

FLORIDA BUILDING CODE, ENERGY CONSERVATION
Residential Building Thermal Envelope Approach
R-Value Computation Method

FORM R402—2020

Florida Climate Zone

PROJECT NAME AND ADDRESS: *Gerke 1483 Belen Bayh Lane*

BUILDER: *Mike Todd*

PERMITTING OFFICE: *Columbia County*

JURISDICTION NUMBER:

PERMIT NUMBER:

NUMBER OF UNITS: *1*

CONDITIONED FLOOR AREA: *2700.59 ft²*

OWNER: *Gay Gerke*

PERMIT TYPE: *Residential, Single Family*

WORST CASE? *NO*

Scope: Compliance with Section R402.1.2 of the Florida Building Code, Energy Conservation, shall be demonstrated by the use of Form R402 for single- and multiple-family residences of three stories or less in height, additions to existing residential buildings, alterations, renovations and building systems in existing buildings, as applicable. To comply, a building must meet or exceed all of the energy efficiency requirements and applicable mandatory requirements summarized on this form. If a building does not comply with this method, or by the UA Alternative method, it may still comply under Section R405 or R406 of the Florida Building Code, Energy Conservation.

- General Instructions:**
1. Fill in all the applicable spaces of the "INSTALLED" row in the INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT table with the information requested. All "INSTALLED" values must be equal to or more efficient than the required levels. "AVG" indicates an area weighted average is allowed; "LOWEST" indicates the lowest R-value to be installed must be entered.
 2. Complete the tables for air infiltration and installed equipment.
 3. Read the MANDATORY REQUIREMENTS table and check each box to indicate your intent to comply with all applicable items.
 4. Read, sign and date the "Prepared By" certification statement at the bottom of this form. The owner or owner's agent must also sign and date the form.

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT¹

REQUIREMENTS	FENESTRATION U-FACTOR ^{2,3,4}	SKYLIGHT ² U-FACTOR	GLAZED FENESTRATION SHGC ^{3,5}	CEILING R-VALUE	WOOD FRAME WALL R-VALUE ⁶	MASS WALL R-VALUE ^{6,7}	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB ⁸ R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE
CLIMATE ZONE 1	NR	0.75	0.25	30	13	3/4	13	0	0	0
CLIMATE ZONE 2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
VALUE	AVG	AVG	AVG	LOWEST	LOWEST	LOWEST	LOWEST	LOWEST	LOWEST	LOWEST
INSTALLED:	<i>0.28</i>	<i>—</i>	<i>0.28</i>	<i>22</i>	<i>13</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>

R-Value Calculation Method - [PASS / FAIL]

- For SI: 1 foot = 304.8 mm; NR = No requirement.
- (1) 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.
 - (2) 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.
 - (3) For impact rated fenestration complying with Section R301.2.1.2 of the Florida Building Code, Residential or Section 1609.1.2 of the Florida Building Code, Building, the maximum U-factor shall be 0.65 in Climate Zone 2. An area-weighted average of U-factor and SHGC shall be accepted to meet the requirements, and up to 15 square feet of glazed fenestration area are exempted from the U-factor and SHGC requirement based on Section R402.3.1, R402.3.2 and R402.3.3.
 - (4) One side-hinged opaque door assembly up to 24 square feet is exempted from this U-factor requirement based on Section R402.3.4.
 - (5) R-values are for insulation material only as applied in accordance with manufacturer's installation instructions.
 - (6) The second R-value applies when more than half the insulation is on the interior of the mass wall.
 - (7) 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.

Air Infiltration: Blower door test is required on the building envelope to verify leakage ≤ 7 ACH50; test report must be provided to code official before CO is issued. Florida Building Code, Energy Conservation Section R402.4.1.2 testing exception may apply for additions, alterations, or renovations.

(continued)

