

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name FLMcCarty Res
 Street
 City, State, Zip , FL ,
 Owner
 Design Location FL, Gainesville

Builder Name
 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	2
5. Is this a worst case?	Yes
6. Conditioned floor area above grade (ft ²)	1590
Conditioned floor area below grade (ft ²)	0
7. Windows(255 0 sqft)	Description Area
a. U-Factor	DbI, U=0.35 255 00 ft ²
SHGC	SHGC=0.35
b. U-Factor	N/A ft ²
SHGC	
c. U-Factor	N/A ft ²
SHGC	
d. U-Factor	N/A ft ²
SHGC	
Area Weighted Average Overhang Depth	8 927 ft.
Area Weighted Average SHGC	0.350
8. Floor Types (1590 0 sqft)	Insulation Area
a. Crawlspace	R=19 0 1590 00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²

9. Wall Types(1470 5 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13 0 1286.50 ft ²
b. Frame - Wood, Adjacent	R=13 0 184 00 ft ²
c. N/A	R= ft ²
d. N/A	R= ft ²
10. Ceiling Types (1590 0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=30 0 1590 00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
11. Ducts	R ft ²
a. Sup Attic, Ret. Attic, AH Main	6 318
12. Cooling systems	kBtu/hr Efficiency
a. Central Unit	36 0 SEER 13 00
13. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	36 0 HSPF 7 70
14. Hot water systems	Cap 40 gallons
a. Electric	EF 0 920
b. Conservation features	
None	
15. Credits	Pstat

Glass/Floor Area 0.160 Total Proposed Modified Loads 34.59
 Total Standard Reference Loads 43.26

PASS

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

PREPARED BY ERAN BEANSLEY
 DATE: 2014-4-23

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

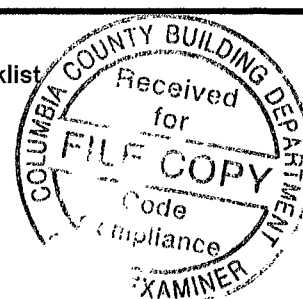
OWNER/AGENT _____
 DATE _____

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



PROJECT											
Title	FLMcCarty Res	Bedrooms	2	Address Type	Street Address						
Building Type	User	Conditioned Area	1590	Lot #							
Owner		Total Stories	1	Block/SubDivision							
# of Units	1	Worst Case	Yes	PlatBook							
Builder Name		Rotate Angle	90	Street							
Permit Office		Cross Ventilation		County	Columbia						
Jurisdiction		Whole House Fan		City, State, Zip	, FL ,						
Family Type	Single-family										
New/Existing	New (From Plans)										
Comment.											
CLIMATE											
✓	Design Location	TMY Site	IECC Zone	Design Temp 97 5 %	2 5 %	Int Design Temp Winter	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	1590	12720							
SPACES											
	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
	1	Main	1590	12720	Yes	4	2	1	Yes	Yes	Yes
FLOORS											
✓	#	Floor Type	Space	Exposed Per/Wall	Ins. R-Value	Area	Floor Joist R-Value	Tile	Wood	Carpet	
_____	1	Crawlspace	Main	170 ft	0	1590 ft²	19	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	Hip	Composition shingles	1778 ft²	0 ft²	Dark	0 96	No	0 9	No	0 26 6
ATTIC											
✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC				
_____	1	Full attic	Vented	300	1590 ft²	N	N				
CEILING											
✓	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type				
_____	1	Under Attic (Vented)	Main	30	1590 ft²	0 11	Wood				

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=>E	Exterior	Frame - Wood	Main	13	43	8	9		393.0 ft²		0.23	0.75	0
	2	E=>S	Exterior	Frame - Wood	Main	13	41		8		328.0 ft²		0.23	0.75	0
	3	S=>W	Exterior	Frame - Wood	Main	13	15	4	9		138.0 ft²		0.23	0.75	0
	4	SW=>N	Exterior	Frame - Wood	Main	13	13	2	9		118.5 ft²		0.23	0.75	0
	5	W=>N	Exterior	Frame - Wood	Main	13	30	4	9		273.0 ft²		0.23	0.75	0
	6	NW=>NE	Exterior	Frame - Wood	Main	13	4		9		36.0 ft²		0.23	0.75	0
	7	S=>W	Garage	Frame - Wood	Main	13	23		8		184.0 ft²		0.23	0.75	0

DOORS											
✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
	1	N=>E	Insulated	Main	None	.46	1		6	8	6.7 ft²
	2	S=>W	Insulated	Main	None	.46	2	8	6	8	17.8 ft²
	3	S=>W	Insulated	Main	None	.46	3		6	8	20 ft²
	4	SW=>N	Insulated	Main	None	.46	2		6	8	13.3 ft²

WINDOWS													
Orientation shown is the entered orientation (=>) changed to Worst Case													
✓	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Area	Overhang Depth	Separation	Int Shade	Screening
	1	N=>E	1	Metal	Low-E Double	Yes	0.35	0.35	26.7 ft²	20 ft 0 in	1 ft 0 in	None	None
	2	N=>E	1	Metal	Low-E Double	Yes	0.35	0.35	9.0 ft²	20 ft 0 in	1 ft 0 in	None	None
	3	N=>E	1	Metal	Low-E Double	Yes	0.35	0.35	16.0 ft²	1 ft 6 in	1 ft 0 in	None	None
	4	N=>E	1	Metal	Low-E Double	Yes	0.35	0.35	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
	5	E=>S	2	Metal	Low-E Double	Yes	0.35	0.35	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
	6	S=>W	3	Metal	Low-E Double	Yes	0.35	0.35	6.7 ft²	12 ft 6 in	1 ft 0 in	None	None
	7	S=>W	3	Metal	Low-E Double	Yes	0.35	0.35	30.0 ft²	7 ft 6 in	1 ft 0 in	None	None
	8	SW=>NW	4	Metal	Low-E Double	Yes	0.35	0.35	20.0 ft²	14 ft 0 in	1 ft 0 in	None	None
	9	SW=>NW	4	Metal	Low-E Double	Yes	0.35	0.35	26.7 ft²	14 ft 0 in	1 ft 0 in	None	None
	10	W=>N	5	Metal	Low-E Double	Yes	0.35	0.35	45.0 ft²	7 ft 6 in	1 ft 0 in	None	None
	11	NW=>NE	6	Metal	Low-E Double	Yes	0.35	0.35	15.0 ft²	10 ft 0 in	1 ft 0 in	None	None

GARAGE						
✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg Wall Height	Exposed Wall Insulation
	1	484 ft²	484 ft²	65 ft	10 ft	1

INFILTRATION								
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Best Guess	0007	2919.4	160.27	301.42	.539	13.770

HEATING SYSTEM										
✓	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts			
✓	1	Electric Heat Pump	None	HSPF 7.7	36 kBtu/hr	1	sys#1			

COOLING SYSTEM									
✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
✓	1	Central Unit	None	SEER 13	36 kBtu/hr	1080 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	50 gal	120 deg	None

SOLAR HOT WATER SYSTEM							
✓	FSEC	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
✓	None	None					

DUCTS														
✓	#	---- Supply ----			---- Return ----		Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC #	
		Location	R-Value	Area	Location	Area							Heat	Cool
✓	1	Attic	6	318 ft²	Attic	79.5 ft²	Default Leakage	Main	(Default)	(Default)			1	1

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

Thermostat Schedule	HERS 2006 Reference	Hours												
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 _____ PERMIT # _____
_____, FL, _____

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* = 80

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

, , FL,

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	1286.50 ft ²
3 Number of units, if multiple family	1		b. Frame - Wood, Adjacent	R=13 0	184 00 ft ²
4. Number of Bedrooms	2		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)	1590		10 Ceiling Types	Insulation	Area
7 Windows**	Description	Area	a Under Attic (Vented)	R=30 0	1590 00 ft ²
a U-Factor	Dbl, U=0 35	255 00 ft ²	b. N/A	R=	ft ²
SHGC	SHGC=0 35		c. N/A	R=	ft ²
b U-Factor	N/A	ft ²	11 Ducts		R ft ²
SHGC			a Sup Attic, Ret Attic, AH Main	6	318
c. U-Factor	N/A	ft ²	12 Cooling systems	kBtu/hr	Efficiency
SHGC			a Central Unit	36 0	SEER 13 00
d. U-Factor	N/A	ft ²	13 Heating systems	kBtu/hr	Efficiency
SHGC			a. Electric Heat Pump	36 0	HSPF 7.70
Area Weighted Average Overhang Depth	8 927 ft.		14 Hot water systems	Cap	40 gallons
Area Weighted Average SHGC	0 350		a Electric	EF	0 92
8 Floor Types	Insulation	Area	b Conservation features		
a Crawlspace	R=19 0	1590.00 ft ²	None		
b N/A	R=	ft ²	15 Credits	Pstat	
c N/A	R=	ft ²			

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

Project Title.
FLMcCarty Res

, FL

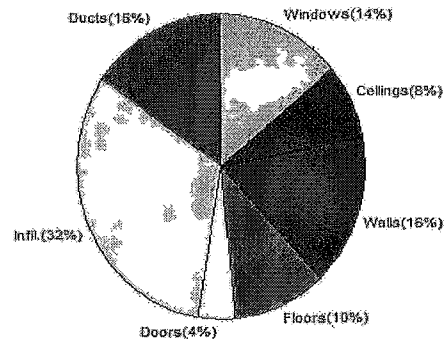
4/23/2014

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	23368	Btuh	Total cooling load calculation	30842	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	154.1	36000	Sensible (SHR = 0.75)	112.1	27000
Heat Pump + Auxiliary(0.0kW)	154.1	36000	Latent	133.1	9000
			Total (Electric Heat Pump)	116.7	36000

WINTER CALCULATIONS

Winter Heating Load (for 1590 sqft)

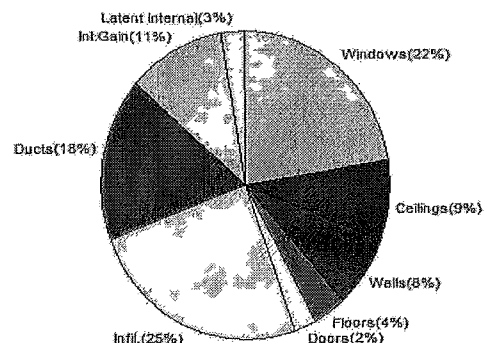
Load component		Load	
Window total	255 sqft	3302	Btuh
Wall total	1158 sqft	3802	Btuh
Door total	58 sqft	983	Btuh
Ceiling total	1590 sqft	1874	Btuh
Floor total	1590 sqft	2419	Btuh
Infiltration	183 cfm	7406	Btuh
Duct loss		3582	Btuh
Subtotal		23368	Btuh
Ventilation	0 cfm	0	Btuh
TOTAL HEAT LOSS		23368	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1590 sqft)

Load component		Load	
Window total	255 sqft	6907	Btuh
Wall total	1158 sqft	2319	Btuh
Door total	58 sqft	744	Btuh
Ceiling total	1590 sqft	2633	Btuh
Floor total		1118	Btuh
Infiltration	137 cfm	2552	Btuh
Internal gain		3320	Btuh
Duct gain		4484	Btuh
Sens Ventilation	0 cfm	0	Btuh
Blower Load		0	Btuh
Total sensible gain		24078	Btuh
Latent gain(ducts)		953	Btuh
Latent gain(infiltration)		5011	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		800	Btuh
Total latent gain		6764	Btuh
TOTAL HEAT GAIN		30842	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY EVAN BERNSELY

DATE 2014-04-23

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Project Title:
FLMcCarty Res
Building Type User

, FL

4/23/2014

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

This calculation is for Worst Case. The house has been rotated 45 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	NE	26.7		12.9	345 Btuh
2	2, NFRC 0.35	Metal	0.35	NE	9.0		12.9	117 Btuh
3	2, NFRC 0.35	Metal	0.35	NE	16.0		12.9	207 Btuh
4	2, NFRC 0.35	Metal	0.35	NE	30.0		12.9	388 Btuh
5	2, NFRC 0.35	Metal	0.35	SE	30.0		12.9	388 Btuh
6	2, NFRC 0.35	Metal	0.35	SW	6.7		12.9	86 Btuh
7	2, NFRC 0.35	Metal	0.35	SW	30.0		12.9	388 Btuh
8	2, NFRC 0.35	Metal	0.35	W	20.0		12.9	259 Btuh
9	2, NFRC 0.35	Metal	0.35	W	26.7		12.9	345 Btuh
10	2, NFRC 0.35	Metal	0.35	NW	45.0		12.9	583 Btuh
11	2, NFRC 0.35	Metal	0.35	N	15.0		12.9	194 Btuh
Window Total					255.0(sqft)			3302 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	305		3.28	1001 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	298		3.28	979 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	81		3.28	267 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	59		3.28	192 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	228		3.28	749 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	21		3.28	69 Btuh
7	Frame - Wood	- Adj	(0.089)	13.0/0.0	166		3.28	546 Btuh
Wall Total					1158(sqft)			3802 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		7		17.0	113 Btuh
2	Insulated - Garage, n		(0.460)		18		17.0	303 Btuh
3	Insulated - Exterior, n		(0.460)		20		17.0	340 Btuh
4	Insulated - Exterior, n		(0.460)		13		17.0	227 Btuh
Door Total					58(sqft)			983 Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Vented Attic/D/Shing		(0.032)	30.0/0.0	1590		1.2	1874 Btuh
Ceiling Total					1590(sqft)			1874 Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Stem/Crawlsp(v)		(0.052)	19.0/0.0	1590.0	sqft	1.5	2419 Btuh
Floor Total					1590	sqft		2419 Btuh
Envelope Subtotal								12380 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		
	Natural		0.86	12720	1.00	182.8		7406 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.181)							3582 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

, FL

Project Title:
FLMcarty Res
Building Type: User

4/23/2014

All Zones	Sensible Subtotal All Zones	23368 Btuh
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WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	23368 Btuh
	Ventilation Sensible Heat Loss	0 Btuh
	Total Heat Loss	23368 Btuh

EQUIPMENT

1. Electric Heat Pump	#	36000 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

Project Title:
FLMcCarty Res

, FL

4/23/2014

Reference City Gainesville, FL Temperature Difference: 17.0F(MJ8 99%) Humidity difference: 54gr.
This calculation is for Worst Case. The house has been rotated 45 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	NE	20.0f	1.0ft.	26.7	0.0	26.7	13	29	786 Btuh
2	2 NFRC	0.35	0.35	No	No	NE	20.0f	1.0ft	9.0	0.0	9.0	13	29	265 Btuh
3	2 NFRC	0.35	0.35	No	No	NE	1.5ft.	1.0ft	16.0	0.0	16.0	13	29	472 Btuh
4	2 NFRC	0.35	0.35	No	No	NE	1.5ft.	1.0ft	30.0	0.0	30.0	13	29	884 Btuh
5	2 NFRC	0.35	0.35	No	No	SE	1.5ft.	1.0ft	30.0	8.8	21.2	13	31	775 Btuh
6	2 NFRC	0.35	0.35	No	No	SW	12.5f	1.0ft	6.7	6.7	0.0	13	31	89 Btuh
7	2 NFRC	0.35	0.35	No	No	SW	7.5ft	1.0ft	30.0	30.0	0.0	13	31	399 Btuh
8	2 NFRC	0.35	0.35	No	No	W	14.0f	1.0ft	20.0	20.0	0.0	13	40	266 Btuh
9	2 NFRC	0.35	0.35	No	No	W	14.0f	1.0ft.	26.7	26.7	0.0	13	40	355 Btuh
10	2 NFRC	0.35	0.35	No	No	NW	7.5ft	1.0ft	45.0	0.0	45.0	13	29	1326 Btuh
11	2 NFRC	0.35	0.35	No	No	N	10.0f	1.0ft	15.0	0.0	15.0	13	13	200 Btuh
	Excursion													1091 Btuh
	Window Total								255 (sqft)					6907 Btuh
Walls	Type					U-Value	R-Value	Area(sqft)			HTM		Load	
							Cav/Sheath							
1	Frame - Wood - Ext					0.09	13.0/0.0	304.7			2.1		635 Btuh	
2	Frame - Wood - Ext					0.09	13.0/0.0	298.0			2.1		622 Btuh	
3	Frame - Wood - Ext					0.09	13.0/0.0	81.3			2.1		170 Btuh	
4	Frame - Wood - Ext					0.09	13.0/0.0	58.5			2.1		122 Btuh	
5	Frame - Wood - Ext					0.09	13.0/0.0	228.0			2.1		476 Btuh	
6	Frame - Wood - Ext					0.09	13.0/0.0	21.0			2.1		44 Btuh	
7	Frame - Wood - Adj					0.09	13.0/0.0	166.2			1.5		251 Btuh	
	Wall Total								1158 (sqft)					2319 Btuh
Doors	Type							Area (sqft)			HTM		Load	
1	Insulated - Exterior							6.7			12.9		86 Btuh	
2	Insulated - Garage							17.8			12.9		229 Btuh	
3	Insulated - Exterior							20.0			12.9		258 Btuh	
4	Insulated - Exterior							13.3			12.9		172 Btuh	
	Door Total								58 (sqft)					744 Btuh
Ceilings	Type/Color/Surface					U-Value	R-Value	Area(sqft)			HTM		Load	
1	Vented Attic/DarkShingle					0.032	30.0/0.0	1590.0			1.66		2633 Btuh	
	Ceiling Total								1590 (sqft)					2633 Btuh
Floors	Type						R-Value	Size			HTM		Load	
1	Stem/Crawlsp(v)						19.0	1590 (sqft)			0.7		1118 Btuh	
	Floor Total								1590.0 (sqft)					1118 Btuh
	Envelope Subtotal													13721 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate.FL_GAINESVILLE_REGIONAL_A
FLMcCarty Res

, FL

4/23/2014

Infiltration	Type Natural	Average ACH 0.65	Volume(cuft) 12720	Wall Ratio 1	CFM= 137.1	Load 2552 Btuh
Internal gain		Occupants 4	Btuh/occupant X 230	Appliance +	2400	Load 3320 Btuh
	Sensible Envelope Load					19593 Btuh
Duct load	Average sealed, Supply(R6 0-Attic), Return(R6 0-Attic) (DGM of 0.229)					4484 Btuh
	Sensible Load All Zones					24078 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title
FLMcarty Res

Climate FL_GAINESVILLE_REGIONAL_A

, FL

4/23/2014

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	19593 Btuh
	Sensible Duct Load	4484 Btuh
	Total Sensible Zone Loads	24078 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	24078 Btuh
	Latent infiltration gain (for 54 gr. humidity difference)	5011 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	953 Btuh
	Latent occupant gain (4.0 people @ 200 Btuh per person)	800 Btuh
	Latent other gain	0 Btuh
	Latent total gain	6764 Btuh
	TOTAL GAIN	30842 Btuh

EQUIPMENT

1. Central Unit	#	36000 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