Building Inspection Report

Harvard Fire Station No. 2, 230 Still River Road, Harvard, MA

Inspection Date: 01 December 2011

Prepared For:Town of Harvard

Prepared By: Galeota Associates, Inc. P.O. Box 424 Townsend, MA 01469

> (978) 597-1300 (978) 597-1391 Fax

> > Report Number: 120111GA

Inspector: Greg A. Galeota, President Christopher P. Galeota, VP

SUMMARIZATION REPORT FOR

Town of Harvard

AT

Harvard Fire Station No. 2, 230 Still River Road, Harvard, MA

We hope you had the advantage of being present during the inspection. If so, you have a better perspective and more detail that any written report can give.

Your inspection has been done incorporating with the principles and standards developed for professional home inspections by the "AMERICAN SOCIETY OF HOME INSPECTORS" and in compliance with the Commonwealth of Massachusetts' *Rules and Regulations Governing Home Inspectors: 266 CMR 1.00-11.00*. In addition, during the inspection we have tried to offer constructive suggestions and to answer as many of your questions as we were able. You will, however, recall that we do not move furniture, disassemble equipment or get into dangerous areas, or see behind covered sections.

Due to licensing requirements/restrictions we cannot provide you verbal "ball park" estimates for repairs suggested in this report. Ethically we are not allowed to recommended any specific contractors. We are not contractors or construction estimators therefore we cannot provide written estimates for work suggested in the report.

Your inspector has done his very best for you! He has given his honest, unbiased opinions to the very best of his ability--and that is what you have purchased--nothing else--but alas, he is but human. He is a trained and experienced "building generalist" but neither he nor anyone can be an "expert" in everything about a building, neither does he make any pretensions of either total completeness or infallibility.

Since appliances such as refrigerators, dishwashers, stoves, ovens and disposals are not considered mechanicals, they are not inspected and are not part of this report.

We wish you the best of luck!

GALEOTA ASSOCIATES, INC. P.O. BOX 424, TOWNSEND, MA 01469-0424 TELEPHONE: (978) 597-1300

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YOUR INSPECTOR: Greg A. Galeota, President MA Home Inspector License #: 424 Christopher P. Galeota, VP MA Home Inspector License #: 423, ASHI #:1051

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Report Overview

THE BUILDING IN PERSPECTIVE

This is a 63+ year old (approximate age) fire station that has been lacking maintenance somewhat. Apart from the short term need to deal with this lacking maintenance, the improvements that are recommended in this report are not considered unusual for a building of this age and location. Please remember that there is no such thing as a perfect building.

Time at the Inspection: 9:45 a.m. to 12:00 p.m.

CONVENTIONS USED IN THIS REPORT

For your convenience, the following conventions have been used in this report.

- denotes a major improvement recommendation that is in need of immediate repair.
- 🗵 denotes a observation or recommendation that is considered an immediate safety concern.
- denotes improvements that should be anticipated over the short term.
- denotes an area where further investigation and/or monitoring is needed. Repairs may be necessary. During the inspection, there was insufficient information. Improvements cannot be determined until further investigation or observations are made.

Please note that those observations listed under "Discretionary Improvements" are not essential repairs, but represent logical long term improvements.

NOTE: For the purpose of this report, it is assumed that the building faces west.

IMPROVEMENT RECOMMENDATION HIGHLIGHTS

The following is a synopsis of the potentially significant improvements that should be budgeted for over the short term. Other significant improvements, outside the scope of this inspection, may also be necessary. Please refer to the body of this report for details and recommendations.

THE SCOPE OF THE INSPECTION

All components designated for inspection in the ASHI® Standards of Practice are inspected, except as may be noted in the "Limitations of Inspection" sections within this report.

This inspection is visual only. A representative sample of building components are viewed in areas that are accessible at the time of the inspection. No destructive testing or dismantling of building components is performed.

Not all improvements will be identified during this inspection. Unexpected repairs should still be anticipated. The inspection should not be considered a guarantee or warranty of any kind.

Please refer to the pre-inspection contract for a full explanation of the scope of the inspection.

WEATHER CONDITIONS

Dry weather conditions prevailed at the time of the inspection. The estimated outside temperature was 44 degrees F

Structural Components

DESCRIPTION OF STRUCTURAL COMPONENTS

Foundation:

Floor Structure:

Poured Concrete

Wall Structure:

Masonry Block

Ceiling Structure:

•Joist •Wood Frame

Roof Structure:

•Rafters •Wood Frame

Roof Sheathing:

Solid Plank

Attic Access Location:

•Garage •Attic Method Of Inspection: Viewed From Access Hatch •Rear

Ceiling of Fire House

STRUCTURAL COMPONENT OBSERVATIONS

The attic was viewed from the ceiling opening only. Flooring and lighting was not provided.

RECOMMENDATIONS / OBSERVATIONS

- Slightly larger than typical exterior wall cracks were observed. These areas should be monitored. The rate of movement cannot be predicted during a one-time visit to the building. (Photo)
- Typical settlement cracks were observed in the foundation walls of the house. This implies that some structural movement of the building has occurred, as is typical of most buildings.
- Typical vertical cracking was observed in the foundation. This type of cracking is usually the result of shrinkage of the concrete as it cures. Shrinkage cracks are very common and should not be cause for alarm.
- Evidence of prior roof leakage was observed on the underside of the roof sheathing.
- There is evidence of vermin activity in the attic. A pest control specialist should be consulted in this regard. (Photo)
- Typical concrete floor cracks were observed. These cracks are not cause for alarm.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

LIMITATIONS OF STRUCTURAL COMPONENT INSPECTION

As prescribed in the pre-inspection contract, this is a visual inspection only. Assessing the structural integrity of a building is beyond the scope of a typical inspection. A certified professional engineer is recommended where there are structural concerns about the building. Inspection of structural components was limited by (but not restricted to) the following conditions:

- Structural components concealed behind finished surfaces could not be inspected.
- Only a representative sampling of visible structural components were inspected.
- Vehicles and/or storage restricted access to some structural components.

Roofing System

DESCRIPTION OF ROOFING SYSTEM

Roof Covering:

•Composition Shingle •Number of roofing layers observed: One

Chimneys:

Masonry ●Lined

Gutters and Downspouts:

•None Installed

Method of Inspection:

•Viewed With Binoculars

ROOFING OBSERVATIONS

The roof, roof covering, flashing, soffit areas, gutters and chimney, where present, were inspected from the ground with high powered field glasses.

The roofing is considered to be in visually normal condition. It is reported that this roof covering is approximately 10+- years old. The typical life expectancy of this roof cover is 20-25+-years. Signs of wear and tear, loss of granular material, signs of curling and weathering were observed. You should verify the age of the roof cover with the department.

RECOMMENDATIONS / OBSERVATIONS

- Normal irregular wave of the roof structure was observed. This condition may exist due to the method of framing acceptable at the time of construction. Further discussion will take place in this report.
- Tree branches that are in close proximity to the roof should be trimmed. (Photo)
- The configuration of the roofing system is susceptible to ice damming. This should be watched for during the winter months. The potential for ice dams can vary with the severity of the winter. Severe ice dams can result in roof leakage, typically near the eaves. Solutions include better attic insulation and ventilation and eave protection below the roof coverings.
- The masonry chimney is in need of pointing (replacing the mortar between the bricks). A mason or certified chimney sweep should be contacted for further evaluation and repairs. (Photo)
- A rain cap and vermin screen should be installed on the masonry chimney.
- The chimney and plumbing vent pipe flashing was in visually normal condition at the time of the inspection.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section,

LIMITATIONS OF ROOFING INSPECTION

This is a visual inspection only. Roofing life expectancies can vary depending on several factors. Any estimates of remaining life are approximations only. This assessment of the roof does not preclude the possibility of leakage. Leakage can develop at any time and may depend on rain intensity, wind direction, ice build up, etc. The inspection of the roofing system was limited by (but not restricted to) the following conditions:

- The entire underside of the roof sheathing is not inspected for evidence of leakage.
- Evidence of prior leakage may be disguised by interior finishes.
- Portions of the roof were viewed from the ground using binoculars. Some sections of the roof could not be viewed.

Exterior Components

DESCRIPTION OF EXTERIOR

Lot Grading:

•Level Grade •Graded Towards Building

Driveways:

Asphalt

Walkways / Patios:

Asphalt

Porches, Decks, and Steps:

None

Soffit and Fascia:

Wood

Wall Cladding:

•Block •Wood

Window Frames:

Metal

Entry Doors:

Metal

Overhead Garage Door(s):

Aluminum • Automatic Opener Installed

EXTERIOR OBSERVATIONS

The exterior of the building has lacked maintenance, somewhat.

RECOMMENDATIONS / OBSERVATIONS

- The slope at the foundation was generally flat. The slope should always be away from the foundation. All depressions should be filled and graded so as to quickly disperse water away from the foundation walls to help prevent possible water penetration. It is important to practice good water drainage control around any structure at all times. Areas where wood is in contact with the ground are potential candidates for wood rot and/or insect infestation. It is recommended, no wood be in contact with the ground and there be a minimum of 8 inches clearance to untreated wood structural members and 6 inches to any other untreated wood.
- The driveway is badly cracked. Replacement will ultimately be necessary. (Photo)
- The driveway is in need of crack filling to prevent water penetration to the sub base. Freezing and thawing of the sub base can cause a deterioration of the surface. (Photo)
- Damage to the rear gable end vent is suspected to be the result of vermin activity. Repairs should be undertaken. Depending on the nature of the vermin activity, consulting an animal control specialist may be desirable. (Photo)
- ✓ Localized pointing of deteriorated mortar between the bricks of the exterior walls is advisable. (Photo)
- Vegetation growing on or within 6 inches of exterior walls should be kept trimmed away from siding, window trims, and the eaves. (Photo)
- The proximity of the pine tree at the rear left could disrupt drainage pipes, cause mechanical damage to the exterior of the building, or influence the foundation over time. It would be wise to consider removal of the tree. (Photo)
- The siding was in visually normal condition. Indications of cupping, curling, shrinkage and splits were observed.
- The siding and trim are in need of proper surface preparation and the application of surface protection.
- Wood/soil contact at the base of the trim should be eliminated. Rotted or damaged trim that is uncovered should be repaired.
- Cracked or broken window(s) should be repaired.
- The entry doors are in poor condition. Replacement of the doors is necessary. (Photo)
- Pronounced floor cracks were noted in the building. The slope of the garage floor is not conducive to good drainage. Garage floors should be sloped to facilitate the movement of liquids toward the main vehicle entry.
- The discharge location and/or current operational condition of the floor drains in unknown. Further investigation is recommended.
- Wood damage was observed on the exterior of the building including, but not limited to, the following areas:
 - at the entry doors (Photo)
 - at the Gable end vent (Photo)

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- The interior ceiling and applicable non-bearing walls were sheathed with an asbestos type board. This product may contain an asbestos base. Further investigation, repair and/or removal is recommended. (Photo)
- Damaged weather stripping at the overhead garage doors will need repair and/or replacement. (Photo)
- Insulated glass was noted at the overhead garage doors.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

LIMITATIONS OF EXTERIOR INSPECTION

This is a visual inspection only. The inspection of the exterior was limited by (but not restricted to) the following conditions:

- A representative sample of exterior components was inspected.
- The inspection does not include an assessment of geological conditions and/or site stability.
- Landscape components restricted a view of some exterior areas of the building.

Electrical System

DESCRIPTION OF ELECTRICAL SYSTEM

Size of Electrical Service:

•100 Amps, 120/240 Volt Main Service

Service Entrance Wires:

•Overhead •Aluminum

Main Disconnect:

•Breakers •Located in the garage •Main Service Rating 100 Amps

Service Ground:

•Copper •Ground Rod Connection

Main Distribution Panel:

•Breakers 4+-(120 volt) 3+-(240 volt) •Located in the garage •Panel Rating

100 Amps

Branch/Auxiliary Panel(s):

•Breakers 4+-(120 volt) •Located in the garage

Distribution Wiring:

•Copper Romex, Bx and THHN

Receptacles:

Grounded

Ground Fault Circuit Interrupters:

None Visible

ELECTRICAL OBSERVATIONS

The size of the electrical service is sufficient. All visible wiring within the building is copper. This is a good quality electrical conductor.

Inspection of the electrical system revealed the need for improvements, as is typical of most homes. Although these improvements are not costly to repair, they should be considered high priority for safety reasons. *Unsafe electrical conditions represent a shock hazard*. A licensed electrician should be consulted to undertake the improvements recommended below.

RECOMMENDATIONS / OBSERVATIONS

- Circuit breakers should be switched "on" and "off" once or twice yearly in order to prevent "welding" of the contacts due to oxidation and/or corrosion. Ground Fault Interrupter Circuits should be tested with test button monthly.
- The exterior light fixtures are in relatively poor condition. Replacement would be desirable. (Photo)
- Additional information relative to the current operational condition of the fire and security systems is recommended. Inspection of these systems is beyond the scope of this inspection.
- Additional information relative to the current operational condition of the generator by-pass system is recommended. Inspection of generator by-pass systems is beyond the scope of this inspection.
- All 2-prong receptacles should be upgraded. (Photo)
- Frayed wire in the attic near the access panel will need repair. (Photo)

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

DISCRETIONARY IMPROVEMENTS

The installation of ground fault circuit interrupter (GFCI) devices is advisable on exterior and garage. Any whirlpool or swimming pool equipment should also be fitted with GFCI's. A ground fault circuit interrupter (GFCI) offers protection from shock or electrocution.

LIMITATIONS OF ELECTRICAL INSPECTION

This is a visual inspection only. The inspection does not include low voltage systems, telephone wiring, intercoms, alarm systems, TV cable, timers or smoke detectors. The inspection of the electrical system was limited by (but not restricted to) the following conditions:

- Electrical components concealed behind finished surfaces could not be inspected.
- Only a representative sampling of outlets and light fixtures were tested.
- Furniture and/or storage restricted access to some electrical components.
- The visible connection to the ground rod(s) was not provided.

Heating System

DESCRIPTION OF HEATING SYSTEM

Primary Energy Source:

•Oil

Heating System Type:

•Forced Hot Water # Of Zones: 1 •Weil-McLain

Heat Distribution Methods:

Unitary Heaters

Other Components:

None

HEATING OBSERVATIONS

Heating a building with this type of heating system should be relatively economical. The distribution of heat is divided into "zones", allowing for greater ease of balancing heat flow. The distribution of heat within the home is enhanced by a circulating pump.

The boiler is estimated to be less than 10 years old. The typical life cycle for a unit such as this is 20-25 years. Some units will last longer; others can fail prematurely.

Verification as to the exact age of the boiler is recommended.

As noted, a slightly irregular condition was observed. The boiler is a steam boiler that is being used as a forced hot water boiler. The system was operational at the time of the inspection.

RECOMMENDATIONS / OBSERVATIONS

- Evidence of prior leakage and/or corrosion was observed at various control valves and pipe connections. This is a common condition in older hot water heating systems.
- Rusting of oil tanks usually occurs from the inside out. The oil tank is aging and should be monitored. (Photo)
- Oil burners require yearly service by a certified heating technician.
- There is a thimble in the chimney at the chimney connector.
- Two older ceiling heat exchange coils with blowers were provided.
- The discharge piping serving the Temperature and Pressure Relief (TPR) Valve for the boiler should terminate not less than 6 inches or more than 24 inches above the floor. (Photo)
- The heating system is a forced hot water system. It should be clearly understood that boilers have a limited life expectancy and that this unit performed in a satisfactory manner today.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

HEATING INSPECTION

This is a visual inspection only. The inspection of the heating system is general and not technically exhaustive. A detailed evaluation of the furnace heat exchanger is beyond the scope of this inspection. The inspection was limited by (but not restricted to) the following conditions:

The adequacy of heat distribution is difficult to determine during a one time visit to a home.

Cooling / Heat Pump System

DESCRIPTION OF COOLING / HEAT PUMP SYSTEM

Energy Source: None System Type: Other Components:

SYSTEM OBSERVATIONS

RECOMMENDATIONS / OBSERVATIONS

There is no central cooling system for this building

LIMITATIONS OF COOLING / HEAT PUMP SYSTEM INSPECTION

This is a visual inspection only. Air conditioning and heat pump systems, like most mechanical components, can fail at any time. The inspection of the cooling system was limited by (but not restricted to) the following conditions:

Window mounted air conditioning units are not inspected.

Insulation / Ventilation

DESCRIPTION OF INSULATION / VENTILATION

Attic Insulation:

•3.5+- inches Fiberglass

Exterior Wall Insulation:

None

Air / Vapor Barrier(s):

None

Roof / Attic Ventilation:

•Gable Vents •Ridge Vents

INSULATION / VENTILATION OBSERVATIONS

Insulation and ventilation levels are typical for a building this age and construction.

As is typical of buildings of this age and construction, insulation and ventilation levels are relatively modest. When undertaking renovation work to the building, insulation and ventilation improvements would be both practical and logical.

RECOMMENDATIONS / ENERGY SAVING SUGGESTIONS

It is recommended that you contact MASS SAVE at 866-527-7283 or go to www.masssave.com for more information or to schedule a energy audit.

- Attic insulation improvements are recommended. This should help to reduce heating costs and help keep the building cooler during warm weather. (Photo)
- ♦ Ideally, the attic access hatch should be insulated.
- The level of attic ventilation is considered marginal. It is generally recommended that one (1) square foot of free vent area be provided for every one hundred and fifty (150) square feet of ceiling area. Proper ventilation will help to keep the house cooler during warm weather and extend the life of roofing materials. In colder climates, it will help reduce the potential for ice dams on the roof and condensation within the attic.
- As noted, vermin entry at the rear gable vent was noted. Repair to the vent and a pest control contractor should be consulted. (Photo)

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

LIMITATIONS OF INSULATION / VENTILATION INSPECTION

This is a visual inspection only. The inspection of insulation and ventilation was limited by (but not restricted to) the following conditions:

- Insulation/ventilation type and levels in concealed areas cannot be determined. No destructive tests are performed.
- Potentially hazardous materials such as Asbestos and Urea Formaldehyde Foam Insulation (UFFI) cannot be positively identified without a detailed inspection and laboratory analysis. This is beyond the scope of the inspection.
- An analysis of indoor air quality is beyond the scope of this inspection.
- Any estimates of insulation R values or depths are rough average values.
- The attic was viewed from the access hatch only.

Plumbing System

DESCRIPTION OF PLUMBING SYSTEM

Water Supply Source:

Private Water Supply

Service Pipe to House:

•Plastic •Service Pipe Size: 1 inch

Main Valve Location:

Garage

Supply Piping:

Copper

Waste Disposal System:

Private Sewage System

Drain / Waste / Vent Piping:

•Plastic •Cast Iron •Copper

Cleanout Location:

Garage

Water Heater:

•Approximately 3-5+- gallon capacity •Approximate age: 10+- years •Tankless

System Combined with Boiler •Location: Basement

Other Components:

None

PLUMBING OBSERVATIONS

The water pressure supplied to the fixtures is reasonably good. A typical drop in flow was experienced when two fixtures were operated simultaneously.

The plumbing fixtures are older. Upgrading fixtures would be a logical short term improvement. In the interim, a higher level of maintenance will likely be required. The water heater temperature should be set such that accidental scalding is minimized. Families with small children should be especially aware of this.

RECOMMENDATIONS / OBSERVATIONS

- In houses where a domestic hot water tank is used, either electric, gas or oil, a small amount of water should be drained from the outlet located at the bottom of the tank in order to remove any sediment that may have accumulated.
- Typical corrosion on the exterior of the supply piping was observed.
- For the most part, the piping is older. It may be prone to unexpected problems. Improvement is recommended on an as needed basis
- The water heater is an older unit that is depreciating and may be approaching the end of its useful life. Water heaters have a typical life expectancy of 7 to 12 years. It would be wise to replace this unit in the short term. One cannot predict with certainty when the unit may burst. (Photo)
- The water heater shows evidence of prior leakage. This should be carefully monitored. (Photo)
- Newer interior well components were noted.
- It is recommended that you consider a water quantity test as well as a water quality analysis. These tests will provide you with valuable information regarding your drinking water.
- The inoperative sink at the center storage room should be repaired and/or terminated.(Photo)
- The aging and leaking sink components in the bathroom will need repair. (Photo)
- The toilet in the bath is newer.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

DISCRETIONARY IMPROVEMENTS

During the process of plumbing fixture renovation, it would be wise to replace older piping that is exposed.

LIMITATIONS OF PLUMBING INSPECTION

This is a visual inspection only. The inspection of the plumbing system was limited by (but not restricted to) the following conditions:

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- Portions of the plumbing system concealed by finishes and/or storage (below sinks, etc.), below the structure, and beneath the yard were not inspected.
- Water quality is not tested. The effect of lead content in solder and or supply lines is beyond the scope of the inspection.
- An inspection of the sewage system is outside the scope of this inspection.
- An inspection of the well is outside the scope of this inspection.

The foregoing report is furnished at your request in strict confidence by us as your agent and employee for your exclusive aid in determining the physical condition of the subject premises and the equipment therein as may be examined visually, and we warn you that although such premises and/or equipment may be in good condition when examined, the condition may have changed thereafter.

This inspection has been made by applying the best skills possible and represents a true and honest report. The opinions of the inspector are not based on manufacturer's claims and minimum standards, Building Codes, local ordinances of the adequacy of design but are the opinions of the inspectors. This is a limited inspection based on a reasonable amount of inspection time. Although we stand behind the accuracy of all the statements and observations made in this report, we do not provide a general warranty or guarantee of the conditions of the building. *Galeota Associates, Inc.* is not responsible or liable for problems which cannot reasonably be discovered by a limited inspection. We are hopeful that our services have been informational and helpful to you.

