

Project Name: Barndominium

Address: 174 now Rowan tree terrace lake city FL 32055, ,

OUTDOOR DESIGN CONDITIONS

Weather station: Gainesville Regional AP

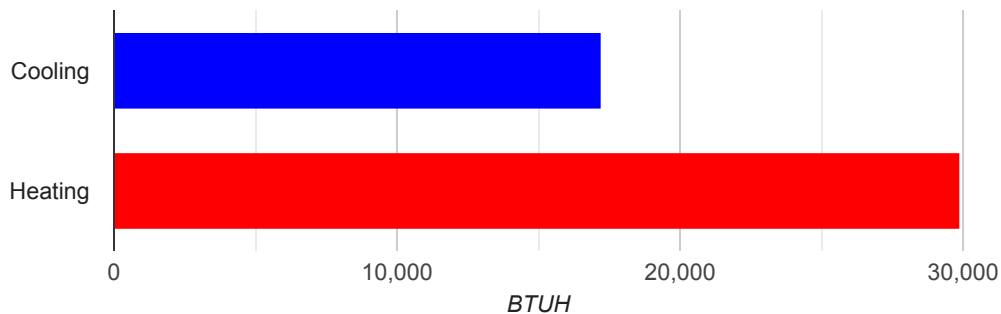
Summer Outdoor F:	92	Summer Indoor F:	75	Design Grains:	47	Daily Range:	Medium
Winter Outdoor F:	33	Winter Indoor F:	70	Cooling RH:	50	Elevation (Ft):	164

LOAD CALCULATION TOTALS

HVAC System: Tbd

Heated square footage:	1,094	Heating BTUH:	29,849
Cooled square footage:	1,094	Cooling BTUH:	17,176
Heated volume (above grade CF):	9,844	CFM:	753
Cooled volume (above grade CF):	9,844	Sensible cooling:	14,911
Exposed wall area (SF):	1,197	Latent cooling:	2,265
		SHR:	0.868

Load Calculation



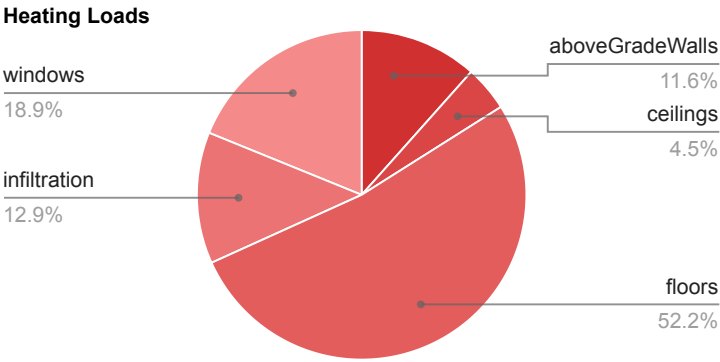
Approved ACCA MJ8 Calculations

Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates on building use, weather data, and inputted values such as R-Values, window types, duct loss, etc. Equipment selections should meet both the latent and sensible gain as well as building heat loss.

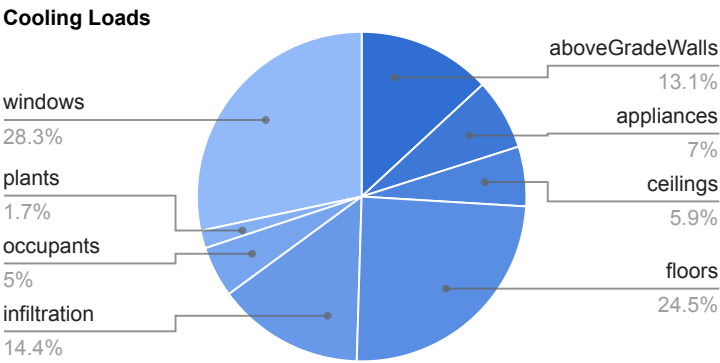


HEATING AND COOLING LOADS

HEATING LOADS		
SECTION	AREA	HEAT LOSS
aboveGradeWalls	963.4	3,458
ceilings	1,238.8	1,329
floors	1,093.8	15,581
infiltration	0	3,853
skylights	0	0
windows	234	5,628
Totals		29,849

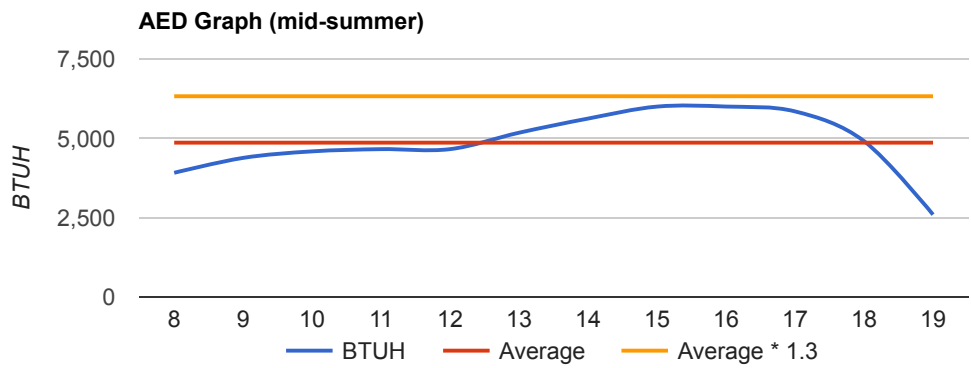


COOLING LOADS			
SECTION	AREA	SENSIBLE	LATENT
AEDExcursion	0	0	0
aboveGradeWalls	963.4	2,252	0
appliances	0	1,200	0
ceilings	1,238.8	1,006	0
floors	1,093.8	4,211	0
infiltration	0	916	1,565
occupants	0	460	400
plants	0	0	300
skylights	0	0	0
windows	234	4,866	0
Totals		14,911	2,265

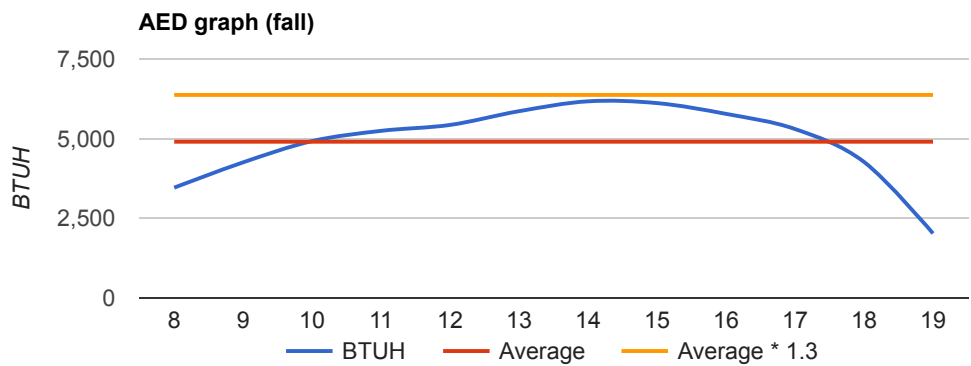


FENESTRATION LOADS

Warning (0): The sensible load for this application peaks during late fall or early winter. This behavior is caused by glass that faces SouthEast, South or SouthWest. Some rooms may be noticeably cooler or warmer than the temperature set point if zoning is not provided. Simultaneous heating and cooling may be required.



This graph represents hourly aggregate fenestration loads in mid-summer.



This graph represents hourly aggregate fenestration loads in October.

COMPONENT LOADS

ABOVE GRADE WALLS					
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	N 272.4	Heating BTUH: 978 Cooling BTUH: 637
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	E 217.7	Heating BTUH: 781 Cooling BTUH: 509
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	S 247	Heating BTUH: 886 Cooling BTUH: 577
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	W 226.3	Heating BTUH: 812 Cooling BTUH: 529

BELOW GRADE WALLS					
There are no components for this section.					

WINDOWS					
Default small windows for wall id 1289834 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 6 N	U Value: SHGC:	0.65 0.45	Heating BTUH: 144 Cooling BTUH: 89
Default medium windows for wall id 1289834 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 24 N	U Value: SHGC:	0.65 0.45	Heating BTUH: 577 Cooling BTUH: 357
Default large windows for wall id 1289834 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 N	U Value: SHGC:	0.65 0.45	Heating BTUH: 866 Cooling BTUH: 535
Default small windows for wall id 1289835 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 6 E	U Value: SHGC:	0.65 0.45	Heating BTUH: 144 Cooling BTUH: 156
Default medium windows for wall id 1289835 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 E	U Value: SHGC:	0.65 0.45	Heating BTUH: 289 Cooling BTUH: 312
Default large windows for wall id 1289835 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 E	U Value: SHGC:	0.65 0.45	Heating BTUH: 866 Cooling BTUH: 936
Default small windows for wall id 1289836 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 S	U Value: SHGC:	0.65 0.45	Heating BTUH: 289 Cooling BTUH: 157
Default medium windows for wall id 1289836 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 S	U Value: SHGC:	0.65 0.45	Heating BTUH: 289 Cooling BTUH: 177
Default large windows for wall id 1289836 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 S	U Value: SHGC:	0.65 0.45	Heating BTUH: 866 Cooling BTUH: 574
Default small windows for wall id 1289837 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 6 W	U Value: SHGC:	0.65 0.45	Heating BTUH: 144 Cooling BTUH: 175
Default medium windows for wall id 1289837 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 W	U Value: SHGC:	0.65 0.45	Heating BTUH: 289 Cooling BTUH: 349
Default large windows for wall id 1289837 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 W	U Value: SHGC:	0.65 0.45	Heating BTUH: 866 Cooling BTUH: 1,048

Window cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

CEILINGS

Map trace generated ceiling Ceiling below roof joists, Metal, White, R-38.	Construction nr: U Value:	18C-38 mw 0.029	Area:	1,238.8	Heating BTUH: Cooling BTUH:	1,329 1,006
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SKYLIGHTS

There are no components for this section.

Skylight cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

DOORS

There are no components for this section.

FLOORS

Map trace generated floor Floor over open crawl space or garage, no floor insulation, Carpet or hardwood.	Construction nr: Area:	20P-0c 1,093.8	Heating U Value:0.385 Cooling U Value:0.385	Heating BTUH: Cooling BTUH: F Value:	15,581 4,211 N/A
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VENTILATION

There are no components for this section.

HOT WATER PIPING

There are no components for this section.

DUCTS

There are no components for this section.

INFILTRATION

Leakage Category:	Average	NCFM Heating: NCFM Cooling:	95 49	Heating BTUH: Sensible BTUH: Latent BTUH:	3,853 916 1,565
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BLOWER MOTOR

There are no components for this section.

WINTER HUMIDIFICATION

There are no components for this section.

OCCUPANTS

Nr. Occupants:	2	Sensible BTUH:	460	Latent BTUH:	400
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APPLIANCES

Small kitchen: 1,200 BTUH	Quantity:	Sensible BTUH: Latent BTUH:	1,200
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PLANTS

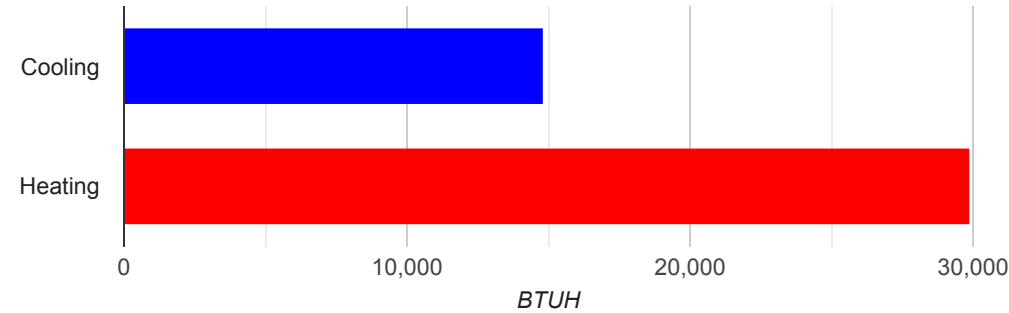
Plant Size:	small	Quantity:	5	Latent BTUH:	50
Plant Size:	medium	Quantity:	5	Latent BTUH:	100
Plant Size:	large	Quantity:	5	Latent BTUH:	150

ROOM DETAIL

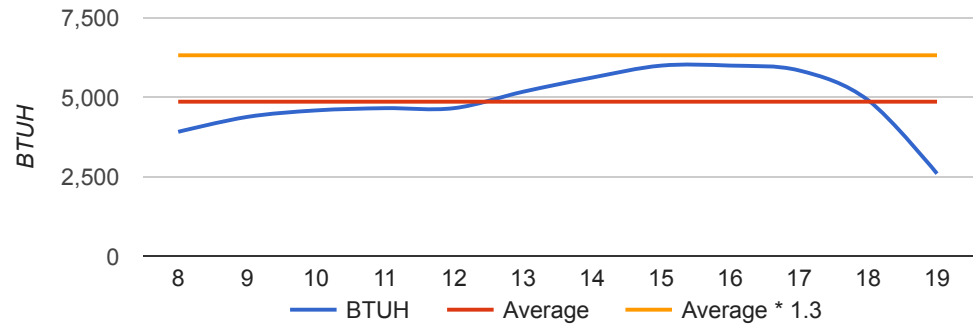
Room name: Main

Heated square footage:	1,094	Total Cooling BTUH:	14,816
Cooled square footage:	1,094	Total Heating BTUH:	29,849
Heated volume (above grade CF):	9,844	CFM:	669
Cooled volume (above grade CF):	9,844		
Exposed wall area (SF):	1,197		

Load Calculation



AED Graph (mid-summer)



AED graph (fall)

