

TOWN OF DORSET

MUNICIPAL OFFICE
112 MAD TOM ROAD
P.O. BOX 715
EAST DORSET, VT 05253-0715

Telephone (802) 362-4671
FAX (802) 362-5156

RECEIVED

January 6th 2009

WMD

Don Einhorn
Department of Environmental Conservation
103 South Main Street, West Office Building
Waterbury, VT 05671

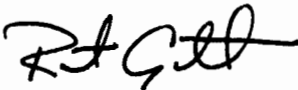
Re: Vermont Community Climate Change Grant Application

I have enclosed the Town of Dorset's community climate change grant application for review. I am hopeful you will approve this grant and award funds in the amount of \$3,960.

Dorset has illustrated its commitment to energy conservation by investing in updates that were recommended after a energy audit of the town's physical plants. Some portions of the project were completed, but due to a lack of funding other portions of the project were not addressed. The problems that were not solved have been mapped out in this proposal. The town has set aside some funds for this project, and with the acceptance of this application we will be able to take a large step in reducing our energy footprint. Any financial assistance the Town of Dorset receives through this grant process will be greatly appreciated.

I would like to thank you, in advance, for considering our application for those funds that have been set aside for these endeavors. This promises to be a purposeful and worthwhile effort.

Very truly yours,



Robert T. Gaiotti
Town Manager

Encl: Climate Change Grant Application

Cc: Selectboard/Energy Committee

**Vermont Community
Climate Change Grant Program
Application**

A. Applicant Information and Project Summary

1. *"Bringing Efficiency to Town Hall"*
2. Town of Dorset
112 Mad Tom Rd
East Dorset, VT
05253
3. Authorized Contact:
Town Manager:
Rob Gaiotti
802-362-4571
townmanager@gmail.com
4. The project will take place at the Dorset Town Office building, 112 Mad Tom Rd, East Dorset, VT
5. In 2007-2008 the Town of Dorset and the Dorset Energy Committee set forth to bring energy efficiency to the forefront of the community. The town embarked on an energy audit of its physical plants. Upon completion of the audit, the town decided to pay for a retrofitting of lights, and insulating of the building. The project never reached completion, as the funds available were limited. With the use of this grant, the town hopes to finish the project and hold the town office building up as a model of energy consciousness.

B. Project Work Plan and Budget

1. Work Plan:
The main objective of this project will be to assure that the town office building is properly insulated. Over the past few budget seasons the town had (like most) been spending a lot of money to heat the building. Upon undergoing an energy audit, the town found out the building had significant air leak problems. In fact the leaks totaled 4612 CFM 50, the equivalent to having a 20"x 36" hole in the building. The work to be completed is:

1. Air sealing and insulating half of the attic (first half has been finished)
Air seal around the chimney, seal wire and plumbing openings (12 hours)
2. Add blue board insulation to vertical knee walls approx 400 sq feet to be covered, add eight inches of cellulose to attic slanted ceiling space (14 hours)
3. Go through wall in west office and blue board and insulate walls and ceilings of lower rooms, and fix wall (22-32)

The estimated amount of hours required to complete the project is 48-60 hours

2. Oversight: Rob Gaiotti
Town Manager
802-362-4571

The oversight portion of the project will allocate access to the working space, and regulate the hours available for work. The main task will be to assure the projected timeline and budget is adhered to by the outside contractor. As stated in the work plan, the project will be broken into sections, with estimated hours to be spent on each portion. Because funding will be limited the subcontracting entity will report to the Town Manager at the beginning and end of each day worked on the project. This will allow the project to be managed efficiently while adhering to the grant budget.

Implementation personnel contact info:

Energy Wise Homes
Ted Taylor
148 Village St.
East Dorset, VT 05253
877-866-1116
info@energy-wise-homes.com

3.
a. Budget Table:

	Grant Share	Match Share	Total Cost
Personnel	\$2448	\$272	\$2720
Materials	\$1512	\$168	\$1680
Equipment	included in materials		
Other	N/A		
Total Budget	\$3960	\$440	\$4400

- b. Budget Narrative:

The main costs of the project can be broken down into personnel (labor) and materials. The sub-contracting entity will provide use of all equipment; any fees associated with equipment are

included in the labor estimation. As illustrated in the budget table the town is prepared to cover 11% of the total project cost. A copy of the estimate is attached.

C. Project Review Criteria

1. Measurable reductions in energy consumption and/or greenhouse gas emissions-

Insulation will be the main focus of the project. The town office building is an older building that does not contain energy well, making it expensive to heat and cool. By placing a general coat of cellulose insulation and confining leak points with blue board the town will consume less energy (fuel oil for heating, and electricity for cooling). This project will serve to curb consumption which is a responsible decision for the environment; it will also cut spending which is a responsible decision for the taxpayer. Based on the figures of the town energy audit, this insulation will save the town up to 15% on heating costs. Last year the town spent nearly \$2500 on heating this building, the assistance of this grant will help us save nearly \$400 /year in heating costs.

2. Transferability-

This project will help Dorset set the standard for creative energy thinking in a municipal office space. As depicted in the work plan and attached photos, the building is architecturally unique, making access to energy weak points difficult. Through brainstorming and inventiveness the town and the subcontractor have found solutions that will assure the work is completed in the most competent and efficient manner possible. All the work will be documented and saved to justify the town expenses on the project, and to give other municipalities a quantified reference point to build from. The hope behind recording each stage of the project is to allow it to be used as a guideline for future projects.

3. Viability of Project Approach-

The project approach is viable because it has been well planned and has sought out public input on many levels. This will assist the town in gaining a high quality and cost effective result, while raising public awareness of energy costs and consumption. The town is fortunate enough to have a group of volunteers on the energy committee that have laid the foundation for the changes in the physical plant, culminating with the work to be done through this grant. The project will be highly effective, because we have had the time to determine our objective and map out the work to achieve those goals. Attached, are pictures and information that speaks to the quality of work that will be conducted. This project is also great because it will help to build political capital that will show the community that the town is on the forefront of energy conservation. Moreover, future energy projects will be aided because of this assignment.

4. Cost Effectiveness-

Materials will be purchased at cost, and installed by experienced professionals. The subcontractor will be given a timeline, and will have to check in with the oversight portion of the project. The subcontractor understands that the work will be mostly funded through a grant, and that they will have to work within the guidelines of the budget table. The main materials (air sealing, blown cellulose and blue board) have a higher insulation rating, and a longer lifespan than

traditional insulation and fiberglass. This will assure that we stretch our energy dollar to the fullest extent.

5. Public Education and Involvement-

The energy committee holds a station at town meeting each year; they update the community on things that have been accomplished, and energy issues that need to be addressed. They have a very proactive approach that has helped to reach out to the public and make them more energy conscious. From showing families how to winterize their houses, to showing each person what an energy footprint is, and how they can reduce it. The public will be notified upon the approval of this grant, and they will be updated when the project has been finished. This will help substantiate the need for a town energy committee, and allow them to continue their good works into the future.

D. Attachments

1. The Dorset Selectboard has endorsed this project via the attached resolution

3. Pictures of the working zones and a portion of the energy audit have been attached; the dark colors in the energy audit pictures denote cold air weak points. Also attached is an estimate of project costs from the sub-contracting company.

E. Applicant Presentation and Signature

See attached



APPLICATION
ATTACHED.

VERMONT COMMUNITY CLIMATE CHANGE GRANT PROGRAM APPLICATION

Applications will be evaluated on the project's ability to successfully address the five review criteria; the qualifications of the project personnel; the clarity of the project plan; and a sound and reasonable budget. The project review criteria and the general terms and conditions of the grant are described in greater detail in the Climate Change Grant Program guidance. All applicants are responsible for reading the guidance and, if awarded a grant, complying with the general terms and conditions.

Please respond to all sections below and attach all documentation that you are relying on to support your grant application.

Due Dates:

February 2, 2009 (Funding Round One)

April 1, 2009 (Funding Round Two)

Contact and Mailing Address:

Don Einhorn

Department of Environmental Conservation

103 South Main Street, West Office Building

Waterbury, VT 05671

802-241-1093

Donald.Einhorn@state.vt.us

A. APPLICANT INFORMATION AND PROJECT SUMMARY

SEE ATTACHED

1. Project Title:
2. Applicant Name (include all partners):
3. Primary Applicant Address:

3. Authorized Contact Name, Phone and Email:

4. Project Location:

5. Brief Project Description (fifty words or less):

B. PROJECT WORK PLAN AND BUDGET

1. Describe the project work plan. Include in the work plan, your plan for project oversight and quality assurance. Identify the number of hours dedicated to each task and identify who will complete the tasks. Provide a project timeline. If applicable, identify all permitting requirements, include permitting in your project timeline, and indicate which permits have already been obtained.

2. Provide the name, title and contact information for project implementation personnel. Describe their role and qualifications. Identify all subcontractors that will be involved in this project. Provide the name, title and contact information for primary subcontractor personnel and describe their role and qualifications.

3. Complete the project budget table and provide a narrative description of the project budget. The budget must include a minimum 10% cash match. Cash spent before the start of the contractual grant period cannot be used as a cash match. Cash matches of greater than 10% are encouraged. In-kind services are not eligible as a match.

a. Budget Table:

	Grant Share	Match Share	Total Cost
Personnel			
Materials			
Equipment			
Other			
Total Budget			

D. ATTACHMENTS

1. For municipal entities, attach a resolution of the governing body authorizing the application.
2. For non-profit entities, attach proof of non-profit status.
3. In the space below, list all other attachments that are being submitted in support of this application.

E. APPLICANT REPRESENTATIONS AND SIGNATURE

The applicant(s), by signing and submitting this application, make(s) the following representations with the understanding that the Department of Environmental Conservation will rely on these representations for the purpose of evaluating this application. The applicant(s) understand(s) and acknowledge(s) that should any of these representations be untrue, the Department may rescind any award of assistance and, in the Department's sole discretion, pursue any other appropriate remedy or relief:

1. All information contained in this application, including attachments, is true and complete to the best of the applicant's knowledge and belief;
2. The applicant(s) has read and understands the grant background and guidance and grant terms and conditions and agrees to comply with them;
3. The primary applicant is a Vermont municipal entity or a non-profit organization, and if a non-profit, is in compliance with all requirements for maintaining its non-profit status; and
4. The applicant(s) will be ready to proceed with the project within 60 days of notification of the award.

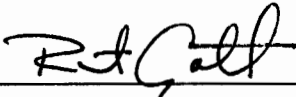
NAME OF PRIMARY APPLICANT:

TOWN OF DORSET

NAME OF PARTNER:

AUTHORIZED SIGNATURES

PRIMARY APPLICANT:



PARTNER:

TOWN OF DORSET

MUNICIPAL OFFICES
112 MAD TOM ROAD
P.O. BOX 715
EAST DORSET, VT 05253-0715

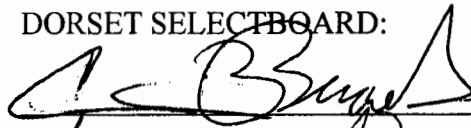
Telephone (802) 362-4571
FAX (802) 362-5156

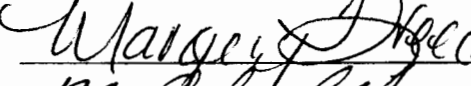
January 5th 2009

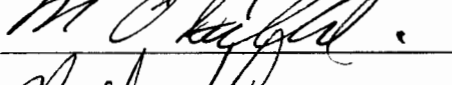
ANR Grant Application

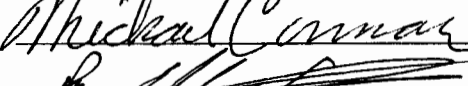
The Town of Dorset and the Dorset Energy Committee will be composing a grant application for funding offered by the Vermont Agency of Natural Resources. The focus of the grant will be to procure funds to complete the energy efficiency updates at the Town Offices. If the grant is approved the town will need to fund 10% of the total projected costs. The estimated cost for the project is \$5,000, in this case the town's share will be \$500. The project will help the town save on future energy costs, and promote energy consciousness to the public. This resolution will serve to authorize the town manager to submit an application, and manage the grant work.


DORSET SELECTBOARD:


Chris Brooks, Chair


Margery Freed, Vice Chair


Michael Oltedal


Michael Connors


Brad Tyler

Energy Wise Homes
 148 Village St
 East Dorset
 Vermont 05253
 info@energy-wise-homes.com



877-866-1116



DATE:

To: Dorset Town Hall
 Mad Tom Rd
 Dorset Vermont 05253

Phone:
Estimated By:
Start Date:
Location:
Job Phone:

TERMS: 1/2 down and 1/2 payment on completion

JOB DESCRIPTION

Air seal and insulate aprox half of the attic. Air seal around chimney. Wires and plumbing openings. Add blue board insulation to vertical knee walls. 400 Sq feet. Add 8 inches of cellulose to slanted ceiling and flat ceiling. 1000 Sq feet

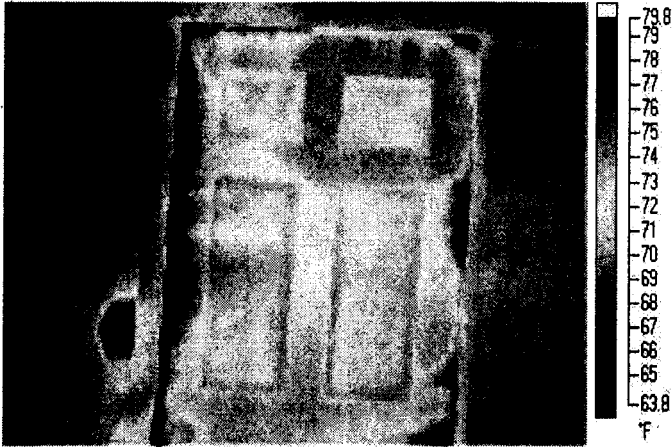
Go through wall in west office and blue board and insulate walls and ceiling of lower rooms. Fix hole.

ITEMIZED ESTIMATE

Same as above	MATERIALS	\$ 1680.00
	LABOR	\$ 2720.00
Aprox man hours	48 to 60 hours	
TOTAL ESTIMATED JOB COST		\$ 4400.00

This is an estimate only, not a contract for services. This estimate is for completing the job as described above. It is based on our evaluation and does not include material price increases or additional labor and materials which may be required should unforeseen problems arise after the work has started.

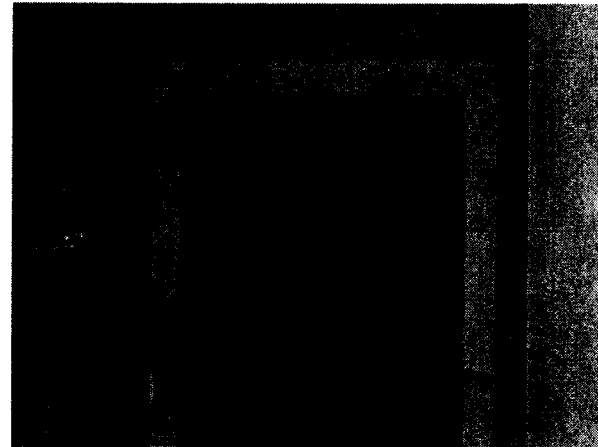
COLD AIR IS DENOTED VIA
DARK COLORS



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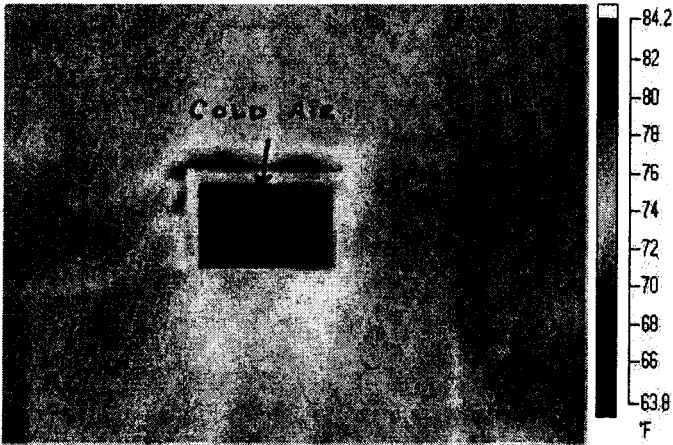
6/30/2007 5:10:32 AM

Door to attic: This interior door should be replaced with an insulated door or sprayed with foam to insulate on the exterior side. There is no weather-stripping.



Visible Light Reference

3



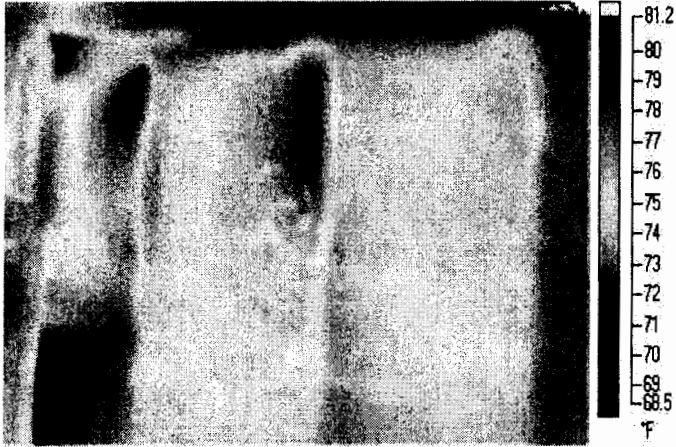
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6/30/2007 5:12:02 AM

Second floor knee-walls: There is a space between the interior wall and exterior wall allowing the cold air to wash through the insulation. An insulation contractor should look at this to make a suggestion on how to properly insulate and stop air flow.



Visible Light Reference



IR20070630_13796.is2

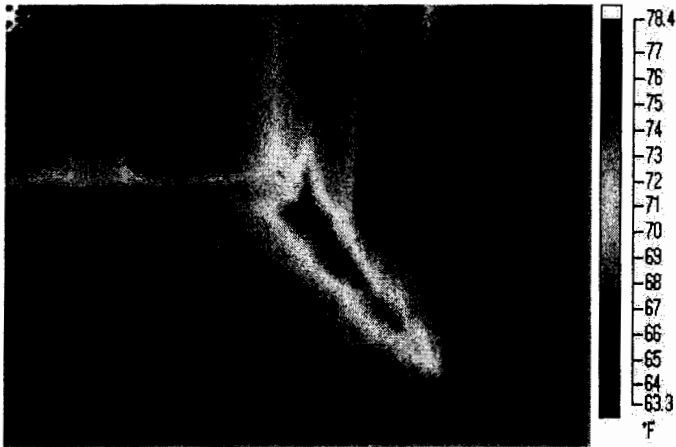
6/30/2007 5:02:58 AM

Copy room: This is the interior wall between the copy room and the safe. Cold air is falling into the interior wall. (Note Jim Hand's thermal hand prints on the wall!!)



Visible Light Reference

#3



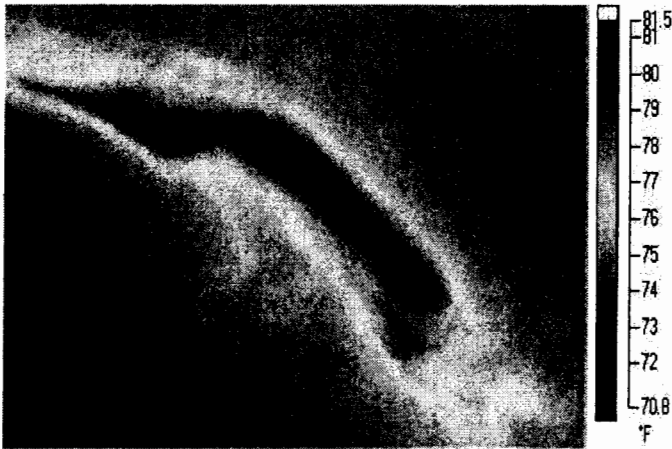
IR20070630_13797.is2

6/30/2007 5:08:28 AM

Stairs: This will be difficult to remedy: cold air is moving through the wall to the bottom of the stairs.



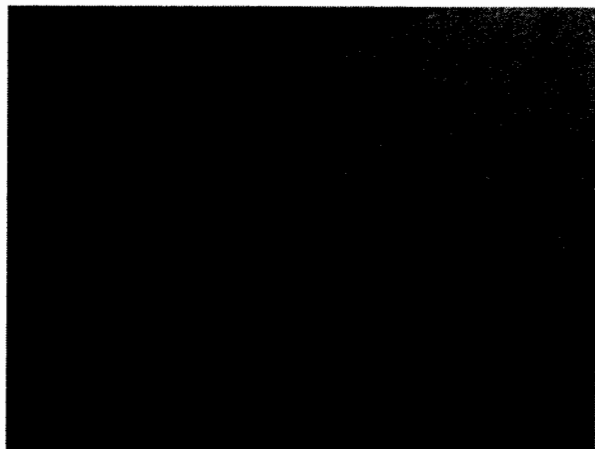
Visible Light Reference



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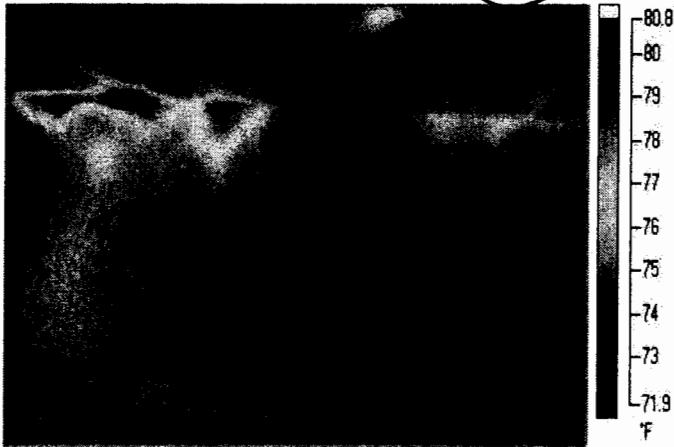
6/30/2007 5:12:55 AM

Second floor slopes: Here you can see that cold air is blowing into the end of the insulation and finding a path to the back side of the sheetrock.



Visible Light Reference

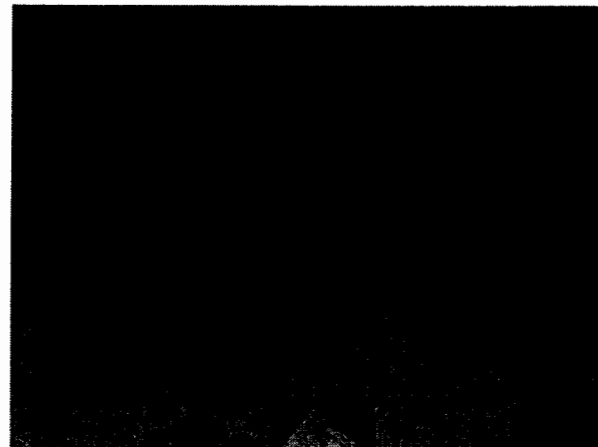
#2



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Lister's Office: Another interior wall with cold air falling into it.



Visible Light Reference

Computers: Power Management features, standard in Windows and Macintosh operating systems, place inactive monitors and computers (CPU, hard drive, etc.) into a low-power sleep mode. A simple touch of the mouse or keyboard "wakes" the computer and monitor in seconds. You have 8 computers and 4 printers.

Having computers sleep when not in use will save electricity by both using less and by generating less heat (that needs to be cooled by the AC.)

- **Monitor power management (MPM)** can save \$10 to \$30 per monitor annually by placing your inactive monitors into a low-power sleep mode. "screen-savers" are not needed with LCD monitors and keep the computer and monitor powered up.
 - **Computer power management (CPM)** places inactive computers (CPU, hard drive, etc.) into a low-power sleep mode, which can save \$15 to \$45 per desktop computer annually.
 - **LCD monitors use less power than CRTs.** When buying a new system ask for an Energy Star listed LCD monitor.
8. **Water heating.** A switch or timer can be installed on the water heater, so it would only heat water when there is someone in the building to use it. With the current system, it would only take about 30 minutes from when it was switched on to heat a full tank of hot water. The tank should be wrapped with insulation and the inlet and outlet pipes insulated for at least 6 feet on each side of the water heater. If the tank is replaced, replace it with a smaller tank high efficiency tank. It may be possible to disconnect the lower element in the existing tank.

During the winter, it may be less expensive to heat water with a small indirect fired water heater. Further study should be done.

9. **Air-seal the building:** In some of the images, you will see a pattern that shows air blowing on a surface (see image to the right.) The camera reads surface temperature, so



you can go to the coldest (bluest) spot to find the source of the air-leak. In the case of the town hall, the leaks total 4612 CFM50. This is the equivalent of about 460 square inches of openings to the outside, or a hole 20 inches wide by two feet tall! Most are air leaks that would be easy to seal with caulk and foam. Reducing air leaks by 30% would save about \$360 in

heating fuel. It may be possible to reduce the leaks by 50%. I estimate the air-sealing would cost about \$1800. This investment will return about 20% annually, at current fuel prices. (Measure ID# 6)

Have the attic door sprayed with foam to increase insulation value to at least R-17.

Some of the doors need weather-stripping and others need to be adjusted to close against the weather-stripping. There are also some air leaks through trim that would be easy to caulk and foam seal. (Measure ID# 6)

Air-seal and insulate the band joists at the joint between the new and old part of the building: There is a lot of leakage through the area that is between the ceiling of the first floor and the floor of the second floor. The band joist is what the exterior of this area is called. Currently there is a serious air leak into this area which is allowing cold air to enter the core of the building. Interior ceilings and floors should be warm!

10. **Ventilation piping:** Piping for bathroom fans should be checked by the insulation contractor. All bath fans should be vented to the outside through the gable walls of the attic or straight out through the wall. They should be vented to the outside using smooth walled pipe, either plastic or metal. All joints should be secured and sealed using mastic or aluminum tape. All duct work should be buried in the insulation. Bathroom fans should never be vented into the soffit.
11. **Service the boiler:** The boiler is operating a 74.9% efficient. A service call and cleaning by your oil company will increase the efficiency to at least 83% which could save \$360 a year! Boilers should be serviced once a year.
12. **Install Cellulose insulation in the knee-walls and attic.** Currently there is fiberglass in places. The installation is not very effective and in some places missing all together. In some areas there are cavities between the insulation and the sheetrock. The insulation should be installed against the top of the sheetrock and without gaps. After air-sealing is complete, Cellulose should be installed in the knee-walls and the attic. Make sure you use a qualified insulator that comes with good references. Let them know that I will be back to inspect their work with an Infrared Camera. Request Cellulose treated with Boric Acid, as it is fireproof, recycled, non-toxic and mice do not like it! (Measure ID#)