



8

1210-20

REScheck Software Version 4.4.3 Compliance Certificate

Energy Code: **2010 Florida Building Code, Energy Conservation**
Location: **Lake City, Florida**
Construction Type: **Single Family**
Conditioned Floor Area: **2720 ft²**
Glazing Area Percentage: **16%**
Heating Degree Days: **1436**
Climate Zone: **2**

Construction Site:
363 SW Blaylock CT
Lake City, FL 32024

Owner/Agent:
Brian & Britney Papka

Designer/Contractor:
Jonathan Morris Design
Lake City, FL 32024
386-288-1188
jmorris89@att.net

Compliance: Envelope passes UA trade-off. Additional mandatory requirements apply. Complete the REScheck inspection checklist to determine compliance with these requirements.

Compliance: 31.9% Better Than Code **Maximum UA: 887** **Your UA: 604** **Maximum SHGC: 0.30** **Your SHGC: 0.30**

The % Better or Worse Than Code index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

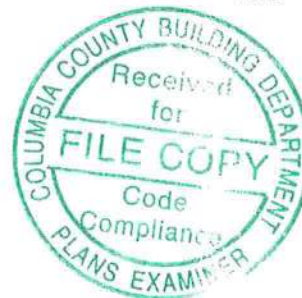
Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Glazing or Door U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	1762	0.0	30.0		55
Ceiling 2: Flat Ceiling or Scissor Truss	958	0.0	30.0		30
Wall 1: Wood Frame, 16" o.c.	3602	19.0	0.0		189
Window 1: Vinyl Frame:Double Pane SHGC: 0.30	346			0.320	111
Door 1: Glass SHGC: 0.30	80			0.320	26
Door 2: Solid	20			0.260	5
Floor 1: Slab-On-Grade:Unheated Insulation depth: 2.0'	224		4.0		183
Floor 2: All-Wood Joist/Truss:Over Unconditioned Space	142	30.0	0.0		5
Air Conditioner 1: Electric Central Air 13 SEER					
Heat Pump 1: Air Source 7.7 HSPF, 13 SEER					

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2010 Florida Building Code, Energy Conservation requirements in REScheck Version 4.4.3 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Name - Title

Signature

Date



Project Title:

Report date: 08/15/12

Data filename: C:\Documents and Settings\jon\My Documents\My Dropbox\Brian & Britney Papka\Brian & Britney Papka.rck Page 1 of 5



REScheck Software Version 4.4.3 Inspection Checklist

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Ceilings:

- ☐ Ceiling 1: Flat Ceiling or Scissor Truss, R-30.0 continuous insulation

Comments: _____

Roof reflectance ≤ 0.25 .

- ☐ Ceiling 2: Flat Ceiling or Scissor Truss, R-30.0 continuous insulation

Comments: _____

Roof reflectance ≤ 0.25 .

Above-Grade Walls:

- ☐ Wall 1: Wood Frame, 16" o.c., R-19.0 cavity insulation

Comments: _____

Windows:

- ☐ Window 1: Vinyl Frame: Double Pane, U-factor: 0.320, SHGC: 0.30,

For windows without labeled U-factors, describe features:

#Panes _____ Frame Type _____ Thermal Break? _____ Yes _____ No

Comments: _____

Doors:

- ☐ Door 1: Glass, U-factor: 0.320, SHGC: 0.30,

Comments: _____

- ☐ Door 2: Solid, U-factor: 0.260

Comments: _____

Floors:

- ☐ Floor 1: Slab-On-Grade: Unheated, 2.0' insulation depth, R-4.0 continuous insulation

Comments: _____

Slab insulation extends down from the top of the slab to at least 2.0 ft. OR down to at least the bottom of the slab then horizontally for a total distance of 2.0 ft.

- ☐ Floor 2: All-Wood Joist/Truss: Over Unconditioned Space, R-30.0 cavity insulation

Comments: _____

Floor insulation is installed in permanent contact with the underside of the subfloor decking.

Heating and Cooling Equipment:

- ☐ Air Conditioner 1: Electric Central Air: 13 SEER or higher

Make and Model Number: _____

Equipment minimum efficiency requirement as determined in Section 403.6 and Table 503.2.3(1-9): _____

- ☐ Heat Pump 1: Air Source: 7.7 HSPF, 13 SEER or higher

Make and Model Number: _____

Equipment minimum efficiency requirement as determined in Section 403.6 and Table 503.2.3(1-9): _____

Solar Heat Gain Coefficient:

- ☐ Solar Heat Gain Coefficient (SHGC) values are determined in accordance with the NFRC test procedure or taken from the default table.

Air Leakage:

- ☐ Joints (including rim joist junctions), attic access openings, penetrations, and all other such openings in the building envelope that are sources of air leakage are sealed with caulk, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material.
- ☐ Air barrier and sealing exists on common walls between dwelling units, on exterior walls behind tubs/showers, and in openings between window/door jambs and framing.
- ☐ Recessed lights in the building thermal envelope are 1) type IC rated and ASTM E283 labeled and 2) sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.
- ☐ Access doors separating conditioned from unconditioned space are weather-stripped and insulated (without insulation compression or damage) to at least the level of insulation on the surrounding surfaces. Where loose fill insulation exists, a baffle or retainer is installed to maintain insulation application.
- ☐ Wood-burning fireplaces have gasketed doors and outdoor combustion air.
- ☐ Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.

Air Sealing and Insulation:

- ☐ Building envelope air tightness and insulation installation complies by either 1) a post rough-in blower door test result of less than 7 ACH at 50 pascals OR 2) the following items have been satisfied:
 - (a) Air barriers and thermal barrier: Installed on outside of air-permeable insulation and breaks or joints in the air barrier are filled or repaired.
 - (b) Ceiling/attic: Air barrier in any dropped ceiling/soffit is substantially aligned with insulation and any gaps are sealed.
 - (c) Above-grade walls: Insulation is installed in substantial contact and continuous alignment with the building envelope air barrier.
 - (d) Floors: Air barrier is installed at any exposed edge of insulation.
 - (e) Plumbing and wiring: Insulation is placed between outside and pipes. Batt insulation is cut to fit around wiring and plumbing, or sprayed/blown insulation extends behind piping and wiring.
 - (f) Corners, headers, narrow framing cavities, and rim joists are insulated.
 - (g) Shower/tub on exterior wall: Insulation exists between showers/tubs and exterior wall.

Materials Identification and Installation:

- ☐ Materials and equipment are installed in accordance with the manufacturer's installation instructions.
- ☐ Materials and equipment are identified so that compliance can be determined.
- ☐ Manufacturer manuals for all installed heating and cooling equipment and service water heating equipment have been provided.
- ☐ Insulation R-values and glazing U-factors are clearly marked on the building plans or specifications.

Duct and Air handlers: Construction, Insulation, and Testing:

- ☐ Building framing cavities are not used as supply ducts.
- ☐ Ducts and air handling units are installed inside both the thermal and air barrier of the home.
- ☐ Ducts are insulated to R-6.
 - Exceptions:*
 - Exhaust air ducts.
 - Factory installed plenums, casings, or ductwork furnished as a part of tested and rated HVAC equipment.
- ☐ All ducts, air handlers, filter boxes and building cavities which form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, and are constructed and sealed in accordance with FBC, Mechanical Section 503.2.7.2.
- ☐ Duct tightness test has been performed by a Class 1 BERS rater according to Florida code section Section 403.2.2.1 and meets one of the following test criteria. Test report is attached.
 - (1) Postconstruction leakage to outdoors test: Less than or equal to 81.6 cfm (3 cfm per 100 ft² of conditioned floor area).
 - (2) Postconstruction total leakage test (including air handler enclosure): Less than or equal to 244.8 cfm (9 cfm per 100 ft² of conditioned floor area).
 - (3) Rough-in total leakage test with air handler installed: Less than or equal to 108.8 cfm (4 cfm per 100 ft² of conditioned floor area).

Temperature Controls:

- ☐ Where the primary heating system is a forced air-furnace, at least one programmable thermostat is installed to control the primary heating system and has set-points initialized at 70 degree F for the heating cycle and 78 degree F for the cooling cycle.
- ☐ Heat pumps having supplementary electric-resistance heat have controls that prevent supplemental heat operation when the compressor can meet the heating load.
- ☐ Humidistats used for comfort dehumidification have controls to prevent the use of fossil fuel or electricity to reduce humidities below 60 percent.

Heating, Cooling, and Ventilation Equipment:

- ☐ Electric resistance is not used as the heat source for space heating.
- ☐ Heating and cooling equipment are sized based on building loads for the directional orientation of the building for which the load is calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. Additional requirements per Section 403.6.1-2 are satisfied as applicable.
- ☐ For systems serving multiple dwelling units documentation has been submitted demonstrating compliance with 2010 FBC, Energy Conservation, Commercial
- ☐ Buildings designed to operate at positive indoor pressure or have mechanical ventilation meet the following criteria:
 - (1) Maximum air-change-hour equal minimums from ASHRAE 62, Ventilation for Acceptable Indoor Air Quality.
 - (2) No ventilation or air-conditioning system make-up air provided from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas.
 - (3) Air drawn from enclosed space(s) have walls insulated $\geq R-11$ and ceiling $\geq R-19$, space permitting, or R-10 otherwise.

Service Hot Water Systems:

- ☐ Water heating equipment meets minimum efficiency requirements of FBC, Energy Conservation Section 403.4.3.2 and Table 403.4.3.2. Proposed efficiency: _____ Required efficiency: _____.
- ☐ Circulating service hot water pipes are insulated to R-2.
- ☐ Automatic temperature controls, circulating pump manual switching, electric power switching, combustion fuel line shutoff valves are all present (as applicable) for operation when heating system is not in use.
- ☐ Storage water heaters without integral heat traps and having vertical pipe risers have heat traps installed on both the inlets and outlets. External heat traps are either a commercially available heat trap or a downward and upward bend of at least 3.5 inches in the hot and cold water lines located as close as possible to the storage tank.

Heating and Cooling Piping Insulation:

- ☐ HVAC piping conveying fluids above 105 degrees F or chilled fluids below 55 degrees F are insulated to R-3.

Swimming Pools and Spas:

- ☐ Heated pool/spas have a externally mounted on/off heater switch.
 - ☐ Heaters operating on natural gas have an electronic pilot light.
 - ☐ Fossil fueled heaters have a minimum 78% thermal efficiency rating.
 - ☐ Heat pump heaters have a minimum 4.0 COP (testing report required).
 - ☐ Portable electric spa standby power $\leq 5 \times (\text{gallons} \times 0.66)$ watts.
 - ☐ Timer switches on pool heaters and pumps are present.
- Exceptions:*
- Where public health standards require continuous pump operation.
 - Where pumps operate within solar- and/or waste-heat-recovery systems.
- ☐ Heated swimming pools and inground permanently installed spas shall be equipped with a vapor-retardant cover on or at the water surface or a liquid cover or other means proven to reduce heat loss.
- Exceptions:*
- Covers are not required when 70% of the heating energy is from site-recovered energy or solar energy source (over full operating season).
- ☐ Pool pump motors are NOT split-phase, shaded-pole or capacitor start-induction run types.
 - ☐ Pool pumps/motors ≥ 1 hp have variable speed capability. Low speed has a rotation $< 1/2$ the motors maximum rotation rate.
 - ☐ Pool pump motor controls have minimum 2 speeds with the low speed with default circulation speed set at residential filtration speed and with a higher speed override capability not to exceed the lesser of one normal cycle or 24 hours.
- Exceptions:*
- Solar heating systems may run at higher speeds during periods of usable solar heat gain.

Lighting Requirements:

- ☐ A minimum of 50 percent of the lamps in permanently installed lighting fixtures can be categorized as one of the following:
 - (a) Compact fluorescent
 - (b) T-8 or smaller diameter linear fluorescent
 - (c) 40 lumens per watt for lamp wattage ≤ 15
 - (d) 50 lumens per watt for lamp wattage > 15 and ≤ 40
 - (e) 60 lumens per watt for lamp wattage > 40

Energy Performane Display Card:

- ☐ An energy performance level (EPL) display card must be completed and certified by the builder before final approval of the building for occupancy. Florida law (Section 553.9085, Florida Statutes) requires the EPL display card to be included as an addendum to each

sales contract for both presold and nonpresold residential buildings. A copy of the EPL card form can be found in Appendix C of the "FBC, Energy Conservation".

NOTES TO FIELD: (Building Department Use Only)



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Jonathan Morris - Designer

Name - Title

Signature

Date

8-15-12





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Slab insulation extends down from the top of the slab to at least 2.0 ft. OR down to at least the bottom of the slab then horizontally for a total distance of 2.0 ft.

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Comments: _____

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Service Hot Water Systems:

- ☐ Water heating equipment meets minimum efficiency requirements of FBC, Energy Conservation Section 403.4.3.2 and Table 403.4.3.2. Proposed efficiency: _____ Required efficiency: _____.
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Where public health standards require continuous pump operation.

Where pumps operate within solar- and/or waste-heat-recovery systems.

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NOTES TO FIELD: (Building Department Use Only)

Design Indoor Cooling Temp.: 72 °F

Gainesville Airport, FL

Design Indoor Heating Temp.: 70 °F

Design Outdoor Cooling Temp.: 92 °F

Design Outdoor Heating Temp.: 33 °F

Temp. Difference Cooling :20°F

Temp. Difference Heating :37°F

Indoor Humidity: 50 Grains difference: 54

Whole House Load Calculator

ΔTD: Cool 20 Heat 37	Sq. ft. - types 1 and 2	shading	Sq. ft. - types 1 and 2	shading	Sq. ft. - types 1 and 2		Sq. ft.
Outside Wall: North	1:545 2:354	Windows x	1:34 2:0	Glass Doors x	1:0 2:0	Doors	0
Outside Wall: South	1:428 2:354	Windows I v	1:12 2:6	Glass Doors I v	1:40 2:0	Doors	0
Outside Wall: E & W	1:800 2:570	Windows I v	1:176 2:76	Glass Doors I v	1:20 2:0	Doors	0
Outside Wall: NE & NW	1:260 2:	Windows x	1:42 2:0	Glass Doors x	1:20 2:0	Doors	0
Outside Wall: SE & SW	1:291 2:	Windows I v	1:0 2:0	Glass Doors I v	1:0 2:0	Doors	20
Sky Lights	N:0 S:0	E-W: 0	NE-NW: 0	SE-SW: 0			
Floor - (linear ft. if slab)	1:224 2:142						
Ceiling	1:1762 2:958	Help					
Number of Appliances	5						
Number of People	8						
Conditioned - Sq. ft.: 2708	Cubic Ft.: 26242	Construction: very tight v	Duct system: attic v R-6 v	very tight v			
Calculate Load	Total Btu's Cooling 41957	Sensible Load 39201	Latent Load 2756	Total Btu's Heating 29763			
sq. ft. & cubic ft. calculator	length --->	width --->	height --->	Calculate			
air change calculator	cubic ft. --->	cm's --->	changes --->	per hr.	Calculate		
inches to feet	inches	equal	feet				

[To change the structure & start over click here](#)

Btu breakdown

	Sensible	Latent	Heating
walls	4807		7940
windows	13954		7297
ceilings	4787.2		3220.48
doors	291.4		347.8
floors	81.1104		5043.37
appliances	6000		
people	1840	1600	
glass doors	2422		1776
skylights	0		0
infiltration	577	964	1958.09
duct load	4441	192	2180
Totals	39201	2756	29763

Structure types

Outside Walls 1: Siding or Stucco R19 insulation
 Outside Walls 2: Siding or Stucco R19 insulation
 Windows 1: double pane - blinds
 Windows 2: double pane - blinds
 Glass Doors 1: double pane no internal shade
 Glass Doors 2: double pane no internal shade
 Floors 1: Concrete slab R-5 edge insulation
 Floor 2: closed or vented crawl R-30 insulation
 Ceiling 1: Ceiling under attic space R-30
 Ceiling 2: Ceiling under attic space R-30
 Doors: Wood hollow core
 Skylights:

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