

Helpful Home Inspection Report

123 Any Street, Hometown, USA



Inspection Date:
Monday, January 8, 2007

Prepared For:
John and Jane Doe

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Introduction

THANK YOU FOR CHOOSING Helpful Home Inspectors, LLC

As one way of expressing our appreciation for the confidence that you have shown in us, we are pleased to include with this report a free copy of How to Operate Your Home by “Mr. Fix-It”, Tom Feiza. The book is offered as a supplement to the information provided verbally and in writing by your Helpful Home Inspector. It is a part of this report. It provides a wealth of information about the proper use and maintenance of your home and its systems. Specific references to the text may be made in the main body of this report. We recommend, however, that you read the book in its entirety and refer to it in the future to assist you in understanding and maintaining your home. Please visit www.helpfulhomeinspectors.com/links.htm for other helpful information. Thank you for choosing **Helpful Home Inspectors, LLC**.

CONVENTIONS USED IN THIS REPORT

For your convenience, the following conventions may be used in this report:

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

Safety Issue: a condition that is unsafe, though it may or may not meet the legal definition of Material Defect.

Repair: a system or component which is missing or which needs corrective action to assure proper and reliable function.

Monitor: a system or component needing further investigation and/or monitoring to determine if repairs are necessary.

Improve: denotes improvements that are recommended but not required.

Normal for Age: a system or component that is functioning normally despite minor flaws that are typical for components of like age. Repairs are not essential, but may be undertaken as part of the home’s normal maintenance.

- For the purpose of this report, it is assumed that we are standing in front of the house facing the main entry door. From this perspective we may indicate locations as “Front”, “Rear”, “Right” or “Left”.

THE SCOPE OF THE INSPECTION

All components designated for inspection in the American Society of Home Inspectors (ASHI)® Standards of Practice are inspected, except as may be noted in the “Limitations of Inspection” sections within this report.

When defects are found, a qualified professional should be engaged, prior to the close of escrow, to evaluate our concerns and to inspect the remainder of the system or component for additional concerns that may be outside our area of expertise or the scope of our inspection.

A home inspection is intended to assist in evaluation of the overall condition of the dwelling. The inspection is based on observation of the visible and apparent condition of the structure and its components on the date of inspection.

The results of this home inspection are not intended to make any representation regarding the presence or absence of latent or concealed defects that are not reasonably ascertainable in a competently performed home inspection. No warranty or guaranty is expressed or implied.

If the person conducting your home inspection is not a licensed structural engineer or other professional whose license authorizes the rendering of an opinion as to the structural integrity of a building or its other component parts, you may be advised to seek a professional opinion as to any defects or concerns mentioned in the report.

This home inspection report is not to be construed as an appraisal and may not be used as such for any purpose.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of the inspection.

WEATHER CONDITIONS

Wet weather conditions prevailed at the time of the inspection.
The estimated outside temperature was 45 degrees Fahrenheit.

Structure

DESCRIPTION OF STRUCTURE

Foundation:	•Masonry Block •Basement and Crawl Space Configuration
Method of Inspecting Crawl Space:	•Crawled in Crawl Space
Columns:	•Masonry
Beams:	•Wood
Floor Structure:	•Wood Joist
Wall Structure:	•Wood Frame
Ceiling Structure:	•Joist
Roof Structure:	•Rafters •Collars •Knee Walls •Plywood Sheathing

STRUCTURE OBSERVATIONS / RECOMMENDATIONS

I found no major defects in the accessible structural components of the house except as noted below.

- **Normal for Age:** There are some minor settlement cracks in the foundation. This implies that some structural movement of the building has occurred. In the absence of any sign of ongoing movement, repair should not be necessary.
- **Improve:** Remove all debris and/or trash from the crawl space. Organic debris increases the risk of insect damage.
- **Repair:** A beam above the crawl space has insufficient end bearing at the foundation wall at right. Provide additional support to reduce the risk of structural movement and damage.
- **Monitor:** There is evidence of condensation and suspected mold growth on the underside of the roof sheathing. This can weaken the sheathing and ultimately necessitate replacement. During re-roofing, the sheathing should be investigated to determine if replacement is needed. Refer to other sections of this report for recommendations on reducing moisture and condensation in the building.
- **Monitor:** Termites can do a substantial amount of damage to the wood structural components of a home. Take care to control dampness in the soil around the perimeter of the home and to avoid any form of wood/soil contact. Have a certified wood-destroying pests pesticide applicator inspect the property from time to time.

LIMITATIONS OF STRUCTURE INSPECTION

As we have discussed and/or as described in your Inspection Agreement, this is a visual inspection limited in scope 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 are inspected.
- Engineering or architectural services such as calculation of structural capacities, adequacy, or integrity are not part of a home inspection.
- Finished walls, ceilings and floors in the basement restricted access to some structural components.
- Finished walls, floors and ceilings in the attic restricted access to some structural components.
- Insulation at the floor above the crawl space and basement restricted the inspection of some structural components.
- Insulation between the rafters restricted the inspection of some structural components.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of this inspection.

Roofing

DESCRIPTION OF ROOFING

Roof Style:	•Hip
Roof Covering:	•Asphalt Shingle
Roof Flashing and/or Valleys :	•Metal
Chimneys:	•Masonry •Metal-Lined
Roof Drainage System:	•Metal Gutters and Downspouts •Downspouts discharge above grade
Skylights:	•None
Method of Inspection:	•Walked on roof

ROOFING OBSERVATIONS / RECOMMENDATIONS

The roof coverings are in good condition except as noted below. The asphalt shingles are approximately 8 years old, according to the seller's disclosure. Typical life expectancy is 18 to 25 years.

- **Repair:** Minor repairs to the roofing are needed to prevent leaking. Repair or replace damaged or missing shingles, including at the eaves at front and rear. Replace loose nails. Examine all roof penetrations and seal as necessary.
- **Monitor:** I found no felt underlayment beneath the asphalt shingles. Felt underlayment provides extra protection to a roof system. It acts as a vapor barrier and reflects moisture that might be able to leak under the shingles. It also adds to the fire resistance of the roof system.
- **Monitor:** The life expectancy of the asphalt shingles may be adversely affected by moisture condensation on the underside of the plywood roof sheathing, by the lack of felt underlayment and by the presence of organic growth on the shingles. To reduce moisture in the attic, follow the recommendations made in other sections of this report.
- **Repair:** Repair the damaged cap, spalling masonry and deteriorated mortar at the masonry chimney as needed to avoid further damage. Consult a chimney expert.
 - See page 213 "*Inspecting a Masonry Chimney*" in *How To Operate Your Home*.
 - See page 215 "*Spalling(Flaking)Chimney Brick*" in *How To Operate Your Home*.
- **Repair:** Install gutters and downspouts where missing at the dormers to improve the control of storm water. Clean the gutters to avoid spilling roof runoff around the building – a potential source of water entry or water damage.
- **Monitor:** Some of the gutters, including at right, near the chimney, may not have sufficient slope to drain properly. If they do not perform as intended, the slope should be adjusted to direct water toward the downspout(s) and to avoid spilling roof runoff around the building – a potential source of water entry or water damage.
- **Repair:** The downspouts that discharge above grade should discharge water at least five (5) feet from the house. Storm water should flow away from the building at the point of discharge.
 - See page 106 "*Check Gutters and Downspouts*" in *How To Operate Your Home*.

Repair or replace damaged or missing shingles...



Repair the damaged cap, spalling masonry and deteriorated mortar at the masonry chimney...



LIMITATIONS OF ROOFING INSPECTION

As we have discussed and/or as described in your Inspection Agreement, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Interior finishes may disguise evidence of prior leaks.
- Estimates of roof age and/or remaining roof life are approximations only and do not preclude the possibility of leakage. Leakage can develop at any time and may depend on rain intensity, wind direction, ice build up, and other factors.
- Not all of the underside of the roof sheathing is inspected for evidence of leaks.
- The front porch floor restricted an inspection of the membrane below.
- The chimney/flue interior was not readily accessible, was not inspected, and could require repair. The National Fire Protection Association recommends a Level II inspection by a qualified chimney expert whenever a house is sold. A Level II inspection includes an examination of the flue interior by video camera or other means and a determination that the flue is or is not properly sized for the connected appliance(s). Such an examination is beyond the scope of a home inspection.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of this inspection.

Exterior

DESCRIPTION OF EXTERIOR

Wall Covering:	•Wood Siding
Eaves, Soffits, And Fascias:	•Wood
Exterior Doors:	•Wood •Sliding Glass
Window/Door Frames and Trim:	•Wood
Driveways:	•Gravel
Walkways:	•Pavers
Porches:	•Wood
Decks:	•Treated Wood
Steps:	•Wood •Treated Wood
Railings:	•Wood •Treated Wood
Garage:	•None
Surface Drainage:	•Level Grade at Front •Graded Away from House at Rear •Low at Flower Beds and/or Against Building

EXTERIOR OBSERVATIONS / RECOMMENDATIONS

- **Repair:** Improve caulking at joints and terminations in the siding for a better weather-seal and to reduce the risk of water penetration and damage to the building.
- **Repair:** Where the roof meets the walls of the dormers, provide additional clearance between the siding and the roof covering to reduce the risk of damage to the siding due to rot. Repair or replace damaged siding.
- **Monitor:** There is water staining at the eaves. This suggests that the roof may be leaking and/or may suffer from ice damming. Monitor this area. Insulation and ventilation improvements or other eave protection may be needed to avoid ice dam leaks. Refer also to the Roofing section of this report.
- *See page 327 "Ice Dams" in [How To Operate Your Home](#).*
- **Repair:** No flashing is visible atop windows and doors. Install flashing to reduce the risk of water penetration and damage to the building. In the absence of flashing, a caulk seal should be carefully maintained. A heightened risk of water entry and damage to the building will remain.
- *See figure X010 on page 203 "Flashing Over Window" in [How To Operate Your Home](#).*
- **Repair:** Clean, prime and paint exterior wood surfaces. Repair or replace any rotted wood that may be found while preparing surfaces for paint.
- **Safety Issue:** Repair the walkways to eliminate trip hazards due to uneven settlement.
- **Safety Issue:** Alter or replace the patio, deck and stairway railings for improved child-safety. A "child-safe" railing is one with no openings through which a four-inch sphere will pass, except that the triangular openings formed by the riser, tread and bottom rail of a stairway railing may be of such size that a six-inch sphere cannot pass. Also, eliminate open risers for improved child-safety.
- **Repair:** Nails alone do not provide a sufficient connection between the deck and the house. A skilled carpenter should be engaged to provide a proper connection using lag screws or bolts.
- **Repair:** For proper support of the deck, secure the wooden posts at top and bottom.
- **Repair:** No flashing is visible where the deck is attached to the house. Install continuous flashing with a drip edge to prevent water penetration and damage to the deck and to the building. In the worst case, absent flashing, rot may compromise the connection between the deck and the house and the deck may collapse.
- **Repair:** Improve the grading to promote the flow of storm water away from the house. The ground should slope away from the house a minimum of six-inches within the first ten feet. Six-inches of clearance should be maintained between soil level and the bottom of exterior wall siding to prevent damage to the siding and wood framing. Maintain a drainage swale (in effect, a wide and shallow ditch) at front. Drainage swales are intended to divert storm water away from the house and ultimately off the lot.
- *See page 103 "Grading to Protect the Foundation" in [How To Operate Your Home](#).*

- **Repair:** Trim tree branches and bushes away from the house to avoid damage to the building and to eliminate a pathway for wood destroying insects.

LIMITATIONS OF EXTERIOR INSPECTION

As we have discussed and/or as described in your Inspection Agreement, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- A representative sample of exterior components was inspected rather than every occurrence of components.
- The inspection does not include an assessment of geological, geotechnical, or hydrological conditions, or environmental hazards.
- Screening, shutters, awnings, or similar seasonal accessories, fences, recreational facilities, outbuildings, seawalls, break-walls, docks, erosion control and earth stabilization measures are not inspected unless specifically agreed-upon and documented in this report.
- Access below the front porch and the lower deck at rear was extremely limited.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of this inspection.

Electrical

DESCRIPTION OF ELECTRICAL

Size of Electrical Service:	•120/240 Volt Main Service - Service Size: 200 Amp
Service Drop / Lateral:	•Overhead
Service Entrance Conductors:	•Aluminum
Main Disconnect(s):	•200 Amp Breaker •Located at Main Service Panel
Service Grounding:	•Ground Connection Not Visible
Main Panel:	•Breakers •Located in Basement
Sub-Panel(s):	•Breakers •Located in Basement
Distribution Wiring:	•Copper
Wiring Method:	•Non-Metallic Cable
Receptacles:	•Grounded
Ground Fault Circuit Interrupters:	•Bathrooms •Whirlpool •Exterior •Kitchen
Smoke Detectors:	•Present

ELECTRICAL OBSERVATIONS / RECOMMENDATIONS

The size of the electrical service is sufficient for typical single family needs.

➤ See page 61 "Utility Systems – Electrical" in *How To Operate Your Home*.

- **Safety Issue:** A number of repairs and/or improvements to the electrical system are needed. Electrical defects may pose a shock and/or fire hazard. Have a registered electrician undertake the repairs recommended in the Electrical section of this report.
 - **Safety Issue:** Cover the open knock-outs in the main distribution panel for improved fire protection. Use approved covers - not tape.
 - **Safety Issue:** Cover the unused openings in the deadfront cover of the main distribution panel with filler plates designed for this purpose.
 - **Safety Issue:** Have a registered electrician rewire the sub-panel to reduce the risk of shock or electrocution. In a properly wired sub-panel, a 4-wire cable carries power to the panel and the neutral and grounding conductors are isolated from one another. With a 3-wire cable and commingled neutrals and grounds, electricity may flow where people can touch it.
 - **Safety Issue:** Abandoned wiring, such as was found above the kitchen counters and at the window seat in the breakfast area, should be removed or appropriately terminated.
 - **Safety Issue:** Repair all improper electrical connections, including behind the knee walls in the attic. All electrical connections should be made inside junction boxes fitted with cover plates.
 - **Safety Issue:** Provide ground fault circuit interrupter (GFCI) protection at the receptacle outlet in the 1st floor bathroom. For increased protection from shock or electrocution, GFCI protection should be provided for receptacle outlets serving kitchen counters and receptacles installed in bathrooms, as well as receptacle outlets located within six-feet of laundry, utility and bar sinks and at exterior, unfinished basement, crawl space and garage receptacle outlets. Except, GFCI protection is not required at outlets serving only fixed appliances (e.g.: refrigerators, freezers, washers, etc.) that are not easily moved or at outlets serving only a permanently installed fire alarm or burglar alarm system.
- See page 67 "Ground Fault Circuit Interrupters" in *How To Operate Your Home*.
- **Safety Issue:** Replace missing outlet and switch cover plates to avoid a shock hazard.
 - **Monitor:** The light inside the main entry is inoperative. If replacing the bulb(s) does not solve the problem, investigate and repair the circuit as needed.

LIMITATIONS OF ELECTRICAL INSPECTION

As we have discussed and/or as described in your Inspection Agreement, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Electrical components concealed behind finished surfaces are not inspected.
- Only a representative sampling of outlets and light fixtures are tested.
- The inspection does not include remote control devices, alarm systems and components, low voltage wiring systems and components, exterior landscape lighting or ancillary wiring systems and components not part of the primary electrical power distribution system.
- The inspector reports only on the presence or absence of smoke detectors. The building's occupants are responsible for periodic testing and battery maintenance. See "Important Information re: Smoke Detectors" below.
- Storage in the basement and on the 1st floor limited inspection of some electrical components.
- The ground connection for the electrical service was not visible at the time of the inspection.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of this inspection.

IMPORTANT INFORMATION RE: SMOKE DETECTORS

- **Smoke detectors save lives.** In new construction, the International Residential Code 2006 Edition requires that smoke alarms shall be installed in the following locations: a) in each sleeping room, b) outside of each separate sleeping area in the immediate vicinity of the bedrooms, and c) on each additional story of the dwelling, including basements but not including crawl spaces and uninhabitable attics. When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. To satisfy these requirements, new homes have hard-wired smoke detectors with battery backup. When one alarm is activated, all alarms will sound so that no matter where the smoke is first detected, occupants throughout the home are made aware. Although we are not required to meet current standards in older buildings, our homes are made safer when we do so. Owners of older homes should consider making improvements to bring their homes into closer compliance with current safety standards.
- Place detectors on the ceiling at least 4 inches from the nearest wall. If wall mounted, place them not less than 4 inches or more than 12 inches from the ceiling. This 4-inch minimum is important to keep detectors out of possible "dead air" spaces. Installing detectors near a window, door or fireplace is not recommended because drafts could blow smoke away from the unit. In rooms where the ceiling has an extremely high point, such as in vaulted ceilings, mount the detector at or near the ceiling's highest point.
- The National Fire Safety Administration recommends replacing smoke detectors that may be 10 years old or older.

Cooling / Heat Pump

DESCRIPTION OF COOLING / HEAT PUMP

Energy Source:	•Electricity
Central System Type:	•Air Source Heat Pump System •Approximate Date of Manufacture: 1985
	•Manufacturer: Carrier
Distribution Method:	•Ductwork
Auxiliary Heat:	•Electric
Other Components:	•Condensate Pump •Air Handler/Fan in Basement
	•Disposable Filter: 16 x 25 x 1

COOLING / HEAT PUMP OBSERVATIONS / RECOMMENDATIONS

- **Try this! For greater comfort and cost-efficiency...**
During the cooling season, set your thermostat between 76 and 78 degrees. Move the fan switch to the "on" position. Running the fan constantly during the cooling season provides comfort at a fraction of the cost of running the compressor. It also serves to distribute cool air evenly throughout the house. Closing vents is generally counterproductive. It is best to cool the whole house. Avoid the temptation to turn off the air conditioner and "let in some fresh air". This will also let in the humidity, and any savings will be lost in that the system will have to work "overtime" to dehumidify the house. Similarly, if you plan to be away for a few days, it may be wise to raise the thermostat a couple of degrees, but it is best to keep the system running.
➤ *See page 49 "Central Air Conditioning" in How To Operate Your Home.*
- **Important information regarding your heat pump.**
During the heating season, your heat pump operates unlike other heating systems with which you may be familiar. Your satisfaction may depend on an understanding of some of the system's unique characteristics. Equally important is an understanding of how to operate the system for maximum energy and cost efficiencies.
If you see steam rising from the outdoor unit during the heating season, don't panic. This is the heat pump operating in its defrost cycle to remove frost from the coils. A problem exists only if this occurs for too long or too often (longer than 15 minutes or more than twice an hour).
During the heating season, it may seem to you that the system is blowing cool air instead of hot. At approximately 88 degrees, the air is hot enough to warm the room to a comfortable temperature but is cooler than your body temperature and cooler than you may be used to with other heating systems.
The heat pump comes with an emergency or back-up electric resistance heater that turns on automatically when the heat pump itself cannot respond to the demand for heat. Ideally, the electric resistance heat will operate only during the defrost cycle and on the very coldest days of the winter. The secret to controlling costs is to minimize the use of the electric resistance heater. Whenever the thermostat calls for an increase of temperature of more than 2 degrees, the electric resistance heat will respond. Therefore, when raising the thermostat setting, limit it to 2 degrees at a time. With a heat pump, it is best to set the thermostat at a comfortable temperature and to leave it alone. Attempting to save money by turning the heat down at night or when leaving for the day may actually cost you money by increasing reliance on the more costly electric resistance heat.
➤ *See page 53 "Heat Pumps" in How To Operate Your Home.*
- **Material Defect:** The heat pump is inoperative. The outdoor heat pump unit is approximately 18 years old. Typical life expectancy is 10 to 15 years. Note that the typical life expectancy of the indoor unit is 20 to 30 years, so that replacement of the indoor unit is not always necessary when the outdoor unit fails. To meet ever-changing energy standards, however, you may need to replace the entire system when one or the other of the units fails. Have a qualified heating and cooling technician repair or replace the equipment as needed. Given the age of the equipment, replacement will likely be recommended.
- **Improve:** Cooling distribution relies on a central return system. For maximum efficiency, all bedroom doors should be kept open. As an alternative, install transfer grilles through the walls above or adjacent to the bedroom doors or install jump ducts through the attic using ceiling grilles to connect the bedroom to the main space or hallway.

LIMITATIONS OF COOLING / HEAT PUMP INSPECTION

As we have discussed and/or as described in your Inspection Agreement, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- The adequacy of heating and cooling supply and distribution balance is not inspected.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of this inspection.

Insulation / Ventilation

DESCRIPTION OF INSULATION / VENTILATION

Method of Inspecting Attic:	•Entered Finished Attic by Stairs •Entered Unfinished Attic Through Hatch at Knee Walls
Attic Insulation:	•± 5 ½” •Fiberglass Blankets/Batts •Kraft Paper Vapor Retarder •At Rafters
Exterior Wall Insulation:	•Not Visible
Basement Wall Insulation:	•± 3 ½” •Fiberglass Blankets/Batts •Kraft Paper Vapor Retarder •At Finished Walls
Crawl Space Insulation:	•± 5 ½” •Fiberglass Blankets/Batts •Kraft Paper Vapor Retarder •At Floor above Crawl Space
Vapor Retarders:	•Plastic at Crawl Space Floor
Roof Ventilation:	•Roof Vents •Soffit Vents
Crawl Space Ventilation:	•No Ventilation Found
Exhaust Fan/vent Locations:	•Dryer

INSULATION / VENTILATION OBSERVATIONS / RECOMMENDATIONS

- *See page 118 "Insulation and Ventilation" in How To Operate Your Home.*
- **Repair:** Insulation at attic rafters could trap moisture and cause damage to the wood structural components. For proper insulation of the unfinished attic spaces, insulation should be installed at the knee walls and the floor but not at the rafters.
- **Repair:** There is evidence of condensation and suspected mold growth on the underside of the roof sheathing. This may be due, in part, to insufficient attic ventilation. 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. A well-designed attic ventilation system combines equal amounts of low intake venting and high exhaust venting. Proper ventilation will reduce the potential for condensation and moisture accumulation within the attic. It will help to keep the house cooler during warm weather and extend the life of roofing materials. It will help reduce the potential for ice dams on the roof in the winter.
- **Monitor:** The passage of air between the soffit vents and the roof cavity may be obstructed. I saw no light at the soffit as viewed from the attic hatch. “Baffles” should be provided to hold back insulation and allow for free movement of air within the roof space. Investigate further and repair if necessary.
- **Repair:** The insulation at the floors above the basement and crawl space was installed upside down. The vapor barrier should face the conditioned space. Remove and re-install the insulation, or remove the vapor barrier and provide another means of holding the insulation in place, to prevent an accumulation of moisture that could damage the insulation and the wood structural members of the building.
- **Repair:** Replace loose, wet or damaged insulation in the floor above the crawl space and at the basement walls.
- **Repair:** Improve the moisture (vapor) barrier at the crawl space floor to cover all areas of exposed soil.
- *See page 121 "Vapor Barrier in Crawl Space" in How To Operate Your Home.*
- **Monitor:** The bathroom exhaust fan in the basement is inoperative. It may be unplugged. Remove the cover to determine if it is plugged in. Repair or replace if necessary.
- *See page 121 "Bathroom Ventilation" in How To Operate Your Home.*
- **Safety Issue:** To reduce the risk of fire, replace the plastic or foil accordion-type ducting material serving the clothes dryer exhaust with rigid or corrugated semi-rigid metal duct. Keep the vent line clean as a blocked vent line can cause a fire in the dryer.

LIMITATIONS OF INSULATION / VENTILATION INSPECTION

As we have discussed and/or as described in your Inspection Agreement, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Insulation/ventilation type and levels in concealed areas are not inspected. Insulation and vapor barriers are not disturbed and no destructive tests (such as cutting openings in walls to look for insulation) are performed.
- Potentially hazardous materials such as asbestos and urea formaldehyde foam insulation (UFFI) cannot be positively identified without a detailed inspection and laboratory analysis. This is beyond the scope of the inspection.
- An analysis of indoor air quality is not part of our inspection unless explicitly contracted-for and discussed in this or a separate report.
- Any estimates of insulation R values or depths are rough average values.
- No access was gained to the roof cavity of the sloped ceilings.
- No access was gained to the wall cavities of the home.
- Finished walls, ceilings and floors in the basement and attic restricted the inspection of insulation and ventilation.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of this inspection.

Plumbing

DESCRIPTION OF PLUMBING

Water Supply Source:	•Public Water Supply
Service Pipe to House:	•Copper
Main Water Valve Location:	•At Water Meter
Interior Supply Piping:	•Copper
Waste System:	•Public Sewer System
Drain, Waste, & Vent (DWV) Piping:	•ABS •Copper
Water Heater:	•Electric •Approximate Date of Manufacture: 2005 •Approximate Capacity (in gallons): 50 •Manufacturer: General Electric
Other Components:	•Pressure Regulator on Main Line

PLUMBING OBSERVATIONS / RECOMMENDATIONS

The water pressure supplied to the fixtures is good. Only a slight drop in flow was experienced when two fixtures were operated simultaneously. Drainage at the fixtures is functional. Water drains fast enough and completely.

- See page 71 "Water Service - Municipal" in How To Operate Your Home.
- See page 90 "Drainage, Waste and Vent System" in How To Operate Your Home.

- **Repair:** Repair or replace the leaking supply valve at the basement ceiling near the laundry.
- See page 175 "Dripping Valves - Interior" in How To Operate Your Home.
- **Repair:** Repair or replace the leaking trap under the bathroom sink in the basement.
- **Repair:** Repair the unsealed opening in the waste piping in the crawl space to prevent sewer gases from entering the home.
- **Monitor:** The water heater is approximately two years old. Typical life expectancy is 10 to 16 years. One cannot predict with certainty when replacement will become necessary.
- **Safety Issue:** Install discharge piping to serve the temperature/pressure relief (TPR) valve for the water heater. The TPR valve is an important safety feature that keeps the water heater from exploding if the temperature and/or the pressure in the water heater build beyond what it can safely contain. This TPR valve needs an extension pipe that is no smaller than the outlet of the valve, which will divert pressurized scalding water to the floor, or to an indirect waste receptor, in case of a discharge. It should be metal pipe or other material rated and approved for this purpose, discharging full-size through an air gap located in the same room as the water heater, installed to flow by gravity and terminating within 6 inches of the floor or waste receptor. The end of the pipe must be visible and shall not be threaded at the bottom or capped.
- See page 77 "Water Heaters" in How To Operate Your Home.
- **Repair:** Provide a caulk seal where the bathtub meets the bathroom floor to prevent water penetration and damage to the building. Use a "Kitchen and Bath" caulk that resists mildew growth.
- **Repair:** The whirlpool bath was extremely noisy at the time of the inspection. Replace the pump or improve the installation and/or insulation as needed to reduce the noise. Consult a plumber and/or the whirlpool manufacturer or dealer.
- See page 137 "Whirlpool Bath" in How To Operate Your Home.
- **Improve:** Install braided metal hoses at washing machine connections to reduce the risk of leaks due to burst hoses.

LIMITATIONS OF PLUMBING INSPECTION

As we have discussed and/or as described in your Inspection Agreement, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- The inspector is not required to determine whether water supply and waste disposal systems are public or private. If described above, the inspector has made an assumption, not verified, about these systems.

- Portions of the plumbing system concealed by finishes and/or storage (below sinks, etc.), below the structure, or beneath the ground surface are not inspected. It may be wise to have the sewer line inspected with the use of a video camera. Such an examination is beyond the scope of a home inspection.
- Water quantity and water quality are not tested unless explicitly contracted-for and discussed in this or a separate report.
- Clothes washing machine connections are not inspected. Shut-off valves are not operated during the inspection.
- Interiors of flues or chimneys that are not readily accessible are not inspected.
- Water conditioning systems, solar water heaters, fire and lawn sprinkler systems, wells and private waste disposal systems are not inspected unless explicitly contracted-for and discussed in this or a separate report.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of this inspection.

Interior

DESCRIPTION OF INTERIOR

Wall And Ceiling Materials:	•Plaster/Drywall •Tile
Floor Surfaces:	•Carpet •Tile •Wood •Concrete
Window Type(s):	•Double/Single Hung
Window Glazing:	•Double Glazed
Doors:	•Wood
Kitchen Appliances:	•Electric Range •Microwave Oven •Dishwasher •Garbage Disposal •Refrigerator •Non-Venting Fan at Microwave
Laundry Facility:	•Clothes Washer •Clothes Dryer •240-Volt Circuit for Dryer •Dryer Vented to Building Exterior •120-Volt Circuit for Washer •Hot and Cold Water Supply for Washer •Waste Standpipe for Washer Discharge
Fireplaces:	•Fireplace Insert
Vent Systems, Flues, Chimneys:	•Masonry Chimney – Lined

INTERIOR OBSERVATIONS / RECOMMENDATIONS

- **Normal for Age:** There are typical minor cracks and imperfections in the walls and ceilings.
- **Repair:** Replace rotted wood and damaged drywall and insulation at the basement walls at front and at left. Refer to this and other sections of this report for recommendations on controlling moisture in the basement.
- **Repair:** The tile floor is cracked and there is a “hump” in the floor in the kitchen.
- **Repair:** Replace missing baseboards and trim.
- **Safety Issue:** Replace the window in the smaller bedroom in the basement with one that provides a second means of escape and rescue in case of fire or other emergency.
- **Repair:** Trim or adjust interior doors as necessary for proper fit and function.
- **Safety Issue:** Double cylinder locks may pose a hazard by preventing safe egress in the event of a fire. Remove them from entry doors and replace them with locks that open without a key from the inside.
- **Safety Issue:** For improved safety, provide a handrail for the open side of the stairway to the finished attic. A “child-safe” stairway railing is one with no openings through which a four-inch sphere will pass, except that the triangular openings formed by the riser, tread and bottom rail may be of such size that a six-inch sphere cannot pass.
- **Repair:** The basement and the crawl space show evidence of moisture penetration, including rot at wall framing and damaged drywall and insulation. There is standing water in the crawl space. The vast majority of basement leakage problems are the result of insufficient control of storm water at the surface. The ground around the house should be sloped to encourage water to flow away from the foundations. Seals should be maintained, where hard surfaces meet the walls of the house. Gutters and downspouts should act to collect roof water and discharge the water at least five (5) feet from the foundation, or into a functional storm sewer. Downspouts that are clogged or broken below grade level, or that discharge too close to the foundation, are a common source of basement leakage. Please refer to the Roofing and Exterior sections of the report for specific recommendations.
Lot and roof drainage improvements should be undertaken as a first step. In the event that basement leakage problems continue despite these efforts, excavation, damp-proofing and/or the installation of drainage tiles may be undertaken as a last resort. Your plans for using the basement may influence the approach taken to curing any leakage that is experienced.
- See page 285 "Keep Your Basement Dry" in *How To Operate Your Home*.
- **Monitor:** I suspect mold growth at the underside of roof sheathing, at the floor framing above the crawl space and at the damaged wood-framed walls in the basement. Testing for mold is beyond the scope of this inspection. Information on the potential ill-effects of mold, how to clean up residential mold problems and how to prevent mold growth is available from the U.S. Environmental Protection Agency (EPA). Visit us on-line at www.helpfulhomeinspectors.com/links.htm for links to the EPA web site.
- See page 32 "Mold and Mildew" in *How To Operate Your Home* for additional mold information resources.

- **Repair:** The kitchen appliances are old. Anticipate replacement. The garbage disposal is inoperative.
 - See page 87 "Garbage Disposal" in *How To Operate Your Home*.
- **Safety Issue:** Have the fireplace insert and chimney cleaned and inspected prior to operation. Verify compliance with the manufacturer's recommendations for installation, clearance from combustibles and safe operation prior to operating the fireplace insert.
 - See page 136 "Fireplace Cleaning" in *How To Operate Your Home*.

LIMITATIONS OF INTERIOR INSPECTION

As we have discussed and/or as described in your Inspection Agreement, this is a visual inspection limited in scope by (but not restricted to) the following conditions

- Description of interior finishes may be limited to predominant materials rather than an exhaustive list of materials used.
- Furniture, storage, appliances and/or wall hangings are not moved to permit inspection and may block defects.
- Carpeting, window treatments, central vacuum systems, household appliances, recreational facilities, paint, wallpaper, and other finish treatments are not inspected.
- Inspection of household appliances is beyond the scope of this inspection. If appliances are turned on during the inspection, this is done as a courtesy to confirm basic operation only. No report is made as to the adequate function of household appliances. Appliances present in the home at the time of the inspection may or may not be included in the sale. Please refer to your agreement for sale and the seller's disclosure.
- Condensation or "fogging" between the panes of glass is an indication of failed seals in insulating glass units. Not all windows with failed seals exhibit these symptoms at all times. Also, dirty windows, window treatments, furniture, storage, etc. may hide evidence of failed seals in insulating glass.

Please refer to the Inspection Agreement for a detailed explanation of the scope, limitations and exclusions of this inspection.

Summary

IMPROVEMENT RECOMMENDATION HIGHLIGHTS / SUMMARY

The following is a synopsis of the Material Defects, Safety Issues and other potentially significant improvements that should be budgeted for over the short term. Refer to the body of this report for further details on these and other recommendations. Beware that issues that are important to you may be discussed in the main body of the report but omitted in the Summary. Please note that significant improvements, outside the scope of this inspection, may also be necessary.

- **Repair:** A beam above the crawl space has insufficient end bearing at the foundation wall at right. Provide additional support to reduce the risk of structural movement and damage.
- **Repair:** Minor repairs to the roofing are needed to prevent leaking. Repair or replace damaged or missing shingles, including at the eaves at front and rear. Replace loose nails. Examine all roof penetrations and seal as necessary.
- **Repair:** Repair the damaged cap, spalling masonry and deteriorated mortar at the masonry chimney as needed to avoid further damage. Consult a chimney expert.
- **Repair:** Improve caulking at joints and terminations in the siding for a better weather-seal and to reduce the risk of water penetration and damage to the building.
- **Repair:** Where the roof meets the walls of the dormers, provide additional clearance between the siding and the roof covering to reduce the risk of damage to the siding due to rot. Repair or replace damaged siding.
- **Repair:** No flashing is visible atop windows and doors. Install flashing to reduce the risk of water penetration and damage to the building. In the absence of flashing, a caulk seal should be carefully maintained. A heightened risk of water entry and damage to the building will remain.
- **Repair:** Clean, prime and paint exterior wood surfaces. Repair or replace any rotted wood that may be found while preparing surfaces for paint.
- **Safety Issue:** Repair the walkways to eliminate trip hazards due to uneven settlement.
- **Safety Issue:** Alter or replace the patio, deck and stairway railings for improved child-safety. A “child-safe” railing is one with no openings through which a four-inch sphere will pass, except that the triangular openings formed by the riser, tread and bottom rail of a stairway railing may be of such size that a six-inch sphere cannot pass. Also, eliminate open risers for improved child-safety.
- **Repair:** Nails alone do not provide a sufficient connection between the deck and the house. A skilled carpenter should be engaged to provide a proper connection using lag screws or bolts.
- **Repair:** For proper support of the deck, secure the wooden posts at top and bottom.
- **Repair:** No flashing is visible where the deck is attached to the house. Install continuous flashing with a drip edge to prevent water penetration and damage to the deck and to the building. In the worst case, absent flashing, rot may compromise the connection between the deck and the house and the deck may collapse.
- **Repair:** Trim tree branches and bushes away from the house to avoid damage to the building and to eliminate a pathway for wood destroying insects.
- **Safety Issue:** A number of repairs and/or improvements to the electrical system are needed. Electrical defects may pose a shock and/or fire hazard. Have a registered electrician undertake the repairs recommended in the Electrical section of this report.
- **Material Defect:** The heat pump is inoperative. The outdoor heat pump unit is approximately 18 years old. Typical life expectancy is 10 to 15 years. Note that the typical life expectancy of the indoor unit is 20 to 30 years, so that replacement of the indoor unit is not always necessary when the outdoor unit fails. To meet ever-changing energy standards, however, you may need to replace the entire system when one or the other of the units fails. Have a qualified heating and cooling technician repair or replace the equipment as needed. Given the age of the equipment, replacement will likely be recommended.
- **Repair:** Insulation at attic rafters could trap moisture and cause damage to the wood structural components. For proper insulation of the unfinished attic spaces, insulation should be installed at the knee walls and the floor but not at the rafters.
- **Repair:** There is evidence of condensation and suspected mold growth on the underside of the roof sheathing. This may be due, in part, to insufficient attic ventilation. 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. A well-designed attic ventilation system combines equal amounts of low intake venting and high exhaust venting. Proper ventilation will reduce the potential for

condensation and moisture accumulation within the attic. It will help to keep the house cooler during warm weather and extend the life of roofing materials. It will help reduce the potential for ice dams on the roof in the winter.

- **Repair:** The insulation at the floors above the basement and crawl space was installed upside down. The vapor barrier should face the conditioned space. Remove and re-install the insulation, or remove the vapor barrier and provide another means of holding the insulation in place, to prevent an accumulation of moisture that could damage the insulation and the wood structural members of the building.
- **Repair:** Replace loose, wet or damaged insulation in the floor above the crawl space and at the basement walls.
- **Repair:** Improve the moisture (vapor) barrier at the crawl space floor to cover all areas of exposed soil.
- **Safety Issue:** To reduce the risk of fire, replace the plastic or foil accordion-type ducting material serving the clothes dryer exhaust with rigid or corrugated semi-rigid metal duct. Keep the vent line clean as a blocked vent line can cause a fire in the dryer.
- **Repair:** Repair or replace the leaking supply valve at the basement ceiling near the laundry.
- **Repair:** Repair or replace the leaking trap under the bathroom sink in the basement.
- **Repair:** Repair the unsealed opening in the waste piping in the crawl space to prevent sewer gases from entering the home.
- **Safety Issue:** Install discharge piping to serve the temperature/pressure relief (TPR) valve for the water heater. The TPR valve is an important safety feature that keeps the water heater from exploding if the temperature and/or the pressure in the water heater build beyond what it can safely contain. This TPR valve needs an extension pipe that is no smaller than the outlet of the valve, which will divert pressurized scalding water to the floor, or to an indirect waste receptor, in case of a discharge. It should be metal pipe or other material rated and approved for this purpose, discharging full-size through an air gap located in the same room as the water heater, installed to flow by gravity and terminating within 6 inches of the floor or waste receptor. The end of the pipe must be visible and shall not be threaded at the bottom or capped.
- **Repair:** Provide a caulk seal where the bathtub meets the bathroom floor to prevent water penetration and damage to the building. Use a "Kitchen and Bath" caulk that resists mildew growth.
- **Repair:** The whirlpool bath was extremely noisy at the time of the inspection. Replace the pump or improve the installation and/or insulation as needed to reduce the noise. Consult a plumber and/or the whirlpool manufacturer or dealer.
- **Repair:** Replace rotted wood and damaged drywall and insulation at the basement walls at front and at left. Refer to this and other sections of this report for recommendations on controlling moisture in the basement.
- **Repair:** The tile floor is cracked and there is a "hump" in the floor in the kitchen.
- **Repair:** Replace missing baseboards and trim.
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THANKS, AGAIN.

If you have any questions, now or in the future, please call our office.
Once again, we thank you for choosing **Helpful Home Inspectors, LLC**.