City of Brentwood
Planning and Codes Department
5211 Maryland Way
P.O. Box 788
Brentwood, TN 37024-0788

RESIDENTIAL

UPDATED December 2020

♦ ENERGY CONSERVATION CODE DECLARATION ♦

ICC INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2012 EDITION

*****APPLICATION MUST BE 100% COMPLETE**

Subdivision Name _____ Lot Number _____

Address _____

Type of Permit _____

Review Section R101.4.3 of the 2012 IECC regarding energy code requirements for additions, alterations, renovations or repair projects.

Contractor's Name_____

Contractor's Address _____

City/State/Zip Code: _____

Phone Number (_____) _____

Email Address _____

Tennessee State Contractor's License Number _____

DECLARATION OF ENERGY CODE METHOD

If the structure fails to meet the minimum specified "R" values, or exceeds the permitted maximum percentage of openings and skylights, or the maximum glazing U-Factor using the prescriptive method, then you should consult your designer, insulation sub-contractor and your door & window supplier to assist you with compliance by methods 1 or 2 (provide documentation of compliance).

CHECK THE APPROPRIATE BOX BELOW TO INDICATE SELECTED METHOD

SECTION R402 BUILDING THERMAL ENVELOPE (PRESCRIPTIVE)	SECTION R405 SIMULATED PERFORMANCE ALTERNATIVE (PERFORMANCE)
402.1 GENERAL 402.1.1 INSULATION AND FENESTRATION CRITERIA. THE BUILDING THERMAL ENVELOPE SHALL MEET THE REQUIREMENTS OF TABLE 402.1.1 BASED ON THE CLIMATE ZONE SPECIFIED IN CHAPTER 3. (CLIMATE ZONE 4) (SEE BACK OF THIS SHEET)	405.1 SCOPE. THIS SECTION ESTABLISHES CRITERIA FOR COMPLIANCE USING SIMULATED ENERGY PERFORMANCE ANALYSIS. SUCH ANALYSIS SHALL INCLUDE HEATING, COOLING, AND SERVICE WATER HEATER ENERGY ONLY. (SEE BACK OF THIS SHEET)
METHOD 1 [ ]	METHOD 2 [ ]

➡ **AFTER READING THE CONTENT OF THE SECOND PAGE, RETURN TO THIS PAGE AND SIGN / DATE BELOW, CERTIFYING COMPLIANCE TO THE REQUIREMENTS STATED BELOW:**

COMPLIANCE CERTIFICATION

This structure meets or exceeds Chapter 4 of the ICC International Energy Conservation Code (IECC), 2012 edition

_____ _____

CONTRACTOR'S SIGNATURE **DATE**

PRINT NAME _____

FACTORS REQUIRED BY THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2012 EDITION

TABLE R402.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR[b]	SKYLIGHT[b] *U*-FACTOR	GLAZED FENESTRATION SHGC[b, e]	CEILING *R*-VALUE	WOOD FRAME WALL *R*-VALUE	MASS WALL *R*-VALUE[i]	FLOOR *R*-VALUE	BASEMENT[c] WALL *R*-VALUE	SLAB[d] *R*-VALUE & DEPTH	CRAWL SPACE[c] WALL *R*-VALUE
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13+5[h]	8/13	19	5/13[f]	0	5/13
4 except Marine	0.35	0.55	0.40	49	20 or 13+5[h]	8/13	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.32	0.55	NR	49	20 or 13+5[h]	13/17	30[g]	15/19	10, 2 ft	15/19
6	0.32	0.55	NR	49	20+5 or 13+10[h]	15/20	30[g]	15/19	10, 4 ft	15/19
7 and 8	0.32	0.55	NR	49	20+5 or 13+10[h]	19/21	38[g]	15/19	10, 4 ft	15/19

For SI: 1 foot = 304.8 mm.

a. *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.
b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.
c. "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
d. R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Climate Zones 1 through 3 for heated slabs.
e. There are no SHGC requirements in the Marine Zone.
f. Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1.
g. Or insulation sufficient to fill the framing cavity, R-19 minimum.
h. First value is cavity insulation, second is continuous insulation or insulated siding, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation or insulated siding. If structural sheathing covers 40 percent or less of the exterior, continuous insulation *R*-value shall be permitted to be reduced by no more than R-3 in the locations where structural sheathing is used – to maintain a consistent total sheathing thickness.
i. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.

(All R-values shall be printed on the actual insulation)

REQUIREMENTS PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

FOR NEW SINGLE FAMILY, RESIDENTIAL ADDITION, REMODELING, AND BASEMENT BUILD-OUT CONSTRUCTION, BUILDING THERMAL ENVELOPE TESTING AND DUCT SEALING TIGHTNESS TESTING MUST COMPLY WITH THE FOLLOWING TEST CRITERIA:

SECTION R402.4.1.2*: *BUILDING THERMAL ENVELOPE TESTING* OF THE INTERNATIONAL ENERGY CONSERVATION CODE, 2012 EDITION IS AMENDED TO READ, *"THE BUILDING OR DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE OF NOT EXCEEDNG 5-AIR EXCHANGES PER HOUR IN CLIMATE ZONE 4A-CITY OF BRENTWOOD, TENNESSEE"

SECTION R403.2.2: DUCTS-SEALING OF THE INTERNATIONAL ENGERGY CONSERVATION CODE, 2012 EDITION IS AMENDED TO READ, "MECHANICAL DUCT, AIR HANDLER, AND FILTER BOX TIGHTNESS SHALL BE VERIFIED BY EITHER OF THE FOLLOWING":

- ***POST CONSTRUCTION TEST WITH TOTAL LEAKAGE LESS THAN OR EQUAL TO 6CFM PER 100 SQUARE FEET OF CONDITIONED FLOOR AREA OR***
- ***ROUGH-IN TEST WITH TOTAL LEAKAGE LESS THAN OR EQUAL TO 5CFM.***

"A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels.

The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; U-factors for fenestration; and the solar heat gain coefficient (SHGC) of fenestration.

Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment.

Where a gas-fired unvented room heater, electric furnace and/or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric base board heaters."