

INTRODUCTION

Seacoast Inspections LLC
263 Winnacunnet Rd,
Hampton, NH 03842
603-783-1679

FINAL NARRATIVE REPORT

INTRODUCTION: Dear Client, Thank you for asking me to inspect your prospective new home. The inspection was performed according to the "**Standards of Practice**" of the **American Society of Home Inspectors (ASHI)** and the MA Board of Registration (To view ASHI Standards of Practice go to: <http://www.ashi.com>) (To view MASS Rules & Regulations 266 CMR 6.00, go to: <http://www.state.ma.us/reg/boards,hi/cmr/26606.htm>) ASHI inspectors are professionals who adhere to uniform standards for disclosing building deficiencies and a "**Code of Ethics**" that requires members to discharge their duties with fairness and impartiality to all.

SCOPE OF SERVICE: This is a limited inspection only, conforming to the Commonwealth of Massachusetts 266 CMR 1.00 through 11.00. The **Company** shall only inspect and report on those systems and components that are listed in the Standards of Practice and are readily accessible at time of inspection.

This report supersedes all previous communications and represents a visual evaluation of those "systems" outlined in our Contract that were readily accessible on this day only. The **Report** does not represent an endorsement for or against the purchase of real estate. This **Report** is intended to provide an overview of the existing conditions at time of inspection only and should not be used as an indicator of future performance; no expressed or implied warranties or guarantees of any kind are given in conjunction with the inspection of the premises. A building and its components are subjected to constantly changing conditions and environment and problems can develop immediately upon completion of the inspection. Therefore, we do not issue a guarantee or warranty on our inspection and **Report**.

The contents of this **Report** are CONFIDENTIAL, for the exclusive use of the **Client** named in the Inspection Agreement. The **Report** is not assignable to third parties or transferable to others. Should this **Report** be sold or transferred to another party, all opinions are null and void and the **Company** disclaims any and all liability which may result from this **Report** and the opinions contained therein. The **Company** reserves the right to institute legal litigation against any party who distributes or shares information contained within this **Report** with other parties not involved in the sales transaction without our written and/or oral approval.

In MA **By law (Chapter 112 87YY5), your broker was required to give you a "consumer brochure" on home inspections for your review.** Our inspection **Report** is not a substitute for honest disclosure required by real estate agents, property owners, and/or the property transferors'. Real Estate Transfer transferors' disclosure statements or forms should be carefully read **NOW** by you and your attorney for any material facts that may influence or effect the desirability, and/or market value of the property. It is the clients sole responsibility to research any and all jurisdictional permits required by the local authorities regarding the property in contract before the close of escrow, and to personally perform a diligent visual inspection of the property after the seller vacates to insure that no "condition" was concealed by personal property and stored items while occupied, or damaged during the seller's evacuation of the structure. Should any "condition" be revealed that was not addressed within this **Report** prior to, or after the close of escrow, please contact our office immediately for an additional evaluation regarding such "condition."

Please read the **Home Inspection Agreement** and the **Home Inspection Final Report** in their entirety including all definitions and comments on each page. The Home Inspection **Final Report** contains specific information relative to this home. Make sure that it accurately documents the visual problems that were disclosed to you during the hours of the home inspection. If you have any questions or require any further clarification, please call my office for free assistance. If you should desire a "return visit inspection," please contact my office for a quotation based on minimum trip charge and hourly rate. If you were absent during this inspection or you do not understand the **Final Report**, you must **call the office immediately** to speak with the inspector who performed the inspection. At that time, the inspector will give you a verbal

consultation of the property. The *Company* cannot be held liable for your understanding or misunderstanding of this *report* contents if you choose not to consult with the inspector.

To prevent "false expectations," please understand that the task of a home inspector is to function as a "general practitioner" who is trained to be a professional in the identification of typical home deficiencies. He or she performs a visual examination to identify certain components, states their general condition, locates telltale problems and then recommends that you consult with appropriate tradesmen or other experts for further evaluation and repair estimates. **Be advised that a home inspector will not find every little problem during the several hours spent at the site and that undisclosed problems are often revealed during repairs or after further evaluation by tradesmen.** A home inspector does NOT perform destructive testing, can NOT see through walls, and does NOT move furniture or stored goods or predict the future. **Only problems that are readily accessible at time of inspection will be included in the report.** **MA Regulations prohibit the home inspector from determining the cost of repairs.** If the inspector recommends consulting other specialized experts, any such consultation shall be at the *Client's* sole discretion and expense. Any comments regarding correction or repair are based on typical practices used by contractors in the field and are not made as specific recommendations for the noted problems. In all cases, licensed and insured specialists in appropriate fields, should be consulted before any work is undertaken. Correction or repair of problems or conditions noted in this **Report** should be done by qualified licensed and insured professionals in accordance with the requirements of the building code. Any work done by the homeowner is strictly at the **Client's** risk.

DISCLAIMER: Those defects obstructed or concealed at time of inspection are EXCLUDED from this report. The *Client* understands that only deficiencies which are exposed and *readily accessible* at the time of inspection will be included in the *Final Report* and that all opinions expressed concerning the adequacy of the structure or systems are based on visual examination only and do not involve engineering calculations or testing of any nature. . See **INSPECTION AGREEMENT** regarding scope of services and other limitations and exclusions.

Buying real estate is a speculative investment in spite of a limited visual home inspection. While you still incur some risk, the inspection **Report** does represent an educated & impartial second opinion. This **Report** is subject to correction of incorrect statements, typographical errors and addition of items inadvertently left out during **Report** preparation. Please contact us immediately if any discrepancies or errors are noted.

If the **INSPECTION AGREEMENT** is unsigned, delivery and payment for the inspection **Final Report** shall constitute acceptance of all terms on the **INSPECTION AGREEMENT**.

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DEFINITIONS OF TERMS

Please take the time to read this page concerning contingent and limiting conditions and definition of terms so that you can clearly understand the inspector's **observations, analysis and recommendations.**

KEY TO INSPECTION REPORT AND RATING SYSTEM:

* Items that have an asterisk next to them refer to **CONDITION:**

One	(*)	asterisk = FUNCTIONAL
Two	(**)	asterisks = FUNCTIONAL with EXCEPTIONS
Three	(***)	asterisks = NOT FUNCTIONAL
Four	(****)	asterisks = SAFETY HAZARD

* **FUNCTIONAL:** The Inspector did not observe any visible problems where **Readily accessible** and **Observable** at time of inspection. (Note: An item may be **fully depreciated** and still be rated functional. No guaranty on remaining life expectancy, warranty or insurance policy is expressed or implied.)

**** FUNCTIONAL with EXCEPTIONS:** The System/component was inspected where **Readily accessible** and **Observable** and was performing **ONLY PART, BUT NOT ALL** of its intended function. The System/component may be **"fully depreciated"**, or repairs are needed as noted on this report. Consult a qualified professional / tradesman or service technician and request examination, analysis and a cost estimate for needed repairs or replacement **NOW** to restore complete function and to determine the impact on your budget. This research includes conditions beyond the scope of the home inspection that require destructive investigation, engineering, research or analysis.

***** NOT FUNCTIONAL:** NOT performing its intended function. Repairs, corrections or replacement are needed to restore function. Consult a qualified professional / tradesman or service technician and request examination, analysis and a cost estimate for needed repairs or replacement **NOW** to restore complete function and to determine the impact on your budget. This research includes conditions beyond the scope of the home inspection that require destructive investigation, engineering, research or analysis.

****** SAFETY HAZARD: URGENT** repair / replacement are needed. A condition in a **Readily accessible** and **Observable** installed System or Component, which is judged by the Inspector to be unsafe, of significant risk of personal injury during normal day-to-day use. (The risk may be due to damage, deterioration, improper installation or a change in the accepted residential construction standards.)

FULLY DEPRECIATED: Item inspected is no longer under the manufacturer's warranty and it is suggested that it is reaching the end of its serviceable life.

NOT VISIBLE: Items which cannot be visually examined.

NOT ACCESSIBLE: Items which were concealed at time of inspection and require further research by you.

SHUT DOWN: A piece of equipment or system is shut-down when it the device or control cannot be operated in a manner that a homeowner should normally use to operate it. If the safety switch or circuit breaker is in the "off" position or the fuse is missing or blown, the inspector is not required to reestablish the circuit for the purpose of operating the equipment or system. (Note: The true functional condition of equipment or systems in a shut-down condition is undetermined. Further investigation is advised.)

The definitions as listed in 266 CMR 2.00 section 2.01 shall apply to this Report.

CONDITIONS OBSERVED SHALL BE RECORDED IN THE FOLLOWING FORMAT:

OBSERVATION: A verbal description of what the inspector saw.

ANALYSIS: The inspector's opinion.

RECOMMENDATION: Advice intended to give the client further direction.

NOTICE: As part of your purchase research, I recommend that you visit the local building and zoning departments for assurance that the building complies with applicable building codes and municipal regulations. Make sure a current up-to-date **Certificate of Occupancy** exists for the entire house as it is presently constructed, especially if the home is a multi-family building. This should be on file at the local building department. A certificate of occupancy is issued by the local municipality after a home, or alterations to home, have passed all municipal codes and zoning regulations in force at time of construction and that the dwelling is ready for occupancy.

DISCLAIMER: THIS IS NOT A CODE COMPLIANCE REPORT. ANY REFERENCE TO THE BUILDING CODE OR CODE INFRACTIONS IS INTENDED TO PROVIDE A PERFORMANCE BENCHMARK OF WHAT CONSTITUTES ACCEPTABLE CONDITIONS. THE HOME INSPECTOR DOES NOT COVER ALL CODE COMPLIANCE ISSUES. YOU SHOULD CONTACT LOCAL OFFICIALS REGARDING CODE ISSUES.

**266 CMR 6.00 STANDARDS OF PRACTICE
6.11 General Limitations and Exclusions:**

- (1) General limitations.
- (a) Inspections done in accordance with the standards set forth in 266 CMR 6.00 are visual and are not **Technically Exhaustive**.
 - (b) The standards set forth in 266 CMR 6.00 are applicable to buildings with four or less dwelling units and their attached garages.
- (2) General exclusions.
- (a) **Home Inspectors** shall not be required to **Report On**:
 - 1. Life expectancy of any **Component** or **System**.
 - 2. The causes of the need for a repair.
 - 3. The materials for corrections of problems.
 - 4. The methods of repair other than to indicated the repair should comply with applicable requirements of the governing codes and good construction practice .
 - 5. Compliance or non-compliance with applicable regulatory requirements.
 - 6. Any **Component** or **System** not covered by 266 CMR 6.01 through 6.12.
 - 7. The presence or absence of wood destroying insects such as wood damaging organisms, rodents, or insects unless specifically contracted to in writing. Cosmetic items, items that are not **Readily Accessible**, underground items, or items not permanently installed. Items specifically excluded by the **Client** which are noted in writing on the **Contract** or **Report**.
 - (b) **Home Inspectors** shall not be required to:
 - 1. Offer warranties or guarantees of any kind.
 - 2. To collect any engineering data (the size of structural members and or the output of mechanical and or electrical equipment).
 - 3. Inspect concealed spaces.
 - 4. Determine Building Code and/or zoning violations unless specifically contracted for in writing.
 - 5. Enter any area or perform any procedure, which may damage the property or its components, or be dangerous to the **Home Inspector** or other persons, as determined by and reported by the **Home Inspector**.
 - 6. Disturb or move insulation, stored and/or personal items, furniture, equipment, plant life, soil, snow, ice, or debris that obstructs access or visibility.
 - 7. To provide **Environmental Services** including determining the presence or absence of any micro organisms, suspected hazardous substance including carbon monoxide, but not limited to latent surface and or subsurface Volatile Organic Compounds, PCB's, asbestos, UFFI, toxins, carcinogens, lead paint, radon gas, noise, and contaminants in soil, water, air quality, molds, wet lands and or any other environmental hazard. It shall be the **Clients responsibility** to seek out and enlist the services of a qualified professional to investigate and provide all environmental services.
 - 8. Determine the effectiveness of any system installed to control or remove suspected hazardous substances. (**Engineering Service**)
 - 9. Predict future conditions, including but not limited to failure of components.
 - 10. Project operating costs of components.
 - 11. Determine extent or magnitude of damage or failures noted.
 - 12. Operating any system or component, that which does not respond to normal operating controls.
 - 13. Test for radon gas unless specifically contracted for in writing. The **Home Inspector** shall not be responsible for the security of the testing device(s), the picking up of and mailing of the test vials, and or the accuracy of the test(s) all of which is beyond the **Home Inspectors** control.
 - (c) **Home Inspectors** are prohibited from:
 - 1. **Reporting On** the market value of property or its marketability.
 - 2. **Reporting On** the advisability or inadvisability of the purchase of the property.
 - 3. Offering or performing engineering, architectural, surveying, plumbing, electrical, heating services, pest control, urea formaldehyde and lead paint inspection(s) or any other job function requiring an occupational license and or registration in the jurisdiction where the inspection is taking place, unless the **Home Inspector** holds a valid registration and or occupational license, in which case he/she may inform the **Client** that he/she is so registered/licensed, and is therefore qualified to go beyond the 266 CMR 1.00-12.00. Should the **Home Inspector** offer any service requiring a registration and or occupational

licenses he/she shall be required to specify and list additional services not required under these standards of basic home inspection. In addition the **Home Inspector** shall not offer to make and or perform any repairs and or treatment to the property he and or his firm has inspected.

4. Testing **Automatic Safety Controls**.
5. Offering or performing any act or service contrary to law and or these regulations.
6. Determining the cost of repair of any item noted in the **Report** and or inspected by them and or their firm.
7. Offering to make and/or perform any repairs and or treatment to the property he/she and or his/her firm has inspected, unless those repairs and or treatments are part of a negotiated settlement of a complaint and or claim against the **Home Inspector** and or the firm he/she represents.
8. Verifying property lines and or determine location of property lines (Registered Surveyor).
9. Calculating the strength, adequacy, or efficiency of any system or component. (**Engineering Service**)
10. Operating any system or component that is shut down or otherwise inoperable. However, the **Home Inspector** shall recommend the **Seller** and/or the **Sellers Representative** demonstrate that those systems and or components are functional.
11. Evaluating acoustical characteristics of any system or component. (**Engineering Service**)
12. Inspection of surface and subsurface soil conditions. (**Engineering Service**)
13. Turning on any electrical or fuel supply and or devices that are shut down. However, the **Home Inspector** shall recommend the **Seller** and or the **Sellers Representative** demonstrate that those systems and or components are functional.
14. By definition, these controls are automatic in function; because of the need for special tools, possible conflict with normal operating controls, and damage to equipment and distribution systems. Testing of the automatic controls could endanger not only the **Home Inspector** but the **Dwelling** as well because of the excessive pressures and or currents needed to made the control react as designed. Testing is **technically exhaustive** and beyond the scope of the Standards of Practice. Testing should only be done by an appropriately licensed service technician and or engineer familiar with the operation of the control and or device. Testing should comply with the protocols established by the recognized national testing laboratories and or testing agencies such as Underwriters Laboratory, Factory Mutual, ASME, etc.

Home Inspector **REGULATORY AUTHORITY**
M.G.L. c. 13, § 96, c.112, §§ 221 through 226.

1. THIS REPORT IS PREPARED EXCLUSIVELY FOR:

Jane Sample.

2. PROPERTY INSPECTED:

Address: 12 Anystreet
Anytown, USA.

Date: 02/09/09.

**Approximate age
or year built:** 1986 years as attested by the broker.

**Main entrance
faces:** East.

Building Style: Wood framed colonial reproduction.

**State of
occupancy:** Vacant and unfurnished.

3. PEOPLE PRESENT:

Buyer, Listing broker.

4. INSPECTOR(S) PRESENT:

Terry Grube.

5. WEATHER CONDITIONS AT TIME OF INSPECTION:

DATA: Drizzle.
Temperature at time of inspection: 40 degrees F.

6. SYSTEMS OR COMPONENTS THAT WERE NOT INSPECTED OR WERE SHUT-DOWN:

Conditions: Observation: All utilities were operational at time of inspection.

7. OBSTACLES ENCOUNTERED DURING INSPECTION:

Observation: **OWNER NOT PRESENT** - The owner of the home was not present at time of inspection. I had no opportunity to gather important information about the home. Some states and real estate firms require that a formal seller disclosure statement be completed and presented to the prospective buyer, MA does not. The seller of a home is obligated to disclose known defects but you must ask.

Analysis: **A home inspector will not locate all of the problems during the limited time at the site.** Be advised that the owner of record is a valuable reference source regarding the past history of the home, changes and seasonal problems.

Recommendation: For your protection, you should ask if any disclosure information is available and review it very carefully before commitment. I advise that you seek answers to each question listed on line #10 below NOW, prior to commitment.

Observation: Insulation on the basement ceiling or walls prevented complete inspection of the structure and mechanical systems.

Analysis: Home inspectors are not required to move insulation. While the insulation is a positive feature, the inspector was unable to fully evaluate the above systems. Hidden problems could exist that were inaccessible at time of inspection.

Recommendation: If through your negotiations access becomes possible, components become *readily accessible*, repairs are done or systems are restored, you may desire to schedule a "return visit" inspection with this office, at an additional charge, prior to commitment.

Observation: At time of inspection, there was **SNOW** on the grounds, entrance components, decks & roof.

Analysis: The home inspector is not required to clear snow away. Be advised that those exterior surfaces that were covered by snow may have hidden defects that were not accessible for evaluation by the home inspector and are not documented in this report.

Recommendation: You should return to the site during the first available thaw and re-inspect all previously snow covered areas prior to sale. **All snow covered components should be listed in the contract of sale and should be guaranteed by the owner to be serviceable and operative.** If through your negotiations access becomes possible, components become *readily accessible*, repairs are done or systems are restored, you may desire to schedule a "return visit" inspection with this office, at an additional charge, prior to commitment.

8. TIME IN:

Time in: 9am.

9. OPTIONAL FEE BASED SERVICES ELECTED BY CLIENT:

Observation: You requested a water quality analysis by **New England Radon**, 11A Industrial Way Salem, NH 03079, Telephone 603-893-4260, Fax 603-893-8163. Water samples were collected using bottles supplied by the lab., and were delivered within 24 hours.

Analysis: The water quality analysis is performed by the state certified laboratory ONLY. This company is NOT affiliated with the laboratory in any way and is NOT responsible for delays or the scope of analysis. **Most reports take 7-10 working days to complete, and then the results are mailed to your home address. All questions regarding the water quality analysis should be discussed with the laboratory directly.**

Observation: A Radstar Electronic Radon Monitor was been placed & will be retrieved by the home inspector following the manufacturer's instructions. The monitor must have a minimum of 48 hours exposure time prior to retrieval. The building should be closed at this time. People may come and go but doors and windows need to remain shut. The monitor registers not only the radon level hourly but Relative humidity, temperature, and movement (of the unit).

Questions about radon should be addressed to the lab., or the Mass./NH/ME State Board of Health.

DISCLAIMER: The inspection of this home for radon gas is EXCLUDED from this report. The Company supplies radon test monitors only. Accustar Labs maintains and calibrates the units annually. We are NOT licensed, certified or insured to perform radon testing. Please understand that the validity of an unsupervised test site and unsecured test device may not be accurate as each may be tampered with. Monitors are harder to tamper with than canister kits, nevertheless testing is advised. Any radon testing provided by this Company are done so as a courtesy. Placement & retrieval of monitors is our responsibility. For peace of mind, you should retest the home for radon levels after purchase as you were not present to validate the conditions during the test. For free consumer publications, go to: www.epa.gov/radon/pubs/ <http://www.surgeongeneral.gov/pressreleases/sg01132005.html>

10. SELLER DISCLOSURE DATA: (You and your attorney should contact the broker and the owner and request answers to these questions in order to make intelligent decisions prior to commitment).

Disclosure
answers provided
by:

Observation: **OWNER NOT PRESENT - ASK FOR DISCLOSURE DATA.** The owner of the home was not present at time of inspection. I had no opportunity to gather important information about the home. The seller of a home is obligated to disclose known defects when asked. Some states and real estate firms require that a formal seller disclosure statement be completed and presented to the prospective buyer, but Massachusetts does not.

Analysis: A home inspector will not locate all of the problems during the limited time at the site. Be advised that the owner of record is a valuable reference source regarding the past history of the home, changes and seasonal problems.

Recommendation: For your protection, you should ask if any disclosure form is available and review it very carefully with your attorney before commitment. If no information is available, then I urge you to ascertain answers to the following questions from the seller as they are relevant to the purchase of the house and may not be readily observable through inspection:

1. How old is the home?
2. How old is the roof? Any past leaks?
3. How old is the heating system? Average monthly heating bill?
4. How old is the central AC system?
5. How old is the water heater? Enough hot water?
6. Has water ever leaked into the basement or crawl space?
7. Has the home ever been inspected or treated for insect infestation?
If treated, with what chemicals?
8. What types of insulation are present and where?
9. Does the home have public water or well water? If a well, how old is the pump?
10. Is the home connected to a public sewage system or is an on-site system present?
11. If an on-site system is present, when was it last pumped?
Has the system passed Title 5 inspection?
12. Are any of the appliances rented?
13. Can you outline any renovations done during your occupancy?
14. Were all required local permits & inspections completed?
15. When was the chimney last cleaned?
16. Are there any special seasonal problems or maintenance needs?
17. Are there any repairs needed at this time?
18. How old are the kitchen appliances?
19. Has the home been tested for lead paint?
20. Has the home been inspected by a home inspector before?
If "yes," are you willing to disclose such a report?
21. Are there any underground oil tanks on the property?
20. Has the home been tested for radon gas? If "yes," are you willing to share such a report?
21. Will all storage, trash and hazardous waste materials be removed with the property?
22. Will any appliances be left?
23. Are there any budgeted major expense repairs to be done?

11. MODIFICATIONS DONE DURING OWNER OCCUPANCY:

Observation: Unknown - owner not present. YOU should consult the owner about the history of the home NOW, prior to commitment.

**Additional
modifications by
owner:**

Recommendation: Ask the owner if required permits were obtained and if local inspections were completed. YOU should visit or telephone the local building & conservation departments NOW and research the permit history of the home yourself prior to commitment.

REPORT OVERVIEW OR ABSTRACT

THE FOLLOWING IS A PARTIAL OVERVIEW OR ABSTRACT OF THOSE SYSTEMS OR COMPONENTS CONTAINING VISIBLE & READILY ACCESSIBLE PROBLEMS DISCLOSED BY THE HOME INSPECTION. The overview briefly highlights the defects identified during the inspection but does **NOT** represent a complete account of the inspector's findings and opinions. Please read the entire attached report, including the Inspection Agreement or Contract, Standards of Practice and relevant general comments and disclaimers. By reading all of the materials, you will understand the scope of the inspection and the true condition of the property.

The Company recommends that any deficiencies and the components/systems related to said deficiencies noted in this report be further evaluated, inspected or repaired by licensed contractors/professionals **PRIOR TO THE CLOSE OF ESCROW**. Further evaluation **PRIOR TO THE CLOSE OF ESCROW** is recommended so a properly licensed professional can evaluate the inspector's findings and inspect the entire system or component for additional concerns that may be beyond the inspector's expertise or the scope of the inspection agreement. If you fail to perform this research, then you will not have all the facts needed for purchase consideration. Concealed problems may be discovered at a later date, and the cost of repairs will remain undetermined.

NOTICE: ALL DIRECTIONAL REFERENCES (such as left side, right side, front or rear) are oriented as if you were standing at the street and facing the home.

STANDARD RECOMMENDATIONS FOR EVERY HOME:

- A. YOU SHOULD HAVE THE HOME EXAMINED BY A PEST CONTROL COMPANY PRIOR TO PURCHASE.
- B. IF THE HOME WAS BUILT PRIOR TO 1976, THEN A LEAD PAINT INSPECTION SHOULD BE CONSIDERED.
- C. THE EPA & SURGEON GENERAL BOTH RECOMMEND THAT EVERY HOME BE TESTED FOR RADON LEVELS AS PART OF THE PURCHASE PROCESS.
- D. YOU SHOULD REVIEW THIS REPORT WITH YOUR ATTORNEY NOW, PRIOR TO COMMITMENT.
- E. YOU SHOULD VISIT THE LOCAL BUILDING & CONSERVATION DEPARTMENTS NOW, PRIOR TO COMMITMENT AND REVIEW THE HISTORY OF THE HOME.

1. EXTERIOR:

Exterior Common area problem areas:

- A. The home is below street level and water is directed down toward the home and garage.***
- B. There appears to be no flashing between the front porch ledger and the house. Also it doesn't appear to have lag bolts. The hangers have what look to be rust roofing nails in the joist hangers which is not appropriate.***
- C. The finish on the porch is worn and there are some broken boards.**
- D. There are trees overhanging the roof and one has just narrowly missed the house. Some of the branches are touching the siding.***
- E. There are a few areas with cracked or damage siding.***
- F. Some of the T1-11 siding in the rear has wicked up moisture and is starting to delaminate.**
- G. At the ground level under the rear decks there is evidence of decay at trim and siding locations. The entrance door should be replaced and moisture is entering under the sliding doors.***
- H. The home has insulation board installed on the exterior of the foundation. This is conducive to pest infestation.***
- I. The rear deck stairs lacks a proper graspable handrail.****
- J. There are a couple windows that have vinyl siding joints installed directly above them. This is a poor practice and can lead to a leak at the window.**
- K. The field stone wall on the left side of the home is failing. A wooden wall was installed to halt the process but that is decayed and failing as well.***

2. ROOF, CHIMNEY, GUTTERS:

Problem areas of roof, gutters, or chimney:

- A. The chimney is missing a rain cap. We can see stains in the basement at the clean out from moisture getting inside. Also there is efflorescent on the chimney inside the attic.***
- B. Facing the front of the house the right side ridge cap is missing and now open to the attic. We could see straight out from inside and it was just starting to rain in.***
- C. Downspouts discharge to close to the foundation.***
- D. Missing kickout flashing where roof meets side walls.**

3. GARAGE:

Garage problem areas:

- A. Home lacks a complete fire shield.****
- B. Aluminum trim around the garage is dented from being hit.**

4. HEATING SYSTEM & COOLING SYSTEMS:

Heating & Cooling system problems:

- A. There are multiple minor leaks at the boiler system. Both some pipe fittings and gaskets will need to be replaced. Also an air vent is leaking.***
- B. The boiler has not been serviced in a while. I recommend you have it cleaned and serviced by an oil technician.***
- C. The backflow preventer next to the boiler is missing an extension pipe.

5. ELECTRICAL SYSTEM:

Electrical system problems:

- A. There are dead ended wires sticking out of the wall at the water storage tank.****
- B. There are poorly installed wires touching plumbing pipes.***
- C. There are covers on outlets and switches missing. Also there are some open junction boxes.****
- D. The service entrance cable leading into the meter box is not installed in conduit and it not properly secured to the house.****

6. PLUMBING SYSTEM & HOT WATER HEATER:

Problems with plumbing system or hot water heater:

- A. Home has a fire protection and sprinkler system that are not tested during a home inspection. There is some stains near sprinkler heads there is a potential for leaks in this system and it should be further inspected by a fire sprinkler company. I would try the phone number on the control box first.***
- B. At time of first inspection plumbing system is shut down because some supply pipes had burst.***
- C. Pressure gage above the hot water tank is broken.***

7. BASEMENT & STRUCTURE:

Basement or structural problems:

- A. There is water leaking in behind the sprinkler system in the basement. It appears to be coming in from where a pipe enters the wall.***
- B. We found a dead squirrel near the boiler and a pigeon in the chimney cleanout.**
- C. There is a hole in the third flue that is just stuffed with insulation. IF not used this should be properly sealed.****
- D. Under the basement kitchen area there is suspected mold on the sheetrock.***
- E. There are visible moisture stains on the walls in the basement. They did test dry with a moisture meter at time of inspection.**
- F. The Installation of the wall paneling was poorly done in the basement. There are waves throughout the paneling.**

8. KITCHEN & APPLIANCES:

Kitchen problem areas:

- A. The cabinets are missing washers under the screws that hold them to the walls. Also some of the cabinet doors are damaged.**
- B. The home has a garbage disposal attached to a septic system. This can lead to early failure of the system.***
- C. Home has older 3 prong outlet for the dryer. Optional 4 prong is safer.**

9. BATHROOM(S):

Bathroom problem areas:

- A. Tile floors have loose grout and some cracked tile.***

10. LIVING SPACES, FIREPLACE, WOOD STOVE:

Living spaces, fireplace wood stove problems:

- A. There are stairs that lack proper handrails with returns.****
- B. In almost all floors that have tile there is signs of subfloor movement. Loose grout and even some cracked tiles.***

11. ATTIC AREA, VENTILATION, INSULATION:

Problems in attic, ventilation & insulation:

- A. Both attic plumbing vents have active leaks at time of inspection.***
- B. The home has both ridge and gable vents. Ideally the best system is a soffit/ ridge vent system. The gable vents short circuit the system.**
- C. We can see day light when looking up through the chimney flashing.***

EXTERIOR INSPECTION

SCOPE OF THE EXTERIOR INSPECTION: 266CMR: BOARD OF REGISTRATION OF HOME INSPECTORS 266 CMR 6.00: STANDARDS OF PRACTICE:

6.03 System: Exterior

- (1) The **Home Inspector** shall **Observe** the **Readily Accessible** and **Observable**:
 - (a) Wall cladding.
 - (b) Entryway doors and windows.
 - (c) Garage door operators.
 - (d) Decks, balconies, stoops/landings, steps, areaways/window wells, and porches including hand and guard railings.
 - (e) Exposed trim (eaves, soffits, fascias rake and other trim boards).
 - (f) Flashing.
 - (g) Vegetation, grading, site drainage, driveways, walkways and retaining walls with respect to their effect on the condition of the **Dwelling**.
- (2) The **Home Inspector** shall **Describe**:
 - (a) The wall-cladding materials (Cementitious siding, asphalt, wood shingles, aluminum and or vinyl siding, wood clapboards, brick, other).
 - (b) The deck/porch component materials (brick, concrete, concrete block, steel, wood, other)
- (3) The **Home Inspector** shall **Report on** the following exposed **Readily Accessible** and **Observable** exterior **Components** including:
 - (a) Wall cladding.
 - (b) Entryway doors and windows.
 - (c) Deck/porches, balconies, stoops/landings, steps, areaways/window wells, including hand and guard railings.
 - (d) Exposed trim.
 - (e) Flashings.
 - (f) Driveways, walkways, and retaining walls with respect to their effect on the condition of the dwelling and there ability to provide safe egress.
 - (g) Vegetation, grading, site drainage, driveways, walkways and retaining walls with respect to their effect on the condition of the **Dwelling**
- (4) The **Home Inspector** shall:
 - (a) Operate all entryway doors and a representative number of windows and **Report on** the condition and need for repair, if any.
 - (b) Operate garage doors, if the garage is inspected. The garage doors may be operated manually or by using **Permanently Installed Controls** as is appropriate. The **Home Inspector** must **Report on** whether or not an automatic garage door operator will reverse or stop when it meets reasonable resistance during closing.
- (5) The **Home Inspector** is not required to **Observe, Describe or Report on**:
 - (a) Storm windows, storm doors, screening, shutters, awnings and similar seasonal accessories
 - (b) Fences, landscaping, trees, swimming pools, patios, sprinkler systems.
 - (c) Safety glazing.
 - (d) Garage door operator remote control transmitters.
 - (e) Geological conditions (**Engineering services**).
 - (f) Soil conditions (**Engineering services**).
 - (g) Recreational facilities.
 - (h) Outbuildings and detached garages. However, should the **Home Inspector** inspect these structures by agreement or as a courtesy, the inspection of said structures must comply with the standards of 266 CMR 6.01 through 6.12.
 - (i) Underground utilities, pipes, buried wires, or conduits. (**Dig Safe**)

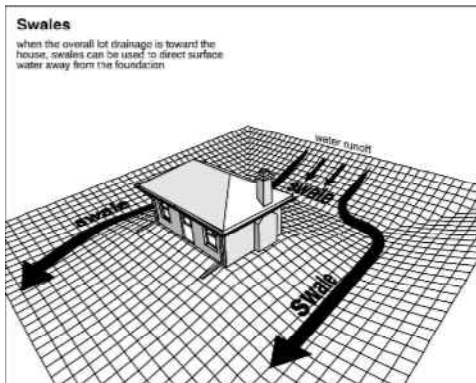
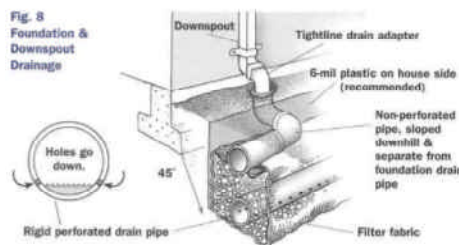
DISCLAIMERS: All items listed in 6.03 system EXTERIOR (5) as listed above plus the following are EXCLUDED from this report: A. Components covered by SNOW. True conditions are undetermined and require further research by

you. B. Paint or stain finishes on siding & trim. C. The condition of unknown underlying siding materials. D. **Detached structures such as sheds, barns, pool house, pump house etc., and all associated plumbing / electrical / heating systems leading to and inside these structures.** E. The location of property lines. F. Swimming pools and equipment. G. Underground oil tanks. H. Lawn sprinkler systems. I. Common elements in multi-unit buildings or condominiums. J. Components & conditions beneath deck and porch crawl spaces that are not *readily accessible*.

GENERAL COMMENTS: A. For safety and reduction in liability, the owner of a dwelling is responsible for maintaining all means of egress in a safe, operable condition at all times; and is required to keep all exterior stairways, fire escapes, egress balconies and bridges free of ice and snow. B. A safe handrail is recommended for every stairway. C. Be advised that all siding materials require maintenance and that those siding materials with Southern exposure usually age at a faster rate. Northern exposed siding is more prone to decay from moisture. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold. D. I recommend that the finish on all untreated wood siding materials be restored at 3-5 year intervals, and that wood decks be water sealed at annual intervals. E. Monitor exterior drainage conditions annually to identify and reduce conditions that may cause wet basement problems. Soil along the perimeter of the foundation should direct water away from the home by gravity flow at a pitch of 1"/FT for a distance of ten feet, and perimeter gardens should be at a higher elevation than the lawn. Likewise, downspouts should have base elbows & splashblocks or extensions to discharge roof water far from the home. F. Maintain a 2-foot clearance between all shrubbery & siding for proper ventilation, access and maintenance. G. **WARNING** - Be advised that before the installation of new thermal replacement windows, old window sash & trim should be tested for LEAD PAINT. H. Purchase a shed and store gasoline and the lawn mower away from the home. I. Make sure the house number is mounted next to the front door and is visible from the street.

1. GRADING & SITE DRAINAGE:

CONDITION:



** FUNCTIONAL with EXCEPTIONS as noted:

Observation: At the time of inspection, there was snow on the property.

Analysis: The home inspection is limited in scope and nature to only those areas that are *readily accessible* at the time of inspection. Be advised that the snow may conceal exterior defects that the inspector could not view.

DISCLAIMER: The true condition of the following items is undetermined and requires

your research during the first thaw: lot drainage, drainage along the foundation, driveway, walks, patio, deck, foundation above grade level, basement windows, lower siding & trim, steps to building, roof, gutters & chimney.

Recommendation: **You should discuss this problem with your attorney NOW prior to agreement to purchase the property. All snow covered components should be listed in the contract of sale and should be guaranteed by the owner to be serviceable and operative.** All snow covered areas require further investigation during the first thaw. If your research reveals any major concerns, you should contact my office for further consultation or schedule an optional "return visit inspection."

LOT TOPOGRAPHY & DRAINAGE:



Observation: The home was built on hillside or at an elevation below street elevation.

Analysis: When a home is built at a lower elevation than the street, it is necessary to control surface water movement so that all front yard & driveway water is directed around the home to areas of a lower elevation. Be advised that a home built at such a lower elevation will usually have greater ground water pressure directed against the front foundation wall than the other sides of the home, making the basement vulnerable to water infiltration. Be advised that all surface water should be both directed around the home as it flows down the slope and away from the foundation. Water is destructive and can find its way through even the tiniest cracks.

Recommendation: You should carefully monitor the lot drainage and you should follow responsible drainage control measures that direct surface water and roof drainage away from the home to side and rear yard areas of lower elevation. You should ask the owner for disclosure of any prior wet basement, wet crawl space or wet garage problems. If drainage problems are experienced, then you might consult a landscape architect about the installation of a swale or a French drain system in the yard as possible cures.

Web Resource: http://www.ndspro.com/downloads/POED_ShortCourse.pdf

Observation: A "French drain" or buried drain pipe with gravel bed appears to be present along the exterior of the foundation.

Analysis: **Disclaimer: As the system is buried, it's true presence and operational condition are undetermined.** For your understanding, a French drain is often installed to collect water as it soaks into the ground near a foundation. The objective is to collect and redirect the water away from the home by gravity flow before it can infiltrate into the basement. A French drain or a footing drain may have a gravity outlet or may lead to a mechanical pump. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

Recommendation: Ask the owner where the French drain terminates and if there has ever been water in the basement.

2. VEGETATION:

Condition:

**** FUNCTIONAL with EXCEPTIONS noted:**

-

Observation: There is a dead tree stump(s) on the property.

Analysis: The stump indicates incomplete tree removal. Be advised that a dead tree stump may promote the presence of wood boring insects. Repair is needed.

Recommendation: I advise that you hire a landscape contractor to remove the stump(s) by excavation or mechanical grinding.

Web Resource: <http://128.241.193.252/index.aspx> (National Arborist Association)

Observation: Tree limbs are overhanging part of the roof.

Analysis: Such conditions pose potential storm hazards. Limbs may damage roof coverings and leaves may clog gutters. Tree limbs also provide easy rodent access. In my opinion, no tree limbs should overhang the roof of any home, repair is needed.

Recommendation: You should ask a certified arborist to examine the tree, and to provide a cost estimate for pruning or removal as determined.

Web Resources: www.ibhs.org/publications/view.asp?id=550 (Institute For Business & Home Safety - Tree Guide)

<http://128.241.193.252/index.aspx> (National Arborist Association)

Observation: A tree or a large limb is leaning towards the home.

Analysis: **WARNING** - the tree places the home & occupants "at risk" if the tree or large limb should fall. Repair is needed.

Recommendation: You should ask a certified arborist to examine the tree, and to provide a cost estimate for pruning or removal as determined.

Web Resources: www.ibhs.org/publications/view.asp?id=550 (Institute For Business & Home Safety - Tree Guide)

Web Resource: <http://128.241.193.252/index.aspx> (National Arborist Association)

3. RETAINING WALLS:

Type(s):

Dry stacked field stone. (Note: Dry stacked stone walls need seasonal maintenance due to frost movement.)
Textured block.

Condition:

**** FUNCTIONAL with EXCEPTIONS noted:**

**RETAINING
WALL
PROBLEMS:**



Observation: The retaining wall has failed.

Analysis: When retaining walls fail, the problem is usually caused by problems with "the base preparation, drainage or reinforcement." Significant retaining wall reconstruction expenses are anticipated as the wall has reached the end of its service life or is *fully depreciated*.

Recommendation: Consult a mason or landscaper for demolition and replacement cost estimates.

Note: A retaining wall four feet or higher should be constructed in accordance with the requirements of the building code.

Note: For safety, a guard railing is advised for each retaining wall regardless of height.

Web Resource: http://www.allanblock.com/RetainingWalls/Installation/Landscape/landscape_walls_guide_2006.pdf

4. DRIVEWAY:

MATERIALS:

Dirt. (Note: Dirt driveways do NOT conform with modern construction practices and will suffer from seasonal problems such as mud, erosion, drainage problems etc. Updating at to asphalt is suggested at optional significant expense).

CONDITION:

**** FUNCTIONAL with EXCEPTIONS NOTED:**

**DRIVEWAY
PROBLEMS:**

Observation: The driveway appears to direct water toward the garage or foundation of the home.

Analysis: Faulty drainage control may cause interior damage or basement infiltration.

Recommendation:

Ask a driveway contractor to reappraise the driveway to determine what drainage improvements are feasible and estimated cost. The installation of a "channel drain" may be a solution.

Web Resources: http://www.ndspro.com/downloads/POED_QuickReview.pdf
<http://www.pavingexpert.com/aco01.htm>



Observation: There was snow cover on the driveway at time of inspection.

Analysis: True conditions are undetermined. Note: There is a potential for concealed damage.

Recommendation: Further research by you is advised when the snow is gone. **All snow covered components should be listed in the contract of sale and should be guaranteed by the owner to be serviceable and operative.** If through your negotiations access becomes possible, components become *readily accessible*, repairs are done or systems are restored, you may desire to schedule a "return visit" inspection with this office, at an additional charge, prior to commitment.

5. WALKS & PATIO:**WALK OR PATIO
MATERIALS:**

Observation: **SNOW** prevented access for identification & evaluation of walks & patio.

Analysis: The snow may cover hidden defects.

Recommendation: Further research is advised.

Condition:

Undetermined, further investigation needed.

**WALK OR PATIO
PROBLEMS:**

Observation: There was snow cover on the walkways.

Analysis: True conditions are undetermined. Note: There is a potential for concealed damage.

Recommendation: Further research by you is advised when the snow is gone. **All snow covered components should be listed in the contract of sale and should be guaranteed by the owner to be serviceable and operative.** If through your negotiations access becomes possible, components become *readily accessible*, repairs are done or systems are restored, you may desire to schedule a "return visit" inspection with this office, at an additional charge, prior to commitment.

6. ENTRANCE STAIRS, STOOPS, LANDINGS & RAILINGS:

STEPS, STOOPS, LANDINGS & HANDRAILS TO BUILDING:

Pressure treated front stoop w no handrail
Pressure treated wood steps at deck, plus a handrail.

CONDITION:

**** Functional with Exceptions as noted:**

VISIBLE PROBLEMS WITH ENTRANCE COMPONENTS:



Observation: The handrail is not graspable.

Analysis: ***** UNSAFE - there is a risk of personal injury.** Handrails built of dimensional lumber (2 x 4 or 2 x 6) are not graspable. A graspable handrail is required at one side of a staircase. A staircase is part of the means of egress from the dwelling and must be maintained in a safe condition. **Urgent** repair is needed.

Recommendation: Hire a carpenter to install graspable handrails **NOW** for safety.

Observation: The joint between the entrance stoop or landing and the house siding was not flashed.

Analysis: This is conducive for hidden decay or pest infestation as water that falls on the landing will splash back and drain behind the stairs to promote continual moisture. The builder should have installed lead flashing beneath then siding or trip with a bend and lap resting upon the staircase landing to shed water from the joint.

Recommendation: Options include caulking the open joint or hiring a carpenter to remove portions of the siding and trim below the door as needed to install the missing flashing.

7. BASEMENT ENTRANCE:

TYPE:

Walk-in entrance to basement.

CONDITION:

***** NOT FUNCTIONAL:**

**BASEMENT
ENTRANCE
PROBLEMS:**

Observation: The door jambs at the exterior door are rotted out at the basement entrance.

Analysis: Door jambs at basement entrances are repeatedly wet and suffer from decay and/or pest infestation. Repair is needed. Note: There is a potential for concealed damage.

Recommendation: I advise that the door be replaced with an insulated steel door unit with a dead bolt lock for security and for energy conservation.

Observation: Water is getting in under the sliding doors which are located under the deck.

Analysis: Even though this is not a finished space the doors are not water tight and should be fixed.

Recommendation: When dry I would clean and caulk the exterior edge of the doors to prevent water from getting in under them.

8. DECKS & PORCHES & BALCONIES:**DECK / PORCH
COMPONENT
MATERIALS:**

Pressure treated wood deck. (Note: I recommend that treated wood receive applications of wood preservative annually to extend life expectancy. For information on arsenic content, visit the EPA's Web site at: www.epa.gov/pesticides/citizens/cca_qa.htm or <http://www.mass.gov/dep/ors/files/ptwoodqa.htm> Pressure Treated Wood Questions and Answers

CONDITION:

**** FUNCTIONAL with EXCEPTIONS NOTED:**

**VISIBLE DECK/
BALCONY
PROBLEMS:**

Observation: Inspection of the front covered entrance revealed the following defects that need repair or upgrading:

Note: The following is a good web resource for proper deck construction:

<http://www.fairfaxcounty.gov/gov/dpwes/publications/deckdet.htm>

Cracked concrete footings.

**** **UNSAFE**, missing bolts at ledger joist. (Staggered bolts with washers are needed to safely support live & dead loads.)

Probing revealed decayed wood.

Missing Z-shaped flashing at the ledger joist against the house. Without flashing, water may enter between the deck and the home causing decay to the siding, wall frame

and deck. There is a risk of concealed damage. Further investigation is needed.

Appears that roofing nails were used in the joist hangers which are not appropriate because they will corrode and could shear.

Analysis: The above listed problems represent potential or real **UNSAFE** conditions that require **URGENT** safety repairs.

Recommendation: You should hire a carpenter to perform repairs in accordance with the requirements of the building code. (Note: The application of a wood preservative is advised every year to prevent sun damage. Due to current industry trends, metal joist hangers may be subjected to corrosion from the preservatives in treated lumber. All metal joist hangers should be re-inspected by the homeowner every two years. Only stainless steel hangers are advised.)

Web resource: <http://deck-lok.com/index.htm>

Observation: The angular cut of the wood stringers at the base of the deck stairs do not fully bear on the concrete pavers. They have settled and twisted.

Analysis: This represents poor workmanship and a potentially unsafe condition. The heel cut of the stringers should bear on a solid base for even load transfer. Be advised that the portion of each stringer that extends beyond the stoop is prone to splitting or decay. Repair is needed.

Recommendation: I advise that a stoop be enlarged for safety.

Web Resource: <http://deck-lok.com/index.htm>

**PORCH
PROBLEMS:**

Mentioned above.

9. FOUNDATION ABOVE GRADE:

TYPE: Concrete (1920's to present)

CONDITION: ** FUNCTIONAL with EXCEPTIONS NOTED:

FOUNDATION PROBLEMS:

Observation: The exterior foundation is completely covered with an insulation board.

Analysis: The insulation board prevented any inspection of the exterior of the foundation. The insulation board is damaged and was never properly protected. This will break down from exposure to UV rays. Also this type of installation is conducive to pest infestation. Carpenter ants love to nest in it and termites can enter the house behind it without ever being seen.

Recommendation: I would cut it back to ground level and expose the foundation for visual inspection. This way in the future you can monitor and visually see if any pest infestation could be taking place.

**10. SIDING:**

**TYPE(S) OF
SIDING / WALL
CLADDING:**

VINYL SIDING GENERAL EXPLANATION:

The home has vinyl siding. Vinyl siding represents a durable and fairly maintenance free wall cladding when properly installed. Vinyl siding is a water shedding siding as opposed to a waterproof siding. A moisture barrier is required beneath the vinyl as small amounts of water can leak behind the siding at trim areas and joints. Be advised that vinyl siding is not combustible, but will melt. For that reason, you should never place a gas grill near the siding. The vinyl is hung loosely on nails leaving a 1/4 - 3/8 inch gap between the siding and stops to allow for expansion and contraction.

Vinyl siding is very brittle and vulnerable to damage during accidental bumps, especially during freezing temperatures. Damaged components can be replaced, but new parts may not perfectly match the color or pattern of the existing siding.

Vinyl siding needs to be regularly cleaned or it will oxidize, requiring more difficult cleaning. Periodic cleaning with household detergent and bleach and a long handled brush is the best method of cleaning the siding. Use a solution of 2/3 cup of household bleach, 1/3 cup powdered detergent and one quart of bleach per gallon of water to clean the siding.

Power washing is possible, but may force water behind the siding or loosen lap joints. Annual inspection is advised to check for warping, loose components, broken parts or worn caulking. Painting vinyl siding is possible, but will void any warranty. A

commercial cleanser called "Streak Away," may also be purchased at building supply stores.

(DISCLAIMER: The type and condition of underlying siding and sheathing materials are undetermined as they are not readily accessible for inspection).

Web resource: www.vsi.com (Vinyl Siding Institute) <http://www.vinylsiding.org/publications/Installation_Manual_english.pdf> Vinyl siding manual.

Observation: The home has areas of textured plywood as siding.

Analysis: Textured plywood siding is a less expensive man made wall cladding with a relatively short design life (15-20 years). Positive features of this material include: less costly to purchase and install, faster coverage and fewer seams. Negative features of plywood siding include: difficulty in flashing joints, susceptible to decay from moisture, warping and de lamination. Plywood siding can provide years of service, but it must be kept clear of the ground to prevent moisture damage and the finish & caulking must be maintained. Also particularly vulnerable are the lap & butt joints between panels and areas cut around window & door openings & trim.

Recommendation: Periodic caulking & paint maintenance represents the best method of extending the life span of plywood siding, because once damaged, replacement is the only feasible repair.

CONDITION:

**** FUNCTIONAL with EXCEPTIONS as noted below: (Disclaimer: The type and condition of underlying siding materials is undetermined.)**

SIDING PROBLEMS:



Observation: Areas of joints where the siding meets windows, trim and doors are not caulked tightly.

Analysis: Missing or aged caulking can allow water infiltration, heat loss and decay.

Recommendation: Restore all caulking as a maintenance repair item as required in new construction.

Observation: There is a lap joint in the vinyl siding that is located in the first row above a window or door opening.

Analysis: There is a risk of leakage. Vinyl siding joints are not supposed to be located directly above a window or door opening. Repair is needed.

Recommendation: I advise that you hire a siding contractor to relocate the joint away from the window or door opening. (Note: The availability of matching replacement parts may be a problem.)

Observation: Inspection of the vinyl siding revealed dented, cracked or damaged components.

Analysis: As the purpose of a siding is to form a watertight skin on a home, damaged siding may allow leakage - repairs are required to restore siding function. A siding installer can provide estimates for repair. (Note: The availability of vinyl with matching

color & texture is undetermined. The condition of underlying siding is undetermined.) Vinyl siding represents a durable and fairly maintenance free wall cladding when properly installed. Periodic cleaning or power washing are all that is needed to restore the finish and the color is consistent through the vinyl. The negative features include: brittleness and expansion & contraction. Annual inspection is advised to check for warping, loose components, broken parts or worn caulking.

Recommendation: You should hire a siding contractor to perform repairs as required to restore function.

Observation: The plywood siding is delaminated or deformed along its edges.

Analysis: In my opinion, siding of this nature is not as durable as other materials and the vertical joints between panels provide poor water-shedding function. Be advised that there is a potential for leakage where the joints between panels have opened.

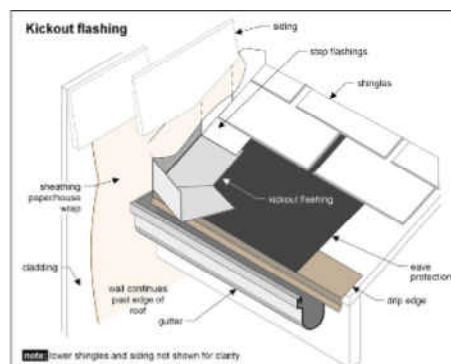
Recommendation: Those plywood panels that are deformed or have poor lap joints should be replaced by a carpenter. I further advise that you budget for the optional retirement of the less desirable siding.

11. FLASHING:

Condition:

Inspection of the flashings revealed the following problems:

**** Functional with exceptions as noted below:**



Observation: The joint between the stoop and the house siding does not appear to be flashed.

Analysis: This is conducive for decay or pest infestation as moisture will enter the space behind the staircase. The builder should have installed lead or aluminum flashing beneath then siding with a bend and lap resting upon the landing to shed water from the joint. Repair is needed.

Note: Repairs may reveal concealed damage, decay or pest infestation that was not *readily accessible* at time of inspection.

Recommendation: Options include caulking the open joint or hiring a carpenter to remove portions of the siding and trim as needed to install the missing flashing.

Observation: Kick out flashing is missing at the bottom edge of a roof to wall intersection.

Analysis: Kick out flashings are used at the bottom edge of a roof to wall intersections, where the roof ends and the wall continues on. They are used to direct the water out from below the cladding at the step flashing plane and away from the wall or into the gutter. This prevents water from draining off the roof and into the wall system below. It also helps aesthetically, as it prevents unsightly stains on the wall cladding from roof drainage.

In order for the kick out flashing to be effective, the bottom seam must be properly sealed or folded to ensure that water does not leak through the joint. Improperly folded or sealed kick out flashings will cause a high water concentration to be poured behind the cladding.

Be advised the missing or improperly installed kick out flashing is conducive for water infiltration and concealed decay in the lower wall or inside corner. Repair is needed.

Recommendation: I advise that you hire a contractor to install the missing kick out flashing as required.

12. EXTERIOR FINISH:

CONDITION OF EXTERIOR FINISH:

Observation: The finish on the deck is worn.

Analysis: Maintenance is needed to prevent sun and water damage.

Recommendation: I advise that you prep the deck and apply two coats of suitable wood preservative or exterior stain as required.

Observation: Suspected mildew is present on the vinyl siding.

Analysis: Cleaning maintenance is needed.

Recommendation: See reference below:

HOW TO CARE FOR VINYL SIDING:

Moderate Atmospheric Dirt - We recommend an occasional washing with clear water using a garden hose and soft-bristled brush (a long-handled, car-washing brush is ideal for this purpose).

Heavy Industrial Atmospheric Dirt - Wash in the manner indicated above, but use the following solution:

1/3 cup detergent (Tide®, for example)

2/3 cup trisodium phosphate (Soilax®, for example)

1 gallon water

Mildew Accumulation - Mildew can collect on surfaces of all types of building products and is often evident on surfaces that have not been properly cared for and maintained. Normally, mildew will appear as black spots. Mildew is easy to remove by using the basic cleaning solution above with the addition of sodium hypochlorite as follows:

1/3 cup detergent (Tide®, for example)

2/3 cup trisodium phosphate (Soilax®, for example)

1 quart sodium hypochlorite 5% solution (Clorox®, for example)

3 quarts water

Caulking Compounds, Tar and Similar Substances - Use mineral spirits in reasonable amounts and apply directly to the foreign substance. Immediately after cleaning, rinse the area thoroughly with water.

Web source: <http://www.alcoahomexteriors.com/Site/LearningCenter/ArticleCaringVinyl.aspx>

13. WINDOWS:

TYPE(S) OF PRIMARY WINDOWS:

Casement windows present. (Be advised that these types of windows are highly prone

to opening & closing problems do to expansion and contraction, paint obstructions and hardware failures.)

Double hung

Insulated, double-glaze windows are present: "Double-paned windows reduce street noise and improve efficiency of heating/cooling systems. The space between the panes is factory sealed. If a seal is broken, air from the environment may enter the formerly sealed space. This condition may cause condensation or fogging in the window, depending on the climatic conditions. We cannot assure the seal on each and every window, but we will note in the report the presence of visible condensation at the time of inspection. Unless otherwise noted in the report, no condensation or fogging was present when inspected."

DISCLAIMER: The integrity of self-flashing windows to prevent leakage is undetermined as the flashings are not *readily accessible* for inspection. Only a representative sample of windows (1/room) are inspected. Windows blocked by furniture or interior ornaments are not operated by the home inspector.

**CONDITION:
WAS AT LEAST
ONE WINDOW
PER ROOM
OPERATED?**

* **FUNCTIONAL.** (A representative sample of windows were examined, 1 per room.)

YES.

**PRIMARY
WINDOW
PROBLEMS:**

Observation: A representative sample (1 window / room) of the primary windows were inspected and no visible problems were observed at time of inspection. (Note: Not every window was examined.)

14. BASEMENT WINDOW CONDITIONS:

**BASEMENT
WINDOW /
AREAWAY
PROBLEMS:**

Observation: The basement window or areaways are clogged with debris.

Analysis: Due to the elevation of the foundation, window wells constructed of masonry or metal shields were installed to protect the basement windows. The wells are presently full of debris that restricted access for inspection - hidden decay or pest infestation could exist in this location. Seasonal maintenance has been neglected. Be advised that defective window wells may collect surface water and cause wet basement problems. Repair is needed. Note: There is a potential for concealed damage.

Recommendation: The window wells should be cleaned out and examined for potential hidden decay or drainage problems. The wells should be cleaned annually and should have several inches of gravel at an elevation lower than the wood window sill.

Web Resource: www.windowbubble.com

15. ENTRANCE DOORS:

**Were all entry
doors operated
by the home
inspector?**

Yes

CONDITION - PROBLEMS:

Observation:
Inspection of the exterior doors revealed the following problems:

An exterior door jamb is damaged, cracked or broken - repair is needed.
Constant wetting has decayed the jamb and trim.



Analysis: In my opinion, the exterior door is at END OF SERVICE LIFE or is *fully depreciated*. Replacement is advised for safety.

Recommendation: Contact a tradesman relative to this area of concern and request reappraisal and cost estimation for replacement.

Observation: The sliding glass doors below the deck are not water tight.

Analysis: Water that is running off the deck is splashing up on the siding and sliding doors. It is getting in under the doors and into the basement.

Recommendation: You could install a gutter below the deck and above the doors to cut back on the amount of water hit that area below. Once everything is dry, I would clean and caulk the frame of the slider to prevent any moisture intrusion underneath. If it is leaking through the doors then replacement might be the only option.

16. EXPOSED TRIM (eaves, soffits, fascias, rakes & other trim boards):**CONDITION:**

* **FUNCTIONAL** as viewed from the ground. No visible problems observed where exposed and *readily accessible*. Conditions behind finish materials are undetermined.

ROOF, CHIMNEY, GUTTERS INSPECTION**SCOPE OF THE ROOF INSPECTION: 266 CMR 6.00: STANDARDS OF PRACTICE:****6.02: System: Roofing**

(1) The **Home Inspector** shall **Observe** the **Readily Accessible** and **Observable**:

- a. Roof coverings.
- b. Exposed roof drainage systems.
- c. Flashings.
- d. Skylights, chimneys and roof penetrations.
- e. Signs of leaks on building components.

(2) The **Home Inspector** shall **Describe**:

- (a) The type of roof covering materials:
Asphalt, Cementitious, Slate, Metal, and or Tile Shingles. Built-up type (Bald Asphalt, Tar and Gravel, Mineral Covered Rolled Roofing, Ballasted Rubber Membrane, Adhere Membrane, Mechanically Fastened Membrane, Other).
- (b) The roof drainage system:
Gutters (Aluminum, Copper, Wood, Vinyl, Other)
Leaders (Aluminum, Copper, Galvanized, Vinyl, Other)
- (c) The chimney materials:
Brick, Concrete Block, Metal, Other

(3) 2) The **Home Inspector** shall **Report on**:

- (a) The methods used to observe the roofing.

(b) Any signs of previous or active leaks. (c) The condition and recommend repair (if needed) of the **Readily Accessible** and **Observable**, roofing **Components** including: the roof covering exposed roof drainage systems, exposed flashings, skylights, exterior of chimney(s), and roof penetrations.

(3) The **Home Inspector** shall not be required to:

- (a) Walk on the roofing unless the **Client** provides **Safe Access** and the **Seller** and or the **Seller's Representative** provide authorization that relieves the **Home Inspector** of all liability for possible damage to the roof.
- (b) **Observe, Describe** or **Report on** attached accessories including but not limited to solar systems, antennae, and lightning arrestors.
- (c) **Observe, Describe** or **Report on** the interior of chimney flues.

(PLEASE READ: The Inspector is NOT required to walk on the roof unless the Client provides safe access and the seller and or the seller's representative provides authorization that relieves the Inspector of all responsibility of possible damage to the roof. The method of roof inspection is a judgment call based upon access and the inspector's safety. The Client understands that roof coverings often contain hidden defects and that if this is cause for concern, a professional roofer should be brought in prior to the close of escrow to determine such defects. Unless otherwise stated, All roofing, flashing and chimneys are examined and conditions stated are as visible from ground level. Problems and defects may exist which could not be determined, from ground level, and for which the Company, and its inspectors, cannot and do not assume responsibility. The only way to insure that hidden problems or defects do not exist, is to hire a professional roofer to climb and walk on the roof.

DISCLAIMERS: A. The true condition of roof components covered by SNOW is undetermined and **EXCLUDED** from this report. B. The inspector is not required to observe attached accessories including but not limited to solar systems, antennae and lightning arrestors. C. Because of the many factors contributing to the adequacy of a roofing installation, the COMPANY cannot warrant such adequacy and can only comment on those installation features that are readily accessible and identifiable by visual inspection - inaccessible areas are **EXCLUDED**. Any additional investigation would require "destructive testing" of the installation to explore roof decking, under underlayments, nailing schedules and many other factors not evident in a visual examination. D. **THIS REPORT IS NOT A GUARANTEE AGAINST ROOF LEAKAGE** as climatic conditions such as high winds, wind driven rain, snow loads, winter ice dams and sun degradation can cause unpredictable leakage with any roof. **NOTICE: UNLESS THE ATTIC WAS VIEWED DURING RAIN, NO GUARANTY AGAINST ROOF LEAKS IS IMPLIED. YOU should monitor the attic area for signs of roof or flashing leakage after heavy rain or snow conditions.** E. **THE INSPECTION AND REPORTING ON THE CONDITION OF CHIMNEY FLUE LINERS IS EXCLUDED FROM THIS REPORT AS A FLUE LINER IS NOT READILY ACCESSIBLE FOR EVALUATION.** Only the exterior of the chimney is inspected from the ground, from the attic and from the basement when accessible. We recommend installing proper liners in all unlined chimney flues **NOW**. Install chimney caps on all chimneys **NOW**. You should hire a member of the "Chimney Sweep Guild" to perform a "LEVEL II" inspection of each chimney and fireplace **NOW**, prior to commitment for true determination of condition. F. The type and condition of roof covering fasteners (nails, staples, etc.) are undetermined as they are not **readily accessible** without destructive testing.

Chimney and Fireplace Inspections:

The National Fire Protection Association and I, recommend an NFPA 211, **Level II inspection** of any chimney and fireplace when a home is sold. Such an inspection, performed by a qualified chimney sweep, might uncover additional problems that were not **readily accessible** for me. For safety reasons, all chimney and fireplace problems should be corrected before use. A list of Chimney Safety Institute of America Certified Chimney Sweeps' is available online at <http://www.csia.org/>

Differing inspection levels:

Level I : is a visual inspection of readily accessible areas of the chimney structure and flue and basic appliance installation and connection. There must be a lack of obstructions or combustible deposits in the flue.

Level II: includes Level I visual inspection. Proper clearances from combustibles in accessible locations, proper construction and condition of accessible portions of the chimney structure and all enclosed flues, all accessible portions the chimney exterior and interior, including areas within accessible attics, crawl spaces, and basements. Most Include inspection by video camera scanning.

Level III: includes Level II inspection. Proper construction and condition of concealed portions of the chimney structure and flues (this requires demolition or removal of portions of the building where necessary). This type of inspection is used

for cause and origin [fire investigations <http://www.inspectionnews.net/home_inspection/autolink.php?id=9&script=showthread&forumid=7>](http://www.inspectionnews.net/home_inspection/autolink.php?id=9&script=showthread&forumid=7) or when a chimney has known damages such as a chimney fire or lightning strike.

GENERAL COMMENTS: A. Most asphalt roof coverings have a 20-year life expectancy depending on brand, ventilation, installation and exposure. The roof covering is not designed to last the life of the home, future replacement should be budgeted. Estimates for any repairs or replacement should be obtained from a licensed & insured roofing contractor. B. I recommend that all chimneys be inspected annually by a certified member of the chimney sweep guild. Such safety precaution will ensure that harmful combustion gases are safely vented outside. **All chimneys and fireplace flues should be cleaned and inspected by a chimney sweep annually.** C. Gutters should be cleaned and inspected for proper drainage control annually. Each downspout should discharge water away from the foundation to prevent wet basement problems. D. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

1. ROOF GEOMETRY:

Style: Gable roof structure.

2. HOW ROOF WAS VIEWED?

The roofs were viewed from:

Viewed from ground by eye.

Viewed by 10 x 50 Bushnell brand binoculars from the ground.

NOTICE: The roof was **NOT** fully accessible for viewing due to obstructions such as slope, high elevation, architectural details or lot depth. Further close-up evaluation is suggested.

Recent weather conditions have been:

Wet, Snow.

3. ROOF COVERING AREA #1:

TYPE OF MAIN ROOF COVERING:

ASPHALT / FIBERGLASS SHINGLES PRESENT: As viewed, the roof structure appears to be covered with asphalt and fiberglass composition shingles.
Analysis: This material is the most common roof covering used in this part of the country and typically provides many years of service when installed properly and maintained. However, asphalt shingles are **NOT** designed to last the life of the home and will require eventual routine age replacement. Replacement should be a budgeted item and should be scheduled before leakage occurs. The service life of the material varies and depends on variable such as: the initial shingle weight or quality, the steepness or pitch of the roof, the amount of attic ventilation, the number of roofing layers and the orientation of the home to the sun. (Note: Average weight shingles last approximately 15-20 years, heavy duty shingles last 25-30 years depending on the quality, ventilation, climate and installation. Without knowing the specific manufacturer and model of the shingle, it is impossible to determine the actual expected service life within the scope of this inspection.)

During ownership, you should conduct an annual roofing inspection to make sure that the condition of the roof is functional or fulfilling it's objective of shedding water before leakage occurs. Look for missing or loose materials, split shingles, areas of storm damage, blown-off shingles, curling shingles, loss of granules, exposed felt mat or other age defects and perform repairs as required to extend service life.

Approximate age of roof:

Unknown - further research is advised. You should consult the owner to verify the age of the roof so that a budget can be established for future age replacement.

CONDITION:**** FUNCTIONAL with EXCEPTIONS as noted below:**

Observation: The roof covering was 100% covered by **SNOW** at the time of inspection.

Analysis: The true condition of the roof covering is undetermined as it was **not readily accessible** for inspection. Further investigation is needed to determine if there are concealed defects.

Recommendation: As I was unable to determine the condition of the roof, a professional roof inspection and certification are advised prior to the close of escrow. The condition of the roof covering requires further research now and also during the first thaw. You should ask the owner the following disclosure questions:

- What type(s) of roof covering(s) is present?
- How old is the roof covering(s)?
- When do you expect that age replacement will be needed?
- Does the roof leak?
- Are there any seasonal performance problems such as ice dams?
- Have the flashings ever leaked?
- Ask if the owner is willing to memorialize in writing that there are no problems with the roof covering.

You should discuss the unknown condition of the roof covering with your attorney NOW, prior to commitment. If the owner is not willing to provide assurance that there are no problems, then perhaps an agreed upon sum of money can be retained in escrow until inspection is possible. Furthermore, you should visit the local building department and perform a "permit search" to determine the last date of roof covering replacement on file. Be advised that roof coverings are NOT designed to last the life of the home. All roof coverings eventually require age replacement at significant expense - such expenses should be budgeted. (Note: Be advised that most 3-tab asphalt / fiberglass shingle roof coverings have a design life of 15-20 years, roll roofing design life = 8-10 years.)

If you have great concerns or your research reveals suspicions of problems, you may want the home inspector to return and evaluate the roof when the roof is bare and weather permits. A TRAVEL FEE AND MINIMUM HOURLY RATE WILL BE CHARGED. Exact pricing and scheduling arrangements can be made by contacting this office.

VISIBLE PROBLEMS:

Observation:
Inspection of the roof covering revealed missing ridge cap shingles of missing shingle parts.

Analysis: Be advised that the loss of shingles of shingle parts leaves a roof vulnerable to leakage and the home vulnerable to property damage. Repair is needed NOW and postponed repair may result in additional shingle loss.

Recommendation:

You should hire a licensed and insured roofing contractor to repair / replace the roof covering as determined by on-roof inspection.

**4. ROOF COVERING AREA #2:****TYPE OF MAIN ROOF COVERING:****RUBBER ROOFING:**

Rubber membrane roofing is present on the low sloped roof under the rear decks. (EPDM - Ethylene Propylene Diene Monomer)

Analysis: Rubber membrane or single ply membrane are relatively new products used for flat roof applications. Manufacturer's boast of a 20-30 year design life, but true life expectancy is unknown due to the limited age of the product on site. In my opinion, this is the material of choice for flat roof applications in terms of weather shedding protection, resistance to the elements and longevity.

Most rubber roofs are contact cemented in place in large sheets with few joints. Joints are heat sealed and uncured rubber is used to form corners or cover other difficult areas.

Problems associated with such rubber membrane roofing products are usually due



to workmanship and seam failure rather than product failure.

Ethylene Propylene Diene Monomer (EPDM), or rubber roofing is the most popular single-ply roofing system used nationally and may be black or white in color.

Recommendation: Semi annual inspections are advised.

Resource: <http://www.epdmroofs.org>

**Approximate age
of roof:**

Unknown - further research is advised. You should consult the owner to verify the age of the roof so that a budget can be established for future age replacement.

CONDITION:

* **FUNCTIONAL** where *readily accessible* at time of inspection, as viewed, and with wear & tear appropriate for the type of material and estimated age. (Note: A roof covering is a disposable component, not designed to last the life of the home. All homeowners should budget for future roof covering replacement when the material reaches end of service life.)

**VISIBLE
PROBLEMS:**

Observation: The *readily accessible* roof coverings did not exhibit any visible problems at time of inspection.

Analysis: Where accessible and by the method observed, the roof covering appears functional with wear & tear appropriate for it's estimated age.

Recommendation: You should ask the owner to disclose the age of the roof covering for so that you can establish a budget for future age replacement.

6. EXPOSED ROOF DRAINAGE SYSTEM:

**TYPE OF
GUTTERS:**

Aluminum gutters. (Note: All gutters should be cleaned annually to protect the home from moisture caused decay, paint failure, soil erosion and wet basement problems.)

**TYPE OR
LEADERS OR
DOWNSPOUTS:**

Aluminum downspouts are present.

CONDITION:

**** FUNCTIONAL with EXCEPTIONS NOTED:**

**GUTTER &
LEADER
PROBLEMS:**



Observation: The downspouts empty roof run-off water near or adjacent to the foundation.

Analysis: Dumping excessive water near the home may cause wet basement problems, foundation problems or soil erosion. Drainage control repairs are needed NOW.

Recommendation: I advise that each downspout be studied and corrected as required

to discharge all roof drainage by gravity flow away from the building. Downspouts should have properly directed elbows, extensions and splash blocks that complement the natural grade of the property.

Observation: Downspouts which carry roof run-off water enter the ground near the foundation. Beyond this point, the downspouts pass underground to unknown locations.

Analysis: **DISCLAIMER: The functional condition of these hidden drains is undetermined as they are not accessible.**

Recommendation: I advise that you question the owner and ask where the underground drains discharge and if they satisfactorily handle all of the water from the roof. I further advise that you monitor the drains during several seasonal periods of prolonged and heavy rains. The gutters leading to the underground drains should be screened to prevent clogging. The downspouts may empty into buried dry wells or they may run to the lot boundary or area of lower elevation. (A dry well is a covered pit with either an open jointed lining or filled with stone aggregate through which drainage from the roof seeps and leaches into the surrounding soil.) Note: Be advised that faulty downspouts that discharge near the foundation or buried drainage systems that boil over or retain water near the foundation may contribute to wet basement problems.

7. EXTERIOR OF CHIMNEY #1:

How viewed: From ground
Viewed by 10 x 50 Bushnell brand binoculars from the ground.

Type of chimney:
(DISCLAIMER:
MA home
inspectors are
not required to
inspect and
report on the
interior of the
chimney. Any
information
provided is done
so as a courtesy
only.)

Brick chimney with multiple clay lined flues where *readily accessible* only.



Condition:

**** FUNCTIONAL with exceptions noted below:** (Note: Not all parts of a chimney are accessible for inspection.)

Chimney problems:

Observation: The chimney top is uncapped.

Analysis: While a chimney cap is not required, the benefits gained by installing a cap are important. According to the Chimney Safety Institute of America (www.csia.org), "chimney caps are the most inexpensive preventive measure that a homeowner can employ to prevent water penetration and damage to the chimney."



An uncapped chimney is a hole in the roof that readily admits rain, snow, ice, sleet, and wildlife, some carrying infection and disease. Rain water may damage the interior of the chimney and damage the lining system. Water may appear in the fireplace, in a connector pipe from the furnace or in a cleanout door at the base of the chimney. A proper stainless steel cap, incorporating a spark screen, can reduce flue fire damage, by containing pieces of hot, flaming creosote attempting to spew from the chimney and ignite everything it touches. Also, almost all costly chimney restoration projects are the result of water getting inside where it doesn't belong and helping the acids eat the chimney. In short, good chimney caps enhance safety while they're saving you money.

Recommendation: I advise that you hire a chimney sweep to clean the chimney, examine the interior for any concealed problems and finally to install an optional protective stainless steel metal cap.

Web resources: www.chimneys.com
www.csia.org

Observation: MA home inspectors are not required to inspect the interior of chimney flues.

Analysis: The condition of the interior of the chimney is undetermined. Further investigation is advised.

Recommendation: Please read the advice provided by the Chimney Safety Institute of America printed below. A Level II inspection is advised.

CHIMNEY INSPECTIONS EXPLAINED FOR THE HOMEOWNER

(A Public Safety Bulletin from the Chimney Safety Institute of America www.csia.org)

Until recently, the scope of work performed in the inspection or evaluation of a fireplace, stove or other venting system was generally up to the discretion of the chimney service technician. Professional service technicians now have an industry standard that removes much of that discretion." The National Fire Protection Association (NFPA) has addressed the minimum chimney inspection standards in its latest publication (NFPA 211) concerning home heating appliances. Inspections are now classified as *Level 1*, *Level 2* or *Level 3*. Each level of inspection covers specific items depending on the individual appliance and venting system. Below is an explanation of the three levels of inspections and what services your chimney service technician should provide for each level.

Level 1 Inspections - If your appliance or your venting system has not changed and you plan to use your system as you have in the past, then a *Level 1* inspection is a minimum requirement.

A **Level 1** inspection is recommended for a chimney under continued service under the same conditions and with the continued use of the same appliance.

In a **Level 1** inspection, your chimney service technician should examine the readily accessible** portions of the chimney exterior, interior and accessible* portions of the appliance and the chimney connections. Your technician will be looking for the basic soundness of the chimney structure and flue as well as the basic appliance installation and connections. The technician will also verify the chimney is free of obstruction and substantially free of combustible deposits.

*Accessible: May require the use of commonly available tools to remove doors, panels or coverings, but will not damage the chimney or building structure or finish.

**Readily Accessible: Exposed, or capable of being exposed, for operation, inspection, maintenance or repair without the use of tools to open or remove doors, panels or coverings.

Level 2 Inspections - A **Level 2** inspection is required when any changes are made to the system. Changes can include a change in the fuel type, changes to the shape of, or material in, the flue (i.e. relining), or the replacement or addition of an appliance of a dissimilar type, input rating or efficiency. Additionally, a **Level 2** inspection is required upon the sale or transfer of a property or after an operating malfunction or external event that is likely to have caused damage to the chimney. Building fires, chimney fires, seismic events as well as weather events are all indicators that this level of inspection is warranted. A **Level 2** inspection is a more in-depth inspection than a **Level 1**

inspection.

A **Level 2** inspection includes everything in a **Level 1** inspection, plus the accessible* portions of the chimney exterior and interior including attics, crawl spaces and basements. It will address proper clearances from combustibles in accessible locations. There are no specialty tools (i.e. demolition equipment) required to open doors, panels or coverings in performing a **Level 2** inspection. A **Level 2** inspection shall also include a visual inspection by video scanning or other means in order to examine the internal surfaces and joints of all flue liners incorporated within the chimney. No removal or destruction of permanently attached portions of the chimney or building structure or finish shall be required by a **Level 2** inspection.

Level 3 Inspections - When a **Level 1** or **Level 2** inspection suggests a hidden hazard and the evaluation cannot be performed without special tools to access concealed areas of the chimney or flue, a **Level 3** inspection is recommended. A **Level 3** inspection addresses the proper construction and condition of concealed portions of the chimney structure and the flue. Removal or destruction, as necessary, of permanently attached portions of the chimney or building structure will be required for the completion of a **Level 3** inspection.

Level 3 inspection - A **Level 3** inspection includes all the areas and items checked in; **Level 1** and a **Level 2** inspection, as well as the removal of certain components of the building or chimney where necessary. Removal of components (i.e., chimney crown, interior chimney wall) shall be required only when necessary to gain access to areas that are the subject of the inspection. When serious hazards are suspected, a **Level 3** inspection may well be required to determine the condition of the chimney system.

The Importance of Annual Inspections

Your chimney systems are an important part of your home heating system. The National Fire Protection Association recommends an annual evaluation of all chimneys, fireplaces and vents. In accordance with this recommendation, your chimneys should be checked annually by a CSIA Certified Chimney Sweep'- and swept as required. Each year unsafe chimneys cause significant numbers of injuries and deaths, and account for more than \$200 million in property losses. Make chimney examinations a regular part of your home maintenance schedule. Don't become a statistic!

SITUATION LEVEL OF INSPECTION

- Annual Inspection
- Routine Cleaning of Flue
- Direct Replacement of a Similar Appliance

LEVEL 1

- Upon any sale or transfer of property.
- After an operating malfunction or an external event is likely to have caused damage to the chimney.
- Addition or removal of one or more connected appliances, or the replacement of an appliance with one of a different type, a different input rating or a different efficiency.
- Prior to relining or replacement of the flue lining.

LEVEL 2

- Where necessary for the investigation of an incident which has caused damage to the chimney or building.

·Where a hazard is detected or suspected as the result of a Level I or a Level 2 inspection and the suspected hazard cannot be fully evaluated without access to concealed areas.

·A Level 3 inspection may be required when the construction of all or part of the chimney is deemed critical to the renewed or continued use of the chimney due to potential concealed defects.

Good resources: Chimney Safety Institute of America www.csia.org
Chimney sweep guild www.chimneys.com

Additional problems:



Observation: Unplugged openings are present in chimney. In the basement the insulation is not an appropriate means to plug a flue. Also in the first floor there are what appear to be vents in the brick work.

Analysis: The concern is if the flues or brick wythe have been damaged by moisture poisonous combustion gases can enter the home and cause personal injury FIRE. **** UNSAFE

Recommendation: I advise that you hire a mason to perform safety repairs as required and have a level 2 inspection preformed on the chimney liners.

10. ROOF PENETRATIONS:

TYPES

OBSERVED: Chimney, PVC Vent Pipe
Ridge vent at peak of roof

CONDITION: *** NOT FUNCTIONAL as NOTED:

**VISIBLE
PROBLEMS:**

Observation: As viewed, the flashing at the intersection of the roof covering and the chimney appears to be defective. As seen from the attic I can see day light.

Analysis: The flashing needs further investigation and repair or replacement to prevent leakage and interior water damage.

As explained by the Chimney Institute of America

(www.csia.org):

"Flashing is the seal between the roofing material and the chimney. Flashing prevents rainwater or snow melt from running down the chimney into living spaces where it can stain or damage ceiling and walls or wall paneling or cause rot in rafters, joists or other structural elements. In many cases, the flashing is a single L-shaped sheet of metal that is attached to the side of the chimney and the roof. The most effective flashing is made up of two elements, the flashing and the counter-flashing. The flashing or base flashing - an L-shaped element extending up the chimney side and out onto the roof - is attached to the roof and sealed. The counter flashing, which overlaps the base flashing, is imbedded and sealed in the chimney's masonry joints. This two-element flashing allows both the roof and the chimney to expand or contract at their own rates without breaking the waterproof seal in either area."

Recommendation: You should ask a tradesman relative to this area of concern to further investigate the flashing and to provide a cost estimate for repairs.



Observation: Due to the condition of the ridge vent, there is a potential leakage.

Analysis: Repair is needed.

Recommendation: Consult a roofer.

Observation: There is a potential leakage point at the plumbing vent pipe.

Analysis: Repair is needed.

Recommendation: Consult a roofer.

11. FLASHINGS:**TYPE OF
FLASHINGS:**

- Flashing boot at vent pipe.
- Metal step flashing is present at the chimney / roof intersection.
- Metal drip edge at eaves.
- Metal drip edge at gable rake trim boards.

CONDITION:
FLASHING
PROBLEMS:

*** NOT FUNCTIONAL as NOTED:



Observation: The flashing and/or the rubber gasket around the plumbing vent pipe appears to be defective.

Analysis: Repair is needed. Faulty flashing at the vent pipe / roof intersection may allow leakage. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold. Note: There is a potential for concealed damage.

Recommendation: Hire a roofer to perform repairs.

Web Resource: <http://www.ci.bloomington.mn.us/handouts/53/53ccshingles.pdf>

Observation: As viewed, the flashing at the intersection of the roof covering and the chimney appears to be defective.

Analysis: The flashing needs further investigation and repair or replacement to prevent leakage and interior water damage. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold. Note: There is a potential for concealed damage.

As explained by the Chimney Institute of America (www.csia.org): "Flashing is the seal between the roofing material and the chimney. Flashing prevents rainwater or snow melt from running down the chimney into living spaces where it can stain or damage ceiling and walls or wall paneling or cause rot in rafters, joists or other structural elements. In many cases, the flashing is a single L-shaped sheet of metal that is attached to the side of the chimney and the roof. The most effective flashing is made up of two elements, the flashing and the counter-flashing. The flashing or base flashing - an L-shaped element extending up the chimney side and out onto the roof - is attached to the roof and sealed. The counter flashing, which overlaps the base flashing, is imbedded and sealed in the chimney's masonry joints. This two-element flashing allows both the roof and the chimney to expand or contract at their own rates without breaking the waterproof seal in either area."

Recommendation: You should ask a tradesman relative to this area of concern to further investigate the flashing and to provide a cost estimate for repairs.

Web Resource: <http://www.ci.bloomington.mn.us/handouts/53/53ccshingles.pdf>

12. SKYLIGHTS:

Observation: No visible skylights where *readily accessible*.

13. SIGNS OF PREVIOUS OR ACTIVE LEAKS:

ROOF LEAKS OR AREAS OF POTENTIAL PROBLEMS:



Observation: Inspection of the roof and related components revealed a potential for leakage at the following locations:

- ** Chimney flashing.
- ** Plumbing vent pipe flashing
- ** Ridge vent.

Analysis: Defects in any of the above roof components may allow leakage, interior water damage and mold. Note: There is a potential for concealed damage.

Recommendation: Prior to commitment, you should ask a roofer to perform an on-roof inspection of all components and to provide an estimate for repair or replacement as required to restore function.

14. OVERALL CONDITION / RECOMMENDATIONS:

Opinions of inspector:

In my opinion, visible conditions indicate that the roof covering is in need of repair to restore complete function and to prevent possible leakage or mold. Consult a roofer for price quotes prior to commitment.

In my opinion, the downspouts are in need of **repair** to restore function.

GARAGE INSPECTION

SCOPE OF THE GARAGE INSPECTION: (Note: Home inspectors are NOT required to inspect detached garages. Any inspection of the detached garage is done so as a free courtesy only, with no consideration.) The inspector shall observe the attached garage roof covering, structure, wall coverings, foundation, doors & windows, fireshielding, door operator and electrical outlets. The **Home Inspector** must **Report on** whether or not an automatic garage door operator will reverse or stop when it meets reasonable resistance during closing. The garage inspection is limited to those areas or components that were visible and *readily accessible* at time of inspection only. Concealed areas should be re-inspected by YOU prior to commitment.

DISCLAIMERS: A. Stored goods along the perimeter of the garage walls usually limit access for visual examination of the garage structure. Be advised that hidden or concealed defects may exist that were not *readily accessible* at the time of inspection. B. Locked or inaccessible garages are **EXCLUDED** from this report. C. The true condition of door operators, lights and outlets is undetermined if the electricity is shut-down at time of inspection. D. Overhead door openers will NOT be tested if a car is parked beneath, as malfunctions sometimes occur.

GENERAL COMMENTS: A. For your protection, you should re-examine the garage after the owner has removed all vehicles and storage items as concealed defects may exist. Probing & sounding of the wood sills for hidden decay is especially recommended as their closeness to grade level often invites decay or wood boring insect infestation. Call me if your research reveals hidden concerns. B. All attached garages should have intact fireshielding on the inside surface of the wall adjoining the home and the ceiling if living space is above. C. The garage door operator "safety reversing mechanisms" should be tested monthly to prevent personal injury or property damage. D. For electrical safety, all garage outlets should be equipped with modern ground-fault-circuit-interrupter (GFCI) shock protection. E. Fire doors should have a self-closing piston or spring loaded hinges. F. Overhead door openers should be updated by installing infrared sensors when not present.

1. TYPE OF GARAGE:

Description: 2 car attached garage.

2. OBSTRUCTIONS THAT RESTRICTED INSPECTION:

None.

3. ROOF COVERING WHERE ACCESSIBLE:

TYPE OF MAIN ROOF COVERING:

ASPHALT / FIBERGLASS SHINGLES PRESENT: As viewed, the roof structure appears to be covered with asphalt and fiberglass composition shingles.

Analysis: This material is the most common roof covering used in this part of the country and typically provides many years of service when installed properly and maintained. However, asphalt shingles are **NOT** designed to last the life of the home and will require eventual routine age replacement. Replacement should be a budgeted item and should be scheduled before leakage occurs. The service life of the material varies and depends on variable such as: the initial shingle weight or quality, the steepness or pitch of the roof, the amount of attic ventilation, the number of roofing layers and the orientation of the home to the sun. (Note: Average weight shingles last approximately 15-20 years, heavy duty shingles last 25-30 years depending on the quality, ventilation, climate and installation. Without knowing the specific manufacturer and model of the shingle, it is impossible to determine the actual expected service life within the scope of this inspection.)

During ownership, you should conduct an annual roofing inspection to make sure that the condition of the roof is functional or fulfilling it's objective of shedding water before leakage occurs. Look for missing or loose materials, split shingles, areas of storm damage, blown-off shingles, curling shingles, loss of granules, exposed felt mat or other age defects and perform repairs as required to extend service life.

Approximate age of roof:

Unknown - further research is advised. You should consult the owner to verify the age of the roof so that a budget can be established for future age replacement.

CONDITION:**** FUNCTIONAL with EXCEPTIONS as noted below:**

Observation: The roof covering was 100% covered by **SNOW** at the time of inspection.

Analysis: The true condition of the roof covering is undetermined as it was **not readily accessible** for inspection. Further investigation is needed to determine if there are concealed defects.

Recommendation: As I was unable to determine the condition of the roof, a professional roof inspection and certification are advised prior to the close of escrow. The condition of the roof covering requires further research now and also during the first thaw. You should ask the owner the following disclosure questions:

- What type(s) of roof covering(s) is present?
- How old is the roof covering(s)?
- When do you expect that age replacement will be needed?
- Does the roof leak?
- Are there any seasonal performance problems such as ice dams?
- Have the flashings ever leaked?
- Ask if the owner is willing to memorialize in writing that there are no problems with the roof covering.

You should discuss the unknown condition of the roof covering with your attorney NOW, prior to commitment. If the owner is not willing to provide assurance that there are no problems, then perhaps an agreed upon sum of money can be retained in escrow until inspection is possible. Furthermore, you should visit the local building department and perform a "permit search" to determine the last date of roof covering replacement on file. Be advised that roof coverings are NOT designed to last the life of the home. All roof coverings eventually require age replacement at significant expense - such expenses should be budgeted. (Note: Be advised that most 3-tab asphalt / fiberglass shingle roof coverings have a design life of 15-20 years, roll roofing design life = 8-10 years.)

If you have great concerns or your research reveals suspicions of problems, you may want the home inspector to return and evaluate the roof when the roof is bare and weather permits. A TRAVEL FEE AND MINIMUM HOURLY RATE WILL BE CHARGED. Exact pricing and scheduling arrangements can be made by contacting this office.

VISIBLE PROBLEMS:

Observation: The *readily accessible* roof coverings did not exhibit any visible problems at time of inspection.

Analysis: Where accessible and by the method observed, the roof covering appears functional with wear & tear appropriate for it's estimated age.

Recommendation: You should ask the owner to disclose the age of the roof covering for so that you can establish a budget for future age replacement.

4. GARAGE SIDING & CONDITION WHERE EXPOSED:

SIDING TYPE & CONDITION:

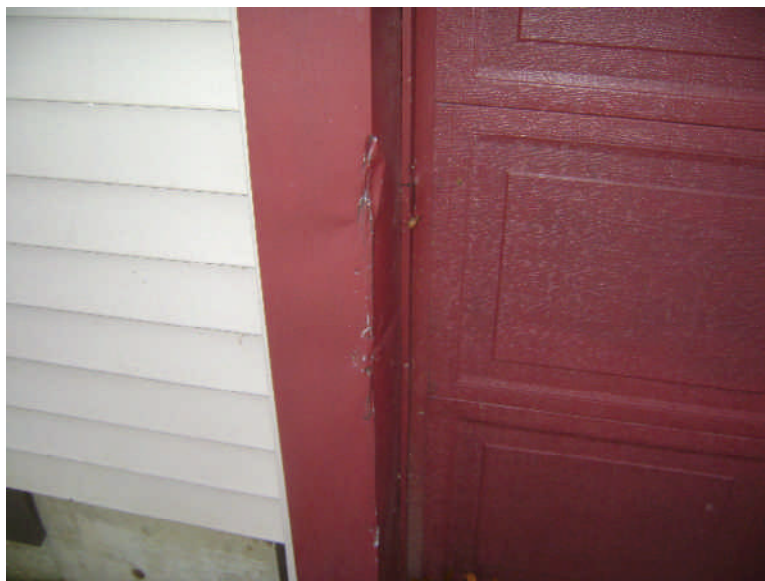
* **FUNCTIONAL**
siding with wear & tear appropriate for age & materials where *readily accessible* at time of inspection.

Observation: The aluminum siding outside corners are dented, damaged or loose.

Analysis: One of the disadvantages of aluminum siding and trim is that it can be easily damaged when struck. Maintenance

repairs are needed. (Note: Be advised that while repair is fairly simple for a tradesman, the availability of matching siding is undetermined.)

Recommendation: You should hire a siding contractor to remove all damaged components and to install new materials where required.



5. GARAGE DOORS & WINDOWS:

DOOR & WINDOW CONDITIONS:

** **FUNCTIONAL** with **EXCEPTIONS** noted:

6. WAS THE GARAGE DOOR OPERATED?

Type of overhead door:

YES, the overhead doors were operated manually because they were not attached properly to the tracks. This disconnect was most likely when the home was winterized.

7. GARAGE STRUCTURE WHERE EXPOSED:

CONDITION OF STRUCTURE:

* **FUNCTIONAL** with wear & tear appropriate for age where *readily accessible* and exposed at time of inspection.

Observation: Hairline cracks are present in the garage concrete floor or walls.

Analysis: In my opinion, such small cracks do not represent a serious problem.

However, such cracks can allow heat loss, pest access, radon gas entry and water infiltration.

Recommendation: Consider optional maintenance patching of the cracks and then monitor for future movement.

8. GARAGE ELECTRICAL SYSTEM WHERE EXPOSED:**GARAGE
ELECTRICAL
SYSTEM:**

* **FUNCTIONAL** where *readily accessible* at time of inspection.
Resource: <http://www.cpsc.gov/cpscpub/pubs/523.html>

9. FIRE SAFETY:**CONDITION OF
ATTACHED
GARAGE FIRE
SAFETY:**

Observation: The required fireshield on the separation wall or ceiling between garage & attached portions of the house is incomplete.

Analysis: **** **UNSAFE**. This is a **FIRE HAZARD**.

Recommendation: Hire a drywall contractor to repair or install a 5/8" type "X" sheetrock fireshield as required for safety.

10. OVERALL CONDITION / RECOMMENDATIONS:**GARAGE
SUMMARY:**

** In my opinion, the garage is **FUNCTIONAL**, but **EXCEPTIONS** were noted as needing repair or updating.

HEATING SYSTEM & AC INSPECTION

SCOPE OF THE HEATING SYSTEM INSPECTION: 266CMR: BOARD OF REGISTRATION OF HOME INSPECTORS
266 CMR 6.00: STANDARDS OF PRACTICE:

6.07 System: Heating

- (1) The **Home Inspector** shall **Observe** permanently installed exposed **Readily Accessible** heating systems including:
- (a) Heating equipment.
 - (b) **Normal Operating Controls**.
 - (c) The presence of **Automatic Safety Controls**.
 - (d) The exterior of the chimneys, thimbles and vents.
 - (e) Solid fuel heating devices.
 - (f) Heating distribution systems including fans, pumps, ducts and piping and supports, dampers, insulation, air filters, registers, radiators, fan coil units, convectors.
 - (g) The existence of insulation.
 - (h) The exposed flue piping and the existence of a thimble(s).
 - (i) The presence of an installed heat source in each habitable room including kitchens and bathrooms.
 - (j) The presence of a fireplace(s) and the operation of their damper(s).
- (2) The **Home Inspector** shall **Describe**:
- 1. The type of energy source (coal, electric, gas, and oil, wood, other).
 - 2. The type of heating equipment (electric, hot air, hot water, steam, other).
 - 3. The type of distribution system (piping: black iron, copper, and other. Duct work aluminum, fiberglass, steel, other).
 - 4. The insulation.
- (3) The **Home Inspector** shall **Report On**:
- a. The heating equipment.
 - b. The distribution system.
 - c. The flue piping and the existence of a thimble(s).
 - d. The condition of the fireplace hearth(s)
 - e. The presence of exposed flues in the smoke chamber

- f. The fireplace damper(s).
- (4) The **Home Inspector** shall:
 - (a) If possible, have the **Seller** and or the **Seller's Representative** operate the systems using **Normal Operating Controls**. If not possible for **Seller** and or the **Seller's Representative** to operate the systems, the **Home Inspector** shall operate the systems using **Normal Operating Controls** and **Report On** condition of said systems.
 - (b) Open **Readily Accessible** and **Operable Access Panels** provided by the manufacturer or installer for routine homeowner maintenance.
- (5) The **Home Inspector** is **not** required to:
 - (a) Test and/or inspect the heat exchanger (Requires dismantling of furnace cover and possible removal of controls) HVAC technician work..
 - (b) Collect engineering data on the size of the heating equipment, the size or length of the distribution systems. (**Engineering/Heating Services**).
 - (c) **Report on** the adequacy of the in-place system(s) to heat the **Dwelling (Engineering/Heating Services)**.
 - (d) **Operate** heating systems when weather conditions or other circumstances may cause equipment damage, or when the electrical and/or fuel supply to the unit is in the off position.
 - (e) **Operate Automatic Safety Controls**. 3
 - (f) Ignite or extinguish solid fuel and or gas fires.
 - (g) **Observe, Describe, or Report On:**
 - 1. The interior of flues.
 - 2. Fireplace insert flue connections.
 - 3. Humidifiers.
 - 4. Electronic air filters.
 - 5. Oil Tanks. 6. The uniformity or adequacies of heat supply to the various rooms.
 - (h) **Observe, Describe, or Report On** underground pipes, tanks, and or ducts, however, the **Home Inspector must note their existence in the Report if the existence an underground pipe, tank, and or duct is known to the Home Inspector**.
- 3 **Home** and **Associate home Inspectors** are prohibited from testing automatic controls with the noted exceptions of the arc and ground fault protective devices.

6.08 System: Central Air Conditioning

- (1) The **Home Inspector** shall **Observe:**
 - (a) Exposed **Readily Accessible** central air conditioning including:
 - 1. Cooling and air handling equipment.
 - 2. **Normal Operating Controls**.
 - (b) Exposed **Readily Accessible** distribution systems including:
 - 1. Fans, pumps, ducts and piping, with supports, dampers, the presence or insulation, air filters, registers, fan-coil units, condensers.
 - 2. The presence of an installed -cooling source in each room.
- (2) The **Home Inspector** shall **Describe:**
 - (a) The type of distribution system (Duct work: aluminum, fiberglass, steel, other) and recommend repair (if needed).
- (3) The **Home Inspector** shall **Report On:**
 - a. The distribution system
 - b. The insulation on the exposed supply ductwork.
 - c. The operation of the both the distribution and condenser fan.
 - d. Whether or not the cold gas line is insulated.
 - e. Whether there is, a service receptacle and a visible service disconnect switch in the area of the condenser and air handling equipment.
- (4) The **Home Inspector** shall
 - (a) If possible, have the **Seller** and/or the **Sellers Representative Operate** the systems using **Normal Operating Controls**.
 - (b) Open **Readily Accessible Operable Access Panels** provided by the manufacturer or installer for routine homeowner maintenance and report on conditions observed.
- (6) The **Home Inspector** is not required to:
 - (a) Collect engineering data on the size of the cooling equipment and the size or length of the distribution systems.

- (b) Report on the adequacy of the air conditioning system(s) to cool the dwelling **Engineering Services**).
- (c) **Observe, Describe or Report On** air filters and/or their effectiveness.
- (d) Have the **Seller** and or the **Sellers Representative Operate** the cooling systems when weather conditions or other circumstances may cause equipment damage or when the electrical supply to the unit is in the off position.
- (e) **Observe, Describe or Report On** evaporator coils (Requires dismantling of the plenum cover and possible removal of controls) HVAC technician work.
- (f) **Observe, Describe or Report On** non-central air conditioners.
- (g) **Observe, Describe or Report On** the uniformity or adequacy of cool-air supply to the various rooms.

DISCLAIMERS: A. The inspector is not required to operate systems when weather conditions or other circumstances may cause equipment damage. B. The inspector is not required to operate automatic safety controls. Systems shall be operated using normal operating controls and shall be observed via readily openable access panels. C. The inspector is not required to ignite or extinguish fires or pilots. D. The inspector is not required to observe non-central air conditioners. E. The uniformity of the supply of conditioned air to the various parts of the structure is not calculated. F. No representation is made regarding line integrity or coolant charges since the inspector does not perform pressure tests on coolant systems. G. The inspector does not check the electric draw (current) or the system. H. Testing is only performed on those systems that will respond to user controls during appropriate prevailing temperature, humidity and climate conditions. I. Systems known to be or appearing to be faulty, defective, unsafe or shut-down are not tested. J. The Inspection and Report do NOT include determination of adequacy of any system with regard to personal comfort needs, nor do the Inspection and Report include any determination of the efficiency of any system with regard to energy usage. K. Except where otherwise noted, we do not judge compliance with manufacture's instructions or regulatory codes, test specialized accessories, determine clearance to combustibles, or verify adequacy of combustion air.

***** **NOTICE: THE EVALUATION OF OIL TANKS AND HEAT EXCHANGERS IS EXPRESSLY EXCLUDED FROM THIS REPORT PER MA RULES & REGULATIONS AS STATED ABOVE, AS THEY ARE NOT READILY ACCESSIBLE FOR COMPLETE VISUAL INSPECTION. I RECOMMEND THAT ALL HEAT EXCHANGERS BE EVALUATED BY A TECHNICIAN NOW PRIOR TO COMMITTING TO PURCHASE. IF YOU FAIL TO HEED THIS ADVICE, THEN THERE IS A POSSIBILITY THAT THE UTILITY COMPANY WILL DISCOVER A FAILED HEAT EXCHANGER AND "RED TAG" THE APPLIANCE AS BEING UNSAFE AND IN NEED OF COSTLY TOTAL APPLIANCE REPLACEMENT. OIL TANKS CAN BE INSPECTED BY ULTRASONIC TESTING BY SPECIALISTS.**

GENERAL COMMENTS: A. Equipment that is "SHUT-DOWN", not seasonally functional, out of fuel or does not respond to normal operating controls cannot be functionally evaluated. Reappraisal by a heating or air conditioning technician is recommended prior to purchase. B. As preventative maintenance, all heating and cooling systems should be inspected and serviced annually by a HVAC technician. Annual service and repair contracts and automatic fuel delivery agreements are recommended. C. If you buy the home, I recommend that you have the heating & cooling systems completely evaluated and fully serviced to establish a base date of good annual maintenance. D. Owners of rental property are required to keep heating systems in good working order and to provide adequate heat between September 15th and June 15th, unless lease agreements define occupant responsibility. E. Today's construction requires that the "emergency shut-off switch" be located outside of the basement or boiler room so that the door remains closed for safety. Updating of older nonconforming switch locations is advised. F. Be advised that when the outside temperature is less than 65 degrees F., the inspector cannot operate the central air conditioning system due to possible damage to the compressor. **G. Be advised of the following average appliance life expectancies depending on brand, maintenance and use: hot air furnace 15-20 years, steel boiler 20 years, cast iron boiler 30-40 years, compressor unit 10-12 years.** H. Consult with the owner **NOW** on any known underground, abandoned oil tanks or oil leaks or hazardous waste on the property. Any known problems should be discussed with your attorney **NOW**.

1. TYPE OF FUEL / ENERGY SOURCE:

TYPE OF FUEL: Oil.

2. OIL TANK OR GAS PIPING:

TYPE OF TANK & LOCATION:

Observation: There is a steel oil tank in the basement (approximate capacity = 275 gallons).

Analysis: The type of tank & capacity are industry standard for residential installations. (Design life = 30 years) **Be advised that steel oil tanks tend to corrode from the inside outward and telltale signs of problems may not always be visible.**

Recommendation: I

advise that any oil tank 30 year of age or older be replaced as a precaution against leakage, environmental contamination and uninsured major expenses for cleanup. For your budget, to have an old tank removed and a new one installed costs between \$1200 and \$1500. Replacement should also include any old oil line that is not enclosed in a protective sleeve that shunts any oil leakage to the head of the pipe where the homeowner can see the leakage.



LOCATION OF MAIN FUEL SHUT- OFF VALVES:

The main fuel shut-off valve is located at the oil tank.



CONDITION OF TANK OR PIPING:

* **FUNCTIONAL** where *readily accessible* at time of inspection and reported free, as a courtesy and without consideration. Notice: 266CMR 6.00: Standards of Practice state "that a home inspector is NOT required to **Observe, Describe or Report** on Oil tanks."

As oil tanks are not readily accessible for complete inspection, and as they corrode from the inside, true conditions cannot be determined during a home inspection. If you want assurance of condition, then you should hire a specialist to perform an ultrasonic test on the tank.

TANK OR PIPING PROBLEMS:

Observation: The exterior of the tank was inspected as a free courtesy, without consideration and no visible problems observed where exposed and *readily accessible* at time of inspection.

Analysis: The true condition of the interior of the tank and any buried oil lines is undetermined.

Recommendation: If you want assurance of condition, then you should hire a specialist to perform an ultrasonic test on the tank.

3. HEATING SYSTEM EQUIPMENT:

TYPE(S) OF HEATING SYSTEMS PRESENT:

FORCED HOT WATER HEAT EXPLANATION: Forced hot water heating represents state of the art technology in terms of efficiency and comfort. Such systems may be fueled by oil or gas and require little owner maintenance, but each should be inspected and serviced annually by a licensed technician.

Analysis: The heart of the system is the boiler, which may be composed of steel or cast iron. (Note: A cast iron boiler is preferable as the service life is far superior to a steel boiler.) The boiler provides the hot water when a thermostat calls for heat. The heated water is distributed through small diameter piping until it reaches wall convectors or baseboard heaters. The hot water continues to flow until the thermostat is satisfied, then the water is recirculated back to the boiler for re-use again. One of the greatest features of a forced hot water heating system is that the home can easily be divided into different thermostatically controlled comfort zones.

Regardless of the type of boiler, certain parts of the boiler have shorter design lifespans than the boiler itself and should be monitored for eventual maintenance replacement. Such parts include:

- Burner
- Fire chamber liner
- Gas valve
- Thermocouple
- Circulator pump
- Air vent valves
- Zone valves
- Relief valve
- Back-flow preventer valve
- Fill-valve
- Control relay
- Drain valve
- Expansion tank
- Thermostat
- Flue pipe
- Gaskets

Recommendation: You should buy a heating system maintenance plan with a local oil or gas company. Such a plan should include an annual safety inspection, cleaning, tune-up and parts replacement.

**WERE THE
MAINTENANCE /
ACCESS PANELS
REMOVED?**

YES, the *readily accessible* operable access panels provided by the manufacturer or installer for routine homeowner maintenance were opened.

**APPROXIMATE
AGE(S):**

Observation: The age of the heating system is unknown.

Analysis: Each type of heating system has an average design life and each type will eventually need age replacement regardless of present age.

Recommendation: Ask the owner how old the central heating system is for your decision making needs and for future budgeted replacement.

**CONDITION OF
HEATING
SYSTEM:**

**** Observation: The heating system was FUNCTIONAL, but with exceptions as noted below:**

**HEATING
APPLIANCE
PROBLEMS:**

Observation: No recent maintenance tags are posted.

Analysis: The lack of maintenance tags may indicate postponed annual maintenance cleanings, tune-ups, parts replacement and safety inspection.

Recommendation: Ask the owner when the system was last serviced. You should have the heating system serviced upon occupancy to establish a good annual service schedule.



4. DISTRIBUTION SYSTEM:

TYPE OF DISTRIBUTION SYSTEM:

Observation: Copper heating pipes are present.

CONDITION:

* **FUNCTIONAL** where *readily accessible* at time of inspection. The distribution system carried heat to those habitable rooms serviced.

CIRCULATOR PUMP OR BLOWER UNIT PROBLEMS:

Observation: A leak was visible at the circulator pump gasket.

Analysis: Maintenance repair is needed.

Recommendation: Hire a heating contractor to perform maintenance repairs as needed to stop the leak.



DISTRIBUTION SYSTEM PROBLEMS:



Observation: The "Air Vent" mounted on top of the "Purger Valve" at the boiler is corroded or drip leaking.

Analysis: Simple maintenance parts replacement of the air vent is most likely needed. The Air Vent is designed for use in liquid systems to purge undesirable free air that otherwise could impede system performance, increase system operating cost and contribute to the damaging effects of corrosion. The accumulation of air in the body of the Air Vent causes a float to drop allowing the air to be vented through an air eliminating orifice. As the liquid level rises in the vent body, the float also rises shutting off the flow of venting gases.

The water that is used initially to fill a hot water heating system contains dissolved air.

Make-up water subsequently added to the boiler will similarly have high air content. Heating this water releases the air and permits it to be circulated in the system, for which it must be vented. The purpose of the Air Purger is to continuously separate and collect any air from the water as it circulates so that it may be vented automatically by afloat air vent without the necessity for frequent manual venting. Replacement of the Air Vent may be needed every few years depending on the quality of the water.
Recommendation: You should hire a heating contractor or a plumber to install a new Air Vent.

Observation: No insulation on heating pipes.

Analysis: Insulation is now required to prevent heat loss.

Recommendation: I advise the optional upgrading of the insulation at this location.

Observation: Inspection of the supply piping connected to the boiler revealed that a valve, called the back-flow preventer, is missing a 1/2 diameter open ended drain pipe.

Analysis: The omission of the drain pipe is not of a critical nature.

Recommendation: If clearances permit, I advise that a proper drain pipe be installed to direct any back-flow boiler water towards the floor.

Observation: The exposed heating distribution pipes exhibited areas of corrosion.

Analysis: This condition indicates that portions of the distribution piping are at end of service life and that repair is needed to prevent leakage, possible interior water damage and loss of heat.

Recommendation: In my opinion, you should hire a licensed heating contractor to perform repairs as required to restore the function of the heating pipes in question.

5. NORMAL OPERATING CONTROLS:

WAS THE
HEATING
SYSTEM
OPERATED
USING NORMAL
OPERATING
CONTROLS?

YES.

CONDITION OF
CONTROLS:

* **FUNCTIONAL.** Homeowner operated devices such as a thermostat, wall switch or safety switch appear to be operational where *readily accessible*. I recommend the use of new setback type thermostats for energy conservation and efficiency. (Note: The inspector only verified the presence of an emergency shut-off switch, he did **NOT** test it's function. You should test the emergency shut-off switch when you move into the home.)

6. AUTOMATIC SAFETY CONTROLS:

CONDITION OF
SAFETY
CONTROLS:

Massachusetts Standards of Practice prohibit a home inspector from testing automatic safety controls. While the safety controls are present and may appear to be functional, their true operational condition is undetermined and requires further investigation. You are advised to ask your service company to test all automatic safety

controls during regular annual cleaning & tune-ups.

**SAFETY
CONTROL
PROBLEMS:**

Observation: Required automatic safety controls are present.

Analysis: No visible problems observed where *readily accessible*, but true operational condition is undetermined.

Recommendation: Be advised that controls are not tested during the inspection. You should ask your heating technician to evaluate the automatic safety controls upon occupancy and annually thereafter.

**LOCATION OF
EMERGENCY
SHUT-OFF
SWITCH:**

Observation: The emergency shut-off switch is located inside the basement staircase.

Analysis: Be advised that this location is no longer allowed in new construction as it is necessary to open the basement door in an emergency.

Recommendation: Inexpensive switch relocation is advised.

7. VENTING:

**METHOD OF
VENTING:**

Observation: The heating system is vented via a metal flue pipe connected to a masonry chimney.

**CONDITION OF
VENTING:**

* **FUNCTIONAL.** Where *readily accessible*, the venting system appeared **FUNCTIONAL** at time of inspection. Annual inspection is recommended.

**VENTING
PROBLEMS:**

Observation: No visible problems observed where exposed and *readily accessible* at time of inspection.

Recommendation: Annual safety inspection of all venting systems is advised as metal parts and chimney components can fail causing deadly combustion gases to enter any home.

**IS A THIMBLE
PRESENT
WHERE THE
FLUE PIPE
CONNECTS TO
THE CHIMNEY?**

Observation: A thimble is present, this is a good feature. A thimble must be present and must extend through the chimney wall to the inner face or liner, but not beyond. The thimble must be permanently cemented in place to facilitate removal of the chimney connector pipe for annual cleaning and chimney inspection. The thimble is a sleeve embedded in the



chimney wall designed to accept the flue connector from an appliance. They must be placed with the chimney end flush with the inside wall of the flue lining and cemented in place with the refractory mortar used in the flue tiles.

8. COOLING SYSTEM:

Type of equipment: No central cooling system present.

9. OVER-ALL CONDITION / RECOMMENDATIONS:

**HEATING
SYSTEM /
COOLING
SYSTEM
SUMMARY:**

The present condition of the heating system indicates that annual maintenance has been postponed. While operational, lack of routine maintenance reduces over-all efficiency, increases fuel consumption and may cause mechanical breakdown. You should have the entire heating system further evaluated and serviced as required prior to commitment. Annual maintenance contracts and safety inspections are highly recommended.

ELECTRICAL INSPECTION

SCOPE OF THE ELECTRICAL INSPECTION: 266CMR: BOARD OF REGISTRATION OF HOME INSPECTORS

266 CMR 6.00: STANDARDS OF PRACTICE:

6.05 System: Electrical:

- (1) The **Home Inspector** shall **Observe** the **Readily Accessible** and **Observable**:
 - (a) Exterior of the exposed service entrance conductors.
 - (b) Service equipment, grounding system, main over current device, interior of the main and distribution subpanels (by removing the service and distribution panel covers). However, the **Home Inspector** is not required to remove the covers if the panel covers are not **Readily Accessible** and or removal would damage any painted surface and or covering materials (however, it shall be the **Home Inspectors** responsibility to document the reason for not removing the panel covers in the **Report**).
 - (c) Amperage and voltage ratings of the service.
 - (d) Exterior of the exposed branch circuit conductors, their over current devices, and the compatibility of their ampacities and voltages.
 - (e) Operation of a representative number of permanently installed lighting fixtures, switches and receptacles located inside the house, garage, and on its exterior walls.
 - (f) The number of branch circuits inside the panel(s) and the number of over current devices in the panel(s).
 - (g) Whether all bathroom and kitchen countertop receptacles are ground fault protected.
- (2) The **Home Inspector** shall **Describe**:
 - a. Service type as being overhead or underground, cable, encased in conduit, other.
 - b. The type of service, feeder, and branch-circuit conductor materials (copper, copper clad aluminum, aluminum, other).
 - c. The type of feeder and branch circuit wiring (Armored cable, conduit, tubing, nonmetallic cable, knob and tube, wire mold, other).
 - d. The location of the service and subpanels and indicated whether they are **Readily Accessible** and **Observable**.
- (3) The **Home Inspector** shall **Report on**
 - (a) The size and the voltage of the main service disconnect (30, 60, 100, 125, 150 and or 200 amp, other service, 120, 120/240, 120/208-volt system).
 - (b) The number of branch circuits in the panel(s) and the number of overcurrent devices in the panel(s).
 - (c) Report any of the overcurrent devices that are in the off position and recommend the **Seller** and or the **Sellers Representative** demonstrate that those circuits are functional.
 - (d) The exterior electrical service.
 - (e) Aluminum wiring, report if the exposed and **Readily Accessible** and **Observable** conductor terminations are properly coated with a termination compound and if the overcurrent devices are identified for use with aluminum wire.
 - (f) All undedicated exterior electrical receptacles and report polarity, grounding and ground fault protection issues (if any).
 - (g) If the electrical system is attached to both the city and dwelling side of the water piping and or a ground rod.
 - (h) Of the neutral and equipment-ground terminal bars and if they are properly attached (bonded) to the panel enclosures.
 - (i) The compatibility of the overcurrent devices and the size of the protected conductor (Over-Fusing) 1.
 - (j) Report ground-fault and arc fault protection issues, if any, as determined by the required testing.
 - (k) Report on any polarity or grounding issues of the receptacles tested.
 - (l) The exposed and **Readily Accessible** and **Observable** branch circuit wiring.
- (4) The **Home Inspector** shall:
 - (a) Test the polarity and grounding of a representative sample of the three prong receptacles throughout the **Dwelling**.
 - (b) Test the polarity and grounding of all undedicated bathroom and kitchen countertop receptacles.
 - (c) Test the polarity and grounding of all nondedicated receptacles in the attached garage and on the exterior of inspected structures and whether said receptacles are ground fault protected.
 - (d) Test the operation of all Ground Fault Circuit Interrupters.
 - (e) Test of the operation of all arc fault protective devices.
- (5) The **Home Inspector** is **not** required to:
 - (a) Collect engineering data on the compatibility of the overcurrent devices with the panel and or

determine the short circuit interrupting current capacity. (**Engineering services**).

- 1 Any overcurrent device exceeding the rated current ampacity of the conductor(s) being protected by the device.
- (b) Determine and or report on the adequacy of the ground and or in place systems to provide sufficient power to the **Dwelling (Engineering/Electrical services)**.
- (c) Insert any tool, probe, or testing device inside the panels.
- (d) Test or operate any over current device except Ground Fault Circuit Interrupters and Arc Fault Interrupters.
- (e) Dismantle any electrical device or control other than to remove the covers of the main and sub-distribution panels. However, the **Home Inspector** is not required to remove the covers of the main and subpanels if the covers are not **Readily Accessible**, when there are **Dangerous or Adverse Situations** or when removal would damage, mar any painted surface and or covering materials (however, it shall be the **Home Inspectors** responsibility to document, in the **Report**, the reason for not removing the panel covers).
- (f) **Observe, Describe** and or **Report On**:
 1. The quality of the conductor insulation. (**Electrical Services**).
 2. Any test for Electro-Magnetic fields. (**Electrical Services**).
 3. Low voltage systems, door bells.
 4. Smoke and Carbon Monoxide detectors (**Seller's** responsibility).
 5. Telephone, security alarms, cable TV, intercoms, or other ancillary wiring that is not a part of the primary electrical distribution system.
 6. Underground utilities, pipes buried wires, or conduits. (Dig Safe).

DISCLAIMERS: The following items are expressly **EXCLUDED** from this report: low voltage systems, smoke & CO detectors, telephone systems, security systems & alarms, cable TV systems, intercoms, landscape lighting or other ancillary wiring that is not part of the primary electrical distribution system. The home inspector will NOT test all switches, receptacles or fixtures; a representative sample would be tested. The inspector will NOT remove switch or outlet cover plates, nor will he trace wiring origins or destinations. Outside pole lamps are **EXCLUDED** as the wiring is not *readily accessible*.

GENERAL COMMENTS: A. **Important Safety Note:** Repairs attempted by untrained or unlicensed individuals to any electrical component may result in injury or death from electric shock or create a future and/or hidden unsafe condition. It is recommended that all repairs or improvements be performed by a licensed electrician. Any electrical repairs attempted by the home owner should be approached with caution as personal injury or fire could result. The power to the entire home should be turned off prior to beginning any repairs, no matter how trivial the repair may seem. B. The MAIN DISCONNECT and individual circuit breakers or fuses were NOT opened or tested during the inspection for to do so would disrupt energized parts of the home and upset the owner. Upon occupancy and twice a year, you should trip the main breaker and circuit breakers as preventative maintenance. C. **Be advised that a 100 amp electrical service is now considered the modern minimum for all single family homes.** I recommend that all 60 amp services be retired unless gas major appliances are utilized. D. While older 2-slot outlets may be typical for an older home, they are rated as "poor" by the CPSC and updating to modern U-type receptacles is recommended for grounding safety. E. Be advised that modern homes now have outlets within 6 foot reach to prevent the use of extension cords. F. Be advised that ground-fault-circuit-interrupters (GFCI) are now required at all water hazard areas such as outside outlets, swimming pools, garage, basement, bathrooms and all outlets above kitchen countertops. Updating is advised if such devices are not present. G. Be advised that as of 2002, all new homes must have arc-fault-circuit-interrupters (AFCI) devices to protect all bedroom circuits from causing a fire. Older homes can be updated with such devices also. H. Be advised that all electrical equipment has a finite life of approximately 40-years, after which all components should be evaluated for age replacement. I. Any flush-mounted ceiling light fixture installed before 1985 has a potential for brittle insulation in the outlet box above the fixture. Further inspection is advised for fire safety. J. For more information on smoke detectors visit <http://www.cpsc.gov/cpscpub/pubs/5077.html>

1. TYPE OF SERVICE:

Type: Observation: The home has an overhead Edison 3-wire service with wires that run from a utility pole to the house.

2. SERVICE EQUIPMENT:

EXPOSED CABLE OR RACEWAY:

Observation: The service wires are enclosed within an exposed cable on the side of the building. The service entrance cable leads to the meter box. The cable & meter box belong to the home owner.

Analysis: While an exposed insulated cable is acceptable, enclosure in a metal or plastic raceway offers greater protection against cable deterioration caused by exposure to the elements and sunlight.

Recommendation: Monitor the cable for future fraying and have it replaced by an electrician as a frayed service cable may allow water infiltration. You should paint the cable to prevent fraying and maintain all waterproof connections with dux-seal.



METER LOCATION:

Observation: The home has an outside meter. (Note: The meter box belongs to the homeowner.)

MATERIAL OF SERVICE LINES:

The service entry materials are copper. (Note: Copper service wires indicate a quality service installation.)

LOCATION & TYPE OF MAIN SERVICE DISCONNECT:

Observation: The main circuit breaker disconnect is located at the top of the circuit breaker panel. The main panel is *Readily Accessible* and *Observable*. (Note: The main service switch was NOT tested during the home inspection so as not to disturb the owner's timers, appliances, computers and lifestyle. You should test the main disconnect when you move into the home.)

**AMPERAGE &
VOLTAGE
RATING OF MAIN
DISCONNECT:**

200 amps - 115 / 230 volts (Note: 100 amps is the required minimum service size.)

**AMPERAGE
RATING OF MAIN
CIRCUIT PANEL:**

200 amps. (Note: A 100 amp service equals modern minimum requirements for single family homes.)

**LOCATION OF
SERVICE PANEL:**

Basement.

**OVERLOAD
PROTECTION
DEVICES (fuses
or circuit
breakers):**

Circuit breakers. (Note: Circuit breakers are a sign of a newer electrical panel. Be advised that circuit breakers should be manually switched on & off every six months to lubricate the internal parts.)

**GROUNDING
EQUIPMENT: (All
conductive
materials should
be bonded.)**

Observation: The main ground connection was not *readily accessible* at time of inspection.

Analysis: The condition of the main ground cable is undetermined.

Recommendation: When clearance or access is possible, you should make sure that the main ground cable is firmly attached to the street side of the water meter and that there is a jumper wire by-passing the water meter.

**ANY SIGNS OF
UNDERSIZED
SERVICE?**

Analysis: In my opinion, the electrical service size appears appropriate for this home.

**ELECTRICAL
SERVICE
CONDITIONS:**

**** FUNCTIONAL with EXCEPTIONS. SEE NOTES BELOW:** (Note: Any electrical defects should NOT be taken lightly. Further evaluation by an electrician is advised to determine needed safety repairs or updating.)

**OUTDOOR
SERVICE
PROBLEMS:**

Observation: The electrical service riser cable is close to a window.

Analysis: ***** UNSAFE** - someone could accidentally come in contact with the electrical service wires when opening or maintaining the window. Exposed service cables must be a minimum of three feet from the left & right sides and bottom of a window to prevent accidental contact. Repair is needed.

Recommendation: I advise that you ask an electrician to reappraise the clearance distance between the window and the service wires and that an estimate be prepared for service wire relocation or encased in a PVC conduit.

Observation: As inspected from outside, the vertical electrical service entrance cable

or raceway on the siding is missing supportive clamps.

Analysis: A loose service cable could move and cause other connections to fail. Minor repair is needed.

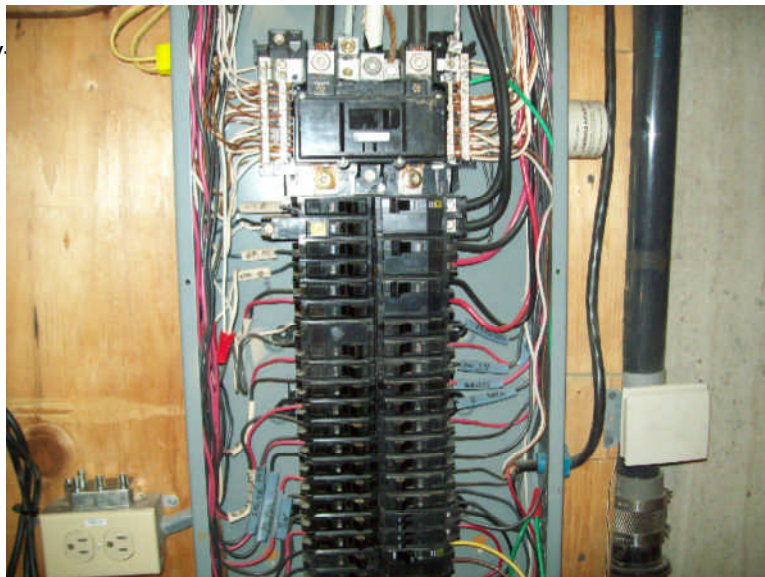
Recommendation: Suitable clamps should be installed and spaced as required.

INDOOR SERVICE PANEL PROBLEMS:

Observation: Mini-back breakers or piggy-back breakers are present in the service panel.

Analysis: Breakers of this type are not to be used unless the panel is designed for them. Often such breakers are installed when space in the panel is limited, and no one wants to pay an electrician to install a larger panel or a subpanel. The mini-breakers may exceed the number of circuits in the panel specified by the panel manufacturer.

Recommendation: Further investigation by an electrician is advised. A larger panel may be needed.



3. SUB-PANELS:

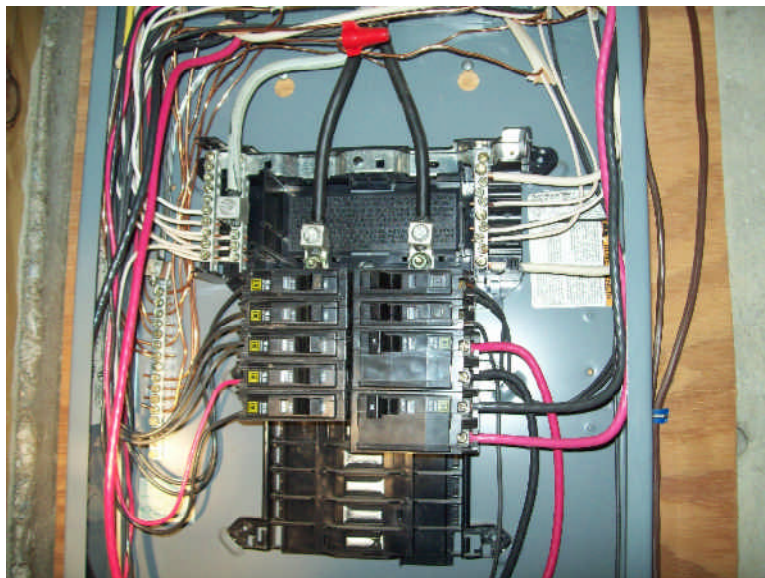
LOCATION & CONDITION:

Observation: The home has a sub-panel that is located remotely from the main panel.

Analysis: This is not be a problem, but you should know where each fuse or breaker is located for future reference.

Observation: The electrical subpanel cover was removed for interior inspection and appeared

FUNCTIONAL. No visible problems where *readily accessible*. Overload devices (fuses or breakers) appear to be compatible in size for the protected conductor wires.



4. BRANCH CIRCUIT CONDUCTORS:

NUMBER OF OVERCURRENT DEVICES IN THE PANEL(S):

Observation: In my opinion, the home has an ample number of circuits for household use.

NUMBER OF BRANCH CIRCUITS IN THE PANEL:

46.

TYPES OF EXPOSED BRANCH CONDUCTOR MATERIALS:

Observation: Copper wiring to branch circuits and aluminum wiring to major appliance circuits are present and functional. The ends of the aluminum conductors are coated with corrosion inhibitor.

Analysis: While total copper branch circuit conductors are more desirable, aluminum is a less expensive and acceptable alternative for appliance circuits to ranges, dryers and central air conditioners. The ends of the aluminum wires should be coated with an anti-oxidant paste.

CONDITION:

* **FUNCTIONAL** where *readily accessible* and as viewed in unfinished areas. (Please understand that the inspector can NOT fully evaluate the wiring within finished walls, floors & ceilings as it is inaccessible.)

BRANCH CIRCUIT WIRING HAZARDS:

Observation: Inspection of the visible branch wiring in the accessible portions of the unfinished areas (basement, crawl space, attic, etc.) revealed the following problems:

**** Wires touch metal pipes. (**UNSAFE** - wires must be isolated from possible conductive metal pipes.)

**** Dead ended wires. (Could be energized by a switch. Have the wires removed.)

**** Bare insulation, (**UNSAFE** - potential for shock or fire.)

**** Open junction boxes, missing covers.

Analysis: Any problems or **UNSAFE** conditions or hazards with the branch wiring may be simple in nature but should not be taken lightly. Be advised that any defects in the branch wiring may pose a **RISK of SHOCK or FIRE.**

Recommendation: You should ask an electrician to reappraise all of the branch wiring to verify the above problems and to identify other defects not documented in this report. Request a bid for completing all repairs in accordance with the requirements of the electrical code.

**Overcurrent
devices in OFF
position**

Observation: Overcurrent devices were in the "OFF" position.

Analysis: Home inspectors cannot energize a shut-down overcurrent device and it may be shut-down for a reason. The condition of the shut-down overcurrent device is undetermined, further investigation is needed.

Recommendation: You should **ASK THE SELLER** of the **SELLER'S REPRESENTATIVE** to demonstrate those shut-down circuits as functional.

5. OUTLETS, SWITCHES, FIXTURES:**TYPES OF
OUTLETS:**

Observation: The home has modern U-type 3 hole receptacles.

Analysis: This is a positive feature.

CONDITION:

**** FUNCTIONAL with EXCEPTIONS.** Observation: Random sampling revealed that the outlets, switches & lights were FUNCTIONAL with EXCEPTIONS as noted below:

PROBLEMS:

Observation: Missing outlet or switch cover plates were noted.

Analysis: ****** UNSAFE** - While repair is simply a matter of installing cover plates where missing, the lack of a cover plate is **UNSAFE** as the user is exposed to alive parts and a shock hazard.

Recommendation: Install all missing cover plates NOW as required for safety.

6. GFI & AFCI DEVICES:**TYPE &
CONDITION:**

Observation: The older home lacks modern arc-fault-circuit-interrupters (AFCI) devices.

Analysis: An AFCI device is a new 2002 requirement for all bedroom circuits and is designed to prevent a fire for new construction.

As of 2008, the National Electrical Code requirement for AFCI protection has been expanded: "Dwelling Units: All 120 volt, single-phase, 15- and 20- amp branch circuits supplying outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sun rooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by listed arc-fault-circuit-interrupter, combination-type, installed to provide protection of the branch circuit."

Recommendation: Consider **optional** updating. See CPSC publication below:

**Arc Fault Circuit Interrupter
(AFCI)
FACT SHEET**

THE AFCI

The "AFCI" is an arc fault circuit interrupter. AFCIs are newly-developed electrical devices designed to protect against fires caused by arcing faults in the home electrical wiring.

THE FIRE PROBLEM

Annually, over 40,000 fires are attributed to home electrical wiring. These fires result in over 350 deaths and over 1,400 injuries each year¹. Arcing faults are one of the major causes of these fires. When unwanted arcing occurs, it generates high temperatures that can ignite nearby combustibles such as wood, paper, and carpets.

Arcing faults often occur in damaged or deteriorated wires and cords. Some causes of damaged and deteriorated wiring include puncturing of wire insulation from picture hanging or cable staples, poorly installed outlets or switches, cords caught in doors or under furniture, furniture pushed against plugs in an outlet, natural aging, and cord exposure to heat vents and sunlight.

HOW THE AFCI WORKS

Conventional circuit breakers only respond to overloads and short circuits; so they do not protect against arcing conditions that produce erratic current flow. An AFCI is selective so that normal arcs do not cause it to trip.

The AFCI circuitry continuously monitors current flow through the AFCI. AFCIs use unique current sensing circuitry to discriminate between normal and unwanted arcing conditions. Once an unwanted arcing condition is detected, the control circuitry in the AFCI trips the internal contacts, thus de-energizing the circuit and reducing the potential for a fire to occur. An AFCI should not trip during normal arcing conditions, which can occur when a switch is opened or a plug is pulled from a receptacle.

Presently, AFCIs are designed into conventional circuit breakers combining traditional overload and short-circuit protection with arc fault protection. AFCI circuit breakers (AFCIs) have a test button and look similar to ground fault circuit interrupter (GFCI) circuit breakers. Some designs combine GFCI and AFCI protection. Additional AFCI design configurations are anticipated in the near future.

It is important to note that AFCIs are designed to mitigate the effects of arcing faults but cannot eliminate them completely. In some cases, the initial arc may cause ignition prior to detection and circuit interruption by the AFCI.

The AFCI circuit breaker serves a dual purpose - not only will it shut off electricity in the event of an "arcing fault", but it will also trip when a short circuit or an overload occurs. The AFCI circuit breaker provides protection for the branch circuit wiring and limited protection for power cords and extension cords. Single-pole, 15- and 20- ampere AFCI circuit breakers are presently available.

WHERE AFCIs SHOULD BE USED

The 1999 edition of the National Electrical Code, the model code for electrical wiring adopted by many local jurisdictions, requires AFCIs for receptacle outlets in bedrooms, effective January 1, 2002. Although the requirement is limited to only certain circuits in new residential construction, AFCIs should be considered for added protection in other circuits and for existing homes as well. Older homes with aging and deteriorating wiring systems can especially benefit from the added protection of AFCIs. AFCIs should also be considered whenever adding or upgrading a panel box while using existing branch circuit conductors.

INSTALLING AFCIs

AFCI circuit breakers should be installed by a qualified electrician. The installer should follow the instructions accompanying the device and the panel box.

In homes equipped with conventional circuit breakers rather than fuses, an AFCI circuit breaker may be installed in the panel box in place of the conventional circuit breaker to add arc protection to a branch circuit. Homes with fuses are limited to receptacle or portable-type AFCIs, which are expected to be available in the near future, or AFCI circuit breakers can be added in separate panel boxes next to the fuse panel box.

TESTING AN AFCI

AFCIs should be tested after installation to make sure they are working properly and protecting the circuit. Subsequently, AFCIs should be tested once a month to make sure they are working properly and providing protection from fires initiated by arcing faults.

A test button is located on the front of the device. The user should follow the instructions accompanying the device. If the device does not trip when tested, the AFCI is defective and should be replaced.

AFCIs vs. GFCIs

The AFCI should not be confused with the GFCI or ground fault circuit interrupter. The GFCI is designed to protect people from severe or fatal electric shocks while the AFCI protects against fires caused by arcing faults. The GFCI also can protect against some electrical fires by detecting arcing and other faults to ground but cannot detect hazardous across-the-line arcing faults that can cause fires.

A ground fault is an unintentional electric path diverting current to ground. Ground faults occur when current leaks from a circuit. How the current leaks is very important. If a person's body provides a path to ground for this leakage, the person could be injured, burned, severely shocked, or electrocuted.

The National Electrical Code requires GFCI protection for receptacles located outdoors; in bathrooms, garages, kitchens, crawl spaces and unfinished basements; and at certain locations such as near swimming pools. A combination AFCI and GFCI can be used to satisfy the NEC requirement for GFCI protection only if specifically marked as a combination device.

Source: <http://www.cpsc.gov/CPSCPUB/PUBS/afcifac8.PDF>

Preventing Fires In Homes: <http://www.cpsc.gov/CPSCPUB/PUBS/afci.html>

7. OVERALL CONDITION / RECOMMENDATIONS:**ELECTRICAL
SUMMARY:**

In my opinion, minimal but **UNSAFE** electrical conditions were noted. While the problems may be simple in nature, electrical hazards should not be taken lightly, safety repairs are needed. Consult an electrician to further evaluate the system and to perform repairs as determined and in accordance with the requirements of the electrical code.

PLUMBING & HOT WATER HEATER INSPECTION

SCOPE OF THE PLUMBING INSPECTION: 266CMR: BOARD OF REGISTRATION OF HOME INSPECTORS

266 CMR 6.00: STANDARDS OF PRACTICE:

6.06 System: Plumbing

- (1) The **Home Inspector** shall **Observe**:
 - (a) The exposed **Readily Accessible** and **Observable** interior water supply and distribution system including:
 1. Piping materials, including supports and insulation.
 2. Fixtures and faucets.
 3. Functional Flow.
 4. Leaks.
 5. **Cross Connections**.
 - (b) The exposed **Readily Accessible** interior drain, waste and vent system, including:
 1. Traps; drain, waste, and vent piping; piping supports and pipe insulation.
 2. Leaks.
 3. Functional Drainage.
 - (c) Hot water systems including:
 1. Water heating equipment.
 2. **Normal Operating Controls**.
 3. **Automatic Safety Controls**.
 4. The exterior of the chimneys, thimbles and vents.
- (2) The **Home Inspector** shall **Describe**:
 1. The type of water supply and distribution piping materials (brass, copper, steel, lead, plastic, other).
 2. The type(s) of drain, waste, and vent piping materials (brass, copper, cast iron, lead, plastic, steel, other)
 3. The type of water heating equipment, flue pipe and capacity (gas, electric, oil, tankless, solar, other), the nameplate, capacity of the water heating equipment (gallons and or gallons per minute).
- (3) The **Home Inspector** shall **Report On** and recommend repair (if needed):
 - a. The location of the main shut off valve.
 - b. The water heater.
 - c. The existence of a pressure/temperature valve and vacuum relief valve.
 - d. The exposed flue piping and the existence of thimbles in the chimney.
 - e. The existence of **Cross Connections** if **Readily Accessible** and **Observable**.
 - f. The **Readily Accessible** and **Observable** waste and water distribution systems.
 - g. The existence of any visible leaks.
 - h. The operation all plumbing fixtures, including their faucets and all exterior faucets attached to the house if **Readily Accessible**.
- (4) The **Home Inspector** shall **not** be required to:
 - (a) Test the operation of any valve except **Readily Accessible** water closet flush valves, fixture faucets.
 - (b) Collect engineering data on the size of the plumbing equipment, the size or length of water and or waste systems and or remove covering materials (**Engineering/Plumbing services**).
 - (b) Report on the adequacy and/or the efficiency of the in place systems to provide sufficient hot water to the dwelling, sufficient water supply or drainage for the dwelling (**Engineering services**).
 - (c) State the effectiveness of anti-siphon devices (**Engineering/Plumbing Services**).
 - (d) Determine whether water supply and waste disposal systems are public or private (**Seller or Sellers Representatives Responsibility**).
 - (e) Operate **Automatic Safety Controls**.
 - (f) Operate any valve except readily accessible water closet flush valves, fixture faucets, and hose faucets.
 - (g) **Observe, Describe or Report On**:
 1. The exterior hose bibs.
 2. Water conditioning systems.
 3. Fire and lawn sprinkler systems.
 4. On-site or public water supply quantity and quality.
 5. On-site or public waste disposal systems (Title V Inspection).
 6. Foundation sub drainage systems.
 7. Spas, except as to functional flow and functional drainage.
 8. The interior of flue linings.

9. Underground utilities, pipes, buried wires, or conduits (Dig Safe).

10. Automatic Controls.

2 **Home** and **Associate Home Inspectors** are prohibited from testing automatic controls with the noted exceptions of the arc and ground fault protective devices.

DISCLAIMERS: The following items are **EXCLUDED** from this report: underground pipes or pipes within walls, floors and finished ceilings, remaining life, solar systems, the effectiveness of antisiphon devices, determination of public versus private water supply and waste disposal systems, operation of automatic safety controls, operation of any valve except water closet flush valves, fixture faucets, and hose faucets. Also excluded are water conditioning systems, fire and lawn sprinkler systems, on-site water supply quantity and quality, on-site waste disposal systems, foundation irrigation systems, spas and central vacuum systems. The condition of walls behind appliances or floors under appliances is not determined since the units are not moved during this inspection.

GENERAL COMMENTS: A. Area public & private water supplies tend to have a high mineral content that is slightly corrosive to copper pipes, fittings, valves, boilers and hot water heaters. There is always a possibility of future leaks or blockages that did not exist at the time of inspection. You should inspect your plumbing system annually for greenish or whitish signs of corrosion and perform maintenance repairs as required. Expect future repair or replacement of faucet & toilet components through normal wear & tear. B. If your prospective older home has a remaining old steel service pipe, the future replacement will be your financial responsibility. The lifespan of old water service pipes is unpredictable but weak water pressure may be a telltale sign of needed age replacement. C. Be advised that the main shut-off valve was not tested during the inspection as they often can develop maintenance leaks or upset the owner. You should test the valve if you buy the home. D. Be advised that well pumps have an average life expectancy of 10-12 years. E. Be advised that new homes now have 3/4" dia. water lines across the basement and 1/2" dia. piping leading to each fixture. Older 1/2" piping systems or brass or steel water piping are candidates for age replacement. E. Older homes may not have local shut-off valves, P-shaped traps and re-vent connections. While appropriate for an older home, such old plumbing will have to undergo required major updating to comply with current codes during any kitchen or bathroom remodeling. **F. Be advised that hot water heaters have a short 5-12 year lifespan depending on brand, budget for eventual age replacement.** Set water temperature control no higher than 130 degrees F. max. at the faucets and 112 degrees F. max. at the shower heads to prevent scalding. G. Private waste disposal systems should be pumped out for general maintenance at least every three years to protect the leaching field. H. If your prospective new home has a "tankless coil" at the boiler for domestic hot water production, then updating the system by installing a modern "indirect water heater" is highly recommended to insure adequate hot water. I. **NOTICE: Homes built before 1987 are likely to have 50:50 lead / tin soldered joints in the copper water pipes.** Be advised that lead is a health hazard in high concentrations. There is a controversy that the old lead solder is not a problem as it has been coated by minerals within the pipes over the years that prevent the lead from leaching into the water. Be further advised that this argument may be correct but true lead content in the water supply is undetermined. If you have health concerns, then suggested options include: further testing of the solder for lead content, further testing of the water for lead content or replacement of all old lead soldered joints if present. J. If the home has a public sewage connection, then you should verify the disclosure with the local public waste disposal department. K. If the home has a private waste disposal system, then the owner is required to give you a copy of an 11-page Title 5 inspection report. Be advised that you may also hire your own Title 5 inspector to verify conditions prior to the close of escrow.

Important Note: Repairs attempted by untrained or unlicensed individuals to any plumbing component may result in malfunctions in the supply and waste piping or water leaks that can lead to hidden damage, including mold. It is recommended that any of the listed repairs or improvements below be performed by a licensed plumber. **I advise that you ask the owner / occupant about any known current or prior plumbing problems in the home.**

1. PROBABLE TYPE OF WATER SERVICE:

TYPE:

WELL GENERAL EXPLANATION: The home has a private well as a water supply and attached pump and holding tank equipment. **Be advised that if a well is present, the owner of the property (YOU) is responsible for the quality of the water.**

The visible and accessible parts of the well and pump equipment were evaluated for condition and function as rated in this report. Water is tested at fixtures for functional flow only.

DISCLAIMER / EXCLUSIONS: Well depth, seasonal flow rates, water quantity, adequacy of water supply and quality testing and future performance are

undetermined and beyond the scope of this limited inspection. To determine the capacity, the well depth, static water level and recovery rate will have to be determined by a licensed contractor, as this is not within the scope of a home inspection limited by time and other constraints.

The presence of a well should not dissuade you from purchasing the home, but you should understand its mechanical operation, past history of performance, anticipated service life, health implications and required maintenance.

Firstly, you should question the owner as the best source of information. Ask about the exact location of the well & waste disposal system to make sure that they are separated by a minimum 100 feet to prevent contamination. Ask about the depth of the well, the type & age of equipment, past performance, performance during drought conditions and what local well company is available to service the system. Ask when the water was last water quality tested and what the result were. Ask who services the well. Note: Well installers have been required to register a well and its specifications with the local board of health since 1974. The local board of health should have a copy of the well completion report that you can review. If the system has attached water filtration or softening equipment, its operation and maintenance should be reviewed with the owner.

NOTICE: TESTING FOR BACTERIAL AND CHEMICAL POLLUTANTS IS ADVISED PRIOR TO COMMITMENT AND ON AN ANNUAL BASIS TO PROTECT THE HEALTH OF THE OCCUPANTS.

Note: Wells in this area (south of Boston) are prone to high mineral content (iron & manganese) levels and a slightly acidic ph, making the water hard and slightly corrosive to copper piping, boilers and water heaters. Analysis of the water may reveal the need for conditioning equipment.

How does the well work?

Mechanically, when a faucet is turned on, water under pressure flows from the pressure tank. The pressure tank or holding tank is the equivalent of a city water tower. It has an air valve provided to re-charge the air pressure within the tank when needed, as the air charge is sometimes diminished through normal use. An instruction tag is usually posted at the air valve (75 psi is a normal rating). As the water in the holding tank is drained out, air within the tank expands until a small gray control box called the pressure switch, senses an average 20 psi differential within the tank. The pressure switch signals the pump to operate bringing more water from the well and re-compressing the air within the holding tank. The pressure switch then signals the pump to turn off. When properly functioning, an attached water pressure gage will read a 20 psi differential as the pump cycles on and off. During the pump cycling, the water pressure should remain functional at three plumbing fixtures during simultaneous use. Any short cycling of the pump or pressure problems may indicate that repairs are needed.

Wells and well equipment can be configured in many different ways, but regardless of the type, all pumps and attached equipment represent mechanical devices subject to unpredictable maintenance repairs or age replacement. Most shallow well jet type pumps have a service life of 5-10 years depending on the chemical content of the water. Most deep well submersible pumps have a service life of 10-12 years depending of the chemical content of the water.

To prevent water problems, I recommend that you **purchase a service contract with a local well contractor**. In addition, I recommend that you monitor all well equipment for signs of corrosion, leaks and pressure or volume problems. Remember that the well pump and controls are mechanical appliances with an unpredictable design life - future breakdowns are inevitable. Notice: If the power is lost, the well equipment will not function. For that reason, a gasoline driven portable generator is advised for use during storm outages. You may wish to consult an electrician

regarding an optional generator installation.

More Information: www.des.state.nh.us/wseb then select "FACT SHEETS"

Recommendation: As the owner of a private well, four categories of annual water quality testing are advised:

- * Radio chemistry
- * Inorganic chemistry
- * Organic chemistry
- * Microbiology

Also, I advise that you sanitize the well annually.

PRIVATE WELL EQUIPMENT & CONDITION:

Observation: **SUBMERSIBLE PUMP EXPLANATION** - the water supply for this home is provided by a private well, and the well water is lifted to the home by a submersible pump.

Analysis: As a general explanation, a submersible pump is a self-priming mechanical device that is physically suspended inside the well near the base of the shaft. Usually, the presence of a submersible pump indicates a well of greater depth as this type of pump has far greater lifting power than other shallow well pumps. The actual depth for which the pump is rated depends on its horsepower, the number of stages and the design of the appliance.

The following is a description of the parts of the system from the well to the house: Inside the well shaft, a vertical pressure line lifts water upward from the pump to below the ground and then makes transition to a horizontal water supply pipe. The water supply pipe running from the well to the house is buried below the frost level to prevent freeze-ups and connects to the vertical pressure line with a pitless adapter below ground.

Above ground is a round pipe or shaft protruding at least 12-24 inches above the ground and a watertight metal cap. The electrical power cable is located within a plastic raceway or conduit along side the well shaft and leading inside the well cap. Beneath the cap, the wires are spliced to allow disconnection should the pump require removal and maintenance.

Both the buried water supply pipe and the power cable run into the basement of the home (or other utility area), where they are connected to the pressure storage tank, pressure switch, power supply and finally the plumbing system inside the house.

The pressure storage tank contains air that is compressed by the water that is forced into it by the pump. The air under pressure forces the water out of the tank and through the pressure pipes to the fixtures when water is demanded. The pressure switch senses the air pressure within the storage tank and instructs the pump to cycle on & off by lifting more water from the well at set low and high limits.

A submersible pump represents current technology for a well system, but you must have realistic expectations regarding its performance and design life. As a mechanical device, its function can be impaired by normal wear & tear, minerals, sediment or other mechanical breakdown. The pump and other components will all need unpredictable future repair or replacement. (The exact service life of the pump is unpredictable but may be between 7-12 years)

Recommendation: As you must rely on the quality of the well water and the function of the pump, you should have the water tested annually and should secure a service contract with a local well equipment company. You should retain the services of a local well installer to service the well, pump, holding tank and pressure switch. Lastly, you should consider installing a generator to power the pump when electricity is lost. **Ask the owner the age of the pump NOW, prior to commitment.**

**TYPE OF
SERVICE/**

SUPPLY PIPING:

Observation: The home has a modern plastic water (polyethylene) service pipe.
Analysis: This is a desirable and corrosion resistant type of water service piping material that is now often used in place of copper.

CONDITION:

FUNCTIONAL.

**WATER SERVICE
PROBLEMS:**

Observation: No visible problems observed where exposed and *readily accessible* at time of inspection.

(DISCLAIMER: The condition of buried or concealed piping is undetermined.)

2. MAIN VALVE:

LOCATION:

The main shut-off valve is located next to the pressure tank in the basement.



**CONDITION /
PROBLEMS:**

* **FUNCTIONAL** where *readily accessible* at time of inspection. NOTICE: Be advised that the main water shut-off valve was not tested during the home inspection and that its true operational condition is undetermined. The valve was not tested as the inspector would be liable for breakage, leakage or loss of water. Further investigation and testing are needed by YOU or by a plumber.

3. INTERIOR PRESSURE PIPING:

TYPE OF DISTRIBUTION PIPING

MATERIAL/S:

Observation: The home has copper pressure piping as observed in the unfinished spaces.

Analysis: Copper is a sign of modern pressure piping. However the copper piping will still need to be monitored for corrosion and future maintenance repairs.

CONDITION:

* **FUNCTIONAL** where exposed and *readily accessible* at time of inspection.

(Note: The condition of piping concealed within walls or finished ceilings is undetermined.)

PRESSURE PIPING PROBLEMS:

Observation: No visible problems or leaks observed with the *readily accessible* pressure piping at time of inspection. Water pressure was functional at the three highest fixtures during simultaneous testing. Prior leaks had just been repaired.

Analysis: While no problems were observed at time of inspection, future leaks can occur in any home. The condition of piping concealed within walls, floors and ceilings is undetermined.

Recommendation: All plumbing systems should be monitored for wear and periodic maintenance repairs.

Are hot water pipes insulated?

Observation: Hot water pipes are not insulated.

Analysis: Heat loss will be excessive.

Recommendation: To reduce standby heat loss, you should install insulation on all exposed hot water pipes. At your option, cold water pipes can be insulated to reduce summer condensation problems.

4. OUTSIDE FAUCETS:

Condition:

Observation: At time of inspection, the outside faucets and water pipes were drained and shut-down for the winter. (Note: Home inspectors are not required to inspect exterior faucets or hose bibs. Faucets are reported as a courtesy only, without consideration.)

Analysis: As the faucets & pipes were shut-down to prevent freeze-ups, their true operational condition is undetermined. Further investigation is needed.

Recommendation: Each outside faucet should be tested when seasonal temperature permits.

(Note: Consider optional retirement of the old type faucets and upgrading to new antifreeze, self-draining faucets with check valves. Such new valves will eliminate the need for winter maintenance while better protecting the public water supply from contamination.)

5. DRAIN, WASTE & VENT PIPING (DWV):

Types of DWV materials visible:

Plastic. (Note: Plastic piping is now the most common material used in DWV piping.

For your knowledge, plastic waste pipes are a little more noisy but are much more

corrosion resistant.)

Condition:

*** FUNCTIONAL.**

Observation: No waste piping leaks observed as fixtures drained.

Analysis: While *readily accessible* DWV piping appears functional at time of inspection, the condition of waste piping concealed by floors, walls and ceilings is undetermined.

Recommendation: All plumbing systems must be monitored for maintenance repairs and parts replacement.

**Drain, Waste or
Vent piping
problems:**

Observation: No visible drain, waste or vent piping problems or support problems were observed where ***readily accessible*** at time of inspection.

Analysis: Be advised that future leaks can occur in any piping system.

Recommendation: Plumbing systems should be monitored for needed maintenance repairs.

6. HOT WATER SYSTEMS:

FUEL & TYPE OF EQUIPMENT:

Observation: The hot water is produced by a **COMPANION** storage tank attached to the heating boiler. (This is a modern state-of-the-art type of hot water production.)



APPROXIMATE CAPACITY:

40 gallons capacity.

Approximate age:

Observation: The age of the water heater is unknown.

Analysis: Be advised that a hot water heater has a relatively short design life. Knowing the age would be helpful for future budgeting as water heaters have a short 5-10 year design life.

Recommendation: Further research advised. Ask the owner how old the water heater is.

CONDITION / PROBLEMS:

* **FUNCTIONAL.** Hot water was available at each fixture serviced. The required automatic safety devices (shut-off valve, temperature/pressure relief valve and vacuum relief valve) are present and appear visually **FUNCTIONAL** as designed to protect the hot water systems & components from excessively high or low pressures & temperatures, excessive electrical current, loss of water, loss of ignition, fuel leaks, fire, freezing, or other unsafe conditions. (Controls are NOT tested.)

**EXTERIOR OF
THE CHIMNEY,
THIMBLES AND
VENTS:**

Not applicable, this type of water heating appliance does not require venting.

7. SECONDARY FIXTURES:

Type & condition: Observation: No secondary fixtures present. Toilet, tub / shower & sink fixtures will be evaluated under kitchen and bathroom headings.

8. LAUNDRY FACILITIES:

TYPES: Washer hook-ups are present.
Hook-ups are present for an electric dryer.

**CONDITION /
PROBLEMS:**

**** Observation:** Laundry facilities are **FUNCTIONAL** with exceptions noted:

Observation: While previously allowed, the receptacle provided for the electric dryer is an older style with three holes for a 3 prong plug that does not provide modern grounding.

Analysis: Be advised that the dryer circuits in new homes must now be wired with a four wire conductor cable feeding a four hole outlet to mate with a four prong dryer plug for added grounding safety. The receptacle must have four holes and the dryer cord (pigtail) must have four prongs to mate properly.

Recommendation: For safety, I advise that you hire an electrician to upgrade the dryer circuit wire, the dryer outlet and the appliance cord for modern grounding safety.

Web Resource: <http://www.homewiringandmore.com/switchoutlet/dryer/dryer.html>

Observation: The washing machine is installed level with or above living space and a protective safe pan is missing beneath the appliance.

Analysis: Without a safe pan under the washing machine, there is a potential for interior water damage if leakage occurs.

Recommendation: The installation of a safe pan with a drain is advised. Consult a plumber.

Web Resource: <http://www.floodsaver.com/Resources/BROCHURE.pdf>

9. SIGNS OF VISIBLE LEAKS: (DISCLAIMER: The condition of concealed piping is undetermined.)

CONDITIONS: Observation: No active pressure piping, waste piping or gas piping leaks were visible where *readily accessible* at time of inspection.
Analysis: All piping systems are subject to varying rates of age deterioration. The condition of concealed piping is undetermined.
Recommendation: You should monitor each piping system for future maintenance repairs.

ANY SIGNS OF SUBSTANDARD WORKMANSHIP OR CROSS CONNECTION?

Observation: No signs of amateur workmanship or cross connections were visible where *readily accessible* at time of inspection.

10. WATER FLOW & DRAINAGE:

WATER FLOW: * Observation: The water flow was **FUNCTIONAL** at all fixtures and during simultaneous testing of the three highest fixtures.
Water pressure varies widely. On a well system, the normal pressure is 20 to 60 psi, with a delta pressure of approximately 20 psi. The delta is determined by the pressure difference between when the pump comes on and when it is switched off again. City water pressure is normally 40 to 60 psi.

DRAINAGE: * **FUNCTIONAL.** Observation: The drainage was functional at time of inspection at all accessible plumbing fixtures. (Note: The evaluation of appliance drainage is beyond the scope of this limited home inspection.)

11. WERE ALL FIXTURES AND FAUCETS OPERATED?

YES. All *readily accessible* fixtures and faucets were operated by the inspector.

12. OVER-ALL CONDITION / RECOMMENDATIONS:

Plumbing system summary:

In my opinion, where *readily accessible*, the plumbing system appears to be in an over-all **FUNCTIONAL** condition. No critical repairs were observed at time of inspection. Nevertheless, all home owners must monitor their plumbing system for needed maintenance repairs as local water quality can be corrosive to copper piping, fittings, valves, boilers & hot water heaters.

SPRINKLER SYSTEM DISCLAIMER: The home has a commercial grade sprinkler system for fire prevention installed in the home. This is not inspected and is excluded in this report. I would recommend you take the number off the control box and call the installation company to come inspect and test the system to make sure it is operational. There are some dry water stains that are located at both sprinkler heads and appear to run along sprinkler lines. Further investigation is needed.

Observation: The home has a central vacuum system. I did not see an actual central vac unit in the basement.

Analysis: **DISCLAIMER** - while I consider this system to be a positive feature in

the home, its evaluation is beyond the scope of this limited visual inspection and is expressly **EXCLUDED** from this report.

Recommendation: I advise that you ask the owner to demonstrate the operation and maintenance of the system prior to commitment and / or that you request a written affidavit attesting that the system is operational.

STRUCTURE INSPECTION

SCOPE OF THE STRUCTURAL INSPECTION: 266CMR: BOARD OF REGISTRATION OF HOME INSPECTORS

266 CMR 6.00: STANDARDS OF PRACTICE:

6.04 System: Structural Components:

A. Basement:

- (1) The **Home Inspector** shall **Observe** the following exposed **Readily Accessible** and **Observable** basement structural components including:
 - a. The exposed portions of the foundation.
 - b. The exposed portions of the floor.
 - c. The exposed portions of the superstructure system (girders, sills, floor joists, headers, and sub-floor).
 - d. The exposed portions of the columns and posts.
- (2) The **Home Inspector** shall **Describe**:
 - a. The type of exposed basement foundation materials (brick, concrete block, concrete, stone, wood, other).
 - b. The type of exposed basement floor system (concrete, earth, wood, other).
 - c. The type of exposed basement superstructure system (girder(s), sills, floor joists, and sub-floor).
 - d. The type of exposed basement columns and posts (brick, concrete block, concrete, steel, wood, other).
 - e. The **Home Inspector** shall document obstructions that prevented him/her from inspecting the items noted above in the **Report**.
- (3) The **Home Inspector** shall **Report On** the condition and recommend repair (if needed) on the following exposed **Readily Accessible** and **Observable** structural components including:
 - a. The foundation.
 - b. The floor system.
 - c. The superstructure system.
 - d. The columns and posts.
- (4) The **Home Inspector** shall:
 - (b) Probe exposed **Readily Accessible** and **Observable** structural components where deterioration is suspected. However, probing is **NOT** required when probing would unduly damage any finished surface.
 - (b) Report signs of previous water penetration into the basement including the presence of sump pumps, sump pits and dehumidifiers. (The **Home Inspector** is prohibited from activating the sump pump(s) and or dehumidifier(s); it shall be the **Seller/Sellers Representative** responsibility to demonstrate that they are functional.)
- (5) The **Home Inspector** shall not be required to:
 - a. Collect engineering data on the size, span, spacing, species, section modulus, slenderness ratio and or modulus of elasticity of the structural members.
 - b. Inspect for the presence or absence of wood destroying insects such as wood damaging organisms, rodents, or insects unless specifically contracted to in writing.
 - c. Provide access to the items being inspected (Responsibility of **Client/Seller/Sellers Representative**).

B: Crawl Space:

The **Home Inspector** shall enter **Readily Accessible** under floor crawl spaces only after the **Seller/Sellers Representative** and/or the **Client** provide **Safe Access** as determined by the **Home Inspector**. The **Home**

Inspector is not required to enter any area, including the crawl space if access is obstructed, when entry could damage the property, or when **Dangerous or Adverse Situations** are suspected and documented in the **Report** by the **Home Inspector**.

(1) The **Home Inspector** shall document the methods used to observe under floor crawl spaces in the **Report**.

(2) The **Home Inspector** shall **Observe** the following exposed **Readily Accessible** and **Observable** crawl space and roof framing structural components including:

- a. The exposed portions of the foundation.
- b. The exposed portions of the floor.
- c. The exposed portions of the superstructure system (girders, sills, floor joists, headers, and sub-floor).
- d. The exposed portions of the columns and posts.

(3) The **Home Inspectors** shall **Report On** obstructions, unsafe access, and **Dangerous or Adverse Situations** that prevented him/her from inspecting the items noted above.

(4) The **Home Inspector** shall **Describe** (if different from the description of the basement supports) and report the condition and recommend repair (if needed) on the following exposed **Readily Accessible** and **Observable** structural components of the crawl space including:

- a. The foundation: (Brick, Concrete, Concrete Block, Wood, Other).
- b. The floor system: (Brick, Concrete, Earth, Wood, Other).
- c. The superstructure floor system: (Girders, Sills, Floor Joists, Headers, Other).
- d. The columns and posts: (Brick, Concrete, Concrete Block, Steel (Adjustable or Fixed), Wood, Other)

(5) The **Home Inspector** shall not be required to:

- a. Collect engineering data on the size, span, spacing, species, section modulus, slenderness ratio and or modulus of elasticity of the structural members (**Engineering Services**).
- b. Inspect for insect infestation, rodents and or vermin (Independent Pest Control/Extermination Service).
- c. Provide **Safe Access** to the items being inspected (Responsibility of **Client/Seller/Sellers Representative**).

(6) The **Home Inspector** shall:

- (a) Probe exposed **Readily Accessible** and **Observable** structural components where deterioration is suspected: However, probing is **NOT** required when probing would unduly damage any finished surface.
- (b) Report signs of previous water penetration into the crawl space including the presence of sump pumps and dehumidifiers. (The **Home Inspector** is prohibited from activating the sump pump(s) and or dehumidifier(s); it shall be the **Seller/Sellers Representative** responsibility to demonstrate that they are functional.)

C: Attic Space:

1. The **Home Inspector** shall enter attic spaces only after the **Seller/Sellers Representative** and or **Client** provide **Safe Access** as determined by the **Home Inspector**. The **Home Inspector** is not required to enter any area, if it is not **Readily Accessible**, if access is obstructed, when entry could damage the property, or when **Dangerous or Adverse Situations** are suspected and reported by the **Home Inspector**.

2. The **Home Inspector** shall observe the following exposed **Readily Accessible** and **Observable** roof framing structural components including:

- a. The exposed portions of the roof framing, including the roof sheathing.

3. The **Home Inspector** shall:

- a. Probe exposed **Readily Accessible** and **Observable** structural components where deterioration is suspected: However, probing is **NOT** required when probing would unduly damage any finished surface.

4. The **Home Inspector** shall describe the roof framing system and the roof sheathing:

- a. Framing: Rafters, Collar Ties, Tie Beams, Trusses, Other
- b. Roof Sheathing: Boards, Oriented Strand Board, Plywood, Other.

5. The **Home Inspector** shall **Report On**:

- a. The methods used to observe attics (through a hatch or while standing in the attic space).
- b. The presents and or lack of flooring, obstructions, unsafe access, and dangerous or adverse situations that prevented him/her from inspecting the items noted above.
- c. The condition and recommend repair (if needed) on the following exposed **Readily Accessible** and **Observable** structural components of the roof framing:

The roof framing (Rafters, Collar Ties, Rafter Ties, Trusses, Beams, Other)
Sheathing Materials (Boards, Oriented Strand Board, Plywood, Other).

- d. Evidence of prior water penetration.
- e. The presence of a light.

6. The **Home Inspector** shall **not** be required to:

- a. Collect engineering data on the size, span, spacing, species, section modulus, slenderness ratio and or modulus of elasticity of the structural members (**Engineering Service**).
- b. Inspect for insect infestation, rodents and or vermin (Independent Pest Control/Extermination Service).
- c. Walk on the exposed and or insulation covered framing members.

DISCLAIMERS:

A. **This report does NOT GUARANTEE A DRY BASEMENT. (see General Comment #A below)**

B. The inspector is not required to enter under-floor crawl spaces or attics when entry could damage the property, or when dangerous or adverse conditions are suspected. Be advised that areas not entered may contain hidden defects.

C. The **Client** understands that the inspection does not include invasive inspection or exploratory demolition. Structural components or mechanical systems concealed by finished surfaces or stored goods are inaccessible for visual inspection and are therefore **EXCLUDED** from this Report. Be advised that hidden problems may exist.

D. The **Client** understands that the inspection & final report do not provide an engineering service or architectural service as assessing structural integrity of a building is beyond the scope of a limited visual inspection. A certified engineer is recommended when there are structural concerns about the building. No engineering calculations are performed during this inspection.

E. **The Client understands that the home inspection & Report do NOT INCLUDE A TERMITE OR WOOD BORING INFESTATION REPORT.** No inspection is made by this **COMPANY** to detect past or present insect or rodent activity. Wood boring insects that can appear anytime, even if there were no signs of infestation or damage at time of inspection. This **Company** is NOT a licensed pest control company or exterminator. The inspection for rot is done by line of sight and is done in conjunction with the responsibility to examine structural condition. **I ADVISE THAT EVERY HOME BE INSPECTED BY A LICENSED PEST CONTROL COMPANY NOW, PRIOR TO THE CLOSE OF ESCROW to protect your right to negotiate for repairs or chemical treatment if needed. I emphasize that your only assurance of arresting or preventing infestation, whether concealed or discovered, is to obtain treatment and a warranty from a state licensed pest control company.**

GENERAL COMMENTS: A. **A dry basement cannot be guaranteed because a basement is a hole in the ground that is vulnerable to infiltration when exposed to prolonged rain, ground saturation, changes in seasonal hydrostatic ground water pressure and fluctuation in the water table. If you want a guaranty of a dry basement, then you should hire a basement waterproofing contractor to install a perimeter French drain system along the perimeter of the basement walls and connected to a sump pump with battery back-up.** Ideally, the site should have hard surfaces and soils that slope away from the residence, functional gutters & downspouts and a difference in elevation between the exterior grade and the interior floors. If the site does not live up to this ideal, then the Company disavows all responsibility for water penetration problems. Be advised that evidence of prior dampness is often concealed by the owner's stored goods, painted surfaces or finished surfaces below grade level. You should ask the owner about honest disclosure of any prior wet basement problems prior to purchase. Most basement dampness can be reduced by directing all surface water and roof run-off away from the foundation. B. **You should request in writing that the basement, garage and attic be emptied and broom swept clean prior to purchase. Then you should return to re-inspect for concealed defects.** C. Owners are required to maintain structural elements in good repair and fit for intended use. D. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold. E. The condition of hidden wall substrate is undetermined as it is not *readily accessible* for inspection.

1. DESCRIPTION OF BUILDING:

STYLE: Wood framed colonial reproduction.

**TYPE OF SPACE
BENEATH
BUILDING:**

Observation: The home has a full basement that is approximately 70% finished.
Analysis: While a finished basement may be a positive feature, it prevents a home inspector from gaining access to inspect those parts of the structure and mechanical systems that are covered by finished surfaces - hidden problems may exist. (Note: Be

advised that new foundations enclosing habitable space below grade level are required to have **waterproofing** to prevent potential water infiltration problems. The original dampproofing of the foundation alone is not adequate. Be further advised that average basement windows are not sized properly for safe emergency egress.

Recommendation: You might ask the owner if and there are any past wet basement problems and if the foundation was treated with waterproofing or if a drainage system is present to protect the basement.

2. OSTRUCTIONS THAT RESTRICTED INSPECTION:

TYPE OF OBSTACLE:

Observation: The basement is partly finished. **STRUCTURAL ELEMENTS WERE VIEWED IN THE UNFINISHED AREAS ONLY.**

Analysis: While the inspector used an earnest effort to alert you about visible or suspected problems, please understand that the he does NOT have X-ray eyes. The condition of structural elements & mechanical systems hidden by finished surfaces is undetermined. **HIDDEN PROBLEMS MAY STILL EXIST that are not documented in this report.**

Recommendation: Ask the owners if they have any knowledge of conditions beneath the finished surfaces and if there is a drainage system in place to protect the finished areas below grade. If through your negotiations access becomes possible, components become *readily accessible*, repairs are done or systems are restored, you may desire to schedule a "return visit" inspection with this office, at an additional charge, prior to commitment.

3. SIGNS OF WATER PENETRATION:

SIGNS OF BASEMENT / CRAWL SPACE WATER PENETRATION:



Observation: Suspected mold was visible in the home.

Analysis: **DISCLAIMER: THE INSPECTION AND REPORTING ON MOLD IS EXCLUDED FROM THE INSPECTION AND REPORT PER OUR AGREED CONTRACT. Mold detection and investigation are beyond the scope of this limited visual home inspection and report. Any reference to mold is done so as a courtesy, without consideration, so that you can consult other experts.**

WARNING: Excessive mold can be a health concern and an irritant to those with respiratory problems. Be advised that many homes have excessive moisture and poor ventilation issues which might lead to mold, and that the extent of mold beyond

visible surfaces is undetermined. There is a possibility of concealed problems. Therefore, further investigation is needed as mold abatement can quickly involve significant expense.

Recommendation: I advise that you hire a microbiology laboratory **NOW** to perform a comprehensive investigation including collection and analysis of indoor air and surface mold samples, full report and discussion of qualitative and quantitative results, and suggestions concerning remediation before close of escrow. Be advised that testing may confirm a need to hire a professional environmental company to perform remediation at **significant expense**.

Mold Resources: <http://www.epa.gov/iaq/pubs/moldresources.html>

<http://www.epa.gov/iaq/molds/moldguide.html>

<http://www.epa.gov/mold/>

Observation: Water stains are visible in the basement at the locations identified below:

- ** Joint of the basement floor and foundation walls.
- ** At the chimney base.
- ** Near the water heater.

Analysis: The stains indicate previous moisture in the basement at the indicated locations. The past frequency or amount of water in the basement is undetermined. Be advised that all basements are vulnerable to seasonal wet basement problems depending on variables such as: lot drainage, drainage along the foundation, roof drainage, soil conditions, water table, type of foundation and weather conditions. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

Recommendation: You should ask the owner to disclose any known past history of wet basement problems as only the owner has seasonal experience in the home. ***If you want a guaranty of a dry basement, then you should hire a basement waterproofing contractor to install a perimeter French drain system along the perimeter of the basement walls and connected to a sump pump with battery back-up. Such systems involve significant expense.***

Web Resource: <http://www.thisoldhouse.com/toh/print/0,17071,591677,00.html>

**FLOOR DRAIN
OR SUMP
CONDITION:**

Observation: There is a floor drain present in the basement floor.

Analysis: The true function, seasonal need and discharge point of the drain are undetermined.

Recommendation:
Ask the owner where the drain discharges and how often it is needed. (Cleaning & testing for drainage is advised.)



**SUMP PUMP &
CONDITION:**

Observation: No sump pump in the *readily accessible* parts of the basement at time of inspection. But the home does have a sewage ejection pump. This collects the sewage, grinds it up and sends it out to the septic system.



4. EXPOSED FOUNDATION SYSTEM:

**TYPE OF
EXPOSED
FOUNDATION
MATERIALS:**

Poured concrete. (1920's to present)

**TYPE OF
EXPOSED
BASEMENT**

FLOOR SYSTEM: **CONCRETE** where exposed. (Note: The inspector is not required to move storage or floor coverings to examine the basement floor. There is a risk of concealed damage, shrinkage cracks, cold joint separations or hidden water stains behind the storage or finished surfaces). Non-critical small random cracks are present in the basement floor.



Observation: Some of the basement floor system is concealed by finished floor coverings.

Analysis: As the basement floor system is not *readily accessible*, true conditions are undetermined. Be advised that removal of floor coverings may reveal problems that are not documented in this report.

Recommendation: If you have concerns regarding hidden problems, then you should ask if the floor covering can be removed for further investigation.

**CONDITION OF
EXPOSED
FOUNDATION:
FOUNDATION
PROBLEMS:**

**** FUNCTIONAL with EXCEPTIONS: (See visible problems below)**

Observation: No visible critical foundation or basement floor problems were observed where *exposed and readily accessible* at time of inspection. (Note: Because of storage, not all parts of the foundation were inspected. The foundation and basement floor should be re-examined for hidden defects when the basement is empty.)

5. EXPOSED CRAWL SPACE(S):

ACCESSIBILITY: Observation: Not applicable. No crawl spaces were found with this building.

6. EXPOSED COLUMNS AND POSTS:

TYPES: **Steel** (fixed) columns are present.

**CONDITION OF
EXPOSED
COLUMNS:**

*** FUNCTIONAL** where *readily accessible* at time of inspection.

COLUMN

PROBLEMS:

Observation: No visible column problems observed where *readily accessible* at time of inspection.

7. EXPOSED BASEMENT SUPERSTRUCTURE SYSTEM:

TYPE OF

EXPOSED

FRAMING:

Observation: Modern platform & box sill floor frame construction present.

DISCLAIMER: NO ENGINEERING OR LOAD CALCULATIONS ARE EXPRESSED OR IMPLIED BY THE IDENTIFICATION OF THE STRUCTURE OR MATERIALS.

**CONDITION OF
EXPOSED SILLS,
GIRDERS,
JOISTS,
SUBFLOOR:**

**** FUNCTIONAL with EXCEPTIONS as NOTED:**

Observation: Areas of ceiling covering materials at the basement level prevented complete viewing, probing and sounding of the floor frame.

Analysis: Complete evaluation undetermined due to lack of access. Hidden problems could exist.

Recommendation: If through your negotiations access becomes possible, components become *readily accessible*, repairs are done or systems are restored, you may desire to schedule a "return visit" inspection with this office, at an additional charge, prior to commitment.

VISIBLE

PROBLEMS

OBSERVED:

Observation: Where *readily accessible*, the floor frame(s) appear **FUNCTIONAL** and did not exhibit any defects of a critical nature at time of inspection.

8. EXPOSED WALL FRAMES:

TYPE:

Wood.

**CONDITION
WHERE
EXPOSED:**

* **FUNCTIONAL** or visually plumb where *readily accessible*. The wood framed walls did not exhibit any excessive bowing, sagging or other critical defects as viewed from living spaces & unfinished areas. (Note: The actual wall framing members are covered by siding, drywall or plaster. The condition of the concealed framing and substrate is undetermined as such components are not *readily accessible* for direct visual evaluation.)



Observation: In the basement there is a finished room with paneling installed that is poorly done.

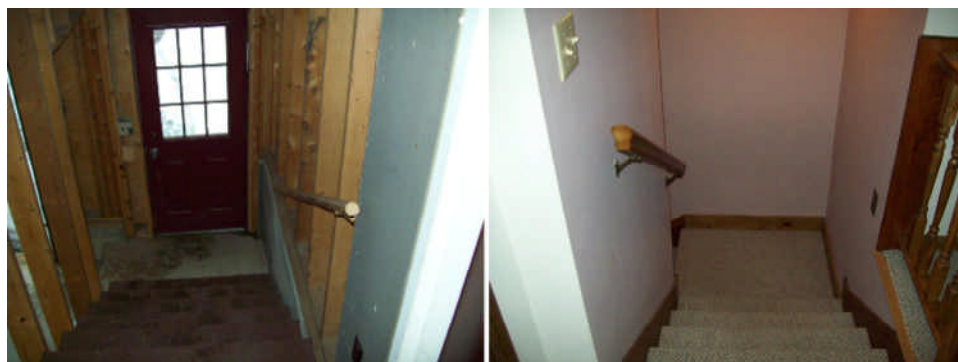
Analysis: As we could see the wall is very wavy. It is possible moisture absorbed into the paneling to cause this when they had the leaks in the plumbing. Or it could be just poorly installed from the beginning.

Recommendation: I would remove the paneling for further inspection behind then make any corrections and reinstall new paneling.

9. EXPOSED STAIRCASES / BALCONIES / TRIM:

**CONDITION:
STAIRCASE
PROBLEMS:**

**** FUNCTIONAL with EXCEPTIONS as noted:**



Observation: The staircase to the basement and second floor lacks returns at each end of the handrail.

Analysis: **** **UNSAFE**. A return is a short piece of handrail intended to prevent someone from hooking a handbag or pocket on the end of the railing and tripping or falling and suffering a personal injury. While the old staircase handrail may be pre-

existing, **URGENT** safety upgrading is advised.

Recommendation: Hire a finish carpenter to correct the handrail in accordance with the requirements of the building code.

Web Resource Video: <http://www.thisoldhouse.com/toh/video/stairsfloors/article/0,26206,1187093,00.html>

10. EXPOSED ROOF STRUCTURE AND CEILING FRAMES:

Description of roof structure and roof sheathing:

Where *readily accessible*, the roof frame has wood rafters and wood boards as decking.

CONDITION - PROBLEMS:

* **FUNCTIONAL.** No visible problems observed where *readily accessible* and clear of storage only at time of inspection. (Note: If there was storage in the attic at time of inspection, then YOU should examine the roof structure again when the owner has emptied the attic.)

11. Did the inspector probe exposed and readily accessible structural components where deterioration is suspected?

YES - Suspected areas of deterioration were probed where *readily accessible* at time of inspection.

12. Did the inspector enter readily accessible under floor crawl spaces and attic spaces?

YES - the inspector did enter *readily accessible* attic spaces.

13. OVER-ALL CONDITION / RECOMMENDATIONS:

Structural summary:

Analysis: Repairs are necessary. Note: There is a potential for concealed damage.
Recommendation: Prior to commitment, you should consult a licensed expert relative to the above listed area of concern, for reappraisal and cost estimates.

KITCHEN INSPECTION

SCOPE OF THE KITCHEN INSPECTION: The inspector shall observe: countertops and a representative number of installed cabinets, plumbing fixtures, lights and outlets, walls, floor and ceiling.

266 CMR 6.00 STANDARDS OF PRACTICE, 6.09 System (4) c: General Interior Conditions: Home inspectors are **NOT** required to inspect household appliances. Notice: Reporting on appliances is done as a courtesy only and without consideration.

DISCLAIMERS: The following items are **EXCLUDED** from this report: A. Portable appliances. B. Appliance timers & thermostats. C. Water filtration devices, ice makers and instant hot water makers. D. Clothes washer & dryer operation. E. Areas concealed by cabinet storage or appliances. F. The functional evaluation of fixtures or appliances that are "shut-down" is undetermined and **EXCLUDED** from this report. G. MA home inspectors are NOT required to report on "venting equipment which is integral with household appliances." H. No appliance warranty is expressed or implied.

GENERAL COMMENTS: A. Kitchen appliances are subject to unpredictable life expectancy and may require repair or replacement although functional at the time of inspection. B. Appliances cannot be moved or run through "full cycles" and

timers cannot be evaluated during a limited visual home inspection. **C. You should question the owner regarding the age and maintenance of each appliance prior to purchase. (Average appliance lifespans: refrigerator 15-20 yrs., range 10-14 yrs., dishwasher 5-7 yrs., garbage disposer 5-7 yrs.)** D. New homes must now have ground-fault-circuit-interrupter (GFCI) electrical shock protection at all countertop outlets. Updating of the kitchen outlets is advised if GFCI protection is not present. E. Be advised that while functional, the plumbing to older kitchen fixtures or appliances may not conform with modern requirements. During kitchen remodeling, a plumber may be needed to update the fixture supply lines, shut-off valves, and DWV piping. F. Be advised that "a kitchen must contain a kitchen sink, space and proper facilities for the installation of a refrigerator and, unless otherwise stated in the lease, a stove and oven in good repair". G. If any fixtures or appliances were shut-down or not operational at time of inspection, further research is advised. H. **You should examine the interior of ALL cabinets and closets during your pre-passing walk through as you may find defects that were hidden by storage at time of inspection.** I. Self cleaning and continuous cleaning operations, timing devices, clocks, thermostat accuracy and lights are not checked during this inspection. J. The ability of the dishwasher to wash dishes is not tested. The inspector does not test any device requiring the use of special keys, codes or combinations. The inspector does not operate any programmable feature of devices. K. You should consult with the owner **NOW** on the location and operation of any kitchen & bathroom exhaust lines and clean and inspect such lines NOW and annually.

1. KITCHEN SINK:

CONDITION:

* **FUNCTIONAL.** The sink did not exhibit any problems where *readily accessible*. Both water pressure & drainage were functional at time of inspection. (Note: Stored items within the sink base cabinet may have restricted complete evaluation of the sink base cabinet itself, piping and the wall. During the pre-passing walk through, all sink base cabinets should be re-inspected for defects when emptied.)

2. GARBAGE DISPOSER:

CONDITION:

Observation: The home has a garbage disposer and a private waste disposal system.

Analysis: Be advised that a garbage disposer is not recommended with a private waste disposal system as the future function of the waste disposal system may be diminished, impaired or damaged.

Recommendation: I advise that you have the garbage disposer removed.



3. DISHWASHER:

CONDITION:

Was not tested because you said you were going to replace the older unit.

4. RANGE:**CONDITION:****** FUNCTIONAL with EXCEPTIONS as noted:**Observation: The range appears to be an old appliance.Analysis: After an average of seven years, appliances tend to start breaking down. In my opinion, while the range may be operational, it is nearing end of design life or is **fully depreciated**.Recommendation: Budget for a new range.**5. HOOD OR EXHAUST FAN:****CONDITION:**Observation: The range hood or fan made excessive noise.Analysis: The fan most likely is not mounted securely.Recommendation: You should disassemble the fan, clean it, reassemble and test it again for noise.**6. CABINETS:****CONDITION:****** FUNCTIONAL with EXCEPTIONS noted:**Observation: The screws that secure the upper cabinets to the wall frame lack washers or round washer button heads.Analysis: **** **UNSAFE**, without washers or round washer button heads, the screws could pull through the thin cabinet backing under the weight of storage in the cabinets. URGENT but simple safety repair is needed. Each cabinet should have a minimum of four 3 1/2-inch round button head screws or cabinet mounting screws secured directly to the wall stud frame. Such screws have an oversize washer formed as part of the head itself, providing larger bearing and resistance to pull-out.Recommendation: Install button head screws or a washer beneath the head of each screw **NOW** for safety.Observation: Damaged cabinets are visible.Analysis: Repairs are needed.Recommendation: Ask a carpenter or cabinet supplier to re-evaluate the damaged cabinet to see if repair is feasible or if replacement is needed and cost estimates.

7. COUNTER TOPS:

CONDITION: * **FUNCTIONAL.** The counter tops appear visually FUNCTIONAL where *readily accessible* at time of inspection. (Note: Small appliances, clutter and condiments may have restricted access for inspection.)

8. ELECTRICAL OUTLETS & LIGHTS:

CONDITION: Observation: Not all outlets above the kitchen countertops have modern GFCI shock protection.
Analysis: All outlets above every countertop in new kitchens are now required to have GFCI shock protection.
Recommendation: If pre-existing, no repairs are required, but optional GFCI upgrading is advised for protection against electrical shock.

9. FLOOR, WALLS, CEILING:

CONDITION: ** **FUNCTIONAL** with **EXCEPTIONS** as **noted:**

Observation:
Inspection of the kitchen floor revealed the following problems:

Observation: Cracked ceramic tiles or loose grout are visible at the kitchen floor.

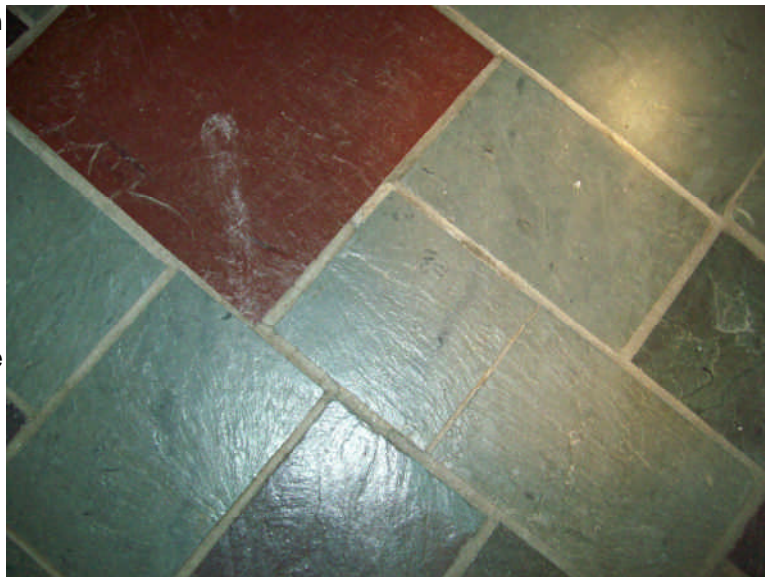
Analysis: ****

UNSAFE. Ceramic floor tiles do not tolerate floor frame movement and crack accordingly.

WARNING - sharp edges can cause personal injury.

Recommendation: Ask the owner if any extra tiles are in storage. Hire a tile contractor to perform repairs or replacement as required. Note: You may be wise to reinforce the floor joists to reduce movement and future cracked tiles.

Web Resource: <http://www.floorstransformed.com/tilecare.html>



10. OVER-ALL CONDITION / RECOMMENDATIONS:

Kitchen summary: Repairs of the above listed items are needed to restore function.

BATHROOMS INSPECTION

SCOPE OF THE BATHROOM INSPECTION: The inspector shall observe: Plumbing fixtures, means of ventilation, functional water pressure & drainage, and *readily accessible* floor, walls, ceiling lights & outlets and cabinets.

DISCLAIMERS: A. The condition of hidden supply, drain, waste and vent piping hidden within wall cavities is undetermined as they are not *readily accessible* for visual inspection. B. If the water service or service to any fixture was *shut-down* at time of inspection, then the true function of that fixture is undetermined and is **EXCLUDED** from this *report*. C. No warranty against leakage is offered regarding the condition of a **shower stall pan** as it is not *readily accessible* for inspection. D. We do NOT test sink and tub fixture overflows as they can sometimes be defective and can cause interior water damage. Overflows are **EXCLUDED** from this *report*. and require further investigation by you or a plumber.

GENERAL COMMENTS: A. A bathroom is required to have either a functional window or exterior vented exhaust fan as a means of ventilation. Fans must be vented outside and NOT into the attic. Be advised that improper bathroom ventilation is often a cause of moisture deficiencies in the home. B. "Bathroom facilities must include a toilet with a toilet seat and a bathtub or shower. These must be situated in a room which allows a person privacy, which is fitted with a door capable of being closed and which is not used for the purpose of living, eating, sleeping or cooking. In addition a washbasin other than the kitchen sink must be located either in the room containing the toilet or near the entrance to that room." C. **Be sure to examine the interior of all cabinets and closets during your pre-passing walk through as you may find defects that were hidden by storage at time of inspection. Call my office for free consultation if additional problems are discovered.**

1. BATHROOMS:

Number of
bathrooms: Three and 1/2.

2. WATER PRESSURE & DRAINAGE CONDITIONS:

Water flow &
drainage: * **FUNCTIONAL.** Observation: At time of inspection, the water flow & drainage were FUNCTIONAL at fixtures during simultaneous fixture testing.

3. BATHROOM HEAT SOURCE:

Condition of
HEAT source: * **FUNCTIONAL** forced hot water baseboard heat or hot water radiator.

4. BATHROOM VENTILATION:

Ventilation
methods: * **FUNCTIONAL window & fan.** (Note: Investigate the fan discharge point; it should discharge outside and not into the attic.)

5. TOILETS:

Condition of
toilets: ** **FUNCTIONAL with EXCEPTIONS noted:**
Observation: The water was shut-off at the tank in the master bath at time of inspection.
Analysis: The operational condition of the toilet is undetermined, further investigation is needed.
Recommendation: Prior to commitment, you should ask that the water service be restored to all fixtures and return to test for functional pressure and drainage or undetermined leaks.
Web Resource: <http://www.toiletology.com/index.shtml>

6. SINKS:

Condition sinks-faucets:

* **FUNCTIONAL** bathroom sinks, faucets, pressure, drainage & hot water where *readily accessible*. (Note: The inspector could not fully examine the interior of the sink base cabinet(s) do to stored goods. All sink base cabinet interiors should be re-examined during the pre-passing walk through inspection, after the owner has moved.)

7. TUBS & SHOWERS:

Condition tubs-showers:

* **FUNCTIONAL**. No visible problems observed where *readily accessible*. The tub / shower fixtures were **FUNCTIONAL** with adequate water pressure & drainage at time of inspection.

Observation: The caulking at the tub / wall / floor intersections is worn or eroded.

Analysis: Gaps could allow leakage & interior water damage. Repair is needed.

Recommendation: Caulk tub / floor joint, tub / wall joint and faucet spout & handle as general maintenance.

8. CABINETS & CLOSETS:

Condition cabinets-closets:

* **FUNCTIONAL**. No visible problems observed where *readily accessible*. (Note: Sink base cabinets & closets containing stored goods were not fully accessible for inspection - hidden problems could exist. You would be wise to re-examine all such area during the pre-passing walk-through inspection after the owner has moved out.)

9. LIGHTS & ELECTRICAL OUTLETS:

Condition lights-outlets:

* **FUNCTIONAL** electrical outlets with GFCI shock protection & functional light fixtures.

10. WALLS, FLOOR, CEILING:

Condition walls-floors-ceiling:

** **FUNCTIONAL with exceptions:**

Observation: The grout between ceramic tiles at the bathroom floor &/or wall has eroded.

Analysis: Grout erosion represents normal wear & tear; maintenance repair is needed. Be advised that further grout erosion may allow water to loosen tiles or cause more serious moisture damage to floors, walls or ceilings.

Recommendation: Re-grout the ceramic tile where needed and apply a silicone liquid sealant.

Web Resource: <http://www.floorstransformed.com/tilecare.html>

Observation: The caulking around the bathtub / shower walls has gaps or areas of erosion.

Analysis: Joints of this nature require annual inspection and maintenance when needed. Be advised that a failure to waterproof such joints may allow water infiltration, decay or ceiling problems below.

Recommendation: Restore caulking where needed.

11. OVER-ALL CONDITION / RECOMMENDATIONS:**Bathroom
summary:**

Observation: Inspection of the bathroom(s) revealed problems which need repairs to restore proper function (see notes above).

LIVING SPACES, FIREPLACE, WOODSTOVE.**SCOPE OF THE INTERIORS SYSTEM INSPECTION: 266CMR: BOARD OF REGISTRATION OF HOME INSPECTORS****266 CMR 6.00: STANDARDS OF PRACTICE:****6.09 System: General Interior Conditions****(1) The *Home Inspector* shall *Observe*:**

- (a) Walls, ceiling, and floors.
- (b) Steps, stairways, balconies, and hand and guard railings.
- (c) Counter tops and a **Representative Number** of cabinets.
- (d) A **Representative Number** of doors and windows.
- (e) Separation walls, ceilings, and doors between a dwelling unit and an attached garage or another dwelling unit.

(2) The *Home Inspector* shall *Describe*:

- a. The condition and type of exposed floor material (brick, carpet, ceramic tile, linoleum, slate, vinyl tile, wood, other).
- b. The condition and type of exposed wall materials (brick, ceramic tile, fiberglass, laminates, paneled, plaster, gypsum wallboard, plastic tile, other).
- c. The condition and type of exposed ceiling materials (acoustical tile, gypsum wallboard, plaster, wood, other).

(3) The *Home Inspector* shall *Report On* and recommend repair (if need):

- a. The floor.
- b. The walls.
- c. The ceilings.
- d. The condition of the interior stairs, hand and guard railings.
- e. Report signs of water penetration.
- f. The interior doors observed and tested.
- g. The condition of the windows in general including:
 - Broken sash cords
 - Broken parting beads
 - Broken glass lites
 - Missing locks
 - Broken locks
 Recommend the installation of replacement insulating windows where applicable to reduce the heat loss.

(4) The *Home Inspector* is *not* required to *Observe, Describe*, or *Report On*:

- (a) Paint, wallpaper, and other finish treatments on the interior walls, ceilings, and floors.
- (b) Draperies, blinds, or other window treatments.
- (c) Household appliances.
- (d) Recreational facilities, detached garages, out buildings or any other dwelling unit(s) or addresses.

NOTICE: The inspector is **NOT** required to move furniture, stored goods or other obstructions to view interior spaces. When the owner has removed the obstructions, all such spaces should be further investigated for potential concealed problems prior to commitment. You should consult the home inspector if problems are found that were not readily accessible at time of inspection. Consultation is free, but a fee will be charged for a "return visit."

DISCLAIMERS: The following items are **EXCLUDED** from the interior inspection: A. Paint, wallpaper or other finish

treatments on the interior walls, ceilings and floors. The condition of walls & floors beneath wall or floor coverings or where hidden by furniture. B. Carpeting. C. Draperies, blinds, or other window treatments. D. Portable appliances. E. Recreational facilities. F. Alarm, security, intercom and stereo systems. G. Fire sprinkler or alarm systems & smoke detectors. H. Inaccessible fireplace or chimney flue spaces. I. Vacuum systems. J. Determining odors or stains. K. Determining the condition of thermopane window & exterior glass door seals when the glass is dirty. L. **MOLD AND INDOOR AIR QUALITY.**

GENERAL COMMENTS: A. If major defects are revealed by your pre-passing walk through, you should telephone my office for further advice or schedule an optional "return visit inspection" for additional professional evaluation. B. Fireplace & wood stove flues should be inspected by a member of the chimney sweep guild as not all interior flue areas are *readily accessible* during a limited home inspection. **C. You should ask the owner to provide you with a copy of the wood or coal stove "building permit," documenting that the appliance and the installation meet all fire code, safety and UL requirements. This documentation is needed for your homeowner's insurance file.** D. **The owner of the property is required to have the fire department examine and evaluate smoke detectors and fire alarm systems prior to purchase and provide you with documentation at time of closing.** E. Small cracks & nail pops in walls and ceilings are usually minor cosmetic defects caused in part by the expansion & contraction of the wood frame beneath the drywall or plaster wall covering and by wood frame vibration. Unless the wall or ceiling coverings are in danger of falling, the repairs are of no structural significance and should require maintenance patching, caulking, priming and painting. F. Not all problems are found during a brief inspection. G. The condition of walls and framing behind wallpaper, drywall, paneling, other coverings and furniture cannot be determined. H. Determining the presence of asbestos in acoustic ceiling tiles or sprayed ceilings is beyond the scope of this inspection. I. The inspector will not determine the origin of odors or stains in carpets. J. The condition of flooring beneath carpets is undetermined. K. All closets and cabinets should be further inspected for concealed problems after all storage is removed. L. Firewall rating determination is beyond the scope of this inspection. M. A "Home Buyer's and Seller's Guide to Radon" is available at: <http://www.epa.gov/iaq/radon/pubs/hmbyguid.html>

We recommend having all fireplace(s) / flue(s), solid burning appliance(s) and gas fireplaces cleaned, inspected and serviced NOW PRIOR TO PURCHASE (a LEVEL II inspection) and annually by a licensed chimney sweep. Obtain ALL proper permits and instruction manuals NOW on the installation and use of solid fuel appliances and gas fireplaces. Do NOT use gas fireplace(s) or solid burning appliance(s) without proper servicing and / or signed installation permits.

NOTICE: We recommend "indoor air quality testing" NOW, prior to purchase if you have the slightest concern about mold, mildew or any other potential respiratory irritant. Any potential contaminant or environmental hygiene problem that may effect health is a deeply personal responsibility that requires further investigation by specialists. Such testing is beyond the scope of this limited visual inspection.

The inspection and reporting of minor, easily correctable, or cosmetic defects and deficiencies is not the intent or focus of the inspection; if such conditions are reported it is as a courtesy only. If certain conditions are mentioned, verbally or in the report, it is not meant to imply that there are not other unreported conditions.

NOTICE: Please understand that the inspection of the living spaces is greatly restricted by the owner's furniture, window treatments, carpeting and stored goods. Be advised that hidden defects could exist that were not *readily accessible* at time of inspection. For that reason, you should schedule a "pre-passing walk through inspection" to examine the home after the owner has removed furniture and storage. You may elect to perform this inspection yourself or request that the inspector return. (Call for fee schedule.) If concealed problems are found, please call the inspector for free consultation.

1. FLOOR COVERINGS:

TYPES OF EXPOSED FLOOR MATERIALS:

Areas of hardwood.

Areas of wall to wall carpeting. (Note: A home inspector cannot remove carpeting and is unable to see through carpeting or padding. The condition of hidden floor surfaces or subfloor materials is undetermined. There is a potential for concealed damage.)

Areas of ceramic tile.

CONDITION: ** FUNCTIONAL with EXCEPTIONS as noted:

**FLOOR
PROBLEMS:**

Observation: Cracked ceramic floor tiles or loose grout were observed.

Analysis: **** **UNSAFE, cracked tiles with sharp edges can cause personal injury. Safety repairs are needed.** (Note: The availability of matching tiles is questionable as manufacturers change patterns & dye lots.) Be advised that the tile industry requires a firm substrate beneath ceramic tiles. A substrate that is not firm is considered as a sub-standard installation that will cause future tiles & grout to crack or loosen due to floor frame movement or vibration.

Recommendation: Ask a tile contractor to further evaluate the tile floor and repair or replace as required.

Web Resource: <http://www.floorstransformed.com/tilecare.html>

Observation: Worn wall to wall carpeting noted.

Analysis: Carpeting is *fully depreciated* or is nearing or at end of service life.

Recommendation: Budget for age replacement.

Web Resource: <http://www.carpet-rug.org/index.cfm>

Observation: The home has living space below grade.

Analysis: Living spaces below grade are required to have a means of "waterproofing." Be advised that the typical black dampproofing materials painted on the exterior surface of a foundation does not comply. If no waterproofing system is present, then the living space below grade is at risk of water damage.

Note: Finished surfaces and storage may have prevented the home inspector from determining if a waterproofing system is present. Further investigation is needed.

Recommendation: YOU should ask the owner if the finished basement was done with a building permit and if a waterproofing system is present. This research should be completed prior to commitment.

2. WALL COVERINGS:

**TYPES OR
EXPOSED
MATERIALS:**

Gypsum board (drywall).
Paneling on some walls.

CONDITION: ** FUNCTIONAL with EXCEPTIONS noted:

**WALL COVERING
PROBLEMS:**

Observation: No visible problems where *readily accessible* at time of inspection. Other than previously mentioned.

DISCLAIMER: CONDITIONS BEHIND FURNITURE, STORAGE AND OTHER OBSTRUCTIONS ARE UNDETERMINED. BE SURE TO EXAMINE ALL WALLS DURING YOUR PRE-PASSING WALK-THROUGH INSPECTION AS THERE IS A RISK OF CONCEALED PROBLEMS.

3. CEILINGS:

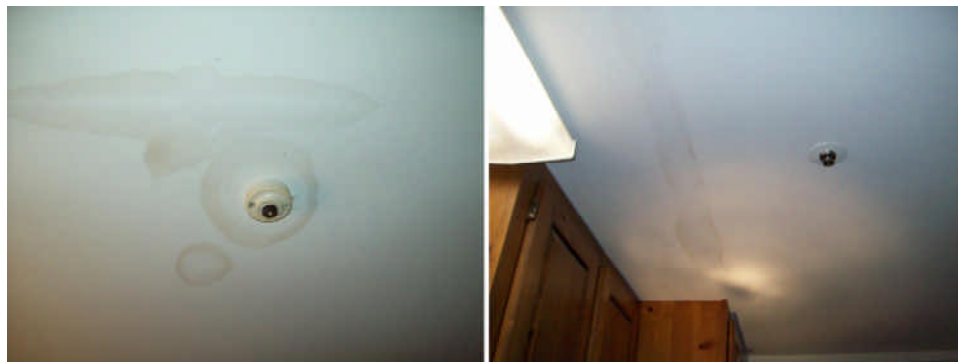
TYPES OF EXPOSED CEILING MATERIALS:

Gypsum wallboard.

CONDITION:

**** FUNCTIONAL with the following EXCEPTIONS:**

CEILING PROBLEMS:



Observation: There is a visible water stain on a ceiling.

Analysis: A prior plumbing leak is suspected as the cause of the ceiling water stain.

Note: There is a potential for concealed damage. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

Recommendation: Ask the owner to disclose any knowledge of a past leak.

Investigate and make sure that the moisture source has been correctly identified and corrected. Apply a product called stain-kills to the stained area and then re-paint the ceiling as required.

4. HALLWAYS:

Floors

* **FUNCTIONAL** - no visible problems where *readily accessible*.

Walls

* **FUNCTIONAL** - no visible problems where *readily accessible*.

Ceiling

* **FUNCTIONAL** - no visible problems where *readily accessible*.

5. CLOSETS:

CONDITION & PROBLEMS:

* **FUNCTIONAL.** Observation - The exposed portions of the closets appear **FUNCTIONAL**. No visible problems where *readily accessible*. (Note: Be advised that stored goods prevented complete access for inspection. Hidden closet problems could exist. Be sure to examine all closets when empty during your pre-passing inspection.)

6. DOORS & WINDOWS:**CONDITION & PROBLEMS:**

* **FUNCTIONAL.** Observation - No visible interior door trim problems observed where *readily accessible*.

* **FUNCTIONAL.** Observation: No visible problems at the interior trim components of the windows where *readily accessible*.

Note: Only a random sample of windows (1/room) are inspected. Windows blocked by furniture or nick-nacks or decorations are not inspected.)

WAS AT LEAST ONE INTERIOR DOOR PER ROOM OPERATED?

YES.

WAS AT LEAST ONE WINDOW PER ROOM OPERATED?

YES (Not all windows are tested.)

7. FIREPLACE(S):**DISCLAIMER:**

* **DISCLAIMER:** 266 CMR 6.07 (3)(g)1: "*Inspectors are not required to observe the interior of chimneys.*" THE INSPECTION AND REPORTING ON CHIMNEY INTERIOR OR FLUE LINERS IS BEYOND THE SCOPE OF THIS LIMITED VISUAL INSPECTION, AND ARE EXCLUDED FROM THIS REPORT PER CONTRACT. THE CHIMNEY SAFETY INSTITUTE RECOMMENDS A LEVEL II INSPECTION BY A CHIMNEY SWEEP DURING A PROPERTY TRANSFER.

Chimney and Fireplace Inspections:

The National Fire Protection Association and I, recommend an NFPA 211, **Level II** inspection of any chimney and fireplace when a home is sold. Such an inspection, performed by a qualified chimney sweep, might uncover additional problems that were not *readily accessible* for me. For safety reasons, all chimney and fireplace problems should be corrected before use. A list of Chimney Safety Institute of America Certified Chimney Sweeps' is available online at <http://www.csia.org/>

Differing inspection levels:

Level I : is a visual inspection of readily accessible areas of the chimney structure and flue and basic appliance installation and connection. There must be a lack of obstructions or combustible deposits in the flue.

Level II: includes Level I visual inspection. Proper clearances from combustibles in accessible locations, proper construction and condition of accessible portions of the chimney structure and all enclosed flues, all accessible portions the chimney exterior and interior, including areas within accessible attics, crawl spaces, and basements. Most Include inspection by video camera scanning.

Level III: includes Level II inspection. Proper construction and condition of concealed portions of the chimney structure and flues (this requires demolition or removal of portions of the building where necessary). This type of inspection is used for cause and origin fire investigations http://www.inspectionnews.net/home_inspection/autolink.php?id=9&script=showthread&forumid=7 or when a chimney has known damages such as a chimney fire or lightning strike.

**TYPE &
CONDITION:**

Recommendation: A new inspection tool offered by professional chimney companies consist of a video inspection to determine the true condition of the interior flue surfaces and joints. The technique is called a chim-scan (budget \$100-150) and is the only way to fully evaluate the chimney.

**FIREPLACE
PROBLEMS:**

Not applicable.

8. WOOD / COAL STOVE:**TYPE &
CONDITION:**

Observation: The home has a free standing wood stove.

**VISIBLE
PROBLEMS:**

Recommendation: Ask the owner if a permit is available for the stove installation.

(Permits have been required for stove installations since 1975.) You need this documentation for insurance purposes. If the document is not available, ask the owner to request local inspection by the building or fire officials prior to purchase.

Observation: Unplugged openings are present in chimney. In the basement the insulation is not an appropriate means to plug a flue. Also in the first floor there are what appear to be vents in the brick work.

Analysis: The concern is if the flues or brick wythe have been damaged by moisture poisonous combustion gases can enter the home and cause personal injury FIRE.***
UNSAFE

Recommendation: I advise that you hire a mason to perform safety repairs as required and have a level 2 inspection performed on the chimney liners.

9. SIGNS OF WATER PENETRATION:

Signs of water
penetration on
interior surfaces?



Observation: Signs of water penetration (stains) were observed on ceilings. The moisture stains tested as being dry at time of inspection.

Analysis: The above observation should NOT be considered as a guaranty against future water penetration. There is a potential for future water penetration and / or concealed damage, further investigation is needed. The source of the moisture stain may or may not have been determined during the home inspection due to the finished ceiling or systems or components that were not readily accessible. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

Recommendation: YOU should ask the owner about the source of the ceiling stains and if the problem has been corrected. If the problem has been identified and corrected, then cosmetic ceiling repairs are needed.

Observation: Moist or wet stains are present on the Attic floors, as determined by the use of a portable moisture meter.

Analysis: Active water penetration is suspected. The source of the problem appears to be the leaks at the plumbing vents and the missing ridge cap. There is a potential for concealed damage. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

Recommendation: YOU should ask the owner to disclose any knowledge regarding the source of the moist stains on the floors. Hire a tradesman to perform required repairs as needed to correct the source of water penetration.

10. OVER-ALL CONDITION / RECOMMENDATIONS:

Interior summary: Analysis: You should consult applicable tradesmen relative to the above concerns to further investigate and to provide cost estimates for repairs or replacement NOW, prior to commitment.

INSULATION AND VENTILATION

SCOPE OF THE INSULATION & VENTILATION INSPECTION: 266CMR: BOARD OF REGISTRATION OF HOME INSPECTORS

266 CMR 6.00: STANDARDS OF PRACTICE:

6.10 System: Insulation and Ventilation

- (1) The **Home Inspector** shall **Observe**:
 - (a) Exposed insulation in unfinished spaces.
 - (b) Ventilation of attics and crawl space areas.
 - (c) Bathroom venting systems.
 - (d) The ventilation of under floor crawl spaces.
- (2) The **Home Inspector** shall **Report On**:
 - (a) The absence of insulation in unfinished spaces at conditioned surfaces and recommend repair (if needed).
 - (b) The type of ventilation in the attic space (None, ridge, soffit, area, power vent, gable, eave, mushroom, turbine, other) and recommend repair (if needed)
 - (c) The existence and or absence bathroom ventilation other than a window(s) and recommend repair (if needed).
 - (d) The absence of ventilation of an under floor crawl space and recommend repair (if needed)
- (3) The **Home Inspector** is not required to **Report On**:
 - (a) The type of insulation
 - (b) Concealed insulation and vapor retarders.
 - (c) Venting equipment which is integral with household appliances.

DISCLAIMERS: The following items are **EXCLUDED** from this report: A. Concealed insulation and vapor retarders. B. Venting equipment which is integral with household appliances. C. Inaccessible unfinished spaces. D. Spaces or problems concealed by stored goods.

GENERAL COMMENTS: A. FREE or inexpensive **ENERGY AUDITS** by local utility companies are recommended to further identify & estimate areas in need of energy saving improvements. **Visit www.masssave.com** B. YOU should re-inspect the attic space after the owner has removed all possessions as hidden problems may exist. C. New homes are now required to have a light in the attic. D. New homes are required to have a vapor barrier of 1.0 perm or less installed on the warm side of walls, ceilings and floors enclosing a conditioned space. E. Typical insulation requirements for residential applications include: Ceilings (R = 30) 9" fiberglass or equivalent, walls & basement (R = 12.5) 3 1/2" fiberglass or equivalent. F. Typical ventilation requirements for new residential applications include: Attics with a ceiling vapor barrier shall have a screened opening of at least 1 SF of free vent area for each 300 SF of ceiling space. Attics without a ceiling vapor barrier shall have a screened opening of at least 1 SF for each 150 SF of ceiling area. G. **Buyers should ask the owner about any prior roof leakage and should monitor the attic to determine if corrective action is needed.** Be advised that active roof or flashing leaks can occur at anytime regardless of the age or condition of the roof coverings and flashings. H. **DISCLAIMER: Inspection for MOLD is EXCLUDED from this report..** I. **NOTICE: UNLESS THE ATTIC WAS VIEWED DURING RAIN, NO GUARANTY AGAINST ROOF LEAKS IS IMPLIED. YOU should monitor the attic area for signs of roof or flashing leakage after heavy rain or snow conditions.** The Massachusetts Standards require that the inspector "Enter *readily accessible* under floor crawl spaces and attic spaces only after safe access has been provided by the owner and or client except when access is obstructed, when entry could damage the property, or when dangerous or adverse situations are suspected by the inspector."

1. ACCESS:

METHOD USED TO OBSERVE ATTIC:

Observation: The attic was entered via a set of stairs. (Note: To prevent heat loss, doors leading to an attic should be weatherstripped & insulated. Attic stairs should have a handrail & gallery rail if applicable.)

**IS AN ATTIC
LIGHT
PRESENT?**

Yes, an attic light is present.

2. SIGNS OF ATTIC WATER PENETRATION:

**EVIDENCE OF
LEAKS OR
CONDENSATION
PROBLEMS:**

Observation: Wet stains were visible in the *readily accessible* parts of the attic at time of inspection.

Analysis: Active leakage is suspected, further investigation and repairs are needed.

Note: There is a potential for concealed damage. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

Recommendation: You should ask the owner to disclose any known roof or flashings leakage problems. A licensed roofing contractor should be hired to further identify the source of the suspected leak and repaired as determined.

Observation: Moist water stains were noted adjacent to the plumbing vent pipe within the attic.

Analysis: In my opinion, the stains indicate that the flashing boot around the plumbing vent pipe is leaking at the roof. Further investigation and repairs are needed. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold. Note: There is a potential for concealed damage.

Recommendation: You should ask the owner if he or she has any knowledge of past roofing or flashing leakage problems or repairs? Hire a roofer to repair the flashing and monitor for future leakage.

Observation: Water stains are present of the roof framing beneath or adjacent to the attic ridge vent.

Analysis: Ridge vents are vulnerable to wind driven rain leakage. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

Recommendation: I advise that you ask a roofer to perform a closer on-roof inspection to determine the true condition of the ridge vent and the brand installed. In my opinion, a quality ridge vent will have a baffle on each side to deflect wind and water away and a matching square footage of soffit ventilation. If the present type of ridge vent has no baffles, then I recommend replacement.

Observation: There is a potential for leakage at:

Chimney flashing

Analysis: Leaks may cause interior water damage. Be advised that any source of water penetration or ventilation imbalance can cause interior damage and / or mold.

Note: There is a potential for concealed damage.

Recommendation: Potential leakage points should be reappraised by applicable tradesmen and corrected as required.

3. VENTILATION:

TYPE OF ATTIC VENTILATION:

Observation: The attic space is vented by the following means:

Ridge & soffit vent (Note: This is an indication of a modern attic ventilation system).
Gable end louver vents

CONDITION:

* **FUNCTIONAL.** Observation: No visible problems observed where *readily accessible* at time of inspection.

ATTIC VENTILATION PROBLEMS:

Observation: The attic is ventilated by both gable end louver vents and a modern ridge vent system.

Analysis: The gable vents may have been original and the ridge vent system may be a renovation. Be advised that for a ridge vent system to function properly, air must enter the soffit vents or vented drip edge flashing, flow upward between the rafters and then vent through the ridge vent to the atmosphere. The two gable end louver vents should NOT be present as air entering through the vents will impair the function of the ridge vent by reducing a positive draft. In short, the gable vents short-circuit the desired air movement for ridge vent function. Simple repair is needed.

Recommendation: You should hire a tradesman to block the gable end louver vents from within the attic.

CONDITION OF FOUNDATION / CRAWL SPACE VENTILATION:

Not applicable with this structure.

CONDITION OF KITCHEN VENTILATION:

* **FUNCTIONAL.** Observation: No visible major problems observed where *readily accessible*.

CONDITION OF BATHROOM VENTILATION:

Observation: The bathroom is ventilated by a window and an exhaust fan.

CONDITION OF DRYER VENTILATION:

* **FUNCTIONAL.** Observation: No visible problems observed where *readily accessible*.

4. INSULATION IN UNFINISHED SPACES:

ATTIC:

Suspected types of exposed and *readily accessible* attic insulation:
Fiberglass batt type insulation present.

**BASEMENT /
CRAWL SPACE:**

Observation: The basement is partly finished.

Analysis: Due to the wall and/or ceiling coverings, the unfinished surfaces were not *readily accessible* for inspection. Therefore, the presence or non-presence, type(s) and condition of insulation and vapor barriers is undetermined. Further investigation is needed.

Recommendation: You should ask the owner to disclose any knowledge of insulation and vapor barriers behind the finished walls and ceiling materials. You may also elect to contact the local utility company and schedule an inexpensive "energy audit" of the entire home, to determine where insulation improvements are needed, approximate cost and potential savings in heating and cooling expenses.

Observation: Where *readily accessible*, the unfinished basement or crawl space has no insulation.

Analysis: While the lack of basement or crawl space insulation may be typical for the older home, the omission will increase fuel consumption and will reduce comfort levels.

Optional insulation upgrading is advised.

Recommendation: I advise that you hire an insulation contractor to install fiberglass batt type insulation between all floor joists in accordance with the requirements of the building code.

Web Resources: U.S. DOE website www.ornl.gov/%7eroofs/zip/ziphome.html (Zip Code Insulation Program)

<http://www.eere.energy.gov/buildings/info/documents/pdfs/26455.pdf>

<http://www.eere.energy.gov/buildings/info/documents/pdfs/29238.pdf> Crawl space

Observation: As mentioned earlier the home has exterior rigid insulation installed on the foundation all the way up above ground to the siding.

Analysis: This is a positive feature for energy efficiency but a negative in regards to pest infestation. Carpenter ants love to make there nests in this stuff and termites like it because they don't have to go to the trouble of making mud tubes.

Recommendation: I would have the insulation cut back to the surface of the ground or at least a 2 inch vision strip that would allow you to see and pest activity. Right now you have no way of knowing what is going on behind that insulation. I would also recommend an inspection and annual service by a pest company to be proactive rather than reactive. Most of the basement interior is not readily visible for inspection so preventive maintenance is advised.

**WALLS where
exposed:**

Observation: There were no unfinished wall spaces *readily accessible* at time of inspection.

Analysis: The presence and condition of any insulation within the wall spaces is undetermined. **Be advised that homes built before the 1950's were most often constructed without insulation in the exterior walls.** While the lack of insulation may be typical for a home of this era, heat loss will be excessive as compared to new construction, making the home more expensive to heat.

Recommendation: You should question the owner about any known wall insulation. To precisely identify wall insulation, it is necessary to remove part of the wall covering such as in a closet, and then patch the wall afterwards. If your research reveals the absence of wall insulation, then an energy audit and insulation updating are advised for energy conservation and comfort. You may desire to seek estimates from an insulation contractor for blown-in loose fiberglass or loose cellulose within the exterior wall cavities.

Web resource on wall insulation: <http://www.eere.energy.gov/buildings/info/documents/pdfs/26451.pdf>

5. VAPOR BARRIERS IN UNFINISHED SPACES:

**VAPOR BARRIER
PRESENT OR
ABSENT IN
UNFINISHED
SPACES?**

* **FUNCTIONAL** vapor barrier where exposed and *readily accessible*.

6. OVER-ALL CONDITION / RECOMMENDATIONS:

**Insulation /
ventilation
summary:**

Observation: Insulation or ventilation problems or upgrades are documented above.

Analysis: Insulation and ventilation problems can lead to imbalance conditions resulting in air quality problems, mold, decay, pest infestation and energy waste.

Recommendation: The above problems should be repaired or upgraded. Consult appropriate insulation or ventilation tradesman for cost estimates.

TRADESMEN TO CONTACT FOR REAPPRAISAL:

CONCLUSIONS: As you compare & contrast the issues disclosed by the home inspection, you should keep them in perspective relative to the age of the home and its sale price. The task of a home inspector is to function as a "general practitioner" who identifies visible major structural & major mechanical system problems and then refers clients to applicable tradesmen to determine the scope and estimated repair cost. **(NOTE: MASS. REGULATIONS 266 CMR 6.11.2C.5 PROHIBITS HOME INSPECTORS FROM DETERMINING THE COST OF REPAIRS. ALL REPAIRS SHOULD BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS OF THE BUILDING CODE, ELECTRICAL CODE, PLUMBING & GAS CODE OR APPLICABLE REGULATIONS.)**

NOTICE: In Massachusetts, a broker is NOT required to provide you with a formal "seller disclosure document". If such an optional document is available, then you and your attorney should carefully review it NOW, prior to commitment.

I advise that YOU perform the following research at the local town or city offices NOW, prior to commitment.

- [x] Visit the local building department NOW and research the permit history of the home.
- [x] Visit the local conservation commission NOW and ask if any portion of the property is considered to be on or near wet lands as the presence of wet lands could seriously effect the present & future use of the property.
- [x] If any suspected MOLD was observed, then you should hire a microbiology laboratory to take swaps and air samples for analysis prior to commitment. Many homes have excessive moisture issues which might lead to mold, but the ability to detect mold is beyond the scope of this home inspection and is EXCLUDED from this report.

Web sources:

- * A Massachusetts Consumer Guide: Buying and Selling a Home in Massachusetts
<http://www.state.ma.us/consumer/Pubs/buysell.htm>
- * A Massachusetts Consumer Guide: Guide To Home Improvement
<http://www.state.ma.us/consumer/Pubs/homeimp.htm>

Optional re-inspection (at an hourly rate) is only performed on items not *readily accessible* or *shut-down* at the time of original inspection. Should you negotiate with the owner to have items repaired, I suggest they be performed by a licensed or qualified professional and NOT the homeowner as they can not offer a warranty on their work. You need to decide for yourself if you or the seller's qualifications, experience and knowledge would allow the repair to be made without using a qualified licensed trade professional. All work must comply with applicable law, including local permit, inspection, and Certificate of Occupancy requirements. You should ask the owner to provide receipts for repairs performed by others. The documentation should include a written statement indicating the date of repairs, who performed the repairs, applicable

permits and final verification of condition.

It is your job to judge what the house needs after the home inspection, and what it can become with budgeted repairs and upgrades. It is up to you to determine if the cost of needed repairs will add measurably to the cost of the home and if those costs are manageable in your budget. You should obtain cost estimates for repairs identified by your home inspector as soon as possible after the home inspection, and when necessary, you should request extensions to allow enough time to complete needed research prior to closing. These costs when added to the purchase price will reflect the true cost of the home. I hope that the inspection and report will help you understand the property you are buying and will help you enjoy your purchase in the future. If through your negotiations access becomes possible, components become *readily accessible*, repairs are done or systems are restored, you may desire to schedule a "return visit" inspection with this office, at an additional charge, prior to commitment.

The inspection of all **EXCLUDED** items in our Contract and in the Standards of Practice should be performed, directed and evaluated by other specialists of your choice of hire prior to commitment. Since this inspection company does not dismantle equipment or perform invasive inspections the contractor's subsequent examination and repairs may reveal additional required repairs. Photographs have been included to help you to understand what was observed during the inspection. When describing defects, photos are intended to show an example of a defect, but may not show every occurrence of the defect. When correcting these problems, you should have a qualified specialist carefully check for all similar occurrences. Based on my observations during the home inspection, YOU should contact the following specialists for further investigation of the ENTIRE SYSTEM and cost estimates for repairs **NOW** before close of escrow:

1. TRADESMAN OR PROFESSIONALS TO CONSULT:

Trade or specialty:

Plumber, Electrician, Roofer, Driveway installer, Tile or flooring contractor, Tree surgeon, Cleaning service, Chimney sweep, Landscape contractor,

Expert to consult for further inspection:

Septic system analysis, Pest control inspector, Mold inspector.

2. Time out:

12:30.

CLOSING STATEMENTS

Dear Client,

This impartial report provides you with documentation of the *readily accessible* & visible problems in the home that were disclosed to you during the home inspection. An earnest effort was made to provide you with the facts needed for intelligent decision making during the real estate purchasing process. To prevent any surprises, you should consult applicable licensed tradesmen regarding each concern. Request that the entire system of concern be further investigated for additional problems not included in this report, and that repair or replacement cost estimates be provided as determined. **Gather all the facts NOW, prior to commitment!**

Be assured that as your professional representative, I fully understand your nervousness and the stress associated with the biggest purchase of your life. Therefore, I urge you to telephone me for free consultation should you require any further clarification or guidance. ("The only stupid question is one that is not asked!")

In closing, **it is not my intention to influence your decision to purchase or not to purchase real estate - that decision is yours alone!** But, I do urge you to use your head as well as your heart.

I hope that my services have been helpful and educational, and that I have gained your respect and friendship; for your referral is my greatest source of marketing and a recognition of my professionalism. Everyone seems to know someone who is buying or selling a home. **THE GREATEST COMPLIMENT YOU COULD GIVE ME IS TO PLEASE PASS MY NAME ALONG TO FRIENDS & RELATIVES.**

Thank you for hiring me as your home inspector. I hope that I have earned your respect and gained a new friend!

Sincerely,

Terry Grube

Certified member #247162 of the American Society of Home Inspectors (ASHI)

Certified member of ASHI, New England Chapter

Certified member of NAHI # 10-22313, National Association of Home Inspectors

Certified Building Science Thermographer #31162 (ITC)

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