FORM R405-2020

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Enclosure Garage 3746	Builder Name:	
Street:	3746 33rd avenue ne	Permit Office:	
City, State, Zip:	Naples, FL,	Permit Number:	
Owner:		Jurisdiction:	211000
Design Location:	FL, NAPLES_MUNICIPAL	County:	Collier(Florida Climate Zone 1)

1. New construction or existing	Addition
2. Single family or multiple family	Attached
3. Number of units, if multiple family	1
4. Number of Bedrooms	0
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	329
Conditioned floor area below grade (ft²)	0

7. Windows(0.0 sqft.)	Description	Area
a. U-Factor: SHGC:	N/A	ft²
b. U-Factor: SHGC:	N/A	ft²
c. U-Factor: SHGC:	N/A	ft²
Area Weighted Average Overhang Depth:		0.000 ft
Area Weighted Average SHGC:		0.000

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

9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R= 0.0	329.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(686.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	392.00 ft²
b. Concrete Block - Int Insul, Exterior	R=4.1	294.00 ft²
c. N/A		
d. N/A		

11. Ceiling Types(329.0 sqft.)	Insulation	Area
a. Flat ceiling under att (Vented)	R=30.0	329.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Vented)	Deck R=30.0	356 ft²
13. Ducts, location & insulation level		R ft²
a. Sup: New Game , Ret: New Game , AH: New Game		66
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	12.0	SEER:16.00

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Strip Heat	12.0	COP:1.00

16. Hot Water Systems - Replacement equipment	
a. Electric	Cap: 40 gallons EF: 0.948
b. Conservation features	None
17. Credits	Pstat

Glass/Floor Area: 0.0

Total Proposed Modified Loads: 12.76
Total Baseline Loads: 14.32

PASS

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

PREPARED BY: IPERMITTING SERVICES CORP

DATE: 02.20.23

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 certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.
- Default duct leakage does not require a Duct Leakage Test Report.
- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires a PERFORMANCE envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2). (Exception n

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Enclosure Garage 3746			Address type:	Street Address
Building Type:	User	Bedrooms:	0	Lot #:	---
Owner:		Conditioned Area:	329	Block/SubDivision:	---
		Total Stories:	1	PlatBook:	---
Builder Name:		Worst Case:	No	Street:	3746 33rd avenue ne
Permit Office:		Rotate Angle:	0	County:	Collier
Jurisdiction:	211000	Cross Ventilation:		City, State, Zip:	Naples,
Family Type:	Attached	Whole House Fan:			FL,
New/Existing:	Addition	Terrain:	Suburban		
Year Construct:	2023	Shielding:	Suburban		
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, NAPLES_MUNICIPAL	FL_NAPLES_MUNICIPAL	46	90	70	75	288.5	58	Medium

BLOCKS

√	Number	Name	Area	Volume
___	1	Block1	329	2961 cu ft

SPACES

√	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___	1	New Game Room	329	2961	No	1		Yes	Yes	Yes

FLOORS (Total Exposed Area = 329 sq.ft.)

√	#	Floor Type	Space	Exposed Perim	Perimeter R-Value	Area	U-Factor	Joist R-Value	Tile	Wood	Carpet
___	1	Slab-On-Grade Edge Ins	New Game Room	73	0	329 ft	0.304	---	0.00	0.00	1.00

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	356 ft²	0 ft²	Medium	N	0.96	No	0.9	No	30	22.62

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___	1	Full attic	Vented	300	329 ft²	N	N

CEILING (Total Exposed Area = 329 sq.ft.)

√	#	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___	1	Flat ceiling under attic(Vented)	New Game Room	30.0	Batt	329.0ft²	0.044	0.11	Wood

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

WALLS (Total Exposed Area = 686 sq.ft.)

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area sq.ft.	U-Factor	Sheath R-Value	Frm. Frac.	Solar Absor.	Below Grade
	1	N	Exterior	Frame - Wood	New Game Room	13.0	21.0	0	9.0	4	196.0	0.084		0.23	0.75	0 %
	2	S	Exterior	Frame - Wood	New Game Room	13.0	21.0	0	9.0	4	196.0	0.084		0.23	0.75	0 %
	3	E	Exterior	Conc. Blk - Int Ins	New Game Room	4.1	15.0	9	9.0	4	147.0	0.149		0	0.75	0 %
	4	W	Exterior	Conc. Blk - Int Ins	New Game Room	4.1	15.0	9	9.0	4	147.0	0.149		0	0.75	0 %

DOORS (Total Exposed Area = 43 sq.ft.)

√	#	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
	1	E	Exterior	Insulated	New Game Room	None	0.40	2.00	8	8.00	0	21.3ft²
	2	W	Exterior	Insulated	New Game Room	None	0.40	2.00	8	8.00	0	21.3ft²

INFILTRATION

√	#	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
	1	Wholehouse	Proposed ACH(50)	0.00040	345	18.95	35.58	0.1324	7.0	All	2961 cu ft

MASS

√	#	Mass Type	Area	Thickness	Furniture Fraction	Space
	1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	New Game Room

HEATING SYSTEM

√	#	System Type/Fl. Addition	Subtype	AHRI #	Efficiency	Capacity kBtu/hr	----Geothermal HeatPump---- Entry	Power	Volt	Current	Ducts	Block
	1	Electric Strip Heat/Supplementa	None		COP: 1.00	12.0		0.00	0.00	0.00	sys#1	1

COOLING SYSTEM

√	#	System Type/Fl. Addition	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	Air Flow cfm	SHR	Duct	Block
	1	Central Unit/Supplementa	Through the Wall(Split)/Si		SEER:16.0	12.0	360	0.75	sys#1	1

HOT WATER SYSTEM

√	#	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length
	1	Electric	None	New Game Room	0.95 (0.93)	40.00 gal	60 gal	120 deg	Standard	None	99

	Recirculation System	Recirc Control Type	Loop length	Branch length	Pump power	DWHR	Facilities Connected	Equal Flow	DWHR Eff	Other Credits
1	No		NA	NA	NA	No	NA	NA	NA	None

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INPUT SUMMARY CHECKLIST REPORT

DUCTS

✓	Duct #	Supply Location	Supply R-Value	Supply Area	Return Location	Return R-Value	Return Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool
___	1	New Game Room	6.0	66 ft²	New Game Room	6.0	16 ft²	Default Leakage	New Game R	(Default)	(Default)			1	1

TEMPERATURES

Programable Thermostat: Y Ceiling Fans: N

	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

FORM R405-2020

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 89

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

3746 33rd avenue ne,Naples,FL,

1. New construction or existing		Addition
2. Single family or multiple family		Attached
3. Number of units, if multiple family		1
4. Number of Bedrooms		0
5. Is this a worst case?		No
6. Conditioned floor area above grade (ft²)		329
Conditioned floor area below grade (ft²)		0

7. Windows**	Description	Area
a. U-Factor:	N/A	ft²
SHGC:		
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		0.000 ft
Area Weighted Average SHGC:		0.000

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

9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R= 0.0	329.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(686.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	392.00 ft²
b. Concrete Block - Int Insul, Exterior	R=4.1	294.00 ft²
c. N/A		
d. N/A		

11. Ceiling Types(329.0 sqft.)	Insulation	Area
a. Flat ceiling under att (Vented)	R=30.0	329.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Vented)	Deck	R=30.0	356 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: New Game , Ret: New Game , AH: New Game	6	66
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	12.0	SEER:16.00

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Strip Heat	12.0	COP:1.00

16. Hot Water Systems - Replacement equipment	
a. Electric	Cap: 40 gallons
	EF: 0.948
b. Conservation features	
	None
17. 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: 3746 33rd avenue ne City/FL Zip: Naples,FL,

*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.

Residential System Sizing Calculation

Summary

Project Title:
Enclosure Garage 3746

3746 33rd avenue ne
Naples, FL

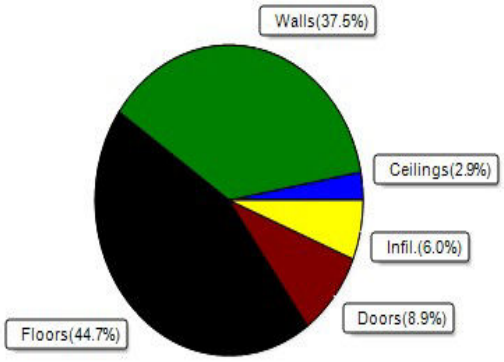
2/18/2023

Location for weather data: Naples, FL - Defaults: Latitude(26) Altitude(23 ft.) Temp Range(L) Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(57gr.)					
Winter design temperature(MJ8 99%)	47	F	Summer design temperature(MJ8 99%)	90	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	23	F	Summer temperature difference	15	F
Total heating load calculation	**4431**	**Btuh**	**Total cooling load calculation**	**3234**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Strip Heat)	270.8	12000	Sensible (SHR = 0.75)	329.6	9000
			Latent	595.5	3000
			Total	371.1	12000

WINTER CALCULATIONS

Winter Heating Load (for 329 sqft)

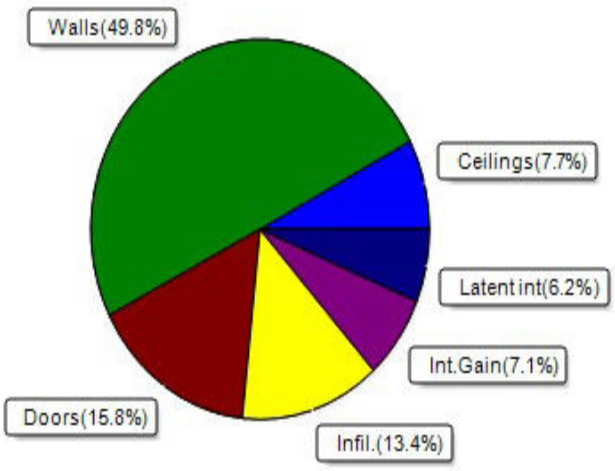
Load component			Load	
Window total	0	sqft	0	Btuh
Wall total	643	sqft	1663	Btuh
Door total	43	sqft	393	Btuh
Ceiling total	329	sqft	130	Btuh
Floor total	329	sqft	1981	Btuh
Infiltration	10	cfm	264	Btuh
Duct loss			0	Btuh
Subtotal			**4431**	**Btuh**
Ventilation	Ex:0 cfm; Sup:0 cfm		0	Btuh
TOTAL HEAT LOSS			**4431**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 329 sqft)

Load component			Load	
Window total	0	sqft	0	Btuh
Wall total	643	sqft	1611	Btuh
Door total	43	sqft	512	Btuh
Ceiling total	329	sqft	248	Btuh
Floor total			0	Btuh
Infiltration	8	cfm	129	Btuh
Internal gain			230	Btuh
Duct gain			0	Btuh
Sens.Ventilation	Ex:0 cfm; Sup:0 cfm		0	Btuh
Blower Load			0	Btuh
Total sensible gain			**2730**	**Btuh**
Latent gain(ducts)			0	Btuh
Latent gain(infiltration)			304	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			200	Btuh
Total latent gain			**504**	**Btuh**
TOTAL HEAT GAIN			**3234**	**Btuh**



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8th Edition

EnergyGauge® System Sizing
PREPARED BY: _____
DATE: _____

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

3746 33rd avenue ne
Naples, FL

Project Title:
Enclosure Garage 3746
Building Type: User

2/18/2023

Reference City: Naples, FL (Defaults) Winter Temperature Difference: 23.0 °F (MJ8 99%)
Winter Setpoint: 70 °F (Required Manual J default)

Component Loads for Whole House

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	196	2.04	400 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	196	2.04	400 Btuh
3	Conc Blk,Hollow	- Ext	(0.149)	4.1/0.0	126	3.43	431 Btuh
4	Conc Blk,Hollow	- Ext	(0.149)	4.1/0.0	126	3.43	431 Btuh
	Wall Total				643(sqft)		1663 Btuh
Doors	Type	Storm	Ueff.		Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.400)		21	9.2	196 Btuh
2	Insulated - Exterior,	n	(0.400)		21	9.2	196 Btuh
	Door Total				43(sqft)		393Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area X	HTM=	Load
1	Flat ceil/M/Shing		(0.017)	30.0/30.0	329	0.39	130 Btuh
	Ceiling Total				329(sqft)		130Btuh
Floors	Type		Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	73.0 ft(perim.)	27.1	1981 Btuh
	Floor Total				329 sqft		1981 Btuh
					Envelope Subtotal:		4166 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural		0.21	2961	1.00	10.5	264 Btuh
Duct load	Average sealed, R6.0, Supply(Con), Return(Con)					(DLM of 0.000)	0 Btuh
All Zones				**Sensible Subtotal All Zones**			**4431 Btuh**

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss		4431 Btuh
	Ventilation Sens. Heat Loss	(Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss		4431 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

3746 33rd avenue ne
Naples, FL

Project Title:
Enclosure Garage 3746
Building Type: User

2/18/2023

EQUIPMENT		
1. Electric Strip Heat		12000 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:
Enclosure Garage 3746

3746 33rd avenue ne
Naples, FL

2/18/2023

Reference City: Naples, FL (Defaults)
Humidity difference: 57gr.

Temperature Difference: 15.0F(MJ8 99%)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Whole House

	Window Total		0 (sqft)			0 Btuh
Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	196.0	2.3	444 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	196.0	2.3	444 Btuh
3	Concrete Blk,Hollow - Ext	0.15	4.1/0.0	125.7	2.9	362 Btuh
4	Concrete Blk,Hollow - Ext	0.15	4.1/0.0	125.7	2.9	362 Btuh
	Wall Total			643 (sqft)		1611 Btuh
Doors	Type			Area (sqft)	HTM	Load
1	Insulated - Exterior			21.3	12.0	256 Btuh
2	Insulated - Exterior			21.3	12.0	256 Btuh
	Door Total			43 (sqft)		512 Btuh
Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/Med/Shingle	0.017	30.0/30.0	329.0	0.75	248 Btuh
	Ceiling Total			329 (sqft)		248 Btuh
Floors	Type		R-Value	Size	HTM	Load
1	Slab On Grade		0.0	329 (ft-perimeter)	0.0	0 Btuh
	Floor Total			329.0 (sqft)		0 Btuh
				Envelope Subtotal:		2371 Btuh

Infiltration	Type	Average ACH		Volume(cuft)	Wall Ratio		CFM=	Load
	Natural	0.16		2961	1		7.8	129 Btuh
Internal gain		Occupants		Btuh/occupant		Appliance		Load
		1	X	230	+	0		230 Btuh
						Sensible Envelope Load:		2730 Btuh
Duct load	Average sealed, Supply(R6.0-Condi), Return(R6.0-Condi)					(DGM of 0.000)		0 Btuh
						Sensible Load All Zones		**2730 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_NAPLES_MUNICIPAL

3746 33rd avenue ne
Naples, FL

Enclosure Garage 3746

2/18/2023

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**2730**	**Btuh**
	Sensible Duct Load	0	Btuh
	Total Sensible Zone Loads	**2730**	**Btuh**
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0	Btuh
	Blower	0	Btuh
	Total sensible gain	**2730**	**Btuh**
	Latent infiltration gain (for 57 gr. humidity difference)	304	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	0	Btuh
	Latent occupant gain (1.0 people @ 200 Btuh per person)	200	Btuh
	Latent other gain	0	Btuh
	Latent total gain	**504**	**Btuh**
	TOTAL GAIN	**3234**	**Btuh**

EQUIPMENT

1. Central Unit	#	12000 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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Version 8

System Sizing Calculations - Winter

Residential Load - Room by Room Component Details

3746 33rd avenue ne
Naples, FL

Project Title:
Enclosure Garage 3746
Building Type: User

2/18/2023

Reference City: Naples, FL (Defaults) Winter Temperature Difference: 23.0 °F (MJ8 99%)
Winter Setpoint: 70 °F (Required Manual J default)

Component Loads for Room #1: New Game Room

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	196	2.04	400 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	196	2.04	400 Btuh
3	Conc Blk,Hollow	- Ext	(0.149)	4.1/0.0	126	3.43	431 Btuh
4	Conc Blk,Hollow	- Ext	(0.149)	4.1/0.0	126	3.43	431 Btuh
	Wall Total				643(sqft)		1663 Btuh
Doors	Type	Storm	Ueff.		Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.400)		21	9.2	196 Btuh
2	Insulated - Exterior,	n	(0.400)		21	9.2	196 Btuh
	Door Total				43(sqft)		393Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area X	HTM=	Load
1	Flat ceil/M/Shing		(0.017)	30.0/30.0	329	0.39	130 Btuh
	Ceiling Total				329(sqft)		130Btuh
Floors	Type		Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	73.0 ft(perim.)	27.1	1981 Btuh
	Floor Total				329 sqft		1981 Btuh
					Room Envelope Subtotal:		4166 Btuh
Infiltration	Type	Wholehouse	ACH	Room Volume	Wall Ratio	CFM=	
	Natural		0.21	2961	1.00	10.5	264 Btuh
Duct load	Average sealed, Supply(R6.0-Cond.), Return(R6.0-Cond.)					(DLM of 0.000)	0 Btuh
Room #1					**Sensible Room Subtotal**		**4431 Btuh**

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss		4431 Btuh
	Ventilation Sens. Heat Loss	(Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss		4431 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

3746 33rd avenue ne
Naples, FL

Project Title:
Enclosure Garage 3746
Building Type: User

2/18/2023

EQUIPMENT		
1. Electric Strip Heat		12000 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 - Room by Room Component Details

Project Title:
Enclosure Garage 3746

3746 33rd avenue ne
Naples, FL

2/18/2023

Reference City: Naples, FL (Defaults)
Humidity difference: 57gr.

Temperature Difference: 15.0F(MJ8 99%)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Room #1: New Game Room

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	196.0	2.3	444 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	196.0	2.3	444 Btuh
3	Concrete Blk,Hollow - Ext	0.15	4.1/0.0	125.7	2.9	362 Btuh
4	Concrete Blk,Hollow - Ext	0.15	4.1/0.0	125.7	2.9	362 Btuh
	Wall Total			643 (sqft)		1611 Btuh
Doors	Type			Area (sqft)	HTM	Load
1	Insulated - Exterior			21.3	12.0	256 Btuh
2	Insulated - Exterior			21.3	12.0	256 Btuh
	Door Total			43 (sqft)		512 Btuh
Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/Med/Shingle	0.017	30.0/30.0	329.0	0.75	248 Btuh
	Ceiling Total			329 (sqft)		248 Btuh
Floors	Type		R-Value	Size	HTM	Load
1	Slab On Grade		0.0	329 (ft-perimeter)	0.0	0 Btuh
	Floor Total			329.0 (sqft)		0 Btuh
					Zone Envelope Subtotal:	2371 Btuh

Infiltration	Type	Wholehouse ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.16	2961	1.00	7.8	129 Btuh
Internal gain		Occupants	Btuh/occupant		Appliance	Load
		1	X 230	+	0	230 Btuh
					Sensible Envelope Load:	2730 Btuh
Duct load	Average sealed, Supply(R6.0-Cond.), Return(R6.0-Cond.)				(DGM of 0.000)	0 Btuh
					Sensible Zone Load	**2730 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_NAPLES_MUNICIPAL

3746 33rd avenue ne
Naples, FL

Enclosure Garage 3746

2/18/2023

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**2730**	**Btuh**
	Sensible Duct Load	0	Btuh
	Total Sensible Zone Loads	**2730**	**Btuh**
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0	Btuh
	Blower	0	Btuh
	Total sensible gain	**2730**	**Btuh**
	Latent infiltration gain (for 57 gr. humidity difference)	304	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	0	Btuh
	Latent occupant gain (1.0 people @ 200 Btuh per person)	200	Btuh
	Latent other gain	0	Btuh
	Latent total gain	**504**	**Btuh**
	TOTAL GAIN	**3234**	**Btuh**

EQUIPMENT

1. Central Unit	#	12000 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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