



**SOUTHERN NEVADA
PROPOSED AMENDMENTS**

TO THE

2012 INTERNATIONAL ENERGY CONSERVATION CODE

**INTERNATIONAL ENERGY CONSERVATION CODE COMMITTEE
SEPTEMBER 04, 2012**

PREFACE

This document was developed by the Southern Nevada Building Officials' International Energy Conservation Code Committee and presents recommended amendments to the 2012 *International Energy Conservation Code* (IECC) as published by the International Code Council (ICC).

Participation in the 2012 International Energy Conservation Code Committee was open to all interested parties. However, voting on amendment proposals was limited to one vote each for the seven Southern Nevada municipalities (Clark County, Henderson, Las Vegas, North Las Vegas, Boulder City, Pahrump, and Mesquite), the Clark County School District, and three industry representatives. All International Energy Conservation Code Committee proceedings were conducted in accordance with Robert's Rules of Order.

The recommended amendments contained herein are not code unless adopted and codified by governmental jurisdictions. These amendments are not intended to prevent the use of any material or method of construction not specifically prescribed herein, provided any alternates have been approved and their use authorized by the Building Official. This document may be copied and used in whole or in part without permission or approval from the organizations listed on the cover page.

Tracking List of Proposed Amendments

No.	Code Section	Proposed by	Status/Notes
CEC 01	C101.1	Fredric Zwerg (Southwest Gas)	Approved
CEC02	C101.4.3	Don White (City of Las Vegas)	Approved
CEC03	C102.1.1	Don White (City of Las Vegas)	Approved
CEC04	C106.1	Fredric Zwerg (Southwest Gas)	Approved
CEC05	C202	Fredric Zwerg (Southwest Gas)	Approved
CEC06	C202	Fredric Zwerg (Southwest Gas)	Approved
CEC07	C202	George Huang(Industry)	Approved
CEC08	C202	George Huang(Industry)	Approved
CEC09	C202	George Huang(Industry)	Approved
CEC10	C301.1	Don White and Brent Steed	Approved
CEC11	C303.1.3	Don White (City of Las Vegas)	Approved
CEC12	C402.4.1	Don White (City of Las Vegas)	Approved
CEC13	C402.4.7	Don White (City of Las Vegas)	Approved
CEC14	C402.4	Don White (City of Las Vegas)	Approved
CEC15	C405	George Huang(Industry)	Approved
CEC16	C405.1	George Huang(Industry)	Approved
CEC17	C405.2.3	George Huang(Industry)	Approved
CEC18	C405.5.1	George Huang(Industry)	Approved
CEC19	C405.6.2	George Huang(Industry)	Approved
CEC20	C408.2	Jason Witterman(Industry)	Approved
CEC21	C408.2.4	Jason Witterman(Industry)	Approved
CEC22	C408.3	George Huang(Industry)	Approved
CEC23	Chapter 5	Don White (City of Las Vegas)	Approved
CEC24	Chapter 5	Don White (City of Las Vegas)	Approved
REC01	R101.1	Don White (City of Las Vegas)	Approved
REC02	R101.4.3	Don White (City of Las Vegas)	Approved
REC03	R102.1.1	Don White (City of Las Vegas)	Approved
REC04	R106.1	Don White (City of Las Vegas)	Approved
REC05	R202	Don White (City of Las Vegas)	Approved
REC06	R202	Fredric Zwerg (Southwest Gas)	Approved
REC07	R301.1	Don White and Brent Steed	Approved
REC08	R303.1.3	Don White (City of Las Vegas)	Approved
REC09	R401.3	Don White and B. Thompson	Approved
REC10	R402.2.4	Tracy Foglesong(Industry)	Approved
REC11	Table R402.4.1.1	Tracy Foglesong(Industry)	Approved
REC12	R403.5	Fredric Zwerg (Southwest Gas)	Approved
REC13	Chapter 5	Don White (City of Las Vegas)	Approved

Commercial Energy Code Provisions

Committee Approved Amendments to Commercial Chapter 1—Scope and Administration

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 IECC
Amend. Track. No.: CEC 01
Code Section: Sec C101.1 Title
Date: 06/01/2012
Proponent: Fredric Zwerg
Representing: Southwest Gas Corporation

Proposed Amendment : Section C101.1 Title is amended to read as follows:

C101.2 Title. This code shall be known as the *International Energy Conservation Code of Southern Nevada*, and shall be cited as such. It is referred to herein as “this code”.

JUSTIFICATION:

Per SNBO Criteria 6 for clarification and completion purposes only.

Reasoning: This is merely a formality to fill in the blank space left in the code book text for such purpose. The change at the end of the second sentence is a correction of grammar.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 01

Boulder City (Henderson)	Clark County	Henderson	Las Vegas	Pahrump (Clk Co.)	North Las Vegas	CCSD (NLV)	Industry			Result Approved 6/11/12
							Hodgson	Foglesong	Zwerg	
Soucy	Thompson	Soucy	White	Thompson	Kinney	Kinney				
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 02
Code Section: C101.4.3 Additions, alterations, renovations and repairs, Exception
Date: April 14, 2012
Proponent: Don White
Representing: City of Las Vegas

Proposed Amendment: C101.4.3 remains the same. Exceptions changed to read as follows:

Exception: The following need not comply with the applicable provisions of the code, provided the authority having jurisdiction deems the energy use of the building is not increased:

1. (same)
2. Glass only replacements in an existing sash and frame, provided glass meets or exceed the same U-factor and SHGC of the glass being replaced. If the U-factor and SHGC of the glass cannot be determined, the windows shall either meet the minimum prescriptive values of Table C402.3 or justified using the whole building performance modeling approach per Sec. C407.
3. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities ~~are~~ had been filled with insulation. If insulation is missing and R-value cannot be determined, then all exterior cavities absent the insulation shall be insulated per the minimum prescriptive requirements of Sec. C402, or justified using the whole building performance modeling approach per Sec. C407.
4. (same)
5. (same)
6. (same)
7. Alterations that replace less than 50 percent of the luminaires in a room or space provided that such alterations do not increase the installed interior lighting power of Sec. C405.5.2. Altered rooms or spaces created within the remodeled area must still comply with the switching requirements of section C405.2.
8. same
9. Relocations only of exiting lunaires within an area enclosed by existing walls or floor-to-ceiling partitions are exempted from lighting power requirements of Sec. C405.5.2. Altered rooms or spaces created within the remodeled area must still comply with the switching requirements of section C405.2.

JUSTIFICATIONS:

Per SBO Criteria 6, this section was amended to clarify the intent of the code.

Reasoning: The exception statement is misleading and too general, which has resulted in the contractor or design professional thinking they have the authority to make the determination on whether a project, or portion thereof, is exempt. The authority having jurisdiction is added as the entity that makes the final determination of as to whether the energy usage of the building will increase or not.

Exception 2. Per Criteria 6, this exception was amended for clarification. As intended, the replacement of a broken plane of glass in an existing framed opening is “maintenance” and does not require permits. But, if the replacement of glass panes come under the scope of permitted work or renovation project, then the glazing must meet all the requirements of the code.

Exception 3. Per Criteria 6, amended for clarification purposes only. As presently worded, the exception does not state what should be done if a contractor or inspector notes that an existing conditioned building which is under renovation has no insulation in the exterior framing cavities. The building must be brought up to the current energy code.

Exception 7: Per Criteria 6 and Criteria 8, this amendment is proposed for clarification and enforcement consistency purposes. This exception is very poorly conceived and written and causes much confusion. The problem word is “space” as defined by the code. Many design professionals assume this to mean an entire TI space with multiple rooms and uses and changes of use or occupancy. The intent of this exception was for minor change-out of lighting fixture(s) for a particular existing room configuration. In order to show the lighting is exempt as previously written, a lighting power budget calculation would be required. Normally, the reason lighting is being altered is because of a change of use for the space, which is also not exempt under the code per Sec. 101.4.4.

Even if the lighting exemption would be allowed, new walls, rooms or spaces are being created which would also trigger the code switching requirements.

Exception 9: Per Criteria 6 and Criteria 8, the change to this section is also for clarification and uniform interpretation purposes only. This allows the relocation of exiting fixtures within a space or group of spaces where no increase to the energy use of these spaces occurs. BUT, normally, the relocation is due to alterations within a tenant space, including the addition of new rooms and uses. We feel the code should exempt the lighting from the power requirements but not the switching requirements. since new wiring must be added for newly created space switching anyway. Example. An existing open office area has interior partitions added to divide the space into several smaller office areas, copy rooms, storage rooms, etc. Though there is no change to the lighting power usage overall, individual switching requirement for the newly created spaces would now be required, including dual switching requirements, light reduction controls and daylight controls.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 02

Boulder City (N. LV Soucy)	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump Thompson	North Las Vegas Kinney	CC School District (Henderson) Kinney	Industry			Result
							Hodgson	Foglesong	Zwerg	Approved 6/11/12
Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0	

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 03

Code Section: C102.1.1 Above Code Programs

Date: May 4, 2012

Proponent: Don White

Representing: Jurisdiction of Las Vegas

Proposed Amendment: Revise C102.1.1 Above code programs to read as follows:

Section C102.1.1 Above code programs. ~~The code official or other authority having jurisdiction~~ Southern Nevada Building Officials shall be permitted to deem a national, state or local energy efficiency program to exceed the efficiency required by this code. Programs seeking approval must submit all requested supporting documentation, including program guidelines, protocols, calculations and program simulation performance software, if applicable, to the Southern Nevada Building Officials for review. Buildings ~~approved~~ certified in writing by such an energy efficiency program shall be considered in compliance with this code, but all requirements identified as “mandatory” in Chapter 4 of this code shall be met.

JUSTIFICATIONS: Per SNBO Criteria 6, for clarification of the intent of the code. Also, Criteria 8, to provide for consistency in regional interpretation and application of the codes. This matches what we did in the residential energy code. As we have done in past code years, we specify that SNBO is the authority to approve an above code program on a valley wide basis. In addition, wording that clarifies what basic documentation must be submitted to SNBO in order for the above code program to be considered was added. Finally, we changed the word “approved” to “certified” in the last sentence, because the AHJ is the only authority capable of approving per the codes. The energy efficiency program participants must certify the buildings that are enrolled in their programs meet or exceed their protocol and standards.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 03

Boulder City (N. LV) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clark Co) Thompson	North Las Vegas Kinney	CC School District (N. LV) Kinney	Industry			Result Approved 6/11/12
							Hodgson	Foglesong	Zwerg	
Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0	

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 04

Code Section: C106.1 Referenced codes and standards

Date: 06/01/2012

Proponent: Fredric Zwerg

Representing: Southwest Gas Corporation

Proposed Amendment: Revise Section C106.1 Referenced codes and standards to read as follows:

C106.1 Referenced codes and standards. The codes and standards referenced in this code shall be those listed in Chapter 5. Where this code refers to other codes not adopted by the Southern Nevada Building Officials, the applicable code adopted by the Southern Nevada Building Officials shall govern. ~~and s.~~ Such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections C106.1.1 and C106.1.2.

JUSTIFICATION: This amendment was required for proper code correlation. The Southern Nevada Building Officials have adopted the Uniform Plumbing Code in lieu of the International Plumbing Code, the Uniform Mechanical Code in lieu of the International Mechanical Code and the Uniform Fuel Gas Code in lieu of the International Fuel Gas Code. Where the above international codes are referenced in a section of this book, the uniform codes for these disciplines shall apply.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 04

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co.) Thompson	North Las Vegas Kinney	CCSchool District (NLV) Kinney	Industry			Result
							Hodgson	Foglesong	Zwerg	Approved 6/11/12
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

STEERING COMMITTEE RECOMMENDATION: Concurs.

Committee Approved Amendments to Commercial Chapter 2—General Definitions

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 05
Code Section: Section C202 **Definition:** AIR BARRIER
Date: 06/01/2012
Proponent: Fredric Zwerg
Representing: Southwest Gas Corporation

Proposed Amendment: Revise C202 definition of AIR BARRIER to read as follows:
AIR BARRIER. An integral component of the building thermal envelope comprised of approved material(s) that are assembled and joined together to support in-contact insulating materials on one or more of its surfaces and to provide a barrier to air leakage through the building envelope. An air barrier may be a single material or a combination of materials, comprised of, but not be limited to, the exterior siding, exterior lath and stucco, rigid insulation board, exterior sheathing and sub-sheathing, water proof substrate with tiles, masonry walls, roof sheathing and drywall between conditioned and unconditioned spaces.

JUSTIFICATION: Per SNBO Criteria 6, this amendment was required to clarify the intent of the code; per Criteria 1 to address local climatic conditions; and per Criteria 8 to provide consistency in regional interpretation and application of the code.

This is integral component of the thermal energy envelope, but it was not defined in the code until the 2009 cycle. Though a definition has now been provided in the last two code cycles, we feel it does not go far enough to describe its important purposes. Not only does the air barrier prevent air leakage into and from the conditioned space, the insulation must be installed in substantial direct contact with an approved air barrier in order for the insulation to function effectively. Therefore, one of the main functions of the air barrier is to provide the impervious support surface for the thermal insulation and should be stated as part of the definition.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 05

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co.) Thompson	North Las Vegas Kinney	CCSchool District (NLV Kinney)	Industry			Result Approved 6/11/12
							Hodgson	Foglesong	Zwerg	
Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0	

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 06
Code Section: Section C202 Definition: **BUILDING THERMAL ENVELOPE**
Date: 06/01/2012
Proponent: Fredric Zwerg
Representing: Southwest Gas Corporation

Proposed Amendment: Revise C202 definition of BUILDING THERMAL ENVELOPE to read as follows:

BUILDING THERMAL ENVELOPE. The building’s ~~basement walls, exterior walls, floor(s), ceilings, roof(s)~~ and any other building elements that define a thermal barrier (heat gain/loss) between the interior and exterior environments, ~~enclose conditioned space or provides a boundary between conditioned space and exempt or unconditioned space.~~ The building thermal envelope includes the air barrier installed in direct contact with insulation and is enclosed by, but is not limited to, the following combination of elements: thermal insulation, air barrier, framing/structural members, glazing, doors and other components between the conditioned interior and unconditioned exterior environments.

JUSTIFICATION: Per Criteria 6, the purpose of this amendment is to clarify the intent of the code.

The existing definition for the building thermal envelope was defined using *conditioned space*. The clarification removes *conditioned space* as a condition and defines it based on the buildings thermal barrier between the interior and the exterior environments. The plural “s” was add to “floor” and “roof” to account for buildings with multiple floors and roofs. A general listing of possible components is provided to demonstrate what is typically part of the thermal envelope. This definition helps clarify attics within the thermal envelope (insulation attached to underside of roof) as conditioned space.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 06

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co.) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 6/11/12
							Hodgson	Foglesong	Zwerg	
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track No.: CEC 07
Code Section: Section C202 Definition: CASINO
Date: May 31, 2012
Proponent: George Huang, Don White
Representing: Industry (shop12 Design / Steelman Partners), CLV
Code Section: Section C202 Definition: CASINO

Proposed Amendment: Add a new definition for CASINO, in its entirety, to the definitions section to read as follows:

CASINO. A business with a Non-restricted Gaming License from the Nevada Gaming Commission and State Gaming Control Board. It includes the gaming area(s) as well as all the adjacent area(s) within the building envelope.

JUSTIFICATIONS: Per SNBO Criteria 4 to address special use and occupancy; Criteria 6 to clarify the intent of the code; Criteria 7 to address unique designs or systems not anticipated in the codes; Criteria 8 to provide for consistency in regional interpretation and application of the codes.

Reasoning: The term “casino gaming area” needs to be clearly defined, since it is referenced in the IECC Exception 1.6 of section C405.5.1 and another amendment. We have added *casino gaming areas* to Exception 8 to the exterior lighting power requirements of Sec.C405.6.2 to exempt it the same as for theme park elements. ICC has agreed that this use would meet the intent of the subject code exception, since a full casino is equivalent to an adult theme park. Also, a clear distinction must also be made between casinos and businesses that have only a few slot machines. Because the state of Nevada allow for several types of gaming licenses, one of which is a *restricted gaming license*, which allows grocery stores, restaurant, taverns and convenience stores to have up to 15 slot machines within their premises, the committee suggests the term casino and casino gaming area be more narrowly defined.

Nevada Gaming Commission and State Gaming Control Board

1.065 “Casino” defined. “Casino” means the room or rooms wherein gaming is conducted and includes any bar, cocktail lounge or other facilities housed therein as well as the area occupied by the games, except restricted gaming operations as defined by NRS 463.0189. (Amended: 9/82; 7/99. Effective: 2/1/2000.)

Non-restricted Gaming License: Issued for the operation of games and/or tables only; or, for the operation of 16 or more slot machines only; or, for the operation of games and/or tables in conjunction with slot machines.

Restricted Gaming License: Issued for the operation of not more than 15 slot machines and no other games.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 07

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result
							Hodgson	Fogleson	Zwerg	Approved 6/11/12
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 08
Code Section: Section C202 **Definition:** CASINO GAMING AREA
Date: May 31, 2011
Proponent: George Huang Don White
Representing: Shop 12 Design Group CLV

Proposed Amendment: Add the Sec C202 definition for CASINO GAMING AREA to read as follows:

CASINO GAMING AREA. The space within a casino wherein gaming is conducted. The gaming area shall also include accessory uses within the same room(s) as, or substantially open to, the gaming floor(s). Such areas shall include, but not be limited to lobbies, balconies, public circulation areas, assembly areas, restaurants, bars, lounges, food courts, retail spaces, mezzanines, convention pre-function areas, cashiers' cages, players' clubs, customer support, conservatories and promenades that share the same atmosphere, spillover lighting and theme lighting with the adjacent gaming floor area.

For accessory areas situated on the perimeter of the gaming floor to be considered substantially open, the walls(s) or partitions(s) separating an accessory space from the gaming area must be a minimum of 50% open, as measured from the interior side of the accessory space, with no doors, windows and other obstructions, other than roll up security grills, installed within the opening.

Justification: Per SNBO Criteria 3 to be consistent with State statutes; per Criteria 4 to address special uses and occupancies; per Criteria 5 to correlate the provisions of this national code with prevailing state law; per Criteria 6 to clarify the intent of the code for our valley; per Criteria 7 to address unique designs or systems not anticipated in this code; per Criteria 8 to provide consistency in regional interpretation and application of this code.

Reasoning: Because the design and layout of the modern casino floor areas include bars, restaurants, food courts, pre-function areas and retail spaces open to and literally a part of the gaming floor theme or atmosphere, there is no physical way to separate these areas from the gaming floor itself without drastically altering the flow of the theme or modern design. The intent of this “theme flow” and openness is to draw the patron to other amenities provided within a short distance of the gaming floor. The definition was revised to emphasize that only the adjacent accessory areas of the casino gaming floor that are essentially in the same room and share the same lighting as the gaming floor are included, as was the intent of the code. This can include accessory areas on mezzanines or balconies on floor(s) above the gaming area that are in the same room as the gaming floor, overlook the gaming area(s) and share the same theme, lighting and air as the gaming floor. (Also see justification for the definition of *casino*.)

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 08

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co.) Thompson	North Las Vegas Kinney	CCSchool District (NLV) Kinney	Industry			Result
							Hodgson	Foglesong	Zwerg	Approved 6/11/12
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 09
Code Section: SECTION C202 GENERAL DEFINITIONS: LUMINAIRE
Date: June 26, 2012
Proponent: George Huang, LC, LEED® AP, MIES, Assoc. IALD
Representing: Industry (SHOP12 / Steelman Partners)
Code Section: SECTION C202, GENERAL DEFINITIONS: LUMINAIRE

Proposed Amendment: Add a new definition for LUMINAIRE, in its entirety, to the definitions section.

LUMINAIRE. A complete lighting unit consisting of a light source, such as a lamp or lamps, together with the parts designed to position the light source and connect it to the power supply. It may also include parts to protect the light source, ballast, or distribute the light. A lampholder itself is not a luminaire.

JUSTIFICATIONS:

Per Criteria 5, to provide code correlation between the IECC and the NEC; per Criteria 6 to clarify the intent of the code.

The term “LUMINAIRE” needs to be clearly defined, since it is referenced in the IECC in numerous locations. This definition was based on and taken from 2011 NEC Article 100

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 09

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co.) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 7/02.12
							Hodgson	Foglesong	Zwerg	
absent	Y	absent	Y	Y	absent	absent	Y	Y	Y	6-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

Committee Approved Amendments to Commercial Chapter 3—General Requirements

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 10

Code Section: C301.1 General

Date: May 18, 2012

Proponent: Don White and Bent Steed

Representing: City of Las Vegas Nye County Building Official

Code Section and Title: C301.1 General

Proposed Amendment: Delete the current section C301.1 General in its entirety and replace it with section to read as follows:

~~**Sec. 301.1 General:** Climate zones from Figure C301.1 or Table C301.1 shall be used in determining the applicable requirements from Chapters 4. Locations not in Table C301.1 (outside the United States) shall be assigned a climate zone based on Section C301.3.~~

Sec. C301.1 General. The jurisdictions under the governance of the Southern Nevada Building Officials, comprised of the building departments of the City of Boulder City, the County of Clark County, the Clark County School District, the City of Henderson, the City of Las Vegas, the City of North Las Vegas and the Township of Pahrump shall meet the requirements of this code for Climate Zone 3B.

Exception: Areas within these jurisdictions above altitudes of 4000 feet shall be considered in Climate Zone 5B.

JUSTIFICATION: Per SNBO Criteria 1, to address the local geologic, geographic, topographic or climatic conditions; Criteria 6, this amendment is to clarify the intent of the code; Criteria 8 to provide for consistency in regional interpretation and application of the codes.

Note: This amendment proposal is being supported by the building official of Nye County and the Township of Pahrump.

We amend this section every code cycle to specifically state what climate zone the builders in the southern Nevada use on which to base their design. Historically, the DOE based the climate zone region maps on the heating and cooling degree days of the municipality with the largest population in each county in the 1995. Most states have many small area counties in which there are few micro-climates. The DOE didn't account for areas that have municipalities within the county that are lower elevations and have mountainous regions in the same county. The state of Nevada is unique. It has only 13 very large counties, with Nye county extending from the southern edge of the state at Death Valley (zero elevation) up to the center of the state in Tonopah, the county seat at 5500 ft and a much colder climate. Clark County has elevation of from 1500 ft to 10,000 at Mt. Charleston. Therefore it is required that we list the exception to the code climate zone map.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 10

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co.) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 6/11/12
							Hodgson	Foglesong	Zwerg	
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 11

Code Section: C303.1.3 Fenestration product rating.

Date: May 18, 2012

Proponent: Don White

Representing: City of Las Vegas

Proposed Amendment: Add two new sub-sections under Sec. C303.1.3 Fenestration product rating.

Section C303.1.3.1 Fenestration rating documentation. All fenestration products to be used in a project must be listed in a fenestration schedule on the approved plans. This schedule shall include all of the following:

1. A list of all fenestrations, including, but not limited to, fixed and operable windows, skylights, sliding, swinging and overhead doors and glass block.
2. For site-built window assemblies not listed in the NFRC CMAST data base, simulation report reference numbers provided by an NFRC accredited simulation laboratory, for each type of product to be used in the project. [Note: The simulation reports are required as part of the plans submittal documentation, and shall include specific frame profiles, glazing options, emissivity coatings, gas fills, and spacer usage.]
3. The fenestration type, size, quantity and NFRC 100 certified U-factor
4. The solar heat gain coefficient for each fenestration proposed, using the NFRC 200 certified value.

Section C303.1.3.2 Construction site documentation. In addition to the approved plans described in Section C303.1.3.1, the following documentation shall be provided at the construction site prior to inspection of the building thermal envelope:

1. All NFRC certified factory-built fenestration products shall be labeled with the NFRC label certificates. This label is to remain intact on the fenestration unit until inspected by the jurisdiction having authority.

2. For rated site-built fenestration products, there shall be a separate NFRC label certificate for each type of fenestration product used in the project,. The label will display the following information:
 - a) The NFRC certification logo

- b) The name, address and authorized NFRC license number of the approved inspection agency
- c) The product ratings (U-factor, solar heat gain coefficient and visible light transmittance)
- d) The address and name of the project
- e) the product line information
- f) The names, addresses and contractors/business license numbers for the suppliers of the frame, the glazing and the contractor

JUSTIFICATIONS: Per SNBO Criteria 6, to clarify the intent of the code; per Criteria 8 to provide for consistency in regional interpretation and application of the code.

Reasoning: For commercial projects, fenestration products can be the largest single energy variable in the energy efficiency equation. For years there has been a loophole in the code with regard to verification of the rating of site built window products. Design professionals have learned that, in order to expedite the plan review process, they could simply place any U-value or SHCG it would take to get a “passing” statement in the COMcheck Envelope Compliance Report, knowing it was very difficult for the jurisdiction to verify the ratings of the actual unlabeled window that were eventually installed at the job site.

This situation has also presented a real problem for conscientious glazing contractors, who go to the extent of bidding on the plan specified window products just to be underbid by the unscrupulous contractors or building owner/speculators who proceed to order and installed cheaper, non-rated, unspecified (value engineered) fenestration products. The LV Glaziers Association has asked us to help remedy this situation to help create a level playing field. The NFRC certification program continues to expand for site-built windows, and there now is a clear procedure for attaining compliance.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 11

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co.) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result
							Hodgson	Fogelsong	Zwerg	Approved 6/25/12
Absent	Absent	Absent	Y	Absent	Y	Y	Y	Y	Y	6-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

Committee Approved Amendments to Commercial Chapter 4 —Commercial Energy Efficiency

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 12
Code Section: C402.4.1 Air Barriers, Exception:
Date: June 14, 2012
Proponent: Don White
Representing: CLV

Proposed Amendment: Revise the above code section to remove the exception. It should read as follows:

C402.4.1 Air barriers. A continuous air barrier shall be ...(section to read as in text)...

~~**Exception:** Air barriers are not required in buildings located in Climate Zones 1,2, and 3.~~

JUSTIFICATIONS:

Per SNBO Criteria for justification: Criteria 1, to address the local geographic, topographic or climatic conditions. Criteria 6, to clarify the intent of the code, Criteria 8, to provide for consistency in regional interpretation and application of the code, 9 needed to address errata to the code.

Reasoning: This was an oversight by the majority of the ICC Code Development Committee. The definition of the building thermal envelope requires an approved air barrier with insulation held permanently in place in direct contact with it. The purpose for the blower door test is to insure the tightness of the building thermal envelope, with the air tight air barrier being the integral part of this system. Air permeable insulation does not perform its function at all if it is not held in direct contact with an approved air barrier. Per manufacturer’s installation instructions, the insulation warrantee would be voided if it were not installed in direct contact with an approved air barrier. Therefore it is contradictory to have this exception in the code.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on CEC 12

Boulder City (Henderson Soucy)	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry (Hodgson) Tibbitts	Industry Foglesong	Industry Zwerg	Result Approved 6/18/12
absent	absent	absent	Y	Y	absent	Y	Y	absent	Y	5-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 13
Code Section: C402.4.7 Vestibules, Exceptions
Date: June 15, 2012
Proponent: Don White
Representing: CLV

Proposed amendment: Add additional Exception to vestibules to allow for the use of air curtains to mitigate fenestrations normally kept open to outside elements:

Sec. C402.7. Vestibules. (all text and exceptions remain the same--add additional exception)

Exceptions:

1. (through ...
6. same)
- 7 Doors equipped with an approved air curtain meeting testing requirements described in Sec. C402.4.9.

JUSTIFICATIONS:

Per SNBO Criteria 1 to address climatic conditions for this region; Criteria 5-to correlate this code with the IgCC; Criteria 7-to address unique designs or systems not anticipated in this code; Criteria 8-to provide for consistency in regional interpretation and application of this code.

Reasoning: The IECC has always required vestibules in climate zone 3B for building entrances opening into areas of over 3000 sf. In the past, the committee used to match the language of the exceptions of ASHREA 90.1 Sec. 5.4.3.4, which exempts vestibules for entrance doors in buildings of less than 4 stories in height and under 10,000sf, but could not do so in the 2009 code cycle because of the state's 90% compliance mandate. The new IgCC, the latest energy code to be offered in the ICC family of codes, and a more rigorous code than the base IECC, now offers a viable alternative to vestibules by allowing air curtains to protect exterior openings. Advancements in the energy efficient design and operation of air curtains tested per ANSI/AMCA 220 have proven more energy efficient than vestibules and have been allowed into the IgCC code. This change would most likely have been allowed into the IgCC's base code, the IECC, if the completion of testing for air curtains had happened in advance of the 2012 code development committee hearings. It is anticipated that we will gain far greater compliance and energy savings by allowing the use of air curtains for not only entrance doors, but door to dining patios, indoor-outdoor bar openings, etc, by allowing their use for entrance doors and requiring their use for openings.

COST IMPACT: This amendment may increase the cost of construction over what is currently stated in the code text, because it allows a contractor the added option of adding an opening in the building thermal envelope that will be normally kept open to the outside environment if an approved mechanical air curtain is installed over the opening. I say it may increase the cost, because the CC Health District requires "fly fans" over openings of this sort in dining and food prep establishments anyway.

Committee Action on CEC 13

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry (Hodgson) Tibbitts	Industry Foglesong	Industry Zwerg	Result Approved 6/18/12
absent	absent	absent	Y	Y	absent	Y	Y		Y	5-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 14
Code Section: C402.4 Air leakage (Mandatory)
Date: June 15, 2012
Proponent: Don White
Representing: CLV

Proposed amendment: Amend Sec. C402.4 to include reference to added sub-section C402.4.9 and add additional subsection to Air leakage (Mandatory) to allow for air curtains as follows:

Sec. C402.4 Air Leakage (Mandatory). The thermal envelope of buildings shall comply with Sections C402.4.1 through C402.4.8 9.

Sec. C402.4.9 Air curtains. Where doorway, passageway or pass-thru openings in the building thermal envelope are intended to be normally opened to the exterior environment, an approved air curtain tested in accordance with ANSI/AMCA 220 shall be used to separate conditioned air from the exterior.

JUSTIFICATIONS:

C402.4-Per SNBO Criteria 2, this change was made to correctly correlate code test to include new additional sub-section **C402.4.9.**

Reasoning: This change was merely to accommodate for newly added subsection **402.4.9**

C402.4.9- SNBO Criteria 1-to address climatic conditions for this region; Criteria 2-to correlate this code with the IgCC; Criteria 3- to be consistent with state law; Criteria 5-to correlate this code with the IgCC; Criteria 7-to address unique designs or systems not anticipated in the codes; Criteria 8-to provide for consistency in regional interpretation and application of this code.

Reasoning: Due to our moderate climate for 6 months of the year, many restaurant/lounge and retail establishments wish to use entrances and openings in the building thermal envelope to allow for the free flow of customers, products and services and to entice customers into their establishments from outdoor mall areas. Currently, it is a common practice to provide roll-up or accordion type entrance doors and windows that can technically meet the base requirements of the energy code in the closed position, just to have them left completely open during all hours of operation. The new IgCC, the latest energy code to be offered in the ICC family of codes, and a more rigorous code than the base IECC, now offers a viable alternative to protect openings to the exterior environment by allowing the use of approved air curtains. Advancements in the energy efficient design and operation of air curtains tested per ANSI/AMCA 220 have proven up to 75% more energy efficient than vestibules and have been allowed into the IgCC code as an alternative. This allowance would most likely have been allowed into the IgCC's base code, the 2012 IECC, if the completion of testing for air curtains had been available in advance of the 2012 code development committee hearings. It is anticipated that we will gain far greater compliance and energy savings by allowing the use of air curtains for not only entrance doors, but door to dining patios, indoor-outdoor bar openings, etc, by allowing their use for openings and entrance doorways.

COST IMPACT: This amendment may increase the cost of construction because it allows a contractor the added option of adding an opening in the building thermal envelope that will be normally kept open to the outside environment if an approved mechanical air curtain is installed over the opening. I say it may increase the cost, because the CC Health District requires “fly fans” over openings of this sort in dining and food prep establishments anyway.

Committee Action on CEC 14

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry Foglesong	Industry Zwerg	Result Approved 6/18/12
absent	absent	absent	Y	Y	absent	Y	Y	absent	Y	5-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track No.: CEC 15
Code Section: Sec. C405 Electrical Power and Lighting Systems (Mandatory)
Date: June 26, 2012
Proponent: George Huang, LC, LEED® AP, MIES, Assoc. IALD
Representing: Industry (shop12 Design / Steelman Partners)

Proposed Amendment: Remove “Mandatory” from the Section 505 Title:

SECTION C405 ELECTRICAL POWER AND LIGHTING SYSTEMS (Mandatory)

JUSTIFICATIONS:

Per SNBO Criteria 6, to clarify the intent of the code; per Criteria 9 to address errata to this code. Each subsection of Section C405 is listed as either “Mandatory” or “Prescriptive.” Having “Mandatory” at the top of Section C405 contradicts any sections that are prescriptive.

COST IMPACT: None

Committee Action on CEC 15

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry Foglesong	Industry Zwerg	Result Approved 7/02/12
absent	Y	absent	Y	absent	Y	absent	Y	Y	Y	6-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 16

Code Section: Section C405.1 General (Mandatory).

Date: June 26, 2012

Proponent: George Huang, LC, LEED AP, MIES, Associate IALD

Representing: Industry (SHOP12 / Steelman Partners)

Proposed Amendment: C405.1 General (Mandatory)., Exception is amended to read as follows:

C405.1 General (Mandatory). (Text reads the same)

Exception: Dwelling units within commercial buildings shall not be required to comply with Sections C405.2 through C405.5 provided that not less than 75 percent of the permanently installed light fixtures, other than low voltage lighting, shall be fitted for, and contain only *high-efficacy lamps*.

JUSTIFICATIONS:

Per SNBO Criteria 9, to address errata to the codes.

Reasoning: The term “high-efficacy lamps” is a Definition on page C-9 of 2012 IECC. The words should be in italics to indicate that there is a definition. Also, a dash is added between “high” and “efficacy” to match the exact spelling of the definition for consistency.

COST IMPACT: None

Committee Action on CEC 16

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney	Pahrump (Clk Cou) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry Foglesong	Industry Zwerg	Result Approved 7/02/12
absent	Y	absent	Y	absent	Y	absent	Y	Y	Y	6-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

The Steering Committee did not see the need for this amendment since it addresses an error which could be addressed with a memo or e-mail. But the Code Committee responded “**This amendment was for errata purposes only, as is allowed per SNBO criteria 9. Please read our justification. Though a minor change, it is valid...**”.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 17

Code Section: Section C405.2.3 Specific application controls

Date: June 26, 2012

Proponent: George Huang, LC, LEED AP, MIES, Associate IALD

Representing: Industry (SHOP12 / Steelman Partners)

Proposed Amendment: C405.2.3 Specific application controls, #3 is amended to read as follows:

C405.2.3 Specific application controls. Specific application controls shall be provided for the following:

1. (no change to existing text)
2. (no change to existing text)
3. Hotel and motel sleeping units and guest suites shall have a master control device at the main room entry that controls all permanently installed luminaires and switched receptacles except in bathrooms.
4. (no change to existing text)
5. (no change to existing text)
6. (no change to existing text)

JUSTIFICATIONS:

SNBO Criteria: Per Criteria 6, to clarify the intent of the codes.

Reasoning: The exception for bathrooms is left out from what was stated in the 2009 IECC. Due to safety concerns, the bathroom lights should not go completely dark if the master light switch is turned off to the room/suite. It can create a potential hazardous situation if someone is in the tub or shower and is unable to find the light switch to turn the lights back on. If the switch in the bathroom does not have an override, the occupant would have to stumble to the front entry to turn on the master switch, if the occupant would even know to go there in the first place.

COST IMPACT: None

Committee Action on CEC 17

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry Foglesong	Industry Zwerg	Result Approved 7/02/12
absent	Y	absent	Y	absent	Y	absent	Y	Y	N	5-1

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 18

Code Section: Section C405.5.1 Total connected interior lighting power.

Date: June 26, 2012

Proponent: George Huang, LC, LEED AP, MIES, Associate IALD

Representing: Industry (SHOP12 / Steelman Partners)

Proposed Amendment: Revise Sec. C405.5.1 Total connected interior lighting power, exceptions to add additional Exception #15.

Exceptions:

- 1. through 14. (text remains the same)
- 15. Theme/entertainment elements in theme/amusement parks and casinos.

JUSTIFICATIONS:

Per SNBO Criteria 2, to correlate the indoor section with the outdoor section; Criteria 4, to address special uses and occupancies; Criteria 6 to clarify the intent of the code, Criteria 7 to address unique designs or systems not anticipated in the code; Criteria 8 to provide for consistency in regional interpretation and application of the codes.

Reasoning: In Las Vegas, there are many areas within casino resort areas that are an extension of the mystique/theme that is being portrayed to its visitors. Theme elements are carried throughout the entire property, interior and exterior. Typically, theatrical/theme lighting is used to directly or indirectly illuminate performance areas, dance floors, and visual features in themed or theatrical environments. Theatrical Lighting can include, but not be limited to: strobe lights, automated luminaries (intelligent lighting), effects projectors, lasers, and ultraviolet (UV) fixtures. But, in order to qualify as theme /theatrical the lighting, the lights must be controlled separately from general illumination. The themed guest experience is supposed to be seamless. Because it makes sense to exempt exterior theme elements (see Exception #8 of Sec. C405.6.2 and Sec. C505.5.1, Exception 3, it is logical to propose that interior theme elements be exempt as well.

COST IMPACT: None

Committee Action on CEC 18

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry Foglesong	Industry Zwerg	Result Approved 7/02/12
absent	Y	absent	Y	absent	Y	absent	Y	Y	Y	6-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 19

Code Section: Section C405.6.2 Exterior building lighting power.

Date: June 26, 2012

Proponent: George Huang, LC, LEED AP, MIES, Associate IALD

Representing: Industry (SHOP12 / Steelman Partners)

Proposed Amendment: Addition of the words “and casinos” to Exception #8 of Section C405.6.2 Exterior building lighting power.

Exceptions:

1. through 7 (text to remain the same)
8. Theme elements in theme/amusement parks and casinos; and
9. (exception to remain the same)

JUSTIFICATIONS:

Per SNBO Criteria 2, to correlate with C405.5.1 , Exceptions 1.6 and 15; per Criteria 4, to address special uses and occupancies; per Criteria 6 to clarify what we believe is the intent of this code; per Criteria 7, to address unique designs or systems not anticipated in this code; per Criteria 8, to provide for consistency in regional interpretation and application of the code Casinos are essentially theme/amusement parks for adults. The theme elements within a theme/amusement park are part of a complete guest experience. The decorative elements in casinos on the Las Vegas Strip rival those of Disney World® and Universal Studios®.

COST IMPACT: None

Committee Action on CEC 19

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry Foglesong	Industry Zwerg	Result Approved 7/02/12
absent	Y	absent	Y	absent	Y	absent	Y	Y	Y	6-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 20
Code Section: Section C408.2 Mechanical systems commissioning and completion requirements
Date: July 30, 2012
Proponent: Jason Witterman, PE, LEED AP BD+C
Representing: Industry (JBA Consulting Engineers)

Proposed Amendment: Section C408.2 is amended to read as follows:

C408.2 Mechanical systems commissioning and completion requirements. Prior to passing the final mechanical inspection, ~~the~~ a registered design professional or approved agency shall provide evidence of mechanical systems *commissioning* and completion in accordance the provisions of this section. (rest of section to remain the same)

JUSTIFICATIONS:

SNBO Criteria: Per Criteria 2, required for code correlation; Per Criteria 6, required to clarify the intent of the code; Per Criteria 8, required to provide for consistency in regional interpretation and application of the codes.

Reasoning: The language of this section is ambiguous and does not clearly identify who is required to provide evidence of mechanical systems commissioning. Use of the term “the *registered design professional*” may be interpreted as requiring the Mechanical Engineer of Record to provide the evidence.

Revising the language to “a *registered design professional* or approved *agency*” will permit any registered design professional or approved agency to perform this work. This language is consistent with the language of Section C408.2.1, which defines who shall provide the commissioning plan. Commissioning should not strictly require a Professional Engineer, but rather an individual who is qualified to provide commissioning services. Third party agencies may be desirable in lieu of the designer.

COST IMPACT: Likely cost savings, more options provided for commissioning agent

Committee Action on CEC 20

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV Kinney)	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry (Foglesong) Tibbitts	Industry Zwerg	Result Approved 7/30/12 4-0
absent	absent	absent	Y	absent	absent	absent	Y	Y	Y	

STEERING COMMITTEE RECOMMENDATION: Concurs.

Please note that six jurisdictions were not involved in voting.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 IECC
Amend. Track. No.: CEC 21
Code Section: Section C408.2.4 Preliminary commissioning report
Date: July 30, 2012
Proponent: Jason Witterman, PE, LEED AP BD+C
Representing: Industry (JBA Consulting Engineers)

Proposed Amendment: Section C408.2.4 is amended to read:

C408.2.4 Preliminary commissioning report. A preliminary report of commissioning test procedures and results shall be completed and certified by ~~the~~ a registered design professional or approved agency and provided to the building owner. ...
 (rest of text for this section shall be the same)

JUSTIFICATIONS:

SNBO Criteria: Per Criteria 2, required for code correlation; Per Criteria 6, required to clarify the intent of the code; Per Criteria 8, required to provide for consistency in regional interpretation and application of the codes.

Reasoning: In some instances, a registered design professional independent of the project or of a separate division of the same firm other than the designer of record is commonly utilized to insure the functionality of the systems installed. Use of the term “~~the~~ *registered design professional* or *approved agency*” may be interpreted as excluding registered design professionals other than the Mechanical Engineer of Record or other approved agency.

The 2012 International Building Code defines “registered design professional” as:”An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or *jurisdiction* in which the project is to be constructed”. Revising the language to “**a** *registered design professional* or *approved agency*” will permit any registered design professional or approved agency to perform this work. This language is consistent with the language of Section C408.2.1, which defines who shall provide the commissioning plan.

COST IMPACT: Likely save money due to more options available for report prep.

Committee Action on CEC 21

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV Kinney)	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry (Foglesong) Tibbitts	Industry Zwerg	Result Approved 7/30/12 4-0
absent	absent	absent	Y	absent	absent	absent	Y	Y	Y	

STEERING COMMITTEE RECOMMENDATION: Concurs.

Please note that six jurisdictions were not involved in voting.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 22

Code Section: Section C408.3 Lighting system functional testing

Date: July 17, 2012

Proponent: George Huang, LC, LEED AP, MIES, Associate IALD
Joe Crapo, PE

Representing: Industry: Shop 12 Designs Intrepid Engineering

Proposed Amendment: Entire section C408.3, **Lighting system functional testing** and subsection C408.3.1 **Functional testing** to be removed in lieu of the following complete re-write of the section.

C408.3 Lighting system functional testing. Controls for automatic lighting systems shall comply with Section C408.3.1

C408.3.1 Functional testing. Lighting control devices and control systems shall be tested, to ensure that control hardware and software are calibrated, adjusted, programmed, and in proper working condition in accordance with the construction documents and manufacturer’s installation instructions. The requirement for functional testing shall be stated in construction documents. When *occupancy sensors*, *time switches*, *programmable schedule controls*, or *photosensors* are installed, at a minimum, the following procedures shall be performed:

1. *Occupancy Sensors:*
 - 1.1. Certify that the sensor has been located and aimed in accordance with manufacturer recommendations
 - 1.2. For projects with up to seven (7) *occupancy sensors*, all shall be tested.
 - 1.3. For projects with more than seven (7) *occupancy sensors*, testing shall be done for each unique combination of sensor type and space geometry. If multiples of each unique combination of sensor type and space geometry exists, at least one (1) or 10% random sampling of each shall be tested, whichever is more. The design professional and code official may require a higher percentage of each unique combination of sensor type and space geometry to be tested. If 30% or more of the tested controls within the random sampling fails, test all remaining identical combinations. For each sensor to be tested, verify the following:
 - Status indicator (as applicable) operates correctly.

- eroccupies the project. The controlled lights turn off or down to the permitted level within the required time.
 - For auto-on *occupancy sensors*, the lights do turn on to the permitted level when someone enters the space.
 - For manual on sensors, the lights turn on only when manually activated.
 - The lights are not incorrectly turned on by movement in nearby areas or by HVAC operation.
2. Automatic Time Switches:
- 2.1. Confirm that the automatic time switch control is programmed with appropriate weekday, weekend, and holiday (as applicable) schedules.
 - 2.2. Document for the owner automatic time switch programming including weekday, weekend, holiday schedules as well as all set-up and preference program settings.
 - 2.3. Verify the correct time and date is properly set in the time switch.
 - 2.4. Verify that any battery back-up (as applicable) is installed and energized.
 - 2.5. Verify that the override time limit is set to no more than 2 hours.
 - 2.6. Simulate occupied condition. Verify and document the following:
 - All lights can be turned on and off by their respective area control switch.
 - Verify the switch only operates lighting in the enclosed space in which the switch is located.
 - 2.7. Simulate unoccupied condition. Verify and document the following:
 - All non-exempt lighting turns off.
 - Manual override switch allows only the lights in the enclosed space where the override switch is located to turn on or remain on until the next scheduled shut off occurs.
3. Daylight Controls:
- 3.1. All control devices (photocontrols) have been properly located, field-calibrated and set for appropriate set points and threshold light levels.
 - 3.2. Daylight controlled lighting loads adjust to appropriate light levels in response to available daylight.
 - 3.3. The location where calibration adjustments are made is readily accessible only to authorized personnel.

The individual(s) responsible for the functional testing shall provide documentation certifying that the installed lighting controls meet or exceed all documented performance criteria of Section C405. The qualifications for the individual(s) responsible for the functional testing shall be identified on the construction documents and shall be subject to the code official's approval. Functional testing can begin when conditions exists to support the required testing and shall be complete within 90 days from the date the own occupies the project.

JUSTIFICATIONS:

SNBO Criteria: Per Criteria 2 – to correlate with other sections of the code, Criteria 6 – to clarify the intent of the codes, Criteria 7 – to address the unique designs or systems not anticipated in the codes, and Criteria 8 – to provide consistency in regional interpretations and application of the codes.

Reasoning: More specific requirements for functional testing are added for clarity and consistency. The amendment clearly outlines the minimum function testing criteria for occupancy sensors, automatic time switches, and daylight controls to avoid different regional interpretations.

The amendment also clarifies and establishes a reasonable standard for testing occupancy sensors that accounts for small/simple to large/complex projects. For smaller/simple projects where there are seven (7) or less occupancy sensors all must be tested. For projects that have more than seven (7) occupancy sensors, a random testing base on percentage is more feasible from a standpoint of manpower, cost, and time. For example, if a building with 1,000 typical spaces having the same combination of sensor type and room geometry, it would make practical sense to randomly function test a minimum of 10% of each unique combination rather than “all” spaces. It helps mitigate the potential extreme cost expenditures on labor and time required to test “all” typical spaces. If 30% or more of the random sampling fails the function test, then all spaces shall be tested. The amendment allows the design professional and the code official latitude to increase the percentage of each unique combination be tested to account for special circumstances not accounted for in the code.

The requirement for third party/independent party testing of the lighting system is not consistent with a similar section regarding commissioning of the HVAC system (Ref. Section C408.2). Current lighting control systems are relatively proprietary and there is not a nationally recognized accreditation program to certify a level of competence for programming and testing lighting control systems from different manufacturers. Lighting controls manufacturers currently have their own trained technicians that perform the start-up programming and functional testing of their equipment. Since the manufacturer’s representatives are generally the most qualified to perform the functional test it does not make sense to exclude them from being able to perform the test with the “approved party independent from the design or construction” verbiage.

The intent of the code is for the design professional to determine who is reasonably qualified to perform the functional test of the lighting control system and to state such on the construction documents. The design professional is reasonably suited to determine the functional testing needs of the project on a case-by-case basis, weighing the complexity of the system, the size of the project and the needs of the owner. This amendment will place the judgment for determining the qualifications for the party to perform the functional test on the design professional and still reserve the right of the code official to approve or reject the testing individual. Adoption of the proposed amendment will allow the additional testing costs associated with this section of the code to be minimized for small projects or projects with minimal control requirements while

keeping the intent of the code intact and uniformly administered across the region. In addition it provides a framework that will allow larger facilities to be tested in a reasonable manner.

The time frame for when the functional testing is required to be complete is clarified in this amendment. Documents certifying the functional testing shall be complete and submitted within 90 days of when the owner occupies the project. A temporary certificate of occupancy (TCO) can be issued to allow for the project to open while functional testing is being performed. The certificate of occupancy (COO) is only issued after the compliance document is received by the building official. Do to the potential complexity, added time, increased cost, and availability of qualified individuals to perform the functional testing, this 90 days will allow owners to operate the property and minimize the financial loss from delays in opening. Lighting fixtures, lighting control, and furniture are the last thing that goes into a building and they are critical for functional testing so it makes logical sense to allow for this grace period. There is also precedence set in other areas (i.e. mechanical/HVAC, fenestration/glazing, etc.) where the required certification document is prepared and submitted after the building is occupied.

COST IMPACT: Likely cost savings, section establishes a protocol for random testing

Committee Action on CEC 22

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	CCSD (NLV) Kinney)	Pahrump (Clk Co) Thompson	North Las Vegas Kinney	Industry Hodgson	Industry (Foglesong) Tibbitts	Industry Zwerg	Result Approved 7/30/12 4-0
absent	absent	absent	Y	absent	absent	absent	Y	Y	Y	

STEERING COMMITTEE RECOMMENDATION: Concurs.

Please note that six jurisdictions were not involved in voting.

Committee Approved Amendments to Commercial Chapter 5—Reference Standards

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC

Amend. Track. No.: CEC 23

Code Section: Chapter5 Reference Standards ACMA

Date: August 26, 2012

Proponent: Don White

Representing: 2012 IECC Code Committee

Proposed Amendment: Modified reference standards to provide AMCA standard for air curtain testing

AMCA	Air Movement and Control Association International 30 West University Drive Arlington Heights, IL 60004-1806	
Standard reference number	Title	Reference in code section number
500D-10 <u>220-05</u>	Laboratory Methods for Testing Dampers for Rating <u>Laboratory Methods for Testing Air Curtain Units for Aerodynamic Performance Rating</u>	C402.4.5.1, C402.4.5.2 <u>C402.4.9</u>

JUSTIFICATIONS:

Per SNBO Criteria 2 required to correlate code sections; per Criteria 8, to provide consistency with the amended code text.

Reasoning: The use of air curtains has been added to this code, using the wording from the section of the 2012 IgCC. The air curtain must meet the standard listed in the amended code section. Therefore, the standard is added to the approved standards in commercial Chapter 5.

COST IMPACT: None

Committee Action on CEC 23

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk.Co) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 6/18/12
							Hodgson	Foglesong (Venable)	Zwerg	
absent	absent	absnet	Y	absent	Y	Y	Y	Y	Y	6-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Commercial IECC
Amend. Track. No.: CEC 24
Code Section: C-Chapter5 Reference Standards: IAPMO and ICC
Date: August 26, 2012
Proponent: Don White
Representing: 2012 IECC Code Committee

Proposed Amendment: Revise ICC standard to remove the IMC and IPC not adopted by SNBO. Added new standard for IAPMO referencing the UMC and UPC to appear as follows:

IAPMO	International Association of Plumbing and Mechanical Officials 5001 E. Philadelphia Street Ontario, CA 91761	
Standard reference number	Title	Referenced in code section number
UMC—12	Uniform Mechanical Code®	C403.2.5, C403.2.5.1, C403.2.6, C403.2.7, C403.2.7.1, C403.2.7.1.1, C403.2.7.1.2, C403.2.7.1.3, C403.4.5, C408.2.2.1
UPC--12	Uniform Plumbing Code®	C201.3

ICC	International Code Council 500 New Jersey Avenue NW 6 th Floor Washington, DC 20001	
Standard reference number	Title	Reference in code section number
IBC—12	International Building Code®	C201.3, C303.2, C402.4.4
IFC—12	International Fire Code®	C201.3
IFGC—12	International Fuel Gas Code®	C201.3
IMC—12	International Mechanical Code®	C403.2.5, C403.2.5.1, C403.2.6, C403.2.7, C403.2.7.1.1, C403.2.7.1.2, C403.2.7.1.3, C403.4.5, C408.2.2.1
IPC—12	International Plumbing Code®	C2.7.1

JUSTIFICATIONS:

Per SNBO Criteria 3, to be consistent with local jurisdictional laws/ordinances.

Reasoning: The Southern Nevada Building Officials adopt the most current Uniform Mechanical and Uniform Plumbing Codes in lieu of the International Mechanical and Plumbing Codes. This change is a formality to list the correct codes and standards adopted by the southern Nevada region

COST IMPACT: None

Committee Action on CEC 24

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk.Co) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result
							Hodgson	Foglesong	Zwerg	Approved 5/21/12
Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0	

STEERING COMMITTEE RECOMMENDATION: Concurs.

Residential Energy Code Provisions

Committee Approved Amendments to Residential Chapter 1

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: **2012 Residential IECC**

Amend. Track. No.: **REC 01**

Code Section: **Section R101.1 Title**

Date: **04/20/12**

Proponent: **Donald J. White**

Representing: **City of Las Vegas**

Proposed Change: Section R101.1 Title of the code is amended to read as follows:

Section R101.1 Title. This code shall be known as the *International Energy Conservation Code of Southern Nevada*, and shall be cited as such. It is referred to herein as “this code”.

JUSTIFICATIONS:

Per Amendment Criteria 6 for clarification and completion purposes only.
This is merely a formality to fill in the blank space left in the code book text for such purpose.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 01

Boulder City (Henderson)	Clark County	Henderson	Las Vegas	Pahrump (Clark Co)	North Las Vegas	CC School District (N. Las Vegas)	Industry			Result Approved
							Hodgson	Fogelson	Zwerg	
abs	Y	absent	Y	Y	Y	Y	Y	Y	8-0	

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC

Amend. Track. No.: REC 02

Code Section: R101.4.3 Additions, alterations, renovations and repairs, Exceptions

Date: May 4, 2012

Proponent: Don White

Representing: City of Las Vegas

Proposed Amendment: Revise Sec. R101.4.3 Additions, alterations renovations and repairs, Exceptions to read as follows:

R101.4.3 (text to remain the same)

Exception: The following need not comply with the applicable provisions of the code, provided the authority having jurisdictions deems the energy use of the building is not increased:

1. (same)
2. Glass only replacements in an existing sash and frame, provided glass meets or exceed the same U-factor and SHGC of the glass being replaced. If the U-factor and SHGC of the glass cannot be determined, the windows shall either meet the minimum prescriptive values of Table R402.1.1 or justified using the whole building performance modeling approach per Sec. R405.
3. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are had been filled with insulation. If insulation is missing and R-value cannot be determined, all exterior cavities absent the insulation shall be insulated per the minimum prescriptive requirements of Sec. R402 or justified using the whole building performance modeling approach per Sec. R405.
4. (same)
5. (same)
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 percent of the luminaires 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 luminaires in a space provided that the alteration does not increase the installed interior lighting power.~~

JUSTIFICATIONS:

Exception statement:

Per SNBO Criteria 6, this section was amended to clarify the intent of the code. The exception statement is misleading and too general, which has resulted in the contractor or builder thinking they have the authority to make the determination on whether a project, or portion thereof, is exempt. The authority having jurisdiction is added as the entity that makes the final determination of whether the energy usage of the building will increase or not.

Exception Item 2.

Per Criteria 6, this exception was amended for clarification. As intended, the replacement of a broken plane of glass in an existing framed opening is “maintenance” and does not require permits. But, if the replacement of glass panes comes under the scope of permitted work or renovation project, then the glazing must meet all the requirements of the code.

Exception Item 3.

Per Criteria 6, amended for clarification purposes only. As presently worded, the exception does not state what should be done if a contractor or inspector discovers that the existing conditioned building under renovation has no insulation in the exterior framing cavities. The building must be brought up to the current energy code.

Exception Items 6 , 7 and 8 .

Per Criteria 6 and 9 , these exceptions are being deleted. In the haste to separate the residential from the commercial provisions of the code, the editor failed to remove the above exceptions, which deal directly with commercial buildings,. These are being removed as they are irrelevant to the residual portions of the code.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 02

Boulder City (Henderson)	Clark County	Henderson	Las Vegas	Pahrump (Clark County) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 5/14/12
							Hodgson	Foglesong	Zwerg	
Soucy	Thompson	Soucy	White	absent	Y	Y	Y	absent	Y	7-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC

Amend. Track. No.: REC 03

Code Section: R102.1.1 Above Code Programs

Date: May 4, 2012

Proponent: Don White

Representing: Jurisdiction of Las Vegas

Proposed Amendment: Revise Section R102.1.1 Above code program to read as follows:

Section R102.1.1 Above code programs. ~~The code official or other authority having jurisdiction~~ Southern Nevada Building Officials shall be permitted to deem a national, state or local energy efficiency program to exceed the efficiency required by this code. Programs seeking approval must submit all requested supporting documentation, including program guidelines, protocols, calculations and program simulation performance calculator software, if applicable, to the Southern Nevada Building Officials for review. ~~Buildings Residences approved certified~~ in writing by such an energy efficiency program shall be considered in compliance with this code. The requirements identified as “mandatory” in Chapter 4 ~~and 5 of this code, as applicable,~~ shall be met.

JUSTIFICATIONS:

Per SNBO Criteria 6, for clarification of the intent of the code.
As we have done in past code years, we specify that SNBO has the authority to approve an above code program on a valley wide basis. The wording that clarifies what basic documentation must be submitted to SNBO in order for the above code program to be considered.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 03

Boulder City (N. LV)	Clark County	Henderson	Las Vegas	Pahrump	North Las Vegas	CC School District (Henderson)	Industry			Result
							Hodgson	Fogleson	Zwerg	Approved 5/14/12
Y	Absent	Y	Y	absent	Y	Y	Y	Y	8-0	

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC

Amend. Track. No.: REC 04

Code Section: R106.1 Referenced codes and standards.

Date: May 4, 2012

Proponent: Donald J. White

Representing: City of Las Vegas

Proposed Amendment: Revise Sec. R106.1 Referenced codes and standards to read as follows:

Section R106.1 Referenced codes and standards. The codes and standards referenced in this code shall be those listed in Chapter 5 and Where this code refers to other codes not adopted by the Southern Nevada Building Officials, the applicable code adopted by the Southern Nevada Building Officials shall govern. Such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections R106.1.1 and R106.1.2

JUSTIFICATIONS:

Per SNBO Criteria 2, this amendment was required for proper code correlation. The Southern Nevada Building Officials have adopted the Uniform Plumbing Code in lieu of the International Plumbing Code, the Uniform Mechanical Code in lieu of the International Mechanical Code and the Uniform Fuel Gas Code in lieu of the International Fuel Gas Code. Where the above international codes are referenced in a section of this book, the uniform codes for these disciplines shall apply.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 04

Boulder City (Henderson)	Clark County	Henderson	Las Vegas	CCSD (NLV)	Pahrump (Clark County)	North Las Vegas	Industry	Industry	Industry	Result Approved 5/14/12
Soucy	Thompson	Soucy	White	Kinney	Thompson	Kinney	Hodgson	Foglesong	Zwerg	
Y	Absent	Y	Y	Y	Absent	Y	Y	Absent	Y	7-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

**Committee Approved Amendments to Residential Chapter 2—Definitions
SOUTHERN NEVADA CODE AMENDMENT FORM – 2012**

Committee: 2012 Residential IECC
Amend. Track. No.: REC 05
Code Section: R202 Definition of AIR BARRIER
Date: April 24, 2012
Proponent: Donald J. White
Representing: City of Las Vegas

Proposed Amendment: Revise the Sec. R202 definition of AIR BARRIER to read as follows:

AIR BARRIER. An integral component of the building thermal envelope comprised of approved materials that are assembled and joined together to support in-contact insulating materials on one or more of its surfaces and to provide a barrier to air leakage through the building envelope. An air barrier may be single material or a combination of materials comprised of, but not limited to, the exterior siding, exterior lath and stucco, rigid insulation board, exterior sheathing and sub-sheathing, water proof substrate with tiles, masonry walls, roof sheathing and drywall between conditioned and unconditioned spaces.

JUSTIFICATIONS:

Per SNBO Criteria 6, required to clarify the intent of the code; per Criteria 1, required to address local climatic conditions; per Criteria 8, required to provide consistency in regional interpretation and application of the code. Though an integral component of the thermal energy envelope, this component was not defined in the code until the 2009 cycle. Though a definition has now been provided in the last two code cycles, we feel it does not go far enough to describe its important purposes. Not only does the air barrier prevent air leakage into and from the conditioned space, the insulation must be installed in substantial direct contact with an approved air barrier in order for the insulation to function effectively. Therefore, one of the main functions of the air barrier is to provide the impervious support surface for the thermal insulation. This should be stated as part of the definition of its purpose.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 05

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clark County Thompson)	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 5/14/12
							Hodgson	Foglesong	Zwerg	
Y	Absent	Y	Y	Absent	Y	Y	Y	Absent	Y	7-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC

Amend. Track. No.: REC 06

Code Section: R202 **Definition:** BUILDING THERMAL ENVELOPE

Date: May 8, 2012

Proponent: Fredric Zwerg

Representing: Southwest Gas Corporation

Proposed Amendment: Revise the R202 definition of BUILDING THERMAL ENVELOPE to read as follows:

BUILDING THERMAL ENVELOPE. The building’s basement walls, exterior walls, floor(s), ceilings, roof(s) and any other building elements that define a thermal barrier (heat gain/loss) between the interior and exterior environments. ~~enclose conditioned space or provides a boundary between conditioned space and exempt or unconditioned space.~~ The building thermal envelope includes the air barrier installed in direct contact with insulation and is enclosed by and includes, but is not limited to, the following combination of elements: thermal insulation, air barrier, framing/structural members, glazing, doors and other components between the conditioned interior and unconditioned exterior environments.

JUSTIFICATION:

Per SNBO Criteria 6, the purpose of this amendment is to clarify the intent of the code. The existing definition for the building thermal envelope was defined using conditioned space. The clarification removes conditioned space as a condition and defines it based on the buildings thermal barrier between the interior and the exterior environments. The plural “s” was added to “floor” and “roof” to account for buildings with multiple floors and roof levels. A general listing of possible components is provided to demonstrate what is typically part of the thermal envelope. This definition helps clarify attics within the thermal envelope (insulation attached to underside of roof) as conditioned space.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 06

Boulder City (Henderson)	Clark County	Henderson	Las Vegas	Pahrump (Clk Co)	North Las Vegas	CCSD (NLV)	Industry			Result
							Hodgson	Fogleson	Zwerg	Approved 5/14/12
Soucy absent	Thompson	Soucy absent	White	Thompson	Kinney	Kinney				
	Y		Y	Y	Y	Y	Y	Y	Y	8-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

**Committee Approved Amendments to Residential Chapter 3—General
SOUTHERN NEVADA CODE AMENDMENT FORM – 2012**

Committee: 2012 Residential IECC

Amend. Track. No.: REC 07

Code Section: R301.1 General

Date: May 18, 2012

Proponent: Don White and Brent Steed

Representing: City of Las Vegas Nye County Building Official

Code Section and Title: R301.1 General

Amendment Proposal: Delete current section R301.1 General in its entirety and replace it with section to read as follows:

~~**Sec. R301.1 General:** Climate zones from Figure 3-01.1 or Table R301.1 shall be used in determining the applicable requirements from Chapters 4. Locations not in Table R301.1 (outside the United States) shall be assigned a climate zone based on Section 301.3.~~

Sec. R301.1 General. The jurisdictions under the governance of the Southern Nevada Building Officials, comprised of the building departments of the City of Boulder City, the County of Clark County, the Clark County School District, the City of Henderson, the City of Las Vegas, the City of North Las Vegas and the Township of Pahrump shall meet the requirements of this code for Climate Zone 3B.

Exception: Areas within these jurisdictions above altitudes of 4000 feet shall be considered in Climate Zone 5B.

JUSTIFICATION:

Per SNBO Criteria 1, to address the local geologic, geographic, topographic or climatic conditions; Criteria 6, this amendment is to clarify the intent of the code; Criteria 8 to provide for consistency in regional interpretation and application of the codes.

Note: This amendment proposal is being supported by the building official of Nye County and the Township of Pahrump.

We amend this section every code cycle to specifically state what climate zone the builders in the southern Nevada use on which to base their design. Historically, the DOE based the climate zone region maps on the heating and cooling degree days of the municipality with the largest population in each county in the 1995. Most states have many small area counties in which there are few micro-climates. The DOE didn't account for areas that have municipalities within the county that are lower elevations and have mountainous regions in the same county. The state of Nevada is unique. It has only 13 very large counties, with Nye county extending from the southern edge of the state at Death Valley (zero elevation) up to the center of the state in Tonopah, the county seat at 5500 ft and a much colder climate. Clark County has elevation of from 1500 ft to 10,000 at Mt. Charleston. Therefore it is required that we list the exception to the code climate zone map.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 07

Boulder City (Henderson)	Clark County	Henderson	Las Vegas	Pahrump (Clark Co.)	North Las Vegas	CCSD (NLV)	Industry			Result Approved 5/21/12
							Hodgson	Foglesong	Zwerg	
Soucy	Thompson	Soucy	White	Thompson	Kinney	Kinney				
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC

Amend. Track. No.: REC 08

Code Section: R303.1.3 Fenestration product rating.

Date: May 18, 2012

Proponent: Don White

Representing: City of Las Vegas

Proposed Amendment: Add two new subsections to R303.1.3 to read as follows:

Section R303.1.3.1 Fenestration rating documentation. All fenestration products to be used in a project must be listed in a fenestration schedule on the approved plans. This schedule shall include all of the following:

1. A list of all fenestrations, including, but not limited to, fixed and operable windows, skylights, sliding, swinging and overhead doors and glass block.
2. For site-built window assemblies not listed in the NFRC CMAST data base, simulation report reference numbers provided by an NFRC accredited simulation laboratory, for each type of product to be used in the project. [Note: The simulation reports are required as part of the plans submittal documentation, and shall include specific frame profiles, glazing options, emissivity coatings, gas fills, and spacer usage.]
3. The fenestration type, size, quantity and NFRC 100 certified U-factor
4. The solar heat gain coefficient for each fenestration proposed, using the NFRC 200 certified value.

Section R303.1.3.2 Construction site documentation. In addition to the approved plans described above, the following documentation shall be provided at the construction site prior to inspection of the building thermal envelope:

1. All NFRC certified factory-built fenestration products shall be labeled with the NFRC label certificates. This label is to remain intact on the fenestration unit until inspected by the jurisdiction having authority.

2. For rated site-built fenestration products, there shall be a separate NFRC label certificate for each type of fenestration product used in the project,. The label will display the following information:
 - a) The NFRC certification logo
 - b) The name, address and authorized NFRC license number of the approved inspection agency
 - c) The product ratings (U-factor, solar heat gain coefficient and visible light transmittance)
 - d) The address and name of the project
 - e) the product line information
 - f) The names, addresses and contractors/business license numbers for the suppliers of the frame, the glazing and the contractor

JUSTIFICATIONS: Per SNBO Criteria 6, to clarify the intent of the code; per Criteria 8 to provide for consistency in regional interpretation and application of the code.

Reasoning: Fenestration products can be the largest single energy variable in the energy efficiency equation. Though residential projects mostly use NFRC labeled factory built windows, many large custom homes do use site built windows and doors. For years there has been a loophole in the code with regard to verification of the rating of site built window products. Design professionals have learned that, in order to expedite the plan review process, they could simply place any U-value or SHCG it would take to get a “passing” statement in the REScheck Envelope Compliance Report, knowing it was very difficult for the jurisdiction to verify the ratings of the actual unlabeled window that were eventually installed at the job site. This problem has also presented a real problem for conscientious glazing contractors, who go to the extent of bidding on the plan specified window products just to be underbid by the unscrupulous contractors or building owner/speculators who proceed to installed cheaper, non-rated, unspecified (value engineered) fenestration products. The Las Vegas Glaziers Association has asked us to help remedy this problem. Site certification and verification of site built window products will accomplish this.

The NFRC certification program continues to expand for site-built windows, and there now is a clear procedure for attaining compliance.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 08

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clark Co) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 6/25/12
							Hodgson	Foglesong	Zwerg	
Absent	Absent	Absent	Y	Absent	Y	Y	Y	Y	Y	6-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

**Committee Approved Amendments to Residential Chapter 4-Residential
Energy Efficiency
SOUTHERN NEVADA CODE AMENDMENT FORM – 2012**

Committee: 2012 Residential IECC

Amend. Track. No.: REC 09

Code Section: R401.3 Certificate

Date: May 18, 2012

Proponent: Don White as modified by: Brenda Thompson

Representing: City of Las Vegas Clark County

Amendment proposal: Revise Sec. R401.3 Certificate to read as follows:

R401.3 Energy Certificate. A permanently installed home thermal energy component certificate approved by SNBO shall be completed and posted on ~~or near the electrical distribution panel~~ an interior wall within the garage by the builder or registered design professional. ~~The certificate shall not cover or obstruct the visibility of the circuit directory label or other required labels. The certificate shall list the predominant R-values of the 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, and the results from any required duct system and building thermal envelope air leakage testing done on the building. 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 types and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, 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 baseboard heaters.~~

JUSTIFICATION Criteria: Per SNBO Criteria to correlate this code with the NEC; per Criteria 6, to clarify the intent of the code; per Criteria 8 to provide for consistency in regional interpretation and application of the code.

Justification:

- Each code cycle our committee ponders the contents of and the question regarding where would be a best location to install the energy code certificated. The electrical panel usually has vital information on the inside panel door that cannot be covered without violating the NEC and the manufacturer’s listing. We suggest several locations in the past. Last code cycle, the steering committee suggested near the hot water heater, but with the rise in use of hot-water-on-demand systems installed in attics, etc., we have decided to locate the certificate on any interior garage wall. There is always the concern that subsequent occupants will paint over or remove the certificated. Though this location is more apt to have the label removed or tampered with at this location, it is more readily available for reference. Included in our amendment package is our committee’s recommendation of the certificate for SNBO’s approval and use. This will become the official certificate in lieu of the myriad forms we see in the field at present.
- All of values for the thermal envelope components should be listed to provide interested parties complete information and documentation regarding the insulating of the building.
- Gas fired unvented room heaters, electric furnaces and baseboard electric heaters are not allowed by state law and local ordinances and should, therefore, be stricken from the code text.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 09

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co.) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 5/21/12
							Hodgson	Foglesong	Zwerg	
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

Please note that a copy of the certificate mentioned in JUSTIFICATION was not provided. When asked, the Code Committee replied; **“Certificate Samples to be provided and approved by SNBO at final review.”**

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC
Amend. Track. No.: REC 10
Code Section: R402.2.4 Access hatches and doors
Date: 5/22/2012
Proponent: Tracy Foglesong
Representing: Industry: Energy Conservation Group, LLC

Proposed Amendment: Amend R402.2.4 Access hatches and doors to read as follows:

R402.2.4 Access hatches and doors. Access doors from conditioned space to unconditioned spaces (e.g. attics and crawl spaces) shall be weatherized and insulated to a level equivalent to the insulation on the surrounding surfaces. Insulation shall be permanently affixed to the access door or hatch to provide a permanent means of maintaining the installed R-value. Access shall be provided to all equipment that prevents damaging or compressing insulation. A wood framed equivalent baffle or retainer is required to be provided when loose fill insulation is installed, the purpose of which is to prevent the loose fill insulation from spilling into the living space when the attic access is opened, and to provide a permanent means of maintaining the installed R-value of the loose fill insulation.

JUSTIFICATIONS:

Criteria: Required to clarify the intent of the code and required to address local climatic conditions.

The intent of the code is to permanently maintain the installed R-value between the conditioned space and the unconditioned space, requiring the insulation to be permanently affixed to the attic hatch helps ensure this intent is met.

Due to our extreme summer climatic conditions ensuring the thermal isolation between the conditioned space and the unconditioned space meets the intent of the code to “regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each building”.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 10

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result
							Hodgson	Foglesong	Zwerg	Approved 6/11/12
Y	Absent	Y	Y	Absent	Y	Y	Y	Y	Y	8-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC

Amend. Track. No.: REC 11

Code Section: Table R402.4.1.1

Date: 5/22/2012

Proponent: Tracy Foglesong

Representing: Industry Energy Conservation Group, LLC

Proposed Amendment: Revise Table R402.4.1.1 to read as follows:

Table R402.4.1.1.

Air Barrier and Insulation Installation

Component	Criteria
Air barrier and thermal barrier	<p>A continuous air barrier shall be installed in the building envelope.</p> <p>External thermal envelope contains a continuous air barrier <u>that is in substantial contact and continuous alignment with the insulation free of any gaps, voids or compression.</u></p> <p>Breaks or joints in the air barrier shall be sealed.</p> <p>Air-permeable insulation shall not be used as a sealing material.</p>
Ceiling/attic	<p>The air barrier in any ceiling/soffit <u>attic, including but not limited to dropped ceilings, soffits and others, shall be in substantial contact and continuous alignment</u> aligned with the insulation, <u>free of any gaps, voids or compression</u> and the air barrier sealed.</p> <p>Access openings, drop down stairs or knee wall doors to unconditioned space shall be <u>insulated</u> and sealed.</p>
Walls	<p>Corners and headers shall be insulated and the junction of the foundation and sill plate shall be sealed.</p> <p>The junction of the top plate and top of exterior walls shall be sealed.</p> <p>Exterior thermal envelope insulation for frame walls shall be installed in substantial contact and continuous alignment with the air barrier <u>without gaps, voids or compression.</u></p> <p>Knee walls shall be sealed <u>and insulated.</u></p>

Rim joists	Rim joists shall be insulated, <u>with the insulation in substantial contact and continuous alignment with the exterior air barrier, free of any gaps, voids or compression and include the air barrier.</u>
Floors (including above-garage and cantilevered floors)	Insulation shall be installed <u>free of any gaps, voids or compression in substantial contact and continuous alignment</u> to maintain permanent contact with underside of subfloor decking
Crawl space walls	Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawlspace walls <u>in substantial contact and continuous alignment free of any gaps, voids or compression.</u> Exposed earth in unvented crawl spaces shall be covered with a Class 1 vapor retarder with overlapping joints taped.
Shafts, Penetrations	Duct Shafts, utility <u>All penetrations and flue shafts architectural openings to the exterior or unconditioned space shall be sealed with a continuous air barrier.</u> Duct shafts, flue shafts and any other architectural openings to the exterior or unconditioned space shall be capped with an air barrier material and sealed.
Narrow cavities	Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation, readily conforms to the available cavity space, <u>in substantial contact and continuous alignment with the air barrier, free of any gaps, voids or compression.</u>
Plumbing and wiring	Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior wall or insulation that on installation readily conforms to the available space shall extend behind piping and wiring <u>in substantial contact and continuous alignment with the air barrier, free of any gaps, voids or compression.</u>

The rest of the table remains the same

JUSTIFICATIONS:

Criteria: Per SNBO Criteria 6, required to clarify the intent of the code; and per SNBO Criteria 1 required to address local climatic conditions.

Reasoning: This table is specifically entitled “**Air Barrier and Insulation Installation**” and outlines the visual inspection checklist protocol that our inspectors are to perform on every house.

The intent of the code is to “regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each building”, requiring the insulation to

be installed in continuous alignment with the air barrier and installed without gaps, voids or compression helps ensure this intent is met.

Due to our extreme summer climatic conditions ensuring the thermal isolation between the conditioned space and the unconditioned space meets the intent of the code as stated above.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 11

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result
							Hodgson) (Tibbitts)	Foglesong	Zwerg	Approved 6/18/12
Absent	Absent	Absent	Y	absent	Y	Y	Y	Y	6-0	

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC

Amend. Track. No.: REC 12

Code Section: R403.5 Mechanical ventilation (Mandatory)

Date: May 24, 2012

Proponent: Fredric Zwerg

Representing: Industry SW Gas

Proposed Amendment: Add one exception to R403.5 Mechanical ventilation (Mandatory)
R403.5 Mechanical ventilation (Mandatory). (no change)

Exception: Where clothes dryer exhaust vents terminate vertically at the roof, back draft dampers are not permitted.

JUSTIFICATIONS:

SNBO Criteria for justification: Per Criteria 5 to correlate the provisions the IFC ordinance with this code.

Reasoning: The purpose of this amendment is to enforce the fire departments requirement to prevent increased probability of lint clogging the duct/damper assembly, which would increase the fire hazard.

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 12

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk Co) Thompson	No. Las Vegas Kinney	CCSD (NLV) Kinney	Industry Hodgson	Industry Foglesong	Industry Zwerg	Result
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Approved 6/11/12 10-0

STEERING COMMITTEE RECOMMENDATION: Concurs.

SOUTHERN NEVADA CODE AMENDMENT FORM – 2012

Committee: 2012 Residential IECC
Amend. Track. No.: REC 13
Code Section: R Chapter5 Reference Standards ICC
Date: May 21,2012
Proponent: Don White
Representing: 2012 IECC Code Committee

Proposed Amendment: Revise ICC standard to remove the IMC and IPC, which are not adopted by SNBO. Instead, add IAPMO to table to reference the UMC and UPC which are adopted by SNBO.

IAPMO	International Association of Plumbing and Mechanical Officials 5001 E. Philadelphia Street Ontario, CA 91761	
Standard reference number	Title	Referenced in code section number
UMC—12 UPC--12	Uniform Mechanical Code® Uniform Plumbing Code®	R201.3, R303.2, R402.2.10, R403.2.2, R403.5 R201..3

ICC	International Code Council 500 New Jersey Avenue NW 6 th Floor Washington, DC 20001	
Standard reference number	Title	Reference in code section number
IBC—12 IFC—12 IFGC—12 IMC—12 IPC—12 IRC--12	International Building Code® International Fire Code® International Fuel Gas Code® International Mechanical Code® International Plumbing Code® International Residential Code®	C201.3, C303.2, C402.4.4 C201.3 C201.3 R201.3, R403.2.2, R403.5 R201.3 R301.3, R303.2, R402.2.10, R403.2.2, R403.5

JUSTIFICATIONS: Per SNBO Criteria 3, to be consistent with local jurisdictional laws/ordinances.

Reasoning: The Southern Nevada Building Officials adopt the most current Uniform Mechanical and Uniform Plumbing Codes in lieu of the International Mechanical and Plumbing Codes. This change is a formality to list the correct codes and standards adopted by the southern Nevada region

COST IMPACT: No additional increase over what is required in the base code.

Committee Action on REC 13

Boulder City (Henderson) Soucy	Clark County Thompson	Henderson Soucy	Las Vegas White	Pahrump (Clk.Co) Thompson	North Las Vegas Kinney	CCSD (NLV) Kinney	Industry			Result Approved 5/21/12
							Hodgson	Foglesong	Zwerg	
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10=0

STEERING COMMITTEE RECOMMENDATION: Concurs.

