



Property Inspection Report

42 School St Ext Isle La Motte VT 05463

INSPECTION PREPARED FOR: Cary Sandvig

INSPECTOR: Jeff Belrose

AGENT:

Year Built: 1998

Date of Inspection: 6/21/2023

Time of Inspection: 10:00 AM

Radon Testing

Mold & Mildew

360° Virtual Tours

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Belrose Home Inspection Services, LLC.

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Greetings! At your request, an inspection of the property listed was performed on the date and time listed on the cover. Belrose Home Inspection is pleased to submit the enclosed report. These reports are a professional opinion based upon a visual inspection of the components and systems of the home. Please understand that there are limitations to this inspection and very little historical information is provided in advance of the inspection. It is also important to note that we are generalists and not specialist. While we can reduce your risk in the purchase of a home, we cannot eliminate it, nor can we assume it. Even the most comprehensive inspection cannot be expected to reveal every condition you may consider significant to ownership. It is important to note that latent defects and conditions may be hidden behind walls and in ceilings that cannot be seen during the inspection. You may find these defects when you open the walls and ceiling for renovation. We cannot perform a destructive inspection that would reveal what is behind materials. We also cannot predict when a component will fail. Even a day after inspection. Most, if not all components of a home have a rate of failure that is not predictable. Disclaimer: Although the Inspector uses techniques such as probing and visual examination in an effort to determine the presence of wood decay in the logs of log structures, these techniques are not technically exhaustive and will not reveal the presence of wood decay hidden in inaccessible places, such as log cores and/or the intersections of log walls. For this reason, locating or identifying wood decay which is not readily visible or decay of logs in inaccessible areas of log homes lies beyond the scope of the General Home Inspection or Log Home Inspection. Wood decay weakens logs and can compromise their ability to support structural loads. The information provided in this report is solely for your use. Belrose Home Inspection Services will not release a copy of this report without your consent. If you have any further questions regarding this property, please feel free to contact us at any time. We offer free lifetime support of our inspections. It was a pleasure to work with you and we wish you the very best with this property and opportunity! Thank you for choosing Belrose Home Inspection Services for your home inspection.

Best regards,
Jeff Belrose

Terms of the Report

This report is the exclusive property of Belrose Home Inspection Services, LLC and the client whose name appears herewith. Use of the report by any unauthorized persons is strictly prohibited. The observations and opinions expressed within this report are those of Belrose Home Inspection Services and supersede any alleged verbal comments. We inspect all of the systems, components, and conditions described in accordance with the standards of the International Association of Certified Home Inspectors (INTERNACHI), and those we do not inspect are disclaimed in the Standards of Practice or in the Contract Agreement. However, some components that are inspected and found to be functional may not necessarily appear in the report. This is not a code inspection. Code is cited in the report as a courtesy only.

Important: Any areas or components of the home that could not be accessed due to safety or for any reason, were not inspected and are disclaimed in this report.

This would include any condition that was concealed or not reported by the current/previous owner. A home inspection is intended to assist in evaluation of the overall condition of the dwelling. The report is not intended to be a "check list" of items that need repair or general maintenance, it is designed to identify material defects or deficiencies that would have an adverse impact on the value of the real-property, or that involve an unreasonable risk to people on the property. This home inspection report will not reveal every condition that exists or ever could exist, but only those material defects that were observed on the day of the inspection. In accordance with the terms of the contract, the investigation and service recommendations that we make in this report should be completed

DURING YOUR INSPECTION CONTINGENCY PERIOD by qualified, licensed specialists, who may well identify additional defects or recommend some upgrades that could affect your evaluation of the property. By relying on this inspection report you have agreed to be bound by the terms, conditions and limitations as set forth in the CONTRACT AGREEMENT, which was presented to you at the time of the inspection or in an electronic mail attachment prior to the inspection. If you do not have a copy of the CONTRACT AGREEMENT please contact Belrose Home Inspection Services and a copy will be provided to you electronically. If you do not agree to be bound by this CONTRACT AGREEMENT in its entirety, you must contact Belrose Home Inspection Services immediately upon receipt of this completed report. In addition, all electronic and paper copies of the inspection report must be deleted and destroyed, and may not be used in whole or in part for consideration in a real estate transaction.

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Report Summary

This summary report is intended to emphasize conditions that might significantly affect your purchase consideration; that represent a safety hazard, that might require significant expense, or that require action of some type. It is not a complete list of home system deficiencies. No standard exists to provide a clear dividing line between what must be included in the summary, and what can be left in the body of the report. Because opinions about what is- and is not- important vary with individual perception, you should be sure to read the entire report.

Final Walk-Through: The walk through prior to closing is the time for the Client to review the property. Conditions can change between the time of a home inspection and the time of closing. Restrictions that existed during the inspection may have been removed for the walk through. Defects or problems that were not found during the home inspection may be discovered during the walk-through. The Client should be thorough during the walk through.

Any defect or problem discovered during the walk through should be reviewed with the owner/seller of the property prior to closing. It is important to note that any findings at the walk-through may be outside of the inspection period and may not be subject to negotiation. **Purchasing the property with a known defect or problem releases Belrose Home Inspection Services, LLC of all responsibility. The Client assumes responsibility for all known defects after settlement.**

The following are recommendations for the pre-closing walk through of your new house. Consider hiring a certified home inspector to assist you. FYI: Only you as the client should be performing the operation of any of the following. Please make sure that all plumbing is properly terminated and connected prior to doing this to prevent damage to the home. Individuals are responsible for any damage that occurs to the home during the final walk-through.

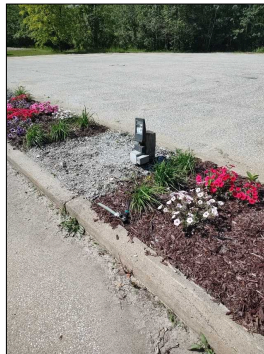
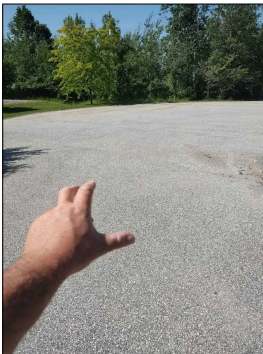
1. Check the heating and cooling system (**Make sure that you have had an inspection by a certified HVAC technician prior to the walk through**). Turn the thermostat to heat mode and turn the temperature setting up. Confirm that the heating system is running and making heat. Turn the thermostat to off and wait 20 minutes. Turn the thermostat to cool mode and turn the temperature setting down. Confirm the condenser is spinning and the system is making cool air. The cooling system should not be checked if the temperature is below 60 degrees. You should not operate a heat pump in the heating mode when it is over 75 degrees outside.
2. Operate all appliances.
3. Run water at all fixtures and flush toilets.
4. Operate all exterior doors, windows and locks.
5. Test smoke and carbon monoxide detectors.
6. Ask for all remote controls to any garage door openers, fans, gas fireplaces , etc.
7. Inspect areas that may have been restricted at the time of the inspection.
8. Ask seller questions about anything that was not covered during the home inspection.
9. Ask seller about prior infestation treatment and warranties that may be transferable.
10. Read seller's disclosure.
11. To assist in your walk through, you can download and print a free checklist at:

<https://www.nachi.org/final-walk-through-checklist.htm>

Grounds

Page 30 Item: 1	Driveway, Walkway, Flatwork Condition	<p>1.6. The parking lot lighting was sub-standard in comparison to similar parking lots and usage.</p> <p>1.7. The parking lot was missing directional markings designed to indicate the proper flow of traffic. Directional markings should be installed at proper locations to facilitate the safe flow of traffic.</p>
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		<p>1.8. In the parking lot, pedestrian crosswalks were not marked. For safety reasons, all pedestrian crosswalks should be marked to comply with applicable regulations or best practice.</p> <p>1.9. Lines and arrows marked on the parking lot pavement surface were severely worn or illegible in areas and should be remarked.</p> <p>1.10. Parking stalls were not designated. Parking spaces should be marked to comply with applicable regulations or best practice.</p> <p>1.11. Total parking spaces of up to 25 requires at least one handicapped space. The handicapped parking spaces must be located on the closest and shortest route from the parking lot to the entrance of the building entrance. If there is not one building entrance, then the handicapped spaces should be located closest to the pedestrian entrance. If your building has multiple entrances, the handicapped spaces should be equal to the entrances to the building. Recommend adding handicap parking as needed or necessary.</p>
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No established parking spaces Substandard parking lot lighting

Exterior Areas

<p>Page 35 Item: 1</p>	<p>Siding Condition</p>	<p>1.9. Loose siding noted . Recommend securing the siding as needed or necessary.</p> <p>1.10. Siding damage noted. Recommend repair or replacement as needed or necessary.</p> <p>1.11. Peeling paint observed.</p> <p>1.12. Gaps in vinyl siding noted where moisture can enter. Recommend repairing as needed or necessary.</p>
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Gaps in vinyl siding



Damaged siding



Loose siding



Damaged siding



Loose siding



Damaged siding

Page 36 Item: 2

Exterior Paint

2.4. Peeling paint observed, suggest scraping and painting as necessary.

<https://www.finehomebuilding.com/project-guides/painting/how-to-get-a-perfect-exterior-paint-job>

<https://www.finehomebuilding.com/project-guides/painting/10-tips-to-paint-like-a-pro>



Peeling paint



Peeling paint

Page 36 Item: 4

Doors

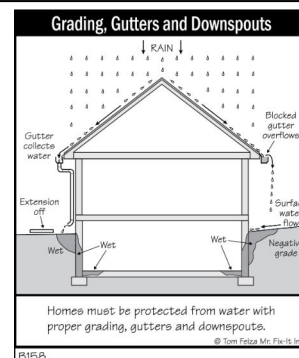
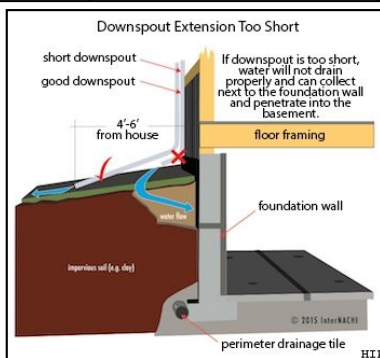
4.1. Damaged exterior door(s) noted. Recommend review for repair or replacement as needed or necessary.



Damaged door

Roof

<p>Page 42 Item: 3</p>	<p>Gutter</p>	<p>3.4. No gutters or downspouts. Full installation recommended to keep water away from structure. Water can weaken the foundation and deteriorate the siding. Be sure to install splashblocks or extensions to carry water away, and keep water from areas such as driveways or walks where it can be an ice hazard in winter.</p> <p>3.5. Make sure all downspouts are connected and routed to discharge away from the homes foundation (3-6 feet), this will reduce the potential for water to seep into the basement.</p> <p>3.6. Maintenance Tip: Keep gutters cleared of organic debris to prevent downspouts from being clogged causing overflow at gutters, ensure that all downspouts have extensions/splash blocks to carry water away from the foundation and ensure that sprinkler system does not spray siding or windows of house.</p>
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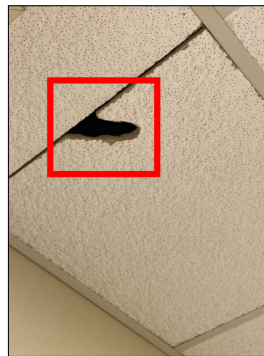
Attic

<p>Page 43 Item: 1</p>	<p>Chimney</p>	<p>1.7. Our chimney review is limited to visible accessible components only. Not all areas could be seen visibly, limiting the inspection. If further review is desired, we suggest review by a qualified professional prior to close. We recommend a certified chimney service contractor (preferably with a video scope) perform an inspection for a more comprehensive evaluation.</p> <p>Resources - http://www.csa.org/search</p> <p>The National Fire Protection Association has stated that an in-</p>
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		<p>depth Level 2 chimney inspection should be part of every sale or transfer of property with a wood-burning device.</p> <p>1.8. Recommend that the chimney be evaluated and cleaned prior to closing on this home and prior to each heating season by a qualified professional. Failure to do this could result in failure that could result in a house fire and secondary damage and/or costly repairs. A home inspector is not qualified to make a proper evaluation of a chimney and do not pass or fail this unit or system unless they are properly certified. You may want to contact Above the Rest Chimney Service. They can be reached at 802-888-1215.</p> <p>1.9. Level 2 Chimney Inspection recommended by a qualified chimney professional.</p>
Page 46 Item: 5	Access Condition	<p>5.3. Sealed attic access: The attic access did not open at the time of inspection (sealed). Sealed attics are not opened due to the damage that would be caused to the property. The attic could not be viewed.</p> <p>Upper attic</p>

Bathroom

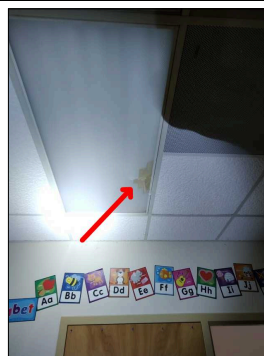
Page 54 Item: 17	Ceiling Condition	<p>17.3. Damaged areas of ceiling noted. Recommend repairing as needed or necessary.</p>
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Ceiling damage noted

Interior Areas

Page 56 Item: 2	Electrical	<p>2.4. Damaged/Missing light cover noted. Recommend installing cover.</p>
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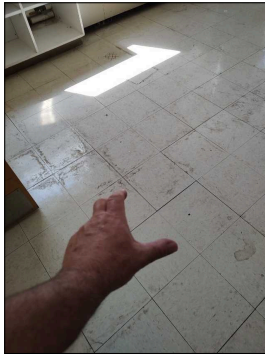


Damaged light cover

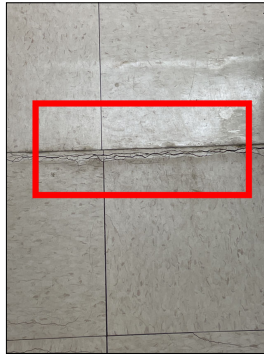
Page 56 Item: 3	Smoke Detectors	<p>3.6. Security system smoke detectors noted. Recommend</p>
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		<p>verifying with the security company that the smoke detectors are combination photoelectric and carbon monoxide detectors per Vermont state standards.</p> <p>https://firesafety.vermont.gov/sites/firesafety/files/files/Documents/dfs_codesheet_residential_smoke_alarms_matrix.pdf</p> <p>https://firesafety.vermont.gov/sites/firesafety/files/files/Documents/dfs_codesheet_co_matrix.pdf</p>
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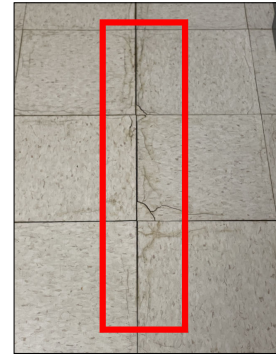
Page 58 Item: 6	Floor Condition	<p>6.3. Damaged floor noted. Recommend review for repair or replacement by a qualified professional as needed or necessary.</p> <p>6.4. The floor appeared to be affected by high levels of moisture. This would happen through vapor diffusion and capillary suction with moisture coming to the concrete from below. Recommend trying to manage moisture off the roof areas with gutters, while moving moisture away from the building.</p>
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Evidence of vapor diffusion and capillary action: moisture affecting the flooring



Damaged flooring noted

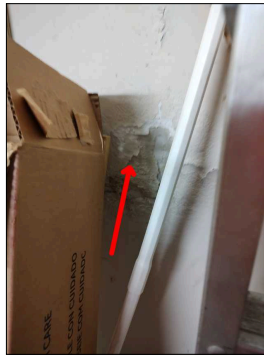


Damaged flooring noted



Damaged flooring noted

Page 60 Item: 7	Wall Condition	<p>7.11. Wall damage noted. Repair as needed or necessary.</p> <p>For more about repairing walls, please visit the following video link: https://www.youtube.com/watch?v=qbupCzSPW9o</p>
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Damaged wall

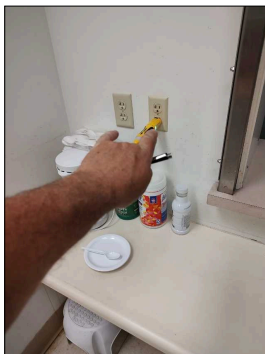
Kitchen

Page 64 Item: 3

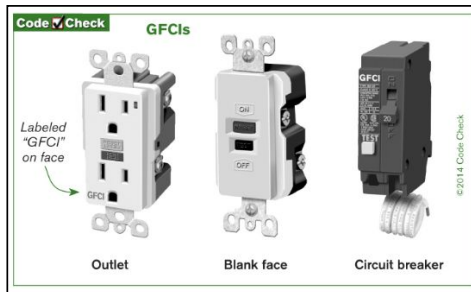
Electrical

3.4. No **GFCI** protection present, suggest installing GFCI protected receptacles for safety.(areas of the kitchen). From International Residential Code: Section E3902. E390 2.6 Kitchen receptacles: " 125-volt, single phase, 15 and 20 ampere receptacles that serve countertop surfaces shall have ground fault circuit interrupter protection for personnel."

3.5. Extension cords shall not be used as a substitute for permanent wiring. All extension cords shall be removed and/or replaced with adequately placed electrical outlets installed by a licensed electrician. If wiring new electrical outlets this work requires an electrical permit from the Division of Fire Safety and must be obtained BEFORE work may commence.NFPA 11.1.5.3.5 Extension cords and flexible cords shall not be affixed to structures, extend through walls, ceilings, floors, or under doors or floor coverings or be subject to environmental or physical damage. 1:11.1.7.6



Receptacle that needs to be GFCI protected



Receptacle that needs to be GFCI protected



Extension cord being used for permanent power

Page 66 Item: 4

Sinks

4.4. Faucet leaks at base. Recommend repairing as needed or necessary.

For more about sink and faucet replacement please visit the following video link:

<https://www.youtube.com/watch?v=OvUuoY4veRA>

Multiple sinks



No water from cold side of faucet



Water faucet leaking



Water faucet leaking at the base

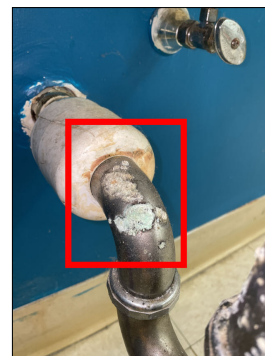
Page 67 Item: 9

Plumbing

9.2. Older style metal traps noted. Buyer is cautioned that these traps can leak at any time due to corrosion.



Corrosion on pipes



Corrosion on pipes

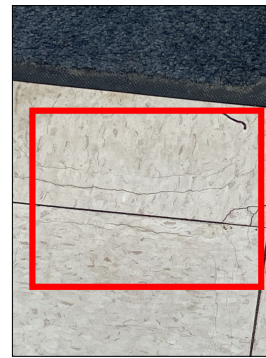
Page 71 Item: 17

Floor Condition

17.2. Damaged floor noted. Recommend review for repair or replacement by a qualified professional as needed or necessary.



Damaged flooring noted



Damaged flooring noted

Foundation

Page 75 Item: 5	Ventilation	5.1. Recommend adding a 70 pint, self pumping dehumidifier to manage humidity in the basement. For mor information about dehumidification, please go to the following link: http://www.finehomebuilding.com/how-to/departments/how-it-works/dehumidifiers.aspx
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Electrical

Page 80 Item: 2	Electrical Panel	2.12. Missing panel cover screws: The dead front cover was missing screws at the time of the inspection. The Inspector recommends that appropriate screws be installed to securely attach the dead front cover.
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Missing panel box screw noted

Heat/AC

Page 84 Item: 1	Heater Condition	<p>1.26. Caution: Attention! Important! This Home Inspection does not replace an HVAC inspection by a certified professional. Do not skip a certified HVAC inspection prior to purchasing this home! Make sure to have and HVAC inspection done yearly!</p> <p>1.27. Boiler/Heater: Last service date: Unknown. There are areas which cannot be seen without specialized equipment and training. One such area is the combustion chamber / heat exchanger where cold air blows across the "fire box", becoming the hot air that circulates throughout your home. During the life span of any boiler, this metal wall may develop a crack or a broken weld, allowing carbon monoxide to circulate throughout the home. This is why boiler/furnace specialists recommend a complete inspection prior to closing</p>
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on this property and annually. The unit should be inspected by certified HVAC technician. It is important to note that the home inspector is not a code enforcement inspector and all applicable codes must be determined by a certified technician. The home inspector is not a certified technician and makes no guarantee or warranty or code determinations during this inspection. Failure to have a heating system inspection prior to close could result in surprise repairs or costly failures. The inspector is not responsible for code failures or system failures and does not pass or fail this unit.

1.28. Date of installation: 1998

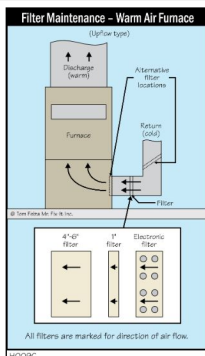
1.29. The heating unit is approaching its designed life expectancy. We make no warranty, guarantee or estimation as to the remaining useful life of this unit.

Page 87 Item: 3

Enclosure

3.3. Recommend an HVAC contractor perform a system Clean-and-Check. HVAC systems require yearly maintenance.

3.4. Recommend replacing the filters every three months during the heating season or as needed or necessary. Use only quality pleated filters.



Page 88 Item: 5

Venting

5.4. [See chimney comments](#)

Water Heater

Page 94 Item: 1

Water Heater Condition

1.12. Black Water or rotten egg odor from the hot water heater: The incidence of rotten egg odor or black water in hot water lines is due to the reaction of sulfates and micro-organisms in the water that create Hydrogen Sulfide (H₂S). This is a water chemistry **condition**, rather than a water heater problem. Although there is very little literature associating odors and sulfate reduction with magnesium, there is reference to sulfate-reducing bacteria known as 'desulfovibrio'. These bacteria cannot grow in the presence of atmospheric oxygen, which may account for their not being noticed in cold water supplies. When the same water is heated, the odor becomes noticeable.

How can H₂S be detected?
Just take a swift sniff. A simple check for the cause of the odor is to draw enough hot water to notice the odor. H₂S is one of the few water contaminants that human senses can detect at low concentrations. The odor is most noticeable

when water is first turned on or heated. A shower can be an unpleasant experience with hydrogen sulfide present. The odor can be detected at levels as low as 0.5 parts per million (ppm). At less than 1 ppm, H₂S will give water a musty odor. At 1 to 2 ppm, it will have an odor similar to rotten eggs. Levels are usually less than 10 ppm. The source of the odor is in the cold water supply, such as untreated rural water systems or well water; but does not present itself until heated.

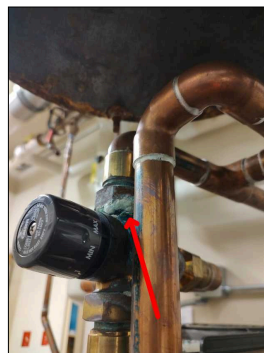
What is hydrogen sulfide, and how does it form?
 Sulfur-reducing bacteria that are naturally present in ground water use sulfur as an energy source to chemically change sulfates to produce H₂S. The bacteria uses sulfur from decaying plants, rocks, or soil. They exist in environments that are oxygen-deficient (not enough oxygen) such as deep wells and plumbing systems. However, H₂S can exist naturally in ground water as well. It can enter surface water through springs and quickly escape into the atmosphere. Some of these waters have excessive sulfate content along with various strains of sulfate reducing bacteria. These bacteria, harmless to health, will react in stagnant water that has been depleted of oxygen and will produce hydrogen sulfide gas, utilizing the hydrogen ion from the anode cathode reaction. This problem is more prevalent in softened water containing sodium in place of calcium and magnesium. The anode may have some affect because the greater activity of the anode, the greater amount of the hydrogen ion and hydrogen sulfide gas. These bacteria can be killed with adequate additions of chlorine such as in a chlorine feeder. This will usually eliminate the odor problem.

How can H₂S be treated?
 Chlorination - by means of a continuous chlorine feeder; or periodic flushing with common household bleach. This process is 100% effective only if a continuous chlorine feeder is installed.

Page 96 Item: 3

Plumbing

3.4. Corrosion noted on water heater plumbing. Recommend having a plumber review for repair or replacement as needed or necessary. Recommend the following product to clean rust and corrosion: <https://clrbrands.com>



Corrosion on plumbing

Municipal Waste/Septic

Page 99 Item: 1

Location

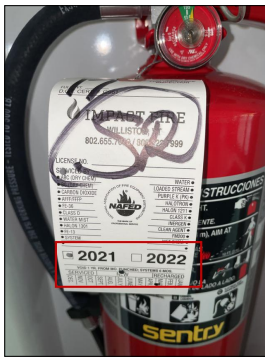
1.9. Septic Systems: Belrose Home Inspection Services does not inspect septic systems. Due to the specific nature of a

		<p>septic system, these inspection should be performed by a company who specializes in septic tanks and installation. We also recommend that the tank be pumped prior to the purchase of the home and every 2 to 4 years depending on the number of individuals residing in the home. For more information regarding septic systems please see: For illustrations of systems please see: http://www.environmentalenhancements.com/systems.h</p> <p>RECOMMEND THAT THE SYSTEM BE PUMPED AND CHECKED PRIOR TO CLOSING ON THE HOME. FAILURE TO DO THIS COULD RESULT IN COSTLY SURPRISES THAT MAY INCLUDE PARTIAL OR FULL REPLACEMENT OF THE SYSTEM. THIS ASPECT OF INSPECTION SHOULD NOT BE FOREGONE.</p> <p>1.10. Recommend that the tank be serviced, tested and pumped by a qualified septic professional every 2-4 years (depending on the individuals residing in the home).</p> <p>1.11. Recommend adding yeast (a tablespoon per month) or a spoiled gallon of milk once every three months into your septic system to keep a balanced ecosystem.</p> <p>1.12. Due to the age of the septic system, we recommend that you consider having the leach field and tank inspected with a remote camera.</p>
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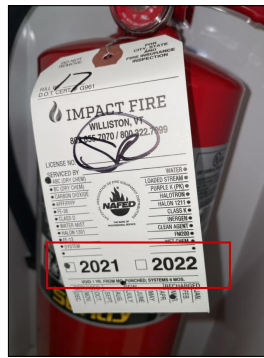


Security System/Fire and Safety

<p>Page 106 Item: 1</p>	<p>Condition/Location</p>	<p>1.19. Fire extinguisher noted as not being properly tagged, inspected. NFPA 1:13.6.3.1.14: Portable Fire Extinguishers</p> <p>One properly sized fire extinguisher shall be provided and shall be mounted properly and inspected annually. The fire extinguisher shall be inspected and tagged by a technically qualified person(s) or be replaced with a new extinguisher, annually.</p> <p>1.20. -----Electrical room-----Lighting and electricity</p> <p>1.21. GFCI protection needed: See grounds, garage, foundation, kitchen, bathroom, shed</p>
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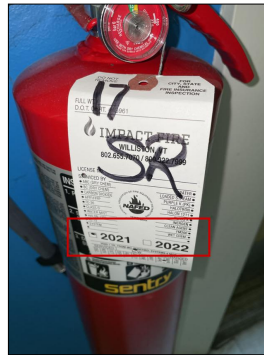
Fire extinguisher not properly tagged



Fire extinguisher not properly tagged



Fire extinguisher not properly tagged



Fire extinguisher not properly tagged

Before You Worry About Cracking

Read this.....

Cracks occur when a ground movement force induces a stress on the building material that exceeds the strength of the material itself. The types of induced stress potentials that occur in walls and slabs are known as tension, shear and compression.

Cracking is a common occurrence in buildings and structures. Generally, there are 2 reasons why cracking occurs: 1. A seismic event such as an earthquake, vibration from vehicles or machines, blasting nearby, etc or 2. Movement from geological processes such as movement from expanding or shrinking soils.

The most common types of geological processes that may be hazardous and effect buildings are soil subsidence (the downward movement of soil as it dries) that would include soil collapse, shrinkage, Hydroconsolidation and liquification, soil expansion, landslides, slope creep, lateral fill extension and earthquake -induced ground shaking.

Normal movement is the downward vertical motion of the ground surface caused by soil subsidence and shrinking expansive soil. The reverse of this is movement upward in the vertical heave from swelling of expansive soils. This would be when there is a great deal of moisture in the soil, causing expansion. The freeze process would only heighten this condition.

Since we build in ground that freezes, it is inevitable that buildings and structures will move in the freeze/thaw process of soils. This will potentially cause structural movement and cracking in building materials. Cracks that are over ¼ inch in size would be cause for concern and possibly the need for further evaluation by a structural engineer.

There are 2 types of cracks that we are concerned about in this thought process: 1. Live cracking: These are cracks that have been repaired and continue to open and move. The other types of cracks that are more common: 2. Static cracking: Cracks that have occurred but are stable and do not continue to open after repair or after they happen.

It generally takes 3 to 7 years for a home to settle into its geological environment. It is possible and normal for the building to move slightly depending on what is happening in the soils around it. It is important to manage moisture around buildings as much as possible.

Material failure, poor workmanship (improper installation of materials and excavation processes) can also contribute to why cracking occurs. So, it is always important to monitor cracking for any changes.

As we look at cracking, it is important to look at the areas around it. Some questions that you always need to consider are as follows:

1. Do the cracks create an adverse effect in any other aspect/areas of the structure?
2. Do the cracks translate to any other area?
3. Does there appear to be failure in the materials?
4. Is there displacement in the materials (inward or outward, rounding in, rounding out)?
5. Is the cracking affecting the operation of other components of the home, for example:
the opening of windows and doors?

Cracking does not always signal a problem. It is a very normal occurrence in almost every home. It is important to understand the dynamics of why cracking happens around the home and how materials are affected or not affected by the presence of cracking.

THANK YOU!

Thank you for choosing us to perform this General Home Inspection. The inspection performed to provide data for this report was visual in nature only, and non-invasive. The purpose of this report is to reflect as accurately as possible the visible condition of the home at the time of the inspection. This inspection is not a guarantee or warranty of any kind, but is an inspection for system and major accessible component defects and safety hazards.

The Inspection is not Pass/Fail

A property does not "Pass" or "Fail" a General Home inspection. An inspection is designed to reflect the visual condition of the home at the time of the inspection.

Please feel free to contact me with any questions about either the report or the property, soon after reading the report, or at any time in the future!

The following conditions lie beyond the scope of the General Home inspection:

- Identification of building regulation violations;
- Conditions not readily observable;
- Failure to follow manufacturer's installation recommendations, or
- Any condition requiring research.

Read the Report!

Please read your entire inspection report carefully. Although the report has a summary that lists the most important considerations, the body of the report also contains important information.

Repairs, Evaluations and Corrections

For your protection, and that of others, all repairs, corrections, or specialist evaluations should be performed by qualified contractors or licensed professionals. Safety hazards or poorly performed work can continue to be a problem, or even be made worse when home sellers try to save money by hiring inexpensive, unqualified workmen, or by doing work themselves.

Be sure to take whatever actions are necessary before the expiration of your Inspection Object Deadline!

Do a Final Walk-Through!

Because conditions can change very quickly, we recommend that you or your representative perform a final walk-through inspection immediately before closing to check the condition of the property, using this report as a guide.

WHAT IS INCLUDED?

Please keep in mind that as home inspectors, we are generalists. It is impossible for us to have the same level of knowledge and experience, or to perform inspections of the different home systems to the same degree as would contractors specializing in each of those systems.

Because performing research lies beyond the InterNACHI Standards of Practice, does not typically include confirmation of compliance with any manufacturer's recommended installation instructions, confirmation of property boundary limits or structure setbacks. Any comments on proper installation are by courtesy only.

Although some conditions commented on in this report may be building code violations, identification of building code violations lies beyond the scope of the General Home Inspection.

To understand more fully what is and is not included in a General Home Inspection, please visit the Standards of Practice page of the International Association of Certified Home Inspectors (InterNACHI) at www.nachi.org/sop.

The goal of this inspection report is not to make a purchase recommendation, but to provide you with useful, accurate information that will be helpful in making an informed purchase decision.

We're Here to Help!

If you have questions about either the contents of this report, or about the home, please don't hesitate to contact us for help, no matter how much time has passed since your home inspection. We'll be happy to answer your questions to the best of our ability.



Inspection Details

PLEASE READ CAREFULLY AND COMPLETELY A Home Inspection is a non-invasive, visual examination of a residential dwelling, performed for a fee, which is designed to identify observed material defects within specific components of said dwelling. Components may include any combination of mechanical, structural, electrical, plumbing, or other essential systems or portions of the home, as identified and agreed to by the Client and Inspector, prior to the inspection process.

For the purposes of this report, all directional references to the house will be made as if individuals were facing the front of the house

This home inspection was performed according to the NACHI Standards of Practice.
<http://www.nachi.org/sop.htm>.

We are not pest inspectors and this service is not included with this inspection. We are not licensed/certified plumbing and heating, electrical, certified chimney or Septic system contractors. It is highly recommended/advised that you get a separate boiler/heater inspection for all units that apply as well as a chimney and septic inspection (if applicable) prior to closing. This includes the hot water heating system. This inspection does not supersede those inspections and will not provide you with as comprehensive an inspection as these certified individuals will provide. It is the responsibility of those professionals to determine any code conditions.

A home inspection is intended to assist in evaluation of the overall condition of the dwelling. The inspection is based on observation of the visible and apparent condition of the structure and its components on the date of the inspection and not the prediction of future conditions.

A home inspection will not reveal every concern that exists or ever could exist, but only those material defects observed on the day of the inspection. The evaluation of nonconventional, non-code installations are strictly opinion based and are disclaimed in this report.

A material defect is a condition with a residential real property or any portion of it that would have a significant adverse impact on the value of the real property or that involves an unreasonable risk to people on the property. The fact that a structural element, system or subsystem is near, at or beyond the end of the normal useful life of such a structural element, system or subsystem is not by itself a material defect.

A Inspection report shall describe and identify in written format the inspected systems, structures, and components of the dwelling and shall identify material defects observed. Inspection reports may contain recommendations regarding conditions reported or recommendations for correction, monitoring or further evaluation by professionals, but this is not required.

Engineers and Specialists: We are not structural or electrical engineers or specialists (Plumbers electricians or builders). Our opinions are based upon the conditions that are visually present. Our opinion does not supersede the opinion of a structural or electrical engineer or specialist in these areas. If further opinion is needed, it is up to the client to secure the services of an engineer or specialist within the inspection period. Any findings after the inspection, are the sole responsibility of the buyer or client. If engineers or specialist are retained subsequent of the inspection, their findings supersede any condition found during the inspection, specific to the components they are offering opinion on. Should any defects or conditions be found during these inspections, they are explicitly disclaimed In this report as they were offered outside of the home inspection report and inspection period. Belrose Home Inspection Services, LLC is not responsible for any findings subsequent of the inspection by structural or electrical engineers or any other specialist. Belrose Home Inspection, LLC is not responsible to secure the services of other specialists or structural or electrical engineers and is the sole responsibility of the client.

Cracking and Structural Defects (in any material, component or area of the home): If cracking or structural defects exist within the home, it is recommended that you consult with a structural engineer in the inspection period. Home Inspectors cannot determine structural integrity of materials, Time of occurrence, Cause/Remedy or whether conditions will deteriorate over time or get better. It is the buyers responsibility to determine if they need further opinion from a structural engineer. All concealed areas at the time of inspection are disclaimed in this report.

Insurance and Building Code: THIS IS NOT A CODE INSPECTION: It is important to make yourself aware of state and local building codes as it applies to your home. We do the best that we can to stay current with building codes. However, our findings are not necessarily based upon codes and how municipalities interpret them. Municipalities have different guidelines specific to that town. Not all towns have building codes or code enforcement. Towns will often interpret and apply building code to meet their specific needs. **You may be required to comply with codes that are not in this report or were not in place when this home was constructed. Be Advised: This is not a code inspection. Only licensed professionals specific to their area of expertise and licensure may pass/fail components of the home. Any code cited, is done so as a courtesy and source of information only. Belrose Home Inspection Services, LLC. is not responsible for code findings/failures before or after this inspection is performed. Further, any and all certified/licensed contractors opinion supercedes the findings and comments found in this**

report. Be advised that codes change and may have done so, subsequent this inspection. The buyer assumes responsibility for any code changes and upgrades as a result. Only licensed plumbing/heating and electrical contractors can determine pass or fail of an item based upon code. Please note the links in the report for Vermont rules and regulations about plumbing and electrical code. **REMEMBER: Code is the minimum standard that a home component, finish should be installed at/to. It is not the highest standard, it is the minimum standard. It can be exceeded, but should not be done, installed or completed at a lesser level.**

Insurance requirements may also have guidelines that are specific to policy and not aligned with the findings of a home inspection. These policies are typically guidelines regarding insurance coverage, but may be required by your insurer to gain coverage. A home inspection will not necessarily cover these areas as they change rapidly and often are different depending on municipality or are specific only to the insurer. Please remember that your inspector is not an insurance agent or code enforcement. Local, State and National building codes supersede the findings and recommendations in this report where applicable. As always, it is important to insure your property and belongings. Condo owners should always have a policy covering their belongings as association or adjoining owner policies may not cover your losses in the event of property damage.

Testing Appliances:

All Appliance testing during the inspection is done as a courtesy and is beyond or exceeds the scope of inspection. We do not test Washers and Dryers. Appliances are NOT always tested at the time of inspection as often, the units are replaced, will be removed by the current owner or are scheduled for replacement. We recommend that you operate the appliances at the final walk-through to determine if there are any issues or failures with units or plumbing. We also recommend that you speak with the current owner regarding the condition of the appliances, plumbing and any past failures that have occurred. Any past, current or future failures are disclaimed in this report. Further, we make no guarantee or warranty of the serviceability of the appliances and assume no responsibility for their current or future operation or any failures that have or may occur. Belrose Home Inspection, LLC is not responsible for appliance failures before, during or after the inspection. Appliances, especially if older, can fail at any time. **FYI: If you choose to test appliances at the final walk-through, please make sure that all plumbing is properly terminated to prevent damage to the home. Please be aware that you are outside of the inspection period of the contract and failure to/of appliances found at the final walk-through may not be subject to negotiation. Only you, as the client and purchaser of this home, should test appliances and systems.**

Hazardous Building Materials: This inspection does not include testing for hazardous materials in the building materials of the home unless specifically requested. Only environmental testing can determine the presence of hazardous materials, mold or other compounds that may be in the

building materials. Our inspection does not and cannot determine material makeup or composition and therefore, any findings after the inspection are the responsibility of the buyer. We can facilitate testing of materials at the time of inspection or prior to or at a later date. All testing would be analyzed by a third party who is certified to perform these functions.

Belrose Home Inspection Services, LLC makes no warranty or guarantee that this home is free from hazardous building materials based upon our comments or inspection findings. All future findings of hazardous materials are disclaimed in this report if environmental testing was not undertaken or performed at the time of inspection and are the sole responsibility of the buyer.

Warranties/Recalls/Class-action lawsuits: We are not aware of any home warranties, class-action lawsuits or recalls on any of the homes materials, components or appliances. We are not aware of the makeup of the roof shingles and whether or not they have organic properties or composition. We are not responsible for any future failure of the home's materials, components or appliances. Further, we will not research or determine if any class-action lawsuits or recalls are associated with any of the materials in the home, components or appliances. Any comments made regarding the home materials, components or appliances are limited to the day of inspection. Any future condition change is disclaimed.

Inaccessible or Obstructed Areas: -Below floor coverings - Behind and under furniture or stored items in rooms -Walls, ceilings covered or freshly painted -Attic contains or areas with limited access - Stored items in garage - Areas behind sheet rock, insulation, cabinets - Stored items in closets - Wood framing and materials covered by siding -Stored items under sinks - Crawlspace areas where inaccessible - Stored items in attics and any place that cannot be viewed due to a lack of physical access or because we were not permitted access by the current Owner/Power of Attorney or Real Estate Agent. The inspection and report do not include Chinese drywall detection, indoor air quality analysis, municipal regulatory compliance, subsurface investigation, or record research related to this property. This inspection excludes all underground piping including but not limited to water, sewer and gas piping. Detached structures, other than the primary garage are inspected as a courtesy only. The buyer assumes full responsibility for the structures and their condition on the day of inspection and each day forward subsequent the inspection.

Photographs Photographs accompanying comments in the report should be considered to be examples of the item or condition being described. Not every instance of an item or condition are necessarily represented with individual photographs. In addition some photos do not turn out well (distort). If this happens you will only see a narrative representing the defect.

Sewer Scan: A scan of this homes waste system (from the cleanout to the municipal line only) may have been completed per client's request. A sewer scan provides an interior view of the homes waste system on the day of inspection. It may not have been possible to complete the scan to the city line due to defects and or blockages in the system. This will be noted in the report. The scan may or may not reveal defects in the system and is by no means, nor should it be construed as a guarantee and/or warranty that the system will not fail subsequent the inspection. Failures can and will occur at any time. Keep in mind that conditions on the outside of the pipe are not visible as they are covered with soils and materials. These areas were not inspected due to these conditions. Changes to the system such as failures and root growth can occur after the inspection is completed. The sewer scan simply gives a greater, more comprehensive view of the homes waste system that otherwise, could not be seen without the use of a sewer camera.

Thermal Scans Infrared/Thermal cameras or other specialty equipment may be used just like any other tool in our tool bag for portions of the inspection process as determined by the inspector in his sole discretion and is always a "limited scan" as part of a home inspection and not to be construed as a thermal scan of entire home and it's contents. Thermal scans will be used for:

1. **Building Heat Loss:** Surveying buildings for variations in temperature, indicating areas of heat loss: air bypass leaks, missing insulation. In addition to spotting specific "cold spots", if there is a significant temperature difference between indoors and outside, thermography can quickly identify/compare temperatures on interior partitions with exterior walls.
2. **Building Moisture Traps, Leaks:** Surveying buildings for evidence of recent leaks, wet insulation in building cavities. Be careful: an old leak into a building cavity may have completely dried out, producing no IR detectable information, but problematic mold, rot, or insect damage could be present. Visual evidence of building leak history and a recording of building details likely to have led to leaks or water entry are important.
3. **Electrical overheating:** to identify overheating electrical components at electrical panels, electrical switches or receptacles, at wiring serving electric heating baseboards, and where aluminum branch circuit wiring is installed.

Copyright/Confidentiality The inspector's obligations extend exclusively to the customer(s) whose signature(s) appear on the signed contract. The inspector unequivocally denies any responsibility to third parties that have not signed the contract. NO obligations to the home inspector's customer can transfer or extend to person(s) or entities other than those with signatures on the contract. Ownership of this report is retained by Jeff Belrose and Belrose Home Inspection Services. Copying and pasting deficiencies to prepare the repair request is permitted. **THE INFORMATION IN THIS REPORT SHALL NOT BE RELIED UPON BY ANYONE OTHER THAN THE CLIENT NAMED HEREIN.** This report is governed by an Inspection agreement that contained the scope of the inspection, including limitations, exclusions, and conditions of the copyright.

Agents are specifically advised that transfer or sale of this report to any other potential buyer or another agent is strictly prohibited and will be reported to their appropriate board.

AGENTS: You are prohibited from sharing the report outside of this transaction with anyone. This includes interoffice or within real estate company that you represent. DO NOT SHARE THE REPORT! Copyright Jeff Belrose, Belrose Home Inspection Services, 2008

Time of Inspection All conditions are reported as they existed "at the time of the inspection".

Home Inspectors, Licensed Specialists, and Experts Inspectors are generalists, are not acting as specialist in any craft or trade, and are conducting what is essentially a visual inspection. If inspectors recommend consulting specialists or experts, it is possible that they will discover additional problems that a home inspector generalist cannot. Any listed items in this report concerning areas reserved for such experts should not be construed as a detailed, comprehensive, and/or exhaustive list of problems or areas of concern.

Estimates and Repairs The client is advised to seek at least two professional opinions and acquire estimates of repairs as to any defects, comments, mentions, and recommendations in the report. Recommend professionals making any repairs inspect the property further in order to discover and repair related problems that were not identified in the report. Assessment and prioritization of repair items is subjective. Only you, the client, can determine what observed conditions are acceptable to

you. This inspection does not provide cost estimates for repairs.

Timely Evaluation Recommendations made by the inspector should be acted upon in a timely manner in order to receive the results of any further evaluation by contractors or engineers before the deadline for negotiation with the seller has passed.

Life Expectancy A life expectancy chart can be viewed by visiting <http://www.nachi.org/life-expectancy.htm>. InterNACHI Standards of Practice: <http://www.nachi.org/sop.htm>. Every home system has a point of failure. It is impossible to predict when this failure will occur with any accuracy. Any estimate given is truly an estimate only with no guarantee or warranty that it will not happen sooner. The inspector is not responsible for any leaking or failure of a component, system or finish that occurs prior to any estimate given or beyond the estimate.

Things to ask the Seller for:

- Samples or records of Paint colors
- Copies of construction records/permits
- All available manuals for appliances and systems
- Obtain keys/combinations for entry and garage doors
- The sellers disclosure (SPIR). Keep in mind that a seller may be liable for material defects that they were aware of, but not disclosed for up to 7 to 10 years.

Text Color Significance:

GREEN: Water or power was off to the structure or items/area. These areas could not be tested or evaluated at the time of inspection.

BLUE: Observations and information regarding the condition of the systems and components of the home. These include comments of deficiencies which are less significant, but should be addressed; or comments which further expand on a significant deficiency; or comments of recommendations, routine maintenance, tips, and other relevant resource information. Limitations that may have restricted the inspection associated with an area will be listed here.

RED: Safety, Material or Component issues that should be addressed in the most immediate manner by certified or licensed professionals.

Yellow: highlights allow you to place your cursor over the word for definitions or additional information regarding the term in the report.

Orange: Areas of the home, structure, components that could not be seen or are concealed for any reason at the time of inspection and are disclaimed.

Video: In some reports, video may be added to further highlight a condition. To access the video, simply click on the picture until the play button appears (one click). Press "Play" for a short playback.

Ratings: **IN:** Inspected (Green Check Mark) **NM:** Needs Maintenance (Tools Symbol) **R or R:** Repair or Replace (Red Flag Symbol) **NI:** Not Inspected (Clipboard Symbol) **NP:** Not Present (Caution Sign Symbol)

Sources for information provided within this report come from but are not limited to: [InspectAPedia®](#) and [InspectAPedia.com®](#) Home & Site Map - Building & Environmental Inspection, Testing, Diagnosis, Repair, & Problem Prevention Advice: In-depth research & advice on diagnosing, testing, correcting, & preventing building defects & indoor environmental hazards. Unbiased information, no conflicts of interest, Code Check, International Residential Code (IRC), InterNACHI: International Association of Certified Home Inspectors, The Journal of Light Construction, Fine Home Building, and [Greenbuildingadvisor.com](#), Working RE Home Inspector, Building Intelligence Center, Various Youtube Video Presenters, Ask This Oldhouse, This Old House, Carson and Dunlop.

Home Maintenance Checklist

1. ROOFS: Water can cause damage to your home. a. Check all flashing, roof penetrations and transitions (chimneys, vents, etc.) for signs of leaks. b. Look for damaged, loose or missing shingles. Repair or replace as needed. c. Check gutters and down spouts for blockage, holes, alignment, slope, etc; clean, repair and replace as needed. d. Be sure down spouts direct water away from foundation at least 6 ft. e. Cut back tree limbs at least 2 feet away from roof. Wind may cause branches to rub and wear a hole in the roof. f. Check chimneys and direct vents for nests and blockages. Blocked chimneys and vents can cause Carbon Monoxide to back up into the home. Check for cracked and damaged chimney caps, loose and missing mortar and/ or caulk. Repair as needed or necessary. Remember to keep snow cleared from all exhaust vents.

2. EXTERIOR: a. Maintain proper slope of earth, walks and drives away from foundation walls. 1/2" per foot for 10' or to the lot line. (wet basements and costly foundation issues may occur) b. Check foundation walls, steps, retaining walls, walks, patios, driveways, etc., for cracks, missing mortar and damage. c. Remove down spouts from perimeter drain entries. These can become blocked and add water into your basement. d. Check painted or stained surfaces (fascia, soffits, siding, trim, etc.) for wear, rot, etc. Maintain as needed. e. Cut back and trim shrubbery against front, back and side walls. Keep vegetation 18 inches away from foundation walls and siding. f. Check and repair weather stripping and caulk around doors and windows to prevent air and weather penetration problems. g. Check for rot around doors, windows, corner boards, and joints. Repair or replace as needed. h. Check glazing compound around windows. Leave a little paint or sealant on the glass to protect against moisture intrusion.

3. GARAGE a. Duplicate the checklist for the house b. Test the overhead door operator safety mechanism.

4. CENTRAL AIR CONDITIONING UNITS a. Turn off the power to the compressor when you enter the heating season. Field mice tend to chew exposed wiring. b. Turn the power back on 24 hours prior to operating the system to prevent damage to the compressor. c. Do not cover the compressor with a tarp or plastic. Trapped condensation will accelerate rusting. d. Use a cable tie on the exterior disconnect to prevent inquisitive children from gaining access to high voltage wiring.

5. INTERIOR FOUNDATION WALLS a. Check basement (crawlspace too) walls and floor for dampness, seepage and leaking after wet weather. b. Check your sump pump (if applicable). Run a 70 pint, self pumping dehumidifier below 60% humidity. 35 to 55% is optimal. Open basement windows in warmer, drier weather. c. Check walls for cracks. If cracks exist, document crack size & location to determine future wall movement.

6. PLUMBING: For preventive maintenance. a. Check main supply valves for leaks, corrosion and ease of operation. b. Check isolation valves, faucets & hose bibbs for leaks and corrosion. c. Shut off interior and open exterior hose bibb valves in the fall. d. Check your toilet for movement. Lie on it (to add weight) while tightening. Fill your tub before caulking it. e. Flush water heaters twice per year or per manufacturer's recommendation.

7. ELECTRICAL: Always maintain 3 feet of clearance at the front of the main panel. a. Know the location of the main power disconnect in the electrical panel box. Never over fuse. b. Mark and label all circuits in the main and sub panels. c. Check appliance cords, extension cords and outlet plugs. Replace all worn cords and outlets immediately. d. If fuses blow or breakers trip frequently, have a licensed electrician determine cause. Never double tap breakers or overload circuits. f. Test all AFCI and GFCI breakers at all locations. These units do have a rate of failure. Replace as needed or necessary. Replace smoke detectors every 6-10 years. (Remember to replace batteries at each daylight savings time interval)

8. HEATING & COOLING: (The arrow on the filter points towards the furnace or A/C motor) a. Change or clean furnace and air conditioning filters monthly or per manufacturer's recommendation (as applicable). Always use quality pleated filters. Vacuum out all registers. b. Schedule a clean/ service/ safety check prior to each heating season. c. On steam systems, "blow off" or drain low

water cut-off per manufacturer's recommendation. d. Check the electric shut off switch prior to requesting a service call if the furnace or A/C suddenly stop working.

9. INTERIOR: a. Check grout and caulk at bathroom tiles. With tile surrounds, fill tub prior to caulking. b. Check all windows for ease of operation and signs of moisture damage due to high humidity or leaks from exterior.

10. ATTICS: a. Check for leaks, water stains, rot and microbial growth around roof penetrations such as chimney & plumbing stack. b. Repair or replace damaged vent screens to prevent entry of wasps, birds, squirrels, bats, racoons and mischevious rascals.

Helpful Links For The Home Owner

Tools Every Home Owner Should Own: <http://www.nachi.org/tools.htm>

10 Easy Ways to Save Money & Energy in Your Home: <https://www.nachi.org/increasing-home-energy-efficiency-client.htm>

17 Ways to Save Energy: <http://www.nachi.org/saveenergy2006.htm>

Standard Estimated Life Expectancy Chart for Homes: <http://www.nachi.org/life-expectancy.htm>

Organize/Maintain your home: <https://www.houselogic.com/organize-maintain/home-maintenance-tips/home-maintenance-schedule/>

For more information about home safety and living conditions, please visit the Center For Healthy Living: nchh.org/resources/resident-and-homeowner/

1. Attendance

In Attendance:

- **Structure orientation:** For the sake of this inspection the front of the home will be considered as the portion pictured in the cover photo. References to the back, left or right of the home should be construed as standing in the front yard, viewing the front of the home.
 - **Inspection type:** Presale Inspection
 - **Attending the Inspection:**
 - Client present
 - **Weather during the inspection:**
 - Temperature: Degrees: 77
 - Sunny and warm
 - Humidity: 33%
 - Wind: 2.3 mph SW
 - Rain in the last three days: no
 - At the inspection, the ground was: Damp from **condensation**
-

2. Home Type

Home Type:

- **Type of Building :**
 - Commercial inspection
-

3. Occupancy

Occupancy:

- Occupied - Furnished
- **Access to some items such as:** electrical outlets/receptacles, windows, wall/floor

surfaces, and cabinet interiors may be restricted by furniture or personal belongings. Any such items are excluded from this inspection report.

- The utilities were on at the time of inspection.

4. Description



Observations:

- There are many things that can be done to improve safety and living **conditions** within any home. While many of these issues come to light in the course of the Standard Home Inspection there are likely to be other things that can be done to improve the home. Additional information can be found at: [Center for Healthy Living](#)
- [Home Tips](#)
- [For More About Appliances](#)
- [Life Cycles and Cost Estimates](#)
- [Home Improvement Cost Estimates](#)
- [What is average life expectancy of house components?](#)
- [For more about home maintenance](#)
- [Environmental Issues](#)
- [COMMON PROBLEMS](#)
- [Insurance](#) : It is important to insure your home and your belongings. Please keep in mind that conditions can affect your ability to be properly insured. Things like an old and damaged roof, damaged siding and exterior **components** as well as things that are not regularly maintained, etc.
- [Permitting](#): All renovations or additions require permitting by the city or state. General repairs such as replacing a toilet or fixing a faucet, replacing a light, painting walls etc, are considered maintenance and are not generally subject to permitting. However, larger plumbing and electrical upgrades need to be permitted by the state fire marshal (plumbing and electrical inspectors). Construction over 60% of the unit (removal and addition of wallboard, walls, reconfiguration of structural components in a unit) requires local and state construction permitting.
- All interior rooms were inspected for general condition. Minor cracks on interior surfaces as well as surface damage that is superficial in nature, are usually cosmetic and are not mentioned in the report. Doors and windows are randomly inspected for proper operation. Lighting and ceiling fans were tested for proper operation, and receptacles were randomly tested for proper grounding in polarity. Furniture and stored items are not moved during the inspection.
- Have an Americans with Disabilities Act (ADA) survey performed to establish costs associated with any necessary improvements required for compliance with ADA regulations.



Grounds

1. Driveway, Walkway, Flatwork Condition



Materials: **Asphalt** driveway noted. • **Concrete** sidewalk noted.

Observations:

1.1. Handicap parking

1.2. [Link to ADA standards for parking](#)

1.3. Have an Americans with Disabilities Act (ADA) survey performed to establish costs associated with any necessary improvements required for compliance with ADA

regulations.

1.4. Find a [Free ADA checklist here!](#)

1.5.Parking Lot Marking.....

1.6. The parking lot lighting was sub-standard in comparison to similar parking lots and usage.

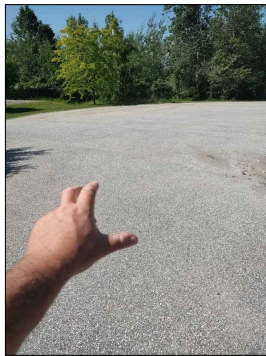
1.7. The parking lot was missing directional markings designed to indicate the proper flow of traffic. Directional markings should be installed at proper locations to facilitate the safe flow of traffic.

1.8. In the parking lot, pedestrian crosswalks were not marked. For safety reasons, all pedestrian crosswalks should be marked to comply with applicable regulations or best practice.

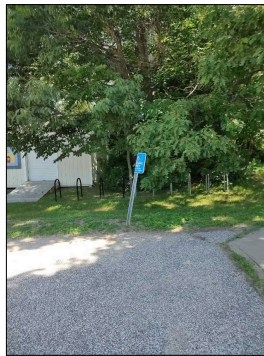
1.9. Lines and arrows marked on the parking lot pavement surface were severely worn or illegible in areas and should be remarked.

1.10. Parking stalls were not designated. Parking spaces should be marked to comply with applicable regulations or best practice.

1.11. Total parking spaces of up to 25 requires at least one handicapped space. The handicapped parking spaces must be located on the closest and shortest route from the parking lot to the entrance of the building entrance. If there is not one building entrance, then the handicapped spaces should be located closest to the pedestrian entrance. If your building has multiple entrances, the handicapped spaces should be equal to the entrances to the building. Recommend adding handicap parking as needed or necessary.



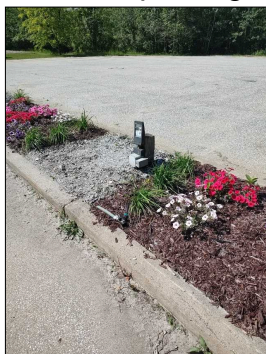
No established parking spaces



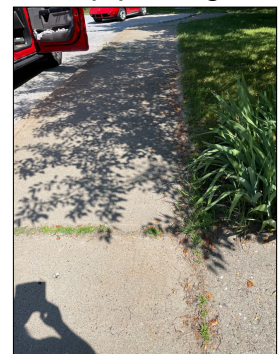
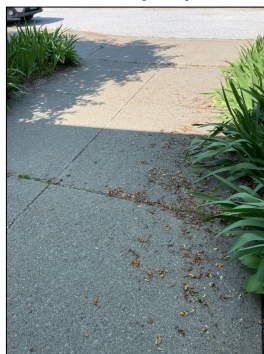
Handicap space

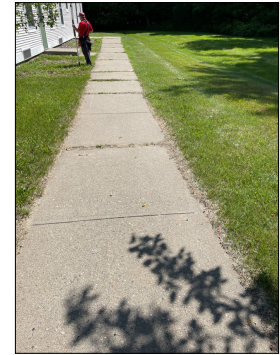


No handicap parking markings



Substandard parking lot lighting





2. Patio and Porch Deck

Observations:



2.1. [Guardrails and Handrails: Where Do You Need Them?](#)

2.2. Observations/Limitations: Attempts will be made to point out visible deck defects discovered during the course of a normal home inspection. However, every deck is unique and determining the overall structural stability and load carrying capacity of individual members and connections is outside the scope of this inspection. Many critical items and details that affect the stability and load carrying capacity can be hidden from view such as verifying the presence and condition of flashing between the ledger board and the house, the condition of bolts nails and screws, including rust and corrosion, the grade and moisture content and extent of decay in **wood** members, the condition of **columns** and members in contact with soil, and depth and size of footings below ground. It is not always possible to see deck flashing and its serviceability for performance. It is also not always possible to see secondary damage due to poor flashing and installation. Any primary or secondary damage that could not be seen is disclaimed in this report. This is a noninvasive home inspection.

2.3. Concrete Patio noted

2.4. Appeared functional at time of inspection.

2.5. For more information about decks and porches, please visit the following link:
<http://www.greenbuildingadvisor.com/green-basics/decks-and-porches>

2.6. FYI: never place your cooking grill next to the home. Always place it at the edge of the deck or patio away from the home and anchor it securely.



3. Stairs & Handrail



4. Electrical



5. Exterior Faucet Condition



Location:

- Front of structure.

Observations:

5.1. We do not turn on hose bib water shutoff valves. Plantings or belongings may conceal some locations.



Front exterior faucet

6. Vegetation Observations



Observations:

6.1. Vegetation was inspected around the home to ensure that it had adequate **clearance** from the structure and was not impacting the structure.

6.2. No major system safety or functional concerns noted at time of inspection.

6.3. **Maintenance Tip:** When landscaping, keep plants, even at full growth, at least a foot (preferably 18 inches) from house siding and windows. Keep trees away from foundation and roof. Plants in contact or proximity to home can provide pathways for wood destroying insects, as well as abrade and damage siding, screens and roofs.

7. Grading

Observations:



7.1. Lot description: Mostly level and flat

7.2. No major system safety or function concerns noted at time of inspection.

7.3. Lot grading and drainage have a significant impact on the building, simply because of the direct and indirect damage that moisture can have on the foundation. It is very important, therefore, that surface runoff water be adequately diverted away from the home. Lot grading should slope away and fall a minimum of one (1) inch every foot for a distance of six (6) feet around the perimeter of the building.

7.4. While performance of lot drainage and water handling systems may appear serviceable at the time of inspection, the inspector cannot always accurately predict this performance as conditions constantly change. Furthermore, items such as leakage in downspout/gutter systems are very difficult to detect during dry weather. Inspection of foundation performance and water handling systems, therefore, is limited to visible conditions and evidence of past problems.

7.5. The exterior drainage is generally away from foundation.

8. Plumbing

Materials:



- Copper piping noted.

Observations:

8.1. Plumbing appeared functional at the time of inspection.

8.2. Septic system noted. Client is advised to seek the services of a specialist in evaluating this system.

8.3. Potable water supplied by well. Suggest water testing within inspection contingency period.

9. Water Pressure



10. Pressure Regulator



11. Condition

Observations:



11.1. No applicable fencing and walls noted at the time of inspection.



Exterior Areas

1. Siding Condition



Materials:

• Walls/Cladding: Siding material

• Vinyl siding and trim noted, wood frame construction, concrete foundation.

<http://www.jlconline.com/how-to/exteriors/vinyl-siding/vinyl-siding-field-guide#vinyl-siding-types>

or

http://www.vinylsiding.org/wp-content/uploads/2014/02/11_-_Vinyl_Siding_Installation_Manual_English2.pdf

Observations:

1.1. **Inspection restriction: Water and moisture damage could not be seen behind any of the siding structure or installed finishes at the time of inspection as these areas were not **accessible** and could not be accessed without doing a destructive inspection. A destructive inspection is not allowed under the standards of practice, and we are not allowed to damage the home in any way. Major damage may be present that we cannot see. This damage in these areas are disclaimed.**

Please be aware: Damage in these areas that are uncovered after inspection, was not missed! It simply could not be seen until it was uncovered.

1.2. R703.4 Flashing. Approved corrosion-resistant flashing shall be applied shingle-fashion in a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components.

1.3. **Flashing:** Flashing was inspected where the roof covering meets a wall or siding material visually. There should be step and counter flashing installed in these locations. This is not an exhaustive inspection of all flashing areas. Flashing could be missing or damaged in areas that could not be visually inspected.

1.4. Exterior wall coverings protect the wall structure and living space from water, wind, and sun damage. If not installed and maintained properly, exterior siding can be vulnerable to moisture entry, causing siding failure and/or structural damage. Routine maintenance of exterior walls should include: sealing gaps, openings, and joints at door and window frames with appropriate caulk and/or weather stripping; cleaning and repainting or restaining wall surfaces as necessary; and keeping vegetation cut back at least 18 inches away from wall surfaces.

1.5. **For more about exterior areas of the home, please visit the following link:**
https://hcloud.blob.core.windows.net/hrbpdfs/HRB_2_Exterior_2011.pdf

1.6. It is recommended that all repairs or replacements be conducted by a qualified, licensed specialists, who may well identify additional defects or recommend some upgrades that could affect your evaluation of the property. It is important to note that siding may be covering secondary damage due to moisture having an entry behind it. This cannot be seen typically in a normal home inspection. This is a noninvasive inspection. Any primary or secondary damage that could not be seen or evaluated is disclaimed in this report.

1.7. No major system safety or function concerns noted at time of inspection.

1.8. **Weather Resistant Barrier: House wrap**

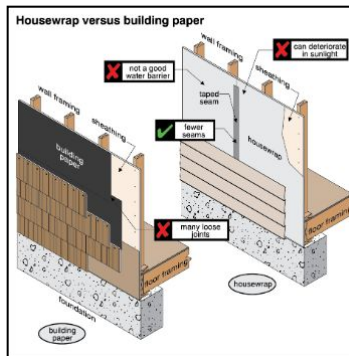
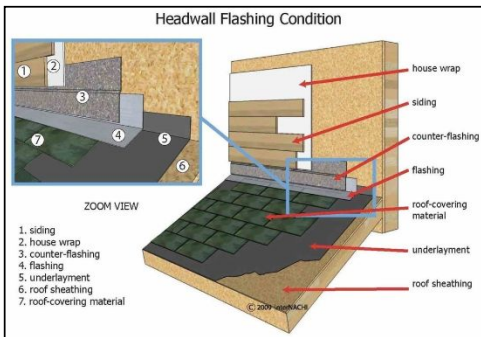
For more about weather barriers, please visit the following video:
<https://www.youtube.com/watch?v=QrQ-4u5V4GE>

1.9. **Loose siding noted . Recommend securing the siding as needed or necessary.**

1.10. **Siding damage noted. Recommend repair or replacement as needed or necessary.**

1.11. **Peeling paint observed.**

1.12. **Gaps in vinyl siding noted where moisture can enter. Recommend repairing as needed or necessary.**



Gaps in vinyl siding



Damaged siding



Loose siding



Damaged siding



Loose siding



Damaged siding

2. Exterior Paint



Observations:

2.1. Sealants At Exterior: It is important to maintain a property, including painting or sealing walkways, decks, and other hard surfaces, and it is particularly important to keep the house walls sealed, which provide the only barrier against deterioration. Loose or unsealed trim wrap can allow moisture to rot trim causing damage to the structure. Unsealed cracks around windows, doors, and thresholds can permit moisture intrusion, which is the principle cause of the deterioration of any surface. The evidence of such intrusion may only be obvious when it is raining

2.2. All exterior painted wood trim surfaces should be annually examined and sealed, re-caulked and re-painted as needed.

2.3. For more information about paint failure, please go to the following link:
<http://www.finehomebuilding.com/how-to/departments/how-it-works/paint-failure-troubleshooting.aspx>

2.4. Peeling paint observed, suggest scraping and painting as necessary.

<https://www.finehomebuilding.com/project-guides/painting/how-to-get-a-perfect-exterior-paint-job>

<https://www.finehomebuilding.com/project-guides/painting/10-tips-to-paint-like-a-pro>



Peeling paint



Peeling paint

3. Eaves & Facia

Observations:



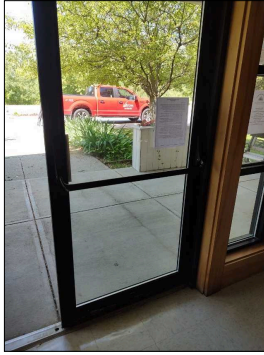
3.1. All eaves and soffits were in serviceable condition. Eaves and soffits consisted of Wood materials which had no visible defects or water stains.

4. Doors

Observations:



4.1. Damaged exterior door(s) noted. Recommend review for repair or replacement as needed or necessary.



Damaged door

5. Window Condition

Observations:



5.1. Window flashings are concealed by the exterior wall covering. We cannot endorse them and specifically disclaim any evaluation of these components. Leaks may become evident only during heavy, prolonged or wind-driven rainfall. The window screens are not evaluated (or evaluated by courtesy only if in place) because many people choose to remove them for aesthetic reasons. Time intervals for leaking flashing or field flashing cannot be predicted.

For more about flashing please visit the following link:

<https://www.finehomebuilding.com/2019/07/03/dont-forget-the-flashing>

5.2. For more about flashing, please visit the following

link:<https://www.discoverhorizon.com/hrb/article.aspx?ASKID=827&DROPDOWN=2311>

and

<https://www.discoverhorizon.com/hrb/article.aspx?ASKID=826&DROPDOWN=2311>

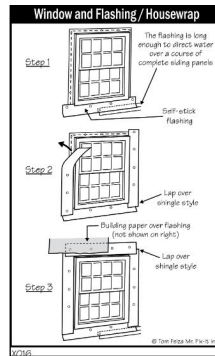
5.3. Typical window flashing

5.4. The proper installation of flashings around windows is critical to water proofing the exterior walls. Missing, damaged or improperly installed flashings are the most common cause of moisture intrusion to walls and baseboards beneath windows.

Because these flashings are concealed by the exterior wall covering, we cannot endorse them and specifically disclaim any evaluation of these flashings, and leaks may become evident only during heavy, prolonged or wind-driven rainfall. The window screens are not evaluated because many people choose to remove them for aesthetic reasons. Also, they are easily damaged and can be removed after our inspection.

5.5. Components appeared in satisfactory condition at time of inspection.

5.6. Window flashings are concealed by the exterior wall covering. We cannot endorse them and specifically disclaim any evaluation of these components. Leaks may become evident only during heavy, prolonged or wind-driven rainfall. The window screens are not evaluated (or evaluated by courtesy only if in place) because many people choose to remove them for aesthetic reasons.



1. Roof Condition



Materials:

- Roof was visually inspected from accessible points on the interior and/or exterior. If a roof is too high, is too steep, is wet, or is composed of materials which can be damaged if walked upon, the roof is not mounted. Roof was not mounted.
- The Inspector inspected the roof and its components by using a 30 ft. roof camera.

Materials: Metal standing seam roofing noted.

Observations:

1.1. **Inspection restriction: The components of the roof that were covered roof covering finishes were not able to be inspected. Unless otherwise noted, leaks or damage to the sheathing or any other type of primary or secondary damage could not be viewed due to the roof covering finishes. These areas are disclaimed in the report. A roof may leak at any time. This time interval cannot be predicted.**

1.2. **Metal roof materials can be difficult to evaluate as damage such as small holes and material thickness changes are difficult to evaluate unless the roof is actually leaking.**

1.3. [What's the average lifespan of a roof?](#)

1.4. Roofing Overview: The roof is a complex system comprised of many components that must work well together to provide weather protection for the house/building. The major elements in this system include the roofing or roof covering (shingles, rolled roofing, slate, membrane or metal materials), the underlayment (impregnated felt or paper, ice and water shield), metal flashing (lead, copper, aluminum, **galvanized steel**), sheathing (plywood, OSB, dimensional lumber boards), the roof rafters and other roof framing components.

Limitations: Roof inspectors are limited to visual observation of accessible surfaces. The roof is inspected from the roof level, only if it can be done safely and without damaging the roof. Certain types of damage and/or poor workmanship (e.g., improper fastening, manufacturer defects, etc) may not be apparent during a non-invasive, visual inspection. As such, no warranty or guarantee that the roof will be free of leaks, remaining service life of the roof covering or structure can be made or given by the inspector. If defects are

reported and/or you have concerns about remaining life expectancy, insurability or potential for future problems, we recommend consulting with a qualified roofing specialist.

1.5. The home inspector shall observe: Roof covering; Roof drainage systems; Flashings; Skylights, chimneys, and roof penetrations; and Signs of leaks or abnormal condensation on building components. The home inspector shall: Describe the type of roof covering materials; and Report the methods used to observe the roofing. The home inspector is not required to: Walk on the roofing; or observe attached accessories including but not limited to solar systems, antennae, and lightning arrestors. Estimates of serviceability: The home inspector will not be able to accurately project the lifespan of the roof or its future serviceability; nor will they be able to predict when it will leak. The roof will simply leak, when it leaks. Every home system has a point of failure. It is impossible to predict when this failure will occur with any accuracy. Any estimate given is truly an estimate only with no guarantee or warranty that it will not happen sooner. The inspector is not responsible for any leaking or failure that occurs prior to any estimate given or beyond the estimate. The inspector is not responsible for future conditions of the shingles post inspection. This includes determining the makeup of the shingle and whether or not they have/had organic properties and composition. The home inspector is and was not aware of any class-action lawsuits or recalls of the shingles that are on this home. Any comments made regarding the roofs condition and serviceability are limited to the day of inspection.

Many different types, brands and models of asphalt composition shingles have been installed over the years, each with specific manufacturer's installation requirements that may or may not apply to similar-looking shingles. In addition, most shingles have underlayment requirements that cannot be visually confirmed once the shingles have been installed. For this reason, the Inspector disclaims all responsibility for accurate confirmation of proper shingle roof installation.

The Inspector's comments will be based on- and limited to- installation requirements common to many shingle types, brands and models, but accurate confirmation of a particular shingle roof installation, which requires research that exceeds the scope of the General Home Inspection, will require the services of a qualified roofing **contractor**.

1.6. No major system safety or function concerns noted at time of inspection.

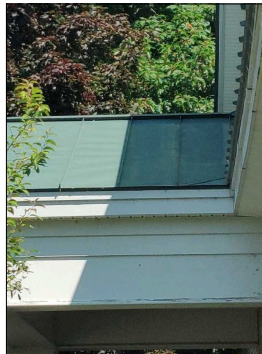
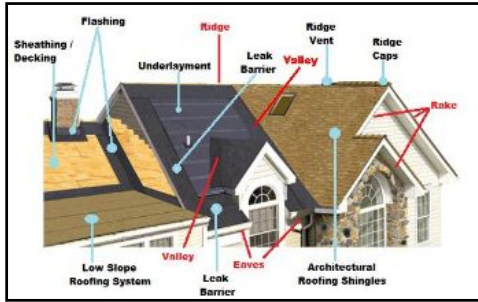
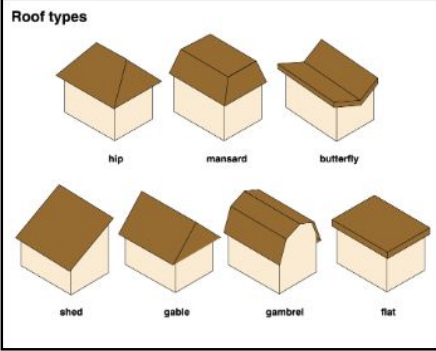
1.7. No leaks noted on the exterior roof or in the attic at the time of inspection. This inspection is not a guarantee that a roof leak in the future will not happen. A roof will leak at some point. Even a roof that appears to be in good, functional condition may leak under certain circumstances. It is virtually impossible to detect leaks until the moment that they actually happen. Therefore, there is no way an individual could know, in any specific time frame, when a roof will fail and leak. We will not take responsibility for a roof leak that happens in the future this is not a warranty or guarantee of the roof system. It is virtually impossible to detect leaks until the moment that they actually happen. Therefore, there is no way an individual could know, in any specific time frame, when a roof will fail and leak.

1.8. For more information on roof materials, please visit the following link:
<http://www.greenbuildingadvisor.com/green-basics/roofing-material-choices>

1.9. Roof types: See photo

1.10. Roofing terms: see photo

1.11. Typical roof system on a home



Ice and snow guards





2. Flashing

Observations:



2.1. **Inspection Restriction: Areas behind flashing were concealed and could not be inspected at the time of inspection. Moisture can get behind installed, failed and improperly installed flashing which can create primary and secondary damage. Unless otherwise noted in the report, damage could not be determined or seen at the time of inspection. These areas are disclaimed in the report. It is possible that you will find damage behind flashing when repairs or upgrades are made. Recommend planning for additional damage and cost.**

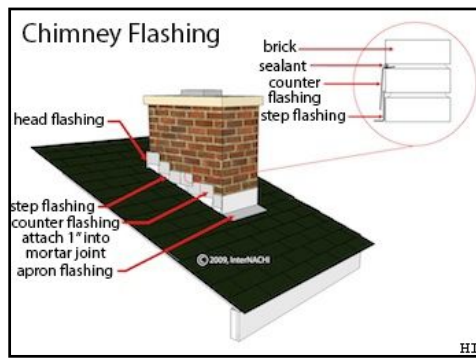
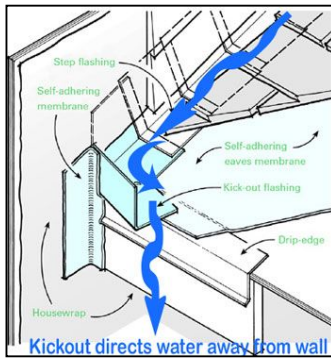
2.2. Kick out flashing should always be installed wherever the roof intersects with the wall structure. Water can create primary and secondary damage if not properly managed. Recommend installing the kick out flashing in any area of intersection as it applies to the home.

<https://www.americanflashings.com/jd-out-flashing>

2.3. **For more about roofing and flashing, chimneys, please visit the following link:**
https://hcloud.blob.core.windows.net/hrbpdfs/HRB_1_Roofing_2011.pdf

2.4. FYI: It is important to understand that the flashing can leak at any time and water may enter the structure and not be seen during the home inspection. This can happen over a period of time increased secondary damage. Any leaks that are not visually seen or detected with equipment after they were visually seen, are disclaimed in this report. All components and materials on a home at a rate of failure and can at any time.

2.5. The visible portions of the flashings were in an acceptable condition. Most of the flashing is not visible.



3. Gutter

Observations:



3.1. Inspection restricting: Determining proper gutter pitch is not part of a home inspection. Gutters should always be pitched to flow toward the area of the downspout. It is also not possible to always see behind the gutters thus, not being able to see any primary or secondary damage that may have occurred in this area. Gutters should also be properly fastened. It is not always possible to view how gutters are installed/fastened. Gutters should be monitored on a regular basis and cleaned regularly in order to maintain proper water flow. Poorly maintained gutters can cause water to flow behind materials which cannot be seen during a normal home inspection. These conditions are displayed in this report.

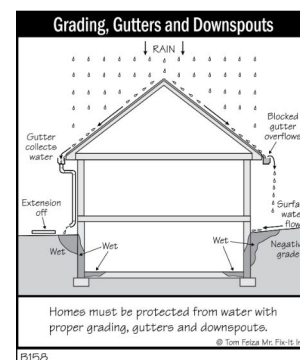
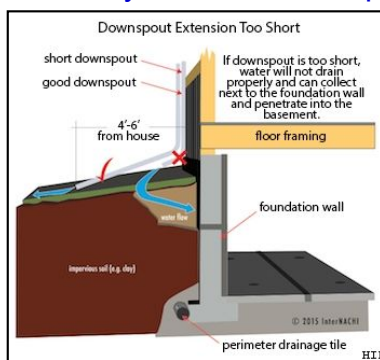
3.2. [Should I put gutters on the house?](#)

3.3. [Problems With Downspouts](#)

3.4. No gutters or downspouts. Full installation recommended to keep water away from structure. Water can weaken the foundation and deteriorate the siding. Be sure to install splashblocks or extensions to carry water away, and keep water from areas such as driveways or walks where it can be an ice hazard in winter.

3.5. Make sure all downspouts are connected and routed to discharge away from the homes foundation (3-6 feet), this will reduce the potential for water to seep into the basement.

3.6. Maintenance Tip: Keep gutters cleared of organic debris to prevent downspouts from being clogged causing overflow at gutters, ensure that all downspouts have extensions/splash blocks to carry water away from the foundation and ensure that sprinkler system does not spray siding or windows of house.





Attic

1. Chimney



Observations:

1.1. **Inspection restriction: The inspection of the chimney is limited to the viewable and accessible components. It may not be possible to see the top of the chimney or areas that may require elevation. The interior of the chimney is not part of this inspection. A level II chimney inspection is required by a certified professional. All areas that could not be inspected or viewed are disclaimed in this report. This report does not guarantee serviceability of the chimney or fireplace components.**

1.2. [The 3 Levels of Chimney Inspections](#)

1.3. [Why You Should Clean Your Chimney](#)

1.4. [How to Clean Your Chimney](#)

1.5. The NFPA (National Fire Protection Association) highly recommends an annual inspection of all chimneys, fireplaces, solid fuelburning **appliances**, and vents. They also recommend an NFPA 211 Standard, Level II inspection upon sale or transfer of the property. A Level II inspection includes, not only cleaning the interior of the chimney pipe, but also the use of specialized tools and testing procedures such as video cameras, etc. to thoroughly evaluate the serviceability of the entire flue lining and fireplace/chimney system. If one has not been performed over the past 12 months, such an inspection is recommended before home changes ownership---for fire safety reasons.

1.6. Metal chimney noted

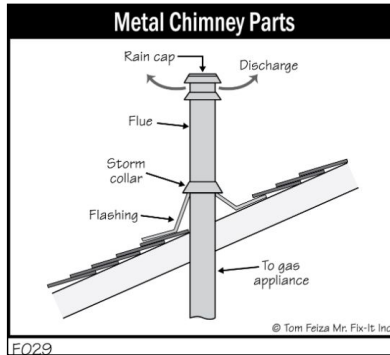
1.7. Our chimney review is limited to visible accessible components only. Not all areas could be seen visibly, limiting the inspection. If further review is desired, we suggest review by a qualified professional prior to close. We recommend a certified chimney service contractor (preferably with a video scope) perform an inspection for a more comprehensive evaluation.

Resources - <http://www.csia.org/search>

The National Fire Protection Association has stated that an in-depth Level 2 chimney inspection should be part of every sale or transfer of property with a wood-burning device.

1.8. Recommend that the chimney be evaluated and cleaned prior to closing on this home and prior to each heating season by a qualified professional. Failure to do this could result in failure that could result in a house fire and secondary damage and/or costly repairs. A home inspector is not qualified to make a proper evaluation of a chimney and do not pass or fail this unit or system unless they are properly certified. You may want to contact Above the Rest Chimney Service. They can be reached at 802-888-1215.

1.9. Level 2 Chimney Inspection recommended by a qualified chimney professional.



2. Attic Plumbing

Observations:

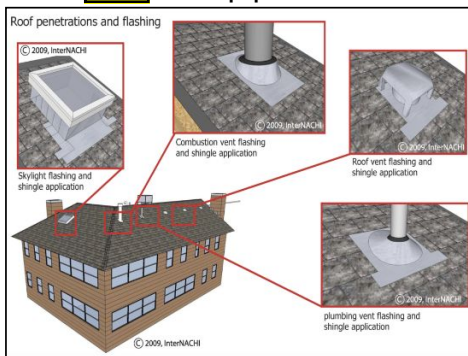


2.1. Plumbing Vent Pipes: Homeowner's Responsibility:

Your job is to monitor the flashing around the plumbing vent pipes that pass through the roof surface. Sometimes they deteriorate and cause a roof leak.

Be sure that the plumbing vent pipes do not get covered, either by debris, a toy, or snow.

2.2. PVC vent pipe noted



3. Vent Screens

Observations:



3.1. Vent screens were noted as functional.

4. Ventilation

Observations:



4.1. **The Inspector disclaims confirmation of adequate attic ventilation year-round performance, but will comment on the apparent adequacy of the system as experienced by the inspector on the day of the inspection. Attic ventilation is not an exact science and a**

standard ventilation approach that works well in one type of climate zone may not work well in another. The performance of a standard attic ventilation design system can vary even with different home site locations and conditions or weather conditions within a single climate zone.

The typical approach is to thermally isolate the attic space from the living space by installing some type of thermal insulation on the attic floor. Heat that is radiated into the attic from sunlight shining on the roof is then removed using devices that allow natural air movement to carry hot air to the home exterior. This reduces summer cooling costs and increases comfort levels, and can help prevent roof problems that can develop during the winter such as the forming of ice dams along the roof eaves.

Natural air movement is introduced by providing air intake vents low in the attic space and exhaust vents high in the attic space. Thermal buoyancy (the tendency of hot air to rise) causes cool air to flow into the attic to replace hot air flowing out the exhaust vents.

Conditions that block ventilation devices, or systems and devices that are poorly designed or installed can reduce the system performance.

4.2. For more information on roof ventilation, go to:

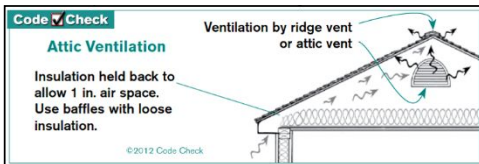
http://inspectapedia.com/ventilation/Roof_Ventilation_Specs.php or visit the following link:
<http://www.workingre.com/wp-content/uploads/2013/12/attic-ventilation-news.html>

4.3. How to prevent ice damming and roof condensation. Please visit the following link:

http://inspectapedia.com/ventilation/Attic_Condensation_Ice_Dams.php

4.4. Gable end vents noted

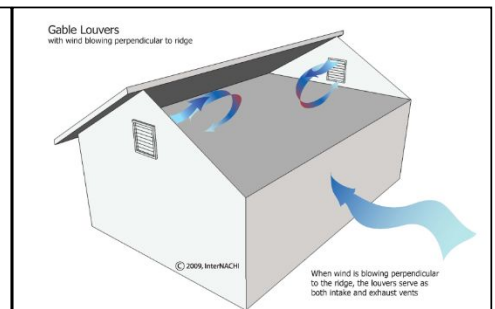
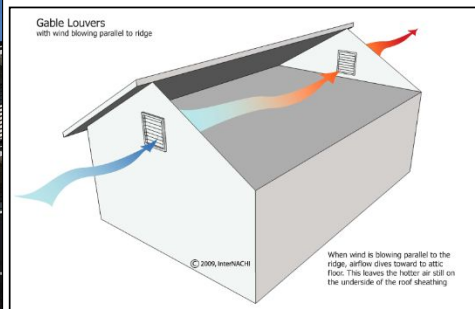
4.5. Example of gable vents when the wind blows



Soffit vents



Gable vents



5. Access Condition

Observations:

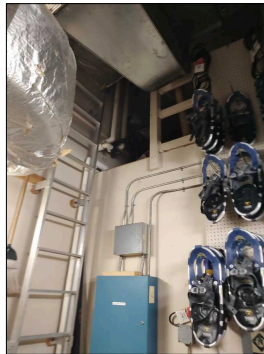


5.1. **Inspection restriction: No access to the attic noted at the time of inspection. The attic area could not be viewed.**

5.2. Attic Views: every effort was made to visually inspect all accessible areas or show limitations of access. We do not attempt to enter attics that have less than thirty-six inches of headroom, or are restricted by ducts, or in which the insulation obscures the joists and thereby makes mobility hazardous. We do not disturb or move insulation that may obscure water pipes, electrical conduits, junction boxes, exhaust fans, and other components. When low clearances and deep insulation prohibits walking in an unfinished Attic, inspection will be from the access opening only. Any items or defects that are not in view from the inspection vantage point (due to accessibility and conditions explained above) on the day of inspection, are disclaimed in this report

5.3. Sealed attic access: The attic access did not open at the time of inspection (sealed). Sealed attics are not opened due to the damage that would be caused to the property. The attic could not be viewed.

Upper attic



6. Structure



Observations:

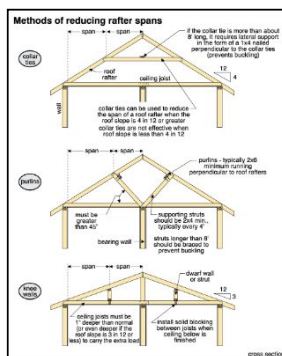
6.1. **Inspection restriction: The full attic area may not have been able to be seen due to a lack of access. The attic may have only been able to be inspected by camera shooting. All areas of the attic may not have been able to be accessed or viewed.**

6.2. [About Attics](#)

6.3. Inspection of the roof structure and attic is performed via visual observation of this area and components which can be reasonably and safely accessed. Areas and components which are inaccessible are noted. Signs of water penetration, AC or plumbing leaks will be noted, as will deficiencies in framing, access, insulation and ventilation.

Limitations: Almost all addicts have spaces which are inaccessible to inspection, whether due to stored items, ductwork, mechanical equipment, roof structural components and roof geometry. Areas which cannot be readily or safely accessed are not inspected.

6.4. Rafter construction noted



7. Insulation Condition



Materials:

- Insulation type: R-value per inch

Fiberglass blanket or batt 2.9 to 3.8 (use 3.2)

High-performance fiberglass blanket or batt 3.7 to 4.3 (use 3.8)

Loose fill Fiberglass 2.3 to 2.7 (use 2.5)

Loose fill rock wool 2.7 to 3.0 (use 2.8)

Loose fill **cellulose** 3.4 to 3.7 (use 3.5)

Expanded polystyrene board 3.6 to 4 (use 3.8)

- The depth of insulation in the attic was approximately ten to twelve inches. The modern recommended value for ceilings is R21-30

Observations:

7.1. Inspection restriction: This inspection is limited to the viewable portions of the attic. This may have only been able through camera shooting. This inspection will not be able to determine whether environmentally hazardous materials are present or the material makeup of the installation itself. This inspection will not determine the effectiveness of the insulation or whether there is air leakage throughout the attic.

7.2. Inspection restriction: Insulation could not be viewed at the time of inspection due to a lack of access to the attic space. Recommend verifying insulation depth and type prior to close.

7.3. Installation basics:

https://hcloud.blob.core.windows.net/hrbpdfs/HRB_7_Insulation_2011.pdf

7.4. [About Insulation](#)

7.5. Insulation R-value per Inch:

Batt or Blanket 3.3

Cellulose 3.7

Polyurethane 6.2

Rock wool 3.3

Rigid board Cellular **glass** 2.5

Polystyrene, molded 2.5

Perlite 2.7

Vermiculite 2.1

7.6. [How To Add Insulation To Your Home](#)

7.7. [For More About Insulating Your Home](#)

7.8. Does your attic insulation measure up: See chart

7.9. Overview: The attic space in a home in this region is the most important area for installation. Attic floor insulation should be at least R 49. Many insulation contractors are now insulating attics to a level of R-60.

In this climate, the three most important factors affecting energy efficiency are air infiltration gains and losses, radiant solar heat gain and conduction. Conduction (or direct heat gain or loss through the walls and ceiling) is primarily controlled by insulation. Air infiltration loss or gain (drafts or air leakage) is controlled by caulking and weatherstripping and air sealing around penetrations in the building envelope. Solar heat gain is controlled by the external shading of windows exposed to the sun or reflected sun. Overall shading around the home with vegetation and by use of mechanical installations such as awnings will also be a factor.

7.10. LIMITATIONS OF INSULATION / VENTILATION INSPECTION: This is a visual inspection limited in scope by (but not restricted to) the following conditions: • Insulation/ventilation type and levels in concealed areas are not inspected. Insulation and vapor barriers are not disturbed and no destructive tests (such as cutting openings in walls to look for insulation) are performed. • Potentially hazardous materials such as Asbestos and Urea Formaldehyde Foam Insulation (UFFI) cannot be positively identified without a detailed inspection and laboratory analysis. This is beyond the scope of the inspection. • An analysis of indoor air quality is not part of our inspection unless explicitly contracted-for and discussed in this or a separate report. • Any estimates of insulation R values or depths are rough average values. • No access was gained to the wall cavities of the home. Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

7.11. Energy Efficiency: It is recommended that all clients visit Efficiency Vermont website: <http://www.encyvermont.com/Index.aspx> for information on energy conservation, rebate programs and tax incentives on appliances, insulation, etc. The website includes excellent tips and information and list contractors who are certified by Efficiency Vermont to perform work. Rebates: <http://encyvermont.com/formyhome.aspx>. Efficiency Vermont is a leader in Vermont energy conservation both within the state and nationally and are a valuable resource for all homeowners across the state.

7.12. For more information on insulation, please visit the following link: http://inspectapedia.com/insulation/Insulation_Inspection.php

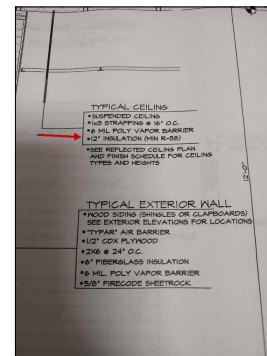
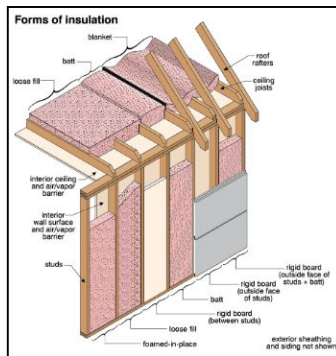
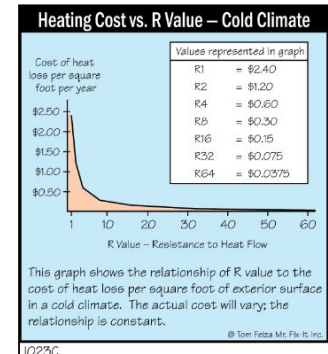
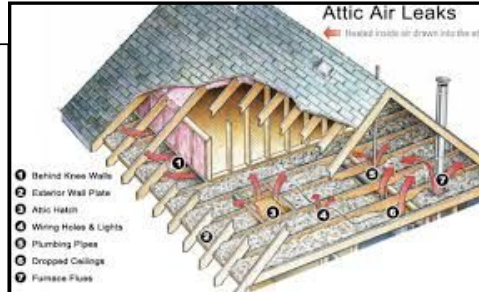
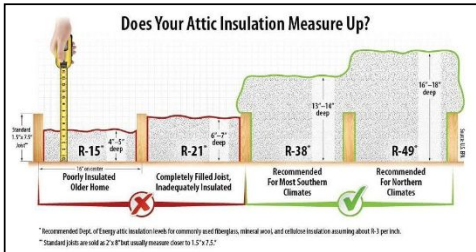
7.13. For more information on saving energy, go to the following link: <http://www.nachi.org/increasing-home-energy-efficiency-client.htm>

7.14. Remember that performing energy upgrades may be a tax deduction. This can include but not be limited to the following materials: Energy-efficient windows, doors, heating appliances, roofing materials, as well as other possible building materials. It is

always best to check with your tax preparer or accountant for the information that applies to your situation.

7.15. Insulation R-Value vs. Heating Costs

7.16. Types of insulation



Attic insulation: 12 inches

8. Electrical

Observations:



8.1. **Inspection restriction: Electrical components could not be viewed due to a lack of attic access at the time of inspection.**

9. Duct

Observations:



9.1. Overview: Ventilation is very important for all buildings. Attic ventilation will reduce the amount of moisture that can develop in insulated attics and can increase roof shingle life by reducing heat and condensation. Good ventilation yields a healthier living environment. Further, it reduces the accumulation of offensive and/or toxic fumes. Interior ventilation and circulation can be significantly improved by keeping interior doors open whenever possible.

Limitations: Indoor air quality is a growing concern. **Mold** and mildew, fostered by moisture accumulation, can lead to respiratory discomfort and aggravate allergies and other respiratory conditions for some individuals. While we may comment on readily visible evidence of possible microbial activity; only environmental testing can verify the presence of microbial activity and mold.

9.2. **Inspection restriction: Ductwork could not be viewed due to a lack of attic access.**

10. Exhaust Vent



Observations:

10.1. **Inspection restriction: Could not access, therefore these components could not be inspected.**



Bathroom

Bathrooms can consist of many features from jacuzzi tubs and showers to toilets and bidets. Because of all the plumbing involved it is an important area of the house to look over. Moisture in the air and leaks can cause mildew, wallpaper and paint to peel, and other problems. The home inspector will identify as many issues as possible but some problems may be undetectable due to problems within the walls or under the flooring..

1. Locations

Locations:

- Main Floor Bathroom(s)

2. Cabinets



3. Counters



4. Electrical

Observations:



4.1. Electrical components appeared serviceable at the time of inspection.

E3703.4 Bathroom Branch Circuits

A minimum of one 20-ampere branch circuit shall be provided to supply bathroom receptacle outlet(s). Such circuits shall have no other outlets. [210.11(C)(3)]

Exception: Where the 20-ampere circuit supplies a single bathroom, outlets for other equipment within the same bathroom shall be permitted to be supplied in accordance with Section E3702. [210.11(C)(3) Exception]

4.2. Code: **GFCI** protection is required within 6 feet of a sink, bathtub or shower, even if they are outside of the bathroom. Recommend installing GFCI protection for receptacles near bathrooms at these distances.

NEC Article 210.8 GFCI Protection; Chapter 535 General Provisions Subchapter R. Real Estate Inspectors. §535.229(b)(3)(A). Standards of Practice:
Minimum Inspection Requirements for Electrical Systems

4.3. Electrical components appeared serviceable at the time of inspection.

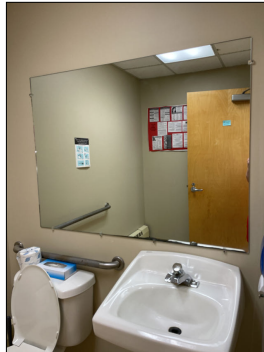
4.4. No major system safety or function concerns noted at time of inspection.

5. Mirrors

Observations:



5.1. The mirror(s) was serviceable at the time of inspection.



6. Exhaust Fan

Observations:



6.1. Check the information label attached to each exhaust fan. Bathroom fans that are switch-operated should be rated at least 50 cfm. Baths over 100 sq. ft., or multiple tubs or showers, should have higher-capacity fans. The sone rating refers to the relative quietness of the unit, rated on a scale of 1 to 7. (Quieter fans have lower sone ratings.)

6.2. Bathroom ventilation improves air quality and helps to maintain proper moisture levels in the home. Excess moisture can migrate into wall and floor cavities and into the attic if the bathroom is not properly vented, and this moisture can damage materials and provide moisture for microbial growth. Ventilation may not have been required when the house was built, but the installation of mechanical ventilation is recommended.

6.3. The bath fans were operated and no issues were found.



7. Sinks

Observations:



7.1. The bathroom sink(s) were/was functional at the time of inspection.

7.2. All bathroom sinks had functional flow and drainage at the time of the inspection.



8. Plumbing

Observations:



8.1. Every effort was made to test all bathroom plumbing fixtures in the house, and check that hot water was being delivered. All the bathroom fixtures are not pictured. Personal belongings are not moved and may conceal issues. Supply valves are not tested as part of a standard home inspection. Water intrusion from bathtubs and shower enclosures is a common cause of damage behind walls, sub floors, and ceilings below bathrooms. As such, periodic re-caulking and grouting of tub and shower areas is an ongoing maintenance task which should not be neglected.

8.2. The bathroom fixtures were noted as operating properly at the time of inspection.



9. Showers



10. Shower Walls



11. Enclosure



12. Bath Tubs



13. Toilets



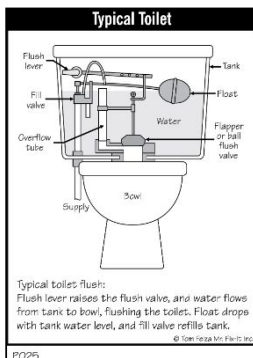
Observations:

13.1. Observed as functional and in good visual condition.

13.2. Operated when tested. No deficiencies noted.

13.3. For more information on low-flow toilets, please visit the following link:
<http://www.greenbuildingadvisor.com/content/do-low-flow-toilets-really-work>

13.4. American Standard



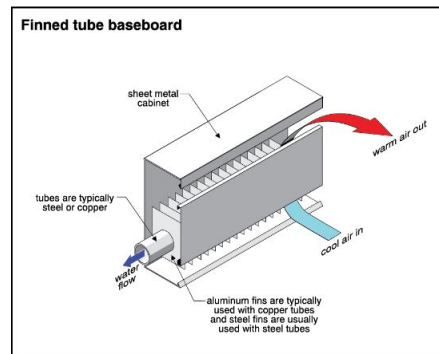
14. Heating

Observations:



14.1. Central heating noted in this room. At the time of the inspection, all appeared to be functioning and in serviceable condition.

14.2. Baseboard hot water heat noted



15. Doors

Observations:



15.1. No major system, safety or function concerns noted at time of inspection.

15.2. Solid panel, wood doors noted

16. Floor Condition

Materials:

- Vinyl squares (tiles) are noted

Observations:

16.1. Carpet, vinyl, and wood floors near water sources (kitchens, laundry, bathrooms, etc.) need to be monitored regularly for wet conditions where mold can thrive. Vinyl floors need to be monitored regularly for curling and deteriorated grout or caulking to prevent moisture from getting under the vinyl and creating wet conditions where mold can thrive. There is always the possibility that moisture has penetrated beneath any floor covering in an existing structure, particularly in a kitchen at the dishwasher and sink, and in bathrooms at the bathtub/floor junction and the toilet/floor junction, and that any mold or subfloor damage would not be detected during a visual home inspection.

16.2. The floors appeared to be in serviceable condition at the time of inspection.

17. Ceiling Condition

Materials:

- There are acoustic grid and tile ceilings noted.

Observations:

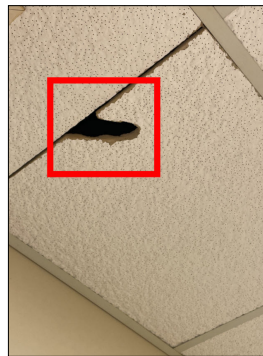
17.1. Ceilings appeared serviceable at the time of inspection.

17.2. Evidence of past leaking was noted. Areas were dry at the time of inspection.

17.3. Damaged areas of ceiling noted. Recommend repairing as needed or necessary.

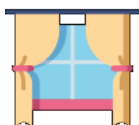


Evidence of past moisture damage noted



Ceiling damage noted

18. Window



Interior Areas

The Interior section covers areas of the house that are not considered part of the Bathrooms, Bedrooms, Kitchen or areas covered elsewhere in the report. Interior areas usually consist of hallways, foyer, and other open areas. Within these areas the inspector is performing a visual inspection and will report visible damage, wear and tear, and moisture problems if seen. Personal items in the structure may prevent the inspector from viewing all areas on the interior.

The inspector does not usually test for mold or other hazardous materials. A qualified expert should be consulted if you would like further testing.

1. Closets

Observations:



1.1. The closets are in serviceable condition.



2. Electrical

Observations:

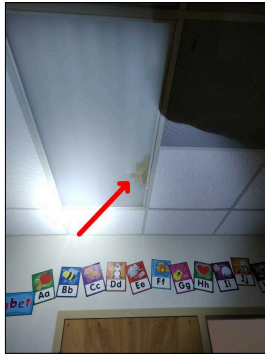


2.1. **Inspection Restriction: Every effort was made to test accessible electrical components. Damaged or non-working receptacles or components may have been concealed behind room contents. These units are disclaimed and not included in this inspection. The viewable/accessible electrical components were in serviceable condition at the time of inspection.**

2.2. [Shockproof USB Receptacles](#)

2.3. Every effort was made to test accessible electrical components. Damaged or non-working receptacles or components may have been concealed behind room contents. These units are disclaimed and not included in this inspection. The viewable/accessible electrical components were in serviceable condition at the time of inspection.

2.4. Damaged/Missing light cover noted. Recommend installing cover.



Damaged light cover



Testing receptacles

3. Smoke Detectors

Observations:



3.1. Testing of smoke detectors is not included in this inspection. Pushing the "Test" button only verifies that there is power at the detector--either a battery or hard wired to the house power--and not the operational workings of the detector. The operational check is done by filling the sensor with smoke and is beyond the scope of this inspection. Battery operated smoke alarms should be checked routinely and the batteries changed frequently.

3.2. Recommend photoelectric combo smoke/CO detectors on every level of the home and the adjacent hall the any individual sleeps or in the bedroom according to code and when the home was constructed. For more information please go to the following link: http://firesafety.vermont.gov/sites/firesafety/files/pdf/Code%20Info%20Sheets/2011_CO%20Alarm.pdf

3.3. MAINTENANCE: Periodic testing and changing batteries at the daylight savings time changes (both) to ensure proper Smoke Alarm operation is required. <http://www.workingre.com/wp-content/uploads/2013/10/smoke-alarms-NE.html>

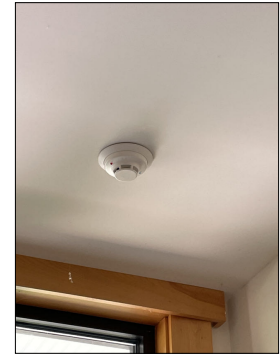
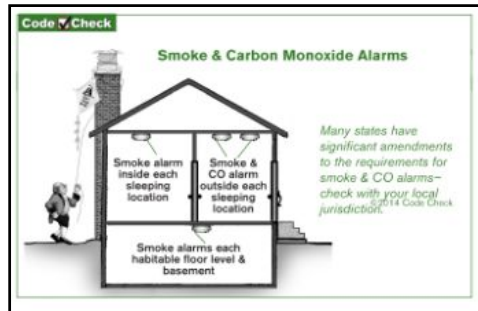
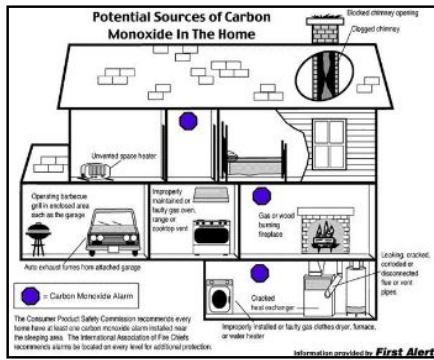
3.4. Smoke detectors last 6-10 years. Recommend replacing at these time intervals.

3.5. SAFETY INFO: **Carbon Monoxide (CO)** is a lethal gas--invisible, tasteless, odorless--produced in normal amounts whenever you use an appliance which burns a combustible fuel--gas, oil, kerosene, charcoal, and wood. When proper ventilation becomes blocked or inadequate, CO concentrations build up inside your home and become deadly. For more about Carbon Monoxide C/O, please visit the following link: <https://www.nachi.org/carbon-monoxide.htm>

3.6. Security system smoke detectors noted. Recommend verifying with the security company that the smoke detectors are combination photoelectric and carbon monoxide detectors per Vermont state standards.

https://firesafety.vermont.gov/sites/firesafety/files/files/Documents/dfs_codesheet_resident_al_smoke_alarms_matrix.pdf

https://firesafety.vermont.gov/sites/firesafety/files/files/Documents/dfs_codesheet_co_matrix.pdf



4. Stairs & Handrail



5. Doors

Observations:



5.1. For more about interior doors, please visit the following link:

<https://www.discoverhorizon.com/hrb/article.aspx?ASKID=2760&DROPDOWN=1853>

5.2. Recommend all interior doors having doorstops installed to prevent damage to adjacent interior wall coverings.

5.3. No major system, safety or function concerns noted at time of inspection.

5.4. Solid wood panel doors noted



Example of doorstops

6. Floor Condition



Materials: Carpet is noted, VCT flooring noted

Observations:

6.1. **Inspection restriction: All areas beneath the floor covering could not be viewed at the time of inspection. All primary and secondary damage unless otherwise noted in the report, is disclaimed as it could not be viewed or inspected. This extends to all areas of the home including bedrooms, bathrooms, kitchens, basement floor coverings and anywhere where there would be finished flooring.**

6.2. Flooring appeared to be functional at the time of inspection.

6.3. Damaged floor noted. Recommend review for repair or replacement by a qualified professional as needed or necessary.

6.4. The floor appeared to be affected by high levels of moisture. This would happen through vapor diffusion and capillary suction with moisture coming to the concrete from below. Recommend trying to manage moisture off the roof areas with gutters, while moving moisture away from the building.



Evidence of vapor diffusion and capillary suction: moisture affecting the flooring



Damaged floor



Damaged flooring noted



Damaged flooring noted



Damaged flooring noted

7. Wall Condition

Materials: Drywall walls noted., Painted finish noted.

Observations:



7.1. **Inspection restriction:** All areas beyond the interior finishes could not be viewed or inspected at the time of inspection. Therefore, all primary and secondary damage that may exist or may be found subsequent the inspection are disclaimed. These areas simply could not be inspected or viewed. This extends to all other areas of the home with finished walls.

7.2. Reading a thermal image: In this sample image, warmer temperatures are represented by lighter colors, cooler temperatures by darker colors. The temperature span and color pallet that the thermographer used for the image is shown on the right.

7.3. **Cracking:** the complexity of cracking depicts the nonuniform change in dynamic soil structure interactions is dependent upon the following factors: the sensor location of ground movement, the type and location of applied stress, in the response of the building material being distorted. The complexity, as related to crack pattern expression, is considered simple, compound and complex. It can also refer to either local or widespread areas of distortion. Complexity is more distinguishable in wall cracks than in slab cracks

Simple cracks: reflect minimal nonuniform and localized soil structure interaction there

pattern indicates a single sensor ground movement and applied stress. The majority of cracks in buildings fall into this category. These cracks represent the predictable early stages of low level ground movement is a distortion of the building material.

Common cracks: reflect increasing, nonuniform soil structure interaction. They are a single lineament that is changing pattern during development because of a change in the sense of ground movement, and/or type of applied stress. These cracks are common in buildings where a geological setting processes more than a single hazard.

Complex cracks reflect a chaotic soil structure interaction. They are expressed as the simultaneous generation of theories crack patterns because of the influence of 2 or more senses of ground movement in a change of location or types of applied stress unusual architectural building configurations also contribute to the nonuniform distribution and release of stress. Coupled geological hazards causing stress at a focus point usually develops more than one crack pattern, although this situation is rare.

Crack activity is a reflection of building behavior. It defines the level of ground movement relative to the buildings distortion in real time The rate of cracking can provide the ability to forecast future building distress.

Geological processes generate 2 types of cracks found in buildings:

Live cracks and Static cracks

Live cracks: are created by, or in response to, continuous or recurrent building stresses caused by dynamic geological processes such as the constant upward or downward vertical movement of soil sustained by the swirl and shrink capability of expansive clay. These cracks decrease in size or recur after repair.

Static cracks: are created by, or in response to, a single incident or transient geological process such as a seismic event. Once formed, static cracks maintain a constant size and when repair do not reopen.

Cracks occur when a ground force introduces a stress on a building material that exceeds the strength of the material itself these types of stress are known as tension, shear and compression.

The most common cause of cracking is geological processes that may be hazardous and affect buildings such as soil subsidence, soil collapse, soil shrinkage, Hydro consolidation, soil expansion, landslides, slow creep, lateral fill extensions, and earthquake.

7.4. Gaps and Separation: Building elements may be predisposed to displacement along construction joints or cold contacts in the wall or floor slab. These would include drywall sheet abutments, and crack classification, recognition of distinguishing correct features and knowledge of crack patterns caused by variable types of ground movements.

Ground movement and soil structures can cause a single uniform type of stress in building materials. However, it can also initiate multiple stresses creating a number of different crack and gap patterns that may develop simultaneously.

Keep in mind that cracking and separation may return yearly and in the same areas. New areas of cracking and separation are also possible.

7.5. [About Loadbearing Walls](#)

7.6. [What Does Continuous Load Path Mean](#)

7.7. Items such as wall paper, paneling, wall mirrors, wall hangings can conceal damage

to walls. Concealed defects are not within the scope of the home inspection. In areas where there is typically a high level of humidity, such as bathrooms and laundry rooms, any damage to the wall paper or paneling can allow moisture to accumulate behind the wall paper or paneling, promoting moisture damage and possible mold and mildew growth.

7.8. See photo example of loadbearing walls:

7.9. Cracking noted in walls. This is often due to settling and seasonal movement due to the freeze/thaw effect of the climate. For more information about cracking please visit the following link: http://inspectapedia.com/interiors/Drywall_Crack_Causes.php

Cracking may or may not be (as it may be concealed by contents or installations) noted in the home wall system in this report. If cracking within the home is of concern to you, it is advised that you seek further opinion from a structural engineer. A home inspector cannot make structural determinations regarding cracking of any nature.

For more information about repairing settle cracks, please visit the following video link: https://www.youtube.com/watch?v=kZy_eTMggVU

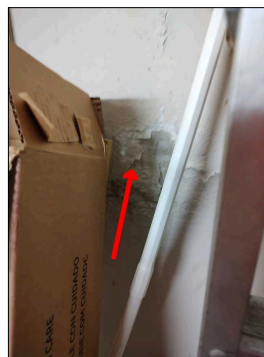
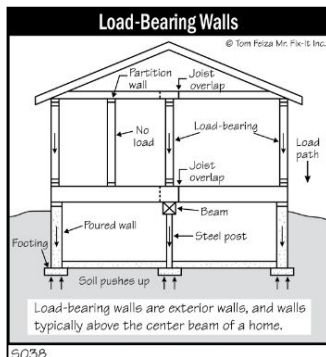
https://www.youtube.com/watch?v=tY_iKmrCeFs

[How can I tell if a diagonal crack in drywall at the corner of a window or door indicates a structural problem?](#)

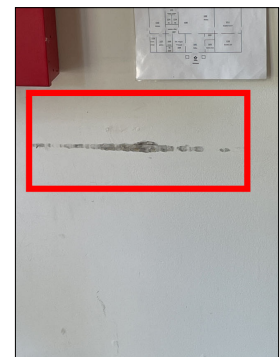
7.10. [Problems with walls: water damage](#)

7.11. Wall damage noted. Repair as needed or necessary.

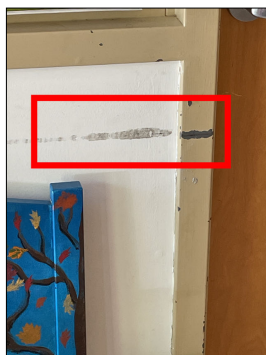
For more about repairing walls, please visit the following video link: <https://www.youtube.com/watch?v=qbupCzSPW9o>



Damaged wall



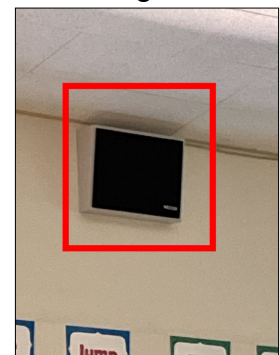
Damaged wall



Damaged wall



Damaged wall



Speakers



Damaged wall



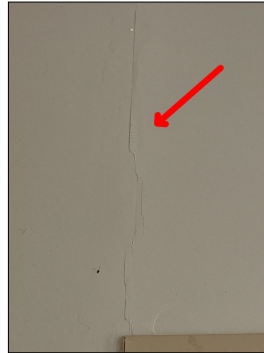
Damaged wall



Damaged wall



Damaged wall



Settle cracking



Damaged wall

8. Window Condition



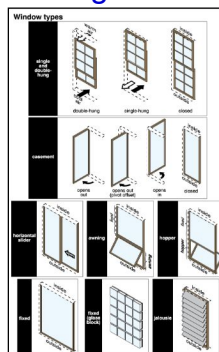
Materials: Vinyl framed double hung window noted., Insulated glass noted.
Observations:

8.1. **Inspection Restriction: A representative amount of windows were tested during inspection. Internal window parts could not be inspected. Windows that were impeded by finishes or contents could not be inspected. Window parts have a rate of failure and can fail at any time.**

8.2. How to install replacement windows:
<https://www.youtube.com/watch?v=rHVYqMRnr94>

8.3. Window types: See photo

8.4. A representative amount of windows were opened/tested. If there is furniture or contents in the way of windows, we do not test those units as we cannot move furniture and contents. As always, we recommend that you make sure all components are working in your final walk-through. Keep in mind that conditions in the home can change from the day of this report to the final walk-through.



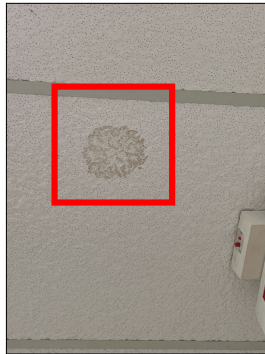
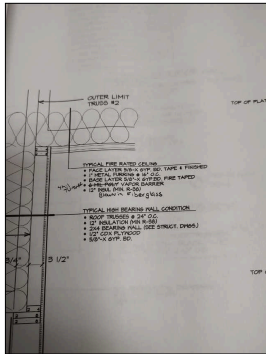
9. Ceiling Condition



Materials: There are drywall ceilings noted., There are acoustic grid and tile ceilings noted.
Observations:

9.1. **Inspection restriction: Areas beyond finished ceilings could not be viewed or inspected. Unless otherwise noted in the report, these areas are disclaimed. It is possible for damage to exist in these areas and be covered up by the current or past owners. Unless uncovered, these areas cannot be inspected or viewed. This extends to any area of the property that has finished ceilings.**

9.2. Evidence of past leaking was noted. Areas were dry at the time of inspection.



Water stains: dry



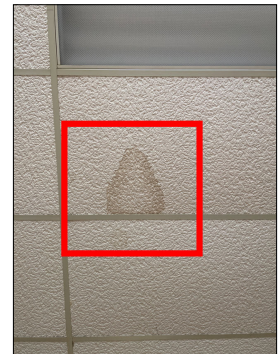
Water stains: dry



Water stains: dry



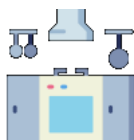
Water stains: dry



Water stains: dry



Water stains: dry



Kitchen

Inspection of kitchens typically includes the following:

ROOM

- wall, ceiling and floor
- windows, skylights and doors

APPLIANCES

- range/cooktop (basic functions, anti-tip)
- range hood/downdraft (fan, lights, type)
- dishwasher (operated only at the Inspector's discretion)

CABINETS

- exterior and interior
- door and drawer

SINK

- basin condition
- supply valves
- adequate trap configuration
- functional water flow and drainage
- disposal

ELECTRICAL

- switch operation
- outlet placement, grounding, and GFCI protection

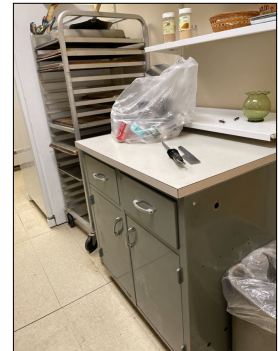
Note: Appliances are operated at the discretion of the Inspector:

1. Cabinets

Observations:



1.1. Appeared functional and in satisfactory condition, at time of inspection.



2. Counters

Observations:



2.1. The countertops were in serviceable condition at the time of inspection.

2.2. Solid Surface tops noted.

2.3. Plastic laminate tops noted.

2.4. Stainless steel countertops noted



3. Electrical

Observations:



3.1. Kitchen receptacles: All receptacles serving counter tops in the kitchen and within 6 feet of water shall have GFCI protection. Code [210.8(A)(6), 210.8 (A)(7) 2002, 2005]

NEC Article 210.8 GFCI Protection; Chapter 535 General Provisions Subchapter R. Real Estate Inspectors. §535.229(b)(3)(A). Standards of Practice: Minimum Inspection Requirements for Electrical Systems

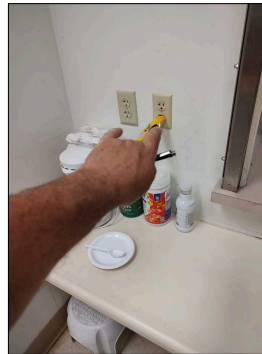
3.2. Required GFCI protected receptacles and year: See photo

3.3. Kitchen Requirements: At least two 20A small-appliance branch circuits are required in kitchens and dining areas. These circuits are in addition to those for lighting or permanently installed appliances. Additional circuits can be installed for specific appliances, such as refrigerators. Receptacles are required for counter top spaces that are 1 ft. or more in width.

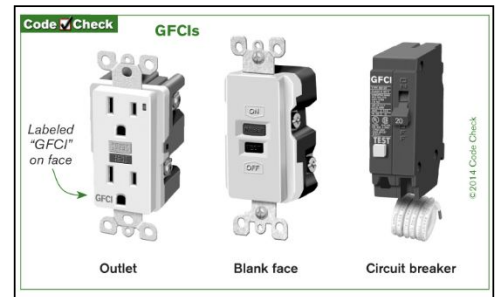
3.4. No GFCI protection present, suggest installing GFCI protected receptacles for safety.(areas of the kitchen). From International Residential Code: Section E3902. E390 2.6 Kitchen receptacles: " 125-volt, single phase, 15 and 20 ampere receptacles that serve countertop surfaces shall have ground fault circuit interrupter protection for personnel."

3.5. Extension cords shall not be used as a substitute for permanent wiring. All extension cords shall be removed and/or replaced with adequately placed electrical outlets installed by a licensed electrician. If wiring new electrical outlets this work requires an electrical permit from the Division of Fire Safety and must be obtained BEFORE work may commence. NFPA 11.5.3.5 Extension cords and flexible cords shall not be affixed to structures, extend through walls, ceilings, floors, or under doors or floor coverings or be subject to environmental or physical damage. 1:11.1.7.6

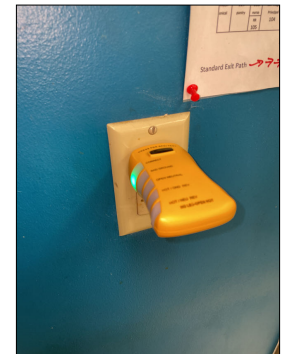
DWELLING UNIT 120 volt GFCI Protected Receptacle Outlets - REQUIRED LOCATIONS												
DATE OF INSPECTION	S P I N G	P O L S	S A S	E T H S	B A S	G A S	H A S	M A S	K A S	U A S	C A S	S A S
NEC EDITION	H O T	T O S	R I O S	H O S	A G S	S O T	D U B S	A G S	H E S	U N S	P A S	(formerly) W A S
1971	X ₁₀			X ₁₀								
1975	X ₁₀			X	X							
1978	X ₁₀			X ₁₀	X	X ₁₀						
1982	X ₁₀	X ₁₂		X ₁₀	X	X ₁₀						
1984	X ₁₀	X ₁₂		X ₁₀	X	X ₁₀						
1997	X ₁₀	X _{12A}	X ₁₀	X	X ₁₀	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀		
1990	X ₁₀	X _{12A}	X ₁₀	X	X ₁₀	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	
1997	X ₁₀	X _{12A}	X ₁₀	X	X ₁₀	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	X ₁₀
1996*	X ₁₀	X _{12A}	X ₁₀	X	X ₁₀	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	X ₁₀
1999*	X ₁₀	X _{12A}	X ₁₀	X	X ₁₀	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	X ₁₀
2002*	X ₁₀	X _{12A}	X ₁₀	X	X ₁₀	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	X ₁₀
2005*	X ₁₀	X _{12A}	X ₁₀	X	X ₁₀	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	X ₁₀
2008 ¹³	X ₁₀	X _{12A}	X ₁₀	X	X	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	X ₁₀
2012 ¹³	X ₁₀	X _{12A}	X ₁₀	X	X	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	X ₁₀
2014 ¹⁴	X ₁₀	X _{12A}	X ₁₀	X	X	X ₁₀	X	X ₁₀	X ₁₀	X ₁₀	X ₁₀	X ₁₀



Receptacle that needs to be GFCI protected



Receptacle that needs to be GFCI protected



Extension cord being used for permanent power

4. Sinks

Observations:



4.1. Stainless steel sink noted

4.2. Grease trap noted

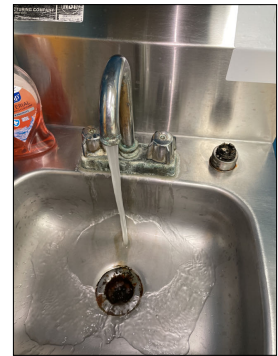
4.3. Water was off to sink at the time of inspection: Note that without water the sink(s) and/or dishwasher could not be evaluated.

Cold side, at one of the sinks.

4.4. Faucet leaks at base. Recommend repairing as needed or necessary.

For more about sink and faucet replacement please visit the following video link:
<https://www.youtube.com/watch?v=OvUuoY4veRA>

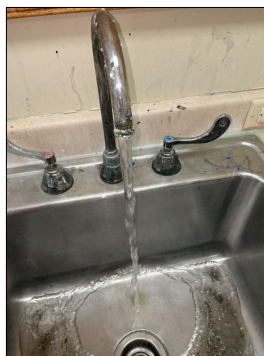
Multiple sinks



Grease trap



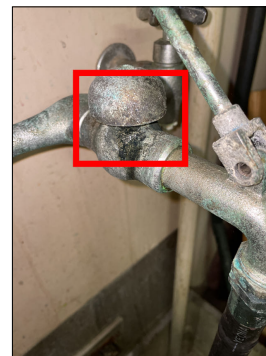
No water from cold side of faucet



Water faucet leaking



Utility sink



Water faucet leaking at the base

5. Water Filter



6. Spray Wand

Observations:



6.1. The spray wand was operated and was functional.



7. Hot Water Dispenser

Observations:



7.1. No hot water dispenser noted

8. Soap Dispenser

Observations:



8.1. No soap dispenser noted

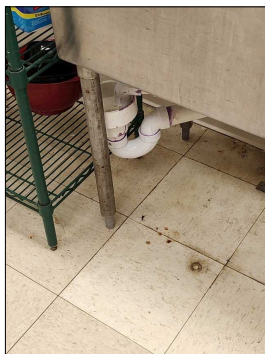
9. Plumbing

Observations:



9.1. The plumbing was in serviceable condition at the time of inspection.

9.2. Older style metal traps noted. Buyer is cautioned that these traps can leak at any time due to corrosion.



Corrosion on pipes



Corrosion on pipes

10. Dishwasher

Observations:



10.1. [How To Maintain Your Dishwasher](#)

10.2. Dishwasher was operational at the time of inspection. Dishwashers most commonly fail internally at the pump, motor or seals. We do not disassemble these units to inspect these components. We recommend you operate this unit prior to closing.

10.3. Stainless

10.4. Hobart



11. Cook top condition

Observations:



11.1. **Inspection restriction: Be advised that appliances can and may fail at any time, regardless of age and use. This inspection does not guarantee the working or continued working operation of any appliance in the home. The appliances that were tested, were done so as a courtesy only and are disclaimed in the report and after inspection, should they fail. Time intervals for failure cannot be predicted.**

11.2. The built-in appliances of the home were inspected as a courtesy and reported on with the above information.

It is recommended that all repairs or replacements be conducted by a qualified, licensed specialists, who may well identify additional defects or recommend some upgrades that could affect your evaluation of the property.

11.3. Stainless

11.4. Gas cook top noted.

11.5. Ultra Max & Southbend



12. Oven & Range

Observations:



12.1. The heating elements/burners and oven operated when tested, but does not confirm the efficiency of the system.

12.2. Oven: gas burners

13. Microwave



14. Venting



15. Vent Condition

Observations:



15.1. The unit was in serviceable condition at the time of inspection.

16. Refrigerator Condition



Materials:

- Black
- Stainless
- White
- Frigidaire
- GE
- Tnoulsen

Observations:

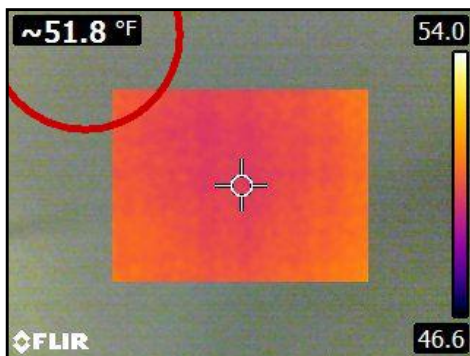
16.1. The unit was operating at the time of inspection. This does not confirm or determine the efficiency of the unit/appliance.

16.2.

Recall on Appliances and other items that may be used in the home go to:

http://www.ashi.org/customers/cpsc_recalls.asp or <http://www.recalls.org/appliances.html>

16.3. Life expectancy for home components: <http://www.nachi.org/life-expectancy.htm>



Refrigerator operating

17. Floor Condition



Materials:

- VCT flooring noted

Observations:

17.1. Carpet, vinyl, and wood floors near water sources (kitchens, laundry, bathrooms, etc.) need to be monitored regularly for wet conditions where mold can thrive. Vinyl floors need to be monitored regularly for curling and deteriorated grout or caulking to prevent moisture from getting under the vinyl and creating wet conditions where mold can thrive. There is

always the possibility that moisture has penetrated beneath any floor covering in an existing structure, particularly in a kitchen at the dishwasher and sink, and in bathrooms at the bathtub/floor junction and the toilet/floor junction, and that any mold or subfloor damage would not be detected during a visual home inspection.

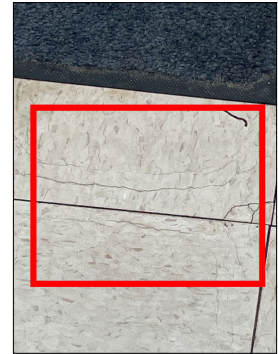
17.2. Damaged floor noted. Recommend review for repair or replacement by a qualified professional as needed or necessary.



Damaged flooring noted



Damaged flooring noted



Damaged flooring noted



Floor drain

18. Wall Condition



Materials:

- Drywall walls noted.
- Painted finish noted.
- Marlite walls noted

Observations:

18.1. The walls were in serviceable condition at the time of inspection.

19. Ceiling Condition



Materials:

- There are acoustic grid and tile ceilings noted.

Observations:

19.1. The ceilings were in serviceable condition at the time of inspection.



Foundation

1. Slab Foundation



Observations:

1.1. [For more about concrete cracking, please visit the following video:](#)

1.2. Foundation construction included a slab-on-grade.

Because the General Home Inspection is a visual inspection, inspection of the slab-on-grade foundation is limited by the fact that typically, most of the foundation and slab is hidden underground or by interior floor coverings. Where possible, I inspect that portion of the foundation visible at the home exterior between grade and the bottom of the exterior wall covering.

Shrinkage cracks are often visible and are not a structural concern. It is possible for moisture to enter the foundation through these cracks by capillary action and within the home structure this moisture may cause damage typically detectable only through invasive techniques that lie beyond the scope of the General Home Inspection.

1.3. Concrete slab not visible in all areas due to floor coverings.

1.4. Numerous cracks were observed at the basement concrete floor. Moisture and radon gases could enter through the cracks. Recommend sealing the cracks with a concrete crack filler or caulk that is recommended for concrete.

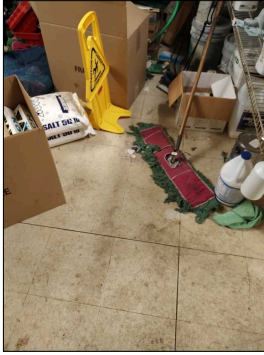
1.5. No active leaks observed at the time of inspection.

1.6. • Vapor Diffusion and Capillary Suction: Air flow in a home moves from bottom to top. Vapor pressure causes moisture to move through air spaces, whether in a room, a smaller interstitial space, or through voids in materials. In areas where vapor pressure is different from one side of a structural component to another, moisture is diffused through the component to equalize the pressure (Water sitting outside a concrete foundation). In such an instance, vapor pressure and capillary suction act together in sequence to move water through materials and the voids that exist in the material. Concrete is a highly permeable material and allows moisture to move freely and for great distances in the material. It is highly possible that water that falls close to the home (due to lack of gutters) provides an ample amount of moisture to enter the structure in this manner. This would allow moisture, in the form of vapor pressure to enter materials that will wick moisture once it gets into the basement. Wood is one of those materials.

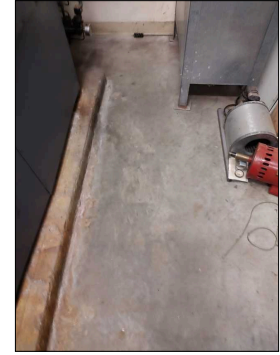
1.7. All concrete floor slabs experience some degree of cracking due to shrinkage in the drying process. In most instances floor coverings prevent recognition of cracks or settlement in all but the most severe cases. Where carpeting and other floor coverings are installed, the materials and condition of the flooring underneath cannot be determined.

1.8. Floor drain noted.

Condition: Verify function in case of an Emergency - Recommend testing the functionality of the basement floor drain. This can be done with a standard garden hose. It is important that this drain is tested and functional in case of a plumbing or foundation leak. If it is not functioning as designed it is better to find out under a controlled test than when it is seriously needed.



Floor drain



Floor drain

2. Foundation Perimeter

Observations:



2.1. **Inspection restriction: Groundwater may enter a home at any time. Any home with a subsurface foundation may experience water intrusion at any time. The areas on the outside of the foundation and possible components such as in exterior drain system, cannot be inspected visually and are disclaimed in this report. If the home contains a sump pump, be advised that this pump may fail at any time.**

2.2. No deficiencies were observed at the visible portions of the structural components of the home.

2.3. No leaks were observed at the time of the inspection.

2.4. Although there are no signs of water penetration we caution you to consider any basement as wet until experience proves it dry.

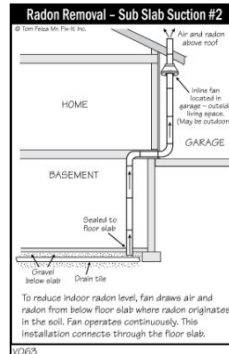
2.5. No stains or evidence of moisture penetration observed.

2.6. Radon: it is highly encouraged that you inform yourself (if you have not already) about radon gas and the effects that it may have on individuals. if elevations of radon gas are found in the home, systems can be put in place to drastically reduce levels to what the EPA considers safe. Only radon testing can determine the levels that may or may not exist within the home. We highly recommend that you consider testing the levels prior to the purchase of the home. For more information about radon please see the following information:

<http://www.epa.gov/radon/> For a checklist of home maintenance items please see the following link: <http://www.myhomeideas.com/how-to/weekend-projects/home-maintenance-checklist-1000000173> 132

For a detailed map and averages in your region, please visit the following link: <http://www.radon.com/maps/>

2.7. Financial Incentives For Being Energy Efficient:
<http://www.buildingenergyvt.com/resources/home-improvement-incentives/?gclid=CNj09oDMLrgCFQui4AodaGIAj>



3. Foundation Walls

Observations:



3.1. Views of the **foundation walls** are limited to the areas that can be seen at the time of inspection. Finishes, insulation and contents may impede inspection of these areas. Further, only the exposed areas of the foundation walls can be inspected. No areas that are below grade and to the exterior, can/could be evaluated. These areas along with any area that is limited in view, are disclaimed in the report.

3.2. Why does concrete crack: For more information please visit the following video:
<https://www.youtube.com/watch?v=nEK53vEpnw>

3.3. For more about foundation walls, please visit the following link:
<https://www.discoverhorizon.com/hrb/HHRB.aspx?id=445&DROPDOWN=4607>

3.4. A home's foundation is typically comprised of poured concrete, block, **stone** and/or lumber and is often built in a slab or pier and beam configuration. Regardless of its construction, the primary purpose of the foundation is to provide a stable base to support the entire structure of the building and its contents, and to transfer that weight to the ground. Any improper movement of the foundation, especially differential movement, can have a detrimental impact to all of the home's structural systems.

For more about basic waterproofing for your basement please visit the following link:
<https://www.nachi.org/waterproofing-basements.htm>

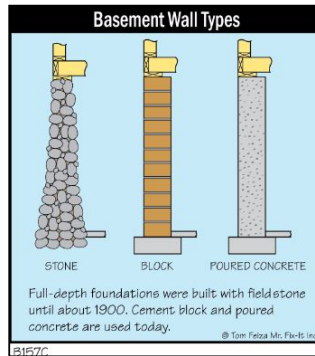
3.5. For more Information on How to Protect Your Property from Water Damage, please visit the following: <http://www.nachi.org/waterdamage.htm>

3.6. For more information about foundation insulation please visit the following link:
<https://www.nachi.org/foundationinsulation.htm>

3.7. Normal settlement.

3.8. No leaks were observed at the time of the inspection.

3.9. Basement wall types: see photo



4. Cripple Walls



5. Ventilation

Observations:



5.1. Recommend adding a 70 pint, self pumping dehumidifier to manage humidity in the basement. For mor information about dehumidification, please go to the following link: <http://www.finehomebuilding.com/how-to/departments/how-it-works/dehumidifiers.aspx>

6. Vent Screens

Observations:



6.1. Vent screens noted as functional.

7. Access Panel

Observations:



7.1. Inspection method: Basement was fully accessible, basement finishes were noted that concealed wiring and plumbing and primary structure. Only viewable areas were inspected.

7.2. Exterior access noted

8. Post and Girders

Observations:

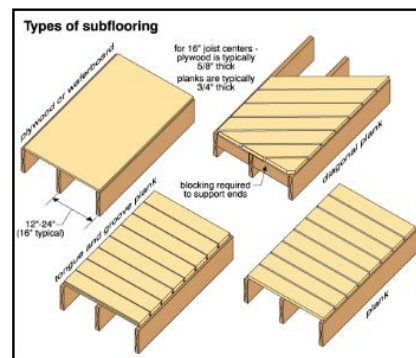
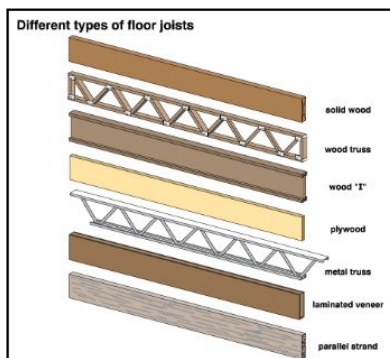
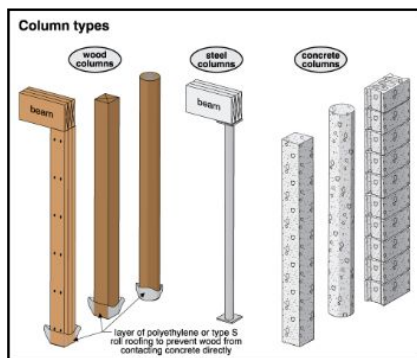


8.1. For information about why buildings move, please visit the following link: https://hcloud.blob.core.windows.net/hrbpdfs/HRB_3_Structure_2011.pdf

8.2. Support Material: Steel

8.3. Beam Material: Wood

8.4. Types of subfloor: See photo



9. Foundation Electrical

Observations:



9.1. The foundation electrical appeared functional at the time of inspection.

10. Foundation Plumbing

Observations:



10.1. **Inspection restriction: All plumbing in interior walls and in areas that could not be accessed, viewed and inspected is disclaimed in this report. It is possible that the current or past owners have performed unprofessional and improper repairs in these areas. Also, older pipes and installation's may exist in these areas as well and have a rate of failure. Plumbing can fail at any time. These failures cannot be predicted.**

10.2. For more about plumbing, please visit the following link:

https://hcloud.blob.core.windows.net/hrbpdfs/HRB_8_Plumbing_2011.pdf

10.3. [Understanding Home Plumbing and Maintenance](#)

10.4. **LIMITATIONS OF PLUMBING INSPECTION** : This is a visual inspection limited in scope by (but not restricted to) the following conditions: • Portions of the plumbing system concealed by finishes and/or storage (below sinks, etc.), below the structure, or beneath the ground surface are not inspected. • Water quantity and water quality are not tested unless explicitly contracted-for and discussed in this or a separate report. • Clothes washing machine connections are not inspected. • Interiors of flues or chimneys which are not readily accessible are not inspected. • Water conditioning systems, solar water heaters, fire and lawn sprinkler systems, and private waste disposal systems are not inspected unless explicitly contracted-for and discussed in this or a separate report. Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

10.5. Plumbing: Every effort was made to test all the plumbing fixtures at the house. All the plumbing fixtures are not be pictured here. Supply valves are not tested as part of a standard home inspection. The water flow is test for adequacy by running water in the bath sink and shower while the toilet is flushed. Any issues will be noted in the appropriate section. The inspector attempts to evaluate drain pipes by flushing every drain that has an active fixture while observing its draw and watching for blockages or slow drains, but this is not a conclusive test and ONLY A VIDEO-SCAN of the main line would confirm its actual condition.

10.6. Drain Lines: Reasonable effort is made to evaluate the viewable and accessible drain pipes by flushing every drain that has an active fixture while observing its draw and

watching for blockages or slow drains, but this is not a conclusive test and ONLY A VIDEO-SCAN of the main line would confirm its actual condition.

10.7. 3/4 inch copper

10.8. Poly Vinyl Chloride "PVC" waste and vent pipes noted.

10.9. Appears Functional at time of inspection.

10.10. See photo for main water shut off valve location.<FYI> Future reference in the event of an emergency.

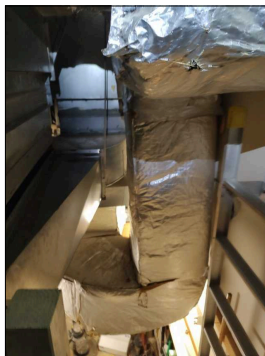
11. Ducting

Observations:



11.1. No deficiencies were observed at the visible portions of the structural components of the home.

11.2. Appeared functional, at time of inspection. The interior condition of the ductwork is beyond the scope of a home inspection and would require a more invasive inspection if this condition is a concern.



Electrical

1. Cable Feeds

Observations:



1.1. **Inspection restriction:** The electrical inspection of this home is limited to what is viewable and accessible. All wiring within walls and all wiring installations that cannot be or inspected are disclaimed in this report. It is possible that the current or past homeowners performed unprofessional installations of wiring and components to the wiring system of the home. Be aware: Components may fail at any time, after this inspection. Time intervals for electrical failure cannot be predicted.

1.2. What is [Grounding and Bounding](#)

1.3. [The Shocking Truth About Grounding Electrode Conductors](#)

1.4. For more about the electrical service in your home, please visit the following link:
https://hcloud.blob.core.windows.net/hrbpdfs/HRB_4_Electrical_2011.pdf

1.5. For more about your electrical system: <https://inspectapedia.com/electric/Building-Electrical-Systems.php>

1.6. There is an underground service lateral noted.

1.7. UFER electrode or primary grounding rod: The main electrical service was grounded to steel re-bar left protruding from the foundation for this purpose. This type of ground is called a "ufer" (YOO-fer) ground. This type of grounding electrode has length and continuity requirements which could not be confirmed at the time of the inspection due to the fact that the grounding electrode was encased in concrete or driven into the ground.
<https://www.nachi.org/grounding-electrodes.htm>



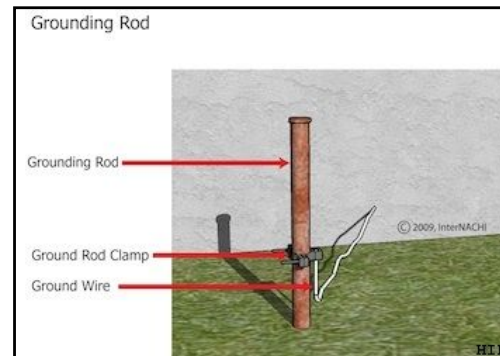
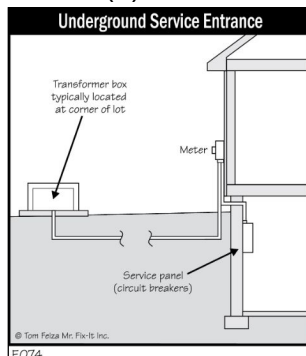
Solar Meter(s)



Two-way radio antenna



Power meter location



2. Electrical Panel



Location:

- Main Location: Main Floor
- Siemens

Location: A sub-panel is a metal cabinet containing overcurrent devices such as breakers or fuses that protect electrical circuits in the home. Power to branch circuit breakers in this sub-panel was controlled by a main disconnect located in the service panel.

Observations:

2.1. [Electrical System](#)

2.2. Surge Protection Devices (SPD's)

SPD not present: Not present but considered best practice and installation is encouraged

(ELECTRICAL-17) Description:

Voltage surges can be a costly example of the power interference that occurs in Buildings every day. This momentary rise in voltage can start inside or outside a Building and damage sensitive electronic equipment such as computer, Building entertainment center, treadmills, and all the other --often expensive -- equipment found in most Buildings today.

Conventional surge protectors in the home cannot protect against large surges from lightning and it is still considered best practice to unplug expensive appliances during a lightning storm.

Whole Building surge arresters should be installed at the Building's electrical service panel by professional, licensed electrical contractors. There are dozens of different makes, models and styles of surge protectors on the market, which vary greatly in both price and quality. The type and size of the service panel, how full the panel is, as well as the investment in appliances and electronic devices that need to be protected all play a role in determining which surge protector should be installed. Your service professional, after inspecting the Building and service panel, will make the recommendation as to the appropriate product to be installed.

2.3. [Electrical Safety](#)

2.4. Three (3) feet of clearance should be maintained around the panel box at all times so that the units can be maintained and so that you can get to the breakers in an emergency. **DO NOT STORE ITEMS NEAR YOUR ELECTRICAL PANEL!**

2.5. LIMITATIONS OF ELECTRICAL INSPECTION : This is a visual inspection limited in scope by (but not restricted to) the following conditions: • Electrical components concealed behind finished surfaces are not inspected. • Only a representative sampling of outlets and light fixtures were tested. • Furniture and/or storage restricted access to some electrical components which may not be inspected. • The inspection does not include remote control devices, alarm systems and components, low voltage wiring, systems, and components, ancillary wiring, systems, and other components which are not part of the primary electrical power distribution system. Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

2.6. Residential branch circuits consist of devices such as conductors (wiring), switches, outlets, connections for permanently-wired appliances and the electrical conductors which supply them with electricity. Most conductors are hidden behind floor, wall and ceiling coverings and cannot be evaluated by the inspector. The inspection does not include the removal of cover plates and inspection of branch circuits and wiring is limited to proper response to testing of switches and electrical outlets.

2.7. For information on how a panel box works go to the following link: <http://www.finehomebuilding.com/how-to/departments/how-it-works/electrical-breaker-panels.aspx>. For the most common electrical issues, please visit the following link: <http://www.workingre.com/10-most-common-electrical-issues/>

2.8.

2014 NEC, 210.8 (A) Dwelling Units, Ground-fault Circuit-interrupter Protection for Personne

2.9. The home had a grid-tied photovoltaic (PV) system installed. A PV system is a system that converts sunlight to electricity. A grid-tied system is one that is connected to the power company electricity supply system. When the PV system is producing electricity, it causes the electric meter (called a "net meter") to spin backwards. This can reduce monthly electrical costs or even generate income.

You will need to learn about the system maintenance and operation requirements. This system requires a specialist inspection, and not all electrical contractors will be qualified. The Inspector strongly recommends that you have the PV system inspected before the expiration of your Inspection Objection Deadline. These systems commonly produce enough electricity to cause serious or fatal injury. You should have good

instruction on the operation and maintenance requirements of this system.

Photovoltaic systems shall be designed and installed in accordance with Sections R324.3.1 through R324.6.1 and NFPA 70. Inverters shall be listed and labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction.

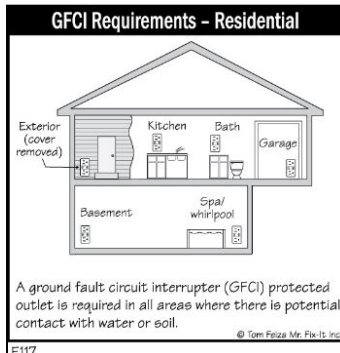
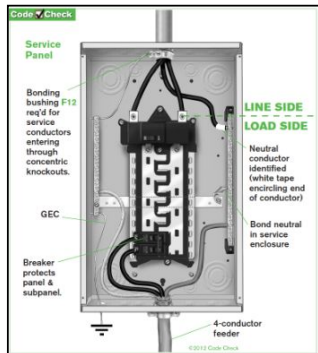
For more information about the advantages of solar energy, please visit the following link: <https://www.nachi.org/advantages-solar-energy.htm>

2.10. R324.4 Rooftop-Mounted Photovoltaic Systems:

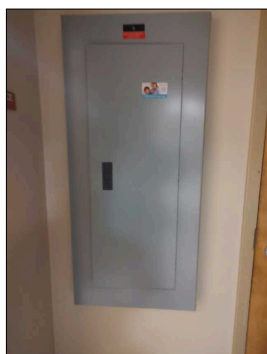
R324.4.1 Roof Live Load:Roof structures that provide support for photovoltaic panel systems shall be designed for applicable roof live load. The design of roof structures need not include roof live load in the areas covered by photovoltaic panel systems. Portions of roof structures not covered by photovoltaic panels shall be designed for roof live load. Roof structures that provide support for photovoltaic panel systems shall be designed for live load, LR, for the load case where the photovoltaic panel system is not present.

2.11. [Rules for Rooftop Solar](#)

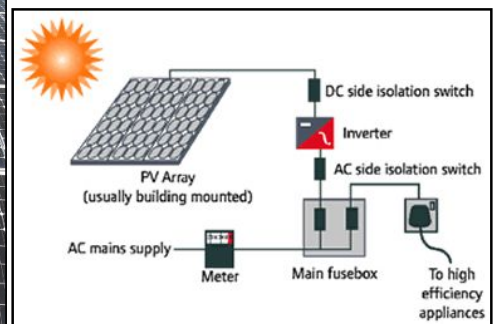
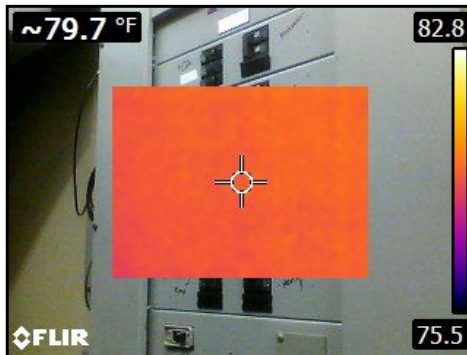
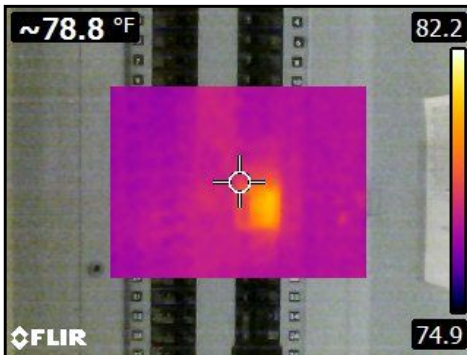
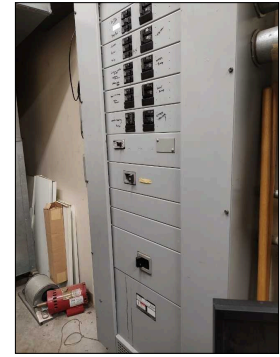
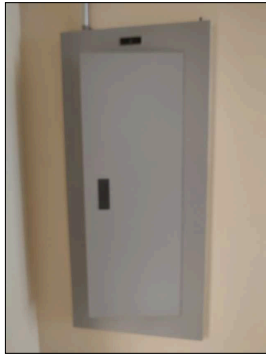
2.12. Missing panel cover screws: The dead front cover was missing screws at the time of the inspection. The Inspector recommends that appropriate screws be installed to securely attach the dead front cover.



Photovoltaic panels



Missing panel box screw noted



3. Main Amp Breaker

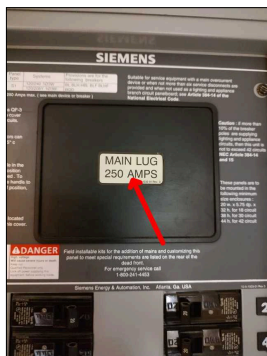
Observations:



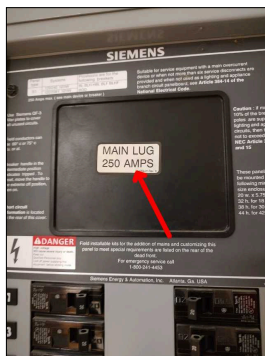
3.1. 120/240 volt service

3.2. 500 amp: The pictured electrical service disconnect will shut off all power to the home in the case of an emergency, or for servicing.

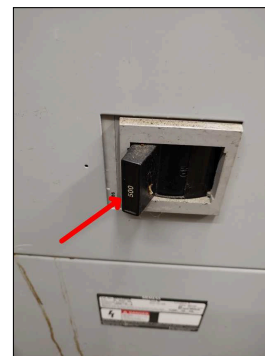
3.3. 250 amp: The pictured electrical service disconnect will shut off all power to the home in the case of an emergency, or for servicing.



250 amp service



250 amp service



500 amp service

4. Breakers in off position

Observations:



4.1. 0

5. Breakers



Materials:

- Copper non-metallic sheathed cable noted.

Observations:

5.1. [When were GFCI receptacle outlets first required?](#)

5.2. [For more about arc fault breakers \(AFCI\)](#)

5.3. [AFCI, CAFCI, DFCI and GFCI](#)

5.4. Overcurrent protection of branch circuits was provided by circuit breakers located in the service panel.

5.5. All of the circuit breakers appeared serviceable.



Heat/AC

The heating, ventilation, and air conditioning and cooling system (often referred to as HVAC) is the climate control system for the structure. The goal of these systems is to keep the occupants at a comfortable level while maintaining indoor air quality, ventilation while keeping maintenance costs at a minimum. The HVAC system is usually powered by electricity and natural gas, but can also be powered by other sources such as butane, oil, propane, solar panels, or wood.

The inspector will usually test the heating and air conditioner using the thermostat or other controls. For a more thorough investigation of the system please contact a licensed HVAC service person.

1. Heater Condition



Materials:

- The boiler is located in the utility room.

Materials: [Wall unit heater](#) noted • [Four Common Types of Heating Units:](#)

- Gas fired boiler noted: Here is the link to the International Fuel Gas [Code](#)
- Split system AC noted • [Hot water baseboard heat](#) noted • Space heater noted • Empire

• Weil Mclain • McQuay
Observations:

1.1. **Inspection restriction:** This inspection is limited to the visual components of the heating system. It does not guarantee future operation of the units in any manner. You must have an inspection of any aspect of the heating system, by a licensed professional. Be advised, any of the heating system and its components may fail at any time. This inspection cannot predict when that is or how long any aspect of the heating system will last. An inspection does not guarantee serviceability.

1.2. For more about heating your home, please visit the following link:
https://hcloud.blob.core.windows.net/hrbpdfs/HRB_5_Heating_2011.pdf

1.3. [High Efficiency Rebates](#)

1.4. LIMITATIONS OF HEATING INSPECTION: This is a visual inspection limited in scope by (but not restricted to) the following conditions: • The adequacy of heat supply or distribution balance is not inspected. • The interior of flues or chimneys which are not readily accessible are not inspected. • The furnace heat exchanger, humidifier, or dehumidifier, and electronic air filters are not inspected. • Solar space heating equipment/systems are not inspected. Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

1.5. FYI: Remember that performing energy upgrades may be a tax deduction. This can include but not be limited to the following materials: Energy-efficient windows, doors, heating appliances, roofing materials, as well as other possible building materials. It is always best to check with your tax preparer or accountant for the information that applies to your situation. Recommend having an energy audit performed by Efficiency Vermont or Vermont Gas (if applicable). An audit will help define areas where savings can be found. Often, these energy updates can be performed with little to no upfront costs. For tips on how to save on heating costs, please visit the following link: www.thebalance.com/how-to-save-on-heating-costs-1388212?utm_term=household+energy+saving+tips&utm_content=p1-main-4-title&utm_medium=sem&utm_source=gemini_s&utm_campaign=adid-cbd2c7d7-3d42-4910-a6d7-1b64aa0d77

1.6. Heat Exchanger: The heat exchanger could not be viewed on the day of inspection. The condition of this aspect of the heating system determines the current and future serviceability of the heating unit. If the heat exchanger fails, dangerous carbon monoxide could enter the home. An inspection of the heat exchanger should be done prior to each heating season and prior to close by a certified technician. Heat exchangers, like other aspects of the system, do have an unpredictable rate of failure. The Inspector specifically disclaims furnace heat exchangers because proper evaluation requires invasive, technically exhaustive measures that exceed the scope of the General Home Inspection. Recommend that you have it certified by a qualified HVAC contractor.

1.7. Carbon monoxide levels in the home are measured during inspection. The following levels were noted: 0

1.8. It is recommended that all clients visit Efficiency Vermont website: <http://www.encyvermont.org/Index.aspx> Consider an energy audit through Efficiency Vermont or through Vermont Gas (if applicable).

1.9. To help individuals understand the life expectancy of home components, please review the following information: <http://www.oldhouseweb.com/how-to-advice/life-expectancy.shtm> or <http://www.nachi.org/life-expectancy.htm>

1.10. Check on Your HVAC Systems (Before They Check Out on You):

<http://www.nachi.org/home-depot-hvac.htm>

1.11. For more about boiler, please visit the following link:
<http://www.greenbuildingadvisor.com/green-basics/boilers>

1.12. Backflow Preventer noted

1.13. The pipes supplying fuel to the heating system appeared to be properly configured and in serviceable condition at the time of the inspection.

1.14. At the time of the inspection, the Inspector observed no deficiencies in the condition of the circulation pump(s).

1.15. The boiler had an **expansion tank** installed to allow for thermal expansion of water in the plumbing pipes. The expansion tank appeared to be properly installed.

1.16. Zone valves appeared to be operating from controls at the time of inspection.

1.17. At the time of the inspection, the Inspector observed no deficiencies in the condition of the TPR discharge pipe.

1.18. See photo example of Typical boiler system

1.19. Consider switching to **LP gas** for greater efficiencies in heating, heating hot water, laundry and cooking.

1.20. Older Boilers: efficiency and when to replace:
<http://www.finehomebuilding.com/video/how-to/home-energy-audit-boiler.aspx>

1.21. Information from the air-conditioner label/data plate is shown in the photo.

1.22. Inspection of the **air-conditioning system** typically includes visual examination of the following:

- compressor housing exterior and mounting condition;
- refrigerant line condition;
- proper disconnect (line of sight);
- proper operation (outside temperature permitting); and
- proper **condensate** discharge.

The system should be serviced at the beginning of every cooling season.

1.23. Split **A/C** System noted: The home had two air-conditioning systems. The air conditioning systems were split systems in which the cabinets housing the compressors, cooling fans and condensing coils were located physically apart from the evaporator coils. As is typical with split systems, the compressor/condenser cabinets were located at the home's exterior so that the heat collected inside the home could be released to the outside air. Evaporator coils designed to collect heat from the home interior were located inside the air ducts at the furnaces. The average life of an air conditioner compressor/condenser is approximately 12 to 15 years. It should be determined from the present owner of any compressor/condensing system components have been recently repaired or replaced.

1.24. Refrigerant lines: The visible air-conditioner refrigerant lines appeared to be in serviceable condition at the time of the inspection.

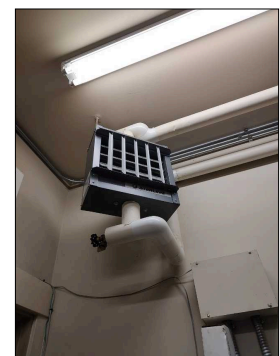
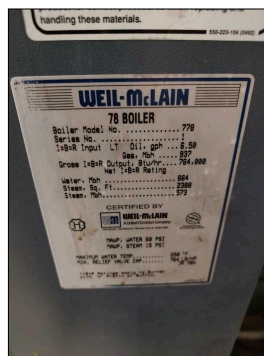
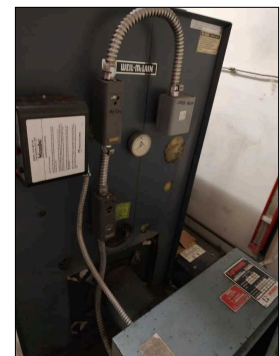
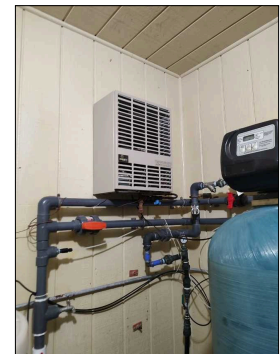
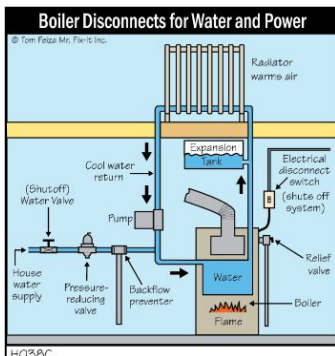
1.25. [**A MORE COMPREHENSIVE LIST OF AC DATE CODES**](#)

1.26. Caution: Attention! Important! This Home Inspection does not replace an HVAC inspection by a certified professional. Do not skip a certified HVAC inspection prior to purchasing this home! Make sure to have and HVAC inspection done yearly!

1.27. Boiler/Heater: Last service date: Unknown. There are areas which cannot be seen without specialized equipment and training. One such area is the combustion chamber / heat exchanger where cold air blows across the "fire box", becoming the hot air that circulates throughout your home. During the life span of any boiler, this metal wall may develop a crack or a broken weld, allowing carbon monoxide to circulate throughout the home. This is why boiler/furnace specialists recommend a complete inspection prior to closing on this property and annually. The unit should be inspected by by certified HVAC technician. It is important to note that the home inspector is not a code enforcement inspector and all applicable codes must be determined by a certified technician. The home inspector is not a certified technician and makes no guarantee or warranty or code determinations during this inspection. Failure to have a heating system inspection prior to close could result in surprise repairs or costly failures. The inspector is not responsible for code failures or system failures and does not pass or fail this unit.

1.28. Date of installation: 1998

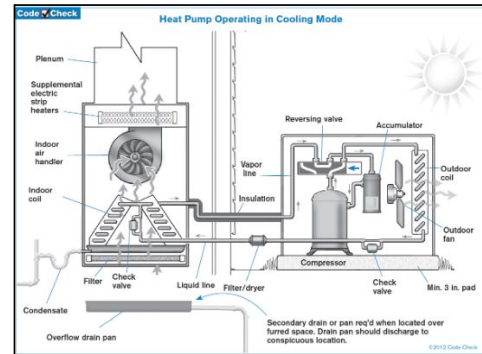
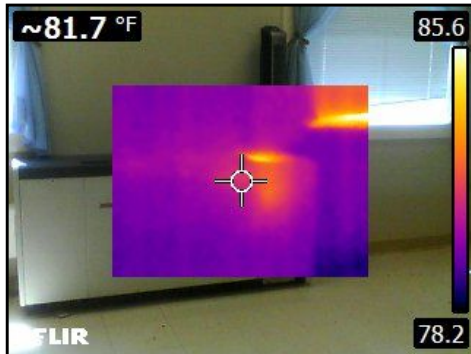
1.29. The heating unit is approaching its designed life expectancy. We make no warranty, guarantee or estimation as to the remaining useful life of this unit.



Space heater



Level of carbon monoxide in the home: 0



2. Gas Valves

Observations:



2.1. **Inspection restriction:** Oil leaks may occur anytime prior to, during or after inspection. It may not be possible to see leaking pipes or components at the time of inspection due to installation, location or contents within the home. The homeowner is responsible for all leaks and the repair of those leaks. This home inspection is not being performed by a certified HVAC professional. It is highly recommended that an HVAC professional inspect the heating system on an annual basis (yearly).

2.2. Fuel Source: [LP Gas](#)

At LP gas tank

2.3. LP gas tank size: 250 gal

Fuel tanks are only filled within 9 or 10 gallons of capacity to account for expansion

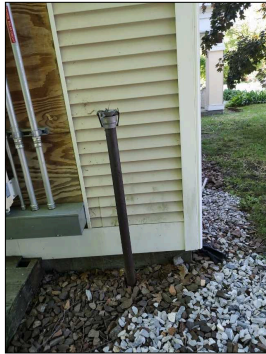
2.4. A TIF 8900 Combustible Gas Detector was used to check all gas lines, heaters and appliances for leaks. No leaks were detected at the time of inspection.

2.5. Gas shut off valves were present and functional.

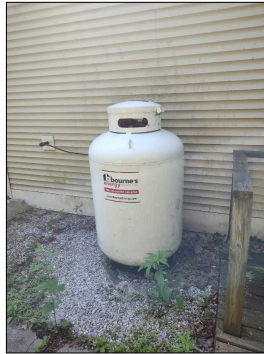
G2420.5 (409.5) Appliance shutoff valve. Each appliance shall be provided with a shutoff valve in accordance with Section G2420.5.1, G2420.5.2 or G2420.5.3.

2.6. Gas testing: The following gases were monitored in the home at the time of inspection, with the following outcomes:

CO: Carbon monoxide: 0
O2: Oxygen levels: 9%/Vol
LEL: Lower Explosive Limit Gases: 0
H2S: Hydrogen Sulfide 0



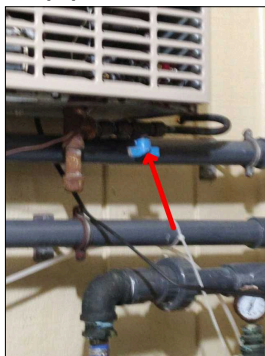
Oil vent pipe



LP gas tank location



LP gas tank location



Gas shut off valve



Oil fill pipe location

3. Enclosure

Observations:

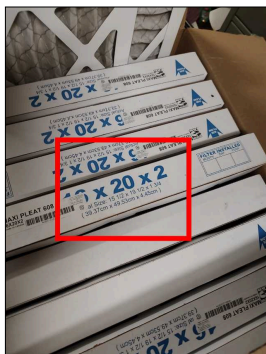


3.1. Three (3) feet of clearance should be maintained around heating and ventilating units at all times so that the units can be maintained and to prevent a house fire. **DO NOT STORE ITEMS NEAR YOUR HEATING SYSTEM!**

3.2. 16 x 20 x 2

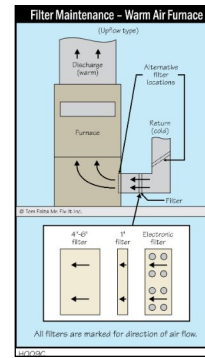
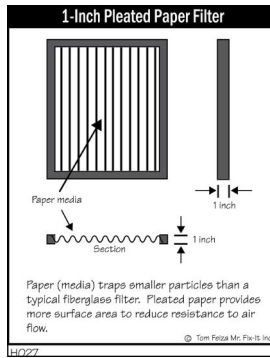
3.3. Recommend an HVAC contractor perform a system Clean-and-Check. HVAC systems require yearly maintenance.

3.4. Recommend replacing the filters every three months during the heating season or as needed or necessary. Use only quality pleated filters.



Furnace filters size: 16 x 20 x 2





4. Heater Base

Observations:



4.1. The heater base appears to be functional.

5. Venting

Observations:



5.1. Recommend making sure to have a licensed plumber review the exhaust and intake to make sure that clearances are proper and installations are according to applicable code.

M1401.1 Installation:

Heating and cooling equipment and appliances shall be installed in accordance with the manufacturer's instructions and the requirements of this code.

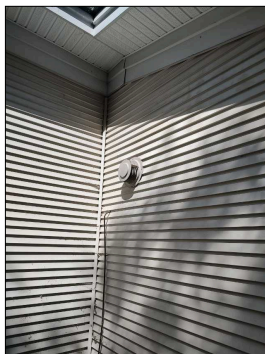
This includes water heating equipment. All combustion water heating equipment should be checked for proper ventilation, per code by a licensed plumber. This inspection is not a code inspection. The opinion of a licensed plumbing and heating professional supersedes any opinion noted here. All venting should be reviewed for proper installation according to applicable code. Only a licensed plumbing and heating professional can pass or fail appliances based upon code.

This inspection will not determine proper venting or proper sizing of vents.

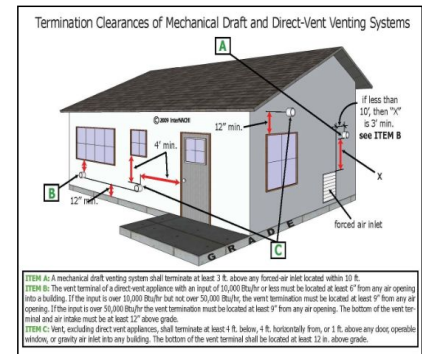
5.2. Metal double wall chimney vent pipe noted.

5.3. Direct vent noted

5.4. [See chimney comments](#)



Heater exhaust



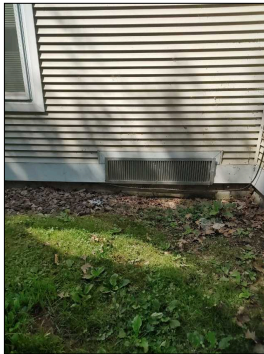
6. Air Supply

Observations:



6.1. The return air supply system appears to be functional.

COMBUSTION/DILLUTION & MAKEUP AIR – All combustion appliances require air for proper combustion. Homes with inadequate means of introducing air for these combustion appliances are at risk of the buildup of harmful combustion byproducts and backdrafting of the exhaust from these systems. Other mechanical exhaust fans can also compete for intake air and complicate the problem. Assurances are warranted that there are adequate sources of makeup air for both combustion appliances and exhaust fans. For additional information on these issues please see the following link: COMBUSTION & MAKEUP AIR, <http://mn.gov/commerce/energy/images/CombustionAir.pdf>



7. Thermostats

Observations:



7.1. [All About Smart Thermostat's](#)

7.2. FYI: Thermostats are not checked for calibration or timed functions. Adequacy, efficiency or the even distribution of air throughout a building cannot be addressed by a visual inspection. Keep in mind that thermostats do fail and should be regularly monitored. Older thermostats typically have Mercury in them and should be handled carefully when discarding as there is enough Mercury in the unit to poison an individual or be fatal. Check your local rules and regulations about handling thermostats with Mercury.

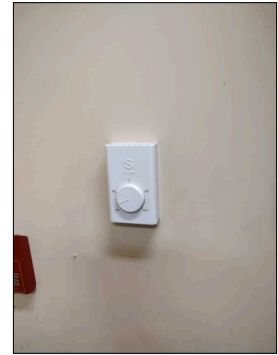
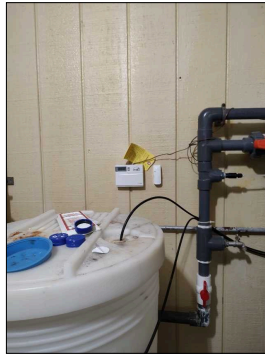
7.3. Programmable thermostat: When used properly, savings can range from approximately \$2-\$300 per year. For more on potential energy savings: please visit the following link: http://inspectapedia.com/Energy/Energy_Savings.php

7.4. Functional at the time of inspection.

7.5. Digital - programmable type.

7.6. Analog, non-programmable type.

7.7. Electric heat thermostats noted in each room



Thermostat location

Thermostat location



Thermostat location

Thermostat location

Thermostat location



Thermostat location

Thermostat location



Water Heater

Reduce Hot Water Use for Savings

Homeowners can lower their water heating costs by using and wasting less hot water. To conserve hot water, they can fix leaks, install low-flow fixtures, and purchase energy-efficient dishwashers and clothes washers.

Fix Leaks

A homeowner can significantly reduce hot water use by simply repairing leaks in fixtures —faucets and showerheads —and pipes. A leak of one drip per second can cost \$1 per month.

If the water heater's tank leaks, the water heater must be replaced.

Install Low-Flow Fixtures

Federal regulations in the U.S. mandate that new showerhead flow rates can't exceed more than 2.5 gallons per minute (gpm) at a water pressure of 80 pounds per square inch (psi). New faucet flow rates can't exceed 2.5 gpm at 80 psi, or 2.2 gpm at 60 psi. Homeowners can purchase quality, low-flow fixtures for around \$10 to \$20 a piece and achieve water savings of 25% to 60%.

Showerheads

For maximum water efficiency, select a shower head with a flow rate of less than 2.5 gpm. There are two basic types of low-flow showerheads: aerating and laminar-flow. Aerating showerheads mix air with water, forming a misty spray. Laminar-flow showerheads form individual streams of water. If the home is in a humid climate, the homeowner might want to use a laminar-flow showerhead because it won't create as much steam and moisture as an aerating one does.

Before 1992, some showerheads had flow rates of 5.5 gpm. Therefore, if the home has fixtures that pre-date 1992, the owner might want to replace them if they're not sure of their flow rates.

Here's a quick test to determine whether a shower head should be replaced:

1. Place a bucket —marked in gallon increments —under your showerhead.
2. Turn on the shower at the normal water pressure.
3. Time how many seconds it takes to fill the bucket to the 1-gallon (3.8 liter) mark.

If it takes less than 20 seconds to reach the 1-gallon mark, the homeowner could benefit from a low-flow showerhead.

Faucets

The aerator —the screw-on tip of the faucet —ultimately determines the maximum flow rate of a faucet. Typically, new kitchen faucets come equipped with aerators that restrict flow rates to 2.2 gpm, while new bathroom faucets have ones that restrict flow rates from 1.5 to 0.5 gpm. Aerators are inexpensive to replace and they can be one of the most cost-effective water conservation measures. For maximum water efficiency, purchase aerators that have flow rates of no more than 1 gpm. Some aerators even come with shut-off valves that allow you to stop the flow of water without affecting the temperature.

Energy-Efficient Dishwashers and Clothes Washers

The biggest cost of washing dishes and clothes comes from the energy required to heat the water. Homeowners can significantly reduce energy costs if they purchase or own and use energy-efficient dishwashers and clothes washers.

Dishwashers

It's commonly assumed that washing dishes by hand saves hot water. However, washing dishes by hand several times a day can be more expensive than operating an energy-efficient dishwasher. You can consume less energy with an energy-efficient dishwasher when properly used and when only operating it with full loads.

Dishwashers fall into one of two categories: compact capacity and standard capacity. Although compact-capacity dishwashers may appear to be more energy-efficient on the label, they hold fewer dishes, which may force you to use it more frequently. In this case, the energy costs could be higher

than with a standard-capacity dishwasher.

One feature that makes a dishwasher more energy-efficient is a booster heater. A booster heater increases the temperature of the water entering the dishwasher to the 140° F recommended for cleaning. Some dishwashers have built-in boosters, while others require manual selection before the wash cycle begins. Some also only activate the booster during the heavy-duty cycle. Dishwashers with booster heaters typically cost more, but they pay for themselves with energy savings in about one year if you also lower the water temperature on the water heater.

Another dishwasher feature that reduces hot water use is the availability of cycle selections. Shorter cycles require less water, thereby reducing energy cost.

Clothes Washers

Unlike dishwashers, clothes washers don't require a minimum temperature for optimum cleaning. Therefore, to reduce energy costs, you can use either cold or warm water for most laundry loads. Cold water is always sufficient for rinsing.

Inefficient clothes washers can cost three times as much to operate than energy-efficient ones. Some machines allow you to adjust the water temperature and levels for different loads. Efficient clothes washers spin-dry your clothes more effectively, too, which saves energy when drying, as well. Also, front-loading machines use less water and, consequently, less energy than top-loaders. Small-capacity clothes washers often have better ratings. However, a reduced capacity might increase the number of loads you need to run, which could increase your energy costs.

Lower Water Heating Temperature for Energy Savings

A homeowner can reduce their water heating costs by simply lowering the thermostat setting on the water heater. For each 10°-reduction in water temperature, a homeowner can save between 3% to 5% in energy costs.

Although some manufacturers set water heater thermostats at 140° F, most households usually only require them set at 120° F. Water heated at 140° F also poses a safety hazard: scalding. However, if the home has a dishwasher without a booster heater, it may require a water temperature within a range of 130° F to 140° F for optimum cleaning.

Reducing the water temperature to 120° F also slows mineral buildup and corrosion in the water heater and pipes. This helps the water heater last longer and operate at its maximum efficiency. Consult the water heater owner's manual for instructions on how to operate the thermostat. You can find a thermostat dial for a gas-storage water heater near the bottom of the tank on the gas valve. Electric water heaters, on the other hand, may have thermostats positioned behind screw-on plates or panels. As a safety precaution, shut off the electricity to the water heater before removing or opening the panels. Keep in mind that an electric water heater may have two thermostats—one each for the upper and lower heating elements.

Homeowner Tip: Mark the beginning temperature and the adjusted temperature on the thermostat dial for future reference. After turning it down, check the water temperature with a thermometer at the tap farthest from the water heater. Thermostat dials are often inaccurate. Several adjustments may be necessary before you get the right temperature.

If the occupants plan to be away from home for at least three days, they should turn the thermostat down to the lowest setting or just turn off the water heater. To turn off an electric water heater, switch off the circuit breaker to it. For a gas water heater, occupants should make sure they know how to safely relight the pilot light before turning it off.

Install Heat Traps on a Water Heater Tank for Energy Savings

Some water heater tanks have pipes on the top of a water heater with two heat traps installed, one in the hot water line and one in the cold water line. The heat traps look like small cylinders installed on the end of the pipes. Inside the heat traps are balls that either float or sink to stop convection.

If the storage water heater doesn't have heat traps, you can save energy by adding them to the water heating system. They can save around \$15 to \$30 on the water heating bill by preventing convective heat losses through the inlet and outlet pipes.

Heat traps —valves or loops of pipe —allow water to flow into the water heater tank but prevent unwanted hot-water flow out of the tank. The valves have balls inside that either float or sink into a seat, which stops convection. These specially designed valves come in pairs. The valves are designed differently for use in either the hot or cold water line.

A pair of heat traps costs only around \$30. However, unless you can properly solder a pipe joint, heat traps require professional installation by a qualified plumbing and heating contractor. Therefore, heat traps are most cost-effective if they're installed at the same time as the water heater. Today, many new storage water heaters have factory-installed heat traps or have them available as an option.

1. Water Heater Condition



Heater Type:

- Hybrid hot water heater with a drop in heat pump noted
- Rheem
- Manufacture date: 2016

Location: The heater is located in the basement • Utility room

Observations:

1.1. **Inspection restriction:** This inspection is limited to the areas that can be viewed and inspected. It does not include any area of the inside of the water heating or water storage system. These units tend to fail from the inside. This inspection does not guarantee a lifespan for the unit. The unit may fail at any time after inspection. Time intervals for failure cannot be predicted.

1.2. Fastest water heating recovery rates: See picture table

1.3. **Common water heater myths:** Please watch the following video:

<https://www.youtube.com/watch?v=9kjabzlcLRA>

1.4. **For more information about water heaters, please visit the following link:**

<https://www.discoverhorizon.com/hrb/article.aspx?ASKID=2584&DROPDOWN=7451>

1.5. Appears to be in satisfactory condition -- no concerns. For more on estimating the lifespan of a water heater please visit the following link: <https://www.nachi.org/lifespan-water-heater.htm>

1.6. No major system safety or function concerns noted at time of inspection.

1.7. Consider renting a hot water heater: If you choose to convert to gas appliances throughout the home, you may want to consider renting a hot water heater. For a low monthly price, the utility will service the tank 24 hours per day. Water tanks are a consumable item in a home and have a relatively high failure rate as an appliance.

1.8. For more information on water heating, please visit the following link:
<http://www.greenbuildingadvisor.com/green-basics/water-heating>

1.9. Misc. Water Heater Tips:

RUMBLING, CRACKLING, POPPING SOUNDS

Lime is present in all home water to some degree. Because lime is inversely soluble, the more that water is heated, the more lime comes out of it. High degrees of use, excessive water hardness, and increased heating surface area can increase lime build up on the tank bottom and walls. Popping sounds are often made by water trapped beneath lime deposits and sizzling sounds are made by water trapped next to heating elements.

ELECTRIC

1. Normally, a residential water heater with two elements will have only one element operate at a time. If the upper element fails, the water heater will supply no hot water. If the lower element fails, the water heater will still have 1/3 of the tank with hot water.

2. With a two element water heater, the lower element and thermostat will cycle more frequently than the upper element and thermostat. For this reason, the lower element will normally accumulate lime faster and fail more often than the upper element. Lower elements will fail more often than upper elements.

1.10. Water Source: Private Well

1.11. Hybrid hot water heaters: For more about hybrid hot water heaters with drop in heat pumps, please visit the following link:
<http://www.greenbuildingadvisor.com/blogs/dept/musings/heat-pump-water-heaters-come-age> or http://www.jlconline.com/how-to/plumbing/heat-pump-water-heaters_o

1.12. Black Water or rotten egg odor from the hot water heater: The incidence of rotten egg odor or black water in hot water lines is due to the reaction of sulfates and micro-organisms in the water that create Hydrogen Sulfide (H₂S). This is a water chemistry condition, rather than a water heater problem. Although there is very little literature associating odors and sulfate reduction with magnesium, there is reference to sulfate-reducing bacteria known as 'desulfovibrio'. These bacteria cannot grow in the presence of atmospheric oxygen, which may account for their not being noticed in cold water supplies. When the same water is heated, the odor becomes noticeable.

How can H₂S be detected?

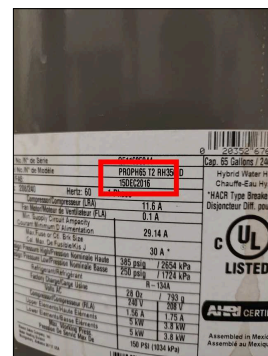
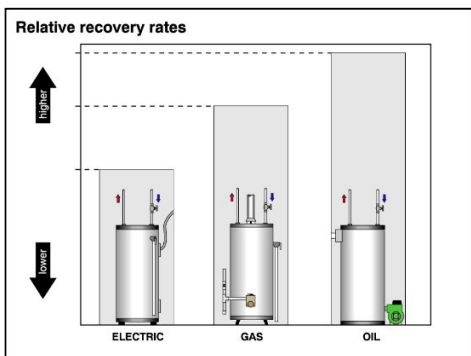
Just take a swift sniff. A simple check for the cause of the odor is to draw enough hot water to notice the odor. H₂S is one of the few water contaminants that human senses can detect at low concentrations. The odor is most noticeable when water is first turned on or heated. A shower can be an unpleasant experience with hydrogen sulfide present. The odor can be detected at levels as low as 0.5 parts per million (ppm). At less than 1 ppm, H₂S will give water a musty odor. At 1 to 2 ppm, it will have an odor similar to rotten eggs. Levels are usually less than 10 ppm. The source of the odor is in the cold water supply, such as untreated rural water systems or well water; but does not present itself until heated.

What is hydrogen sulfide, and how does it form?

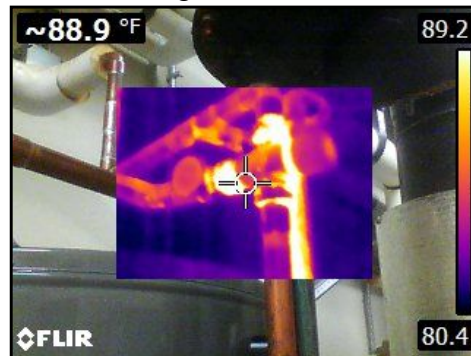
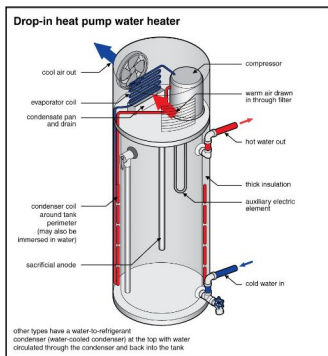
Sulfur-reducing bacteria that are naturally present in ground water use sulfur as an energy source to chemically change sulfates to produce H₂S. The bacteria uses sulfur from decaying plants, rocks, or soil. They exist in environments that are oxygen-deficient (not enough oxygen) such as deep wells and plumbing systems. However, H₂S can exist naturally in ground water as well. It can enter surface water through springs and quickly escape into the atmosphere. Some of these waters have excessive sulfate content along with various strains of sulfate reducing bacteria. These bacteria, harmless to health, will react in stagnant water that has been depleted of oxygen and will produce hydrogen sulfide gas, utilizing the hydrogen ion from the anode cathode reaction. This problem is more prevalent in softened water containing sodium in place of calcium and magnesium. The anode may have some affect because the greater activity of the anode, the greater amount of the hydrogen ion and hydrogen sulfide gas. These bacteria can be killed with adequate additions of chlorine such as in a chlorine feeder. This will usually eliminate the odor problem.

How can H₂S be treated?

Chlorination - by means of a continuous chlorine feeder; or periodic flushing with common household bleach. This process is 100% effective only if a continuous chlorine feeder is installed.



Age of hot water heater: 2016



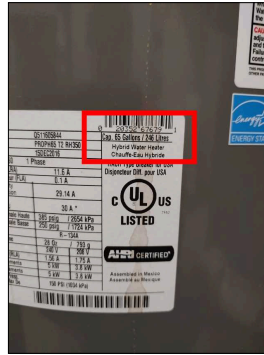
Water heater operating

2. Number Of Gallons

Observations:



2.1. 65 gallons



65 gallons

3. Plumbing



Materials:

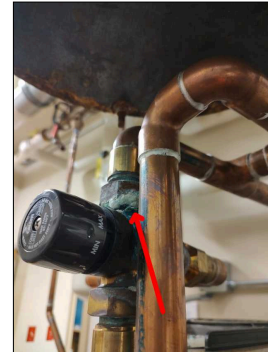
- Copper piping noted and in serviceable condition at the time of inspection.

Observations:

- 3.1. [What is the purpose of a thermostatic mixing valve above a water heater?](#)
- 3.2. Plumbing appeared in serviceable and functional condition at the time of inspection.
- 3.3. Thermostatic Mixing valve noted as in place and operating
- 3.4. Corrosion noted on water heater plumbing. Recommend having a plumber review for repair or replacement as needed or necessary. Recommend the following product to clean rust and corrosion: <https://clrbrands.com>



Thermostatic mixing valve for the hot water heater



Corrosion on plumbing

4. Overflow Condition



Materials:

- Copper

Observations:

- 4.1. Appears to be in satisfactory condition -- no concerns.
- 4.2. The water heater discharge pipe should be cut any 45 degree angle at the bottom.
Vermont code: 504.6 (15) Outlet of all relief valve piping shall be cut on a 45 degree angle.



5. TPRV

Observations:



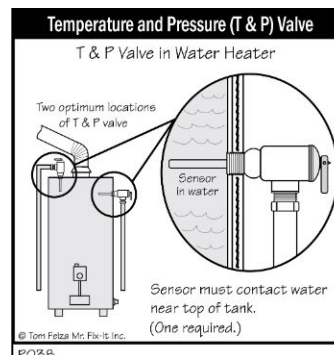
5.1. The temperature and pressure relief valve is arguably one of the most important safety devices in your house. Should the thermostats fail inside your water heater, this allows excess pressure to "blow off," which will prevent catastrophic build up of temperature and pressure which can make water heaters explosive. The "blow off valve" is not tested during inspection as there is a risk it could stick open and testing could cause the need for a repair. It is recommended that these be inspected annually. Recommend asking a plumber to test whenever heating equipment is serviced.

5.2. The TPRV extention was in place at the time of inspection

5.3. Photo example of a TPRV:



Example of a TPRV



6. Base

Observations:



6.1. The base was functional at the time of inspection

7. Enclosure

Observations:



7.1. The enclosure was functional at the time of inspection

7.2. **WHY WATER TANKS LEAK**



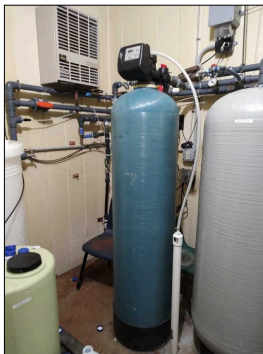
Water Filter

1. Condition

Observations:



1.1. There is a water filter noted.



Filtration



Municipal Waste/Septic

1. Location

Observations:



1.1. **Inspection restriction: Many aspects of the waste system are underground. It is impossible to fully inspect these areas, even if performed with a remote camera. Aspects of the waste system may fail at any time. This inspection does not guarantee serviceability or predict the rate of failure. Time intervals for failure cannot be predicted.**

1.2. Learn about your septic system at the following link:

<http://www.finehomebuilding.com/how-to/departments/how-it-works/septic-systems.aspx>

For more about the septic systems please visit the following link for a video:

<https://www.youtube.com/watch?v=udBaGyzJyU8&t=96s>

1.3. Please visit the following links for information about how dishwashers and washers impact septic systems. Impacts of dishwashers on septic systems:

http://inspectapedia.com/septic/Dishwasher_Impact_on_Septic_System.php Impacts of

washers on septic systems:

http://inspectapedia.com/septic/Washing_Machine_Impact_on_Septic.php

1.4. See photo Example of septic tanks:

1.5. [About Septic Systems](#)

1.6. [Homeowners Guide To Septic Care](#)

1.7. [Septic Do's and Don'ts](#)

1.8. You may want to contact Complete Septic Services. They can be reached at 802-923-3572 or 802-309-1069

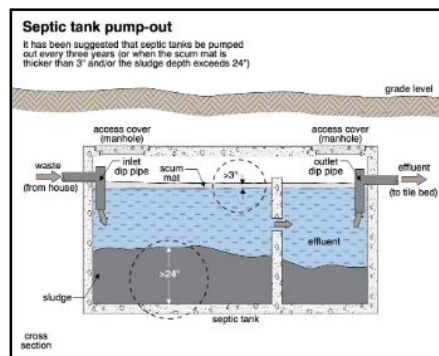
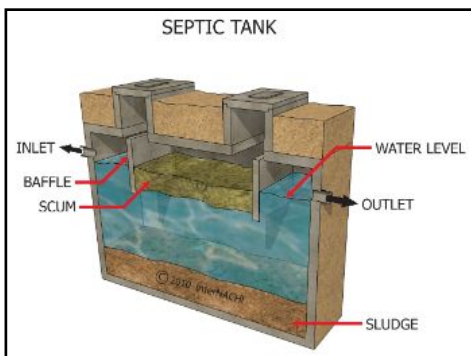
1.9. **Septic Systems: Belrose Home Inspection Services does not inspect septic systems. Due to the specific nature of a septic system, these inspection should be performed by a company who specializes in septic tanks and installation. We also recommend that the tank be pumped prior to the purchase of the home and every 2 to 4 years depending on the number of individuals residing in the home. For more information regarding septic systems please see: For illustrations of systems please see: <http://www.environmentalenhancements.com/systems.h>**

RECOMMEND THAT THE SYSTEM BE PUMPED AND CHECKED PRIOR TO CLOSING ON THE HOME. FAILURE TO DO THIS COULD RESULT IN COSTLY SURPRISES THAT MAY INCLUDE PARTIAL OR FULL REPLACEMENT OF THE SYSTEM. THIS ASPECT OF INSPECTION SHOULD NOT BE FOREGONE.

1.10. Recommend that the tank be serviced, tested and pumped by a qualified septic professional every 2-4 years (depending on the individuals residing in the home).

1.11. Recommend adding yeast (a tablespoon per month) or a spoiled gallon of milk once every three months into your septic system to keep a balanced ecosystem.

1.12. Due to the age of the [septic system](#), we recommend that you consider having the leach field and tank inspected with a remote camera.



Septic tank location



Septic tank alarm





Septic System Care (Recommendations) Learn about your septic system at the following link: <http://www.finehomebuilding.com/how-to/departments/how-it-works/septic-systems.aspx>.

For more information about Vermont Wastewater Rules, please visit the following link:

dec.vermont.gov/water/laws/ww-systems-rules

- Be conservative with the amount of water being used, such as showers, laundry, and limit the use of antibacterial products.

- Space the use of your laundry so that it is not one load after another. A top loading washer at full capacity uses about 35 to 50 gallons of water per load. Front load washers use a lesser amount of water.

- Repair any leaking faucets or toilets.

- To keep a septic system functioning, pumping the tank is recommended every three to five years. Without this pumping, scum and sludge build up in the tank and flow out into the leach field, clogging pipes and gravel and causing the biomat to thicken to a point where it is impermeable and fails to absorb effluent. The result is puddles of effluent in the yard, a sure sign of a failed system. Most professionals agree that so-called septic system maintenance products that you flush down the toilet to keep a healthy microbe level in your septic tank are a waste of money. Unless you are pouring huge quantities of microbe-killing paint solvents or gasoline down the drain on a regular basis, your septic system has all the natural organisms it needs to function properly.

- Have your tank cleaned regularly, every 3 to 5 years. Typically, a 1000 gallon tank for a home of 1 to 4 bedrooms. Usage is between 150 to 300 gallons per day per bedroom.

- Get to know your septic system and leach field and how they work:

<http://www.finehomebuilding.com/howto/departments/how-it-works/septic-systems.aspx>

- **Avoid Charmin and Costco/Kirkland toilet paper.** They are heavy products and not good for septic systems. Cottonelle toilet paper breaks down very well. Use any single ply toilet paper whenever possible.

- Garbage disposals are not recommended and will cause damage to your septic leach field. The food, grease and oils that are chopped up tends to float and go out into your leach field and does not decompose. They co-mingle together to form a mat that does not allow fluids to leach into soils. Do not use your garbage disposal like a garbage can. Do not pour food grease down the main drain. Put in a can or a jar and dispose of it properly. Compost whenever you can. If you continue to use the disposal, a yearly pumping is recommended as your solids will increase by 50%. **If you choose to use a garbage disposal it is highly recommended that you pump yearly!**

- According to the EPA, bacteria additives such as Rid-X are not needed to keep your septic system working properly. Some additives will actually do more harm than good. Consider adding a spoiled gallon of milk to your system every three months to promote good bacterial health of your septic system and add valuable bacteria.

DO NOT USE FLUSHABLE CAT LITTER!

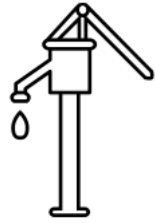
- Never install above ground pools, ice-skating rinks or drive heavy vehicles over your septic system.

- Nonbiodegradable items such as feminine hygiene products, condoms, cigarette butts, baby wipes and diapers should never be disposed of in to your toilet. **There is no such thing/product as flushable wipes!**

- Chemicals such as engine oil gas or other heavy cleaning agents should not be poured down your septic system as this will kill the necessary bacteria in the septic tank.

-Filter Out Fibers. Keep fibers and particles out of the septic system. Many of today's fabrics are made of recycled plastic soda bottles and other non-degradable fibers that can clog your leach field. The Septic Protector (\$150) attaches to your washing machine drain to remove these fibers. Septic tank filters also can be added to the outlet of your septic tank to keep fibers and particles out of the leach field.

- Water softeners should not back-flush or tie into the septic tank. This will add sulfides and chlorides to the septic system and will kill good bacteria. If you are able to direct the condensate water from the water softener to the outside during the warmer weather months that would be ideal.



Water Service/Well

1. Location/Observation



Materials:

• The home is served by a well. It is not within the scope of this report to determine the degree of salinity, quality, or volume of any well water or the operational effectiveness of any water treatment equipment. At your request, which may or may not have been made prior to this inspection, we can facilitate water testing for you with an independent lab. All underground piping related to water supply, waste, or sprinkler use are excluded from this inspection. Leakage or corrosion in the piping cannot be detected by visual inspection. You may want to have the well evaluated or serviced. You may want to contact Chevalier Drilling. They can be reached at 802-868-7709 or 1-800-248-4082

• Drilled well

Materials: The tank is located in the basement area. • The pressure tank appeared in good repair at the time of inspection.

Observations:

1.1. **Inspection restriction: The inspection of the water equipment is limited to the visual aspects that can be inspected. Well pumps that are in the well cannot be inspected during this process other than use. Pumps, tanks and the mechanical aspects of the system all have a rate of failure, as do the electrical components of the system. This inspection does not guarantee lifespan or predict a rate of failure. Further, this inspection does not guarantee that a well will not run dry or fail and does not check for flow rate unless as a courtesy only.**

1.2. For more information about water quality, please visit:

<http://www.nachi.org/waterquality.htm> or

<https://dec.vermont.gov/sites/dec/files/dwgwp/DW/Water-Supply-Rule-March-17-2020.pdf>

You should test your well water yearly. Hydrogen sulfide (egg water) is always a possibility in a well. Some variables that can make a greater are:

- When homes are left empty and the water is not used.

- When water is heated.

As with any environmental condition, changes within the levels of hydrogen sulfide are unpredictable and can happen at any time.

1.3. [How Do You Get Water From A Well](#)

1.4. The well is located at the right of the home.

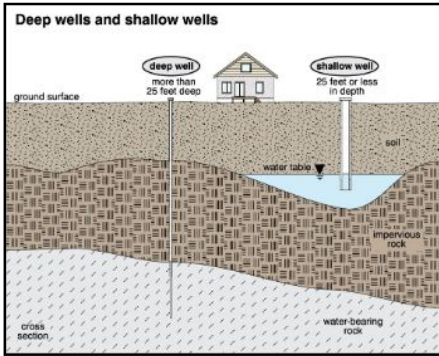
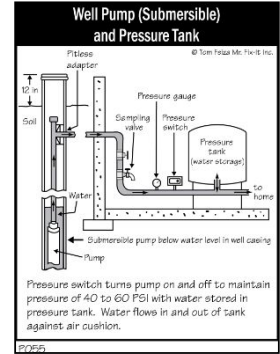
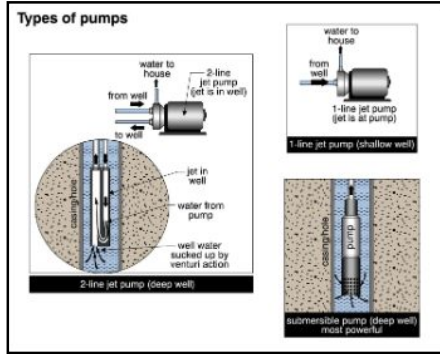
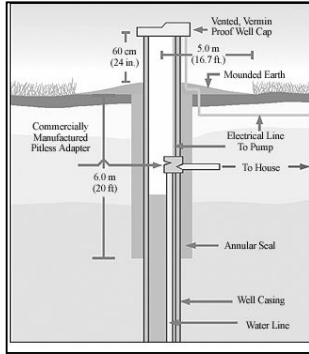
1.5. See photo example of a drilled well

1.6. See photo examples of well pumps

1.7. Photo example of a well pressure tank:

1.8. See photo example of well depth

1.9. Chlorinator noted on the water system.



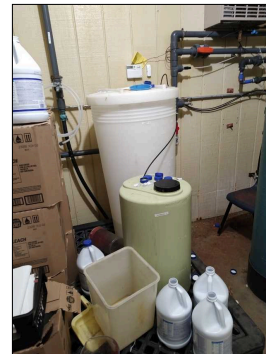
Well pressure tank



Well pressure tank



Well pressure tank



Chlorinator



Shocking a Well/Water System - Remove the wellhead - Pour unscented bleach into the wellhead. Use 1 gallon for every 300 feet of well casing.

- Draw water from each faucet in the home until you smell the bleach.
- Let the bleach sit in the system for at least 12 hours.
- After at least 12 hours, flush the system from the exterior faucets only so as not to add bleached water into your septic tank (if applicable)
- Flush the system until you do not smell bleach any longer. Finished by flushing the faucet areas, which should only take a short amount of time.

* Please note that more bleach is not necessarily better. It will just mean that it will take longer to flush from the system. So, start with a lesser amount and add only if you do not smell bleach.

Only add 1 quart at a time in this case.

* This process should be done at least once a year in order to sanitize the water system in the home.

You should also test the coliform and bacteria levels in your water yearly.

For a more comprehensive description of this process, use the following link in a search:

http://inspectapedia.com/water/Well_Chlorination_Shocking_Procedure.php



Security System/Fire and Safety

1. Condition/Location

Observations:



1.1. For more information about Child-Proofing your home, please visit the following: <http://www.nachi.org/childsafety.htm> or <https://certifiedmasterinspector.org/> and find Jeff Belrose to access your Safe Home Book.

1.2. The 10 Best Places to Hide Valuables in Your Home: <http://www.nachi.org/hiddenvaluables.htm>

1.3. For more about fire safety for the home, please visit the following link: <https://www.nachi.org/fire-safety-home.htm>

For more about fire safety, please visit the following video link: For more about fire safety, please visit the following video: <https://www.youtube.com/watch?v=EgwlylG2-Rw&list=PLkJADc1qDrr8MoKe-bQ9MdbS1cBAxt5ql&index=3>

1.4. There is a security system noted. You may also be interested in local monitoring services such as Home Security and Management Company in Stowe, Vt for monitoring. They can be reached at 800-933-4762 or at info@hsmc-ul.com. You may also want to update the system or perform routine maintenance. You may want to consider Summitt Fire and Security. They can be reached at 802-497-1925.

or

Black Dog Fire and Security (BDFS): 802-355-1010

1.5. State or municipal fire and safety inspections are generally conducted under 2015 Vermont Fire and Building Safety Code, the Vermont Rental Housing Code which was revised in 2015, and the revised ordinances of the municipality. This building is covered under these rules as it meets the definition of a public building as defined by Vermont State Statute, Title 20, Chapter 173, Section 2730. Vermont Rental Housing Code, and/or the revised ordinances of the municipality. The following is a description of possible issues under these guidelines. The following list may not include every issue that could be termed a code violation by state or local municipality officials. This list is for reference only and is not to be considered a fire and safety inspection for this address, on the day of inspection. A fire and safety inspection by the proper authorities must be undertaken as agreed upon and/or as needed or necessary.

State or local officials may use the terms "grandfathering" or "existing". These terms are used to describe a condition or conditions that may be deemed acceptable at the time of inspection by local or state definition. This is most prevalent when a building or condition is considered historical and cannot be easily replicated or altered. However, it is important to note that these terms are not represented in any code book and are specific to municipalities. As codes change, you may be responsible to bring these conditions to current standards at the time of future inspections or if you, renovate or rebuild structures.

1.6. Permit and Licensing Requirements: Projects within a Rental Property or Apartment building having more than 2 units that includes: new construction, alterations, renovations or the installation of fixtures.

Types of permits and licensing required: construction, plumbing, electrical. This also includes public buildings.

1.7. [Vermont Fire Codes and Standards](#)

1.8. [Vermont Fire Code Information Sheets](#)

1.9. [Ansul Fire Suppression Fire Systems in Vermont](#)

1.10. ----- **Water supply**-----

1.11. 507.1 Required water supply. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises on which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction.

1.12. 507.2 Type of water supply. A water supply shall consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

1.13. 507.4 Water supply test. The fire code official shall be notified prior to the water supply test. Water supply tests shall be witnessed by the fire code official or approved documentation of the test shall be provided to the fire code official prior to final approval of the water supply system.

1.14. ----- **Access**-----

1.15. Means of **egress** shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency. NFPA 1:14.4.1 - 2015 Edition - NFPA 1:14.4.1 - 2015 Edition

1.16. Fire extinguisher mounted

1.17. Fire alarm system noted

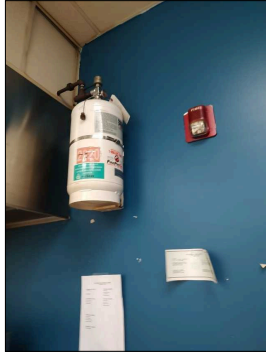
1.18. Exit signage noted

1.19. Fire extinguisher noted as not being properly tagged, inspected. NFPA 1:13.6.3.1.14: Portable Fire Extinguishers

One properly sized fire extinguisher shall be provided and shall be mounted properly and inspected annually. The fire extinguisher shall be inspected and tagged by a technically qualified person(s) or be replaced with a new extinguisher, annually.

1.20. ----- **Electrical room**----- **Lighting and electricity**

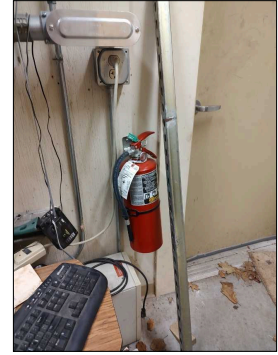
1.21. GFCI protection needed: See grounds, garage, foundation, kitchen, bathroom, shed



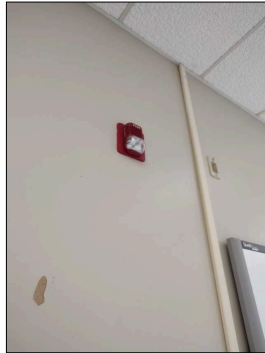
Ansul system



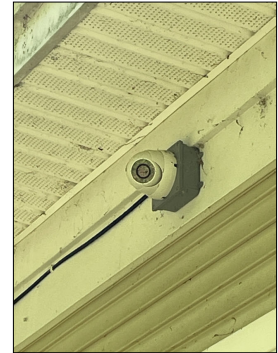
Exit signage



Fire extinguisher marking



Fire alarm system



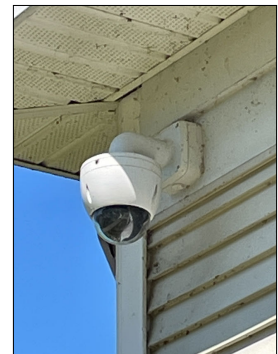
Security system



Emergency lighting



Security system



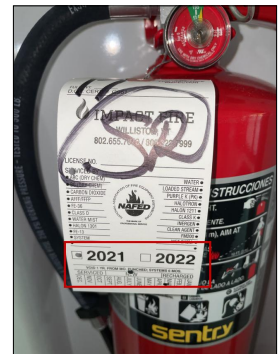
Security system



Speakers noted



Fire extinguisher mounted



Fire extinguisher not properly tagged



Fire alarm system



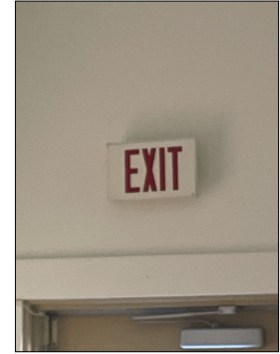
Fire extinguisher mounted



Fire extinguisher not properly tagged



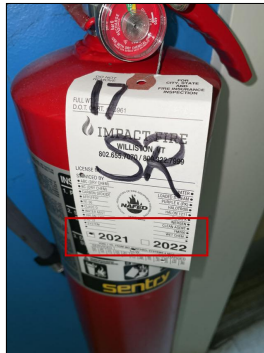
Fire extinguisher not properly tagged



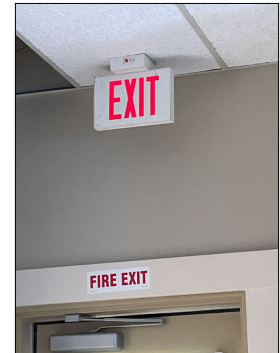
Exit signage



Fire extinguisher and marking



Fire extinguisher not properly tagged



Exit signage



Thermography/Home Energy Performance

1. Conditions/Findings



Materials: Thermal Camera: A Flir E8 infrared camera was used to check overall air exchange within the home. There was unremarkable air exchange was noted throughout the home unless otherwise noted. Photos were taken at the exterior walls of the first floor, second floor and second floor ceiling. We also show appliances operating and look for moisture around toilets (where applicable). All insulation appeared to be intact. All penetrations appeared to be sealed. The photos were taken under static conditions. Observations:

1.1. Note the sources of moisture in a home.

1.2. Lighting accounts for 30% to 50% of a buildings energy use or about 17 percent of total annual US electricity consumption. 90% of the energy emitted by incandescent bulbs is in the form of heat, only 10% is in the form of light. This means that not only is money wasted on inefficient lighting, but using incandescent bulbs lights increases cooling costs.

1.3. Limitations and Observations: The home was inspected for basic energy performance and is limited in scope and observation. This aspect of the inspection exceeds the standards of practice for this inspection and is performed as a courtesy for our clients only. This is not to be viewed as a full energy audit of the home and its systems and cannot be used to gain energy credits or funding. We highly recommend that an energy audit of the home be performed by a qualified entity and that all heating and cooling appliances are serviced annually by qualified professionals.

A portion of this inspection involve the use of a Thermal Imaging Radiometer to survey portions of the interior and/or exterior of the structure looking for anomalies which may indicate issues with moisture, electrical components or the building thermal envelope. Any observed anomalies, when possible, are further investigated using appropriate methods and tools to verify the nature of the exception. Thermography is not x-ray technology and cannot see inside walls. Moisture must be present at the time of the inspection to be detected using infrared thermography. During dry periods, building materials can dry out and moisture may not be detectable, even though a leak may still be present. Electrical issues may not be detectable under light electrical loads. Detection of the building thermal envelope issues is dependent on weather conditions and the ability of the HVAC system to establish and maintain adequate temperature differential between conditioned and unconditioned areas.

Be advised that a thermal scan is not a substitute for indoor air quality (IAQ) testing for pollutants and/or potential bio hazards including mold or microbial activity. Thermal image a does not detect mold. If air quality for the presence of pollutants or bio hazards is a concern, a qualified IAQ specialist should be consulted.

1.4. NOTE: Thermal images of moisture problems (if any) have been confirmed with a quality moisture meter and proper repairs should only be done by a qualified professional. Moisture can be conducive to fungi-mold, decay and wood destroying insects that cannot always be seen. Also remember that more repair items may be discovered during the process of further evaluations and repairs of any item listed.

NOTE: Although Infrared Thermal Imaging is a far better diagnostic tool than the naked eye, it does not guarantee 100% accuracy, unless removal or destruction of components can be achieved to validate findings. When possible, other tools are used to verify Thermal Images, but even with these considerations we do not claim to have x-ray vision. Conditions may change and cause the apparent temperature readings revealed in Thermal Images to be different at any given time.

1.5. Energy upgrades and tax deductions: Energy upgrades such as replacement of doors and windows to energy efficient units and models, adding insulation to areas such as the attic or box sills in the basement and/or walls, adding a moisture barrier on a dirt floor of a basement, adding a hot water heating unit such as a model with a heat pump (GE GeoSpring), Energy-efficient roofing and siding as well as many other items can be a tax deduction. As always, consult with your accountant or tax professional regarding any and all work for upgrades that you have done to the home after purchase.

1.6. Energy audits: Consider having an energy audit performed by a qualified contractor such as Vermont Gas (if applicable) or Efficiency Vermont. The findings of an energy audit could lead to significant savings throughout your home. Savings on heating and water heating equipment as well as programs to purchase such units are also beneficial.

1.7. Heating and cooling guide: Go to the following link:
<https://www.nachi.org/documents2012/Home%20Energy%20Inspection/Heating-Cooling-Guide-InterNACHI-Home-Energy-Inspection.pdf>

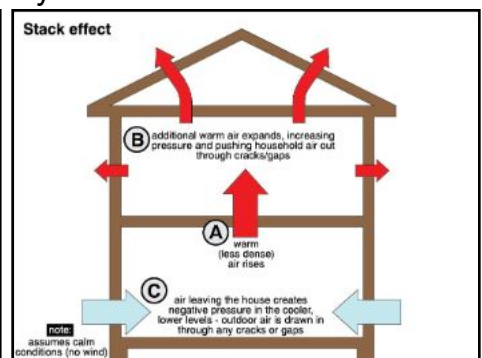
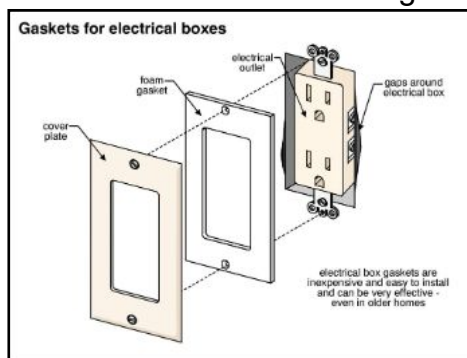
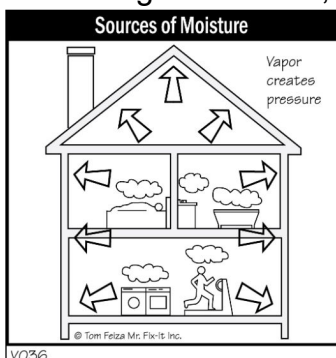
1.8. Unremarkable air exchange/thermal bridging/breaks noted: This is air exchange that is typical in the wall structure and ceiling structure. Generally, structural components such as studs or headers will show up. These are normal points of convection for airflow into or out of the home as they cannot be insulated like a void in the wall can. All materials have an R-value. Most materials R-value is lesser than manufactured insulating materials.

1.9. Air exchange at receptacles in the wall noted. Recommend obtaining receptacle insulating covers and installing them.

1.10. Note the photo of typical airflow in a home.

1.11. There were some areas throughout the home that showed pockets of air exchange. It may be possible to blow insulation into the walls from above or other points. In many cases, it is difficult to add insulation due to finished wallcoverings without incurring a great deal of cost to dismantle the walls insulate and then re-install the walls. It is important to control heat going upward and insulation can be updated in the attic areas. Also, replacing older single pane windows (when applicable) would also help a great deal. Replace seals around doors and windows if needed. Keep in mind, that any upgrades that are made for energy conservation are tax-deductible. This includes insulation, doors, windows, heat sources, electric usage upgrades, etc.

1.12. The floors consisted of at least 50% hard surfaces like wood, tile or concrete. Hard surfaces are easier to clean than surfaces covered by carpet or rugs. Carpets can collect allergens and dirt, so homes with hard surfaces are generally healthier to live on.



2. List of Energy Upgrades

Materials:

- **Energy Efficiency Matters:** The following is a list of recommended energy upgrades that your home may benefit from. We recommend that you have an energy audit with either Vermont Gas (if applicable) or Efficiency Vermont. Here is a video regarding home energy audits: <http://www.greenbuildingadvisor.com/video-series-home-energy-audit>. Remember that energy upgrades may be or are a tax deduction. For more about energy efficiency you may also want to visit the following link: <https://www.nachi.org/energyconservation.htm>
- Building thermal envelope Ref: IRC Section N1102.4.1: The building thermal envelope shall be durably sealed to limit infiltration. The ceiling methods between dissimilar materials shall allow for differential expansion and contraction. The following shall be

caulked, gasketed, whether stripped or otherwise sealed with an air barrier material, suitable film or solid material. 1. All joints, seams and penetrations. 2. Site built windows, doors and skylights. 3. Openings between windows and door assemblies and their respective jambs and framing. 4. Utility penetrations. 5. Dropped ceilings or chases adjacent to the thermal envelope. 6. Knee walls. 7. Walls and ceiling separating the garage from conditioned spaces. 8. Behind tubs and showers on exterior walls. 9. Common walls between dwelling units. 10. Attic access openings. 11. Rim joists junction. 12. Other sources of infiltration.

- **Interior:**

- Recommend adding insulating gaskets on all exterior wall receptacles and switches
- Recommend adding water saving aerators at faucets and showers

- **Basement:**

- Install a 70 pint per day dehumidifier

- **Electrical:**

- Lightbulbs: Replace all incandescent lighting with compact fluorescent bulbs or with LED lighting.
- Unplug smaller unused appliances such as toasters and all battery chargers. FYI: leaving battery chargers with batteries in them for tools or even cell phones can cause potential overheating and fire.
- **[Turn Off Your Computer](#)** : Click this link to learn how to save money buying and owning a computer

- **Air exchange:**

- Equip or replace bathroom fans with units that have a humidistat. Set your bathroom fan(s) on a timer or set a preferred humidity level under 60% humidity. Bathroom fans should run at least 15 to 20 minutes after a shower. Running bathroom fans will allow the home to exchange air which will help the overall comfort and air quality in the home.

- **Heating System/Water Heater:**

- Make sure and have an annual service for your boiler or furnace by a qualified and certified technician
- Install programmable or smart thermostats to manage indoor temperatures. Turning your temperatures to lower settings while you are sleeping or gone to work and save from zero to \$300 per year, per thermostat.
- Do not store any contents within 3 feet of heating equipment
- Replace any water heater that is older than 8 to 10 years
- Consider installing a hot water heater with a drop in heat pump. This will use energy from the air temperature in the basement as well as dehumidifier the basement area.
- Replace older heating systems with energy efficient models. Typically units will last 20 to 40 years.
- Consider heat pumps for heating and cooling the home. Heat pump will offset more expensive energy needs from your current heating and cooling system. Adding solar as a powergenerating source will vastly reduce the cost of running heat pumps and your overall electricity needs.

- **Appliances:**

- Replace older appliances with energy rated appliances
- Upgrade your washer to a unit that uses only 15 gallons per load
- Do you have duplicate appliances? if so, now is a good time to determine if you need them.



Hot Water Temperature

1. Temperature

Observations:

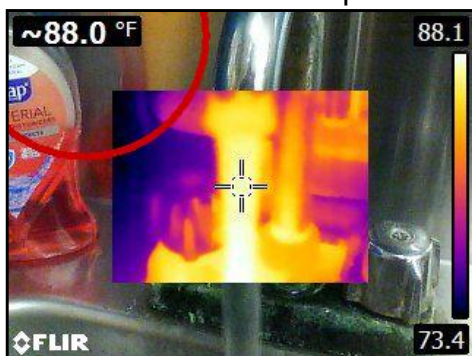


1.1. The system was tested by way of faucets in kitchen and baths.

1.2. FYI: You should keep the water temperature set at a minimum of 110 degrees Fahrenheit to kill microbes and a maximum of 120 degrees to prevent scalding. Water heaters have a typical life expectancy of 8-12 years.

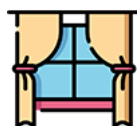
Vermont Code: Maximum hot water temperature allowed: 120 degrees Fahrenheit unless otherwise required by law. This is referenced in section 602.2 as amended by 2015 Vermont Plumbing Rules (2015 IPC). A good guideline is that any faucet that you can put your hand under, must meet this requirement. Dishwashers do not have to meet this requirement because you cannot put your hands into them.

1.3. The hot water temperature at the time of inspection was: 88 degrees.



Hot water temperature

Water Scalding Chart	
Set water heater to 120 degrees or less for safety!	
TEMPERATURE	TIME TO PRODUCE SERIOUS BURN
120 degrees (hot)	More than 5 minutes
130 degrees	About 30 seconds
140 degrees	Less than 5 seconds
150 degrees	About 1 1/2 seconds
160 degrees (very hot)	About 1/2 second



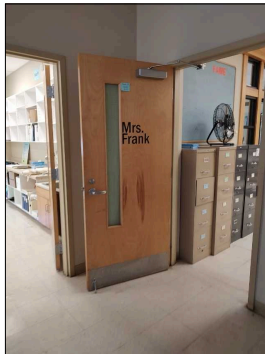
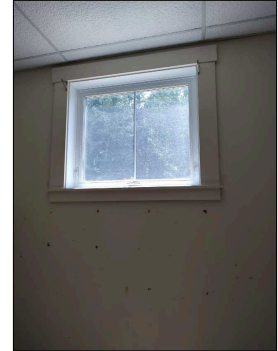
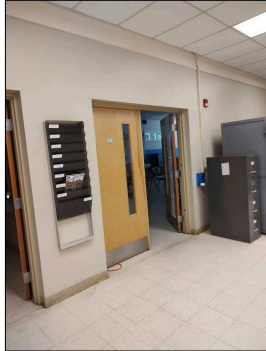
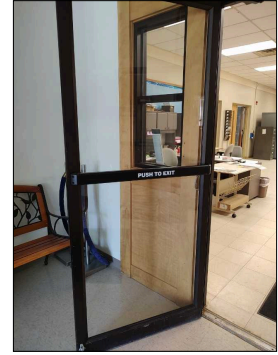
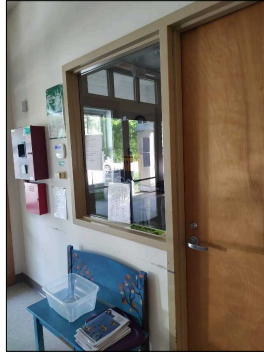
Interior Finishes

1. Door and Window Styles

Observations:



• Pictures in this section are of the door and window styles in the home.



Window operating

2. Floor, Wall and Ceiling Styles



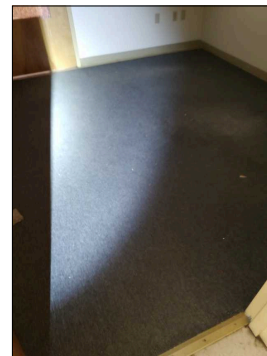
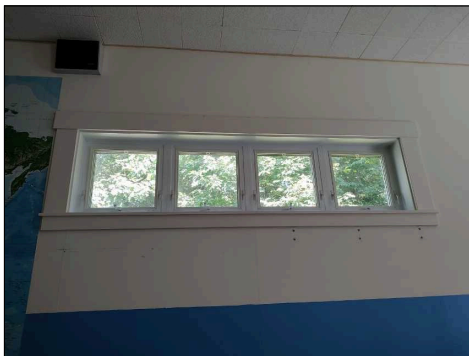
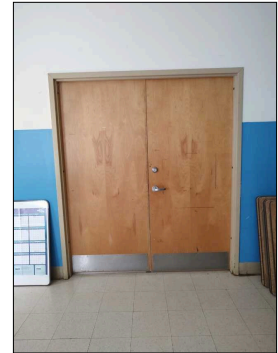
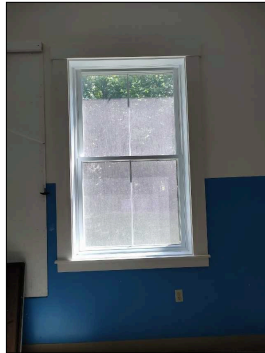
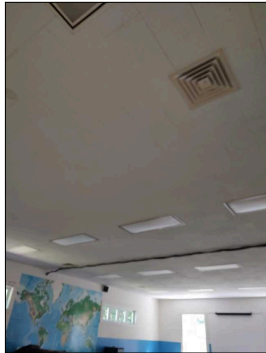
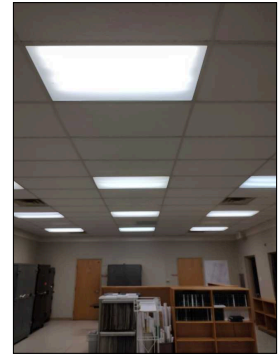
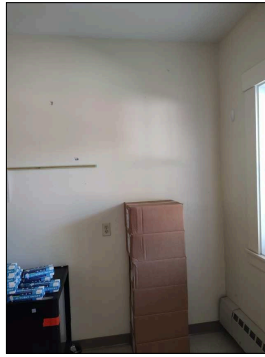
Observations:

- **Inspection restriction:** All areas beyond the interior finishes could not be viewed or inspected at the time of inspection. Therefore, all primary and secondary damage that may exist or may be found subsequently inspection are disclaimed. These areas simply could not be inspected or viewed. This inspection also cannot determine the makeup of the materials or whether they contain environmentally hazardous materials. It is possible for damage or poor quality workmanship to exist and to have been covered up by the current owner or previous owners. This extends to all other areas of the home with interior finishes.

- Pictures in this section are of the floor ceiling and wall styles in the home.

- For more about interior finishes in the home, please visit the following week:

https://hcloud.blob.core.windows.net/hrbpdfs/HRB_9_Interior_2011.pdf



Exterior/Interior Photos

1. Exterior Photos

Observations:



- The photos in this section represent the condition of the home on the day of inspection.





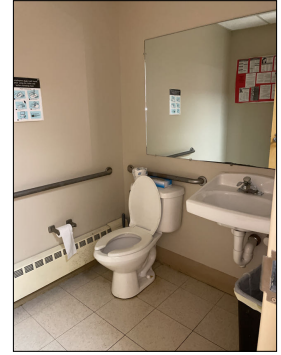
2. Interior Photos

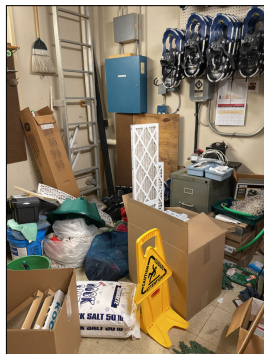
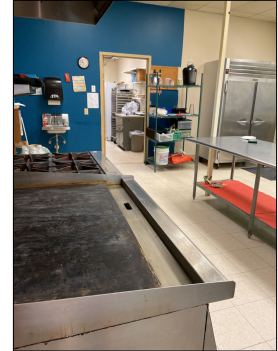
Observations:



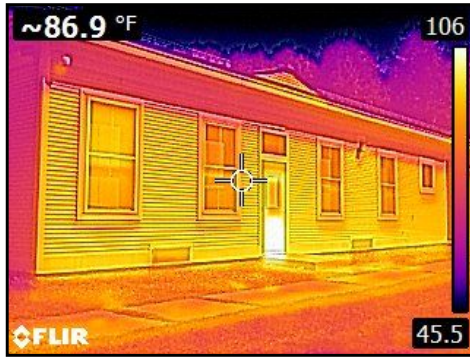
- The photos in this section represent the condition of the home on the day of inspection.







Photos





Glossary

Term	Definition
2014 NEC, 210.8 (A) Dwelling Units, Ground-fault Circuit-interrupter Protection for Personnel	<p>According to the 2014 NEC, GFCI protection of 120-volt, 15- or 20- amp electrical receptacles is required at the following locations:</p> <ol style="list-style-type: none"> 1. Bathrooms: This includes receptacles that may not be readily accessible, like those attached to ceiling lights. 2. Garages, and also accessory buildings that have a floor at or below grade level not intended as habitable rooms and intended as storage areas, work areas, and areas of similar use. 3. Outdoors: All, with the following exceptions: <ol style="list-style-type: none"> a. Exception to 3: for receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow melting, deicing, or pipeline and vessel heating equipment, protection may be provided to the receptacle only, not necessarily the entire circuit. 4. Crawlspace- at or below grade level. 5. Unfinished basements (not intended as living spaces and used for storage, work rooms, etc.). <ol style="list-style-type: none"> a. Exception to 5: receptacles supplying permanently installed fire or burglar alarms need not have GFCI protection. 6. Kitchens: for receptacles installed to serve countertop surfaces. 7. Sinks: where receptacles are installed within 6 feet of a sink edge. 8. Laundry receptacles: Code: [E390 2.8 – E390 2.10]: All receptacles in laundry areas must now be protected by an easily accessible ground fault circuit interrupter: GFCI. E3703.3 Laundry circuit. A minimum of one 20-ampere-rated branch circuit shall be provided for receptacles located in the laundry area and shall serve only receptacle outlets located in the laundry area. [210.11(C)(2)]
A/C	Abbreviation for air conditioner and air conditioning
AIR-CONDITIONING SYSTEM	A system that consists of heat exchangers, blowers, filters, supply, exhaust and return-air systems, and shall include any apparatus installed in connection therewith.
Accessible	In the opinion of the inspector, can be approached or entered safely, without difficulty, fear or danger.
Appliance	A household device operated by use of electricity or gas. Not included in this definition are components covered under central heating, central cooling or plumbing. In commercial applications, equipment other than industrial that is installed or connected as a unit to perform one or more functions.
Asphalt	A dark brown to black, highly viscous hydrocarbon produced from the residue left after the distillation of petroleum. Asphalt is used on roofs and highways and as a waterproofing agent.

CONDENSATE	The liquid that separates from a gas due to a reduction in temperature; for example, water that condenses from flue gases and water that condenses from air circulating through the cooling coil in air conditioning equipment.
Carbon Monoxide (CO)	A colorless, odorless, highly poisonous gas formed by the incomplete combustion of carbon.
Cellulose	Cellulose insulation: Ground-up newspaper that is treated with fire-retardant.
Clearance	The minimum distance through air measured between the surface of something heat producing and the surface of something combustible.
Columns	Columns are rigid, relatively slender structural members designed primarily to support axial compressive loads applied to the ends of the members. Relatively short, thick columns are subject to failure by crushing rather than by buckling. Failure occurs when the direct stress from an axial load exceeds the compressive strength of the material available in the cross section. An eccentric load, however, can produce bending and result in an uneven stress distribution in the section. Ching, Francis D. K.. Building Construction Illustrated (p. 157). Wiley. Kindle Edition.
Component	A permanently installed or a detached fixture, element or part of a system.
Concrete	Concrete is made by mixing cement and various mineral aggregates with sufficient water to cause the cement to set and bind the entire mass. While concrete is inherently strong in compression, steel reinforcement is required to handle tensile and shear stresses. It is capable of being formed into almost any shape with a variety of surface finishes and textures. In addition, concrete structures are relatively low in cost and inherently fire-resistant. Concrete's liabilities include its weight— 150 pcf (2400 kg/ m ³) for normal reinforced concrete— and the forming or molding process that is required before it can be placed to set and cure. Ching, Francis D. K.. Building Construction Illustrated (p. 888). Wiley. Kindle Edition.
Condensation	The conversion of a vapor or gas to a liquid. Water will collect as droplets on cold surfaces when warmer, humid air is in contact with it.
Condition	The plainly visible and conspicuous state of being of a material object.

Contractor	<p>An individual licensed to perform certain types of construction activities. In most states, the general contractor's license and some specialty contractors licenses don't require compliance with bonding, workers compensation or similar regulations. Some of the specialty contractor licenses involve extensive training, testing and/or insurance requirements. There are various types of contractors, including the general contractor, who is responsible for the execution, supervision and overall coordination of a project in may also perform some of the individual construction tasks. Most general contractors are not licensed to perform all specialty trades and must hire specialty contractors for such tasks. These tasks include but are not limited to: electrical, plumbing, roofing, building etc. A remodeling contractor is a general contractor who specializes in remodeling work. A specialty contractor is licensed to perform a specialty task such as: electrical, side sewer, environmental abatement, plumbing, etc. A subcontractor is a general or specialty contractor who works for another general contractor.</p>
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Cracking

Causes of Cracking

When forces act on a material or a structure that create stress, cracking is one of the methods that nature uses to relieve that stress.

Differential Soil Movement

Differential soil movement happens when:

1. One part of a building remains stable while an adjacent part of the building moves. Heaving, settling and creep can all cause differential movement.

Heaving can be caused by:

1. Saturated soil expanding as it turns to ice. You might see this where an exterior hose bib leaks where plumbing supply pipes have leaked, or where roof drainage discharges to the foundation.
2. Expansive soils. Soils that expand in volume with increases in moisture content are typically clays. Clay deposits can be cover large areas and small deposits may exist randomly and affect only scattered homes in a small area.

Settling can be caused by:

1. Inadequately compacted fill. Soil disturbed by the excavation process must be compacted to a density equal to that of the surrounding, undisturbed soil. If soil is inadequately compacted, the weight of the structure will force air out of the spaces between soil particles and settling will occur.
2. Consolidation occurs when soil loses moisture, leaving air pockets between soil particles. Again, the weight of the structure will force air out of the spaces between soil particles and settling will occur.
3. Fill impurities can consist of wood that will eventually decay, leaving a void in its place, or any other material that deterioration will reduce in size over time.
4. Collapsible soils: Collapsible soils are those in which a significant portion of particles are loosely stacked and held together by thin binding agents like clay or other materials, all of which are water-sensitive. The particle structure is stable as long as it remains dry. Once water is introduced, the binder dissolves and the particle structure collapses, causing settling.

Lateral movement can be caused by:

1. Soil creep: Soil creep happens when gravity slowly moves soil downhill. This can happen when, in order to create a buildable lot from a sloped lot, the builder brings in fill to level the lot. If the original lot was too steeply sloped, the fill may start sliding slowly downhill. Especially if the rate of creep beneath a structure foundation varies among different parts of the foundation, stresses may develop that are relieved by cracking.

Craze Cracking:

Craze cracking is random hairline cracking, usually appearing on the face of glazed brick. It may be caused by poor manufacturing processes or as a result of freeze damage. It's

most common in the face of glazed brick. In cold climates it will increase the chances of freeze damage.

CRACK APPEARANCE

Cracking caused by soil movement is typically visible lower in the walls.

Stepped Cracking:

Stepped cracking in mortar is typically the result of foundation movement caused by differential soil movement. It will follow the rules for crack closures but is typically oriented diagonally. Cracks follow mortar lines because the mortar is weaker than the brick.

Straight cracking:

Differential soil movement can also cause straight cracking. If a type of mortar has been used that is stronger than the brick, cracks will propagate (grow) through the brick and mortar in relatively straight lines (not stepped cracking).

Cracking/Deterioration Above Arched Openings:

Solid masonry (brick double wythe) walls often have arches supporting the wall areas above openings. Because of the increased stress in these areas, over the long-term it's common to see cracking in the arches and the wall areas above them. This is typically the result of mortar deterioration. It will continue to deteriorate unless it is stabilized by re-pointing or rebuilding, depending on the condition.

Craze Cracking:

Craze cracking is random hairline cracking, usually appearing on the face of glazed brick. It may be caused by poor manufacturing processes or as a result of freeze damage. It's most common in the face of glazed brick. In cold climates it will increase the chances of freeze damage.

CRACK DESCRIPTION

Cracks should be described in terms of "closures".

- Descending closure: crack is wider at the top.
- Ascending closure: crack is wider at the bottom.

Both ascending and descending closures can be caused by either heaving or settling, depending on to which part of the foundation walls the vertical force is applied; at the corners or between corners.

Examples:

- Heaving at a corner will cause an ascending closure (wider at the bottom).
- Heaving between corners will cause a descending closure (wider at the top).

	<ul style="list-style-type: none"> • Settling at a corner will cause a descending closure (wider at the top). • Settling between corners will cause an ascending closure (wider at the bottom). <p>Horizontal Cracks: Horizontal cracks may develop where mortar loses its bond to brick. Raking and re-pointing would be required for correction.</p>
Egress	<p>Egress is the required path from all portions of the building, including each floor level, to the required egress door. Only one door is required. The required egress door must meet certain size requirements, be hinged, and can't have a deadbolt keyed on both sides, among other requirements. Other doors can meet these requirements but are not required to.</p> <p>Means of egress. Dwellings shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the required egress door without requiring travel through a garage. The required egress door shall open directly into a public way or to a yard or court that opens to a public way. 2018 IRC R311.1</p>
Energy Efficiency Matters:	<p>By making your house more energy-efficient, your heating and cooling systems will work less, and you may reduce the capacity needed when you replace your systems, which means more savings for you.</p> <p>Why Energy Efficiency Matters It's good for your budget, your comfort and our environment. Each year you spend hundreds of dollars to heat and cool your home and to heat your hot water. By installing energy-efficient equipment, which gives you the same comfort for less energy, you can lower these costs. Furthermore, the lower you can make your energy costs now, the better off you will be should energy prices go up and conservation reduces upward pressure on energy prices.</p> <p>Whenever fuels are burned in your home, in a generating station to produce electricity, in vehicles or elsewhere carbon dioxide, nitrogen oxide and sulphur dioxide are released. These emissions contribute to environmental concerns including smog, acid rain and climate change. Reducing energy use lowers the amounts of these emissions and their impact on the environment. You can help by practicing energy efficiency and conservation not only in heating and cooling your home, but everywhere at home, in the workplace and in your transportation choices. Many factors can affect your annual energy bill such as size and location of your home, yearly variations in weather, efficiency of your furnace and other appliances, thermostat settings, number of occupants, and the local cost of energy.</p> <p>Are you serious about how to go about cutting your heating and cooling costs? Follow these steps:</p>

Expansion Tank	An expansion tank or expansion vessel is a small tank used to protect closed (not open to atmospheric pressure) water heating systems and domestic hot water systems from excessive pressure. The tank is partially filled with air, whose compressibility cushions shock caused by water hammer and absorbs excess water pressure caused by thermal expansion.
Foundation walls	<p>Foundation walls provide support for the superstructure above and enclose a basement or crawl space partly or wholly below grade. In addition to the vertical loads from the superstructure, foundation walls must be designed and constructed to resist active earth pressure and anchor the superstructure against wind and seismic forces.</p> <p>Ching, Francis D. K.. Building Construction Illustrated (p. 211). Wiley. Kindle Edition.</p>
Four Common Types of Heating Units:	<ul style="list-style-type: none"> - A furnace provides heat through a forced air distribution system. - A boiler provides heat through a hydronic distribution system. (Hydronic systems are also referred to as hot water systems.) - A space heater supplies heat directly to the room where it is located. - A heat pump extracts heat from the air, ground or water outside the house and usually delivers it through a forced air distribution system.
GFCI	A special device that is intended for the protection of personnel by de-energizing a circuit, capable of opening the circuit when even a small amount of current is flowing through the grounding system. https://inspectapedia.com/electric/What-is-a-GFCI-CPSC.pdf
Galvanized	The home contained galvanized steel water distribution pipes. These pipes are outdated and subject to corrosion which will eventually result in restricted flow and leakage and will need to be replaced. Water flow in the home was satisfactory at the time of the inspection.
Glass	<p>Glass is a hard, brittle, chemically inert substance produced by fusing silica together with a flux and a stabilizer into a mass that cools to a rigid condition without crystallization. It is used in building construction in various forms. Foamed or cellular glass is used as rigid, vapor proof thermal insulation. Glass fibers are used in textiles and for material reinforcement. In spun form, glass fibers form glass wool, which is used for acoustical and thermal insulation. Glass block is used to control light transmission, glare, and solar radiation. Glass, however, is used most commonly to glaze the window, sash, and skylight openings of buildings.</p> <p>Ching, Francis D. K.. Building Construction Illustrated (p. 920). Wiley. Kindle Edition.</p>

Gutters

Gutters can be made of several materials; however, the most common are aluminum, galvanized steel, plastic and copper. Integral gutters are usually framed in wood, and lined with metals such as lead or copper. There are advantages and disadvantages to the various materials used.

Aluminum gutters do not rust but they dent easily, particularly with tall, heavy ladders. Joints in aluminum gutters are usually riveted together and caulked. The caulking must be renewed every few years. Fortunately, the number of joints required in aluminum gutters is less than with other types of systems, as it is often fabricated on the job site from long rolls of aluminum stock. Aluminum gutter is also pre-finished and, therefore, is low maintenance. Life expectancy is estimated to be twenty to twenty-five years.

Some galvanized steel gutters are also pre-finished but most are not. Galvanized steel requires periodic painting. Joints in galvanized gutters are usually soldered together. This type of gutter has a twenty to twenty-five year life expectancy.

Plastic gutters are generally designed for the do-it-yourself. Plastic comes in a limited color selection and some types tend to discolor with time. It is usually relatively small in size and some of the earlier systems are prone to cracking during cold weather. Its life expectancy is dependent upon the quality of the kit and the installation.

Copper gutters are considered to be the best; however, they are very expensive and not common. Copper can last fifty to one hundred years.

Mold	<p>Exposure to Mold:</p> <p>Mold is a fungus, or rather fungi. Fungi comprise 20% to 30% of the world's biomass. Mold fungi are in every home and humans are exposed to mold spores every day. Mold fungi can produce hazards to humans in two basic ways:</p> <ol style="list-style-type: none"> 1. Mycotoxins are a gaseous product of fungal metabolic processes. They vary in toxicity according to the family of mold fungi that produces them. Because mycotoxins are normally diluted in air to a concentration in which they are typically not a health threat, they are not much of a concern. 2. High concentrations of mold spores in indoor air. Mold fungi are typically not active when conditions are dry. Once moisture levels reach about 20% in materials, mold fungi become active and start to feed. Once levels reach about 30% in materials, mold colonies begin to expand. To reproduce, they release spores into the air. Spores are like microscopic seeds. <p>The greatest health threat to humans from mold fungi is inhalation of mold spores, which may reach elevated concentrations in indoor air. We all breathe mold spores all the time and our bodies are used to dealing with them, but high concentrations can produce a bad reaction in people with asthma, allergies, lung disease or compromised immune systems.</p> <p>Mold Sampling: Concentrations of mold spores in both indoor and outdoor air fluctuate with seasonal changes in weather and home ventilation levels. Concentrations can also vary with changes in home conditions, such as the development of plumbing leaks. Because of fluctuations in spore concentrations, sampling and analysis may reveal either high or low spore concentrations that are only temporary. In other words, sampling and analysis will not provide a long-term overview of the potential for health hazards relating to mold. They may reveal a short-term problem, and that can sometimes be quite valuable, depending on the health of those exposed.</p> <p>According to the US Centers for Disease Control (CDC), "toxic mold" is an inaccurate term. Mold can be "toxigenic" meaning that it can produce mycotoxins, but mold fungi and their spores are not toxic or poisonous.</p> <p>CDC statements about potential for mold-related health problems: https://www.cdc.gov/mold/stachy.htm#Q1</p>
PVC	Polyvinyl chloride, which is used in the manufacture of white plastic pipe typically used for water supply lines.

Steel	<p>Steel refers to any of various iron-based alloys having a carbon content less than that of cast iron and more than that of wrought iron, and having qualities of strength, hardness, and elasticity varying according to composition and heat treatment. Steel is used for light and heavy structural framing, as well as a wide range of building products such as windows, doors, hardware, and fastenings. As a structural material, steel combines high strength and stiffness with elasticity. Measured in terms of weight to volume, it is probably the strongest low-cost material available. Although classified as an incombustible material, steel becomes ductile and loses its strength when subject to temperatures over 1000 ° F (538 ° C). When used in buildings requiring fire-resistive construction, structural steel must be coated, covered, or enclosed with fire-resistant materials; see A. 12. Because it is normally subject to corrosion, steel must be painted, galvanized, or chemically treated for protection against oxidation.</p> <p>Ching, Francis D. K.. Building Construction Illustrated (pp. 896-897). Wiley. Kindle Edition.</p>
Stone	<p>Stone is an aggregate or combination of minerals, each of which is composed of inorganic chemical substances. To qualify as a construction material, stone should have the following qualities: Strength: Most types of stone have more than adequate compressive strength. The shear strength of stone, however, is usually about 1/ 10 of its compressive strength. Hardness: Hardness is important when stone is used for flooring, paving, and stair treads. Durability: Resistance to the weathering effects of rain, wind, heat, and frost action is necessary for exterior stonework. Workability: A stone's hardness and grain texture must allow it to be quarried, cut, and shaped. Density: A stone's porosity affects its ability to withstand frost action and staining. Appearance: Appearance factors include color, grain, and texture.</p> <p>Ching, Francis D. K.. Building Construction Illustrated (pp. 900-901). Wiley. Kindle Edition.</p>
WHY WATER TANKS LEAK:	<p>Please go to the following link: https://www.waterheaterleakinginfo.com/</p>

Weather Resistant Barrier: House wrap	<p>Weather Resistant Barrier: House wrap</p> <p>2006 IRC</p> <p>SECTION R703 EXTERIOR COVERING</p> <p>R703.1 General. Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.8. The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-resistant barrier behind the exterior veneer as required by Section R703.2. and a means of draining water that enters the assembly to the exterior. Protection against condensation in the exterior wall assembly shall be provided in accordance with Chapter 11 of this code.</p> <p>It could not be determined that house wrap was installed on the home at the time of inspection due to the installation of siding and wall coverings. Making that determination is beyond the scope of this inspection. If in place, the house wrap could also be improperly installed or incomplete which could allow moisture damage or issues to manifest and create secondary damage.</p>
Wood	<p>As a construction material, wood is strong, durable, light in weight, and easy to work. In addition, it offers natural beauty and warmth to sight and touch. Although it has become necessary to employ conservation measures to ensure a continued supply, wood is still used on construction in many and varied forms. There are two major classes of wood— softwood and hardwood. These terms are not descriptive of the actual hardness, softness, or strength of a wood. Softwood is the wood from any of various predominantly evergreen, cone-bearing trees, such as pine, fir, hemlock, and spruce, used for general construction. Hardwood is the wood from a broad-leaved flowering tree, such as cherry, maple, or oak, typically used for flooring, paneling, furniture, and interior trim.</p> <p>Ching, Francis D. K.. Building Construction Illustrated (p. 903). Wiley. Kindle Edition.</p>

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