

App# 54667



Project Name: Lake City Addition

Address: 576 Southwest Broderick Drive, Lake City, FL

OUTDOOR DESIGN CONDITIONS

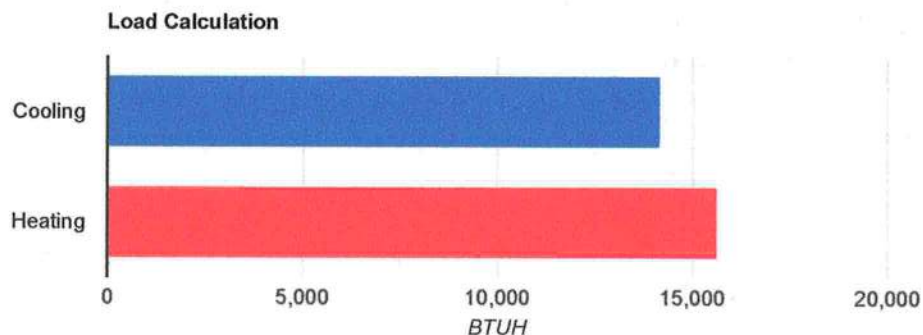
Weather station: Gainesville Regional AP

Summer Outdoor F:	92	Summer Indoor F:	70	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: Addition HVAC System

Heated square footage:	854	Heating BTUH:	15,621
Cooled square footage:	854	Cooling BTUH:	14,161
Heated volume (above grade CF):	7,121	CFM:	628
Cooled volume (above grade CF):	7,121	Sensible cooling:	12,453
Exposed wall area (SF):	1,012	Latent cooling:	1,708
		SHR:	0.879



Approved ACCA MJ8 Calculations

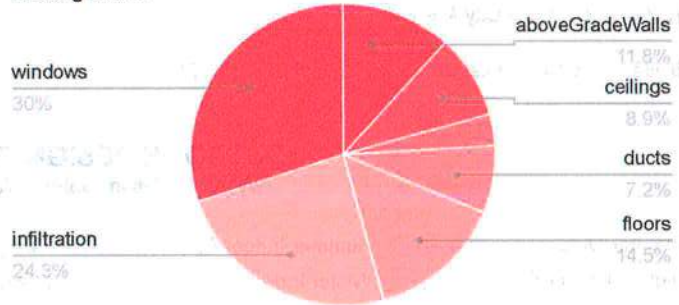
Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates on building use, weather data, and inputted values such as R-Values, window types, duct loss, etc. Equipment selections should meet both the latent and sensible gain as well as building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



HEATING AND COOLING LOADS

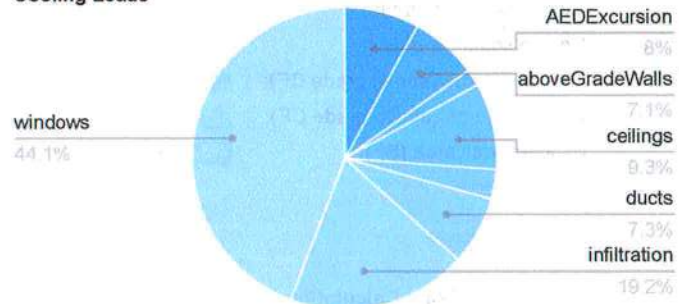
HEATING LOADS		
SECTION	AREA	HEAT LOSS
aboveGradeWalls	766	1,842
ceilings	854	1,390
doors	24	533
ducts	0	1,119
floors	565	2,259
infiltration	0	3,797
skylights	0	0
windows	222	4,682
Totals		15,621

Heating Loads



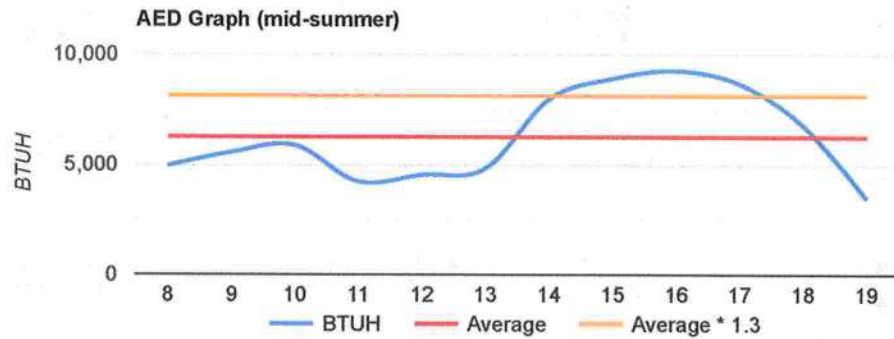
COOLING LOADS			
SECTION	AREA	SENSIBLE	LATENT
AEDExcursion	0	1,133	0
aboveGradeWalls	766	1,011	0
appliances	0	250	0
ceilings	854	1,315	0
doors	24	446	0
ducts	0	877	161
floors	565	0	0
infiltration	0	1,172	1,547
skylights	0	0	0
windows	222	6,249	0
Totals		12,453	1,708

Cooling Loads

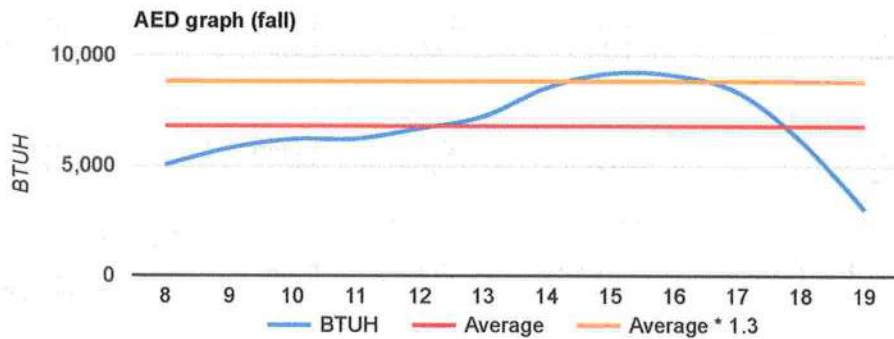


FENESTRATION LOADS

Warning (0): This application has glass areas that produced relatively large cooling loads for part of the day. Zoning may be required to overcome spikes in solar load for one or more rooms. A zoned system may be required, or some rooms may require zone control (provided by individual, motorized, thermostatically controlled dampers).



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



This graph represents hourly aggregate fenestration loads in October.

COMPONENT LOADS

ABOVE GRADE WALLS

System generated wall - NE

Frame Wall, Wood framing, R-21 cavity insulation, Stucco or Siding.

Construction nr:	12F-0s w	Exposure:	NE	Heating BTUH:	125
U Value:	0.065	Area:	52	Cooling BTUH:	69

System generated wall - SW

Frame Wall, Wood framing, R-21 cavity insulation, Stucco or Siding.

Construction nr:	12F-0s w	Exposure:	SW	Heating BTUH:	96
U Value:	0.065	Area:	40	Cooling BTUH:	53

System generated wall - NW

Frame Wall, Wood framing, R-21 cavity insulation, Stucco or Siding.

Construction nr:	12F-0s w	Exposure:	NW	Heating BTUH:	308
U Value:	0.065	Area:	128	Cooling BTUH:	169

System generated wall - SW

Frame Wall, Wood framing, R-21 cavity insulation, Stucco or Siding.

Construction nr:	12F-0s w	Exposure:	SW	Heating BTUH:	274
U Value:	0.065	Area:	114	Cooling BTUH:	150

System generated wall - NE

Frame Wall, Wood framing, R-21 cavity insulation, Stucco or Siding.

Construction nr:	12F-0s w	Exposure:	NE	Heating BTUH:	368
U Value:	0.065	Area:	153	Cooling BTUH:	202

System generated wall - SE

Frame Wall, Wood framing, R-21 cavity insulation, Stucco or Siding.

Construction nr:	12F-0s w	Exposure:	SE	Heating BTUH:	224
U Value:	0.065	Area:	93	Cooling BTUH:	123

System generated wall - SW

Frame Wall, Wood framing, R-21 cavity insulation, Stucco or Siding.

Construction nr:	12F-0s w	Exposure:	SW	Heating BTUH:	224
U Value:	0.065	Area:	93	Cooling BTUH:	123

System generated wall - NW

Frame Wall, Wood framing, R-21 cavity insulation, Stucco or Siding.

Construction nr:	12F-0s w	Exposure:	NW	Heating BTUH:	224
U Value:	0.065	Area:	93	Cooling BTUH:	123

BELOW GRADE WALLS

There are no components for this section.

WINDOWS

Default small windows for wall id 2607431

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	253
Area:	12	SHGC:	0.56	Cooling BTUH:	274
Exposure:	NE				

Default small windows for wall id 2607396

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	127
Area:	6	SHGC:	0.56	Cooling BTUH:	174
Exposure:	SW				

Default medium windows for wall id 2607396

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	506
Area:	24	SHGC:	0.56	Cooling BTUH:	721
Exposure:	SW				

Default small windows for wall id 2607503

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	253
Area:	12	SHGC:	0.56	Cooling BTUH:	315
Exposure:	SE				

Default medium windows for wall id 2607503

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	253
Area:	12	SHGC:	0.56	Cooling BTUH:	331
Exposure:	SE				

Default large windows for wall id 2607503

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	759
Area:	36	SHGC:	0.56	Cooling BTUH:	1,040
Exposure:	SE				

WINDOWS

Default small windows for wall id 2607504

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	253
Area:	12	SHGC:	0.56	Cooling BTUH:	349
Exposure:	SW				

Default medium windows for wall id 2607504

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	253
Area:	12	SHGC:	0.56	Cooling BTUH:	361
Exposure:	SW				

Default large windows for wall id 2607504

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	759
Area:	36	SHGC:	0.56	Cooling BTUH:	1,118
Exposure:	SW				

Default small windows for wall id 2607505

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	253
Area:	12	SHGC:	0.56	Cooling BTUH:	313
Exposure:	NW				

Default medium windows for wall id 2607505

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	253
Area:	12	SHGC:	0.56	Cooling BTUH:	313
Exposure:	NW				

Default large windows for wall id 2607505

Window, NFRC rated, Clear glass.

Construction nr:	1G	U Value:	0.57	Heating BTUH:	759
Area:	36	SHGC:	0.56	Cooling BTUH:	939
Exposure:	NW				

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

CEILINGS

System generated ceiling.

Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-21.

Construction nr:	16DR-21 al	Area:	100	Heating BTUH:	163
U Value:	0.044			Cooling BTUH:	154

System generated ceiling.

Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-21.

Construction nr:	16DR-21 al	Area:	128	Heating BTUH:	208
U Value:	0.044			Cooling BTUH:	197

System generated ceiling.

Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-21.

Construction nr:	16DR-21 al	Area:	225	Heating BTUH:	366
U Value:	0.044			Cooling BTUH:	346

System generated ceiling.

Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-21.

Construction nr:	16DR-21 al	Area:	112	Heating BTUH:	182
U Value:	0.044			Cooling BTUH:	172

System generated ceiling.

Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-21.

Construction nr:	16DR-21 al	Area:	289	Heating BTUH:	470
U Value:	0.044			Cooling BTUH:	445

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

Default doors for wall id 2607429

Metal Door, Fiberglass Core.

Construction nr:	11	Area:	24	Heating BTUH:	533
U Value:	0.6	Exposure:	SW	Cooling BTUH:	446

FLOORS

System generated floor.

Concrete slab on grade floor, R-10 slab insulation.

Construction nr:	22C-10ph	Heating U Value:	0	Heating BTUH:	0
Area:	100	Cooling U Value:	0	Cooling BTUH:	0
		F Value:			1.221

FLOORS

System generated floor.

Concrete slab on grade floor, R-10 slab insulation.

Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	1,446
Area:	128	Cooling U Value:0	Cooling BTUH:	0
			F Value:	1.221

System generated floor.

Concrete slab on grade floor, R-10 slab insulation.

Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	813
Area:	225	Cooling U Value:0	Cooling BTUH:	0
			F Value:	1.221

System generated floor.

Concrete slab on grade floor, R-10 slab insulation.

Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	0
Area:	112	Cooling U Value:0	Cooling BTUH:	0
			F Value:	1.221

VENTILATION

There are no components for this section.

HOT WATER PIPING

There are no components for this section.

DUCTS

System generated ducts (above conditioned space)

Attic - Radial

EHLF:	0.077	Heating BTUH:	1,119
ESGF:	0.084	Sensible BTUH:	877
ELG:	161	Latent BTUH:	161

INFILTRATION

Leakage Category: Average

NCFM Heating:	94	Heating BTUH:	3,797
NCFM Cooling:	49	Sensible BTUH:	1,172
		Latent BTUH:	1,547

BLOWER MOTOR

There are no components for this section.

WINTER HUMIDIFICATION

There are no components for this section.

OCCUPANTS

There are no components for this section.

APPLIANCES

Ceiling fan	Quantity:	1	Sensible BTUH:	250
			Latent BTUH:	0

PLANTS

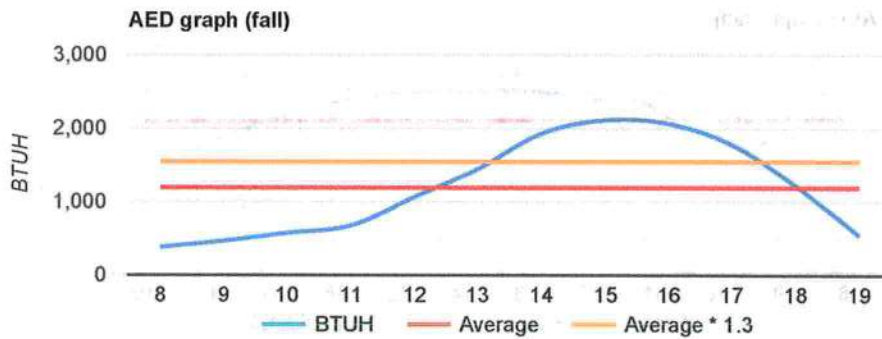
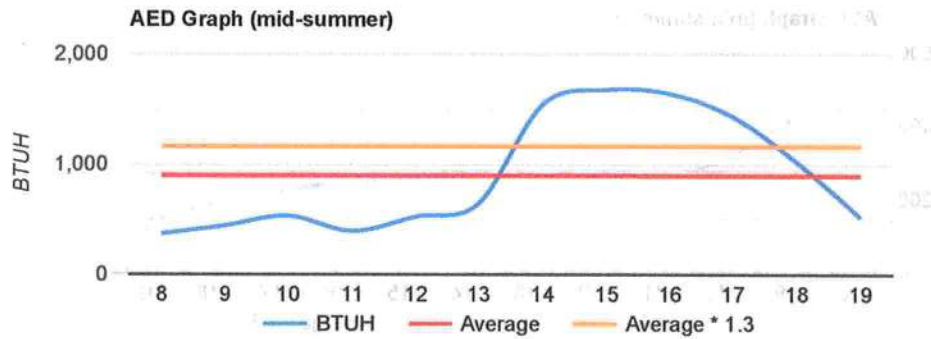
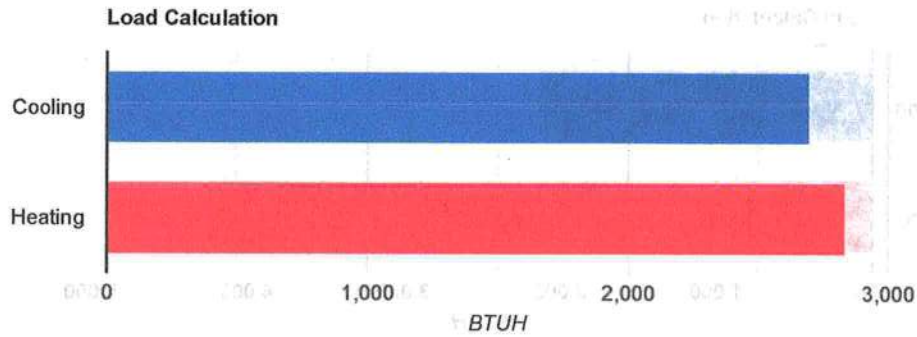
There are no components for this section.

ROOM DETAIL

Room name: Master Bedroom

Heated square footage: 225
Cooled square footage: 225
Heated volume (above grade CF): 1,800
Cooled volume (above grade CF): 1,800
Exposed wall area (SF): 144

Total Cooling BTUH: 2,695
Total Heating BTUH: 2,829
CFM: 125



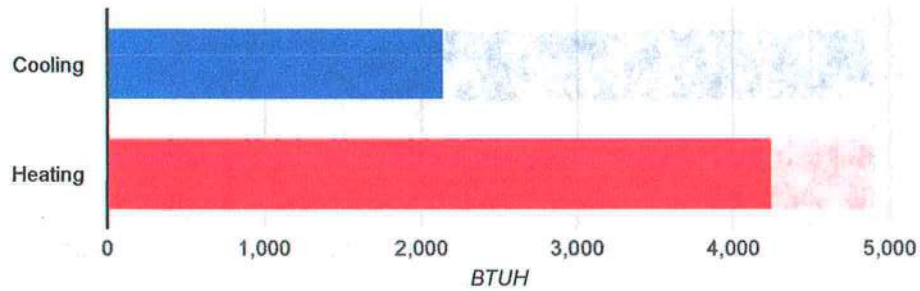
ROOM DETAIL

Room name: Master Bath

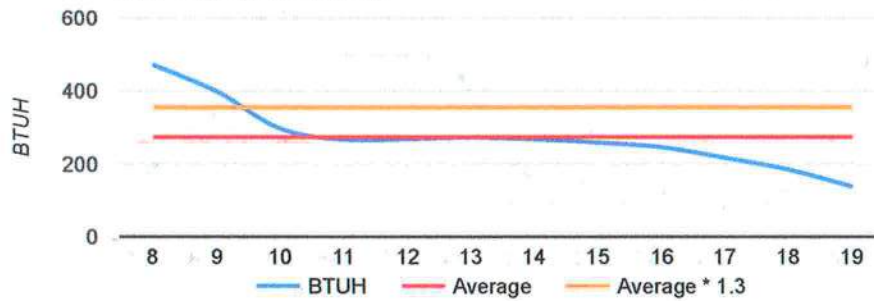
Heated square footage: 128
 Cooled square footage: 128
 Heated volume (above grade CF): 1,024
 Cooled volume (above grade CF): 1,024
 Exposed wall area (SF): 256

Total Cooling BTUH: 2,137
 Total Heating BTUH: 4,233
 CFM: 79

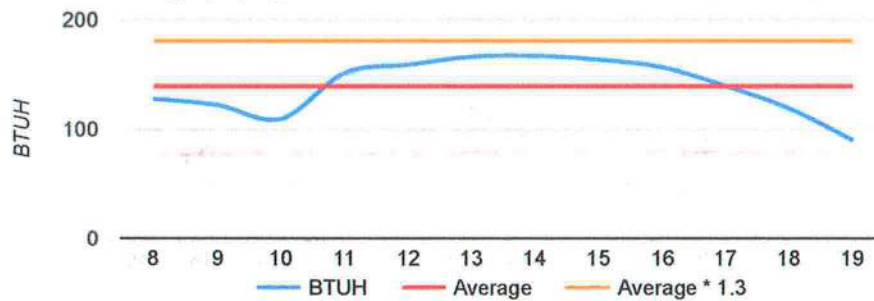
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

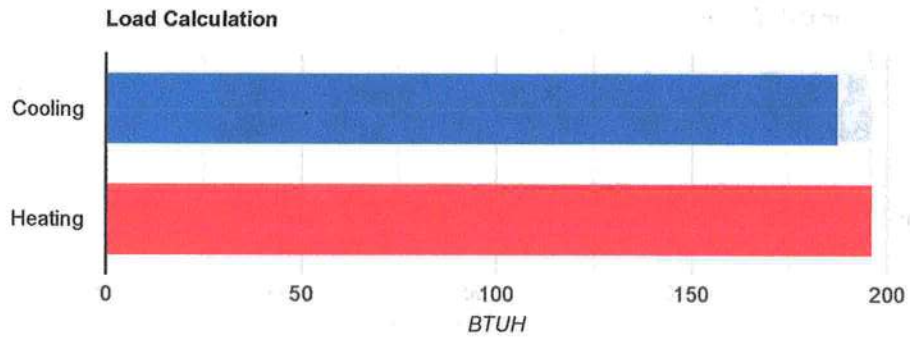


ROOM DETAIL

Room name: Master Closet

Heated square footage: 112
Cooled square footage: 112
Heated volume (above grade CF): 896
Cooled volume (above grade CF): 896
Exposed wall area (SF): 0

Total Cooling BTUH: 187
Total Heating BTUH: 196
CFM: 9



ROOM DETAIL

Room name: Hallway

Heated square footage:

100

Cooled square footage:

100

Heated volume (above grade CF):

800

Cooled volume (above grade CF):

800

Exposed wall area (SF):

0

Total Cooling BTUH:

167

Total Heating BTUH:

175

CFM:

8

Load Calculation

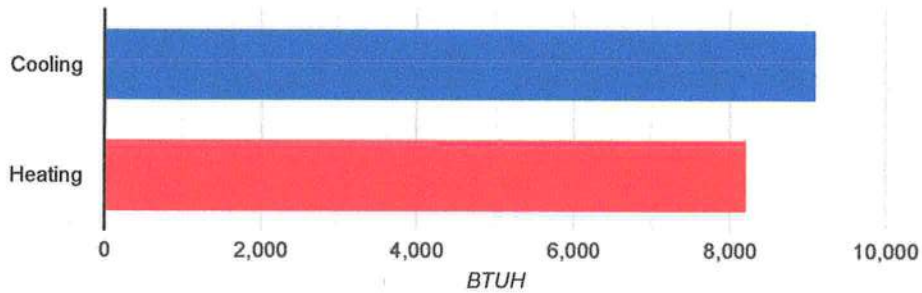


ROOM DETAIL

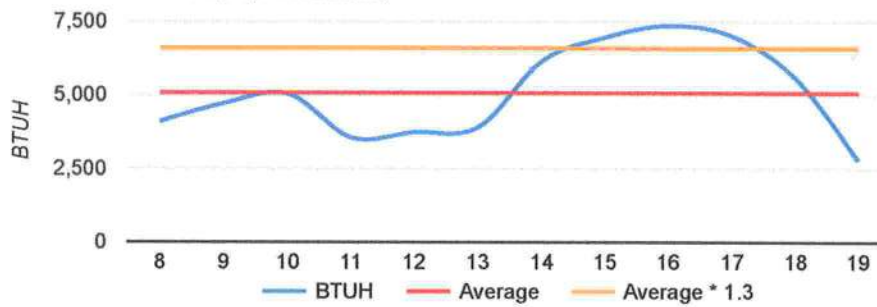
Room name: Bonus Room

Heated square footage:	289	Total Cooling BTUH:	9,077
Cooled square footage:	289	Total Heating BTUH:	8,188
Heated volume (above grade CF):	2,601	CFM:	411
Cooled volume (above grade CF):	2,601		
Exposed wall area (SF):	612		

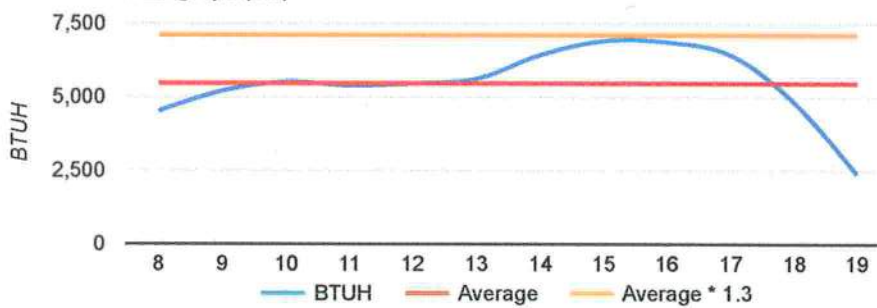
Load Calculation



AED Graph (mid-summer)



AED graph (fall)



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