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

GENERAL REQUIREMENTS:
APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL

Items to Include- Each Box shall be Circled as Applicable
Select From Drop down

1	Two (2) complete sets of plans containing the following:			✔		
2	All drawings must be clear, concise, drawn to scale, details that are not used shall be marked void			✔		
3	**Condition space (Sq. Ft.)**		**Total (Sq. Ft.) under roof**	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	Yes		
5	Dimensions of all building set backs	Yes		
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		
7	Provide a full legal description of property.	Yes		

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		
10	(Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated)	Yes		
11	Wind importance factor and nature of occupancy	Yes		
12	The applicable internal pressure coefficient, Components and Cladding	Yes		
13	The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component, cladding materials not specifally designed by the registered design professional.	Yes		

Elevations Drawing including:

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

Floor Plan Including:

21	Dimensioned area plan showing rooms, attached garage, breeze ways, covered porches, deck, balconies	Yes		
22	Raised floor surfaces located more than 30 inches above the floor or grade	NA		
23	All exterior and interior shear walls indicated	Yes		
24	Shear wall opening shown (Windows, Doors and Garage doors)	Yes		
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		
26	Safety glazing of glass where needed	Yes		
27	Fireplaces types (gas appliance) (vented or non-vented) or wood burning with Hearth (see chapter 10 and chapter 24 of FBCR)	Yes		
28	Show stairs with dimensions (width, tread and riser and total run) details of guardrails, Handrails	NA		
29	Identify accessibility of bathroom (see FBCR SECTION 320)	Yes		

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		
31	All posts and/or column footing including size and reinforcing	Yes		
32	Any special support required by soil analysis such as piling.	NA		
33	Assumed load-bearing valve of soil Pound Per Square Foot	NA		
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	NA		

FBCR 506: CONCRETE SLAB ON GRADE

35	Show Vapor retarder (6mil. Polyethylene with joints lapped 6 inches and sealed)	Yes		
36	Show control joints, synthetic fiber reinforcement or welded fire fabric reinforcement and Supports	Yes		

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		

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	NA		
39	Show all Lintel sizes, type, spans and tie-beam sizes and spacing of reinforcement	NA		

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	NA		
41	Show conventional floor joist type, size, span, spacing and attachment to load bearing walls, stem walls and/or priers	NA		
42	Girder type, size and spacing to load bearing walls, stem wall and/or priers	NA		
43	Attachment of joist to girder	NA		
44	Wind load requirements where applicable	NA		
45	Show required under-floor crawl space	NA		
46	Show required amount of ventilation opening for under-floor spaces	NA		
47	Show required covering of ventilation opening	NA		
48	Show the required access opening to access to under-floor spaces	NA		
49	Show the sub-floor structural panel sheathing type, thickness and fastener schedule on the edges & intermediate of the areas structural panel sheathing	NA		
50	Show Draftstopping, Fire caulking and Fire blocking	NA		
51	Show fireproofing requirements for garages attached to living spaces, per FBCR section 302.6	NA		
52	Provide live and dead load rating of floor framing systems (psf).	NA		

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		
54	Fastener schedule for structural members per table FBC-R602.3.2 are to be shown	Yes		
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		
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		
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		
58	Indicate where pressure treated wood will be placed	Yes		
59	Show all wall structural panel sheathing, grade, thickness and show fastener schedule for structural panel sheathing edges & intermediate areas	Yes		
60	A detail showing gable truss bracing, wall balloon framing details or/ and wall hinge bracing detail	Yes		

FBCR :ROOF SYSTEMS:

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

FBCR 802:Conventional Roof Framing Layout

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

FBCR 803 ROOF SHEATHING

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

ROOF ASSEMBLIES FRC Chapter 9

72	Include all materials which will make up the roof assembles covering	Yes		
73	Submit Florida Product Approval numbers for each component of the roof assembles covering	Yes		

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		
75	Attic space	Yes		
76	Exterior wall cavity	Yes		
77	Crawl space	Yes		

HVAC information

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

Plumbing Fixture layout shown

81	All fixtures waste water lines shall be shown on the foundationplan	Yes		
82	Show the location of water heater	Yes		

Private Potable Water

83	Pump motor horse power	NA		
84	Reservoir pressure tank gallon capacity	NA		
85	Rating of cycle stop valve if used	NA		

Electrical layout shown including

86	Show Switches, receptacles outlets, lighting fixtures and Ceiling fans	Yes		
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		
88	Show the location of smoke detectors & Carbon monoxide detectors	Yes		
89	Show service panel, sub-panel, location(s) and total ampere ratings	Yes		
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		
91	Appliances and HVAC equipment and disconnects	Yes		
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		

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.

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

****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		
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		
95	**Environmental Health Permit or Sewer Tap Approval** A copy of a approved Columbia County Environmental Health (386) 758-1058	-		
96	**City of Lake City** A City Water and/or Sewer letter. Call 386-752-2031	-		
97	**Toilet facilities shall be provided for all construction sites**	Yes		
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.	-		
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)	NA		
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		
101	A Flood development permit is also required for AE, Floodway & AH. Development permit cost is **$50.00**	NA		
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		
103	**911 Address:** An application for a 911address must be applied for and received through the Columbia County Emergency Management Office of 911 Addressing Department (386) 758-1125.	Yes		

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.

Disclosure Statement for Owner Builders:

If you as the Applicant will be acting as your own contractor or owner/builder under section 489.103(7) Florida Statutes, you must submit the required notarized Owner Builder Disclosure Statement form.

****This form can be printed from the Columbia County Website on the Building and Zoning page under Documents. Web address is - http://www.columbiacountyfla.com/BuildingandZoning.asp**

Section 105 of the Florida Building Code defines the:

Time limitation of application.

An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

Single-family residential dwelling.

Section 105.3.4 A building permit for a single-family residential dwelling must be issued within 30 working days of application therefor unless unusual circumstances require a longer time for processing the application or unless the permit application fails to satisfy the Florida Building Code or the enforcing agency's laws or ordinances.

Permit intent.

Section 105.4.1: A permit issued shall be constructed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the building official from thereafter requiring a correction of errors in plans, construction or violations of this code. Every permit issued shall become invalid unless the work authorized by such permit is commenced within six months after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of six months after the time the work is commenced.

If work has commenced.

Section 105.4.1.1: If work has commenced and the permit is revoked, becomes null and void, or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work.

New Permit.

Section 105.4.1.2: If a new permit is not obtained within 180 days from the date the initial permit became null and void, the building official is authorized to require that any work which has been commenced or completed be removed from the building site. Alternately, a new permit may be issued on application, providing the work in place and required to complete the structure meets all applicable regulations in effect at the time the initial permit became null and void and any regulations which may have become effective between the date of expiration and the date if issuance of the new permit.

Work Shall Be:

Section 105.4.1.3: Work shall be considered to be in active progress when the permit has received an approved inspection within 180 days. This provision shall not be applicable in case of civil commotion or strike or when the building work is halted due directly to judicial injunction, order or similar process.

The Fee:

Section 105.4.1.4: The fee for renewal reissuance and extension of a permit shall be set forth by the administrative authority.

Notification:

When the application is approved for permitting the applicant will be notified by phone as to the status by the Columbia County Building & Zoning Department.

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online @ www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
1. EXTERIOR DOORS			
A. SWINGING	Plastpro		FL-16094.1
B. SLIDING			
C. SECTIONAL/ROLL UP			
D. OTHER			
2. WINDOWS			
A. SINGLE/DOUBLE HUNG	MI		FL 17499
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED			
E. MULLION			
F. SKYLIGHTS			
G. OTHER			
3. PANEL WALL			
A. SIDING			
B. SOFFITS			
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES	Tamko		FL 18355-R4
B. NON-STRUCT METAL			
C. ROOFING TILES			
D. SINGLE PLY ROOF			
E. OTHER			
5. STRUCT COMPONENTS			
A. WOOD CONNECTORS	Simpson	SP4	10456.43
B. WOOD ANCHORS		HETA 16	11473.3
C. TRUSS PLATES		LSTA 24	10852.4
D. INSULATION FORMS		ABW 66Z	10849.6
E. LINTELS		ABW 44Z	10849.6
F. OTHERS			
6. NEW EXTERIOR			
ENVELOPE PRODUCTS			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.
Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection.

NOTES: _____

FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Lot 21 Blackberry Farms	Builder Name:	Gibraltar Contracting, LLC.
Street:		Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 32055	Permit Number:	
Owner:	N/A	Jurisdiction:	
Design Location:	FL, Gainesville	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	4
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	2245
Conditioned floor area below grade (ft²)	0

7. Windows (248.8 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.36	248.83 ft²
SHGC:	SHGC=0.25	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
d. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		6.732 ft.
Area Weighted Average SHGC:		0.250

8. Floor Types (2245.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	2245.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (2165.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1847.00 ft²
b. Frame - Wood, Adjacent	R=13.0	318.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (2357.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=38.0	2357.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Garage	6	561.25

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	27.3	SEER:14.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	37.2	HSPF:8.20

14. Hot water systems	
a. Electric	Cap: 50 gallons EF: 0.920
b. Conservation features None	
15. Credits	CV, Pstat

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for
FILE COPY
Code Compliance

Glass/Floor Area: 0.111

Total Proposed Modified Loads: 57.35
Total Baseline Loads: 59.28

PASS

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

PREPARED BY: _____
DATE: 10/16/2019

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 5.00 ACH50 (R402.4.1.2).

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Lot 21 Blackberry Farms	Bedrooms:	4	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	2245	Lot #	21
Owner Name:	N/A	Total Stories:	1	Block/Subdivision:	Blackberry Farm
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Gibraltar Contracting, LLC.	Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32055
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	2245	20205

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	2245	20205	Yes	8	4	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	237.4 ft	0	2245 ft²	----	0	0	1

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	2698 ft²	0 ft²	Medium	Y	0.96	No	0.9	No	0	33.7

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	2245 ft²	Y	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	2357 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
____	1	S	Exterior	Frame - Wood	Main	13	13	2	9		118.5 ft²		0.23	0.75	0
____	2	S	Exterior	Frame - Wood	Main	13	21	4	10		213.3 ft²		0.23	0.75	0
____	3	S	Exterior	Frame - Wood	Main	13	9	6	9		85.5 ft²		0.23	0.75	0
____	4	E	Garage	Frame - Wood	Main	13	9		10		90.0 ft²		0.23	0.75	0
____	5	S	Garage	Frame - Wood	Main	13	25	4	9		228.0 ft²		0.23	0.75	0
____	6	E	Exterior	Frame - Wood	Main	13	26	2	9		235.5 ft²		0.23	0.75	0
____	7	N	Exterior	Frame - Wood	Main	13	37	8	10		376.7 ft²		0.23	0.75	0
____	8	W	Exterior	Frame - Wood	Main	13	8		10		80.0 ft²		0.23	0.75	0
____	9	N	Exterior	Frame - Wood	Main	13	18	6	10		185.0 ft²		0.23	0.75	0
____	10	E	Exterior	Frame - Wood	Main	13	8		10		80.0 ft²		0.23	0.75	0
____	11	N	Exterior	Frame - Wood	Main	13	13	2	9		118.5 ft²		0.23	0.75	0
____	12	W	Exterior	Frame - Wood	Main	13	39	4	9		354.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	S	Insulated	Main	None	.46	3		6	8	20 ft²
_____	2	S	Insulated	Main	None	.46	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	S	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	2	S	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	8.0 ft²	7 ft 6 in	3 ft 0 in	None	None
_____	3	S	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	5.0 ft²	7 ft 6 in	1 ft 6 in	None	None
_____	4	S	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	36.0 ft²	7 ft 6 in	1 ft 6 in	None	None
_____	5	S	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	4.5 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	6	E	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	3.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	7	E	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	16.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	8	N	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	6.0 ft²	1 ft 6 in	2 ft 6 in	None	None
_____	9	N	7	TIM	Low-E Double	Yes	0.36	0.25	N	38.3 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	10	W	8	TIM	Low-E Double	Yes	0.36	0.25	N	24.0 ft²	10 ft 6 in	1 ft 6 in	None	None
_____	11	N	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	72.0 ft²	12 ft 6 in	1 ft 0 in	None	None
_____	12	N	11	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	13	S	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	6.0 ft²	1 ft 6 in	1 ft 0 in	None	None

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	582.59 ft²	582.59 ft²	66 ft	9 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000286	1683.8	92.44	173.84	.1128	5

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	HSPF:8.2	37.22 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	SEER: 14	27.3 kBtu/hr	810 cfm	0.7	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.92	50 gal	40 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

√	#	---- Supply ---- Location	R-Value	Area	---- Return ---- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool
_____	1	Attic	6	561.25 f	Attic	112.25 f	Default Leakage	Garage	(Default) c	(Default) c			1	1

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66

MASS

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

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 97

The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition	1. New (From Plans)
2. Single-family or multiple-family	2. Single-family
3. No. of units (if multiple-family)	3. 1
4. Number of bedrooms	4. 4
5. Is this a worst case? (yes/no)	5. No
6. Conditioned floor area (sq. ft.)	6. 2245
7. Windows, type and area	
a) U-factor:(weighted average)	7a. 0.360
b) Solar Heat Gain Coefficient (SHGC)	7b. 0.250
c) Area	7c. 248.8
8. Skylights	
a) U-factor:(weighted average)	8a. NA
b) Solar Heat Gain Coefficient (SHGC)	8b. NA
9. Floor type, insulation level:	
a) Slab-on-grade (R-value)	9a. 0.0
b) Wood, raised (R-value)	9b.
c) Concrete, raised (R-value)	9c.
10. Wall type and insulation:	
A. Exterior:	
1. Wood frame (Insulation R-value)	10A1. 13.0
2. Masonry (Insulation R-value)	10A2.
B. Adjacent:	
1. Wood frame (Insulation R-value)	10B1. 13.0
2. Masonry (Insulation R-value)	10B2.
11. Ceiling type and insulation level	
a) Under attic	11a. 38.0
b) Single assembly	11b.
c) Knee walls/skylight walls	11c.
d) Radiant barrier installed	11d. Yes

12. Ducts, location & insulation level	
a) Supply ducts	R 6.0
b) Return ducts	R 6.0
c) AHU location	Garage
13. Cooling system:	Capacity 27.3
a) Split system	SEER
b) Single package	SEER
c) Ground/water source	SEER/COP
d) Room unit/PTAC	EER
e) Other	14.0
14. Heating system:	Capacity 37.2
a) Split system heat pump	HSPF
b) Single package heat pump	HSPF
c) Electric resistance	COP
d) Gas furnace, natural gas	AFUE
e) Gas furnace, LPG	AFUE
f) Other	8.20
15. Water heating system	
a) Electric resistance	EF 0.92
b) Gas fired, natural gas	EF
c) Gas fired, LPG	EF
d) Solar system with tank	EF
e) Dedicated heat pump with tank	EF
f) Heat recovery unit	HeatRec%
g) Other	
16. HVAC credits claimed (Performance Method)	
a) Ceiling fans	
b) Cross ventilation	Yes
c) Whole house fan	No
d) Multizone cooling credit	
e) Multizone heating credit	
f) Programmable thermostat	Yes

*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: _____ City/FL Zip: Lake City, FL 32055

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance
2017 Florida Building Code, Energy Conservation, 6th Edition

Jurisdiction:	Permit #:

Job Information

Builder: Gibraltar Contracting, LLC. Community: Lot: 21

Address:

City: Lake City State: FL Zip: 32055

Air Leakage Test Results *Passing results must meet either the Performance, Prescriptive, or ERI Method*

○ **PRESCRIPTIVE METHOD-**The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.

○ **PERFORMANCE or ERI METHOD-**The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2017 (Performance) or R406-2017 (ERI), section labeled as infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2017-Energy Calc (Performance) or R406-2017 (ERI): 5.000

_____ x 60 ÷ 20205 = _____
CFM(50) Building Volume ACH(50)

☐ **PASS**

☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.

Method for calculating building volume:

○ Retrieved from architectural plans

● Code software calculated

○ Field measured and calculated

R402.4.1.2 Testing. 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.*

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, back draft 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.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above Air Leakage results are in accordance with the 2017 6th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.

Signature of Tester: _____ Date of Test: _____

Printed Name of Tester: _____

License/Certification #: _____ Issuing Authority: _____

Residential System Sizing Calculation

Summary

N/A

Project Title:
Lot 21 Blackberry Farms

Lake City, FL 32055

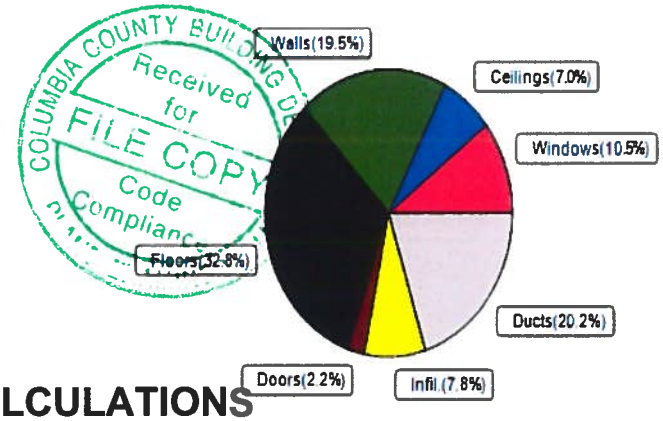
10/16/2019

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M) Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)					
Winter design temperature(TMY3 99%)	30	F	Summer design temperature(TMY3 99%)	94	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	40	F	Summer temperature difference	19	F
Total heating load calculation	**34152**	**Btuh**	**Total cooling load calculation**	**24621**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	109.0	37224	Sensible (SHR = 0.70)	96.6	19111
Heat Pump + Auxiliary(0.0kW)	109.0	37224	Latent	169.3	8190
			Total (Electric Heat Pump)	110.9	27301

WINTER CALCULATIONS

Winter Heating Load (for 2245 sqft)

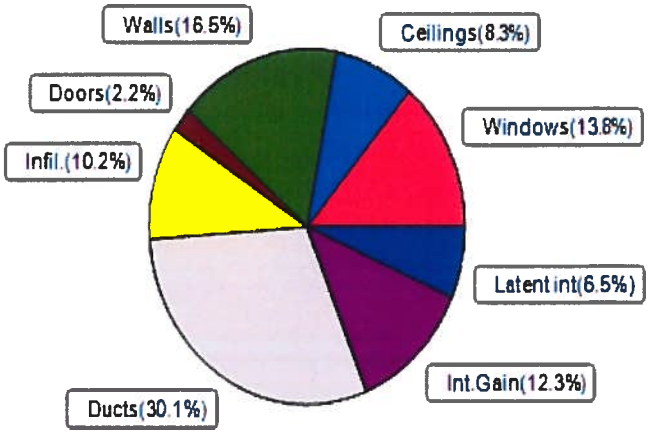
Load component			Load	
Window total	249	sqft	3583	Btuh
Wall total	1876	sqft	6661	Btuh
Door total	40	sqft	736	Btuh
Ceiling total	2357	sqft	2393	Btuh
Floor total	2245	sqft	11205	Btuh
Infiltration	61	cfm	2661	Btuh
Duct loss			6913	Btuh
Subtotal			**34152**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**34152**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 2245 sqft)

Load component			Load	
Window total	249	sqft	3397	Btuh
Wall total	1876	sqft	4074	Btuh
Door total	40	sqft	552	Btuh
Ceiling total	2357	sqft	2034	Btuh
Floor total			0	Btuh
Infiltration	46	cfm	948	Btuh
Internal gain			3040	Btuh
Duct gain			5737	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**19782**	**Btuh**
Latent gain(ducts)			1666	Btuh
Latent gain(infiltration)			1573	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1600	Btuh
Total latent gain			**4839**	**Btuh**
TOTAL HEAT GAIN			**24621**	**Btuh**



Prepared by ACCA MANUAL J 8th Edition

EnergyGauge® System Sizing
PREPARED BY: _____
DATE: 10/16/2019

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

N/A

Project Title:
Lot 21 Blackberry Farms
Building Type: User

Lake City, FL 32055

10/16/2019

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 F (TMY3 99%)

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft) X	HTM=	Load
1	2, NFRC 0.25	Vinyl	0.36	S	15.0	14.4	216 Btuh
2	2, NFRC 0.25	Vinyl	0.36	S	8.0	14.4	115 Btuh
3	2, NFRC 0.25	Vinyl	0.36	S	5.0	14.4	72 Btuh
4	2, NFRC 0.25	Vinyl	0.36	S	36.0	14.4	518 Btuh
5	2, NFRC 0.25	Vinyl	0.36	S	4.5	14.4	65 Btuh
6	2, NFRC 0.25	Vinyl	0.36	E	3.0	14.4	43 Btuh
7	2, NFRC 0.25	Vinyl	0.36	E	16.0	14.4	230 Btuh
8	2, NFRC 0.25	Vinyl	0.36	N	6.0	14.4	86 Btuh
9	2, NFRC 0.25	TIM	0.36	N	38.3	14.4	552 Btuh
10	2, NFRC 0.25	TIM	0.36	W	24.0	14.4	346 Btuh
11	2, NFRC 0.25	Vinyl	0.36	N	72.0	14.4	1037 Btuh
12	2, NFRC 0.25	Vinyl	0.36	N	15.0	14.4	216 Btuh
13	2, NFRC 0.25	Vinyl	0.36	S	6.0	14.4	86 Btuh
	Window Total				248.8(sqft)		3583 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	98	3.55	346 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	144	3.55	512 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	81	3.55	288 Btuh
4	Frame - Wood	- Adj	(0.089)	13.0/0.0	90	3.55	320 Btuh
5	Frame - Wood	- Adj	(0.089)	13.0/0.0	208	3.55	738 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	217	3.55	769 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	332	3.55	1180 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	56	3.55	199 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	113	3.55	401 Btuh
10	Frame - Wood	- Ext	(0.089)	13.0/0.0	80	3.55	284 Btuh
11	Frame - Wood	- Ext	(0.089)	13.0/0.0	104	3.55	367 Btuh
12	Frame - Wood	- Ext	(0.089)	13.0/0.0	354	3.55	1257 Btuh
	Wall Total				1876(sqft)		6661 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.460)	20	18.4	368 Btuh
2	Insulated - Garage,	n	(0.460)	20	18.4	368 Btuh
	Door Total			40(sqft)		736Btuh

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Vented Attic/L/Shing	(0.025)	38.0/0.0	2357	1.0	2393 Btuh
	Ceiling Total			2357(sqft)		2393Btuh

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	237.4 ft(perim.)	47.2	11205 Btuh
	Floor Total			2245 sqft		11205 Btuh

	Envelope Subtotal:	24578 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

N/A

Project Title:
Lot 21 Blackberry Farms
Building Type: User

Lake City, FL 32055

10/16/2019

Infiltration	Type Natural	Wholehouse	ACH 0.18	Volume(cuft) 20205	Wall Ratio 1.00	CFM= 60.8	2661 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att)				(DLM of 0.254)		6913 Btuh
All Zones				**Sensible Subtotal All Zones**			**34152 Btuh**

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	34152 Btuh 0 Btuh 34152 Btuh

EQUIPMENT

1. Electric Heat Pump	#	37224 Btuh

Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)

Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

N/A

Project Title:
Lot 21 Blackberry Farms

Lake City, FL 32055

10/16/2019

Reference City: Gainesville, FL Temperature Difference: 19.0F(TMY3 99%) Humidity difference: 51gr.

Component Loads for Whole House

Window	Type* Panes	SHGC	U	InSh	IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2 NFRC	0.25,	0.36	No	No	S	1.5ft.	1.0ft.	15.0	15.0	0.0	12	14	181 Btuh
2	2 NFRC	0.25,	0.36	No	No	S	7.5ft.	3.0ft.	8.0	8.0	0.0	12	14	97 Btuh
3	2 NFRC	0.25,	0.36	No	No	S	7.5ft.	1.5ft.	5.0	5.0	0.0	12	14	60 Btuh
4	2 NFRC	0.25,	0.36	No	No	S	7.5ft.	1.5ft.	36.0	36.0	0.0	12	14	436 Btuh
5	2 NFRC	0.25,	0.36	No	No	S	1.5ft.	1.0ft.	4.5	4.5	0.0	12	14	54 Btuh
6	2 NFRC	0.25,	0.36	No	No	E	1.5ft.	1.0ft.	3.0	0.7	2.3	12	31	79 Btuh
7	2 NFRC	0.25,	0.36	No	No	E	1.5ft.	1.0ft.	16.0	1.0	15.0	12	31	477 Btuh
8	2 NFRC	0.25,	0.36	No	No	N	1.5ft.	2.5ft.	6.0	0.0	6.0	12	12	73 Btuh
9	2 NFRC	0.25,	0.36	No	No	N	1.5ft.	1.0ft.	38.3	0.0	38.3	12	12	464 Btuh
10	2 NFRC	0.25,	0.36	No	No	W	10.5f	1.5ft.	24.0	21.6	2.4	12	31	335 Btuh
11	2 NFRC	0.25,	0.36	No	No	N	12.5f	1.0ft.	72.0	0.0	72.0	12	12	871 Btuh
12	2 NFRC	0.25,	0.36	No	No	N	1.5ft.	1.0ft.	15.0	0.0	15.0	12	12	181 Btuh
13	2 NFRC	0.25,	0.36	No	No	S	1.5ft.	1.0ft.	6.0	6.0	0.0	12	14	73 Btuh
	Excursion													16 Btuh
	Window Total								249 (sqft)					3397 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	97.5	2.3	221 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	144.3	2.3	327 Btuh
3	Frame - Wood - Ext	0.09	13.0/0.0	81.0	2.3	183 Btuh
4	Frame - Wood - Adj	0.09	13.0/0.0	90.0	1.7	152 Btuh
5	Frame - Wood - Adj	0.09	13.0/0.0	208.0	1.7	351 Btuh
6	Frame - Wood - Ext	0.09	13.0/0.0	216.5	2.3	490 Btuh
7	Frame - Wood - Ext	0.09	13.0/0.0	332.3	2.3	752 Btuh
8	Frame - Wood - Ext	0.09	13.0/0.0	56.0	2.3	127 Btuh
9	Frame - Wood - Ext	0.09	13.0/0.0	113.0	2.3	256 Btuh
10	Frame - Wood - Ext	0.09	13.0/0.0	80.0	2.3	181 Btuh
11	Frame - Wood - Ext	0.09	13.0/0.0	103.5	2.3	234 Btuh
12	Frame - Wood - Ext	0.09	13.0/0.0	354.0	2.3	801 Btuh
	Wall Total			1876 (sqft)		4074 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	20.0	13.8	276 Btuh
2	Insulated - Garage	20.0	13.8	276 Btuh
	Door Total	40 (sqft)		552 Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/Light/Shingle/RB	0.025	38.0/0.0	2357.0	0.86	2034 Btuh
	Ceiling Total			2357 (sqft)		2034 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	2245 (ft-perimeter)	0.0	0 Btuh
	Floor Total		2245.0 (sqft)		0 Btuh

		Load
	Envelope Subtotal:	10057 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

N/A

Project Title: Lot 21 Blackberry Farms

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL 32055

10/16/2019

Infiltration	Type Natural	Average ACH 0.14	Volume(cuft) 20205		Wall Ratio 1		CFM= 45.6	Load 948	Btuh
Internal gain		Occupants 8	Btuh/occupant X 230			+	Appliance 1200	Load 3040	Btuh
						Sensible Envelope Load:		14045	Btuh
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic)					(DGM of 0.408)		5737	Btuh
						Sensible Load All Zones		**19782**	**Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

N/A

Project Title: Lot 21 Blackberry Farms

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL 32055

10/16/2019

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**14045 Btuh**
	Sensible Duct Load	5737 Btuh
	Total Sensible Zone Loads	**19782 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**19782 Btuh**
	Latent infiltration gain (for 51 gr. humidity difference)	1573 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1666 Btuh
	Latent occupant gain (8.0 people @ 200 Btuh per person)	1600 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**4839 Btuh**
	TOTAL GAIN	**24621 Btuh**

EQUIPMENT

1. Central Unit	#	27301 Btuh

*Key: Window types (Panes - Number and type of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value)
(U - Window U-Factor)
(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))
- For Blinds: Assume medium color, half closed
For Draperies: Assume medium weave, half closed
For Roller shades: Assume translucent, half closed
(IS - Insect screen: none(N), Full(F) or Half(½))
(Ornt - compass orientation)

Version 8