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FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: 1209068 Street: 377 NW Blackberry Cir. City, State, Zip: Lake City, FL, 32055- Owner: Neeley Residence Design Location: FL, Gainesville		Builder Name: Edgley Construction Permit Office: Permit Number: Jurisdiction:	
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? Yes 6. Conditioned floor area above grade (ft²) 2054 Conditioned floor area below grade (ft²) 0		9. Wall Types (2005.5 sqft.) Insulation Area a. Frame - Wood, Exterior R=13.0 1758.00 ft² b. Frame - Wood, Adjacent R=13.0 247.50 ft² c. N/A R= ft² d. N/A R= ft²	
7. Windows (226.8 sqft.) Description Area a. U-Factor: Dbl, U=0.35 226.78 ft² SHGC: SHGC=0.35 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: 1.500 ft. Area Weighted Average SHGC: 0.350		10. Ceiling Types (2054.0 sqft.) Insulation Area a. Under Attic (Vented) R=30.0 2054.00 ft² b. N/A R= ft² c. N/A R= ft²	
8. Floor Types (2054.0 sqft.) Insulation Area a. Slab-On-Grade Edge Insulation R=0.0 2054.00 ft² b. N/A R= ft² c. N/A R= ft²		11. Ducts R ft² a. Sup: Attic, Ret: Attic, AH: RoomsInBlock1 6 410.8	
		12. Cooling systems kBtu/hr Efficiency a. Central Unit 46.0 SEER:13.00	
		13. Heating systems kBtu/hr Efficiency a. Electric Heat Pump 46.0 HSPF:7.70	
		14. Hot water systems a. Electric Cap: 40 gallons b. Conservation features EF: 0.920 None	
		15. Credits Pstat	
Glass/Floor Area: 0.110		Total Proposed Modified Loads: 33.79 Total Standard Reference Loads: 43.61	
I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. PREPARED BY: <u>EVAN PERMSLEY</u> DATE: <u>10/9/12</u> 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 completion of a Florida Air Barrier and Insulation Inspection Checklist



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PROJECT

Title:	1209068	Bedrooms:	3	Address Type:	Street Address
Building Type:	FLProp2010	Conditioned Area:	2054	Lot #	
Owner:	Neeley Residence	Total Stories:	1	Block/SubDivision:	
# of Units:	1	Worst Case:	Yes	PlatBook:	
Builder Name:	Edgley Construction	Rotate Angle:	45	Street:	377 NW Blackberry Cir.
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City , FL , 32055-
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	IECC Zone	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	2	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	2054	18486

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	RoomsInBlock1	2054	18486	Yes	3	3	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	RoomsInBlock1	223 ft	0	2054 ft²	---	0.3	0.3	0.4

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Composition shingles	2379 ft²	600 ft²	Dark	0.96	No	0.9	No	0	30.3

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	2054 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	RoomsInBlock1	30	2054 ft²	0.11	Wood

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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	N	Exterior	Frame - Wood	RoomsInBloc	13	59	2	9		532.5 ft²		0.23	0.75	0
	2	E	Exterior	Frame - Wood	RoomsInBloc	13	44	10	9		403.5 ft²		0.23	0.75	0
	3	S	Exterior	Frame - Wood	RoomsInBloc	13	37	2	9		334.5 ft²		0.23	0.75	0
	4	W	Exterior	Frame - Wood	RoomsInBloc	13	54	2	9		487.5 ft²		0.23	0.75	0
	5	S	Garage	Frame - Wood	RoomsInBloc	13	27	6	9		247.5 ft²		0.23	0.01	0

DOORS

✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
	1	W	Insulated	RoomsInBloc	None	0.400000	1		6	8	6.666666
	2	S	Insulated	RoomsInBloc	None	0.400000	1		6	8	20 ft²
	3	S	Insulated	RoomsInBloc	None	0.4	1		6	8	20 ft²

WINDOWS

Orientation shown is the entered orientation (=>) changed to Worst Case.

✓	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang Depth	Separation	Int Shade	Screening
	1	N	1	Metal	Low-E Double	Yes	0.35	0.35	N	90 ft²	1 ft 6 in	2 ft 0 in	HERS 2006	None
	2	N	1	Metal	Low-E Double	Yes	0.35	0.35	N	15 ft²	1 ft 6 in	2 ft 0 in	HERS 2006	None
	3	E	2	Metal	Low-E Double	Yes	0.35	0.35	N	30 ft²	1 ft 6 in	2 ft 0 in	HERS 2006	None
	4	E	2	Metal	Low-E Double	Yes	0.35	0.35	N	4 ft²	1 ft 6 in	2 ft 0 in	HERS 2006	None
	5	S	3	Metal	Low-E Double	Yes	0.35	0.35	N	10 ft²	1 ft 6 in	2 ft 0 in	HERS 2006	None
	6	S	3	Metal	Low-E Double	Yes	0.35	0.35	N	17.77777	1 ft 6 in	2 ft 0 in	HERS 2006	None
	7	S	3	Metal	Low-E Double	Yes	0.35	0.35	N	26.66666	1 ft 6 in	2 ft 0 in	HERS 2006	None
	8	S	3	Metal	Low-E Double	Yes	0.35	0.35	N	4 ft²	1 ft 6 in	2 ft 0 in	HERS 2006	None
	9	W	4	Metal	Low-E Double	Yes	0.35	0.35	N	13.33333	1 ft 6 in	2 ft 0 in	HERS 2006	None
	10	W	4	Metal	Low-E Double	Yes	0.35	0.35	N	16 ft²	1 ft 6 in	2 ft 0 in	HERS 2006	None

GARAGE

✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
	1	576.00004 ft²	576.00004 ft²	70 ft	9 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	BySpaces	Proposed SLA	0.000360	1939.5	106.47	200.25	0.2771	6.2952

HEATING SYSTEM												
✓	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts					
✓	1	Electric Heat Pump	None	HSPF: 7.7	46 kBtu/hr	1	sys#1					

COOLING SYSTEM									
✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
✓	1	Central Unit	None	SEER: 13	46 kBtu/hr	1380 cfm	0.75	1	sys#1

HOT WATER SYSTEM									
✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	Garage	0.92	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 ---			--- Return ---		Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF	HVAC # Heat Cool	
		Location	R-Value	Area	Location	Area								
✓	1	Attic	6	410.8 ft	Attic	102.7 ft	DSE=0.88	RoomsInBl	0.0 cfm	0.00 %	0.00	0.60	1	1

TEMPERATURES														
Programable Thermostat: Y					Ceiling Fans:									
Cooling	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Heating	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Venting	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Thermostat Schedule: HERS 2006 Reference														
Schedule Type		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	

Florida Code Compliance Checklist

Florida Department of Business and Professional Regulations
Residential Whole Building Performance Method

ADDRESS: 377 NW Blackberry Cir.
Lake City, FL, 32055-

PERMIT #:

MANDATORY REQUIREMENTS SUMMARY - See individual code sections for full details.

COMPONENT	SECTION	SUMMARY OF REQUIREMENT(S)	CHECK
Air leakage	402.4	To be caulked, gasketed, weatherstripped or otherwise sealed. Recessed lighting IC-rated as meeting ASTM E 283. Windows and doors = 0.30 cfm/sq.ft. Testing or visual inspection required. Fireplaces: gasketed doors & outdoor combustion air. Must complete envelope leakage report or visually verify Table 402.4.2.	
Thermostat & controls	403.1	At least one thermostat shall be provided for each separate heating and cooling system. Where forced-air furnace is primary system, programmable thermostat is required. Heat pumps with supplemental electric heat must prevent supplemental heat when compressor can meet the load.	
Ducts	403.2.2 403.3.3	All ducts, air handlers, filter boxes and building cavities which form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section 503.2.7.2 of this code. Building framing cavities shall not be used as supply ducts.	
Water heaters	403.4	Heat trap required for vertical pipe risers. Comply with efficiencies in Table 403.4.3.2. Provide switch or clearly marked circuit breaker (electric) or shutoff (gas). Circulating system pipes insulated to = R-2 + accessible manual OFF switch.	
Mechanical ventilation	403.5	Homes designed to operate at positive pressure or with mechanical ventilation systems shall not exceed the minimum ASHRAE 62 level. No make-up air from attics, crawlspaces, garages or outdoors adjacent to pools or spas.	
Swimming Pools & Spas	403.9	Pool pumps and pool pump motors with a total horsepower (HP) of = 1 HP shall have the capability of operating at two or more speeds. Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency=78% (82% after 4/16/13). Heat pump pool heaters minimum COP= 4.0.	
Cooling/heating equipment	403.6	Sizing calculation performed & attached. Minimum efficiencies per Tables 503.2.3. Equipment efficiency verification required. Special occasion cooling or heating capacity requires separate system or variable capacity system. Electric heat >10kW must be divided into two or more stages.	
Ceilings/knee walls	405.2.1	R-19 space permitting.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 77

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

377 NW Blackberry Cir., Lake City, FL, 32055-

1. New construction or existing	New (From Plans)	9. Wall Types	Insulation	Area
2. Single family or multiple family	Single-family	a. Frame - Wood, Exterior	R=13.0	1758.00 ft ²
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	247.50 ft ²
4. Number of Bedrooms	3	c. N/A	R=	ft ²
5. Is this a worst case?	Yes	d. N/A	R=	ft ²
6. Conditioned floor area (ft ²)	2054	10. Ceiling Types	Insulation	Area
7. Windows**	Description	a. Under Attic (Vented)	R=30.0	2054.00 ft ²
a. U-Factor:	DbI, U=0.35	b. N/A	R=	ft ²
SHGC:	SHGC=0.35	c. N/A	R=	ft ²
b. U-Factor:	N/A	11. Ducts		R
SHGC:		a. Sup: Attic, Ret: Attic, AH: RoomsInBlock1	6	410.8
c. U-Factor:	N/A			
SHGC:		12. Cooling systems	kBtu/hr	Efficiency
d. U-Factor:	N/A	a. Central Unit	46.0	SEER:13.00
SHGC:				
Area Weighted Average Overhang Depth:	1.500 ft.	13. Heating systems	kBtu/hr	Efficiency
Area Weighted Average SHGC:	0.350	a. Electric Heat Pump	46.0	HSPF:7.70
8. Floor Types	Insulation	Area		
a. Slab-On-Grade Edge Insulation	R=0.0	2054.00 ft ²		
b. N/A	R=	ft ²		
c. N/A	R=	ft ²		
		14. Hot water systems		Cap: 40 gallons
		a. Electric		EF: 0.92
		b. Conservation features		
		None		
		15. Credits		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 EnergyGauge Rating. Contact the EnergyGauge Hotline at (321) 638-1492 or see the EnergyGauge web site at energygauge.com for information and a list of certified Raters. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section 303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Residential System Sizing Calculation

Summary

Neeley Residence
377 NW Blackberry Cir.
Lake City, FL 32055-

Project Title:
1209068

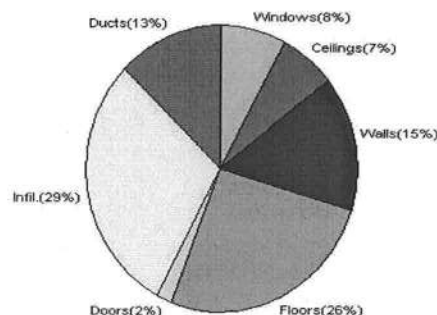
10/9/2012

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(54gr.)			
Winter design temperature(MJ8 99%)	33 F	Summer design temperature(MJ8 99%)	92 F
Winter setpoint	70 F	Summer setpoint	75 F
Winter temperature difference	37 F	Summer temperature difference	17 F
Total heating load calculation	36926 Btuh	Total cooling load calculation	38609 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	124.6 46000	Sensible (SHR = 0.75)	119.5 34500
Heat Pump + Auxiliary(0.0kW)	124.6 46000	Latent	118.0 11500
		Total (Electric Heat Pump)	119.1 46000

WINTER CALCULATIONS

Winter Heating Load (for 2054 sqft)

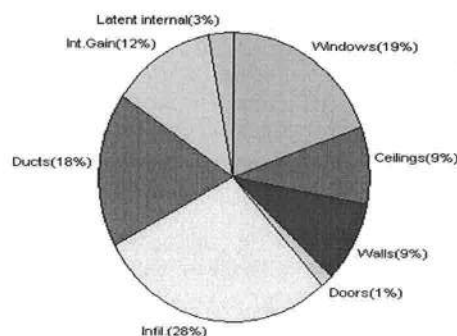
Load component		Load	
Window total	227 sqft	2937	Btuh
Wall total	1732 sqft	5688	Btuh
Door total	47 sqft	691	Btuh
Ceiling total	2054 sqft	2420	Btuh
Floor total	2054 sqft	9736	Btuh
Infiltration	266 cfm	10763	Btuh
Duct loss		4691	Btuh
Subtotal		36926	Btuh
Ventilation	0 cfm	0	Btuh
TOTAL HEAT LOSS		36926	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 2054 sqft)

Load component		Load	
Window total	227 sqft	7459	Btuh
Wall total	1732 sqft	3482	Btuh
Door total	47 sqft	523	Btuh
Ceiling total	2054 sqft	3402	Btuh
Floor total		0	Btuh
Infiltration	199 cfm	3709	Btuh
Internal gain		4780	Btuh
Duct gain		5513	Btuh
Sens. Ventilation	0 cfm	0	Btuh
Blower Load		0	Btuh
Total sensible gain		28867	Btuh
Latent gain(ducts)		1259	Btuh
Latent gain(infiltration)		7283	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		1200	Btuh
Total latent gain		9742	Btuh
TOTAL HEAT GAIN		38609	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: EVAN BEAMS ET

DATE: 10/9/12

EnergyGauge® / USRFZB v3.0

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Neeley Residence
377 NW Blackberry Cir.
Lake City, FL 32055-

Project Title:
1209068
Building Type: User

10/9/2012

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 37.0 F (MJ8 99%)

This calculation is for Worst Case. The house has been rotated 90 degrees.

Component Loads for Whole House								
Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.35	Metal	0.35	E	90.0		12.9	1166 Btuh
2	2, NFRC 0.35	Metal	0.35	E	15.0		12.9	194 Btuh
3	2, NFRC 0.35	Metal	0.35	S	30.0		12.9	388 Btuh
4	2, NFRC 0.35	Metal	0.35	S	4.0		12.9	52 Btuh
5	2, NFRC 0.35	Metal	0.35	W	10.0		12.9	130 Btuh
6	2, NFRC 0.35	Metal	0.35	W	17.8		12.9	230 Btuh
7	2, NFRC 0.35	Metal	0.35	W	26.7		12.9	345 Btuh
8	2, NFRC 0.35	Metal	0.35	W	4.0		12.9	52 Btuh
9	2, NFRC 0.35	Metal	0.35	N	13.3		12.9	173 Btuh
10	2, NFRC 0.35	Metal	0.35	N	16.0		12.9	207 Btuh
Window Total					226.8(sqft)			2937 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	428		3.28	1404 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	370		3.28	1213 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	256		3.28	841 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	452		3.28	1483 Btuh
5	Frame - Wood	- Adj	(0.089)	13.0/0.0	228		3.28	747 Btuh
Wall Total					1732(sqft)			5688 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.400)		7		14.8	99 Btuh
2	Insulated - Garage, n		(0.400)		20		14.8	296 Btuh
3	Insulated - Exterior, n		(0.400)		20		14.8	296 Btuh
Door Total					47(sqft)			691Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Vented Attic/D/Shing		(0.032)	30.0/0.0	2054		1.2	2420 Btuh
Ceiling Total					2054(sqft)			2420Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	223.0 ft(perim.)		43.7	9736 Btuh
Floor Total					2054 sqft			9736 Btuh
Envelope Subtotal:								21472 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio		CFM=	Load
	Natural		0.86	18486	1.00		265.7	10763 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att)					(DLM of 0.146)		4691 Btuh
All Zones	Sensible Subtotal All Zones							36926 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Neeley Residence
377 NW Blackberry Cir.
Lake City, FL 32055-

Project Title:
1209068
Building Type: User

10/9/2012

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	36926 Btuh
	Ventilation Sensible Heat Loss	0 Btuh
	Total Heat Loss	36926 Btuh

EQUIPMENT

1. Electric Heat Pump	#	46000 Btuh
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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

Neeley Residence
377 NW Blackberry Cir.
Lake City, FL 32055-

Project Title:
1209068

10/9/2012

Reference City: Gainesville, FL Temperature Difference: 17.0F(MJ8 99%) Humidity difference: 54gr.
This calculation is for Worst Case. The house has been rotated 90 degrees.

Component Loads for Whole House

Window	Type*						Overhang		Window Area(sqft)			HTM		Load			
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded				
1	2 NFRC	0.35, 0.35	No	No	E		1.5ft.	2.0ft.	90.0	0.0	90.0	13	40	3572	Btuh		
2	2 NFRC	0.35, 0.35	No	No	E		1.5ft.	2.0ft.	15.0	0.0	15.0	13	40	595	Btuh		
3	2 NFRC	0.35, 0.35	No	No	S		1.5ft.	2.0ft.	30.0	30.0	0.0	13	16	399	Btuh		
4	2 NFRC	0.35, 0.35	No	No	S		1.5ft.	2.0ft.	4.0	4.0	0.0	13	16	53	Btuh		
5	2 NFRC	0.35, 0.35	No	No	W		1.5ft.	2.0ft.	10.0	0.0	10.0	13	40	397	Btuh		
6	2 NFRC	0.35, 0.35	No	No	W		1.5ft.	2.0ft.	17.8	0.0	17.8	13	40	706	Btuh		
7	2 NFRC	0.35, 0.35	No	No	W		1.5ft.	2.0ft.	26.7	0.0	26.7	13	40	1058	Btuh		
8	2 NFRC	0.35, 0.35	No	No	W		1.5ft.	2.0ft.	4.0	0.0	4.0	13	40	159	Btuh		
9	2 NFRC	0.35, 0.35	No	No	N		1.5ft.	2.0ft.	13.3	0.0	13.3	13	13	177	Btuh		
10	2 NFRC	0.35, 0.35	No	No	N		1.5ft.	2.0ft.	16.0	0.0	16.0	13	13	213	Btuh		
	Excursion													129	Btuh		
	Window Total								227 (sqft)					7459	Btuh		
Walls	Type						U-Value		R-Value		Area(sqft)		HTM		Load		
									Cav/Sheath								
	1	Frame - Wood - Ext						0.09		13.0/0.0		427.5		2.1		892	Btuh
	2	Frame - Wood - Ext						0.09		13.0/0.0		369.5		2.1		771	Btuh
	3	Frame - Wood - Ext						0.09		13.0/0.0		256.1		2.1		534	Btuh
	4	Frame - Wood - Ext						0.09		13.0/0.0		451.5		2.1		942	Btuh
	5	Frame - Wood - Adj						0.09		13.0/0.0		227.5		1.5		343	Btuh
	Wall Total								1732 (sqft)					3482	Btuh		
Doors	Type								Area (sqft)		HTM		Load				
	1	Insulated - Exterior								6.7		11.2		75	Btuh		
	2	Insulated - Garage								20.0		11.2		224	Btuh		
	3	Insulated - Exterior								20.0		11.2		224	Btuh		
		Door Total								47 (sqft)					523	Btuh	
Ceilings	Type/Color/Surface						U-Value		R-Value		Area(sqft)		HTM		Load		
	1	Vented Attic/DarkShingle						0.032		30.0/0.0		2054.0		1.66		3402	Btuh
		Ceiling Total								2054 (sqft)					3402	Btuh	
Floors	Type						R-Value		Size		HTM		Load				
	1	Slab On Grade						0.0		2054 (ft-perimeter)		0.0		0	Btuh		
		Floor Total								2054.0 (sqft)					0	Btuh	
	Envelope Subtotal:													14865 Btuh			
Infiltration	Type		Average ACH				Volume(cuft)		Wall Ratio		CFM=		Load				
	Natural		0.65				18486		1		199.3		3709		Btuh		
Internal gain			Occupants				Btuh/occupant		Appliance		Load						
			6				X 230		+		3400		4780		Btuh		
	Sensible Envelope Load:													23354 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

Neeley Residence
377 NW Blackberry Cir.
Lake City, FL 32055-

Project Title:
1209068

Climate:FL_GAINESVILLE_REGIONAL_A

10/9/2012

Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)	(DGM of 0.236)	5513 Btuh
		Sensible Load All Zones	28867 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Neeley Residence
377 NW Blackberry Cir.
Lake City, FL 32055-

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10/9/2012

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	23354 Btuh
	Sensible Duct Load	5513 Btuh
	Total Sensible Zone Loads	28867 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	28867 Btuh
	Latent infiltration gain (for 54 gr. humidity difference)	7283 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1259 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	9742 Btuh
	TOTAL GAIN	38609 Btuh

EQUIPMENT

1. Central Unit	#	46000 Btuh
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*Key: Window types (Panels - 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