

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD**ESTIMATED ENERGY PERFORMANCE INDEX* = 86****The lower the Energy Performance Index, the more efficient the home.**

1. New home or, addition	1. <u>New (From Plans)</u>	12. Ducts, location & insulation level	
2. Single-family or multiple-family	2. <u>Single-family</u>	a) Supply ducts	R <u>6.0</u>
3. No. of units (if multiple-family)	3. <u>1</u>	b) Return ducts	R <u>6.0</u>
4. Number of bedrooms	4. <u>3</u>	c) AHU location	<u>Main</u>
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling system:	Capacity <u>29.0</u>
6. Conditioned floor area (sq. ft.)	6. <u>1944</u>	a) Split system	SEER <u>14.0</u>
7. Windows, type and area		b) Single package	SEER <u> </u>
a) U-factor:(weighted average)	7a. <u>0.364</u>	c) Ground/water source	SEER/COP <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	7b. <u>0.237</u>	d) Room unit/PTAC	EER <u> </u>
c) Area	7c. <u>284.0</u>	e) Other	<u> </u>
8. Skylights		14. Heating system:	Capacity <u>30.0</u>
a) U-factor:(weighted average)	8a. <u>NA</u>	a) Split system heat pump	HSPF <u>8.2</u>
b) Solar Heat Gain Coefficient (SHGC)	8b. <u>NA</u>	b) Single package heat pump	HSPF <u> </u>
9. Floor type, insulation level:		c) Electric resistance	COP <u> </u>
a) Slab-on-grade (R-value)	9a. <u>0.0</u>	d) Gas furnace, natural gas	AFUE <u> </u>
b) Wood, raised (R-value)	9b. <u> </u>	e) Gas furnace, LPG	AFUE <u> </u>
c) Concrete, raised (R-value)	9c. <u> </u>	f) Other	<u> </u>
10. Wall type and insulation:		15. Water heating system	
A. Exterior:		a) Electric resistance	EF <u> </u>
1. Wood frame (Insulation R-value)	10A1. <u>19.0</u>	b) Gas fired, natural gas	EF <u> </u>
2. Masonry (Insulation R-value)	10A2. <u> </u>	c) Gas fired, LPG	EF <u>0.93</u>
B. Adjacent:		d) Solar system with tank	EF <u> </u>
1. Wood frame (Insulation R-value)	10B1. <u> </u>	e) Dedicated heat pump with tank	EF <u> </u>
2. Masonry (Insulation R-value)	10B2. <u> </u>	f) Heat recovery unit	HeatRec% <u> </u>
11. Ceiling type and insulation level		g) Other	<u> </u>
a) Under attic	11a. <u>1.0</u>	16. HVAC credits claimed (Performance Method)	
b) Single assembly	11b. <u>1.0</u>	a) Ceiling fans	<u>Yes</u>
c) Knee walls/skylight walls	11c. <u> </u>	b) Cross ventilation	<u>No</u>
d) Radiant barrier installed	11d. <u>No</u>	c) Whole house fan	<u>No</u>
		d) Multizone cooling credit	<u> </u>
		e) Multizone heating credit	<u> </u>
		f) Programmable thermostat	<u>Yes</u>

*Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

I certify that this home has complied with the Florida Building Code, Energy Conservation, through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL display card will be completed based on installed code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: Columbia County City/FL Zip: , FL _____

Florida Building Code, Energy Conservation, 6th Edition (2017)
Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS: Columbia County
FL

Permit Number:

MANDATORY REQUIREMENTS See individual code sections for full details.



SECTION R401 GENERAL

- ☐ **R401.3 Energy Performance Level (EPL) display card (Mandatory).** The building official shall require that an energy performance level (EPL) display card be completed and certified by the builder to be accurate and correct 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. The EPL display card contains information indicating the energy performance level and efficiencies of components installed in a dwelling unit. The building official shall verify that the EPL display card completed and signed by the builder accurately reflects the plans and specifications submitted to demonstrate code compliance for the building. A copy of the EPL display card can be found in Appendix RD.

- ☐ **R402.4 Air leakage (Mandatory).** The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.5.

Exception: Dwelling units of R-2 Occupancies and multiple attached single family dwellings shall be permitted to comply with Section C402.5.

- ☐ **R402.4.1 Building thermal envelope.** The building thermal envelope shall comply with Sections R402.4.1.1 and R402.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

- ☐ **R402.4.1.1 Installation.** The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.

- ☐ **R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

Exception: Testing is not required for additions, alterations, renovations, or repairs, of the building thermal envelope of existing buildings in which the new construction is less than 85 percent of the building thermal envelope.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

- ☐ **R402.4.2 Fireplaces.** New wood-burning fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.

- ☐ **R402.4.3 Fenestration air leakage.** Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m²), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m²), when tested according to NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory and listed and labeled by the manufacturer.

Exception: Site-built windows, skylights and doors.

MANDATORY REQUIREMENTS - (Continued)

- ☐ **R402.4.4 Rooms containing fuel-burning appliances.** In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table R402.1.2, where the walls, floors and ceilings shall meet not less than the basement wall R-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section R403. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.

Exceptions:

1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.
2. Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the Florida Building Code, Residential.

- ☐ **R402.4.5 Recessed lighting.** Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

SECTION R403 SYSTEMS

R403.1 Controls.

- ☐ **R403.1.1 Thermostat provision (Mandatory).** At least one thermostat shall be provided for each separate heating and cooling system.
- ☐ **R403.1.3 Heat pump supplementary heat (Mandatory).** Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.
- ☐ **R403.3.2 Sealing (Mandatory)** All ducts, air handlers, filter boxes and building cavities that form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section C403.2.9.2 of the Commercial Provisions of this code and shall be shown to meet duct tightness criteria below.

Duct tightness shall be verified by testing in accordance with ANSI/RESNET/ICC 380 by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i), Florida Statutes, to be "substantially leak free" in accordance with Section R403.3.3.

- ☐ **R403.3.2.1 Sealed air handler.** Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design airflow rate when tested in accordance with ASHRAE 193.
- ☐ **R403.3.3 Duct testing (Mandatory).** Ducts shall be pressure tested to determine air leakage by one of the following methods:
1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
 2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions:

1. A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. Duct testing is not mandatory for buildings complying by Section 405 of this code.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

- ☐ **R403.3.5 Building cavities (Mandatory).** Building framing cavities shall not be used as ducts or plenums.

- ☐ **R403.4 Mechanical system piping insulation (Mandatory).** Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-3.

- ☐ **R403.4.1 Protection of piping insulation.** Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

- ☐ **R403.5.1 Heated water circulation and temperature maintenance systems (Mandatory)** Heated water circulation systems shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

- ☐ **R403.5.1.1 Circulation systems.** Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermosiphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

- ☐ **R403.5.1.2 Heat trace systems.** Electric heat trace systems shall comply with IEEE 515.1 or UL 515. Controls for such systems shall automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy.

MANDATORY REQUIREMENTS - (Continued)

- ☐ **R403.5.5 Heat traps (Mandatory).** Storage water heaters not equipped with integral heat traps and having vertical pipe risers shall have heat traps installed on both the inlets and outlets. External heat traps shall consist of either a commercially available heat trap or a downward and upward bend of at least 3 ½ inches (89 mm) in the hot water distribution line and cold water line located as close as possible to the storage tank.
- R403.5.6 Water heater efficiencies (Mandatory).**
- ☐ **R403.5.6.1.1 Automatic controls.** Service water-heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use. The minimum temperature setting range shall be from 100°F to 140°F (38°C to 60°C).
- ☐ **R403.5.6.1.2 Shut down.** A separate switch or a clearly marked circuit breaker shall be provided to permit the power supplied to electric service systems to be turned off. A separate valve shall be provided to permit the energy supplied to the main burner(s) of combustion types of service water-heating systems to be turned off.
- ☐ **R403.5.6.2 Water-heating equipment.** Water-heating equipment installed in residential units shall meet the minimum efficiencies of Table C404.2 in Chapter 4 of the Florida Building Code, Energy Conservation, Commercial Provisions, for the type of equipment installed. Equipment used to provide heating functions as part of a combination system shall satisfy all stated requirements for the appropriate water-heating category. Solar water heaters shall meet the criteria of Section R403.5.6.2.1.
- ☐ **R403.5.6.2.1 Solar water-heating systems.** Solar systems for domestic hot water production are rated by the annual solar energy factor of the system. The solar energy factor of a system shall be determined from the Florida Solar Energy Center Directory of Certified Solar Systems. Solar collectors shall be tested in accordance with ISO Standard 9806, Test Methods for Solar Collectors, and SRCC Standard TM-1, Solar Domestic Hot Water System and Component Test Protocol. Collectors in installed solar water-heating systems should meet the following criteria:
1. Be installed with a tilt angle between 10 degrees and 40 degrees of the horizontal; and
 2. Be installed at an orientation within 45 degrees of true south.
- ☐ **R403.6 Mechanical ventilation (Mandatory).** The building shall be provided with ventilation that meets the requirements of the Florida Building Code, Residential, or Florida Building Code, Mechanical, as applicable, or with other approved means of ventilation including: Natural, Infiltration or Mechanical means. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.
- ☐ **R403.6.1 Whole-house mechanical ventilation system fan efficacy.** When installed to function as a whole-house mechanical ventilation system, fans shall meet the efficacy requirements of Table R403.6.1.
- Exception:** Where whole-house mechanical ventilation fans are integral to tested and listed HVAC equipment, they shall be powered by an electronically commutated motor.
- ☐ **R403.6.2 Ventilation air.** Residential buildings designed to be operated at a positive indoor pressure or for mechanical ventilation shall meet the following criteria:
1. The design air change per hour minimums for residential buildings in ASHRAE 62.2, Ventilation for Acceptable Indoor Air Quality, shall be the maximum rates allowed for residential applications.
 2. No ventilation or air-conditioning system make-up air shall be provided to conditioned space from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas.
 3. If ventilation air is drawn from enclosed space(s), then the walls of the space(s) from which air is drawn shall be insulated to a minimum of R-11 and the ceiling shall be insulated to a minimum of R-19, space permitting, or R-10 otherwise.
- ☐ **R403.7 Heating and cooling equipment (Mandatory).**
- R403.7.1 Equipment sizing.** Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on the equipment loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies, based on building loads for the directional orientation of the building. The manufacturer and model number of the outdoor and indoor units (if split system) shall be submitted along with the sensible and total cooling capacities at the design conditions described in Section R302.1. This Code does not allow designer safety factors, provisions for future expansion or other factors that affect equipment sizing. System sizing calculations shall not include loads created by local intermittent mechanical ventilation such as standard kitchen and bathroom exhaust systems. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

**TABLE R403.6.1
WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY**

FAN LOCATION	AIRFLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY ^a (CFM/WATT)	AIRFLOW RATE MAXIMUM (CFM)
Range hoods	Any	2.8 cfm/watt	Any
In-line fan	Any	2.8 cfm/watt	Any
Bathroom, utility room	10	1.4 cfm/watt	<90
Bathroom, utility room	90	2.8 cfm/watt	Any

For SI: 1 cfm = 28.3 L/min.

a. When tested in accordance with HVI Standard 916

MANDATORY REQUIREMENTS - (Continued)

- ☐ **R403.7.1.1 Cooling equipment capacity.** Cooling only equipment shall be selected so that its total capacity is not less than the calculated total load but not more than 1.15 times greater than the total load calculated according to the procedure selected in Section 403.7, or the closest available size provided by the manufacturer's product lines. The corresponding latent capacity of the equipment shall not be less than the calculated latent load.

The published value for AHRI total capacity is a nominal, rating-test value and shall not be used for equipment sizing. Manufacturer's expanded performance data shall be used to select cooling-only equipment. This selection shall be based on the outdoor design dry-bulb temperature for the load calculation (or entering water temperature for water-source equipment), the blower CFM provided by the expanded performance data, the design value for entering wet-bulb temperature and the design value for entering dry-bulb temperature.

Design values for entering wet-bulb and dry-bulb temperatures shall be for the indoor dry bulb and relative humidity used for the load calculation and shall be adjusted for return side gains if the return duct(s) is installed in an unconditioned space.

Exceptions:

1. Attached single- and multiple-family residential equipment sizing may be selected so that its cooling capacity is less than the calculated total sensible load but not less than 80 percent of that load.
2. When signed and sealed by a Florida-registered engineer, in attached single- and multiple-family units, the capacity of equipment may be sized in accordance with good design practice.

R403.7.1.2 Heating equipment capacity.

- ☐ **R403.7.1.2.1 Heat pumps.** Heat pump sizing shall be based on the cooling requirements as calculated according to Section R403.7.1.1, and the heat pump total cooling capacity shall not be more than 1.15 times greater than the design cooling load even if the design heating load is 1.15 times greater than the design cooling load.

- ☐ **R403.7.1.2.2 Electric resistance furnaces.** Electric resistance furnaces shall be sized within 4 kW of the design requirements calculated according to the procedure selected in Section R403.7.1.

- ☐ **R403.7.1.2.3 Fossil fuel heating equipment.** The capacity of fossil fuel heating equipment with natural draft atmospheric burners shall not be less than the design load calculated in accordance with Section R403.7.1.

- ☐ **R403.7.1.3 Extra capacity required for special occasions.** Residences requiring excess cooling or heating equipment capacity on an intermittent basis, such as anticipated additional loads caused by major entertainment events, shall have equipment sized or controlled to prevent continuous space cooling or heating within that space by one or more of the following options:

1. A separate cooling or heating system is utilized to provide cooling or heating to the major entertainment areas.
2. A variable capacity system sized for optimum performance during base load periods is utilized.

- ☐ **R403.8 Systems serving multiple dwelling units (Mandatory).** Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the IECC—Commercial Provisions in lieu of Section R403.

- ☐ **R403.9 Snow melt and ice system controls (Mandatory)** Snow- and ice-melting systems, supplied through energy service to the building, shall include automatic controls capable of shutting off the system when the pavement temperature is above 50°F (10°C), and no precipitation is falling and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F (4.8°C).

- ☐ **R403.10 Pools and permanent spa energy consumption (Mandatory).** The energy consumption of pools and permanent spas shall be in accordance with Sections R403.10.1 through R403.10.5.

- ☐ **R403.10.1 Heaters.** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

- ☐ **R403.10.2 Time switches.** Time switches or other control methods that can automatically turn off and on according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- and waste-heat-recovery pool heating systems.
3. Where pumps are powered exclusively from on-site renewable generation.

- ☐ **R403.10.3 Covers.** Outdoor heated swimming pools and outdoor permanent 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.

Exception: Where more than 70 percent of the energy for heating, computed over an operation season, is from site-recovered energy, such as from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

- ☐ **R403.10.4 Gas- and oil-fired pool and spa heaters.** All gas- and oil-fired pool and spa heaters shall have a minimum thermal efficiency of 82 percent for heaters manufactured on or after April 16, 2013, when tested in accordance with ANSI Z 21.56. Pool heaters fired by natural or LP gas shall not have continuously burning pilot lights.

- ☐ **R403.10.5 Heat pump pool heaters.** Heat pump pool heaters shall have a minimum COP of 4.0 when tested in accordance with AHRI 1160, Table 2, Standard Rating Conditions-Low Air Temperature. A test report from an independent laboratory is required to verify procedure compliance. Geothermal swimming pool heat pumps are not required to meet this standard.
- ☐ **R403.11 Portable spas (Mandatory)** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP-14.

SECTION R404

ELECTRICAL POWER AND LIGHTING SYSTEMS

- ☐ **R404.1 Lighting equipment (Mandatory).** Not less than 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or not less than 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.
- Exception:** Low-voltage lighting.
- R404.1.1 Lighting equipment (Mandatory)** Fuel gas lighting systems shall not have continuously burning pilot lights.

2017 - AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

TABLE 402.4.1.1
AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

Project Name: Soride Residence Street: Columbia County City, State, Zip: , FL , Owner: Design Location: FL, Jacksonville			Builder Name: Permit Office: Permit Number: Jurisdiction:	CHECK
COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA		
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.		
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.		
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.		
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.			
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.		
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.		
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace walls.		
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be 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 spaces.		
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.			
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.		
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.		
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.		
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.			
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub-floor or drywall.			
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.			

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Project Information

For: Soride Residence
Columbia County, FL

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	93	Method	Average
Inside db (°F)	70	75	Construction quality	
Design TD (°F)	38	18	Fireplaces	
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	33	50		

0

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 4TWR5030G1
AHRI ref 8688560

Efficiency 8.2 HSPF
Heating input
Heating output 30000 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 967 cfm
Air flow factor 0.043 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 26 °F



COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 4TWR5030G1
Coil 4TXCB003DS3
AHRI ref 8688560

Efficiency 12.0 EER, 14 SEER
Sensible cooling 20300 Btuh
Latent cooling 8700 Btuh
Total cooling 29000 Btuh
Actual air flow 967 cfm
Air flow factor 0.045 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.87

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
bd2	227	3198	3195	136	143
bth	59	589	308	25	14
Gr Rm	380	4381	6104	187	273
M bd	250	3530	3648	150	163
M bth	127	1344	659	57	30
wic	67	0	0	0	0
cl	12	0	0	0	0
kit	193	1835	2520	78	113
dining	225	2932	2049	125	92
pnty	12	0	0	0	0
ac	17	0	0	0	0
laundry	126	1984	1423	85	64
bd3	229	2892	1702	123	76
h	18	0	0	0	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Entire House	1944	22686	21608	967	967
Other equip loads		0	0		
Equip. @ 1.00 RSM			21608		
Latent cooling			3162		
TOTALS	1944	22686	24771	967	967

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Soride Residence		Builder Name:	
Street: Columbia County		Permit Office:	
City, State, Zip: , FL ,		Permit Number:	
Owner:		Jurisdiction:	
Design Location: FL, Jacksonville		County: Columbia (Florida Climate Zone 2)	

1. New construction or existing		New (From Plans)	
2. Single family or multiple family		Single-family	
3. Number of units, if multiple family		1	
4. Number of Bedrooms		3	
5. Is this a worst case?		No	
6. Conditioned floor area above grade (ft²)		1944	
Conditioned floor area below grade (ft²)		0	
7. Windows(284.0 sqft.)		Description	Area
a. U-Factor:		Dbl, U=0.34	222.00 ft²
SHGC:		SHGC=0.22	
b. U-Factor:		Dbl, U=0.49	48.00 ft²
SHGC:		SHGC=0.32	
c. U-Factor:		Dbl, U=0.31	14.00 ft²
SHGC:		SHGC=0.23	
d. U-Factor:		N/A	ft²
SHGC:			
Area Weighted Average Overhang Depth:		6.225 ft.	
Area Weighted Average SHGC:		0.237	
8. Floor Types (1944.0 sqft.)		Insulation	Area
a. Slab-On-Grade Edge Insulation		R=0.0	1944.00 ft²
b. N/A		R=	ft²
c. N/A		R=	ft²
9. Wall Types(1800.0 sqft.)		Insulation	Area
a. Frame - Wood, Exterior		R=19.0	1800.00 ft²
b. N/A		R=	ft²
c. N/A		R=	ft²
d. N/A		R=	ft²
10. Ceiling Types (1944.0 sqft.)		Insulation	Area
a. Roof Deck (Unvented)		R=20.0	1116.00 ft²
b. Cathedral/Single Assembly (Unvented)		R=1.0	828.00 ft²
c. N/A		R=	ft²
11. Ducts		R	ft²
a. Sup: Attic, Ret: Attic, AH: Main		6	388.8
12. Cooling systems		kBtu/hr	Efficiency
a. Central Unit		29.0	SEER:14.00
13. Heating systems		kBtu/hr	Efficiency
a. Electric Heat Pump		30.0	HSPF:8.20
14. Hot water systems			
a. Propane		Tankless	Cap: 1 gallons
b. Conservation features			EF: 0.930
None			
15. Credits			CF, Pstat

Glass/Floor Area: 0.146	Total Proposed Modified Loads: 48.18	PASS
	Total Baseline Loads: 55.81	

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: Donna Brackeen

DATE: 5/15/2019

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.


OWNER/AGENT:

DATE:

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL:

DATE:



- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.
- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Soride Residence	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1944	Lot #	
Owner Name:		Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:		Rotate Angle:	0	Street:	Columbia County
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	, FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp 97.5 %	2.5 %	Int Design Temp Winter	Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Jacksonville	FL_JACKSONVILLE_INT	32	93	70	75	1281	49	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1944	19440

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1944	19440	Yes	4	3	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	180 ft	0	1944 ft²	----	0.2	0.8	0

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt Tested	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Metal	2252 ft²	568 ft²	Light	N	0.6	No	0.9	No	20	30.3

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Partial cathedral cei	Unvented	0	1944 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Unvented)	Main	1	Blown	1116 ft²	0.11	Wood
_____	2	Cathedral/Single Assembly (Unvented)	Main	1	Blown	828 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS

✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
1	W	Exterior	Frame - Wood	Main	19	54		10		540.0 ft²		0.23	0.5	0
2	E	Exterior	Frame - Wood	Main	19	54		10		540.0 ft²		0.23	0.5	0
3	N	Exterior	Frame - Wood	Main	19	36		10		360.0 ft²		0.23	0.5	0
4	S	Exterior	Frame - Wood	Main	19	36		10		360.0 ft²		0.23	0.5	0

DOORS

✓ #	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
1	W	Wood	Main	None	.33	4		8		32 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
1	W	1	Vinyl	Low-E Double	Yes	0.34	0.22	N	72.0 ft²	6 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 1
2	W	1	Vinyl	Low-E Double	Yes	0.34	0.22	N	48.0 ft²	6 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 1
3	E	2	Vinyl	Low-E Double	Yes	0.34	0.22	N	18.0 ft²	10 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 1
4	E	2	Vinyl	Low-E Double	Yes	0.34	0.22	N	24.0 ft²	10 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 1
5	E	2	Wood	Low-E Double	Yes	0.49	0.32	N	48.0 ft²	10 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 1
6	N	3	Vinyl	Low-E Double	Yes	0.34	0.22	N	36.0 ft²	2 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 1
7	N	3	Vinyl	Low-E Double	Yes	0.31	0.23	N	8.0 ft²	2 ft 0 in	1 ft 0 in	None	None
8	S	4	Vinyl	Low-E Double	Yes	0.31	0.23	N	6.0 ft²	2 ft 0 in	1 ft 0 in	None	None
9	S	4	Metal	Low-E Double	Yes	0.34	0.22	N	24.0 ft²	2 ft 0 in	1 ft 0 in	Drapes/blinds	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000445	2268	124.51	234.16	.183	7

HEATING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Block	Ducts
1	Electric Heat Pump/	Split	HSPF:8.2	30 kBtu/hr	1	sys#1

COOLING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
1	Central Unit/	Split	SEER: 14	29 kBtu/hr	870 cfm	0.75	1	sys#1

INPUT SUMMARY CHECKLIST REPORT

HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
	1	Propane	Tankless	Exterior	0.930000	1 gal	60 gal	120 deg	None

SOLAR HOT WATER SYSTEM

✓	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
	None	None			ft²		

DUCTS

✓	#	Location	Supply R-Value	Area	Location	Return Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	Cool
	1	Attic	6	388.8 ft	Attic	97.2 ft²	Default Leakage	Main	(Default)	(Default)			1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

Cooling	<input type="checkbox"/> Jan	<input type="checkbox"/> Feb	<input type="checkbox"/> Mar	<input type="checkbox"/> Apr	<input type="checkbox"/> May	<input checked="" type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input checked="" type="checkbox"/> Aug	<input checked="" type="checkbox"/> Sep	<input type="checkbox"/> Oct	<input type="checkbox"/> Nov	<input type="checkbox"/> Dec
Heating	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input checked="" type="checkbox"/> Apr	<input type="checkbox"/> May	<input type="checkbox"/> Jun	<input type="checkbox"/> Jul	<input type="checkbox"/> Aug	<input type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec
Venting	<input type="checkbox"/> Jan	<input type="checkbox"/> Feb	<input type="checkbox"/> Mar	<input type="checkbox"/> Apr	<input type="checkbox"/> May	<input type="checkbox"/> Jun	<input type="checkbox"/> Jul	<input type="checkbox"/> Aug	<input type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input type="checkbox"/> Nov	<input type="checkbox"/> Dec

Thermostat Schedule: FloridaCode 2017

Hours

Schedule Type		1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM PM	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75
Cooling (WEH)	AM PM	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75
Heating (WD)	AM PM	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72
Heating (WEH)	AM PM	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.3	Main



COLUMBIA COUNTY BUILDING DEPARTMENT RESIDENTIAL CHECK LIST

MINIMUM PLAN REQUIREMENTS: FLORIDA BUILDING CODE RESIDENTIAL 2017 EFFECTIVE 1 JANUARY 2018
AND THE NATIONAL ELECTRICAL 2014 EFFECTIVE 1 JANUARY 2018

ALL REQUIREMENTS ARE SUBJECT TO CHANGE

ALL BUILDING PLANS MUST INDICATE COMPLIANCE WITH THE CURRENT FLORIDA BUILDING CODES RESIDENTIAL AND THE NATIONAL ELECTRICAL CODE. ALL PLANS OR DRAWINGS SHALL PROVIDE CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS, FBC 1609.3.1 THRU 1609.3.3.

FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEEDS ARE PER FLORIDA BUILDING CODE FIGURE 1609-A THROUGH 1609-C ULTIMATE DESIGN WIND SPEEDS FOR RISK CATEGORY AND BUILDINGS AND OTHER STRUCTURES
Revised 7/1/18

Website: <http://www.columbiacountyfla.com/BuildingandZoning.asp>

Items to Include-
Each Box shall be
Circled as
Applicable

GENERAL REQUIREMENTS:

APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL

Select From Drop down

1	Two (2) complete sets of plans containing the following:	<input checked="" type="checkbox"/>			
2	All drawings must be clear, concise, drawn to scale, details that are not used shall be marked void	<input checked="" type="checkbox"/>			
3	Condition space (Sq. Ft.) <u>1944</u> Total (Sq. Ft.) under roof <u>2808</u>	Yes	No	NA	

Designers name and signature shall be on all documents and a licensed architect or engineer, signature and official embossed seal shall be affixed to the plans and documents as per the FLORIDA BUILDING CODES RESIDENTIAL 107.1.

Site Plan information including:

4	Dimensions of lot or parcel of land	-		<input type="checkbox"/>
5	Dimensions of all building set backs	Yes		<input type="checkbox"/>
6	Location of all other structures (include square footage of structures) on parcel, existing or proposed well and septic tank and all utility easements.	Yes		<input type="checkbox"/>
7	Provide a full legal description of property.	No		<input type="checkbox"/>

Wind-load Engineering Summary, calculations and any details are required.

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL		Items to Include- Each Box shall be Circled as Applicable		
8	Plans or specifications must show compliance with FBCR Chapter 3	Yes	No	NA
		Select From Drop down		
9	Basic wind speed (3-second gust), miles per hour	Yes		<input type="checkbox"/>
10	(Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated)	Yes		<input type="checkbox"/>
11	Wind importance factor and nature of occupancy	Yes		<input type="checkbox"/>
12	The applicable internal pressure coefficient, Components and Cladding	Yes		<input type="checkbox"/>
13	The design wind pressure in terms of psf (kN/m ²), to be used for the design of exterior component, cladding materials not specifically designed by the registered design professional.	Yes		<input type="checkbox"/>

Elevations Drawing including:

14	All side views of the structure	Yes		<input type="checkbox"/>
15	Roof pitch	Yes		<input type="checkbox"/>
16	Overhang dimensions and detail with attic ventilation	Yes		<input type="checkbox"/>
17	Location, size and height above roof of chimneys	Yes		<input type="checkbox"/>
18	Location and size of skylights with Florida Product Approval	Yes		<input type="checkbox"/>
19	Number of stories	Yes		<input type="checkbox"/>
20	Building height from the established grade to the roofs highest peak	Yes		<input type="checkbox"/>

Floor Plan Including:

21	Dimensioned area plan showing rooms, attached garage, breeze ways, covered porches, deck, balconies	Yes		<input type="checkbox"/>
22	Raised floor surfaces located more than 30 inches above the floor or grade	Yes		<input type="checkbox"/>
23	All exterior and interior shear walls indicated	Yes		<input type="checkbox"/>
24	Shear wall opening shown (Windows, Doors and Garage doors)	Yes		<input type="checkbox"/>
25	Show compliance with Section FBCR 310 Emergency escape and rescue opening shown in each bedroom (net clear opening shown) and Show compliance with Section FBC 1405.13.2 where the opening of an operable window is located more than 72 inches above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches above the finished floor of the room in which the window is located. Glazing between the floor and 24 inches shall be fixed or have openings through which a 4-inch-diameter sphere cannot pass.	Yes		<input type="checkbox"/>
26	Safety glazing of glass where needed	Yes		<input type="checkbox"/>
27	Fireplaces types (gas appliance) (vented or non-vented) or wood burning with Hearth (see chapter 10 and chapter 24 of FBCR)	Yes		<input type="checkbox"/>
28	Show stairs with dimensions (width, tread and riser and total run) details of guardrails, Handrails	Yes		<input type="checkbox"/>
29	Identify accessibility of bathroom (see FBCR SECTION 320)	Yes		<input type="checkbox"/>

All materials placed within opening or onto/into exterior walls, soffits or roofs shall have Florida product approval number and mfg. installation information submitted with the plans (see Florida product approval form)

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL		Items to Include- Each Box shall be Circled as Applicable	
---	--	--	--

FBCR 403: Foundation Plans

		Select From Drop down		
30	Location of all load-bearing walls footings indicated as standard, monolithic, dimensions, size and type of reinforcing.	Yes		<input type="checkbox"/>
31	All posts and/or column footing including size and reinforcing	Yes		<input type="checkbox"/>
32	Any special support required by soil analysis such as piling.	Yes		<input type="checkbox"/>
33	Assumed load-bearing value of soil Pound Per Square Foot	Yes		<input type="checkbox"/>
34	Location of horizontal and vertical steel, for foundation or walls (include # size and type) For structures with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an grounding electrode system. Per the National Electrical Code article 250.52.3	Yes		<input type="checkbox"/>

FBCR 506: CONCRETE SLAB ON GRADE

35	Show Vapor retarder (6mil. Polyethylene with joints taped 6 inches and sealed)	Yes		<input type="checkbox"/>
36	Show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and Supports	Yes		<input type="checkbox"/>

FBCR 318: PROTECTION AGAINST TERMITES

37	Indicate on the foundation plan if soil treatment is used for subterranean termite prevention or Submit other approved termite protection methods. Protection shall be provided by registered termiticides	Yes		<input type="checkbox"/>
----	--	-----	--	--------------------------

FBCR 606: Masonry Walls and Stem walls (load bearing & shear Walls)

38	Show all materials making up walls, wall height, and Block size, mortar type	Yes		<input type="checkbox"/>
39	Show all Lintel sizes, type, spans and tie-beam sizes and spacing of reinforcement	Yes		<input type="checkbox"/>

Metal frame shear wall and roof systems shall be designed, signed and sealed by Florida Prof. Engineer or Architect

Floor Framing System: First and/or second story

40	Floor truss package shall including layout and details, signed and sealed by Florida Registered Professional Engineer	Yes		<input type="checkbox"/>
41	Show conventional floor joist type, size, span, spacing and attachment to load bearing walls, stem walls and/or piers	Yes		<input type="checkbox"/>
42	Girder type, size and spacing to load bearing walls, stem wall and/or piers	Yes		<input type="checkbox"/>
43	Attachment of joist to girder	Yes		<input type="checkbox"/>
44	Wind load requirements where applicable	Yes		<input type="checkbox"/>
45	Show required under-floor crawl space	NA		<input type="checkbox"/>
46	Show required amount of ventilation opening for under-floor spaces	NA		<input type="checkbox"/>
47	Show required covering of ventilation opening	NA		<input type="checkbox"/>
48	Show the required access opening to access to under-floor spaces	NA		<input type="checkbox"/>
49	Show the sub-floor structural panel sheathing type, thickness and fastener schedule on the edges & intermediate of the areas structural panel sheathing	Yes		<input type="checkbox"/>
50	Show Draftstopping, Fire caulking and Fire blocking	Yes		<input type="checkbox"/>
51	Show fireproofing requirements for garages attached to living spaces, per FBCR section 302.6	Yes		<input type="checkbox"/>
52	Provide live and dead load rating of floor framing systems (psf).	Yes		<input type="checkbox"/>

FBCR CHAPTER 6 WOOD WALL FRAMING CONSTRUCTION

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL		Items to Include- Each Box shall be Circled as Applicable		
---	--	--	--	--

Select from Drop down

53	Stud type, grade, size, wall height and oc spacing for all load bearing or shear walls	Yes		<input type="checkbox"/>
54	Fastener schedule for structural members per table FBC-R602.3.2 are to be shown	Yes		<input type="checkbox"/>
55	Show wood structural panel's sheathing attachment to studs, joist, trusses, rafters and structural members, showing fastener schedule attachment on the edges & intermediate of the areas structural panel sheathing	Yes		<input type="checkbox"/>
56	Show all required connectors with a max uplift rating and required number of connectors and oc spacing for continuous connection of structural walls to foundation and roof trusses or rafter systems	Yes		<input type="checkbox"/>
57	Show sizes, type, span lengths and required number of support jack studs, king studs for shear wall opening and girder or header per FBC-R602.7.	Yes		<input type="checkbox"/>
58	Indicate where pressure treated wood will be placed	Yes		<input type="checkbox"/>
59	Show all wall structural panel sheathing, grade, thickness and show fastener schedule for structural panel sheathing edges & intermediate areas	Yes		<input type="checkbox"/>
60	A detail showing gable truss bracing, wall balloon framing details or/ and wall hinge bracing detail	Yes		<input type="checkbox"/>

FBCR :ROOF SYSTEMS:

61	Truss design drawing shall meet section FBC-R 802.10. 1 Wood trusses	Yes		<input type="checkbox"/>
62	Include a layout and truss details, signed and sealed by Florida Professional Engineer	Yes		<input type="checkbox"/>
63	Show types of connector's assemblies' and resistance uplift rating for all trusses and rafters	Yes		<input type="checkbox"/>
64	Show gable ends with rake beams showing reinforcement or gable truss and wall bracing details	Yes		<input type="checkbox"/>
65	Provide dead load rating of trusses	Yes		<input type="checkbox"/>

FBCR 802:Conventional Roof Framing Layout

66	Rafter and ridge beams sizes, span, species and spacing	Yes		<input type="checkbox"/>
67	Connectors to wall assemblies' include assemblies' resistance to uplift rating	Yes		<input type="checkbox"/>
68	Valley framing and support details	Yes		<input type="checkbox"/>
69	Provide dead load rating of rafter system	Yes		<input type="checkbox"/>

FBCR 803 ROOF SHEATHING

70	Include all materials which will make up the roof decking, identification of structural panel sheathing, grade, thickness	Yes		<input type="checkbox"/>
71	Show fastener Size and schedule for structural panel sheathing on the edges & intermediate areas	Yes		<input type="checkbox"/>

ROOF ASSEMBLIES FRC Chapter 9

72	Include all materials which will make up the roof assembles covering	Yes		<input type="checkbox"/>
73	Submit Florida Product Approval numbers for each component of the roof assembles covering	Yes		<input type="checkbox"/>

FBCR Chapter 11 Energy Efficiency Code for Residential Building

Residential construction shall comply with this code by using the following compliance methods in the FBCR Chapter 11 Residential buildings compliance methods. **Two of the required forms are to be submitted, N1100.1.1.1 As an alternative to the computerized Compliance Method A, the Alternate Residential Point System Method hand calculation, Alternate Form 600A, may be used. All requirements specific to this calculation are located in Sub appendix C to Appendix G. Buildings complying by this alternative shall meet all mandatory requirements of this chapter. Computerized versions of the Alternate Residential Point System Method shall not be acceptable for code compliance.**

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL		Items to Include- Each Box shall be Circled as Applicable		
---	--	--	--	--

Select from Drop Down

74	Show the insulation R value for the following areas of the structure	Yes		<input type="checkbox"/>
75	Attic space	Yes		<input type="checkbox"/>
76	Exterior wall cavity	Yes		<input type="checkbox"/>
77	Crawl space	NA		<input type="checkbox"/>

HVAC information

78	Submit two copies of a Manual J sizing equipment or equivalent computation study	Yes		<input type="checkbox"/>
79	Exhaust fans shown in bathrooms Mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous required	Yes		<input type="checkbox"/>
80	Show clothes dryer route and total run of exhaust duct	Yes		<input type="checkbox"/>

Plumbing Fixture layout shown

81	All fixtures waste water lines shall be shown on the foundation plan	Yes		<input type="checkbox"/>
82	Show the location of water heater	Yes		<input type="checkbox"/>

Private Potable Water

83	Pump motor horse power	NA		<input type="checkbox"/>
84	Reservoir pressure tank gallon capacity	NA		<input type="checkbox"/>
85	Rating of cycle stop valve if used	NA		<input type="checkbox"/>

Electrical layout shown including

86	Show Switches, receptacles outlets, lighting fixtures and Ceiling fans	Yes		<input type="checkbox"/>
87	Show all 120-volt, single phase, 15- and 20-ampere branch circuits outlets required to be protected by Ground-Fault Circuit Interrupter (GFCI) Article 210.8 A	Yes		<input type="checkbox"/>
88	Show the location of smoke detectors & Carbon monoxide detectors	Yes		<input type="checkbox"/>
89	Show service panel, sub-panel, location(s) and total ampere ratings	Yes		<input type="checkbox"/>
90	On the electrical plans identify the electrical service overcurrent protection device for the main electrical service. This device shall be installed on the exterior of structures to serve as a disconnecting means for the utility company electrical service. Conductors used from the exterior disconnecting means to a panel or sub panel shall have four-wire conductors, of which one conductor shall be used as an equipment ground. Indicate if the utility company service entrance cable will be of the overhead or underground type. For structures with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an Grounding electrode system. Per the National Electrical Code article 250.52.3	Yes		<input type="checkbox"/>
91	Appliances and HVAC equipment and disconnects	Yes		<input type="checkbox"/>
92	Show all 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by a listed Combination arc-fault circuit interrupter, Protection device.	Yes		<input type="checkbox"/>

Notice Of Commencement:

A notice of commencement form **RECORDED** in the Columbia County Clerk Office is required to be filed with the Building Department **BEFORE ANY INSPECTIONS** can be performed.

<p align="center">GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL</p>	<p align="center">Items to Include- Each Box shall be Circled as Applicable</p>
---	--

****ITEMS 95, 96, & 98 Are Required After APPROVAL from the ZONING DEPT.****

Select from Drop down

93	Building Permit Application A current Building Permit Application is to be completed, by following the Checklist all supporting documents must be submitted. There is a \$15.00 application fee. The completed application with attached documents and application fee can be mailed.	Yes		<input type="checkbox"/>
94	Parcel Number The parcel number (Tax ID number) from the Property Appraisers Office (386) 758-1083 is required. A copy of property deed is also required. www.columbiacountyfla.com	Yes		<input type="checkbox"/>
95	Environmental Health Permit or Sewer Tap Approval A copy of a approved Columbia County Environmental Health (386) 758-1058	Yes		<input type="checkbox"/>
96	City of Lake City A City Water and/or Sewer letter. Call 386-752-2031	Yes		<input type="checkbox"/>
97	Toilet facilities shall be provided for all construction sites	Yes		<input type="checkbox"/>
98	Town of Fort White (386) 497-2321 If the parcel in the application for building permit is within the Corporate city limits of Fort White, an approval land use development letter issued by the Town of Fort is required to be submitted with the application for a building permit.	Yes		<input type="checkbox"/>
99	Flood Information: All projects within the Floodway of the Suwannee or Santa Fe Rivers shall require permitting through the Suwannee River Water Management District, before submitting a application to this office. Any project located within a flood zone where the base flood elevation (100 year flood) has been established shall meet the requirements of Section 8.5.2 of the Columbia County Land Development Regulations. Any project located within a flood zone where the base flood elevation has not been established (Zone A) shall meet the requirements of Section 8.5.3 of the Columbia County Land Development Regulations (Municode.com)	Yes		<input type="checkbox"/>
100	CERTIFIED FINISHED FLOOR ELEVATIONS will be required on any project where the approved FIRM Flood Maps show the property is in a AE, Floodway, and AH flood zones. Additionally One Foot Rise letters are required for AE and AH zones. In the Floodway Flood zones a Zero Rise letter is required.	Yes		<input type="checkbox"/>
101	A Flood development permit is also required for AE, Floodway & AH. Development permit cost is \$50.00	Yes		<input type="checkbox"/>
102	Driveway Connection: If the property does not have an existing access to a public road, then an application for a culvert permit (\$25.00) must be made. County Public Works Dept. determines the size and length of every culvert before instillation and completes a final inspection before permanent power is granted. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver (\$50.00) Separate Check when issued. If the project is to be located on an F.D.O.T. maintained road, then an F.D.O.T. access permit is required.	Yes		<input type="checkbox"/>
103	911 Address: An application for a 911 address must be applied for and received through the Columbia County Emergency Management Office of 911 Addressing Department (386) 758-1125.	Yes		<input type="checkbox"/>

Ordinance Sec. 90-75. - Construction debris. (e) It shall be unlawful for any person to dispose of or discard solid waste, including construction or demolition debris at any place within the county other than on an authorized disposal site or at the county's solid waste facilities. The temporary storage, not to exceed seven days of solid waste (excluding construction and demolition debris) on the premises where generated or vegetative trash pending disposition as authorized by law or ordinance, shall not be deemed a violation of this section. The temporary storage of construction and demolition debris on the premises where generated or vegetative trash pending disposition as authorized by law or ordinance shall not be deemed in violation of this section; provided, however, such construction and demolition debris must be disposed of in accordance with this article prior to the county's issuance of a certificate of occupancy for the premises. The burning of lumber from a construction or demolition project or vegetative trash when done so with legal and proper permits from the authorized agencies and in accordance with such agencies' rules and regulations, shall not be deemed a violation of this section. No person shall bury, throw, place, or deposit, or cause to be buried, thrown, placed, or deposited, any solid waste, special waste, or debris of any kind into or on any of the public streets, road right-of-way, highways, bridges, alleys, lanes, thoroughfares, waters, canals, or vacant lots or lands within the county. No person shall bury any vegetative trash on any of the public streets, road right-of-way, highways, bridges, lanes, thoroughfares, waters, canals, or lots less than ten acres in size within the county.