Energy Audit

Sponsored by

EVERSOURCE ENERGY

George's Mill
Fire Station
Sunapee

June 2021

Audit Prepared by

BUILDING STRATEGIES FOR AN AFFORDABLE FUTURE
S.E.E.D.S.
SUSTAINABLE ENERGY EDUCATION DEMONSTRATION SERVICES
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Table of Contents

Introduction

This Energy Audit has been paid for by Eversource as part of their municipal energy efficiency program. Funding may also be available to help reduce energy usage through weatherization efforts.

The purpose of an energy audit is to identify energy saving measures (ESM) in a building. Computer simulated and other energy models were developed for this project using multiple strategies and software. The models predict energy consumption based on the local climate conditions, physical dimensions and characteristics of a building, mechanical systems, lighting, equipment, and occupancy patterns, in addition to a number of other variables.

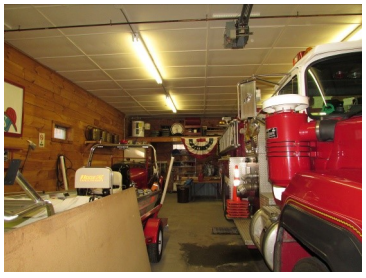
With the building modeled in existing conditions, called here Existing Conditions, energy savings can be estimated for improvements to the thermal envelope or mechanical systems. The cost of those measures can then be analyzed in terms of predicted energy saved. The primary objective is to evaluate the level of investment warranted by energy and dollars saved from those specific measures. There are often benefits to recommended measures beyond potential energy and dollars saved. Improved comfort, air quality, and reduced maintenance, are all potential non energy saving benefits.

This audit has been prepared with the best of intentions to assist the Eversource and the Town of Sunapee make informed decisions regarding energy saving improvements. We do not make any warranty, expressed or implied, or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product or process disclosed.

Executive Summary

Georges Mills is an unincorporated community with its own zip code (03571) in the town of Sunapee. It is located in the northeast corner of the town between the north end of Lake Sunapee and the south shore of Otter Pond. The Fire Station—also known as Rescue Station 2 Georges Mills Station– is a block building constructed in the 1950's or 60's with a floor area of 1152 square feet.

The building is not occupied except for when rescue or fire equipment is needed. It is heated by an un-ducted condensing propane fired furnace. The one dial thermostat is kept at 62 throughout the winter.



Historic energy use is described on page five. The Site EUI is 89.3 KBTU/Ft2 which suggests there are opportunities for reducing energy consumption, though only four have been found to be cost effective at this time.

The four ESM are summarized on the next page, with additional descriptions on pages 8-10. The estimated cost for all four ESM is $2,480 with predicted energy savings of 12.6 million Btus a year and annual dollar savings of $284.00.

The lighting is provided by 12 eight foot fixtures with T12 lamps, but they are not turned on enough to offer compelling savings.

Your Eversource representative will be able to determine if the energy cost/savings analysis of the four recommended ESM meets their threshold for warranting the Town receiving rebates, for implementing the measures.

Summary of Cost Savings Analysis of Recommendations

Four ESM are recommended. All four are estimated to cost $2,480 and yield an annual savings of $284, or 15% of current annual energy costs ($1.75 per gallon propane and $0.16 per kWh). At these prices, a simple 'payback' is expected in less than nine years, but the measures will continue to save energy for an additional 10 years which would yield an investment gain of $2,999 and annualized return on investment (ROI) of 4.0% each year. If energy prices rise, as one can expect, the annual ROI will be greater than 4%.

ESM #	ESM	Cost of Measure	Annual Savings	Simple Payback Years	Life of Measure	Investment Gain	ROI	Annual ROI
1	Relocate Fridge	$0.00	$18	0	20	$360	35900%	34.2%
2	Replace Thermostat	$140	$34	4.1	20	$544	388.6%	8.25%
3	Replace Fridge	$500	$48	10.4	15	$245	51.6%	2.81%
4	Air Sealing	$1,840	$184	10.0	20	$1,850	100.54%	3.54%
1,2,3,4	**TOTALS**	**$2,480**	**$284**	**8.7**	**20**	**$2,999**	**119.5%**	**4.0%**

The chart below summarizes the energy saved from the four ESM which is about 12% of current usage. The measures would also reduce CO2 emissions by approximately 1 ton per year.

ESM #	ESM	Cost of Measure	LP Gallons Saved / Year	kWh Saved / Year	Yearly Site Energy Reduction MMBTU	Yearly Source Energy Reduction MMBTU	Tons CO2 Reductions Annually
1	Relocate Fridge	$0.00	6	45	0.7	1.1	0.1
2	Replace Thermostat	$140	20	0	1.8	2.0	0.1
3	Replace Fridge	$500	0	300	1.0	3.4	0.1
4	Air Sealing	$1,840	105	62	9.8	11.3	0.7
1,2,3,4	**TOTALS**	**$2,480**	**107**	**1094**	**12.6**	**17.7**	**1.0**

ESM Description

1. The refrigerator is old and due for replacement but it also located less than eight inches from the furnace return, blocking or restricting return air flow, and jacket losses and hot air supply result in the refrigerator having to work harder. The intent of this measure is simply to find another location in the fire station for the refrigerator.
2. Replace the dial thermostat with a wifi based, remote control, thermostat to allow for greater set backs during mild winter temperatures and being able to increase settings remotely; for example when called to respond to a fire.
3. Consider how often the refrigerator is used and, if deemed necessary, replace with an 12-15 cubic foot Energy Star rated model.
4. Air sealing involves several targeted areas and is described on the following pages with photos.

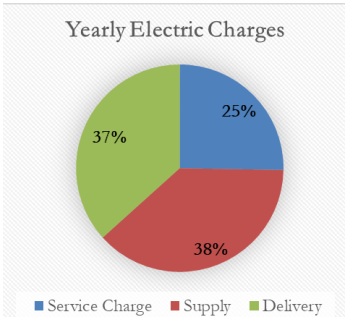
Existing Energy Use Analysis

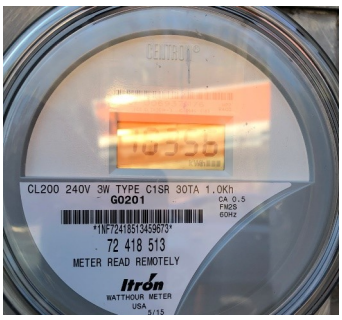
The energy analysis below is based on the average energy usage provided for the full two years propane and electric (2018 & 2019).

Energy	Units	Site Btus	Source Btus	$Cost
Electric kWh	3721	12,696,052	42,274,281	$769.45
Propane	651	90,163,500	103,688,025	$1,139.25
Totals		102,859,552	145,962,306	$1,909
EUI KBtu/FT2	1152	89.3	126.7	$1.66

The Energy Utilization Index (EUI) offers a simple snapshot analysis of a building's energy use by looking at total amount of energy input (converted to Btu's) divided by the floor area of conditioned space. "Site Energy" refers to units of energy delivered to a site. Source energy includes transmission and some allowance for off site generation and other considerations. Source energy attempts to reflect the amount of energy is required to generate and deliver energy to the site, for a more accurate calculation of costs and carbon emissions.

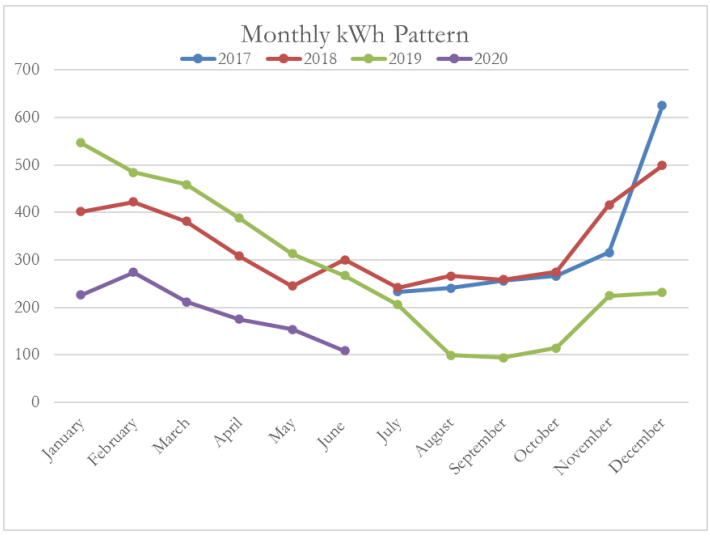
Based on the information provided the fire station's Site EUI is 89.3 thousand BTU per square feet (89.3KBtu/ft2) and Source EUI is 127.7 KBtu/ft2) at a cost $1.66 per ft2 at 2021 energy prices.





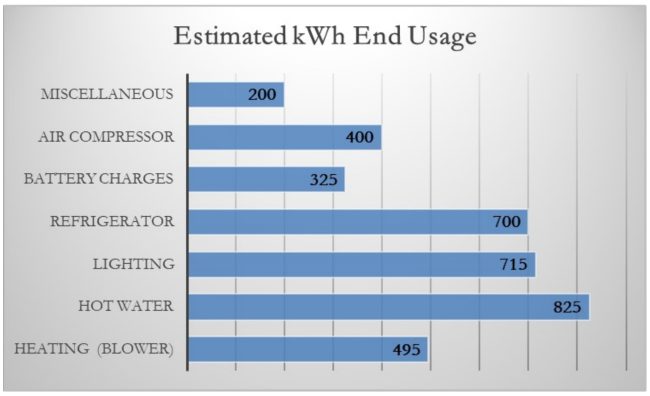
The types of charges for electricity is mostly relevant if considering installing PV for on site generation, which will offset costs for kWh supply and a portion of delivery.

	2017	2018	2019	2020
January		402	547	226
February		422	484	274
March		381	459	212
April		308	388	175
May		245	313	154
June		300	267	109
July	233	242	206	126
August	241	266	99	126
September	256	259	94	135
October	266	275	115	186
November	316	416	225	266
December	625	499	231	340
Totals	1937	4015	3428	2329



Yearly totals vary but seasonal patterns are consistent as usage peaks in winter with lowest usage in summer.

Heating water, lighting, and the refrigerator are believed to be the three highest consumers of electricity, followed by furnace blower.



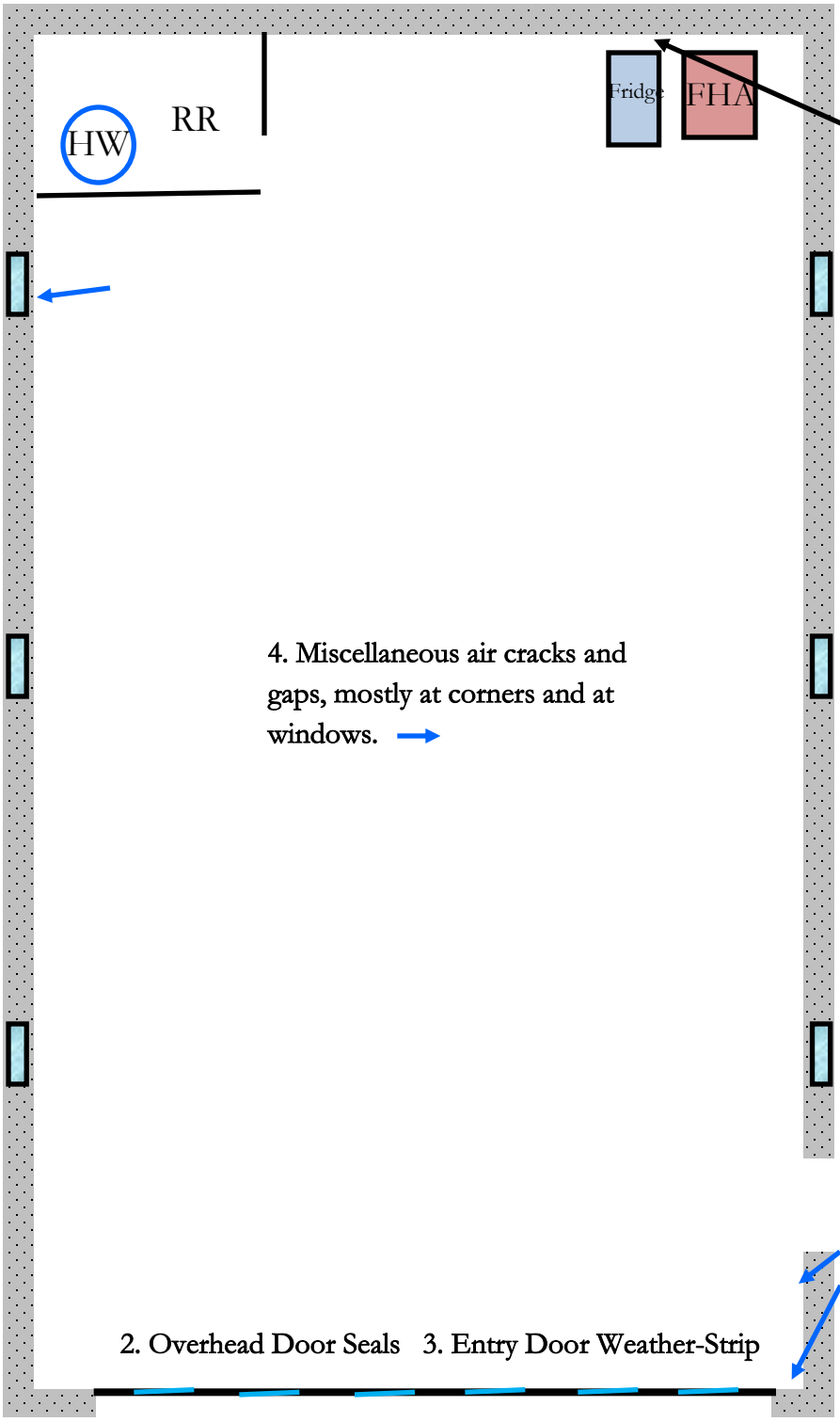
Building Description

The concrete block structure is believed to be over 50 years old with a fairly new metal roof and high efficiency condensing, propane furnace. A layer of XPS rigid foam has been installed on the interior walls and covered in horizontal wood boards. Cellulose has been blown in over six inch fiberglass batt insulation, all of which rests on one inch (1") insulated ceiling panels. Exterior openings include six small awning style double pane windows, a 20x11 insulated overhead door and one entry door.

Targeted air sealing is the most cost effective energy saving measures at this time.

Replacing the six eight foot fixtures and twelve T12 fluorescent tubes with new eight, four foot LED fixtures, is recommended, though at current occupancy rates (when lights are on) the energy savings would likely have a lower ROI than usual.

Air Leakage Sites



Blower Door Assembly with Fan

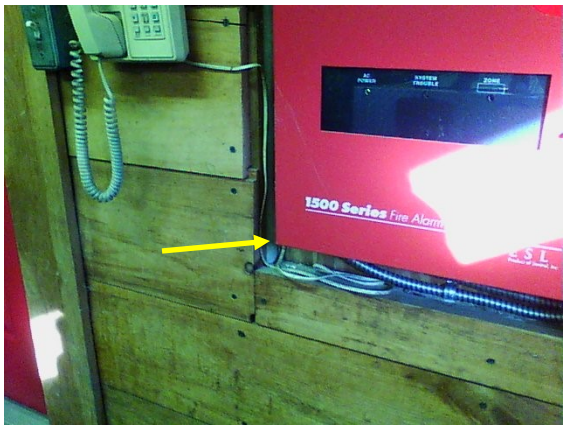
ESM 4: Air Sealing Package

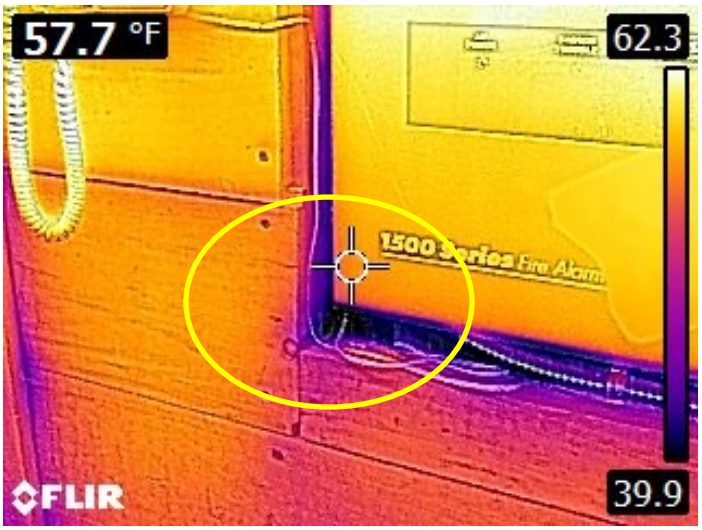
1. Access panel to above the ceiling: Construct an insulated panel, with minimum 4" rigid foam board, that will fit snuggly on the lip of the hatch opening, with weatherstripping. Adhere plywood to both sides for added weight.
2. Purchase high quality overhead door seals (from Garage Door Weather Stripping, Bottom & Threshold Seal (northshorecommercialdoor.com) or similar) and install on all four sides.
3. Install professional grade insulation around the entry door.
4. Depressurize the building with a blower door fan assembly to locate primary leakage sites and use appropriate foam sealant (fire stop or other) to seal gaps and cracks between materials.

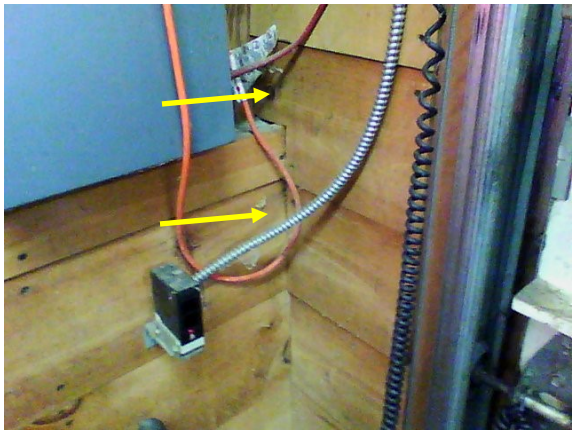
Note dirt on fiberglass as it functions as an air filter more than as insulation.

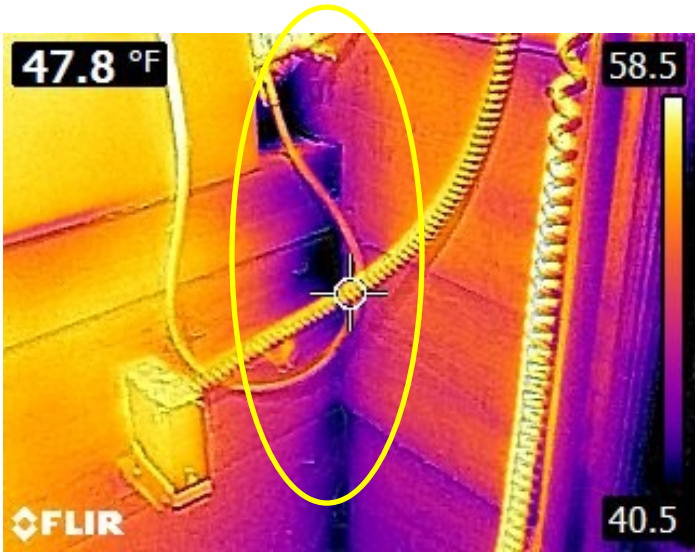
Thermographic or infra red (IR) images depict differences in surface temperatures. Darker colors indicates cooler surfaces and, in the winter, more rapid heat loss to the outside. Streaks or dark "blobs" typically indicate cold air leakage.

Air Leakage Sites









Existing Air Infiltration

Outside Air Data		
	Winter	
Infiltration Specified:	0.590	AC/hr
	135	CFM
Infiltration Actual:	0.590	AC/hr
Building Volume:	X 13,728*	Cu.ft.
	8,100	Cu.ft./hr
	X 0.0167	
Total Building Infiltration:	135	CFM
Total Building Ventilation:	0	CFM

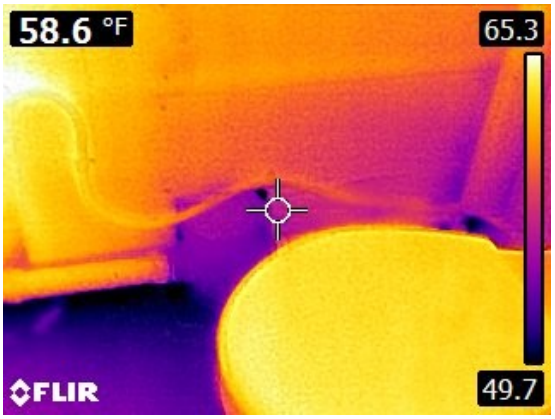
*Indicated volume is based on custom building volume.

Air Infiltration After Air Sealing

	Winter	
Infiltration Specified:	0.240	AC/hr
	55	CFM
Infiltration Actual:	0.240	AC/hr
Building Volume:	X 13,728*	Cu.ft.
	3,300	Cu.ft./hr
	X 0.0167	
Total Building Infiltration:	55	CFM
Total Building Ventilation:	0	CFM

*Indicated volume is based on custom building volume.

The rigid foam board on the interior of the concrete block provides a nearly continuous layer of insulation and air barrier and is a large factor in slowing the rate of heat transfer.



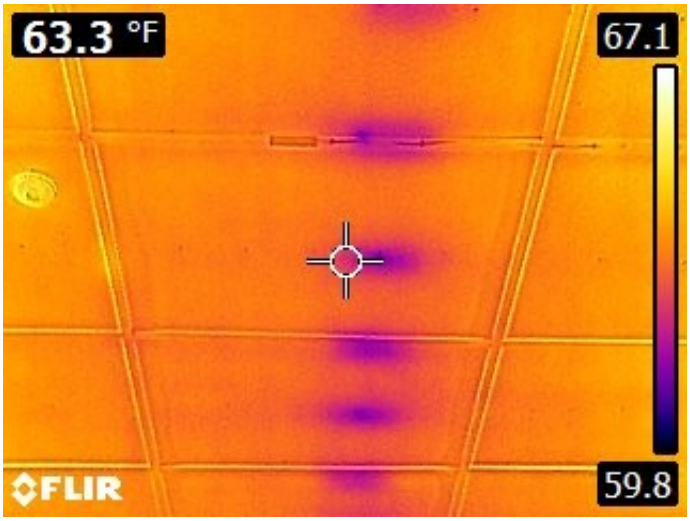
Ceiling Insulation

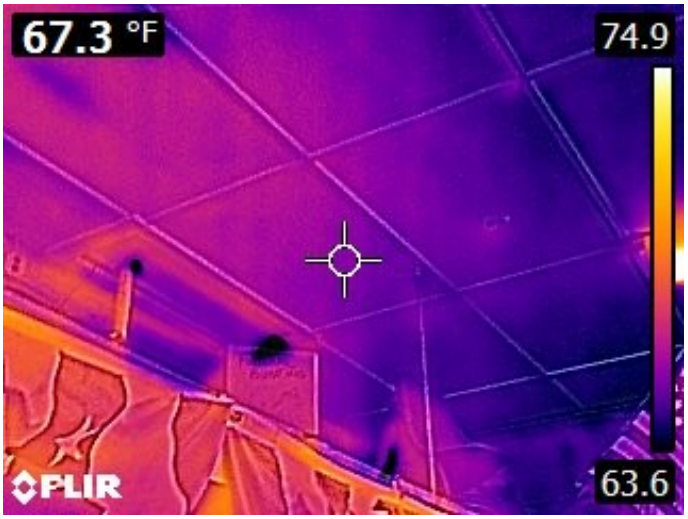
As was discussed with Craig on site, it has been common practice to improve ceiling insulation by blowing cellulose over fiberglass batts. This does increase the R-value, though without effective air sealing, it also misses opportunities for creating a truly effective R60 ceiling plane. The cost to retrofit this ceiling to a high performing plane would not be considered cost effective and today's energy prices.

It is mentioned here because the cost of propane may rise in the coming years and this would be a worthwhile next step to conserving heating energy and reducing loads. As heating loads are reduced—ie the amount of energy input to maintain desired indoor temperatures—the cost to install extremely efficient electric heat pumps, and their ability to provide heating to very low temperature without a back up system, are also reduced. Converting to heat pumps also allows installing solar PV panels to offset electric use over a year, thereby also reducing carbon emission.

At this time, the furnace is performing adequately and no change is advised.


63.9 °F
82.7
62.4
FLIR


63.3 °F
67.1
59.8
FLIR


67.3 °F
74.9
63.6
FLIR

Georges Mill EXISTING
HVAC Load Calculations

for

Town Of Sunapee

Sunapee, NH, 03782

Elite Software

RHVAC Residential HVAC Loads

Prepared By:

Margaret Dillon
S.E.E.D.S.

603-532-8979
Monday, June 28, 2021

Rhvac is an ACCA approved Manual J, D and S computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.

Project Report

General Project Information

Project Title:	Georges Mill EXISTING
Project Date:	Wednesday, June 23, 2021
Client Name:	Town Of Sunapee
Client City:	Sunapee, NH, 03782
Company Name:	S.E.E.D.S.
Company Representative:	Margaret Dillon
Company Phone:	603-532-8979
Company E-Mail Address:	mdillon@myfairpoint.net

Design Data

Reference City:		Concord AP, New Hampshire
Building Orientation:		Front door faces Northwest
Daily Temperature Range:		High
Latitude:	43	Degrees
Elevation:	342	ft.
Altitude Factor:	0.988	

	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	-2	-2.6	n/a	n/a	62	n/a
Summer:	87	70	43%	50%	75	19

Check Figures

Total Building Supply CFM:	447	CFM Per Square ft.:	0.388 *
Square ft. of Room Area:	1,153	Square ft. Per Ton:	0 **
Volume (ft³):	13,728***		

* Based on area of rooms being heated or cooled (whichever governs system) rather than entire floor area.
** Based on area of rooms being cooled.
***Indicated volume is based on custom building volume.

Building Loads

Total Heating Required Including Ventilation Air:	34,015	Btuh	34.015	MBH

Notes

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Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads according to the manufacturer's performance data at your design conditions.

Miscellaneous Report

System 1 Existing FHA Input Data	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	-2	-2.6	80%	n/a	62	n/a
Summer:	87	70	43%	50%	75	18.65

Duct Sizing Inputs

	Main Trunk		Runouts	
Calculate:	No		No	
Use Schedule:	No		No	
Roughness Factor:	0.00300		0.01000	
Pressure Drop:	0.1000	in.wg./100 ft.	0.1000	in.wg./100 ft.
Minimum Velocity:	0	ft./min	0	ft./min
Maximum Velocity:	900	ft./min	750	ft./min
Minimum Height:	0	in.	0	in.
Maximum Height:	0	in.	0	in.

Outside Air Data

	Winter		Summer	
Infiltration Specified:	0.590	AC/hr	0.590	AC/hr
	135	CFM	135	CFM
Infiltration Actual:	0.590	AC/hr	0.590	AC/hr
Building Volume:	X 13,728*	Cu.ft.	X 13,728*	Cu.ft.
	8,100	Cu.ft./hr	8,100	Cu.ft./hr
	X 0.0167		X 0.0167	
Total Building Infiltration:	135	CFM	135	CFM
Total Building Ventilation:	0	CFM	0	CFM

*Indicated volume is based on custom building volume.

---System 1---

Infiltration & Ventilation Sensible Gain Multiplier: 13.04 = (1.10 X 0.988 X 12.00 Summer Temp. Difference)
Infiltration & Ventilation Latent Gain Multiplier: 12.52 = (0.68 X 0.988 X 18.65 Grains Difference)
Infiltration & Ventilation Sensible Loss Multiplier: 69.53 = (1.10 X 0.988 X 64.00 Winter Temp. Difference)
Winter Infiltration Specified: 0.590 AC/hr (135 CFM)
Summer Infiltration Specified: 0.590 AC/hr (135 CFM)

Load Preview Report

Scope	Net Ton	ft.²/Ton	Area	Sen Gain	Lat Gain	Net Gain	Sen Loss	Sys Htg CFM	Sys Clg CFM	Sys Act CFM	Duct Size
Building	0.00	0	1,153	0	0	0	34,015	447	0	447	
System 1	0.00	0	1,153	0	0	0	34,015	447	0	447	0*
Zone 1			1,153	0	0	0	34,015	447	0	447	
1-Georges Mill Fire Station			1,153	0	0	0	34,015	447	0	447	5--0*

Total Building Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
Brosco: Glazing-Brosco windows, U-value 0.35, SHGC 0.4	18	402	0	0	0
Existing: Door-Overhead Door, U-value 0.5	220	7,040	0	0	0
Interior XPS: Wall-Block, Custom, Concrete block with interior XPS and wood planks , U-value 0.08	1449.2	7,419	0	0	0
16BR-19-ml: Roof/Ceiling-Under Attic with Insulation on Attic Floor (also use for Knee Walls and Partition Ceilings), unvented attic with radiant barrier, R-19 insulation, light metal, U-value 0.049	1100	3,450	0	0	0
Poor Areas: Roof/Ceiling-Under Attic with Insulation on Attic Floor (also use for Knee Walls and Partition Ceilings), Custom, six inch fg ineffective, U-value 0.16	44	451	0	0	0
22A-pl: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, light dry soil, U-value 0.65	141	5,866	0	0	0
Subtotals for structure:		24,628	0	0	0
People:	0		0	0	0
Equipment:			0	0	0
Lighting:	0			0	0
Ductwork:		0	0	0	0
Infiltration: Winter CFM: 135, Summer CFM: 135		9,387	0	0	0
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
Total Building Load Totals:		34,015	0	0	0

Check Figures

Total Building Supply CFM:	447	CFM Per Square ft.:	0.388 *
Square ft. of Room Area:	1,153	Square ft. Per Ton:	0 **
Volume (ft³):	13,728***		

* Based on area of rooms being heated or cooled (whichever governs system) rather than entire floor area.
** Based on area of rooms being cooled.
***Indicated volume is based on custom building volume.

Building Loads

Total Heating Required Including Ventilation Air: 34,015 Btuh 34.015 MBH

Notes

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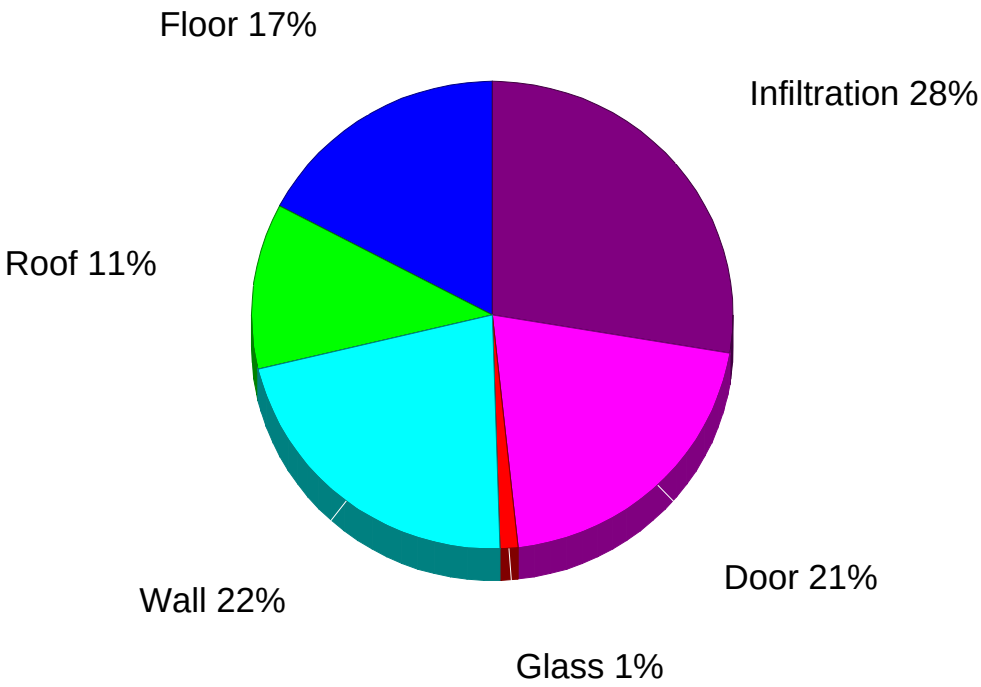
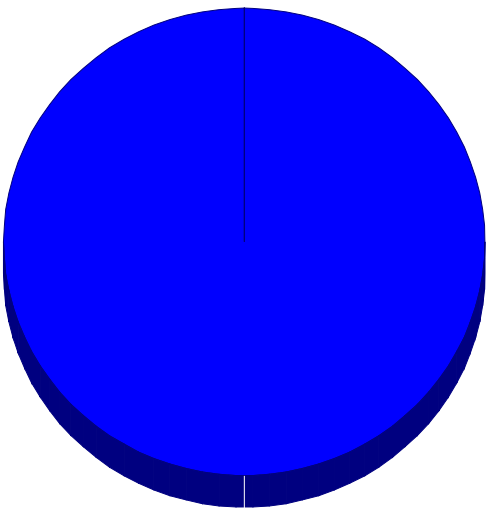
Building Pie Chart





100.0%

Detailed Room Loads - Room 1 - Georges Mill Fire Station

General

Calculation Mode:	Htg. only		Occurrences:	1	
Room Length:	44.0	ft.	System Number:	1	
Room Width:	26.2	ft.	Zone Number:	1	
Area:	1,152.8	sq.ft.	Supply Air:	447	CFM
Ceiling Height:	12.0	ft.	Supply Air Changes:	1.9	AC/hr
Volume:	13,728**	cu.ft.	Req. Vent. Clg:	0	CFM
Number of Registers:	5		Actual Winter Vent.:	0	CFM
Runout Air:	0	CFM	Percent of Supply.:	0	%
			Actual Summer Vent.:	0	CFM
			Percent of Supply:	0	%
			Actual Winter Infil.:	135	CFM
			Actual Summer Infil.:	0	CFM

**Indicated volume is based on custom building volume.

Item Description	Area Quantity	-U- Value	Htg HTM	Sen Loss	Clg HTM	Lat Gain	Sen Gain
NW-Wall-Interior XPS 44 X 12	519	0.080	5.1	2,657	0.0	0	0
NE-Wall-Interior XPS 26.3 X 12	95.6	0.080	5.1	489	0.0	0	0
SW-Wall-Interior XPS 44 X 12	519	0.080	5.1	2,657	0.0	0	0
SE-Wall-Interior XPS 26.3 X 12	315.6	0.080	5.1	1,616	0.0	0	0
NE-Door-Existing 20 X 11	220	0.500	32.0	7,040	0.0	0	0
NW-Gls-Brosco shgc-0.4 0%S (3)	9	0.350	22.4	201	0.0	0	0
SW-Gls-Brosco shgc-0.4 0%S (3)	9	0.350	22.4	201	0.0	0	0
UP-Ceil-16BR-19 44 X 25	1100	0.049	3.1	3,450	0.0	0	0
UP-Ceil-Poor Areas 44 X 1	44	0.160	10.2	451	0.0	0	0
Floor-22A-pl 141 ft..Per.	141	0.650	41.6	5,866	0.0	0	0
Subtotals for Structure:				24,628		0	0
Infil.: Win.: 135.0, Sum.: 0.0	1,687		5.564	9,387	0.000	0	0
Room Totals:				34,015		0	0

Miscellaneous Report

System 1 Existing FHA Input Data	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	-2	-2.6	80%	n/a	62	n/a
Summer:	87	70	43%	50%	75	18.65

Duct Sizing Inputs

	Main Trunk		Runouts	
Calculate:	No		No	
Use Schedule:	No		No	
Roughness Factor:	0.00300		0.01000	
Pressure Drop:	0.1000	in.wg./100 ft.	0.1000	in.wg./100 ft.
Minimum Velocity:	0	ft./min	0	ft./min
Maximum Velocity:	900	ft./min	750	ft./min
Minimum Height:	0	in.	0	in.
Maximum Height:	0	in.	0	in.

Outside Air Data

	Winter		Summer	
Infiltration Specified:	0.240	AC/hr	0.240	AC/hr
	55	CFM	55	CFM
Infiltration Actual:	0.240	AC/hr	0.240	AC/hr
Building Volume:	X 13,728*	Cu.ft.	X 13,728*	Cu.ft.
	3,300	Cu.ft./hr	3,300	Cu.ft./hr
	X 0.0167		X 0.0167	
Total Building Infiltration:	55	CFM	55	CFM
Total Building Ventilation:	0	CFM	0	CFM

*Indicated volume is based on custom building volume.

---System 1---

Infiltration & Ventilation Sensible Gain Multiplier:	13.04	=	(1.10 X 0.988 X 12.00 Summer Temp. Difference)
Infiltration & Ventilation Latent Gain Multiplier:	12.52	=	(0.68 X 0.988 X 18.65 Grains Difference)
Infiltration & Ventilation Sensible Loss Multiplier:	69.53	=	(1.10 X 0.988 X 64.00 Winter Temp. Difference)

Winter Infiltration Specified: 0.240 AC/hr (55 CFM)
Summer Infiltration Specified: 0.240 AC/hr (55 CFM)

Total Building Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
Brosco: Glazing-Brosco windows, U-value 0.35, SHGC 0.4	18	402	0	0	0
Existing: Door-Overhead Door, U-value 0.5	220	7,040	0	0	0
Interior XPS: Wall-Block, Custom, Concrete block with interior XPS and wood planks , U-value 0.08	1449.2	7,419	0	0	0
16BR-19-ml: Roof/Ceiling-Under Attic with Insulation on Attic Floor (also use for Knee Walls and Partition Ceilings), unvented attic with radiant barrier, R-19 insulation, light metal, U-value 0.049	1100	3,450	0	0	0
Poor Areas: Roof/Ceiling-Under Attic with Insulation on Attic Floor (also use for Knee Walls and Partition Ceilings), Custom, six inch fg ineffective, U-value 0.16	44	451	0	0	0
22A-pl: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, light dry soil, U-value 0.65	141	5,866	0	0	0
Subtotals for structure:		24,628	0	0	0
People:	0		0	0	0
Equipment:			0	0	0
Lighting:	0			0	0
Ductwork:		0	0	0	0
Infiltration: Winter CFM: 55, Summer CFM: 55		3,824	0	0	0
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
Total Building Load Totals:		28,452	0	0	0

Check Figures

Total Building Supply CFM:	374	CFM Per Square ft.:	0.325	*
Square ft. of Room Area:	1,153	Square ft. Per Ton:	0	**
Volume (ft³):	13,728***			

* Based on area of rooms being heated or cooled (whichever governs system) rather than entire floor area.
** Based on area of rooms being cooled.
***Indicated volume is based on custom building volume.

Building Loads

Total Heating Required Including Ventilation Air: 28,452 Btuh 28.452 MBH

Notes

Rhvac is an ACCA approved Manual J, D and S computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads according to the manufacturer's performance data at your design conditions.

Georges Mill Fire Station
Energy Cost Analysis

for

Town Of Sunapee

Sunapee, NH, 03782

Elite Software
ENERGY AUDIT
Residential and Light Commercial Energy Analysis

Prepared By:

Margaret Dillon
S.E.E.D.S.

603-532-8979
Friday, June 25, 2021

Project Information

Project Title:	Georges Mill Fire Station	Company Name:	S.E.E.D.S.
Designed By:		Company Rep.:	Margaret Dillon
Project Date:	Thursday, June 24, 2021	Company Address:	
Project Comment:		Company City:	
Client Name:	Town Of Sunapee	Company Phone:	603-532-8979
Client Address:		Company Fax:	
Client City:	Sunapee, NH, 03782	Company Comment:	
Client Phone:			
Client Fax:			
Client Comment:			

Cooling Equipment — System 1

Model Type:	Standard Air Conditioner
Model Number:	
Capacity:	0 Btuh
Efficiency:	0

Heating Equipment — System 1

Model Type:	Propane Furnace
Model Number:	
Capacity:	95,000 Btuh
Efficiency:	95 AFUE
System Description:	Existing FHA

Cooling Equipment — System 2

Model Type:	Standard Air Conditioner
Model Number:	
Capacity:	0 Btuh
Efficiency:	0

Heating Equipment — System 2

Model Type:	Propane Furnace
Model Number:	
Capacity:	95,000 Btuh
Efficiency:	95 AFUE
System Description:	After Air Sealing

Project Summary

General Project Information

Project Title:	Georges Mill Fire Station	Company Name:	S.E.E.D.S.
Project Date:	Thursday, June 24, 2021	Company Rep:	Margaret Dillon
Client Name:	Town Of Sunapee	Company Phone:	603-532-8979
Client City:	Sunapee, NH, 03782	Company E-Mail Address:	mdillon@myfairpoint.net

Design Data

Building Area:	1,153 sq.ft.		
People:	0	Heating Load:	38,111 Btuh
Occupancy:	0	Loads Adj. Factor:	0.47
		AC On Temp.:	0 °F
Actual City:	Concord AP, New Hampshire		
Weather Ref. City:	Concord AP, New Hampshire		
Summer Outdoor:	87 °F	Winter Outdoor:	-2 °F
Summer Indoor:	75 °F	Winter Indoor:	62 °F
Cooling Hours:	0	Degree Days:	7,000

Annual Operating Cost Estimate

System Description	Fuel Rates Set	Total Heating Cost	Total Cooling Cost	Annual Service Charges	Total Oper. Cost	Average Monthly Cost
Existing FHA	1	$1,141	$0	$0	$1,141	$95
After Air Sealing	1	$957	$0	$0	$957	$80