on referenced standards in the IECC. A section-by-section discussion follows:

107.1: The purpose of this proposed change is to provide correlation with current Section 102.8 of the *International Fuel Gas Code*, and Section 102.4 of the *International Residential Code* and also add an exception contained in those sections that recognizes the extremely unlikely but possible occurrence of the code requiring or allowing something less restrictive or stringent than the product's listing or manufacturer's instructions. This correlation will provide an added level of safety by recognizing and deferring to the expertise of the manufacturer and the independent testing laboratory process and fill a gap that currently exists in the IECC. The intent is for the highest level of safety to prevail. The revised text also recognizes that there are codes that are referenced documents in the code as well as standards

A similar correlating proposal has been submitted to the *International Building Code*, *International Existing Building Code*, *International Private Sewage Disposal Code*, *International Property Maintenance Code* and *International Wildland-Urban Interface Code*.

107.3: The purpose of this proposed change is to provide a needed administrative provision not currently in the IECC, the source text for which is Section 102.3 of the *International Building Code*, *International Residential Code* and *International Existing Building Code* and Section 102.5 of the *ICC Electrical Code---Administrative Provisions*.

This new provision would provide a code application tool for the code official by making it clear that, in a situation where the code makes reference to a chapter or section number or to another code provision without specifically identifying its location in the code, then that referenced section, chapter or provision is in this code and not in a referenced code or standard.

A similar correlating proposal has also been submitted to the *International Fire Code*, *International Mechanical Code*, *International Plumbing Code*, *International Private Sewage Disposal Code*, *International Property Maintenance Code* and *International Wildland-Urban Interface Code*.

107.4: The purpose of this proposed change is to add a needed administrative provision not currently in the IFGC, the source text for which is Section 102.2 of the *International Building Code*, *International Residential Code* and *International Existing Building Code* and Section 102.3 of the *ICC Electrical Code---Administrative Provisions*.

This proposed provision would assist the code official in dealing with situations where other laws enacted by the jurisdiction or the state or federal government may be applicable to a condition that is also governed by a requirement in the code. In such circumstances, the requirements of the code would be in addition to that other law that is still in effect, although the code official may not be responsible for its enforcement.

A similar correlating proposal has also been submitted to the *International Building Code*, *International Existing Building Code*, *International Residential Code*, *International Fire Code*, *International Mechanical Code*, *International Plumbing Code*, *International Private Sewage Disposal Code*, *International Property Maintenance Code* and *International Wildland-Urban Interface Code*.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC20-06/07

108 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

SECTION 108

FEES

108.1 Fees. A permit shall not be issued until the fees prescribed in Section 108.2 have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

108.2 Schedule of permit fees. A fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority.

108.3 Work commencing before permit issuance. Any person who commences any work before obtaining the necessary permits shall be subject to an additional fee established by the code official, which shall be in addition to the required permit fees.

108.4 Related fees. The payment of the fee for the construction, alteration, removal, or demolition of work done in connection to or concurrently with the work or activity authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law

108.5 Refunds. The code official is authorized to establish a refund policy.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on proposed permit fee provisions in the IECC. The purpose of this proposed change is to provide needed administrative provisions not currently in the IECC, the source text for which is Section 108 of the *International Building Code*, *International Existing Building Code* and *International Residential Code*. A section-by-section discussion follows:

108.1: This section requires that all fees be paid prior to permit issuance or release of an amendment to a permit. Since department operations are usually intended to be supported by fees paid by the user of department activities, it is important that these fees are received before incurring any expense.

108.2: This section authorizes the establishment of a schedule of fees by the jurisdiction. The fees are usually established by law, such as in an ordinance adopting the code, a separate ordinance or legally promulgated regulation, as required by state or local law and are often based on a valuation of the work to be performed.

108.3: The department will incur certain costs (i.e., inspection time and administrative) when investigating and citing a person who has commenced work without having obtained a permit. This section authorizes the code official to recover those costs by establishing a fee, in addition to that collected when the required permit is issued, to be imposed on the responsible party.

108.4: This provision would provide the code official with a useful administrative tool that makes it clear that all applicable fees of the jurisdiction for regulated work that is done collateral to the work being done under this code's permit, such as sewer connections, water taps, driveways, signs, etc.) must be paid.

108.5: This section authorizes the code official to establish a policy to regulate the refund of fees, which may be full or partial, typically resulting from the revocation, abandonment or discontinuance of a building project for which a permit has been issued and fees have been collected.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: If this code change is approved, the final number of this new section will be correlated with all other approved code changes affecting Chapter 1 of this code.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

EC21-06/07

108 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

SECTION 108 **VIOLATIONS**

108.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize an energy conservation system, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

108.2 Notice of violation. The code official is authorized to serve a notice of violation or order on the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition or occupancy of a building or structure in violation of the provisions of this code, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

108.2.1 Service. A notice of violation issued pursuant to this code shall be served upon the owner, operator, occupant, or other person responsible for the condition or violation, either by personal service, mail, or by delivering

the same to, and leaving it with, some person of responsibility upon the premises. For unattended or abandoned locations, a copy of such notice of violation shall be posted on the premises in a conspicuous place at or near the entrance to such premises and the notice of violation shall be mailed by certified mail with return receipt requested or a certificate of mailing, to the last known address of the owner, occupant or both.

108.3 Prosecution of violation. If the notice of violation is not complied with promptly, the code official is authorized to request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

108.4 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the code official, or of a permit or certificate used under provisions of this code, shall be guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

108.4.1 Abatement of violation. In addition to the imposition of the penalties herein described, the code official is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.

108.4.2 Unauthorized tampering. Signs, tags or seals posted or affixed by the code official shall not be mutilated, destroyed or tampered with or removed without authorization from the code official.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on needed provisions concerning violations of the IECC not currently in the IECC. A section-by-section discussion follows:

108.1: This section, the source text for which is Section 113.1 of the *International Building Code*, *International Residential Code* and *International Existing Building Code*, Section 109.1 of the *International Fire Code* and Section 108.1 of the *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code*, and *International Private Sewage Disposal Code*, provides the code official with an important administrative tool by making a clear statement that violations of any kind of the code are unlawful and provides the basis for all citations and correction notices related to violations of the code.

108.2: This section, the source text for which is Section 113.2 of the *International Building Code*, *International Residential Code* and *International Existing Building Code* and Section 108.2 of the *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code*, and *International Private Sewage Disposal Code*, provides the code official with an important administrative tool by giving the authority to notify the person responsible for a building found to be in violation of this code and to order discontinuance and abatement of the violation.

108.2.1: This section, the source text for which is Section 109.2.1 of the *International Fire Code*, would provide the code official with useful guidance on what are generally recognized as legally sound methods of service, in descending order of preference.

A similar correlating proposal has also been submitted to the *International Building Code*, *International Existing Building Code*, *International Residential Code*, *International Plumbing Code*, *International Private Sewage Disposal Code*, *International Mechanical Code*, *International Property Maintenance Code*, and *International Fuel Gas Code*.

108.3: This section, the source text for which is Section 113.3 of the *International Building Code*, *International Residential Code* and *International Existing Building Code* and Section 108.3 of the *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code*, and *International Private Sewage Disposal Code*, provides the code official with an important administrative tool by making a clear statement that violations will not be tolerated and that the code official has the authority to pursue legal means to correct the violation through the use of the legal counsel of the jurisdiction.

108.4: This section, the source text for which is Section 113.4 of the *International Building Code*, *International Residential Code* and *International Existing Building Code* and Section 108.4 of the *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code*, and *International Private Sewage Disposal Code*, provides the code official with an important administrative tool by prescribing a standard fine or other penalty as deemed appropriate by the jurisdiction. Additionally, the section codifies the principle that "each day that a violation continues . . . shall be deemed a separate offense" for the purpose of applying the prescribed penalty in order to facilitate the prompt resolution.

108.4.1: This section, the source text for which is Section 109.3.1 of the IFC and Section 108.6 of the *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code*, and *International Private Sewage Disposal Code* would make it clear that, despite the assessment of a penalty in the form of a fine or imprisonment against a violator, the violation itself must still be corrected. Failure to make the necessary corrections would result in the violator being subject to additional penalties as described in proposed Section 108.4.

A similar correlating proposal has also been submitted to the *International Building Code*, *International Existing Building Code*, *International Residential Code* and *International Wildland-Urban Interface Code*.

108.4.2: This section, the source text for which is Section 109.2.4 of the *International Fire Code*, recognizes that when a building element, component or system is found to be in violation and is removed from service by the code official, notice and warning of such action is typically given by signs, tags or seals which must remain in place until the hazard is abated as approved by the code official. The section would provide the code official with a useful enforcement tool by prohibiting any action that would diminish the effectiveness of the warnings since the safety of the occupants may depend on the warning signs posted by the code official remaining intact and in place.

A similar correlating proposal has also been submitted to the *International Existing Building Code*, *International Residential Code*, *International Mechanical Code*, *International Plumbing Code*, *International Private Sewage Disposal Code*, and *International Fuel Gas Code*.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: If this code change is approved, the final number of this new section will be correlated with all other approved code changes affecting Chapter 1 of this code.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

EC22-06/07

108 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

SECTION 108 STOP WORK ORDER

108.1 Authority. Whenever the code official finds any work regulated by this code being performed in a manner either contrary to the provisions of this code or dangerous or unsafe, the code official is authorized to issue a stop work order.

108.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

108.3 Emergencies. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work.

108.4 Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on stop work order provisions for the IECC. The purpose of this proposed change is to provide needed administrative provisions not currently in the IECC, the source text for which is Section 111 of the *International Fire Code* and Section 114 of the *International Building Code*, *International Existing Building Code* and *International Residential Code*. A section-by-section discussion follows:

108.1: This section provides for the suspension of work for which a permit was issued, pending the removal or correction of a severe violation or unsafe condition identified by the code official. Stop work orders are issued when enforcement can be accomplished no other way or when a dangerous condition exists.

108.2: This section makes it clear that, upon receipt of a violation notice from the building official, all construction activities identified in the notice must immediately cease, except as expressly permitted to correct the violation.

108.3: This section gives the code official the authority to stop the work in dispute immediately when, in his or her opinion, there is an unsafe emergency condition that has been created by the work. The need for the written notice is suspended for this situation so that the work can be stopped immediately.

108.4: This section establishes consequences for when the stop work order is disregarded and the person responsible continues the work that is at issue, other than abatement work. The dollar amounts for the minimum and maximum fines are to be specified in the adopting ordinance.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: If this code change is approved, the final number of this new section will be correlated with all other approved code changes affecting Chapter 1 of this code.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

EC23-06/07

108 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

SECTION 108 BOARD OF APPEALS

108.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The code official shall be an ex officio member of said board but shall have no vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the code official.

108.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.

108.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training and are not employees of the jurisdiction.

Reason: Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at www.iccsafe.org/cs/cc/admin/index.html.

This proposal focuses on basic board of appeals provisions for the IECC. The purpose of this proposed change is to provide needed administrative provisions not currently in the IECC, the source text for which is Section 112 of the *International Building Code*, *International Existing Building Code* and *International Residential Code*. A section-by-section discussion follows:

108.1: This section provides an aggrieved party with a material interest in the decision of the code official a process to appeal such a decision before a board of appeals. This provides a forum, other than the court of jurisdiction, in which to review the code official's actions. The intent of the appeal process is not to waive or set aside a code requirement; rather it is intended to provide a means of reviewing a code official's decision on an interpretation or application of the code or to review the equivalency of protection to the code requirements.

108.2: This section establishes the grounds for an appeal, which claims that the code official has misinterpreted or misapplied a code provision. The board is not allowed to set aside any of the technical requirements of the code; however, it is allowed to consider alternative methods of compliance with the technical requirements.

108.3: This section requires that the members of the appeals board are to have experience in building construction and system matters because the decisions of the appeals board are to be based purely on the technical merits involved in an appeal.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: If this code change is approved, the final number of this new section will be correlated with all other approved code changes affecting Chapter 1 of this code.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC24-06/07

202

Proponent: Chuck Murray, Washington State University, representing the Northwest Energy Code Group

1. Revise as follows:

ALTERATION. Any construction or renovation to an existing structure other than repair or addition ~~that requires a permit~~. Also, a change in a mechanical system that involves an extension, addition or change to the arrangement, type or purpose of the original installation ~~that requires a permit~~.

BASEMENT BELOW GRADE WALL. A wall 50 percent or more below grade and enclosing conditioned space.

COMMERCIAL BUILDING. All buildings or portions thereof that are not included in the definition of Residential Buildings.

FENESTRATION. Skylights, roof windows, vertical windows (e.g. fixed or moveable, including curtainwall and storefront), opaque doors, glazed doors, glazed block, and combination opaque/glazed doors. Fenestration includes products with glass and non-glass glazing materials.

2. Add new text as follows:

GROSS ROOF AREA. The area of the roof measured from the exterior faces of walls or from the centerline of party walls, including skylights and other fenestration in the plane of the roof.

GROSS ABOVE GRADE WALL AREA. The area of the wall measured on the exterior face from the top of the lowest above grade floor to the bottom of the roof, including vertical windows and doors and other fenestration in the plane of the wall.

Reason: Alteration: delete reference to permit as code requirements apply regardless of whether permits are required or not by a local jurisdiction.

Below Grade Wall: "Basement" is an inappropriate term to use as it has a specific meaning in the IBC and IRC. Revise for consistency with terminology used in commercial Chapter 5. Change term throughout the rest of the code (17 places).

Commercial: clarify that this applies to a portion of a building, such as the street-level retail stores in a four-story building with apartments above.

Fenestration: clarify that "windows" includes fenestration types common in commercial buildings.

Gross Above Grade Wall Area: add definitions for consistency of code implementation of terms used in Chapters 4 and 5.

Gross Roof Area Area: add definition for consistency of code implementation of term used in Chapter 5.

Clarify the following definitions:

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC25-06/07

202

Proponent: Julie Ruth, JRuth Code Consulting, representing the American Architectural Manufacturers Association

Revise as follows:

SECTION 202 GENERAL DEFINITIONS

ENTRANCE DOOR. Fenestration products used for ingress, egress and access in non-residential buildings, including, but not limited to, exterior entrances that utilize latching hardware, and automatic closers; and contain over 50% glass specifically designed to withstand heavy use and possibly abuse.

STOREFRONT. A non-residential system of doors and windows mulled as a composite fenestration structure that has been designed to resist heavy use ~~and possible abuse and provide a high level of resistance to wind load and impact from wind borne debris~~. Storefront systems include, but are not limited to, exterior fenestration systems that span from the floor level or above to the ceiling of the same story on commercial buildings.

Reason: The purpose of this code change proposal is to revise the definitions of "entrance door" and "storefront" in the IECC, to more accurately reflect these types of systems, as they are commonly provided.

The definition of entrance doors is revised to clarify that an exterior door must be equipped with both latching hardware and automatic closers, as well as containing over 50% glass, to be considered an entrance door. This is particularly pertinent in the application of Table 502.3, where entrance doors, which usually consist primarily of glass, are permitted to have much higher U-factors than non-entrance doors.

The definition of storefront is revised to remove criteria that may or may not apply to any given storefront system. The primary characteristic of storefront systems is that they are a composite of windows and doors mulled together into one system, as specified in the retained part of the definition. These systems are commonly designed to resist a higher level of use than residential systems. No clear criteria is given in the definition for determining if the system is designed to resist abuse, or for the level of resistance to wind load that is to be provided. Also, these systems may or may not be designed to resist impact from wind borne debris. Therefore, this proposal deletes the phrase "and possible abuse and provide a high level of resistance to wind load and impact from wind borne debris" from the definition of storefront.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

EC26-06/07

202

Proponent: Vickie Lovell, representing the Association of Industrial Metallized Coaters and Laminators, Inc.

Add new text as follows:

PROJECTION (FACTOR) . The ratio of the horizontal depth of the external shading projection divided by the sum of the height of the fenestration and the distance from the top of the fenestration to the bottom of the furthest point of the external shading projection. The shading from projections used to calculate the projection factor is from an architectural feature such as a cornice, balcony, eave overhang, or a permanent shading device.

PERMANENT SHADING DEVICE. A commercially designed material or product, permanently attached, that reduces the directly transmitted solar heat gain entering a building area or space through the fenestration assembly.

Reason: Although both terms are used in the IECC, they are not defined other than what occurs within the context of the code requirement for projection factor – which does not actually define a projection or permanent shading device.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

EC27–06/07

202

Proponent: Craig Conner, Building Quality, representing himself

Revise as follows:

RESIDENTIAL BUILDING. For this code, includes R-3, as well as R-2 and R-4, buildings three stories or less in height above grade. Residential buildings include detached one- and two-family dwellings and multiple single-family dwellings (including townhouses) three stories or less in height above grade.

Reason: Some find ambiguity in the IECC definition of residential buildings. This modification is only for clarity, it is not intended to change the scope of any IECC Chapter.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

EC28–06/07

IECC: 202, 402.5, 402.5.1 (New), Table 402.5.1 (New), 402.5.2 (New), 402.5.3 (New), 402.2.8, 502.5, 502.5.1 (New), Table 502.5.1 (New), 502.5.2 (New), 502.5.3 (New)

IRC: 202, R318, R318.1, R408.3, R702.3.8, R806.2, N1102.2.8, N1102.5, N1102.5.1 (New), Table N1102.5.1 (New), N1102.5.2 (New), N1102.5.3 (New)

IBC: 202, 1203.2, 1203.3.2, 1403.2, 1910.1, 2509.3, 2510.6

IMC: 202

THIS PROPOSAL IS ON THE AGENDA OF THE IECC, IRC, IBC GENERAL, IBC FIRE SAFETY, IBC STRUCTURAL AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent: Joseph Lstiburek, Building Science Corporation, representing himself

PART I – IECC

1. Delete and substitute as follows:

VAPOR RETARDER. ~~A vapor resistant material, membrane or covering such as foil, plastic sheeting, or insulation facing having a permeance rating of 1 perm (5.7 X 10⁻¹¹ kg/Pa[•]E s⁻¹Em²) or less when tested in accordance with the desiccant method using Procedure A of ASTM E-96. Vapor retarders limit the amount of moisture vapor that passes through a material or wall assembly.~~

VAPOR RETARDER CLASS. A measure of a material or assembly's ability to limit the amount of moisture that passes through that material or assembly. Vapor retarder class shall be defined using the desiccant method of ASTM E-96 as follows:

- Class I: 0.1 perm or less
- Class II: 0.1 < perm >= 1.0 perm
- Class III: 1.0 < perm >= 10 perm
- Class IV: Greater than 10 perm

402.5 Moisture control. (Mandatory). The building design shall not create conditions of accelerated deterioration from moisture condensation. Above grade frame walls, floors and ceilings not ventilated to allow moisture to escape shall be provided with an approved vapor retarder. The vapor retarder shall be installed on the warm-in-winter side of the thermal insulation.

Exceptions:

1. In construction where moisture or its freezing will not damage the materials.
2. Frame walls, floors and ceilings in jurisdictions in Zones 1, 2, 3, 4A and 4B. (Crawl space floor vapor retarders are not exempted.)
3. Where other approved means to avoid condensation are provided.

402.5 Vapor retarders. Class I or II vapor retarders are required on the interior side of walls in Zones 5, 6, 7, 8 and Marine 4.

Exceptions:

1. Basement walls.
2. Below grade portion of any wall.
3. Construction where moisture or its freezing will not damage the materials.

2. Add new text as follows:

402.5.1 Class III vapor retarders. Class III vapor retarders shall be permitted where the conditions in Table 402.5.1 are met.

**TABLE 402.5.1
CLASS III VAPOR RETARDERS**

Zone	Class III vapor retarders permitted for:
Marine 4	<u>Vented cladding over OSB</u> <u>Vented cladding over Plywood</u> <u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 2.5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 3.75 in 2x6 wall</u>
5	<u>Vented cladding over OSB</u> <u>Vented cladding over Plywood</u> <u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 7.5 in 2x6 wall</u>
6	<u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 7.5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 11.25 in 2x6 wall</u>
7 and 8	<u>Insulated sheathing with R-value >= 10 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 15 in 2x6 wall</u>

402.5.2 Material vapor retarder class. The vapor retarder class shall be based on the manufacturer's certified testing or a tested assembly.

The following shall be deemed to meet the class specified:

- Class I: Sheet polyethylene, non-perforated aluminum foil
- Class II: Kraft faced fiberglass batts
- Class III: Latex paint
- Class IV: House wrap, building paper.

402.5.3 Minimum clear air spaces and vented openings. For the purposes of this section vented shall include the following minimum clear air spaces. Other openings with the equivalent net free area shall be permitted.

1. Stucco with a 3/8 inch clear airspace with 3/8 inch continuous slot vent openings at the top and bottom of each wall.
2. Brick with a 2 inch clear airspace behind the brick with vents at both the top and bottom of the brick. The vents shall be 3/8 inch x 2.5 inch openings every third brick at both the bottom and top course of each wall.
3. Stone or Masonry Veneer with a 2 inch clear airspace behind the stone with vents at the top and bottom. The vents shall have at least 1 square inch of vent area for every 24 inches of wall.
4. Panel Siding with 3/8 inch clear airspace with 3/8 inch continuous slot vent openings at both the top and bottom of each wall.
5. Wood, Wood Based, or Fiber Cement Siding with either a 1/4 inch clear airspace; or alternatively a 1/4 inch gap between the horizontal siding laps
6. Other approved clear air spaces and vented openings.

3. Revise as follows:

402.2.8 Crawl space walls. As an alternative to insulating floors over crawl spaces, crawl space walls shall be permitted to be insulated when the crawl space is not vented to the outside. Crawl space wall insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm). Exposed earth in unvented crawl space foundations shall be covered with a continuous Class I vapor retarder. All joints of the vapor retarder shall overlap by 6 inches (153 mm) and be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (153 mm) up the stem wall and shall be attached to the stem wall.

4. Delete and substitute as follows:

~~**502.5 Moisture control. (Mandatory).** All framed walls, floors and ceilings not ventilated to allow moisture to escape shall be provided with an approved vapor retarder having a permeance rating of 1 perm (5.7 °x10⁻¹¹ kg/Pa · s · m²) or less, when tested in accordance with the desiccant method using Procedure A of ASTM E 96. The vapor retarder shall be installed on the warm-in-winter side of the insulation.~~

Exceptions:

1. ~~Buildings located in Climate Zones 1 through 3 as indicated in Figure 301.1 and Table 301.1.~~
2. ~~In construction where moisture or its freezing will not damage the materials.~~
3. ~~Where other approved means to avoid condensation in unventilated framed wall, floor, roof and ceiling cavities are provided.~~

502.5 Vapor retarders. Class I or II vapor retarders are required on the interior side of walls in zones 5, 6, 7, 8 and Marine 4.

Exceptions:

1. Basement walls.
2. Below grade portion of any wall.
3. Construction where moisture or its freezing will not damage the materials.

5. Add new text as follows:

502.5.1 Class III vapor retarders. Class III vapor retarders shall be permitted where the conditions in Table 502.5.1 are met.

**TABLE 502.5.1
CLASS III VAPOR RETARDERS**

Zone	Class III vapor retarders permitted for:
<u>Marine 4</u>	<u>Vented cladding over OSB</u> <u>Vented cladding over Plywood</u> <u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 2.5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 3.75 in 2x6 wall</u>
<u>5</u>	<u>Vented cladding over OSB</u> <u>Vented cladding over Plywood</u> <u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 7.5 in 2x6 wall</u>
<u>6</u>	<u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 7.5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 11.25 in 2x6 wall</u>
<u>7 and 8</u>	<u>Insulated sheathing with R-value >= 10 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 15 in 2x6 wall</u>

502.5.2 Material vapor retarder class. The vapor retarder class shall be based on the manufacturer's testing or a tested assembly.

The following shall be deemed to meet the class specified:

Class I: Sheet polyethylene, non-perforated aluminum foil

Class II: Kraft faced fiberglass batts

Class III: Latex paint

Class IV: House wrap, building paper.

502.5.3 Minimum clear air spaces and vented openings. For the purposes of this section vented shall include the following minimum clear air spaces. Other openings with the equivalent net free area shall be permitted.

1. Stucco with a 3/8 inch clear airspace with 3/8 inch continuous slot vent openings at the top and bottom of each wall.
2. Brick with a 2 inch clear airspace behind the brick with vents at both the top and bottom of the brick. The vents shall be 3/8 inch x 2.5 inch openings every third brick at both the bottom and top course of each wall.
3. Stone or Masonry Veneer with a 2 inch clear airspace behind the stone with vents at the top and bottom. The vents shall have at least 1 square inch of vent area for every 24 inches of wall.
4. Panel Siding with 3/8 inch clear airspace with 3/8 inch continuous slot vent openings at both the top and bottom of each wall.
5. Wood, Wood Based, or Fiber Cement Siding with either a 1/4 inch clear airspace; or alternatively a 1/4 inch gap between the horizontal siding laps
6. Other approved clear air spaces and vented openings.

PART II – IRC

1. Revise as follows:

SECTION R202 GENERAL DEFINITIONS

UNUSUALLY TIGHT CONSTRUCTION. Construction in which:

1. Walls and ceilings comprising the building thermal envelope have a continuous ~~water~~ Class I or II vapor retarder with a rating of 1 perm ($5.7 \times 10^{-11} \text{ kg/Pa} \cdot \text{E s}^{-1} \cdot \text{E m}^2$) or less with openings therein gasketed or sealed.
2. Storm windows or weatherstripping is applied around the threshold and jambs of opaque doors and openable windows.
3. Caulking or sealants are applied to areas such as joints around window and door frames between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines, and at other openings.

2. Delete and substitute as follows:

~~**VAPOR RETARDER.** A vapor resistant material, membrane or covering such as foil, plastic sheeting, or insulation facing having a permeance rating of 1 perm ($5.7 \times 10^{-11} \text{ kg/Pa} \cdot \text{E s}^{-1} \cdot \text{Em}^2$) or less when tested in accordance with the desiccant method using Procedure A of ASTM E-96. Vapor retarders limit the amount of moisture vapor that passes through a material or wall assembly.~~

VAPOR RETARDER CLASS. A measure of a material or assembly's ability to limit the amount of moisture that passes through that material or assembly. Vapor retarder class shall be defined using the desiccant method of ASTM E-96 as follows:

Class I: 0.1 perm or less

Class II: $0.1 < \text{perm} \leq 1.0$ perm

Class III: $1.0 < \text{perm} \leq 10$ perm

Class IV: Greater than 10 perm

3. Delete without substitution:

SECTION R318 MOISTURE VAPOR RETARDERS

R318.1 Moisture control. In all framed walls, floors and roof/ceilings comprising elements of the building thermal envelope, a vapor retarder shall be installed on the warm-in-winter side of the insulation.

Exceptions:

1. In construction where moisture or freezing will not damage the materials.
2. Where the framed cavity or space is ventilated to allow moisture to escape.
3. In counties identified as in climate zones 1 through 4 in Table N1101.2.

(Renumber subsequent sections)

4. Revise as follows:

R408.3 Unvented crawl space. Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where:

1. Exposed earth is covered with a continuous Class I vapor retarder. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall; and

R702.3.8 Water-resistant gypsum backing board. Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C 630 or C 1178. Use of water-resistant gypsum backing board shall be permitted on ceilings where framing spacing does not exceed 12 inches (305 mm) on center for 1/2-inch-thick (13 mm) or 16 inches (406 mm) for 5/8-inch-thick (16 mm) gypsum board. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

R806.2 Minimum area. The total net free ventilating area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted, provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor barrier having a transmission rate not exceeding 1 perm ($5.7 \times 10^{-11} \text{ kg/Pa} \cdot \text{s} \cdot \text{m}^2$) is installed on the warm-in-winter side of the ceiling.

N1102.2.8 Crawl space walls. As an alternative to insulating floors over crawl spaces, crawl space walls shall be permitted to be insulated when the crawl space is not vented to the outside. Crawl space wall insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm). Exposed earth in unvented crawl space foundations shall be covered with a continuous Class I vapor retarder. All joints of the vapor retarder shall overlap by 6 inches (153 mm) and be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (153 mm) up the stem wall and shall be attached to the stem wall.

5. Delete and substitute as follows:

~~**N1102.5 Moisture control.** The building design shall not create conditions of accelerated deterioration from moisture condensation. Above-grade frame walls, floors and ceilings not ventilated to allow moisture to escape shall be provided with an approved vapor retarder. The vapor retarder shall be installed on the warm-in-winter side of the thermal insulation.~~

Exceptions:

1. In construction where moisture or its freezing will not damage the materials.
2. Frame walls, floors and ceilings in jurisdictions in Zones 1, 2, 3, 4A, and 4B. (Crawl space floor vapor retarders are not exempted.)
3. Where other approved means to avoid condensation are provided.

N1102.5 Vapor retarders. Class I or II vapor retarders are required on the interior side of walls in zones 5, 6, 7, 8 and Marine 4.

Exceptions:

1. Basement walls.
2. Below grade portion of any wall.
3. Construction where moisture or its freezing will not damage the materials.

6. Add new text as follows:

N1102.5.1 Class III vapor retarders. Class III vapor retarders shall be permitted where the conditions in Table N1102.5.1 are met.

**TABLE N1102.5.1
CLASS III VAPOR RETARDERS**

<u>Zone</u>	<u>Class III vapor retarders permitted for:</u>
<u>Marine 4</u>	<u>Vented cladding over OSB</u> <u>Vented cladding over Plywood</u> <u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 2.5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 3.75 in 2x6 wall</u>
<u>5</u>	<u>Vented cladding over OSB</u> <u>Vented cladding over Plywood</u> <u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 7.5 in 2x6 wall</u>
<u>6</u>	<u>Vented cladding over Fiberboard</u> <u>Vented cladding over Gypsum</u> <u>Insulated sheathing with R-value >= 7.5 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 11.25 in 2x6 wall</u>
<u>7 and 8</u>	<u>Insulated sheathing with R-value >= 10 in 2x4 wall</u> <u>Insulated sheathing with R-value >= 15 in 2x6 wall</u>

N1102.5.2 Material vapor retarder class. The vapor retarder class shall be based on the manufacturer’s testing or a tested assembly.

The following shall be deemed to meet the class specified:

- Class I: Sheet polyethylene, non-perforated aluminum foil
- Class II: Kraft faced fiberglass batts
- Class III: Latex paint
- Class IV: House wrap, building paper.

N1102.5.3 Minimum clear air spaces and vented openings. For the purposes of this section vented shall include the following minimum clear air spaces. Other openings with the equivalent net free area shall be permitted.

1. Stucco with a 3/8 inch clear airspace with 3/8 inch continuous slot vent openings at the top and bottom of each wall.
2. Brick with a 2 inch clear airspace behind the brick with vents at both the top and bottom of the brick. The vents shall be 3/8 inch x 2.5 inch openings every third brick at both the bottom and top course of each wall.
3. Stone or Masonry Veneer with a 2 inch clear airspace behind the stone with vents at the top and bottom. The vents shall have at least 1 square inch of vent area for every 24 inches of wall.
4. Panel Siding with 3/8 inch clear airspace with 3/8 inch continuous slot vent openings at both the top and bottom of each wall.
5. Wood, Wood Based, or Fiber Cement Siding with either a 1/4 inch clear airspace; or alternatively a 1/4 inch gap between the horizontal siding laps
6. Other approved clear air spaces and vented openings.

PART III – IBC GENERAL

1. Delete and substitute as follows:

**SECTION 202
GENERAL DEFINITIONS**

VAPOR RETARDER. A vapor resistant material, membrane or covering such as foil, plastic sheeting, or insulation facing having a permeance rating of 1 perm (5.7 X 10⁻¹¹ kg/Pa · E s⁻¹ · Em²) or less when tested in accordance with the desiccant method using Procedure A of ASTM E 96. Vapor retarders limit the amount of moisture vapor that passes through a material or wall assembly.

VAPOR RETARDER CLASS. A measure of a material or assembly's ability to limit the amount of moisture that passes through that material or assembly. Vapor retarder class shall be defined using the desiccant method of ASTM E-96 as follows:

Class I: 0.1 perm or less

Class II: $0.1 < \text{perm} \leq 1.0$ perm

Class III: $1.0 < \text{perm} \leq 10$ perm

Class IV: Greater than 10 perm

2. Revise as follows:

1203.2 Attic spaces. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. A minimum of 1 inch (25 mm) of airspace shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than 1/150 of the area of the space ventilated, with 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

Exception: The minimum required net free ventilating area shall be 1/300 of the area of the space ventilated, ~~provided a vapor retarder having a transmission rate not exceeding 1 perm in accordance with ASTM E 96 is installed on the warm side of the attic insulation and~~ provided 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents, with the balance of the required ventilation provided by eave or cornice vents.

1203.3.2 Exceptions. The following are exceptions to Sections 1203.3 and 1203.3.1:

1. Where warranted by climatic conditions, ventilation openings to the outdoors are not required if ventilation openings to the interior are provided.
2. The total area of ventilation openings is permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is ~~treated~~ covered with an approved Class I vapor retarder material and the required openings are placed so as to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited.
3. Ventilation openings are not required where continuously operated mechanical ventilation is provided at a rate of 1.0 cubic foot per minute (cfm) for each 50 floor area and the ground surface is covered with an approved Class I vapor retarder.
4. Ventilation openings are not required when the ground surface is covered with an approved Class I vapor retarder, the perimeter walls are insulated and the space is conditioned in accordance with the *International Energy Conservation Code*.
5. For buildings in flood hazard areas as established in Section 1612.3, the openings for under-floor ventilation shall be deemed as meeting the flood opening requirements of ASCE 24 provided that the ventilation openings are designed and installed in accordance with ASCE 24.

PART IV – IBC FIRE SAFETY

1403.2 Weather protection. Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in Section 1405.3. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1404.2, and a means for draining water that enters the assembly to the exterior. ~~Protection against condensation in the exterior wall assembly shall be provided in accordance with the *International Energy Conservation Code*.~~

Exceptions:

1. A weather-resistant exterior wall envelope shall not be required over concrete or masonry walls designed in accordance with Chapters 19 and 21, respectively.
2. Compliance with the requirements for a means of drainage, and the requirements of Sections 1404.2 and 1405.3, shall not be required for an exterior wall envelope that has been demonstrated through testing to resist wind-driven rain, including joints, penetrations and intersections with dissimilar materials, in accordance with ASTM E 331 under the following conditions:
 - 2.1. Exterior wall envelope test assemblies shall include at least one opening, one control joint, one wall/eave interface and one wall sill. All tested openings and penetrations shall be representative of the intended end-use configuration.

- 2.2. Exterior wall envelope test assemblies shall be at least 4 feet by 8 feet (1219 mm by 2438 mm) in size.
- 2.3. Exterior wall envelope assemblies shall be tested at a minimum differential pressure of 6.24 pounds per square foot (psf) (0.297 kN/m²).
- 2.4. Exterior wall envelope assemblies shall be subjected to a minimum test exposure duration of 2 hours.

The exterior wall envelope design shall be considered to resist wind-driven rain where the results of testing indicate that water did not penetrate control joints in the exterior wall envelope, joints at the perimeter of openings or intersections of terminations with dissimilar materials.

PART V – IBC STRUCTURAL

1910.1 General. The thickness of concrete floor slabs supported directly on the ground shall not be less than 3 1/2 inches (89 mm). A 6-mil (0.006 inch; 0.15 mm) polyethylene Class I vapor retarder with joints lapped not less than 6 inches (152 mm) shall be placed between the base course or subgrade and the concrete floor slab, or other approved equivalent methods or materials shall be used to retard vapor transmission through the floor slab.

Exception: A No vapor retarder is ~~not~~ required:

1. For detached structures accessory to occupancies in Group R-3, such as garages, utility buildings or other unheated facilities.
2. For unheated storage rooms having an area of less than 70 square feet (6.5 m²) and carports attached to occupancies in Group R-3.
3. For buildings of other occupancies where migration of moisture through the slab from below will not be detrimental to the intended occupancy of the building.
4. For driveways, walks, patios and other flatwork which will not be enclosed at a later date.
5. Where approved based on local site conditions.

2509.3 Limitations. Water-resistant gypsum backing board shall not be used in the following locations:

1. Over a Class I or II vapor retarder in shower or bathtub compartments.
2. Where there will be direct exposure to water or in areas subject to continuous high humidity.
3. On ceilings where frame spacing exceeds 12 inches (305 mm) o.c. for 1/2-inch-thick (12.7 mm) water-resistant

2510.6 Water-resistive barriers. Water-resistive barriers shall be installed as required in Section 1404.2 and, where applied over wood-based sheathing, shall include a water-resistive Class III or IV vapor-~~permeable barrier~~ retarder with a performance at least equivalent to two layers of Grade D paper.

Exception: Where the water-resistive barrier that is applied over wood-based sheathing has a water resistance equal to or greater than that of 60-minute Grade D paper and is separated from the stucco by an intervening, substantially nonwater-absorbing layer or drainage space.

PART VI – IMC

1. Revise as follows:

SECTION 202 GENERAL DEFINITIONS

UNUSUALLY TIGHT CONSTRUCTION. Construction in which:

1. Walls and ceilings comprising the building thermal envelope have a continuous ~~water~~ Class I or II vapor retarder ~~with a rating of 1 perm (5.7 x E-10 -11 kg/Pa · E s · E m²) or less~~ with openings therein gasketed or sealed.
2. Storm windows or weatherstripping is applied around the threshold and jambs of opaque doors and openable windows.
3. Caulking or sealants are applied to areas such as joints around window and door frames between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines, and at other openings.

Reason: Wall assemblies can be designed and constructed to dry inwards, outwards and to both sides in all climate zones. Requiring vapor barriers and vapor retarders to always be installed on the interior of wall assemblies inhibits the use of wall designs that promote inward drying thereby increasing the risk of mold and moisture damage. This code change allows more flexibility in the design and construction of moisture forgiving wall systems.

These requirements for vapor retarder have been in the development process for at least 4 years. That process has included two Building America meetings, coordination with personnel at the Oakridge National Laboratory and the University of Waterloo, presentations before ASHRAE committees, and interactions with private companies.

These requirements recognize that many common materials function to various degrees to slow the passage of moisture. In many situations common materials such as the kraft facing on a fiberglass batt, or latex paint may serve to retard moisture sufficiently. In particular, the “standard” sheet of polyethylene is usually not required as a vapor retarder in walls.

This change includes modification of existing vapor retarder requirements and instances in the code to use the vapor retarder classes proposed here.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IECC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART III – IBC GENERAL

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART IV – IBC FIRE SAFETY

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART V – IBC STRUCTURAL

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART VI – IMC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC29–06/07

Table 301.1, Figure 301.1; IRC Table N1101.2, Figure N1101.2

Proponent: John Neff, Washington State Building Code Council

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Revise as follows

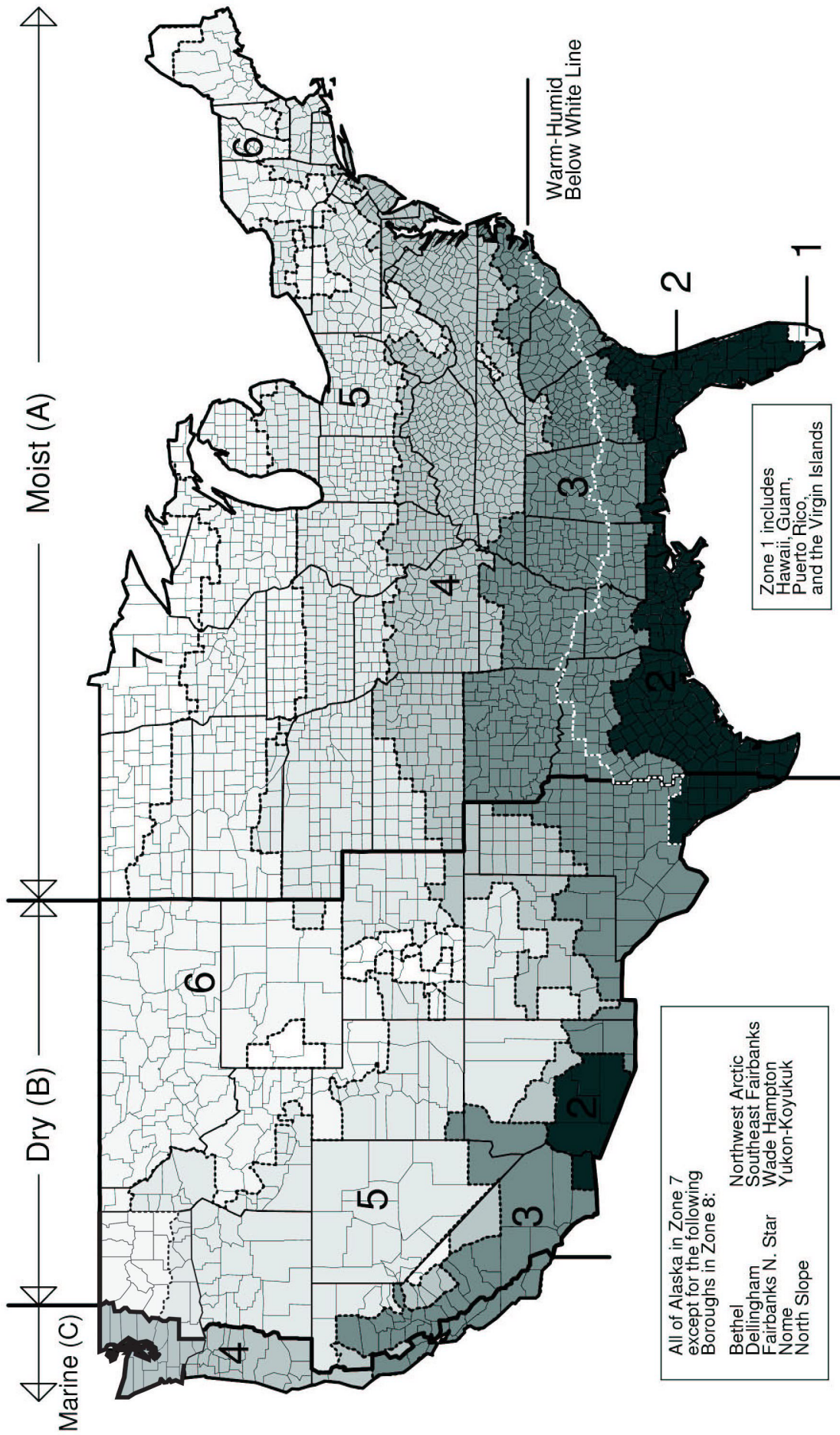


FIGURE 301.1
CLIMATE ZONES

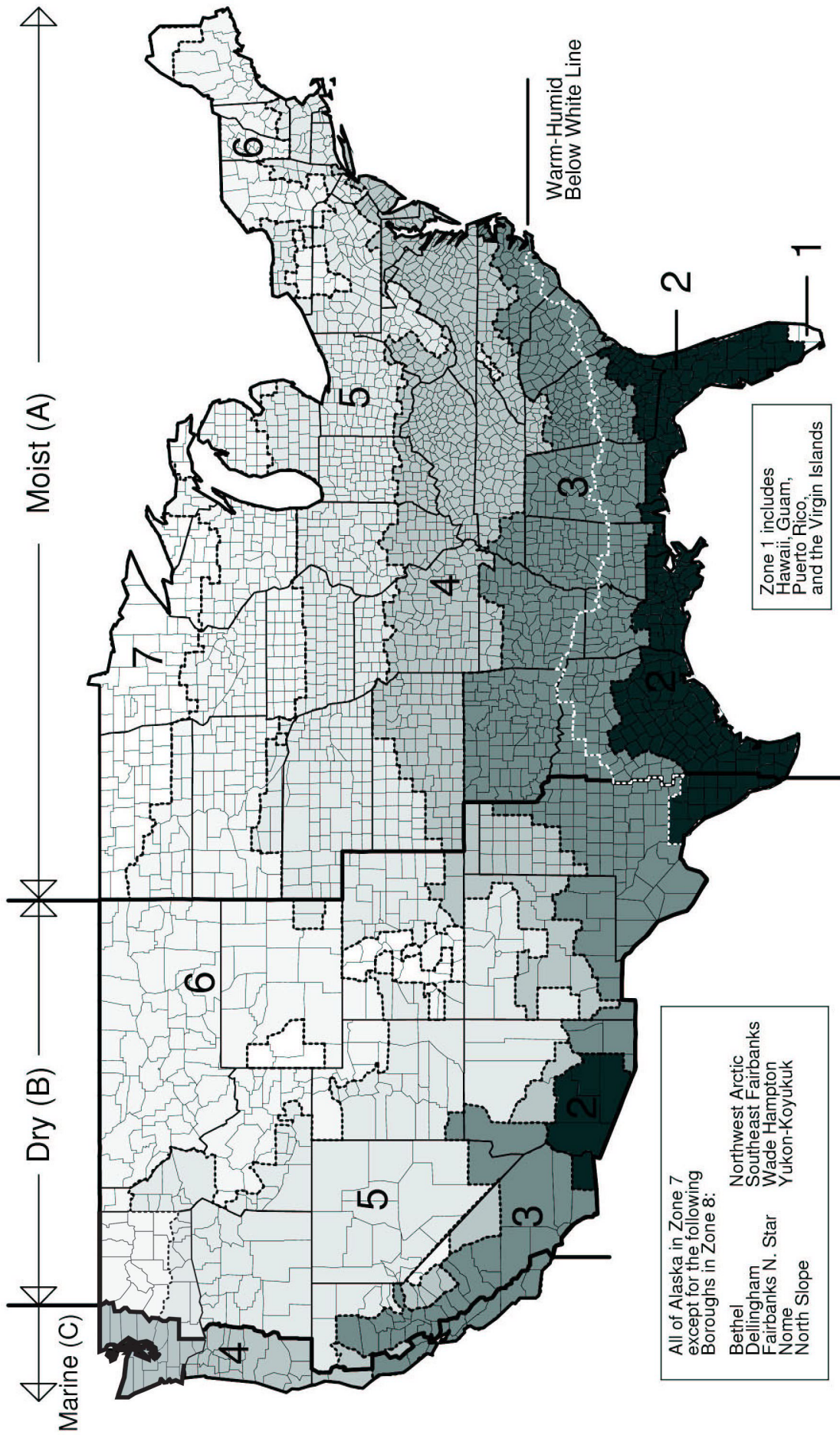
**TABLE 301.1
CLIMATE ZONES BY STATE, COUNTY AND TERRITORIES**

Washington	Grant	Zone 6 Dry
	Kittitas	<u>Adams</u>
Zone 4 Marine	Klickitat	<u>Chelan</u>
except	Lincoln	<u>Douglas</u>
	San Juan	Ferry
Zone 5 Dry	Skamania	<u>Grant</u>
Adams	Spokane	<u>Kittitas</u>
Asotin	Walla Walla	<u>Lincoln</u>
Benton	Whitman	Okanogan
Chelan	Yakima	Pend Oreille
Columbia		<u>Spokane</u>
Douglas		Stevens
Franklin		<u>Whitman</u>
Garfield		

(Other states to remain unchanged.)

PART II - IRC

Revise as follows:



All of Alaska in Zone 7
except for the following
Boroughs in Zone 8:

- Bethel
- Dillingham
- Fairbanks N. Star
- Nome
- North Slope
- Northwest Arctic
- Southeast Fairbanks
- Wade Hampton
- Yukon-Koyukuk

Zone 1 includes
Hawaii, Guam,
Puerto Rico,
and the Virgin Islands

FIGURE 1101.2
CLIMATE ZONES

**TABLE N1101.2
CLIMATE ZONES BY STATE, COUNTY AND TERRITORIES**

Washington	Grant	Zone 6 Dry
	Kittitas	<u>Adams</u>
Zone 4 Marine except	Klickitat	<u>Chelan</u>
	Lincoln	<u>Douglas</u>
	San Juan	Ferry
Zone 5 Dry	Skamania	<u>Grant</u>
Adams	Spokane	<u>Kittitas</u>
Asotin	Walla Walla	<u>Lincoln</u>
Benton	Whitman	Okanogan
Chelan	Yakima	Pend Oreille
Columbia		<u>Spokane</u>
Douglas		Stevens
Franklin		<u>Whitman</u>
Garfield		

(Other states to remain unchanged)

Reason: The Revised Code Washington, Chapter 19.27A, establishes climate zones in statute for the Energy Code in Washington State. These climate zones were established by the Washington State Legislature in 1990 and follow county lines. The cold climate zone includes twelve counties: Adams, Chelan, Douglas, Ferry, Grant, Kittitas, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, and Whitman. The building envelope requirements for these counties are most similar to Climate Zone 6 in the IECC. Consequently, we request that the county climate zone assignments in Table 301.1 and Figure 301.1 be revised as shown.

The purpose of the code change proposal is to align Climate Zones in Washington to those established in statute.

Cost Impact: The code change proposal will not increase the cost of construction as the revised climate zone assignments correspond with existing practice in Washington State.

PART I – IECC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC30–06/07

Table 301.3(2)

Proponent: Chuck Murray, Washington State University, representing Northwest Energy Code Group

Revise as follows:

**TABLE 301.3(2)
INTERNATIONAL CLIMATE ZONE DEFINITIONS**

ZONE NUMBER	THERMAL CRITERIA	SI UNITS
1	9000 < CDD50°F	5000 < CDD10°C
2	6300 < CDD50°F ≤ 9000	3500 < CDD10°C ≤ 5000
3A and 3B	4500 < CDD50°F ≤ 6300 AND HDD65°F ≤ 5400	2500 < CDD10°C ≤ 3500 AND HDD18°C ≤ 3000
<u>3C</u>	<u>CDD50°F < 4500 AND</u> <u>HDD65°F < 3600</u>	<u>CDD10°C < 2500 AND</u> <u>HDD18°C < 2000</u>
4 A and 4B	CDD50°F ≤ 4500 AND <u>3600 < HDD65°F ≤ 5400</u>	CDD10°C ≤ 2500 AND <u>2000 < HDD18°C ≤ 3000</u>
<u>3C</u>	<u>HDD65°F < 3600</u>	<u>HDD18°C < 2000</u>
<u>4C</u>	<u>3600 < HDD65°F ≤ 5400</u>	<u>2000 < HDD18°C ≤ 3000</u>
5	5400 < HDD65°F ≤ 7200	3000 < HDD18°C ≤ 4000
6	7200 < HDD65°F ≤ 9000	4000 < HDD18°C ≤ 5000
7	9000 < HDD65°F ≤ 12600	5000 < HDD18°C ≤ 7000
8	12600 < HDD65°F	7000 < HDD18°C

Reason: Revise climate zone listings to be in numerical order. Fine-tune descriptions so that climate zones do not overlap.

Purpose: Editorial modifications.

We have included the following graph to show that there are not climate zone overlaps when this proposal is adopted.

IECC Climate Zones: 8 zones showing no overlaps															
CDD50 (F)															
9000 +	Zone 1														
8101 - 9000	Zone 2														
7201 - 8100															
6301 - 7200															
5401 - 6300	Zone 3A & 3B														
4501 - 5400															
3601 - 4500	Zone 3C			Zone 4		Zone 5		Zone 6		Zone 7			Zone 8		
2701 - 3600															
1801 - 2700															
901 - 1800															
0 - 900															
	0	901	1801	2701	3601	4501	5401	6301	7201	8101	9001	9901	10801	11701	12600
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
	900	1800	2700	3600	4500	5400	6300	7200	8100	9000	9900	10800	11700	12600	
	HDD65 (F)														

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

EC31-06/07 401.3; IRC N1101.8

Proponent: Craig Conner, Building Quality, representing himself

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Revise as follows:

401.3 Certificate. A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant *R*-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; *U*-factors for fenestration; and the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type types and efficiency efficiencies of heating, cooling and service water heating equipment. Where a gas fired unvented room heater, electric furnace, and/or baseboard electric heater is installed in the residence, the certificate shall list “gas fired unvented room heater”, “electric furnace”, or “baseboard electric heater” as appropriate. An efficiency shall not be listed for gas fired unvented room heaters, electric furnaces, or electric base board heaters.

PART II – IRC

Revise as follows:

N1101.8 Certificate. A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant *R*-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; *U*-factors for fenestration; and the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type types and efficiency efficiencies of heating, cooling and service water heating equipment. Where a gas fired unvented room heater, electric furnace, and/or baseboard electric heater is installed in the residence, the certificate shall list “gas fired unvented room heater”, “electric furnace”, or “baseboard electric heater” as appropriate. An efficiency shall not be listed for gas fired unvented room heaters, electric furnaces, or electric base board heaters.

Reason: Electric furnaces and baseboard heaters sound efficient, since they are virtually 100% efficient at turning electricity into heat. However this is not a good use of electricity and the consumer should not be led to believe electric resistance heating is preferable because its measure of efficiency has a higher number.

Gas fired unvented room heaters are becoming more common, at least according to their trade association. Unvented heater manufacturer's and their trade association advertise that they are 99% or more efficient. Consumers could easily consider a 99% efficient heater better than at 90 AFUE furnace. By design unvented heaters vent the moisture they produce into the residence, a bad design should not be encouraged or made to appear to be a better way to heat.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IECC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC32–06/07

401.3; IRC N1101.8

Proponent: Steven Rocklin, R.A., New York State Department of State Codes Division

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Revise as follows:

401.3 Certificate. A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant *R*-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; *U*-factors for fenestration; and, where requirements apply, the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type and efficiency of heating, cooling and service water heating equipment.

PART II – IRC

Revise as follows:

N1101.8 Certificate. A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant *R*-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; *U*-factors for fenestration; and, where requirements apply, the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type and efficiency of heating, cooling and service water heating equipment.

Reason: The purpose of this proposal is to clarify the location of the certificate that will be placed on or in an electrical panel. The certificate does not govern over any safety information that may be provided and/or required on the panel. Besides circuit directory and disconnect labels, safety instructions such as signage for emergency/alternate power needs to be placed on the disconnect panel. This code proposal clarifies that the required certificate shall not obstruct or conflict with other labels.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IECC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC33–06/07

401.3; IRC N1101.8

Proponent: Steven Rocklin, R.A., New York State Department of State Codes Division

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Delete without substitution:

~~**401.3 Certificate.** A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant *R*-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; *U* factors for fenestration; and, where requirements apply, the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type and efficiency of heating, cooling and service water heating equipment.~~

PART II – IRC

Delete without substitution:

~~**N1101.8 Certificate.** A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant *R*-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; *U* factors for fenestration; and, where requirements apply, the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type and efficiency of heating, cooling and service water heating equipment.~~

Reason: The purpose of this proposal is to remove an unnecessary requirement that may conflict with Section 408.4 of the 2002 edition of the NEC. The certificate does not govern over any safety information that may be provided and/or required on the panel. Besides circuit directory and disconnect labels, safety instructions such as signage for emergency/alternate power needs to be placed on the disconnect panel. The information that section 401.3 requires on the certificate should be available on building construction documents.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IECC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

EC34–06/07

Table 402.1.1, Table 402.1.2, 402.1.3, 402.2.3; IRC Table N1102.1, Table N1102.1.2, N1102.1.2, N1102.2.3

Proponent: Craig Conner, Building Quality, representing himself

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

1. Revise tables as follows:

**TABLE 402.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^(a)**

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC ^h	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ^h	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^e WALL R-VALUE
1	1.20	0.75	0.40	30	13	3 / 4	13	0	0	0
2	0.75	0.75	0.40	30	13	4 / 6	13	0	0	0
3	0.65	0.65	0.40 ^c	30	13	5 / 8	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5 / 10	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.35	0.60	NR	38	19 or 13+5 ^g	13 / 17	30 ^f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	19 or 13+5 ^g	15 / 19	30 ^f	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19 / 21	30 ^f	10/13	10, 4 ft	10/13

a. through g. (No change to current text)

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

**TABLE 402.1.3.
EQUIVALENT U-FACTORS^(a)**

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor ^b	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
1	1.20	0.75	0.035	0.082	0.197	0.064	0.360	0.477
2	0.75	0.75	0.035	0.082	0.165	0.064	0.360	0.477
3	0.65	0.65	0.035	0.082	0.141	0.047	0.360	0.136
4 except Marine	0.40	0.60	0.030	0.082	0.141	0.047	0.059	0.065
5 and Marine 4	0.35	0.60	0.030	0.060	0.082	0.037	0.059	0.065
6	0.35	0.60	0.026	0.060	0.060	0.033	0.059	0.065
7 and 8	0.35	0.60	0.026	0.057	0.057	0.033	0.041	0.057

a. Non-fenestration 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 0.17 in zone 1, 0.14 in zone 2, 0.12 in zone 3, 0.10 in zone 4 and the same as the wood frame wall in zones 5 through 8.

2. Delete without substitution:

~~**402.1.3 U-factor alternative.** An assembly with a U-factor equal to or less than that specified in Table 402.1.3 shall be permitted as an alternative to the R-value in Table 402.1.1.~~

~~**Exception:** For mass walls not meeting the criterion for insulation location in Section 402.2.3, the U-factor shall be permitted to be:~~

- ~~1. U-factor of 0.17 in Climate Zone 1.~~
- ~~2. U-factor of 0.14 in Climate Zone 2.~~
- ~~3. U-factor of 0.12 in Climate Zone 3.~~

3. Revise as follows:

402.2.3 Mass walls. Mass walls for the purposes of this Chapter shall be considered above-grade walls of concrete block, concrete, insulated concrete form (ICF), masonry cavity, brick (other than brick veneer), earth (adobe, compressed earth block, rammed earth) and solid timber/logs. ~~The provisions of Section 402.1.1 for mass walls shall be applicable when at least 50 percent of the required insulation R-value is on the exterior of, or integral to, the wall. Walls that do not meet this criterion for insulation placement shall meet the wood frame wall insulation requirements of Section 402.1.1.~~

~~**Exception:** For walls that do not meet the criterion for insulation placement, the minimum added insulation R-value shall be permitted to be:~~

- ~~1. R-value of 4 in Climate Zone 1.~~
- ~~2. R-value of 6 in Climate Zone 2.~~
- ~~3. R-value of 8 in Climate Zone 3.~~

PART II – IRC

Revise tables as follows:

**TABLE N1102.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^(a)**

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC ^h	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ^h	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^c WALL R-VALUE
1	1.20	0.75	0.40	30	13	3 / 4	13	0	0	0
2	0.75	0.75	0.40	30	13	4 / 6	13	0	0	0
3	0.65	0.65	0.40 ^e	30	13	5 / 8	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5 / 10	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.35	0.60	NR	38	19 or 13+5 ^g	13 / 17	30 ^f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	19 or 13+5 ^g	15 / 19	30 ^f	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19 / 21	30 ^f	10/13	10, 4 ft	10/13

a. through g. (No change to current text)

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

**TABLE N1102.1.2.
EQUIVALENT U-FACTORS^(a)**

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor ^b	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
1	1.20	0.75	0.035	0.082	0.197	0.064	0.360	0.477
2	0.75	0.75	0.035	0.082	0.165	0.064	0.360	0.477
3	0.65	0.65	0.035	0.082	0.141	0.047	0.360	0.136
4 except Marine	0.40	0.60	0.030	0.082	0.141	0.047	0.059	0.065
5 and Marine 4	0.35	0.60	0.030	0.060	0.082	0.037	0.059	0.065
6	0.35	0.60	0.026	0.060	0.060	0.033	0.059	0.065
7 and 8	0.35	0.60	0.026	0.057	0.057	0.033	0.041	0.057

a. Non-fenestration 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 0.17 in zone 1, 0.14 in zone 2, 0.12 in zone 3, 0.10 in zone 4 and the same as the wood frame wall in zones 5 through 8.

N1102.1.2 U-factor alternative. An assembly with a U-factor equal to or less than that specified in Table N1102.1.2 shall be permitted as an alternative to the R-value in Table N1102.1.

Exception: ~~For mass walls not meeting the criterion for insulation location in Section N1102.2.3, the U-factor shall be permitted to be:~~

1. ~~U-factor of 0.17 in Climate Zone 1~~
2. ~~U-factor of 0.14 in Climate Zone 2~~
3. ~~U-factor of 0.12 in Climate Zone 3~~
4. ~~U-factor of 0.10 in Climate Zone 4 except Marine~~
5. ~~U-factor of 0.082 in Climate Zone 5 and Marine 4~~

N1102.2.3 Mass walls. Mass walls for this chapter shall be considered above-grade walls of concrete block, concrete, insulated concrete form (ICF), masonry cavity, brick (other than brick veneer), earth (adobe, compressed earth block, rammed earth) and solid timber/logs. ~~The provisions of Section N1102.1 for mass walls shall be applicable when at least 50 percent of the required insulation R-value is on the exterior of, or integral to, the wall. Walls not meeting this criterion for insulation placement shall meet the wood frame wall insulation requirements of Section N1102.1.~~

Exception: ~~For walls that do not meet this criterion for insulation placement, the minimum added insulation R-value shall be permitted to be:~~

1. ~~R-value of 4 in Climate Zone 1~~
2. ~~R-value of 6 in Climate Zone 2~~
3. ~~R-value of 8 in Climate Zone 3~~
4. ~~R-value of 10 in Climate Zone 4 except Marine~~
5. ~~R-value of 13 in climate Zone 5 and Marine 4~~

Reason: The mass wall insulation requirements are confusing as written. Moving the mass wall R-values and U-factors to their respective tables makes the requirements clearer.

This clarifies that basement walls are not mass walls. This aligns the IRC and IECC.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IECC

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

PART II – IRC

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

EC35–06/07

Table 402.1.1; IRC Table N1102.1

Proponent: Craig Conner, Building Quality, representing himself

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Revise as follows:

**TABLE 402.1.1
 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^(a)**

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC ^h	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^c WALL R-VALUE
1	1.20	0.75	0.40 0.25	30	13	3	13	0	0	0
2	0.75	0.75	0.40 0.25	30	13	4	13	0	0	0
3	0.65	0.65	0.40 ^e	30	13	5	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.35	0.60	NR	38	19 or 13+5 ^g	13	30 ^f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	19 or 13+5 ^g	15	30 ^f	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19	30 ^f	10/13	10, 4 ft	10/13

PART II – IRC

**TABLE 1102.1
 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^(a)**

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC ^h	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^c WALL R-VALUE
1	1.20	0.75	0.40 0.25	30	13	3	13	0	0	0
2	0.75	0.75	0.40 0.25	30	13	4	13	0	0	0
3	0.65	0.65	0.40 ^e	30	13	5	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.35	0.60	NR	38	19 or 13+5 ^g	13	30 ^f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	19 or 13+5 ^g	15	30 ^f	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19	30 ^f	10/13	10, 4 ft	10/13

Reason: Low SHGC windows reduce cooling energy use and increase heating energy use. Climate zones 1 and 2 are overwhelmingly cooling dominated, thus low SHGC windows offer a clear energy savings. Glass manufacturers produce low SHGC windows by depositing low emissivity (low-E) coatings on the glass during the glass manufacturing process. Glass with a variety of low-E coatings is offered commercially, including glass with coatings that produce an SHGC as low as 0.25.

Most energy-saving options come at an increased cost but manufacturer-applied glass coatings are different. The inherent cost difference for the various available low-E options is very small, provided the glass with that coating is produced in large commercially viable quantities. With this code change, large quantities of low-SHGC windows would be required for climate zones 1 and 2.

Small commercial buildings often use “residential-style” windows, made by the same companies that manufacture residential windows. Table 802.3 already has the same 0.25 SHGC requirement for zones 1, 2 and 3, unless the building has a significant overhang (projection factor). Between the existing commercial requirement and this new residential requirement, a large market will be created for low SHGC windows. Therefore, these windows will be available for essentially no incremental cost. Additionally, because low SHGC reduces peak load sizes, there will be a small reduction in the required cooling capacity, which is also a possible first-cost savings.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IECC

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

PART II – IRC

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

EC36–06/07

402.1.2, Table 402.1; IRC N1102.1.1, Table N1102.1

Proponent: Ronald Majette, representing the United States Department of Energy

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Revise as follows:

402.1.2 R-value computation. Insulation material used in layers, such as framing cavity insulation and insulating sheathing, shall be summed to compute the component R-value. For walls, structural wall panels with an area equal to but not greater than the area required for bracing by Chapter 6 of the *International Residential Code* are permitted to replace insulating sheathing in locations with a seismic design categories A, B, and C or in locations with a 50-year wind speed of less than 110 mph as specified in Chapter 3 of the *International Residential Code*. The manufacturer's settled R-value shall be used for blown insulation. Computed R-values shall not include an R-value for other building materials or air films.

**TABLE 402.1.
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^(a)**

- g. "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. ~~If structural sheathing covers 25% or less of the exterior, R-5 sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.~~

(Portions of table and footnotes not shown do not change)

PART II – IRC

N1102.1.1 R-value computation. Insulation material used in layers, such as framing cavity insulation and insulating sheathing, shall be summed to compute the component R-value. For walls, structural wall panels with an area equal to but not greater than the area required for bracing by Chapter 6 of the *International Residential Code* are permitted to replace insulating sheathing in locations with a seismic design categories A, B, and C or in locations with a 50-year wind speed of less than 110 mph as specified in Chapter 3 of the *International Residential Code*. The manufacturer's settled R-value shall be used for blown insulation. Computed R-values shall not include an R-value for other building materials or air films.

**TABLE N1102.1.
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^(a)**

- g. "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. ~~If structural sheathing covers 25% or less of the exterior, R-5 sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.~~

(Portions of table and footnotes not shown do not change)

Reason: The purpose of this code change is to provide simple, complete, unambiguous, and appropriate allowances for structural bracing panels in walls that have insulating sheathing. The code currently only provides guidance on how much structural sheathing is allowed for the rather unusual combination of R-15 cavity insulation and R-5 sheathing insulation. The combination of wind and seismic zones where bracing panels are permitted to replace insulating sheathing ensures that most of the wall will be mostly covered by insulating sheathing.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IECC

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

PART II – IRC

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

EC37–06/07

402.1.4, Table 402.1.4; IRC N1102.1.4, Table N1102.1.4

Proponent: Craig Conner, Building Quality, representing himself

THIS PROPOSAL IS ON THE AGENDA OF THE IECC AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Add new text as follows:

402.1.4 Insulation tradeoff. The insulation requirements in Table 402.1.4 shall be permitted as a tradeoff for the specified improvement.

(Renumber subsequent section)

TABLE 402.1.4.
INSULATION TRADEOFFS

<u>CLIMATE ZONE</u>	<u>IMPROVEMENT</u>	<u>INSULATION REQUIREMENT</u>
4	Any ONE of the following: SEER 14 with AFUE 90 SEER 14 with HSPF 8.5 Ground source heat pump Airtight residence Airtight ducts	R-30 ceiling and R-19 floor
5	Any ONE of the following: AFUE 90 SEER 14 with HSPF 8.5 Ground source heat pump Airtight residence Airtight ducts	R-13 wall
5	Any TWO of the following: AFUE 90 SEER 14 with HSPF 8.5 Ground source heat pump Airtight residence Airtight ducts	R-30 ceiling, R-13 wall, and R-19 floor
6	Any ONE of the following: AFUE 90 Ground source heat pump Airtight residence Airtight ducts	R-13 wall
6	Any TWO of the following: AFUE 90 Ground source heat pump Airtight residence Airtight ducts	R-38 ceiling, R-13 wall, and R-19 floor

Notes:

- Residences with electric furnaces, baseboard heating or gas-fired unvented room heaters are not eligible to use this table.
- Oil boiler or oil furnace with AFUE 85 meets the AFUE requirement.