FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Strachan Residence-Red Door	Builder Name:	Red Door Homes
Street:	TBD SW Summerhill Glenn	Permit Office:	Columbia county Building Dept
City, State, Zip:	Lake City , FL , 32024	Permit Number:	
Owner:	Strachan	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	3
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1704
Conditioned floor area below grade (ft²)	0

7. Windows(120.0 sqft.)	Description	Area
a. U-Factor: SHGC:	Dbl, U=0.21 SHGC=0.31	120.00 ft²
b. U-Factor: SHGC:	N/A	ft²
c. U-Factor: SHGC:	N/A	ft²
d. U-Factor: SHGC:	N/A	ft²
Area Weighted Average Overhang Depth:		1.500 ft.
Area Weighted Average SHGC:		0.310

8. Floor Types (1704.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1704.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (1500.7 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1224.00 ft²
b. Frame - Wood, Adjacent	R=13.0	276.67 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (1704.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=30.0	1704.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Main	6	340.8

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	28.0	SEER:14.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	27.8	HSPF:8.50

14. Hot water systems	
a. Electric	Cap: 50 gallons EF: 0.980
b. Conservation features None	

15. Credits Pstat

COLUMBIA COUNTY BUILDING DEPARTMENT Received for FILE COPY Code Compliance PLANS EXAMINER

Glass/Floor Area: 0.070

Total Proposed Modified Loads: 41.53

Total Baseline Loads: 42.99

PASS

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

PREPARED BY: JRDig

DATE: _____

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.

GREAT SEAL OF THE STATE OF FLORIDA ★ IN GOD WE TRUST ★

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).

- Compliance with a proposed duct leakage Qn requires a Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.030 Qn for whole house.

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Strachan Residence-Red Doo	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1704	Lot #	
Owner Name:	Strachan	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Red Door Homes	Rotate Angle:	0	Street:	TBD SW Summerhill Gl
Permit Office:	Columbia county Building Dep	Cross Ventilation:		County:	columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City , FL , 32024
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	1704	13632

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1704	13632	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	187 ft	0	1704 ft²	----	0.33	0.33	0.34

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	1906 ft²	0 ft²	Medium	N	0.96	No	0.9	No	0	26.6

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1704 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	30	Blown	1704 ft²	0.11	Wood

FORM R405-2017

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	17		8		136.0 ft²		0.23	0.75	0
___	2	E	Exterior	Frame - Wood	Main	13	6		8		48.0 ft²		0.23	0.75	0
___	3	S	Exterior	Frame - Wood	Main	13	12		8		96.0 ft²		0.23	0.75	0
___	4	W	Exterior	Frame - Wood	Main	13	44		8		352.0 ft²		0.23	0.75	0
___	5	N	Exterior	Frame - Wood	Main	13	50		8		400.0 ft²		0.23	0.75	0
___	6	E	Exterior	Frame - Wood	Main	13	24		8		192.0 ft²		0.23	0.75	0
___	7	S	Garage	Frame - Wood	Main	13	10		8		80.0 ft²		0.23	0.75	0
___	8	E	Garage	Frame - Wood	Main	13	2		8		16.0 ft²		0.23	0.75	0
___	9	S	Garage	Frame - Wood	Main	13	10	11	8		87.3 ft²		0.23	0.75	0
___	10	W	Garage	Frame - Wood	Main	13	11	8	8		93.3 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	N	Insulated	Main	None	.46	5		6	8	33.3 ft²
___	3	S	Insulated	Main	None	.46	2	8	6	8	17.8 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	0.21	0.31	N	30.0 ft²	1 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
___	2	S	3	Vinyl	Low-E Double	Yes	0.21	0.31	N	30.0 ft²	1 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
___	3	W	4	Vinyl	Low-E Double	Yes	0.21	0.31	N	15.0 ft²	1 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
___	4	N	5	Vinyl	Low-E Double	Yes	0.21	0.31	N	45.0 ft²	1 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
___	1	483 ft²	483 ft²	52.6 ft	8 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000254	1136	62.36	117.29	.0956	5

HEATING SYSTEM

√	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
___	1	Electric Heat Pump/	None	Singl	HSPF:8.5	27.8 kBtu/hr	1	sys#1

FORM R405-2017

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COOLING SYSTEM

√	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	Singl	SEER: 14	28 kBtu/hr	933 cfm	0.85	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.98	50 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

√	#	---- 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	340.8 ft	Attic	85.2 ft²	Prop. Leak Free	Main	--- cfm	51.1 cfm	0.03	0.50	1	1

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