FORM R405-2020

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Spec Home Parcel #39394080008	Builder Name:	
Street:	2330 4th Ave SE	Permit Office:	Collier
City, State, Zip:	Naples , FL , 34117	Permit Number:	
Owner:		Jurisdiction:	211000
Design Location:	FL, Lee/Collier	County:	Collier (Florida Climate Zone 1)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Detached
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)	1838
Conditioned floor area below grade (ft²)	0

7. Windows(129.3 sqft.)

	Description	Area
a. U-Factor:	Sgl, U=1.11	129.33 ft²
SHGC:	SHGC=0.49	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		1.333 ft.
Area Weighted Average SHGC:		0.490

8. Skylights

		Area
c. U-Factor:(AVG)	N/A	ft²
SHGC(AVG):	N/A	

9. Floor Types (1838.0 sqft.)

	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1838.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types (1711.1 sqft.)

	Insulation	Area
a. Concrete Block - Int Insul, Exterior	R=4.1	1524.40 ft²
b. Frame - Wood, Adjacent	R=13.0	186.67 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

11. Ceiling Types (1838.0 sqft.)

	Insulation	Area
a. Under Attic (Vented)	R=30.0	1838.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

12. Ducts

	R	ft²
a. Sup: Attic, Ret: Attic, AH: Attic	6	224

13. Cooling systems

	kBtu/hr	Efficiency
a. Central Unit	48.0	SEER:16.00

14. Heating systems

	kBtu/hr	Efficiency
a. Electric Strip Heat	28.0	COP:1.00

15. Hot water systems

a. Electric	Cap: 40 gallons
	EF: 0.950
b. Conservation features	
None	

16. Credits CF, Pstat

Glass/Floor Area: 0.070

Total Proposed Modified Loads: 56.03

Total Baseline Loads: 56.70

PASS

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

PREPARED BY: _____

DATE: 09/12/2022

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 R405-2020

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Spec Home Parcel #3939408	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1838	Lot #	
Owner Name:		Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:		Rotate Angle:	0	Street:	2330 4th Ave SE
Permit Office:	Collier	Cross Ventilation:		County:	Collier
Jurisdiction:	211000	Whole House Fan:		City, State, Zip:	Naples , FL , 34117
Family Type:	Detached				
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, Lee/Collier	FL_SOUTHWEST_FLORI	46	91	70	75	321	58	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1838	17148.5

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1838	17148.5	Yes	3	3	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	202.3 ft		1838 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	Wood shingle	2055 ft²	0 ft²	Light	Y	0.96	No	0.9	No	0	26.57

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	150	1838 ft²	Y	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	30	Batt	1838 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	N	Garage	Frame - Wood	Main	13	20		9	4	186.7 ft²		0.23	0.75	0
____	2	S	Exterior	Concrete Block - Int Insul	Main	4.1	50	10	9	4	474.4 ft²		0	0.75	0
____	3	N	Exterior	Concrete Block - Int Insul	Main	4.1	30	10	9	4	287.8 ft²		0	0.75	0
____	4	W	Exterior	Concrete Block - Int Insul	Main	4.1	40	10	9	4	381.1 ft²		0	0.75	0
____	5	E	Exterior	Concrete Block - Int Insul	Main	4.1	40	10	9	4	381.1 ft²		0	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	.1	6		8		48 ft²
_____	2	N	Insulated	Main	None	.1	2	8	8		21.3 ft²
_____	3	N	Insulated	Main	None	.1	6		8		48 ft²
_____	4	W	Insulated	Main	None	.1	6		8		48 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	2	Metal	Single (Clear)	Yes	1.11	0.49	Y	13.5 ft²	1 ft 4 in	7 ft 0 in	None	None
_____	2	S	2	Metal	Single (Clear)	Yes	1.11	0.49	Y	12.0 ft²	1 ft 4 in	4 ft 0 in	None	None
_____	3	E	5	Metal	Single (Clear)	Yes	1.11	0.49	Y	8.0 ft²	1 ft 4 in	3 ft 0 in	None	None
_____	4	W	4	Metal	Single (Clear)	Yes	1.11	0.49	Y	23.2 ft²	1 ft 4 in	6 ft 0 in	None	None
_____	5	E	5	Metal	Single (Clear)	Yes	1.11	0.49	Y	23.2 ft²	1 ft 4 in	6 ft 0 in	None	None
_____	6	W	4	Metal	Single (Clear)	Yes	1.11	0.49	Y	16.2 ft²	1 ft 4 in	6 ft 0 in	None	None
_____	7	S	2	Metal	Single (Clear)	Yes	1.11	0.49	Y	9.8 ft²	1 ft 4 in	4 ft 0 in	None	None
_____	8	E	5	Metal	Single (Clear)	Yes	1.11	0.49	Y	13.5 ft²	1 ft 4 in	7 ft 0 in	None	None
_____	9	E	5	Metal	Single (Clear)	Yes	1.11	0.49	Y	10.0 ft²	1 ft 4 in	0 ft 0 in	None	None

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	492 ft²	492 ft²	60 ft	9.33 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000296	1429	78.4	147.19	.1014	5

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM

√	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
_____	1	Electric Strip Heat/	None		COP:1	28 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	Singl	SEER: 16	48 kBtu/hr	1440 cfm	0.75	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.95	40 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	Cool
_____	1	Attic	6	224 ft²	Attic	81 ft²	Default Leakage	Attic	(Default)	(Default)			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

FORM R405-2020

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 99

The lower the EnergyPerformance Index, the more efficient the home.

2330 4th Ave SE, Naples, FL, 34117

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Detached
3. Number of units, if multiple family	1
4. Number of Bedrooms	3
5. Is this a worst case?	No
6. Conditioned floor area (ft²)	1838

7. Windows**	Description	Area
a. U-Factor:	Sgl, U=1.11	129.33 ft²
SHGC:	SHGC=0.49	
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:		1.333 ft.
Area Weighted Average SHGC:		0.490

8. Skylights	Description	Area
a. U-Factor(AVG):	N/A	ft²
SHGC(AVG):	N/A	

9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1838.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Type and Insulation	Insulation	Area
a. Concrete Block - Int Insul, Exterior	R=4.1	1524.40 ft²
b. Frame - Wood, Adjacent	R=13.0	186.67 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

11. Ceiling Type and insulation level	Insulation	Area
a. Under Attic (Vented)	R=30.0	1838.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

12. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: Attic	6	224

13. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	48.0	SEER:16.00

14. Heating systems	kBtu/hr	Efficiency
a. Electric Strip Heat	28.0	COP:1.00

15. Hot water systems	
a. Electric	Cap: 40 gallons EF: 0.95
b. Conservation features None	

Credits (Performance method)	CF, Pstat

I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction 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: _____

*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage (EEM) incentives if you obtain a Florida Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

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

Envelope Leakage Test Report (Blower Door Test)
Residential Prescriptive, Performance or ERI Method Compliance
2020 Florida Building Code, Energy Conservation, 7th Edition

Jurisdiction: 211000	Permit #:

Job Information

Builder: Community: Lot: NA

Address: 2330 4th Ave SE

City: Naples State: FL Zip: 34117

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 R405-2020 (Performance) or R406-2020 (ERI), section labeled as infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2020-Energy Calc (Performance) or R406-2020 (ERI): 5.000

_____ x 60 ÷ 17149 = _____
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 Statues.*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 2020 7th 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

Project Title:

2330 4th Ave SE
Naples, FL 34117

Spec Home Parcel #39394080008

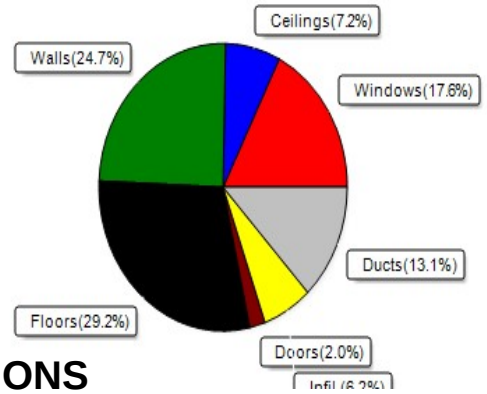
9/12/2022

Location for weather data: Lee/Collier, FL - Defaults: Latitude(26.53) Altitude(15 ft.) Temp Range(M) Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(50gr.)						
Winter design temperature(MJ8 99%)	45	F		Summer design temperature(MJ8 99%)	93	F
Winter setpoint	70	F		Summer setpoint	75	F
Winter temperature difference	25	F		Summer temperature difference	18	F
Total heating load calculation	**20414**	**Btuh**		**Total cooling load calculation**	**20887**	**Btuh**
Submitted heating capacity	% of calc	Btuh		Submitted cooling capacity	% of calc	Btuh
Total (Electric Strip Heat)	137.2	28000		Sensible (SHR = 0.75)	195.9	36000
				Latent	478.3	12000
				Total	229.8	48000

WINTER CALCULATIONS

Winter Heating Load (for 1838 sqft)

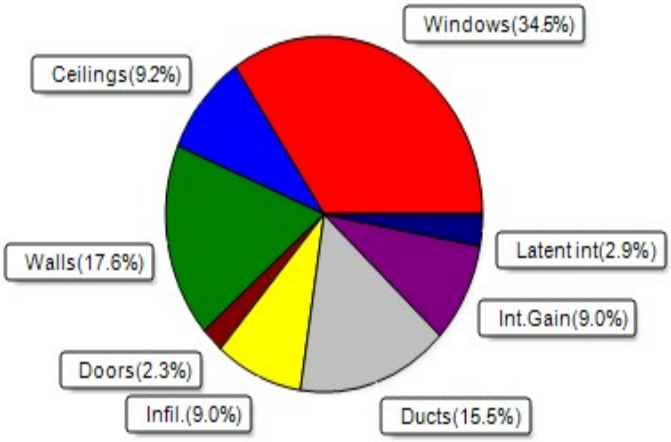
Load component			Load	
Window total	129	sqft	3589	Btuh
Wall total	1416	sqft	5035	Btuh
Door total	165	sqft	413	Btuh
Ceiling total	1838	sqft	1463	Btuh
Floor total	1838	sqft	5968	Btuh
Infiltration	46	cfm	1275	Btuh
Duct loss			2671	Btuh
Subtotal			**20414**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**20414**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 1838 sqft)

Load component			Load	
Window total	129	sqft	7201	Btuh
Wall total	1416	sqft	3681	Btuh
Door total	165	sqft	479	Btuh
Ceiling total	1838	sqft	1932	Btuh
Floor total			0	Btuh
Infiltration	35	cfm	689	Btuh
Internal gain			1890	Btuh
Duct gain			2506	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**18378**	**Btuh**
Latent gain(ducts)			727	Btuh
Latent gain(infiltration)			1182	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			600	Btuh
Total latent gain			**2509**	**Btuh**
TOTAL HEAT GAIN			**20887**	**Btuh**



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EnergyGauge® System Sizing
PREPARED BY: _____
DATE: ____09/12/2022_____

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Project Title:
2330 4th Ave SE
Naples, FL 34117

Spec Home Parcel #39394080008
Building Type: User

9/12/2022

Reference City: Lee/Collier, FL (Defaults) Winter Temperature Difference: 25.0 F (MJ8 99%)

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft) X	HTM=	Load
1	1, NFRC 0.49	Metal	1.11	S	13.5	27.8	375 Btuh
2	1, NFRC 0.49	Metal	1.11	S	12.0	27.8	333 Btuh
3	1, NFRC 0.49	Metal	1.11	E	8.0	27.8	222 Btuh
4	1, NFRC 0.49	Metal	1.11	W	23.2	27.8	643 Btuh
5	1, NFRC 0.49	Metal	1.11	E	23.2	27.8	643 Btuh
6	1, NFRC 0.49	Metal	1.11	W	16.2	27.8	449 Btuh
7	1, NFRC 0.49	Metal	1.11	S	9.8	27.8	271 Btuh
8	1, NFRC 0.49	Metal	1.11	E	13.5	27.8	375 Btuh
9	1, NFRC 0.49	Metal	1.11	E	10.0	27.8	278 Btuh
	Window Total				129.3(sqft)		3589 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Adj	(0.089)	13.0/0.0	165	2.22	367 Btuh
2	Conc Blk,Hollow	- Ext	(0.149)	4.1/0.0	391	3.73	1459 Btuh
3	Conc Blk,Hollow	- Ext	(0.149)	4.1/0.0	240	3.73	895 Btuh
4	Conc Blk,Hollow	- Ext	(0.149)	4.1/0.0	294	3.73	1096 Btuh
5	Conc Blk,Hollow	- Ext	(0.149)	4.1/0.0	326	3.73	1218 Btuh
	Wall Total				1416(sqft)		5035 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.100)	48	2.5	120 Btuh
2	Insulated - Garage,	n	(0.100)	21	2.5	53 Btuh
3	Insulated - Exterior,	n	(0.100)	48	2.5	120 Btuh
4	Insulated - Exterior,	n	(0.100)	48	2.5	120 Btuh
	Door Total			165(sqft)		413Btuh

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Vented Attic/L/Wood	(0.032)	30.0/0.0	1838	0.8	1463 Btuh
	Ceiling Total			1838(sqft)		1463Btuh

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	202.3 ft(perim.)	29.5	5968 Btuh
	Floor Total			1838 sqft		5968 Btuh

	Envelope Subtotal:	16468 Btuh

Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural		0.16	17149	1.00	46.4	1275 Btuh

Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.151)	2671 Btuh
All Zones	**Sensible Subtotal All Zones**	**20414 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Project Title:
2330 4th Ave SE
Naples, FL 34117
Spec Home Parcel #39394080008
Building Type: User

9/12/2022

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	20414 Btuh 0 Btuh 20414 Btuh

EQUIPMENT

1. Electric Strip Heat		28000 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)

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Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Project Title:

2330 4th Ave SE
Naples, FL 34117

Spec Home Parcel #39394080008

9/12/2022

Reference City: Lee/Collier, FL Temperature Difference: 18.0F(MJ8 99%) Humidity difference: 50gr.

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	1 NFRC	0.49,	1.11	No	No	S	1.3ft	7.0ft	13.5	10.2	3.3	31	32	419 Btuh
2	1 NFRC	0.49,	1.11	No	No	S	1.3ft	4.0ft	12.0	12.0	0.0	31	32	367 Btuh
3	1 NFRC	0.49,	1.11	No	No	E	1.3ft	3.0ft	8.0	0.0	8.0	31	68	541 Btuh
4	1 NFRC	0.49,	1.11	No	No	W	1.3ft	6.0ft	23.2	0.0	23.2	31	68	1569 Btuh
5	1 NFRC	0.49,	1.11	No	No	E	1.3ft	6.0ft	23.2	0.0	23.2	31	68	1569 Btuh
6	1 NFRC	0.49,	1.11	No	No	W	1.3ft	6.0ft	16.2	0.0	16.2	31	68	1095 Btuh
7	1 NFRC	0.49,	1.11	No	No	S	1.3ft	4.0ft	9.8	9.8	0.0	31	32	298 Btuh
8	1 NFRC	0.49,	1.11	No	No	E	1.3ft	7.0ft	13.5	0.0	13.5	31	68	913 Btuh
9	1 NFRC	0.49,	1.11	No	No	E	1.3ft	0.0ft	10.0	6.6	3.4	31	68	430 Btuh
	Window Total								129 (sqft)					7201 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Adj	0.09	13.0/0.0	165.3	1.6	264 Btuh
2	Concrete Blk,Hollow - Ext	0.15	4.1/0.0	391.2	2.7	1068 Btuh
3	Concrete Blk,Hollow - Ext	0.15	4.1/0.0	239.8	2.7	655 Btuh
4	Concrete Blk,Hollow - Ext	0.15	4.1/0.0	293.7	2.7	802 Btuh
5	Concrete Blk,Hollow - Ext	0.15	4.1/0.0	326.4	2.7	891 Btuh
	Wall Total			1416 (sqft)		3681 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	48.0	2.9	139 Btuh
2	Insulated - Garage	21.3	2.9	62 Btuh
3	Insulated - Exterior	48.0	2.9	139 Btuh
4	Insulated - Exterior	48.0	2.9	139 Btuh
	Door Total	165 (sqft)		479 Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/Light/Wood shing/RB	0.032	30.0/0.0	1838.0	1.05	1932 Btuh
	Ceiling Total			1838 (sqft)		1932 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	1838 (ft-perimeter)	0.0	0 Btuh
	Floor Total		1838.0 (sqft)		0 Btuh

	Envelope Subtotal:	13293 Btuh

Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.12	17149	1	34.8	689 Btuh

Internal gain	Occupants	Btuh/occupant		Appliance	Load
	3	X 230	+	1200	1890 Btuh

	Sensible Envelope Load:	15872 Btuh
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.158)	2506 Btuh
	Sensible Load All Zones	**18378 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_SOUTHWEST_FLORIDA_I

2330 4th Ave SE
Naples, FL 34117

Spec Home Parcel #39394080008

9/12/2022

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**15872**	**Btuh**
	Sensible Duct Load	2506	Btuh
	Total Sensible Zone Loads	**18378**	**Btuh**
	Sensible ventilation	0	Btuh
	Blower	0	Btuh
	Total sensible gain	**18378**	**Btuh**
	Latent infiltration gain (for 50 gr. humidity difference)	1182	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	727	Btuh
	Latent occupant gain (3.0 people @ 200 Btuh per person)	600	Btuh
	Latent other gain	0	Btuh
	Latent total gain	**2509**	**Btuh**
	TOTAL GAIN	**20887**	**Btuh**

EQUIPMENT

1. Central Unit	#	48000 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)

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