### Hurlbert Home Inspection, LLC Property Inspection Report





14407 Coachway Drive, Centreville, VA 20120 Inspection prepared for: Our Favorite Client Date of Inspection: 5/7/2020 Time: 10:00 Age of Home: 2000 Approx 20 yrs old Size: Approx 3500 sq ft Weather: Clear 65 to 75 deg

> Inspector: Seth Hurlbert VA License #212 NRS, ASHI # 211818 14407 Coachway Drive, Centreville, VA 20120 Phone: 703-830-2229 Email: hhi@hhinsp.com www.hhinsp.com

# **Report Summary**

HVAC-1		
Page 12 Item: 1	HVAC Age and Location	• This unit does not appear to have been serviced recently. We recommend that it be serviced and inspected by a licensed HVAC contractor.
Page 13 Item: 5	Filter	• The filter is damaged and not covering the opening to the air handler. The filter should be replaced and properly installed to keep the equipment clean.
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HVAC-2		
Page 16 Item: 1	HVAC Age and Location	• The heating and cooling system is functional, but beyond its design life. Therefore, it will need to be more closely monitored, serviced bi-annually, and have its filters changed every month. You should budget for its replacement.
Basement Structu	ire	
Page 19 Item: 2	Foundation Wall Type	• The cracks in the basement foundation wall indicate significant movement. This can adversely affect the support of the structure. You should consult with a structural engineer, foundation contractor or other qualified professional as to what repairs are needed to ensure that the structure is properly supported.



#### Water Heating

Page 24 Item: 1	
	span. It should not be expected to last much longer.
	Although there is no way to know how much longer it will last.
	You should monitor it for signs of rust and leaking, as these
	are signs that it will need to be replaced.



#### Main Electrical Panel

Page 28 Item: 4	Fuses	• One or more of the breakers in the panel were hot. Excess heat is typically symptomatic of a problem with the breakers or the wiring. This can cause damage to the equipment and potentially unsafe conditions. This should be evaluated by a
		licensed electrician.

Smoke & CO Det	ectors	tin
Page 29 Item: 2	Carbon Monoxide Detectors	• No carbon monoxide monitors were located in this house. Since there are combustion appliances present it is recommended that there be a CO monitor. Additionally, CO monitors are now required in all new construction, and current code requires one on each level of the house. You may wish

	to upgrade for safety reasons.           Master Bedroom	
Page 30 Item: 1Windows• One or more windows have a broken seal between the transmission of glass and should be replaced. This is evident from fogging, or condensation forming between the panes of glass that confirms that the seal has failed. this will not only affect it's appearance, but also it's insulating ability.		



Master Bath

Page 31 Item: 7 Shower Stall	• Caulking is needed around the shower enclosure. This is needed to keep water from getting into the wall around and floor in front of the enclosure. If water gets into these areas, it can cause the subfloor and supporting structure to deteriorate.
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Page 3 of 55



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Hall Bath
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Page 33 Item: 4	• The sink employs a flexible drainpipe that could contribute to blockages and leaks. It should be replaced by a strait smooth walled pipe. The ridges can trap debris that will clog the drain. They also have a tendency to crack and leak.



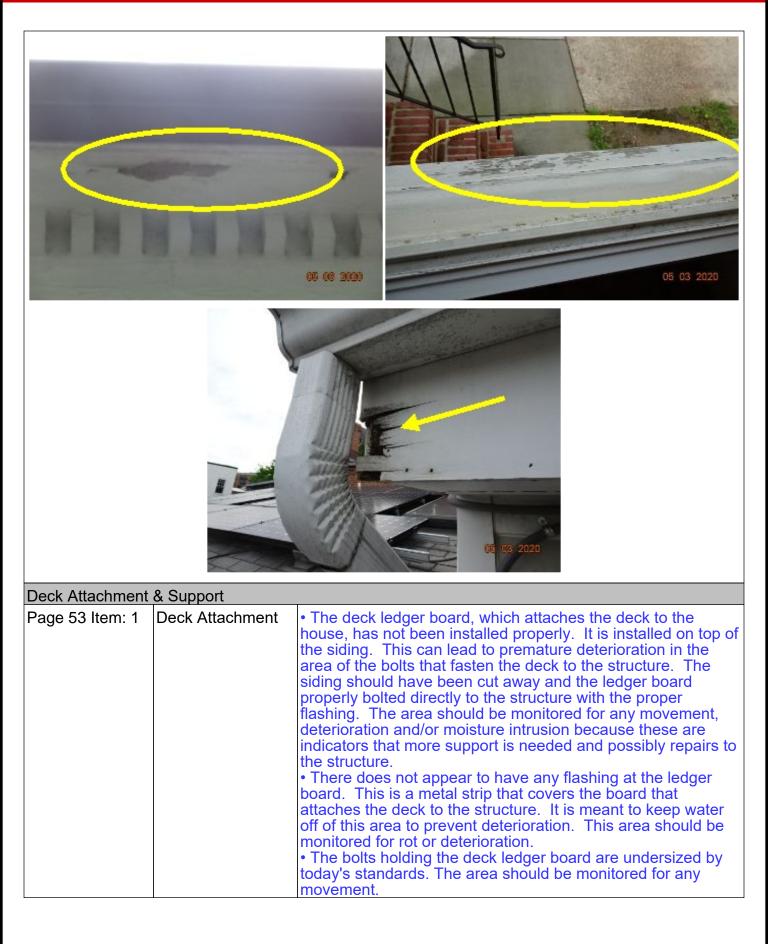
Powder Room

Page 34 Item: 4	& Faucet	<ul> <li>The sink employs a flexible drainpipe that could contribute to blockages and leaks. It should be replaced by a strait smooth walled pipe. The ridges can trap debris that will clog the drain. They also have a tendency to crack and leak.</li> <li>The sink drain is slow or partially blocked and should be serviced, to ensure that the blockage has not progressed beyond the trap and involved the main waste line.</li> </ul>

	pop le	
<u>Kitchen Applianc</u> Page 35 Item: 2	es Cooktop	One or more of the burners of the cooktop did not come on
Page 36 Item: 5	Microwave	• The microwave does not appear to be on a separate breaker in the main electrical panel. The microwave is normally required to be on a separate breaker so as to keep from over loading the circuit. The microwave should be properly rewired

Page 40 Item: 3	Chimney Flue	<ul> <li>Since we cannot know how the chimney was previously used or maintained, we suggest that the fireplace and chimney be given a Class II inspection by a qualified professional. This can help to determine if the chimney is in proper working condition. You may wish to have this done before the end of you contingency period as some conditions in the hearth or chimney can be a safety hazard and/or expensive to repair.</li> <li>Also, since any chimney can be a fire hazard it is recommended that you have the chimney inspected by a trained chimney inspector once a year. Or if there is any reason to think that there could possibly be any problems with the chimney or any of it's components.</li> <li>This chimney flue does not appear to be excessively dirty. But, we do recommend that it be inspected and cleaned by a licensed chimney sweep at least once a year. Since we do not know when this one was last inspected it is recommenced that it be inspected before it is used.</li> </ul>
Page 41 Item: 6	Chimney Top	• The crown, which is designed to seal the chimney wall and shed rainwater, is cracked and should be sealed.
Office		
Page 41 Item: 1	Windows	• One or more windows have a broken seal between the two panes of glass and should be replaced. This is evident from fogging, or condensation forming between the panes of glass, that confirms that the seal has failed. this will not only affect it's appearance, but also it's insulating ability.

Attic Ventilation	1	
Page 44 Item: 2	Exhaust Vents	• The kitchen exhaust duct should be extended to an exterior port, through an outside wall or through the roof. If not vented properly they can allow excessive moisture to build up in the attic. This can damage the components of the roof and attic and allow mold to grow in the area.
Wall Finish	L. Faraia and	
Page 49 Item: 3	House Fascia and Trim	• The wooden fascia and trim on the outside of the house has peeling paint and rot. Any rotten or damaged wood should be replaced and repainted. This may be an indication of delayed or poor maintenance. There may be other areas that need repair that were not observed. Also the amount and depth of any moisture penetration cannot be determined until the damaged area is removed.





The bolts holding the deck ledger board are The deck ledger board, which attaches the deck undersized by today's standards. The area should to the house, has not been installed properly. It is installed on top of the siding. This can lead to be monitored for any movement. premature deterioration in the area of the bolts that fasten the deck to the structure. The siding should have been cut away and the ledger board properly bolted directly to the structure with the proper flashing. The area should be monitored for any movement, deterioration and/or moisture intrusion because these are indicators that more support is needed and possibly repairs to the structure. Page 53 Item: 2 • The deck beams are improperly attached to the support Deck Support posts. The posts must fully support the downward weight of the deck. As such, beams attached to the sides of the support posts, as opposed to resting in notches in the post



The deck beams are improperly attached to the support posts. The posts must fully support the downward weight of the deck. As such, beams attached to the sides of the support posts, as opposed to resting in notches in the post itself, cannot be expected to fully support the weight of the deck. This is a significant safety hazard and should be corrected to avoid potential deck collapse.

The post holding up the deck are made with 4 x 4 post. The current minimum acceptable size is a 6 x 6. More support should be added to keep the deck safe.

Summary Comment		
Page 54 Item: 1	Summary Comment	• The summary presented on site of the inspection is a preliminary report. The report that is emailed to you is the final report. There may be additions or deletions to the preliminary Summary Report. Please use the final, emailed report as your final report.

## **General Comments**

#### 1. Type of Residence

#### Description:

• This residence is a single family residence. This means that the house is on its own lot and is not connected to any other homes.

• This residence consists of two levels with a basement.

• The property was occupied at the time of the inspection. The furniture and personal belonging can obscure some areas of the home. We will make every effort to inspect all assessable areas.

#### 2. In Attendance

General Information:

In attendance at the inspection were Buyer, Buyer's Agent,

#### 3. Disclaimer

General Information:

• There is a great deal of information available about fireplaces and chimneys, both gas and wood burning. A great deal of the fireplace and chimney can not be observed during the inspection and they are not normally in use during the inspection. You can get more information about these combustion appliances and professional inspectors from many sources, Here are just a few: Chimney Safety Institute of America at www.csia.org or (317) 837-5362.

Since we cannot know how the chimney was previously used or maintained, nor can we see the full length of most chimneys visually, we suggest that the fireplace and chimney be given a Class II inspection by a qualified professional. This can help to determine if the chimney is in proper working condition. You may wish to have this done before the end of you contingency period as some conditions in the hearth or chimney can be a safety hazard and/or expensive to repair. Also, since any chimney can be a fire hazard it is recommended that you have the chimney inspected by a trained chimney inspector once a year, or if there is any reason to think that there could possibly be any problems with the chimney or any of it's components. You can find Certified Chimney Inspectors at http://f-i-r-e-service.com/mainframe.html. The National Fireplace Institute can be found at http://www.nficertified.org/index.html.

• Radon is a naturally occurring gas formed as a byproduct of the radioactive breakdown of uranium in the soil. As a gas, it travels up through the ground via whatever path of least resistance it finds. Consequently, it is extremely difficult to successfully predict where it will occur in high concentrations. The EPA recommends having all homes tested for radon periodically, and specifically when being bought or sold. We support this recommendation, as we feel it is always better to know than not, and remediation is typically easy and fairly inexpensive.

#### 4. Renovation/Additions

General Information:

The property has been renovated or remodeled. Therefore, you should request documentation that would include permits and any warranties or guarantees that might be applicable, because we do not approve or tacitly endorse any work done without permits, and latent defects could exist.
For information on building permits in Fairfax County, contact the Permit Application Center at 703-222-0801.

#### 5. Termites and Pest

#### Description:

• It is recommended that you have a termite and woodborer inspection preformed before the close of escrow. This is to ensure that there is not a current problem with termites or woodborer insects. No woodborer insects or termites were observed at this time, unless noted elsewhere in the report. But this does not relieve the need for a licensed inspection.

#### 6. Additional Tests

Description:

• A radon test was performed by HHI at the time of the inspection.

# HVAC-1

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

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

We recommend that all HVAC systems be serviced by a licensed technician at least once a year. Frequently they will offer a service contract that includes a semiannual servicing. Different plans will include different levels of service.

#### 1. HVAC Age and Location

General Information:

• Any HVAC system should be serviced at least once a year (twice yearly is recommended). This is to keep it running safely and efficiently. This service typically includes checking the control circuits and devices, coolant levels, the condensate drain and a light cleaning. It may also periodically need a thorough cleaning.

• The first HVAC system in the home has the air handler, the heating unit and the evaporator, located in the basement. The age of this unit is approximately 9 years old. The condenser, or outside unit, is located outside, next to the house. The age of the outside unit is approximately 9 years.

• The healing and cooling system is in the mid-range of its design life and will need to be more closely monitored, serviced bi-annually, and should have its filter changed every month. Observations:

• This unit does not appear to have been serviced recently. We recommend that it be serviced and inspected by a licensed HVAC contractor.





#### 2. Fuel Type for the Heating System

Description:

• The fuel used for heating in this system is natural gas. This is provided through underground pipelines by the local utility company.

#### 3. Fuel Used for Cooling

Description:

• The energy for the cooling system is electric.

#### 4. System Capacity

Description:

• The approximate BTU rating of this unit is 70,000.

#### 5. Filter

**Description:** 

• The filter in the heating and/or air conditioning system should be kept clean. This will provide cleaner air in the house and keep the system working properly. A dirty filter forces the fan to work harder than it should, thereby using more power. A dirty filter can allow dirt into the air circulation equipment that can cause premature failure. It is recommended that most filter be changed or cleaned monthly.

• This system has a large disposable filter. These do not have to be changed as often as the smaller ones, but should be changed approximately every six months. They often have to be purchased from a HVAC dealer and often are not available at hardware stores

Observations:

• The filter is damaged and not covering the opening to the air handler. The filter should be replaced and properly installed to keep the equipment clean.



#### 6. Air Handler

Description:

• The air handler is functional. This is the part of the furnace that houses the fan that circulates the air for the heating unit. The cooling unit is usually either inside the air handlers or mounted just after the air handler.

#### 7. Burner Assembly

#### Description:

• The burner assembly and heat exchanger appear to be in good condition. Only a small portion of the heat exchanger can be observed. It should be checked periodically by a licensed HVAC technician, who can do a more thorough check of the unit.

#### 8. Combustion Air

#### **Description:**

• <u>Combustion air</u> is the air that is drawn in by a gas burning appliance to fuel the combustion. If there is insufficient combustion air, the appliance may not burn properly which can create carbon monoxide or the vent system may not allow the byproducts of the combustion to vent to the outside properly. Either of these can be a very serious safety hazard.

• The combustion air vents appear to be adequate to support complete combustion.

#### 9. Exhaust Venting

Description:

• The pipe that carries the exhaust gases from the furnace to the outside of the house is a double walled metal pipe called a B-vent. The furnace will be connected to it by a single walled pipe that may get hot while the furnace is on. For safety reasons, any combustible material should be kept away from these pipes.

• The vent pipe has no visual deficiencies and appears to be in working order.

#### 10. Evaporator

#### Description:

• The evaporator for the air conditioner is the part that gets cold. Air is blown across it and distributed around the house. It is connected to the outside condenser by the refrigerant lines. It should be kept clean to keep the unit operating efficiently. It is often installed above the air handler and is difficult to see if it is clean.

#### 11. Condenser Coil

Description:

• The condensing coil responded to the thermostat and appears to be functional.



#### 12. Refrigerant Lines

Description:

• The refrigerant lines are in acceptable condition. They are properly insulated and do not appear to have any problems.

#### 13. Ductwork

**Description:** 

• The inside of the duct can not be observed as part of this inspection. This area can collect a significant amount of dust and debris over time. Having the ducts cleaned on a regular basis is recommended. How often they need to be cleaned depends on how well the filter in the system has been maintained and the lifestyle of the occupants.

• The ductwork includes a rigid sheet metal type ducting. To distribute the conditioned air properly they should be sealed to prevent leaks and properly supported. If they are in an unconditioned area they should be insulated.

#### 14. Thermostat

Description:

• The thermostat is functional.

#### 15. Condensate Drain

Description:

• The condensate from the evaporator drains to a floor drain.

## HVAC-2

#### 1. HVAC Age and Location

General Information:

• The second HVAC system in the home has the air handler, the heating unit and the evaporator, located in the attic. The age of this unit is approximately 20 years old. The condenser, or outside unit, is located outside, next to the house. The age of the outside unit is approximately 20 years. Observations:

• The heating and cooling system is functional, but beyond its design life. Therefore, it will need to be more closely monitored, serviced bi-annually, and have its filters changed every month. You should budget for its replacement.

#### 2. Fuel Type for the Heating System

Description:

• The heating fuel for this system is electricity. It is a heat pump with a backup heating element. These elements are strait resistance heating elements.

#### 3. Fuel Used for Cooling

Description:

• The energy for the cooling system is electric.

#### 4. System Capacity

Description:

• This unit is rated as approximately 2.5 tons.

#### 5. Filter

#### **Description:**

• This system has a disposable filter that should be changed approximately once a month. They can usually be purchased at most hardware stores.



#### 6. Air Handler

#### Description:

• The air handler is functional. This is the part of the furnace that houses the fan that circulates the air for the heating unit. The cooling unit is usually either inside the air handlers or mounted just after the air handler.

#### 7. Heating Elements

**Description:** 

• Electric furnaces and heat pumps utilize heating elements to produce large amounts of heat on demand. These elements function through resistance heating, being larger versions of toasters or cloths dryers. They are not very efficient and use large quantities of electricity.

• The auxiliary heating elements did come on and produce heat.

#### 8. Evaporator

**Description:** 

• The evaporator is the part of the heat pump that get warm or cold to condition the air for the residence. It is connected to the outside condenser by the refrigerant lines. It should be kept clean so the unit will operate efficiently.

#### 9. Condenser Coil

Description:

• The condensing coil responded to the thermostat and appears to be functional.

#### 10. Refrigerant Lines

Description:

• The refrigerant lines are in acceptable condition. They are properly insulated and do not appear to have any problems.

#### 11. Ductwork

Description:

• The ductwork includes a flexible plastic/fiberglass type of ducting. To distribute the conditioned air properly they should be sealed to prevent leaks and properly supported. If they are in an unconditioned area they should be insulated.

#### 12. HVAC Drip Pan

Description:

• The drip pan underneath the air handler is used to catch any condensate that leaks out, in case the main condensate drain malfunctions. It will normally drain to a location that will be noticed so that you will know that the main drain is not working. It will sometimes also have a float switch installed so that if both drains malfunction the unit will shutdown.

• The drip pan is functional.

#### 13. Thermostat

Description:

• The thermostat is functional.

• The thermostat controlling this system is a standard manual type.

#### 14. Condensate Drain

Description:

• The condensate from the evaporator drains to a floor drain.

# **Structural Elements**

Foundations normally consist of poured concrete that is below the frostline and therefore not observable. The foundation wall that are in the basement or crawlspace will be inspected for any sign of foundation problems.

Note that minor settlement or "hairline" cracks in garage or basement slabs and foundation walls are not noted in an inspection, as they are normal to properties of any age. They should, however, be

monitored for expansion and sealed as necessary. If possible we will describe the type of foundation and support for the residence and report on any visual defects. If there are concerns about the foundation or structural aspects of the home, you may wish to consult with a structural engineer. Residential inspections only include garages and carports that are physically attached to the house. They are not considered habitable, and conditions are reported accordingly.

Inspectors are not required to enter any crawlspace areas that are not readily accessible, less than 24" clearance, wet (electrical shock hazard), or where entry could cause damage or pose a hazard to the inspector.

This report describes the foundation, floor, wall, ceiling and roof structures and the method used to inspect any accessible under floor crawlspace areas. Inspectors inspect and probe the structural components of the home, including the foundation and framing, where deterioration is suspected or where clear indications of possible deterioration exist. Probing is not done when doing so will damage finished surfaces or when no deterioration is visible or presumed to exist. Inspectors are not required to offer an opinion as to the structural adequacy of any structural systems or components or provide architectural services or an engineering or structural analysis of any kind. Despite all efforts, it is impossible for a home inspection to provide any guaranty that the foundation, and the overall structure and structural elements of the building is sound.

#### 1. Condition of Floor Structure

#### Description:

• The floor structure, that can be seen, includes structural steel beams and conventional lumber sheathed with plywood or OSB. This means that the floors inside of the foundation walls are supported by steel beams which support floor joist that are made with conventional lumber, such as 2x6s, 2x8, 2x12 and such. These support the sub-floor of plywood or OSB.



#### 2. Condition of Walls

Description:

• The walls appear to be conventionally framed with wooden studs.

#### 3. Condition of Roof Structure

#### Description:

• The roof framing consists of a factor- built truss system, comprised of components called chords, webs, and struts that are connected by wood or metal gussets nailed or glued in place. Each component of the truss is designed for a specific purpose, and cannot be removed or modified without compromising the integrity of the entire truss. The lowest component, which is called the chord and to which the ceiling is attached, can move by thermal expansion and contraction and cause creaking sounds, which are more pronounced in the mornings and evenings along with temperature changes. Such movement has no structural significance, but can result in small cracks or divots in the drywall or plaster.

## **Basement Structure**

#### 1. Basement Foundation

#### Description:

 This residence has a raised foundation. Such foundations permit access, and provide a convenient area for the distribution of water pipes, drain pipes, vent pipes, electrical conduits, and ducts. Raised foundations are far from uniform, but most include concrete footings and walls that extend above the ground with anchor bolts that hold the house onto the foundation. Our inspection of these foundations conforms to industry standards, which is that of a generalist and not a specialist, and we do not use any specialized instruments to establish that the structure is level. We typically enter all accessible areas, to confirm that foundations are bolted and to look for any evidence of structural deformation or damage, but we frequently do not comment on minor deficiencies, such as on commonplace settling cracks in the stem walls and slight deviations from plumb and level in the intermediate floor framing, which would have little structural significance. Interestingly, there is no absolute standard for evaluating cracks, but those that are less than 1/4" and which do not exhibit any vertical or horizontal displacement are generally not regarded as being structurally relevant. Nevertheless, all others should be evaluated by a specialist. However, in the absence of any major defects, we normally do not recommend that you consult with a foundation contractor, a structural engineer, or a geologist. This should not deter you, however, from seeking the opinion of any such expert should you wish to do so.

These areas are often finished into additional living area. This makes inspecting much of the plumbing, ductwork, electrical wiring, foundation walls and structural members inaccessible for inspection.

• The residence is built on a foundation that consist of concrete footers that have a cinderblock wall atop the footers. The house is then built on top of the block wall.

#### 2. Foundation Wall Type

#### Observations:

• The cracks in the basement foundation wall indicate significant movement. This can adversely affect the support of the structure. You should consult with a structural engineer, foundation contractor or other qualified professional as to what repairs are needed to ensure that the structure is properly supported.



#### 3. Sump Pump

Description:

• There is a sump pump that is installed to remove water from the foundation area. This type of pump is controlled by a float switch. It is best if the water is discharged well away from the house and not next to the foundation wall.

Since these pump are electrically operated, you may wish to install a battery back-up that will operate the pump in the event of a power failure. Water sensors can also be installed to sound an alarm if the water rises past a certain level.

• This residence appears to be built with a drain system under the basement slab that directs water to a sump equipped with a sump pump. The sump pump was tested and appears to be working properly.



#### 4. Lights & Plugs

Description:

- The lights are functional, with no visible defect.
- The outlets are functional.

## **Crawlspace Structure**

#### 1. Crawlspace Condition

#### Description:

• The crawlspace appears to be properly accessible and in acceptable condition, unless noted in this report.

#### 2. Foundation Wall Type



#### 3. Sump Pump

Description:

• There is a sump pump that is installed to remove water from the foundation area. This type of pump is controlled by a float switch. It is best if the water is discharged well away from the house and not next to the foundation wall.

Since these pump are electrically operated, you may wish to install a battery back-up that will operate the pump in the event of a power failure. Water sensors can also be installed to sound an alarm if the water rises past a certain level.

• This residence appears to be built with a drain system under the basement slab that directs water to a sump equipped with a sump pump. The sump pump was tested and appears to be working properly.

#### 4. Crawlspace Insulation

Description:

The walls of the crawlspace are well insulated.

#### 5. Crawlspace Venting

Description:

• The crawlspace is not vented, but is insulated along the exterior walls and is heated and cooled by the same system as the house.

## **General Plumbing**

#### 1. Plumbing Comments

#### Description:

• The main water shut-off is located on/in the utility room.

• The residence is on a public water system. The quality of the water is controlled by the utility supplying it. You may wish to have it tested for purity.

• The waste water from the residence is drained to a public system. This system is the responsibility of the utility in your area. Your responsibility is the household drains and the drain line in your yard that connects to the utilities line. This inspection check for normal drainage at the plumbing drains. The buried lines can become clogged or broken, particularly in older homes. You may wish to have the lines video scoped by a licensed plumber.



#### Main Water Cutoff Valve

#### 2. Distribution Piping

Materials:

• The potable water pipes are copper and in acceptable condition, unless noted in the report.

#### 3. Hose Bibs

#### Description:

• Hose bibbs are the outside water faucets of the house. Since these are exposed to the weather they can freeze and burst in cold weather. Most have an inside cutoff and drain vent, so that the pipe going to the exterior can be drained before it gets too cold. Some of the hose bibbs are a "frost free" type. These have a long valve body that extends through the wall. This drains the valve through the wall to the warmer interior each time the valve is turned off. Regardless of which type is used there should be a way to drain the hose bibb to keep it from freezing.

• All hose bibbs should have a device to make sure that water from the hose cannot siphon back to the house or public water supply. Normally there are two types of anti-siphon devices. One is installed on the hose bib and the other is built in to the hose bib. These are often called a back flow preventer. These are normally inexpensive and very easy to install.

• We believe that we have found all the interior cut off valve for the outside water valve and they appear to be in good working order. There may be others that we were not able to find.

• The hose bibbs are functional, but we may not have located and tested every one on the property.



#### 4. Water Pressure Regulator

Materials:

• Water pressure regulators have been required on any new residential construction for several decades. These are installed on the main incoming water line, usually near the main water cut off valve. These are intended to protect the system from over pressurization and to help keep the water pressure in the house at a more constant level. The regulators may also have a backflow preventer, or check valve, built into the device to reduce the risk of water from the house flowing back to the municipal water supply.

If the regulator has a backflow preventer, there should be a method to relieve pressure generated by thermal expansion of the water when heated by the water heating equipment. The three most common ways to relieve this pressure is an **expansion tank** or a pressure relief valve.

• This system has a pressure regulator installed. This will help keep the water pressure in the house at the correct level. With this installed, there should be method to relive any excessive pressure generated by thermal expansion caused by heating the water.

## Water Heating

#### 1. General Condition

General Information:

• There are a wide variety of residential water heaters that range in capacity from fifteen to one hundred gallons. They can be expected to last at least as long as their warranty which is generally from five to eight years, but they will frequently last longer. However, few of them last longer than fifteen or twenty years. Most eventually leak. Therefore it is always wise to have them installed over a drain pan plumbed to the exterior. Also, it is prudent to flush them annually to remove minerals that include the calcium chloride byproduct of many water softening systems. The water temperature should be set at a minimum of 110 degrees fahrenheit to kill microbes and a maximum of 140 degrees to prevent scalding. Additionally, water heaters can be dangerous if they are not equipped with a pressure/temperature relief valve with discharge pipe plumbed to within 6" of the floor and visible.

The water heater appears to be in good condition. There is not an excessive amount of rust at the bottom, no damp or wet areas that could be observed, unless otherwise noted in this report.
The gas water heater in the home is located in the basement. Its capacity is approximately 40 gallons, and the unit is approximately 12 years old.

• The water heater is a high efficiency type. This type of water heater will normally use less energy than some other types. The exhaust gasses are exhausted through a plastic vent pipe instead of a metal one and are assisted by a fan. This fan should be running any time the water heater burner is on.

#### Observations:

• This water heater is at or near the end of its expected life span. It should not be expected to last much longer. Although there is no way to know how much longer it will last. You should monitor it for signs of rust and leaking, as these are signs that it will need to be replaced.



#### 2. Burner Assembly

Description:

• The burner for the water heater functions properly and appears to be in good condition.

#### 3. Vent Pipe

Description:

• The vent pipe is functional. It appears to be venting the exhaust gases properly.

#### 4. Combustion Air

**Description:** 

• Combustion air is the air that is drawn in by a gas burning appliance to fuel the combustion. If there is insufficient combustion air, the appliance may not burn properly, which can create carbon monoxide. Or, the vent system may not allow the byproducts of the combustion to vent to the outside properly. Either of these can be a very serious safety hazard.

• The combustion air vents appear to be adequate to support complete combustion.

#### 5. Temperature/Pressure Valve

Description:

• The water heater is equipped with a mandated temperature-pressure relief valve.

#### 6. Expansion Tank

**Description:** 

• The expansion tank for the water heater is used to keep the system from over pressurization caused by the expansion of the water as it heats up.

#### 7. Valves and Connections

Description:

• The shut-off valve and water connectors appear to be functional.

## Drainage System

#### 1. Drainage and Venting

Description:

• We attempt to evaluate drain pipes by flushing every drain that has an active fixture while observing its draw and watching for blockages or slow drains, but this is not a conclusive test and only a video-scan of the main line would confirm its actual condition. However, you can be sure that blockages will occur, usually relative in severity to the age of the system, and will range from minor ones in the branch lines, or at the traps beneath sinks, tubs, and showers, to major blockages in the main line. The minor ones are easily cleared, either by chemical means or by removing and cleaning the traps. However, if tree roots grow into the main drain that connects the house to the public sewer, repairs could become expensive and might include replacing the entire main line. For these reasons, we recommend that you ask the sellers if they have ever experienced any drainage problems, or you may wish to have the main waste line video-scanned before the close of escrow. Failing this, you should obtain an insurance policy that covers blockages and damage to the main line. However, most policies only cover plumbing repairs within the house, or the cost of rooter service, most of which are relatively inexpensive.

• All drain pipes must be vented to drain properly. If there is not proper venting some drains may "gurgle" and make noises when fixtures are drained or toilets flushed. Also it can cause pipes to drain slowly. The drains are vented by a pipe that usually extends through the roof. This pipe has a rubber seal around it where it goes through the roof to stop leaks. The rubber usually lasts about ten years, so it should be checked periodically for deterioration. Some fixtures can be vented with a one way valve located near that fixture, when it is not practical to connect to the outside vent system. This will allow air in when it is need to drain the system when needed by that fixture.

• The visible portions of the drainpipes include **PVC** piping.

# Gas Plumbing

#### 1. Gas Type

#### Materials:

• The gas to this residence is natural gas. This is supplied by a central utility through a system of pipes. There will be a meter to measure gas usage. The incoming pipes and meter are normally the responsibility of the utility. Any piping and appliances after the meter are normally the responsibility of the homeowner.

#### 2. Gas Plumbing

#### Materials:

• The gas plumbing is of threaded steel pipe sections. It is quite strong and has been successfully used for a very long time.

# **General Electrical**

National safety standards require electrical panels to be weatherproof, readily accessible, and have a minimum of thirty-six inches of clear space in front of them for service. Also, they should have a main disconnect, and each circuit within the panel should be clearly labeled. Industry standards only require us to test a representative number of accessible switches, receptacles, and light fixtures. However, we attempt to test every one that is unobstructed, but if a residence is furnished, we will obviously not be able to test each one.

This inspection does not include determining where the circuits are located, what is on each circuit, or if the panel is correctly labeled. You should check to see what area each circuit breaker controls and make a chart that you will understand, indicating the location of each circuit.

The home inspection of the electrical system normally will consist of checking inside the main electrical panel and checking several of the electrical circuits around the house. Most of the wiring is concealed within the walls and cannot be observed or inspected. The GFCI (Ground Fault Circuit Interrupter) circuits will be tested, the AFIC (Arc Fault Circuit Interrupter) circuits will not be tested unless the home is unoccupied.

GFCI circuits are currently required in all exterior locations, in all bathrooms, above kitchen counters, on kitchen islands and in some basement areas. AFIC are currently required in bedrooms. If your home does not meet the most current standards you may wish to upgrade for proper safety.

#### 1. General

#### Materials:

• National safety standards require electrical panels to be weatherproof, readily accessible, and have a minimum of thirty-six inches of clear space in front of them for service. Also, they should have a main disconnect, and each circuit within the panel should be clearly labeled. Industry standards only require us to test a representative number of accessible switches, receptacles, and light fixtures. However, we attempt to test every one that is unobstructed, but if a residence is furnished, we will obviously not be able to test each one.

#### 2. Type of Wire

Materials:

• The residence is wired predominantly with a modern vinyl conduit known as Romex.

#### 3. Under Ground Cable

Description:

• The electrical service entrance is the point at which the main electrical line from the street enters the property. For this residence, the main power is coming in via underground lines or is a part of the lateral service entrance at ground level.

• This is characteristic of modern electrical services but, inasmuch as the service lines are underground and cannot be seen, they are not evaluated as part of our service. What can be seen of the incoming power lines appears to be in acceptable condition.

#### 4. Meter Box

Description:

• The meter box is properly secured to the house and properly sealed.

# Main Electrical Panel

#### 1. Location of Main Panel

Description:

• The residence is served by a 200 amp, 240 volt panel, located on the right side of the basement.

#### 2. Main Electrical Box

**Description:** 

• The panel and its components have no visible deficiencies. But, you should check that the circuits are properly labeled. This is usually done by turning each beaker off and on to see what it operates.



#### 3. Main Panel Cover

Description:

• The interior panel cover is in acceptable condition.

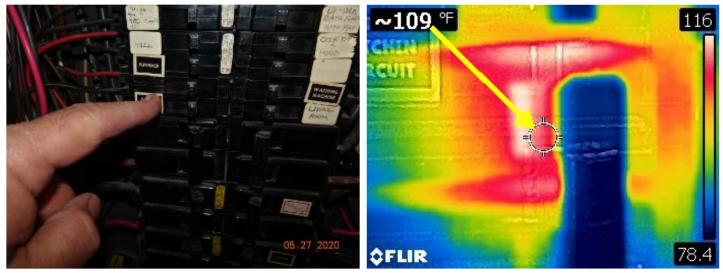
#### 4. Circuit Breakers or Fuses

Description:

• There are no visible deficiencies with the circuit breakers.

#### Observations:

• One or more of the breakers in the panel were hot. Excess heat is typically symptomatic of a problem with the breakers or the wiring. This can cause damage to the equipment and potentially unsafe conditions. This should be evaluated by a licensed electrician.



#### 5. Grounding and Bonding

Description:

• The electrical system appears to have a proper ground. Often the ground attachment, such as the ground rod is not visible. But the main electrical box has a ground wire and the plugs that were tested for a ground had the correct grounding, unless noted in the report. We do not check for impedance in the system.

• The panel is grounded to a driven rod. This rod should be eight feet long and driven into the ground for it's entire length.

## Smoke & CO Detectors

#### 1. Smoke Detector

Description:

• Smoke detectors come in several types and sizes. Currents standards require that they be wired such that if one alarms all of the ones in a residence will alarm. They are hard wired into the house in addition to having a battery back-up. In older homes they may not be wired together, hard wired to the house, or may be battery only. In any case the batteries should be changed one a year to insure proper operation. Smoke detectors are tested by pressing the test button. This will test only the buzzer and battery. The smoke sensor will normally last about 8 years. So smoke detectors should be changed about every 5 years even if the buzzer is still working. More information about smoke detectors can be found at the EPA website at

http://www.epa.gov/radiation/sources/smoke howdo.html .

Current standards are that a smoke detector be on each level of the home and in each bedroom. If there are gas appliances in the home, a carbon monoxide detector should be on each level. Depending on the age of your home this may not have been required. To insure proper safety all homes should comply with current standards.

As of 2013, the American Society of Home Inspectors revised its stance on smoke detectors, saying "Given the current state of smoke alarm technology, ASHI advocates the use of photoelectric smoke alarms and discourages the use of ionization smoke alarms. AHSI recommends that homeowners replace existing ionization alarms with photoelectric alarms." As such, you may wish to ensure that you purchase photoelectric units when replacing any smoke detectors.

• The smoke detectors were tested by pressing the test button on each unit that was accessible. The smoke detectors that were tested functioned properly except as noted. We suggest that the smoke detectors be tested once a mouth and the batteries be changed once a year.

#### 2. Carbon Monoxide Detectors

Description:

• Carbon Monoxide monitors are now required by current code, in homes with combustion appliances, one permanent monitor per level of the house. (While the plug-in style monitors do work, the ease of removal means they cannot be considered 'permanent' fixtures.) As such, we strongly recommend that they be installed and properly maintained in homes where any combustion is planned, such as fireplaces, gas appliances in the kitchen, gas water heaters or gas furnaces. These are tested by pushing the test button only, not with carbon monoxide gas. More information on carbon monoxide can be found at http://f-i-re-service.com/mainframe.html. The US Environmental Protection Agency has CO information at http://www.epa.gov/iaq/co.html Observations:

• No carbon monoxide monitors were located in this house. Since there are combustion appliances present it is recommended that there be a CO monitor. Additionally, CO monitors are now required in all new construction, and current code requires one on each level of the house. You may wish to upgrade for safety reasons.

## Bedroom

The main area of inspection in the bedrooms is the structural system. This means that all walls, ceilings and floors will be inspected. Doors and windows will also be investigated for damage and normal operation. Normally wear and tear of walls and floor covering is not noted. We will be checking for the proper operation of electrical switches and outlets. These areas are in acceptable condition unless noted in the report.

Personal items in the these areas may prevent all areas to be inspected as the inspector will not move personal items.

Any bedroom should have at least two means of egress. This is for safety in case of an emergency. Current building code requires that all bedrooms have a smoke detector. Older homes may not have a smoke detector in the bedroom. If your home does not have one you may wish to add a smoke

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detector and possibly a carbon monoxide detector for additional safety.

#### 1. Bedrooms

General Information:

## Master Bedroom

#### 1. Windows

#### Observations:

• One or more windows have a broken seal between the two panes of glass and should be replaced. This is evident from fogging, or condensation forming between the panes of glass, that confirms that the seal has failed. this will not only affect it's appearance, but also it's insulating ability.



## Bathroom

Bathrooms can consist of many features from whirlpool tubs and showers to toilets and bidets. Because of all the plumbing involved it is an important area of the house to look over. Moisture in the air and leaks can cause mildew, wallpaper and paint to peel, and other problems. The home inspector will identify as many issues as possible but some problems may be undetectable due to problems within the walls or under the flooring. Personal items my prevent some areas from being inspected as we do not move personal items.

Moisture is a common problem in bathrooms. Good ventilation is important to removing the moisture and keeping the area healthy.

We will be looking for signs of water leaks in the plumbing, proper operation of plumbing fixtures such as valves, toilets, and drains. The tubs and showers will be visually inspected of proper sealing of tiles and walls. Doors, windows, fans and cabinets will be checked for proper operation. These areas are considered to be acceptable condition unless noted in the report.

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

#### 1. Bathroom

**General Information:** 

## **Master Bath**

1. Size and Location

General Information:

• The master bath is a full bath located adjacent to the master bedroom.

#### 2. Windows

Description:

• The windows that were unobstructed were checked, and found to be functional.

#### 3. Doors

Description:

• The door is functional. It opens and closes properly and the latch is working.

4. Floors

Materials:

• The floor in this area is made of ceramic tile.

#### 5. Cabinets & Counters

Description:

• The sink countertop is functional. It is secure and has no significant damage.

#### 6. Sink & Faucet

Description:

• The sink and its components are functional.

#### 7. Shower Stall

**Description:** 

• The stall shower is functional.

Observations:

• Caulking is needed around the shower enclosure. This is needed to keep water from getting into the wall around and floor in front of the enclosure. If water gets into these areas, it can cause the subfloor and supporting structure to deteriorate.



Caulking is needed around the shower enclosure. This is needed to keep water from getting into the wall around and floor in front of the enclosure. If water gets into these areas, it can cause the subfloor and supporting structure to deteriorate.

#### 8. Toilet and Bidet

Description:

• The toilet is functional.

#### 9. Exhaust Fan

**Description:** 

• The exhaust fan appears to be functional.

#### 10. Lights & Plugs

Description:

• The lights are functional, with no visible defect.

## Hall Bath

### 1. Size and Location

**General Information:** 

- The hall room is a full bath located on the upper floor.
- 2. Doors

Description:

• The door is functional. It opens and closes properly and the latch is working.

#### 3. Floors

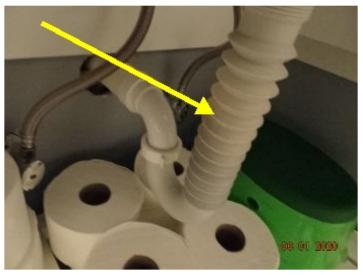
Materials:

• The floor in this area is made of ceramic tile.

#### 4. Sink & Faucet

#### Observations:

• The sink employs a flexible drainpipe that could contribute to blockages and leaks. It should be replaced by a strait smooth walled pipe. The ridges can trap debris that will clog the drain. They also have a tendency to crack and leak.



#### 5. Tub/Shower

Description:

• The tub/shower is functional.

#### 6. Toilet and Bidet

#### Description:

• The toilet is functional.

#### 7. Exhaust Fan

Description:

• The exhaust fan is functional.

#### 8. Lights & Plugs

Description:

• The lights are functional, with no visible defect.

## Powder Room

#### 1. Size and Location

**General Information:** 

• The powder room is a half bath located on the main floor.

#### 2. Powder Room Doors

#### Description:

• The door is functional. It opens and closes properly and the latch is working.

#### 3. Powder Room Floors

Materials:

• The floor in this area is made of ceramic tile.

#### 4. Powder Room Sink & Faucet

#### Observations:

• The sink employs a flexible drainpipe that could contribute to blockages and leaks. It should be replaced by a strait smooth walled pipe. The ridges can trap debris that will clog the drain. They also have a tendency to crack and leak.

• The sink drain is slow or partially blocked and should be serviced, to ensure that the blockage has not progressed beyond the trap and involved the main waste line.



#### 5. Powder Room Exhaust Fan

Description:

• The exhaust fan is functional.

#### 6. Powder Room Lights & Plugs

Description:

- The lights are functional, with no visible defect.
- The outlets are functional.

## Kitchen Cabinets & Counter

The kitchen is used for food preparation and often for entertainment. Kitchens typically include a stove, dishwasher, sink and other appliances. When possible the installed appliances will be operated with the normal controls. The plumbing components will be inspected for proper operation and leaks. Electrical lights and outlets will be checked. Current standards require that all outlets over a kitchen counter and on a kitchen island be GFCI protected. This may not be required in your kitchen. But, you may wish to update the outlets to meet current standards for safety reasons. These items and appliances are in proper operating condition unless otherwise noted in this report. Normal wear and tear are not noted.

#### 1. Condition of Kitchen Counter

Materials:

• The countertops are made of granite. It is a very durable material that needs little maintenance other that cleaning. Granite will need to be sealed periodically.

#### 2. Kitchen Cabinets

**Description:** 

• The cabinets are functional, and do not have any significant damage.

#### 3. Kitchen Lights

Description:

• The lights that are installed in this area are functional.

#### 4. Kitchen Electrical Outlets

**Description:** 

• The outlets are functional and include ground-fault protection.

## **Kitchen Appliances**

#### 1. General

Materials:

• The installed kitchen appliances are tested by using normal operating controls to activate primary functions to ascertain functionality. Calibration of temperatures is not checked.

#### 2. Cooktop

#### Description:

• The gas cook top is functional.

#### Observations:

• One or more of the burners of the cooktop did not come on when tested.



### 3. Refrigerator

Description:

• The refrigerator in the kitchen appears to be in good working order. Proper temperatures are not guaranteed.

#### 4. Dishwasher

Description:

• The dishwasher is functional.

## 5. Microwave

### Description:

• The built-in microwave is functional.

Observations:

• The microwave does not appear to be on a separate breaker in the main electrical panel. The microwave is normally required to be on a separate breaker so as to keep from over loading the circuit. The microwave should be properly rewired by a qualified professional.

### 6. Exhaust Fan

Description:

• The exhaust fan or downdraft is functional.

### 7. Garbage Disposal

Description:

• The garbage disposal is functional.

# **Kitchen Plumbing**

# 1. Kitchen Sink & Faucet

Description:

- The sink is functional and in acceptable condition.
- The sink faucet is functional.

# 2. Kitchen Valves & Connectors

Description:

• The valves and connectors below the sink are functional.

### 3. Trap and Drains

Description:

• The trap and drain are functional.

# Laundry

# 1. Clothes Washer

Description:

• The clothes washer was run through a cycle and operated properly.

### 2. Clothes Dryer

Description:

• The dryer was run through a cycle and ran OK.

### 3. Dryer Vent

Description:

• The dryer vent appears to be functional.

# General Interior Lights/Plugs

The main area of inspection in the interior rooms is the structural system. This means that all walls, ceilings and floors will be inspected. Doors and windows will also be investigated for damage and normal operation, if accessible. Normally wear and tear of walls and floor covering is not noted. We will be checking for the proper operation of accessible electrical switches and outlets. These areas are in acceptable condition unless noted in the report.

Personal items in the bedroom may prevent all areas to be inspected as the inspector will not move personal items.

It is recommended that there be a smoke detector on each level and a CO detector if there are gas appliances on the home, plus a smoke detector in each bedroom. Older homes may not have these detectors. If your home does not meet the current standards you may wish to add a smoke detector and possibly a carbon monoxide detector for additional safety.

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

#### 1. Lights & Plugs

Description:

• A representative number of lights and electrical outlets are tested. This allows for a good overall impression of the condition of these systems. Lights and plugs obstructed by furniture or other belongings are not tested.

• The lights that were tested are functional, with no visible defect, unless otherwise noted in this report.

• The outlets that were tested are functional, unless otherwise noted in this report.

# Gen Interior Windows/Doors/Floors

#### 1. General Interior Floors

#### Materials:

Areas of the floors in this residence are covered with wood planking. This is usually made of solid wood planks, but sometimes it is made of laminated pieces that make up the plank. The planks are laid over a subfloor usually made of plywood or OSB. They are usually finished with a hard clear finish that requires little maintenance except cleaning. Cleaning is usually done with just water and a light soap solution. But, you should follow any manufactures directions on cleaning.
Areas of the floors in this residence are covered with carpet. Carpet usually is recommended to be professionally cleaned about once a year. The life of the carpet will depend on the quality of the carpet, the quality of carpet pad, and the amount of wear that it receives.

• Areas of the floors in this residence are covered with ceramic tiles. This flooring must be laid over a very solid and stable subfloor. If the subfloor is not stable the floor will crack and tiles can come loose. Some manufactures recommend that the floor be sealed periodically for seal out dirt and moisture. The maintenance of this type of flooring is usually just cleaning with water and a light soap solution. But, you should follow any manufactures suggestions for maintenance.

#### 2. Windows

Materials:

• There are many types and sizes of windows. The main purpose is to allow light in to a room and all will do this. They will vary in their ability to insulate the inside from the outside elements and their ease of opening and closing. Older windows often are hard to open and are often painted shut or have seals that are sticking and prevent opening.

Windows can also be a means of egress in case of emergency. Therefore at least one window in each bedroom should be large enough for an emergency exit and be in good operating condition. • The windows in this residence include ones made of a type of vinyl. These need little

maintenance, but the caulking around them may get dry and crack. This caulking will need to be redone periodically.

• The windows in this residence are double glazed or double paned. This means that there are two panes of glass with a space in between that is filled with a gas such as argon. This improves the insulating properties of the window and eliminates the need for storm windows. The space between the tow panes is sealed to keep out moisture. If this seal between the panes of glass is broken the gas will escape and moisture will enter. This will cause the window to fog and will decrease the insulating properties.

#### 3. Window Screens

**Description:** 

• The window screens are functional, unless otherwise noted in this report.

# Stairs

#### 1. Main Stairs

#### Description:

• As per the current building practices, all staircases must conform to certain industry standards. These include secure, gripable handrails extending the entire length of the staircase, set-depth tread and rise, a minimum level of head clearance at every point along the staircase, and size maximums for balusters. The stairs of this residence meet these standards, except as noted in this report.

• The stairs in the residence appear to be made with wood material for the treads, risers and stringers.

# Chimney

### 1. Chimneys

General Information:

• There is a great deal of information available about fireplaces and chimneys, both gas and wood burning. A great deal of the fireplace and chimney can not be observed during the inspection and they are not normally in use during the inspection. You can get more information about these combustion appliances and professional inspectors from many sources, Here are just a few: Chimney Safety Institute of America at www.csia.org or (317) 837-5362.

Since we cannot know how the chimney was previously used or maintained, nor can we see the full length of most chimneys visually, we suggest that the fireplace and chimney be given a Class II inspection by a qualified professional. This can help to determine if the chimney is in proper working condition. You may wish to have this done before the end of you contingency period as some conditions in the hearth or chimney can be a safety hazard and/or expensive to repair. Also, since any chimney can be a fire hazard it is recommended that you have the chimney inspected by a trained chimney inspector once a year, or if there is any reason to think that there could possibly be any problems with the chimney or any of it's components.

You can find Certified Chimney Inspectors at http://f-i-r-e-service.com/mainframe.html. The National Fireplace Institute can be found at http://www.nficertified.org/index.html.

#### 2. Type of Chimney

#### Materials:

• The chimney is a lined masonry type, which is the most dependable because the flue liner not only provides a smooth transition for the byproducts of combustion to be vented beyond the residence but provides an approved thermal barrier as well.

#### 3. Chimney Flue

General Information:

• A complete view of the chimney flue is not possible, and you may wish to have it video scanned by a licensed professional to detect hidden problems. Since problems with the chimney liner can be expensive, you may wish to have this done before the end of the contingency period.

• Since we cannot know how the chimney was previously used or maintained, we suggest that the fireplace and chimney be given a Class II inspection by a qualified professional. This can help to determine if the chimney is in proper working condition. You may wish to have this done before the end of you contingency period as some conditions in the hearth or chimney can be a safety hazard and/or expensive to repair.

Also, since any chimney can be a fire hazard it is recommended that you have the chimney inspected by a trained chimney inspector once a year. Or if there is any reason to think that there could possibly be any problems with the chimney or any of it's components.

• Chimney flues need to be periodically cleaned to prevent the possibility of chimney fires. However, the complex variety of deposits that form within chimneys are not easily understood. They range from pure carbon, which does not burn, to tars that can ignite. All of these deposits are commonly described as creosote, but creosote has many forms, ranging from crusty carbon deposits that can be easily brushed away, to a tar-glazed creosote that requires chemical cleaning. These deposits should be identified and treated by a specialist. However, cleaning a chimney is not a guarantee against a fire. Studies have proven that a significant percentage of chimney fires have resulted within one month of the chimney being cleaned, and many more have resulted within a sixmonth period.

#### **Observations:**

• Since we cannot know how the chimney was previously used or maintained, we suggest that the fireplace and chimney be given a Class II inspection by a qualified professional. This can help to determine if the chimney is in proper working condition. You may wish to have this done before the end of you contingency period as some conditions in the hearth or chimney can be a safety hazard and/or expensive to repair.

Also, since any chimney can be a fire hazard it is recommended that you have the chimney inspected by a trained chimney inspector once a year. Or if there is any reason to think that there could possibly be any problems with the chimney or any of it's components.

• This chimney flue does not appear to be excessively dirty. But, we do recommend that it be inspected and cleaned by a licensed chimney sweep at least once a year. Since we do not know when this one was last inspected it is recommenced that it be inspected before it is used.

#### 4. Fireplace Hearth

Description:

• The standard dimensions for a hearth require it to extend at least sixteen inches from the front of the opening, and eight inches on either side. Also, when the fireplace opening is more than six square feet, the hearth should extend at least twenty inches from the front and at least twelve inches on either side. The hearth must consist of a fire retardant material.

The hearty is intended to protect the home against fire caused by sparks or excessive heat from the fireplace.

• The hearth appears to be in acceptable condition.

#### 5. Chimney Stack

Description:

• The chimney stack appears to be in acceptable condition.

# 6. Chimney Top

Description:

• The chimney has a functional weather cap/spark arrestor.

Observations:

• The crown, which is designed to seal the chimney wall and shed rainwater, is cracked and should be sealed.



# 7. Fireplace

Description:

• The fireplace is in acceptable condition.

# 8. Damper

Description:

• The damper is functional.

# Office

# 1. Windows

### Observations:

• One or more windows have a broken seal between the two panes of glass and should be replaced. This is evident from fogging, or condensation forming between the panes of glass, that confirms that the seal has failed. this will not only affect it's appearance, but also it's insulating ability.



# Attic General

This report describes the method used to inspect any accessible attics; and describes the insulation used in unfinished spaces when readily accessible and the absence of insulation in unfinished spaces at conditioned surfaces. Inspectors are required to inspect insulation in unfinished spaces when accessible and passive/mechanical ventilation of attic areas, if present.

1. General



# 2. Access Location

General Information:

• The attic was accessed from the hallway ceiling.

• We entered the attic and inspected the accessible areas. Normally not all areas will be accessible. Some will be blocked by insulation, ductwork, or roof framing.

#### 3. Electrical Conditions

Description:

• The electrical components that are fully visible appear to be in acceptable condition.

# **Attic Framing & Decking**

# 1. Type of Framing

#### Materials:

• The roof framing consists of a factory-built truss system, comprised of components called chords, webs, and struts that are connected by wood or metal gussets nailed or glued in place. Each component of the truss is designed for a specific purpose, and cannot be removed or modified without compromising the integrity of the entire truss. The lowest component, which is called the chord and to which the ceiling is attached, can move by thermal expansion and contraction and cause creaking sounds, which are more pronounced in the mornings and evenings along with temperature changes. Such movement has no structural significance, but can result in small cracks or divots in the drywall or plaster.

#### 2. Roof Decking

Materials:

• The roof decking is the plywood or OSB(oriented strand board) that the shingles are nailed onto.

# **Attic Ventilation**

Most attics today are the vented type. This means that the attic is not part of the "conditioned space" of the house. There should be insulation on the floor of the attic. If it is properly vented it will keep the temperature down in the summer, helping keep the house cooler. In the winter a properly vented attic will help stop ice damming by letting any snow cover melt evenly. Some attics are not vented, but are part of the "conditioned space" of the house. These will have the insulation on the bottom of the roof instead of on the attic floor. Venting is also important to help remove moisture from the attic. The amount and effectiveness of the attic venting has changed over the years. Older homes typically have less ventilation. If the house is older or has limited ventilation, you may wish to consult with a professional, such as an energy auditor or insulation contractor as how to best improve the ventilation.

#### 1. Type of Attic Venting

### **Description:**

• Most attics today are the vented type. This means that the attic is not part of the "conditioned space" of the house. There should be insulation on the floor of the attic. If it is properly vented it will keep the temperature down in the summer, helping keep the house cooler. In the winter a properly vented attic will help stop ice damming by letting any snow cover melt evenly. Some attics are not vented, but are part of the "conditioned space" of the house. These will have the insulation on the bottom of the roof instead of on the attic floor.

• The attic is ventilated by vents in the soffit and ridge. Warmer air rises out of the ridge vent and cooler are enters at the soffit vents.

• The attic has one or more power vents. These vents have a fan to exhaust hot air from the attic. The fan is controlled by a thermostat switch to turn the fan on at a preset temperature.



**Ridge Vent** 



Soffit vents

# 2. Exhaust Vents

# Observations:

• The kitchen exhaust duct should be extended to an exterior port, through an outside wall or through the roof. If not vented properly they can allow excessive moisture to build up in the attic. This can damage the components of the roof and attic and allow mold to grow in the area.



### 3. Plumbing Vents

Description:

• The drainpipe vents that are fully visible are in acceptable condition, unless noted in this report. The vents should have a proper rubber seal to keep rain out.

# **Attic Insulation**

Insulation in your attic is important for comfort and energy cost consideration. There are several types of attic insulation. The most common are blown-in Fiberglas, blown-in cellulose and Fiberglas battens (better known as rolls). The amount used has varied widely over the years. Sometimes more insulation will have been added to help with the energy efficiency and indoor comfort. If possible we will report as to the type and amount of insulation in the attic.

Recently it has been shown that stopping air movement is as important as the insulation. The air sealing is below the insulation and not visible for the home inspection. But if you are doing energy efficiency upgrades you may wish to consider this.

### 1. Blown Fiber

Materials:

• There is eight to twelve inches of blown-in fiberglass insulation in the attic area. This generally considered to be a good amount of insulation.



# Roof

As with all areas of the house, we recommend that you carefully examine the roof immediately prior to closing the deal. Note that walking on a roof voids some manufacturer's warranties. Adequate attic ventilation, solar / wind exposure, and organic debris all affect the life expectancy of a roof. Always ask the seller about the age and history of the roof. The age of a roof can be quite difficult to determine accurately. Any statement as to the age of the roof by the inspector will be their best estimate. You may wish to have the roof examined by a licensed roofer to more accurately determine the age and condition of the roof.

We will examine roofs by walking on them only when we determine that it is safe to do so and that it will not damage the roof. Otherwise we will inspect them from the ground with binoculars and/or from a ladder.

Metal roofs in snow areas often do not have gutters and downspouts, as there is a concern that snow or ice cascading off the roof may tear gutters from the house. Likewise, be advised that such cascading may cause personal injury or even death. If this house has a metal roof, consult with qualified roofers or contractors regarding the advisability of installing a damming feature which may limit the size and amount of snow / ice sliding from the roof.

### 1. Roof Age

General Information:

• The roof appear to be approximately five to ten years old, but this is just an estimate and you should request the installation permit from the sellers, which will reveal its exact age and any warranty guarantee that might be applicable.





# 2. Roof Condition

### Materials:

• There are a wide variety of composition shingle roofs, which are comprised of asphalt or fiberglass materials impregnated with mineral granules that are designed to deflect the deteriorating ultra-violet rays of the sun. The most common of these roofs are warranted by manufacturers to last from twenty to twenty-five years, and are typically guaranteed against leaks by the installer for three to five years. Some higher quality shingles, such as architectural or dimensional shingles might last thirty, thirty-five or more years. The actual life of the roof will vary, depending on a number of interrelated factors besides the quality of the material and the method of installation. However, the first indication of significant wear is apparent when the granules begin to separate and leave pockmarks or dark spots. This is referred to as primary decomposition, which means that the roof is in decline, and therefore susceptible to leakage. This typically begins with the hip and ridge shingles and to the field shingles on the south facing side. This does not mean that the roof needs to be replaced, but that it should be monitored more regularly and serviced when necessary. Regular maintenance will certainly extend the life of any roof, and will usually avert most leaks that only become evident after they have caused other damage.

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### 3. Method of Evaluation

**General Information:** 

• Due to the height or slope of the roof we inspected the roof from the ground using binoculars and/or a zoom lens camera.

### 4. Flashing

Description:

• The roof flashings that are visible are in acceptable condition.

### 5. Gutters and Drainage

Description:

• The gutters appear to be in acceptable condition. However, without water in them it is difficult to judge whether they are correctly pitched to direct water into the down spouts, but they should function as they were intended.

# Garage

#### 1. Size of Garage

#### General Information:

• This is considered a two car garage. It has two doors or one large door for cars to enter. Since cars and garages vary you may wish to check and make sure the vehicle and other items that you wish to store in this area will fit.

# **Firewall Separation**

### 1. Garage Firewalls

Materials:

The firewall separating the garage from the residence is functional. This usually consists of 5/8s inch sheet rock on the garage walls at any point where the garage is against interior living area.
The door separating the garage from the residence appears to be properly fire-rated. This ensures that the door is not a weak spot in the overall firewall protection and is required under current code.

# **Garage Doors**

### 1. Garage Door

Description:

• The garage door and its hardware are functional. The seal around the outside does not have any major cracks or tears, the door is not bent or rotting and the hardware is serviceable.

### 2. Automatic Door Opener

Description:

• The garage door opener is functional. It will auto reverse if it hits an object or if the door sensors indicate something is in the way. It may need to be lubricated from time to time to keep it operating properly.

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# Wall Finish

### 1. Type of Wall Finish

Materials:

• Some or all of the exterior walls of the residence are finished with a brick veneer. The brick has weep holes to allow moisture to escape.

• Some or all of the house walls are finished with vinyl siding. This type of siding normally requires very little maintenance. If needed, pressure washing will usually clean the siding. The caulking around the doors and windows should be maintained in order to keep moisture out.

### 2. Condition of Wall Finish

**Description:** 

• The house wall finish is in acceptable condition, unless otherwise noted in this report.

#### 3. House Fascia and Trim

**Description:** 

• The fascia board and trim are in acceptable condition. There is no visible rot, peeling paint or poorly sealed areas, unless otherwise noted in the report. Observations:

• The wooden fascia and trim on the outside of the house has peeling paint and rot. Any rotten or damaged wood should be replaced and repainted. This may be an indication of delayed or poor maintenance. There may be other areas that need repair that were not observed. Also the amount and depth of any moisture penetration cannot be determined until the damaged area is removed.







# **Exterior Features**

### 1. Yard Grading

General Information:

• Water can be destructive and foster conditions that are harmful to health. For this reason, the ideal property will have soils that slope away from the residence and the interior floors will be several inches higher than the exterior grade. Also, the residence will have roof gutters and downspouts that discharge into area drains with catch basins that carry water away to hard surfaces.

We cannot guarantee the condition of any subterranean drainage system, but if a property does not meet this ideal, or if any portion of the interior floor is below the exterior grade, we cannot endorse it and recommend that you consult with a grading and drainage contractor, even though there may not be any evidence of moisture intrusion. Our site visit is limited, and the sellers or occupants will obviously have a more intimate knowledge of the site than we could possible hope to have, but we have confirmed moisture intrusion in residences when it was raining that would not have been apparent otherwise. Also, in conjunction with the <u>cellulose</u> material found in most modern homes, moisture can facilitate the growth of biological organisms that can compromise building materials and produce mold-like substances that can be harmful to health.

• Moisture intrusion is always a concern, with which you should be aware. It involves a host of interrelated factors, and can be unpredictable, intermittent, or constant. When moisture intrusion is not self evident, it can be inferred by musty odors, peeling paint or plaster, efflorescence, or salt crystal formations, rust on metal components, and wood rot. However, condensation and humidity can produce similar conditions if the temperature in an area is not maintained above the dew point. If the interior floors of a residence are at the same elevation or lower than the exterior grade we could not rule out the potential for moisture intrusion. Moisture can also enter through any area of the wall or roof that is not properly sealed. If such conditions do exist, or if you or any member of your family suffers from allergies or asthma, you may wish schedule a specialist inspection, such as mold. Moisture intrusion can not always be detected during the inspection as it can be hidden inside the walls or under floors. It can also come from leaks in the plumbing system.

#### 2. Trees

General Information:

• Tree usually add value to property and can provide shade. Since they can also damage the house by dropping leaves and debris on the roof, roots can damage the foundation and falling trees can cause substantial damage. Trees should be monitored for any possible damaging or unhealthy conditions. The roof should be kept clean.

#### 3. Bushes

General Information:

• Bushes should be kept at least 12 inches from the house. This is to reduce the chance of damage from the plants rubbing the house. They can also hold moisture against the structure and make it easier for pest and insects to enter.

#### 4. Flower Beds and Lawn

#### General Information:

• Flower beds are a great way to improve the appearance of a home. But the heighth of the beds should be 4 inches below the top of the foundation. This is to keep moisture and pest, such as termites, away from the wooden part of the house.

# **Drive & Walk Ways**

Inspectors shall inspect adjacent or entryway walkways, patios, and driveways; vegetation, grading, surface drainage, and retaining walls that are likely to adversely affect the building.

#### 1. Driveway Type

Materials:

• The driveway for the residence is asphalt. Asphalt driveways are not as durable as concrete ones, and typically develop cracks. They are expected to last approximately fifteen to twenty years, and typically will need maintenance service.

#### 2. Condition of Driveway

Description:

• The driveway is in acceptable condition.

• Sealing an asphalt driveway will help it last longer and help stop cracking. You can seal yourself with products for the hardware store or have it done professionally. Sealing the drive is a part of normal maintenance.

# **General Deck**

#### 1. Deck General Information

General Information:

• Wood decks vary greatly in size, type and method of construction. Most are used for outdoor entertaining and recreation. Many are added after the construction of the residence and many are built without a building permit, which is normally required for this type of construction. Many are built by the homeowners who have varying amounts of building experience.

Deck failures have become one of the most common types of structural failure in the U.S. Recent studies have shown that the practices commonly used in deck building are not sufficient to maintain the deck in a safe condition over time. Some of the problem areas are the connection of the deck to the structure, foundation support, the types of material used and construction techniques. Some of these items may not be apparent at the time of the Home Inspection. Therefore you should monitor the deck for any signs of deteriorate or movement that might indicate an unsafe condition.

• Decks are made of wood, even if some surfaces are made of composite materials, that is exposed to the weather and often in contact with soil. This will cause the wood to deteriorate and weaken. This may cause the deck to become unsafe, even when there is no observable issues with the deck. Any deck should be monitored for deterioration that could affect the safety of the structure.

• This deck appears to be more than twenty years old. Decks of this age of deck will likely need to be replaced. This deck will not meet current building practices. There is likely to be issues that are not observable that could affect the structure and safety of the deck. The deck should be monitored closely for any deterioration or excessive movement.

• The American Wood Council's Design for Code Acceptance, version 6, or DCA6, is the goldstandard document for code compliant deck construction. If you wish to further examine any of the specific information concerning how decks are supposed to be built, the DCA6 is available online for free from the AWC's website, http://www.awc.org/codes-standards/publications/dca6.

# Deck Surface & Steps

### 1. Deck Surface

Materials:

• The wood deck is in acceptable condition. As part of normal maintenence, the deck will need to be cleaned and treated with a preservative. This should be done on a regular basis to prolong the life of the deck.

# **Deck Railings**

#### 1. Deck Railing

Description:

The deck railing is in acceptable condition.

# Deck Attachment & Support

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#### 1. Deck Attachment

#### Observations:

• The deck ledger board, which attaches the deck to the house, has not been installed properly. It is installed on top of the siding. This can lead to premature deterioration in the area of the bolts that fasten the deck to the structure. The siding should have been cut away and the ledger board properly bolted directly to the structure with the proper flashing. The area should be monitored for any movement, deterioration and/or moisture intrusion because these are indicators that more support is needed and possibly repairs to the structure.

• There does not appear to have any flashing at the ledger board. This is a metal strip that covers the board that attaches the deck to the structure. It is meant to keep water off of this area to prevent deterioration. This area should be monitored for rot or deterioration.

• The bolts holding the deck ledger board are undersized by today's standards. The area should be monitored for any movement.



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#### 2. Deck Support

#### **Observations:**

The deck beams are improperly attached to the support posts. The posts must fully support the downward weight of the deck. As such, beams attached to the sides of the support posts, as opposed to resting in notches in the post itself, cannot be expected to fully support the weight of the deck. This is a significant safety hazard and should be corrected to avoid potential deck collapse.
The post holding up the deck are made with 4 x 4 post. The current minimum acceptable size is a 6 x 6. More support should be added to keep the deck safe.





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# **Summary Comment**

# 1. Summary Comment

#### Observations:

• The summary presented on site of the inspection is a preliminary report. The report that is emailed to you is the final report. There may be additions or deletions to the preliminary Summary Report. Please use the final, emailed report as your final report.

# Glossary

Term	Definition
Cellulose	Cellulose insulation: Ground-up newspaper that is treated with fire-retardant.
Combustion Air	The ductwork installed to bring fresh outside air to the furnace and/or hot water heater. Normally, two separate supplies of air are brought in: one high and one low.
Expansion Tank	An expansion tank or expansion vessel is a small tank used to protect closed (not open to atmospheric pressure) water heating systems and domestic hot water systems from excessive pressure. The tank is partially filled with air, whose compressibility cushions shock caused by water hammer and absorbs excess water pressure caused by thermal expansion.
PVC	Polyvinyl chloride, which is used in the manufacture of white plastic pipe typically used for water supply lines.