

Building Inspection Report

42351 Sheridan Court, Clinton Twp, MI 48038



Inspection Date:
07/26/2007

Prepared For:
Sample

Prepared By:

First Choice



Inspection Services, Inc.

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Report Overview

THE HOUSE IN PERSPECTIVE

This is a well built home that shows normal wear and tear, for a home of this age. Apart from the short term need to deal with suggested repairs, *the improvements and routine maintenance that are recommended in this report are not considered unusual for a home of this age.*

CONVENTIONS USED IN THIS REPORT

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

Major Concern: a system or component which is considered significantly deficient or is unsafe. Significant deficiencies need to be corrected and, except for some safety items, are likely to involve significant expense.

Safety Issue: denotes a condition that is unsafe and in need of prompt attention.

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

Improve: denotes improvements which are recommended but not required.

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

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

THE SCOPE OF THE INSPECTION

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

It is the goal of the inspection to put a home buyer in a better position to make a buying decision. Not all improvements will be identified during this inspection. Unexpected repairs should still be anticipated. The inspection should not be considered a guarantee or warranty of any kind.

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

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

INSPECTION VS WARRANTY

An **inspection** is just what the name indicates, an inspection of a property... usually a home or building that is being purchased. The purpose of the inspection is to determine the condition of the various systems and structures of the building. While an inspection performed by a competent inspection firm will determine the condition of the major components of the home or building, no inspection will pick up every minute latent or concealed defect. The inspector’s ability to find all defects is limited by access to various parts of the property, lack of information about the property and many other factors. A good inspector will do his or her level best to determine the condition of the building and to report it accurately. The report that is issued is an opinion as to the condition of the building at the time of the inspection. This opinion is arrived at by the best technical methods available to the building inspector. It is still only an opinion.

A **warranty** is a policy sold to the buyer that warrants that specific items in the building are in sound condition and will remain in sound condition for a specified period of time. Typically, the warranty company never inspects the building. The warranty company uses actuarial tables to determine the expected life of the warranted items and charges the customer a fee for the warranty that will hopefully cover any projected loss and make a profit for the warranty seller. It is essentially an insurance policy.

The service that we have provided you is an inspection. We make no warranty of this property. If you desire warranty coverage, please ask us, or your real estate agent for information on Warranty companies and plans.

Structure

DESCRIPTION OF STRUCTURE

Foundation:	•Poured Concrete •Basement Configuration
Columns:	•Steel
Floor Structure:	•Wood Joist
Wall Structure:	•Wood Frame
Ceiling Structure:	•Truss
Roof Structure:	•Roof Joists •OSB Sheathing

STRUCTURE OBSERVATIONS

Positive Attributes

The construction of the home is high quality. The materials and workmanship, where visible, are above average.

General Comments

Typical flaws were detected in the structural components of the building.

RECOMMENDATIONS / OBSERVATIONS

Exterior Walls

- **Monitor, Repair:** Common minor crack was observed on the exterior walls of the house at the back of the house. This implies that structural movement has occurred. The location, size and shape of this crack is common. The inspection did not find evidence of significant movement requiring immediate major repairs. I recommend localized tuck pointing of this crack and monitoring this area for additional movement. If additional movement occurs have evaluated by a licensed contractor for remedies available.



- **Repair:** Rust visible on lintels in various locations (a lintel is a beam supporting masonry above an opening in a wall). The lintels need to be treated, painted and sealed. This condition is not uncommon. If additional rust and expanding of lintel occurs, movement could lead to costly repairs of brick and lintels.



- **Repair, Monitor:** An exterior wall crack above a lintel over the garage door opening (a lintel is a beam supporting masonry above an opening in a wall) suggests that the lintel may be marginal. This condition is not uncommon. Have this condition further evaluated by a licensed contractor for repair or replacement as needed.



Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Roofing

DESCRIPTION OF ROOFING

Roof Covering:	•Asphalt Shingle •1 layer
Roof Flashings:	•Metal
Chimneys:	•None
Roof Drainage System:	•Aluminum •Downspouts discharge above & below grade
Method of Inspection:	•Viewed with binoculars •Viewed from ladder at eave

ROOFING OBSERVATIONS

Positive Attributes

The roof coverings are to be in generally good condition. Where investigated, eave protection has been installed below the sloped roof coverings. This reduces the risk of roof leakage, should ice damming develop in the winter. The installation of the roofing materials has been performed in a professional manner. The quality of the installation is above average. Better than average quality materials have been employed as roof coverings. The steep pitch of the roof should result in a longer than normal life expectancy for roof coverings. Roof flashing details appear to be in good order.

RECOMMENDATIONS / OBSERVATIONS

- **Repair:** The roofing at the north slope of the garage shows evidence of moss and organic build up. This condition may reduce the life expectancy of the roofing in this area. Removing moss and organic build up is recommended.



Have Contractor Wash the Roof Shingles with "Anti-Algae Solution"*. Apply at low pressure, wait 15 min. rinse with low pressure water. Protect plants/shrubs. Do not power wash.

(Anti-Algae Solution: 4 Gallons of water, 1 Gallon of bleach, 1 Cup of Tri Sodium Phosphate (TSP))

Gutters & Downspouts

- **Repair:** Downspout(s) should discharge water at least five (5) feet from the house. Storm water should be encouraged to flow away from the building at the point of discharge.
- **Repair:** Downspout(s) that discharge onto the roof should be extended to discharge directly into the gutters below. This condition, if left unattended, can result in premature deterioration of the roofing under the end of the downspout.



- **Repair:** Minor leaks in the gutters should be repaired.



Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Exterior

DESCRIPTION OF EXTERIOR

Wall Covering:	•Brick •Wood Siding
Eaves, Soffits, And Fascias:	•Wood
Window/Door Frames and Trim:	•Vinyl-Covered
Entry Driveways:	•Concrete
Entry Walkways And Patios:	•Concrete
Porches, Decks, Steps, Railings:	•Wood
Overhead Garage Door(s):	•Steel
Surface Drainage:	•Graded Away From House
Retaining Walls:	•Stone
Fencing:	•None

EXTERIOR OBSERVATIONS

General Comments

The exterior of the home has lacked some maintenance; repairs are needed.

RECOMMENDATIONS / OBSERVATIONS

Exterior Walls

- **Repair:** Caulking maintenance is needed around doors, windows, trim and other exterior wall openings. This will help to maintain weather tightness and reduce energy costs. (There is a possibility of unseen water damage where caulking has not been properly maintained).
- **Repair:** Localized rot was observed in the trim in various locations. Following repair of the damaged areas (which should be combined with exterior painting/maintenance) proper maintenance of the trim and control of water from roof or surface runoff can avoid further damage.



Exterior Eaves

- **Monitor:** Localized rot was observed in the fascia (the wooden board to which the gutter is typically fastened) in various locations. Improvement is not necessary at present, although this condition should be repaired when exterior painting or maintenance are planned.

Lot Drainage

- **Repair:** The grading at the north side of the home should be improved to promote the flow of storm water away from the house. This can often be accomplished by the addition of top soil. The ground should slope away from the house at a rate of one inch per foot for at least the first ten feet. At least eight (8) inches of clearance should be maintained between soil level and the bottom of exterior wall siding.

Porch

- **Repair:** The porch should be sealed where it meets the house.
- **Repair, Safety Issue:** The porch railing is loose and needs to be re-secured.

Deck

- **Monitor:** The deck shows evidence of rot in various locations. Replacement may eventually be desired. In the interim, localized repairs could be undertaken.



- **Repair, Safety Issue:** The deck railing is loose and needs repair.
- **Repair:** The support posts for the deck steps do not provide adequate support. Improvements are needed.



Driveway

- **Monitor:** The driveway approach surface is in a deteriorated condition. Resurfacing is necessary to correct this condition.



- **Repair:** The installation of a drain is recommended for the driveway. The drain should be arranged to effectively drain water from the drive while resisting clogging. Drive runoff must be directed away from the building to avoid water entry/damage.



Garage

- **Repair, Safety Issue:** As there is a danger of falling, a railing should be provided for the opening at the top of the stairs leading to the garage.



Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Electrical

DESCRIPTION OF ELECTRICAL

Size of Electrical Service:	•120/240 Volt Main Service - Service Size: 200 Amp
Service Drop:	•Underground
Service Entrance Conductors:	•Aluminum
Service Equipment & Main Disconnects:	•Main Service Rating 200 Amps •Breakers
Service Grounding:	•Copper
Service Panel & Overcurrent Protection:	•Panel Rating: 200 Amp •Breakers
Sub-Panel(s):	•Panel Rating: 100 Amp
Distribution Wiring:	•Copper
Wiring Method:	• Non-Metallic Cable "Romex"
Switches & Receptacles:	•Grounded
Ground Fault Circuit Interrupters:	•Bathroom(s) •Whirlpool •Exterior •Garage •Kitchen •Electrical Panel
Smoke Detectors:	•Present

ELECTRICAL OBSERVATIONS

Positive Attributes

The size of the electrical service is sufficient for typical single family needs. The electrical panel is well arranged and all breakers are properly sized. Generally speaking, the electrical system is in good order. All outlets and light fixtures that were tested operated satisfactorily. The distribution of electricity within the home is good. All 3-prong outlets that were tested were appropriately grounded. Ground fault circuit interrupter (GFCI) devices have been provided in some areas of the home. These devices are extremely valuable, as they offer an extra level of shock protection. All GFCI's that were tested responded properly. Dedicated 220 volt circuits have been provided for all 220 volt appliances within the home. All visible wiring within the home is copper. This is a good quality electrical conductor.



Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Heating

DESCRIPTION OF HEATING

Energy Source:	•Gas
Heating System Type:	•Forced Air Furnace
Vents, Flues, Chimneys:	•Plastic
Heat Distribution Methods:	•Ductwork
Other Components:	•Humidifier

HEATING OBSERVATIONS

Positive Attributes

This is a high efficiency heating system. An electronic air cleaner has been installed on this forced air system. This feature provides better air cleaning than conventional filters.

General Comments

The gas to the heating system was shut off and could not be operated at the time of the inspection

The furnace appears to be a relatively new system that should have years of useful life remaining. Regular maintenance will be necessary to insure for proper safety and function.



Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Cooling / Heat Pumps

DESCRIPTION OF COOLING / HEAT PUMPS

Energy Source: •Electricity •240 Volt Power Supply
Central System Type: •Air Cooled Central Air Conditioning

COOLING / HEAT PUMPSOBSERVATIONS

Positive Attributes

The system responded properly to operating controls.

RECOMMENDATIONS / OBSERVATIONS

Central Air Conditioning

- **Improve:** Vegetation in the vicinity of the outdoor unit of the air conditioning system should be cut back.
- **Monitor:** Central air conditioning systems have a typical life expectancy of 7 to 12 years. The existing unit is approaching this age range. It may require a slightly higher level of maintenance, and may be more prone to major component breakdown. Predicting the frequency or time frame for repairs on any mechanical device is virtually impossible. One cannot predict with certainty when replacement will become necessary.
- **Repair:** The outdoor unit of the air conditioning system is out of level. This should be improved.



Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Insulation / Ventilation

DESCRIPTION OF INSULATION / VENTILATION

Attic Insulation:

•10-15" Cellulose insulation in Attic •Spray Foam

INSULATION / VENTILATION OBSERVATIONS

Positive Attributes

This is a well insulated home.

General Comments

The level of ventilation appears to be adequate. It is generally recommended that one (1) square foot of free vent area be provided for every one hundred and fifty (150) square feet of ceiling area. Proper ventilation will help to keep the house cooler during warm weather and extend the life of roofing materials. In cold climates, it will help reduce the potential for ice dams on the roof and condensation within the attic.

RECOMMENDATIONS / ENERGY SAVING SUGGESTIONS

- Caulking around doors, windows and other exterior wall openings will help to maintain weather tightness and reduce energy costs.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Plumbing

DESCRIPTION OF PLUMBING

Water Supply Source:	•Public Water Supply
Service Pipe to House:	•Copper
Main Water Valve Location:	•Front Wall of Basement
Interior Supply Piping:	•Copper
Waste System:	•Public Sewer System
Drain, Waste, & Vent Piping:	•Plastic
Water Heater:	•Gas
Fuel Shut-Off Valves:	•Natural Gas At Main Valve
Other Components:	•Sump Pump

PLUMBING OBSERVATIONS

Positive Attributes

The piping system within the home, for both supply and waste, is a good quality system.

RECOMMENDATIONS / OBSERVATIONS

Water Heater

- **Monitor:** Water heaters have a typical life expectancy of 7 to 12 years. The existing units are approaching this age range. One cannot predict with certainty when replacement will become necessary.
- **Monitor:** The supply piping shows evidence of corrosion where it meets the water heater. This is a common condition.



Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Interior

DESCRIPTION OF INTERIOR

Wall And Ceiling Materials:	•Drywall
Floor Surfaces:	•Carpet •Tile •Wood
Window Type(s) & Glazing:	•Casement •Double Glazed
Doors:	•Wood

INTERIOR OBSERVATIONS

General Condition of Interior Finishes

On the whole, the interior finishes of the home are in average condition. Typical flaws were observed in some areas.

General Condition of Windows and Doors

The majority of the doors and windows are good quality.

General Condition of Floors

The floors of the home are relatively level and walls are relatively plumb.

RECOMMENDATIONS / OBSERVATIONS

Wall / Ceiling Finishes

- **Monitor:** Typical drywall flaws were observed (Nail pops were noted in various locations).

Floors

- **Repair:** The tile floor in master bedroom is chipped and in need of grouting maintenance.



- **Monitor:** The carpet is stained in various locations.



Windows

- **Repair:** Damaged screens were noted on windows in various locations.

Basement

- **Monitor:** No evidence of moisture penetration was visible in the basement at the time of the inspection. *It should be understood that it is impossible to predict whether moisture penetration will pose a problem in the future.* 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 foundation. Gutters and downspouts should act to collect roof water and drain 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 the most common source of basement leakage. Please refer to the Roofing and Exterior sections of the report for more information.

In the event that basement leakage problems are experienced, lot and roof drainage improvements should be undertaken as a first step. Please beware of contractors who recommend expensive solutions. Excavation, damp-proofing and/or the installation of drainage tiles should be a last resort. In some cases, however, it is necessary. Your plans for using the basement may also influence the approach taken to curing any dampness that is experienced.

Kitchen Counters

- **Repair:** The kitchen counters are in need of caulking maintenance.

LIMITATIONS OF INTERIOR INSPECTION

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

- 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.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Appliances

DESCRIPTION OF APPLIANCES

Appliances Tested:

- Gas Range •Gas Cooktop •Microwave Oven •Dishwasher •Waste Disposer
- Refrigerator •Clothes Washer •Clothes Dryer

Laundry Facility:

- Gas Piping for 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

Other Components Tested:

- Kitchen Exhaust Hood •Door Bell •Intercom •Instant Hot Water Dispenser

APPLIANCES OBSERVATIONS

Positive Attributes

The appliances are to be in generally good condition. Most appliances that were tested responded satisfactorily. The kitchen and laundry facilities are well organized.

General Comments

The appliances are middle aged. As such, they will become slightly more prone to breakdowns; however, several years of serviceable life should remain.

RECOMMENDATIONS / OBSERVATIONS

Gas Range

- **Repair:** A burner on the gas range is inoperative.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Maintenance Advice

UPON TAKING OWNERSHIP

After taking possession of a new home, there are some maintenance and safety issues that should be addressed immediately. The following checklist should help you undertake these improvements:

- Change the locks on all exterior entrances, for improved security.
- Check that all windows and doors are secure. Improve window hardware as necessary. Security rods can be added to sliding windows and doors. Consideration could also be given to a security system.
- Install smoke detectors on each level of the home. Ensure that there is a smoke detector outside all sleeping areas. Replace batteries on any existing smoke detectors and test them. Make a note to replace batteries again in one year.
- Create a plan of action in the event of a fire in your home. Ensure that there is an operable window or door in every room of the house. Consult with your local fire department regarding fire safety issues and what to do in the event of fire.
- Examine driveways and walkways for trip hazards. Undertake repairs where necessary.
- Examine the interior of the home for trip hazards. Loose or torn carpeting and flooring should be repaired.
- Undertake improvements to all stairways, decks, porches and landings where there is a risk of falling or stumbling.
- Review your home inspection report for any items that require immediate improvement or further investigation. Address these areas as required.
- Install rain caps and vermin screens on all chimney flues, as necessary.
- Investigate the location of the main shut-offs for the plumbing, heating and electrical systems. If you attended the home inspection, these items would have been pointed out to you.

REGULAR MAINTENANCE

EVERY MONTH

- Check that fire extinguisher(s) are fully charged. Re-charge if necessary.
- Examine heating/cooling air filters and replace or clean as necessary.
- Inspect and clean humidifiers and electronic air cleaners.
- If the house has hot water heating, bleed radiator valves.
- Clean gutters and downspouts. Ensure that downspouts are secure, and that the discharge of the downspouts is appropriate. Remove debris from window wells.
- Carefully inspect the condition of shower enclosures. Repair or replace deteriorated grout and caulk. Ensure that water is not escaping the enclosure during showering. Check below all plumbing fixtures for evidence of leakage.
- Repair or replace leaking faucets or shower heads.
- Secure loose toilets, or repair flush mechanisms that become troublesome.

SPRING AND FALL

- Examine the roof for evidence of damage to roof coverings, flashings and chimneys.
- Look in the attic (if accessible) to ensure that roof vents are not obstructed. Check for evidence of leakage, condensation or vermin activity. Level out insulation if needed.
- Trim back tree branches and shrubs to ensure that they are not in contact with the house.
- Inspect the exterior walls and foundation for evidence of damage, cracking or movement. Watch for bird nests or other vermin or insect activity.
- Survey the basement and/or crawl space walls for evidence of moisture seepage.
- Look at overhead wires coming to the house. They should be secure and clear of trees or other obstructions.

- Q Ensure that the grade of the land around the house encourages water to flow away from the foundation.
- Q Inspect all driveways, walkways, decks, porches, and landscape components for evidence of deterioration, movement or safety hazards.
- Q Clean windows and test their operation. Improve caulking and weather-stripping as necessary. Watch for evidence of rot in wood window frames. Paint and repair window sills and frames as necessary.
- Q Test all ground fault circuit interrupter (GFCI) devices, as identified in the inspection report.
- Q Shut off isolating valves for exterior hose bibs in the fall, if below freezing temperatures are anticipated.
- Q Test the Temperature and Pressure Relief (TPR) Valve on water heaters.
- Q Inspect for evidence of wood boring insect activity. Eliminate any wood/soil contact around the perimeter of the home.
- Q Test the overhead garage door opener, to ensure that the auto-reverse mechanism is responding properly. Clean and lubricate hinges, rollers and tracks on overhead doors.
- Q Replace or clean exhaust hood filters.
- Q Clean, inspect and/or service all appliances as per the manufacturer's recommendations.

ANNUALLY

- Q Replace smoke detector batteries.
- Q Have the heating, cooling and water heater systems cleaned and serviced.
- Q Have chimneys inspected and cleaned. Ensure that rain caps and vermin screens are secure.
- Q Examine the electrical panels, wiring and electrical components for evidence of overheating. Ensure that all components are secure. Flip the breakers on and off to ensure that they are not sticky.
- Q If the house utilizes a well, check and service the pump and holding tank. Have the water quality tested. If the property has a septic system, have the tank inspected (and pumped as needed).
- Q If your home is in an area prone to wood destroying insects (termites, carpenter ants, etc.), have the home inspected by a licensed specialist. Preventative treatments may be recommended in some cases.

PREVENTION IS THE BEST APPROACH

Although we've heard it many times, nothing could be more true than the old cliché "an ounce of prevention is worth a pound of cure." Preventative maintenance is the best way to keep your house in great shape. It also reduces the risk of unexpected repairs and improves the odds of selling your house at fair market value, when the time comes.

Please feel free to contact our office should you have any questions regarding the operation or maintenance of your home. Enjoy your home!

Information About Radon



EPA RADON RISK INFORMATION

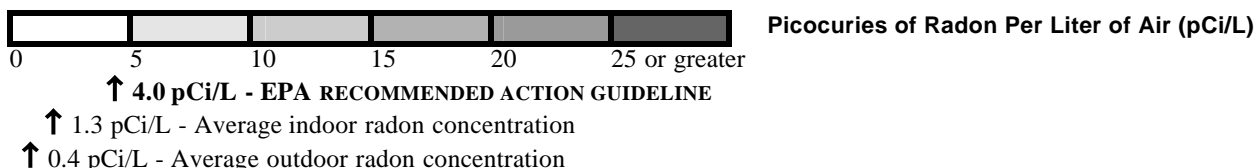
Fifty-five percent of our exposure to natural sources of radiation usually comes from radon. Radon is a colorless, tasteless, and odorless gas that comes from the decay of uranium found in nearly all soils. Levels of radon vary throughout the country. Radon is found all over the United States and scientists estimate that nearly one out of every 15 homes in this country has radon levels above recommended action levels.

Radon usually moves from the ground up and migrates into homes and other buildings through cracks and other holes in their foundations. The buildings trap radon inside, where it accumulates and may become a health hazard if the building is not properly ventilated.

When you breathe air containing a large amount of radon, the radiation can damage your lungs and eventually cause lung cancer. Scientists believe that radon is the second leading cause of lung cancer in the United States. It is estimated that 7,000 to 30,000 Americans die each year from radon-induced lung cancer. Only smoking causes more lung cancer deaths and smokers exposed to radon are at higher risk than nonsmokers. Testing your home is the only way to know if you and your family are at risk from radon.

Testing for Radon.

Should you have your home tested, use the chart below to compare your radon test results with the EPA guideline. The higher a home's radon level, the greater the health risk to you and your family.



The U.S. Environmental Protection Agency (EPA) and the Surgeon General Strongly recommend taking further action when the home's radon test results are 4.0 pCi/L or greater. The concentration of radon in the home is measured in picocuries per liter of air (pCi/L). Radon levels less than 4.0 pCi/L still pose some risk and in many cases may be reduced. If the radon level in your home is between 2.0 and 4.0 pCi/L, EPA recommends that you **consider** fixing your home. The national average indoor radon level is about 1.3 pCi/L. The higher a home's radon level, the greater the health risk to you and your family. Smokers and former smokers are at especially high risk. There are straightforward ways to fix a home's radon problem that are not too costly. Even homes with very high levels can be reduced to below 4.0 pCi/L. EPA recommends that you use an EPA or State-approved contractor trained to fix radon problems.

What do radon test results mean?

If your radon level is **below 4 pCi/L**, you do not need to take action.

If you radon level is **4 pCi/L or greater**, use the following charts to determine what your test results mean. Depending upon the type of test(s) you took, you will have to either test again or fix the home.

NOTE: All tests should meet EPA technical protocols.

Chart 1: Radon Test Conducted Outside Real Estate Transaction

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Type of Test(s)	If Radon Level Is 4.0 pCi/L or Greater
Single Short-Term Test	Test Again*
Average of Short-Term Tests	Fix The Home
One Long-Term Test	Fix The Home

* If your first short term test is several times greater than 4.0 pCi/L - for example, about 10.0 pCi/L or higher - you should take a second short-term test immediately.

Chart 1: Radon Test Conducted During a Real Estate Transaction (Buying or Selling a Home)

Type of Test(s)	If Radon Level Is 4.0 pCi/L or Greater
Single Active Short-Term Test (this test requires a machine)	Fix The Home
Average of 2 Passive Short-Term Tests* (these tests do not require machines)	Fix The Home
One Long-Term Test	Fix The Home

* Use two passive short-term tests and average the results.

What should I do after testing?

If your radon level is 4.0 pCi/L or greater, you can call your State radon office to obtain more information, including a list of EPA or State-approved radon contractors who can fix or can help you develop a plan for fixing the radon problem. Reduction methods can be as simple as sealing cracks in floors and walls or as complex as installing systems that use pipes and fans to draw radon out of the building.

EPA has a National Radon Program to inform the public about radon risks, train radon mitigation contractors, provide grants for state radon programs, and develop standards for radon-resistant buildings. EPA works with health organizations, state radon programs, and other federal agencies to make the program as effective as possible.

For more information about radon, its risks and what you can do to protect yourself, call 1-800-SOS-RADON and request a free copy of EPA's *A Citizen's Guide to Radon*. You may also call the Radon Fix-It Line at 1-800-644-6999 between noon and 8pm Monday through Friday, EST/EDT, for information and assistance. This toll-free line is operated by Consumer Federation of America, a nonprofit consumer organization.

Information About Carbon Monoxide

What is carbon monoxide (CO) and how is it produced in the home?

CO is a colorless, odorless, toxic gas. It is produced by the incomplete combustion of solid, liquid and gaseous fuels. Appliances fueled with gas, oil, kerosene, or wood may produce CO. If such appliances are not installed, maintained, and used properly, CO may accumulate to dangerous levels.

What are the symptoms of CO poisoning and why are these symptoms particularly dangerous?

Breathing CO causes symptoms such as headaches, dizziness, and weakness in healthy people. CO also causes sleepiness, nausea, vomiting, confusion and disorientation. At very high levels, it causes loss of consciousness and death.

This is particularly dangerous because CO effects often are not recognized. CO is odorless and some of the symptoms of CO poisoning are similar to the flu or other common illnesses.

Are some people more affected by exposure to CO than others?

CO exposures especially affect unborn babies, infants, and people with anemia or a history of heart disease. Breathing low levels of the chemical can cause fatigue and increase chest pain in people with chronic heart disease.

How many people die from CO poisoning each year?

In 1989, the most recent year for which statistics are available, there were about 220 deaths from CO poisoning associated with gas-fired appliances, about 30 CO deaths associated with solid-fueled appliances (including charcoal grills), and about 45 CO deaths associated with liquid-fueled heaters.

How many people are poisoned from CO each year?

Nearly 5,000 people in the United States are treated in hospital emergency rooms for CO poisoning; this number is believed to be an underestimate because many people with CO symptoms mistake the symptoms for the flu or are misdiagnosed and never get treated.

How can production of dangerous levels of CO be prevented?

Dangerous levels of CO can be prevented by proper appliance maintenance, installation, and use:

Maintenance:

- A qualified service technician should check your home's central and room heating appliances (including water heaters and gas dryers) annually. The technician should look at the electrical and mechanical components of appliances, such as thermostat controls and automatic safety devices.
- Chimneys and flues should be checked for blockages, corrosion, and loose connections.
- Individual appliances should be serviced regularly. Kerosene and gas space heaters (vented and unvented) should be cleaned and inspected to insure proper operation.
- CPSC recommends finding a reputable service company in the phone book or asking your utility company to suggest a qualified service technician.

Installation:

- Proper installation is critical to the safe operation of combustion appliances. All new appliances have installation instructions that should be followed exactly. Local building codes should be followed as well.
- Vented appliances should be vented properly, according to manufacturer's instructions.
- Adequate combustion air should be provided to assure complete combustion.
- All combustion appliances should be installed by professionals.

Appliance Use:

Follow manufacturer's directions for safe operation.

- Make sure the room where an unvented gas or kerosene space heater is used is well ventilated; doors leading to another room should be open to insure proper ventilation.
- Never use an unvented combustion heater overnight or in a room where you are sleeping.

Are there signs that might indicate improper appliance operation?

Yes, these are:

- Decreasing hot water supply
- Furnace unable to heat house or runs constantly
- Sooting, especially on appliances
- Unfamiliar or burning odor
- Increased condensation inside windows

Are there visible signs that might indicate a CO problem?

Yes, these are:

- Improper connections on vents and chimneys
- Visible rust or stains on vents and chimneys
- An appliance that makes unusual sounds or emits an unusual smell
- An appliance that keeps shutting off (Many new appliances have safety components attached that prevent operation if an unsafe condition exists. If an appliance stops operating, it may be because a safety device is preventing a dangerous condition. Therefore, don't try to operate an appliance that keeps shutting off; call a service person instead.)

Are there other ways to prevent CO poisoning?

Yes, these are:

- Never use a range or oven to heat the living areas of the home
- Never use a charcoal grill or hibachi in the home
- Never keep a car running in an attached garage

Can CO be detected?

Yes, CO can be detected with CO detectors that meet the requirements of Underwriters Laboratories (UL) standard 2034.

Since the toxic effect of CO is dependent upon both CO concentration and length of exposure, long-term exposure to a low concentration can produce effects similar to short term exposure to a high concentration.

Detectors should measure both high CO concentrations over short periods of time and low CO concentrations over long periods of time - the effects of CO can be cumulative over time. The detectors also sound an alarm before the level of CO in a person's blood would become crippling. CO detectors that meet the UL 2034 standard currently cost between \$35 and \$80.

Where should the detector be installed?

CO gases distribute evenly and fairly quickly throughout the house; therefore, a CO detector should be installed on the wall or ceiling in sleeping area/s but outside individual bedrooms to alert occupants who are sleeping.

Are there safety devices already on some appliances? And if so, why is a CO detector needed?

Vent safety shutoff systems have been required on furnaces and vented heaters since the late 1980s. They protect against blocked or disconnected vents or chimneys. Oxygen depletion sensors (ODS) have also been installed on unvented gas space heaters since the 1980s. ODS protect against the production of CO caused by insufficient oxygen for proper combustion. These devices (ODS and vent safety shutoff systems) are not a substitute for regular professional servicing, and many older, potentially CO-producing appliances may not have such devices. Therefore, a CO detector is still important in any home as another line of defense.

Are there other CO detectors that are less expensive?

There are inexpensive cardboard or plastic detectors that change color and do not sound an alarm and have a limited useful life. They require the occupant to look at the device to determine if CO is present. CO concentrations can build up rapidly while occupants are asleep, and these devices would not sound an alarm to wake them.

For additional information, write to the U.S. Consumer Product Safety Commission, Washington, D.C., 20207, call the toll-free hotline at 1-800-638-2772, or visit the website <http://www.cpsc.gov>

Information About Lead Based Paint

Lead-based paint is hazardous to your health.

Lead-based paint is a major source of lead poisoning for children and can also affect adults. In children, lead poisoning can cause irreversible brain damage and can impair mental functioning. It can retard mental and physical development and reduce attention span. It can also retard fetal development even at extremely low levels of lead. In adults, it can cause irritability, poor muscle coordination, and nerve damage to the sense organs and nerves controlling the body. Lead poisoning may also cause problems with reproduction (such as a decreased sperm count). It may also increase blood pressure. Thus, young children, fetuses, infants, and adults with high blood pressure are the most vulnerable to the effects of lead.

Children should be screened for lead poisoning.

In communities where the houses are old and deteriorating, take advantage of available screening programs offered by local health departments and have children checked regularly to see if they are suffering from lead poisoning. Because the early symptoms of lead poisoning are easy to confuse with other illnesses, it is difficult to diagnose lead poisoning without medical testing. Early symptoms may include persistent tiredness, irritability, loss of appetite, stomach discomfort, reduced attention span, insomnia, and constipation. Failure to treat children in the early stages can cause long-term or permanent health damage.

The current blood lead level which defines lead poisoning is 10 micrograms of lead per deciliter of blood. However, since poisoning may occur at lower levels than previously thought, various federal agencies are considering whether this level should be lowered further so that lead poisoning prevention programs will have the latest information on testing children for lead poisoning.

Consumers can be exposed to lead from paint.

Eating paint chips is one way young children are exposed to lead. It is not the most common way that consumers, in general, are exposed to lead. Ingesting and inhaling lead dust that is created as lead-based paint "chalks," chips, or peels from deteriorated surfaces can expose consumers to lead. Walking on small paint chips found on the floor, or opening and closing a painted frame window, can also create lead dust. Other sources of lead include deposits that may be present in homes after years of use of leaded gasoline and from industrial sources like smelting. Consumers can also generate lead dust by sanding lead-based paint or by scraping or heating lead-based paint.

Lead dust can settle on floors, walls, and furniture. Under these conditions, children can ingest lead dust from hand-to-mouth contact or in food. Settled lead dust can re-enter the air through cleaning, such as sweeping or vacuuming, or by movement of people throughout the house.

Older homes may contain lead based paint.

Lead was used as a pigment and drying agent in "alkyd" oil based paint. "Latex" water based paints generally have not contained lead. About two-thirds of the homes built before 1940 and one-half of the homes built from 1940 to 1960 contain heavily-leaded paint. Some homes built after 1960 also contain heavily-leaded paint. It may be on any interior or exterior surface, particularly on woodwork, doors, and windows. In 1978, the U.S. Consumer Product Safety Commission lowered the legal maximum lead content in most kinds of paint to 0.06% (a trace amount). Consider having the paint in homes constructed before the 1980s tested for lead before renovating or if the paint or underlying surface is deteriorating. This is particularly important if infants, children, or pregnant women are present.

Consumers can have paint tested for lead.

There are do-it-yourself kits available. However, the U.S. Consumer Product Safety Commission has not evaluated any of these kits. One home test kit uses sodium sulfide solution. This procedure requires you to place a drop of sodium sulfide solution on a paint chip. The paint chip slowly turns darker if lead is present. There are problems with this test, however. Other metals may cause false positive results, and resins in the paint may prevent the sulfide from causing the paint chip to change color. Thus, the presence of lead may not be correctly indicated. In addition the darkening may be detected only on very light-colored paint.

Another in-home test requires a trained professional who can operate the equipment safely. This test uses X-ray fluorescence to determine if the paint contains lead. Although the test can be done in your home, it should be done only by professionals

trained by the equipment manufacturer or who have passed a state or local government training course, since the equipment contains radioactive materials. In addition, in some tests, the method has not been reliable.

Consumers may choose to have a testing laboratory test a paint sample for lead. Lab testing is considered more reliable than other methods. Lab tests may cost from \$20 to \$50 per sample. To have the lab test for lead paint, consumers may:

- Get sample containers from the lab or use re-sealable plastic bags. Label the containers or bags with the consumer's name and the location in the house from which each paint sample was taken. Several samples should be taken from each affected room (see HUD Guidelines discussed below).
- Use a sharp knife to cut through the edges of the sample paint. The lab should tell you the size of the sample needed. It will probably be about 2 inches by 2 inches.
- Lift off the paint with a clean putty knife and put it into the container. Be sure to take a sample of all layers of paint, since only the lower layers may contain lead. Do not include any of the underlying wood, plaster, metal, and brick.
- Wipe the surface and any paint dust with a wet cloth or paper towel and discard the cloth or towel.

The U.S. Department of Housing and Urban Development (HUD) recommends that action to reduce exposure should be taken when the lead in paint is greater than 0.5% by lab testing or greater than 1.0 milligrams per square centimeter by X-ray fluorescence. Action is especially important when paint is deteriorating or when infants, children, or pregnant women are present. Consumers can reduce exposure to lead-based paint.

If you have lead-based paint, you should take steps to reduce your exposure to lead.

You can:

1. Have the painted item replaced.

You can replace a door or other easily removed item if you can do it without creating lead dust. Items that are difficult to remove should be replaced by professionals who will control and contain lead dust.

2. Cover the lead-based paint.

You can spray the surface with a sealant or cover it with gypsum wallboard. However, painting over lead-based paint with non-lead paint is not a long-term solution. Even though the lead-based paint may be covered by non-lead paint, the lead-based paint may continue to loosen from the surface below and create lead dust. The new paint may also partially mix with the lead-based paint, and lead dust will be released when the new paint begins to deteriorate.

3. Have the lead-based paint removed.

Have professionals trained in removing lead-based paint do this work. Each of the paint-removal methods (sandpaper, scrapers, chemicals, sandblasters, and torches or heat guns) can produce lead fumes or dust. Fumes or dust can become airborne and be inhaled or ingested. Wet methods help reduce the amount of lead dust. Removing moldings, trim, window sills, and other painted surfaces for professional paint stripping outside the home may also create dust. Be sure the professionals contain the lead dust. Wet-wipe all surfaces to remove any dust or paint chips. Wet-clean the area before re-entry.

You can remove a small amount of lead-based paint if you can avoid creating any dust. Make sure the surface is less than about one square foot (such as a window sill). Any job larger than about one square foot should be done by professionals. Make sure you can use a wet method (such as a liquid paint stripper).

4. Reduce lead dust exposure.

You can periodically wet mop and wipe surfaces and floors with a high phosphorous (at least 5%) cleaning solution. Wear waterproof gloves to prevent skin irritation. Avoid activities that will disturb or damage lead based paint and create dust. This is a preventive measure and is not an alternative to replacement or removal.

Contact your state and local health departments lead poisoning prevention programs and housing authorities for information about testing labs and contractors who can safely remove lead-based paint. The U.S. Department of Housing and Urban Development (HUD) prepared guidelines for removing lead-based paint. Ask contractors about their qualifications, experience removing lead-based paint, and plans to follow these guidelines.

COSTS OF REMODELING OR REPAIR

The prices quoted below include a range of prices based on a typical metropolitan area. Individual prices from contractors can vary substantially from these ranges. We advise that several bids be obtained on any work exceeding several hundred dollars. **DO NOT RELY ON THESE PRICES... GET FURTHER ESTIMATES.** This cost estimate guide is intended to give you a general idea of the cost of repairing or replacing the most common items in a home. This is based on an average size home with standard grade replacements. Upgrades may run considerably more

ITEM UNIT ESTIMATED PRICE

Masonry fireplace Each \$3,000 - \$6,000
Install prefab fireplace Each 2,000 - 4,000
Insulate attic Square foot .75 - 1.25
Install attic ventilating fan Each 200 - 300
Install new drywall over plaster Square foot 1.75 - 2.75
Install new warm air furnace Each 1500 - 3,000
Replace central air conditioning electric 3T, on existing ductwork Each 1,400 - 2,000
Install humidifier Each 300 - 500
Install electrostatic air cleaner Each 800 - 1,500
Increase elec. svc. to 60-100 amps Each 600 - 1,200
Run separate elec. line for dryer Each 125 - 200
Run separate elec. line for A/C Each 135 - 200
Install hardwired smoke detector Each 100 - 180
Install new disposal Each 250 - 400
Install new dishwasher Each 500 - 750
Install new hot water boiler Each 2,000 - 4,000
Install new 30-40 gal water heater Each 350 - 650
Install new 30 gal. water heater Each 300 - 500
Dig and install new well Each get estimate
Install new septic system Each get estimate
Regrade around exterior Each 500 - 900
Install new sump pump and pit Each 400 - 600
Build new redwood or pressure-treated deck Square foot 20 - 30
Install storm windows Each 60 - 150
Install wood replacement windows Each 400 - 800
Install aluminum or vinyl replacement windows Each 300 - 800
Install new gutters and downspouts Linear foot 3.50 - 5.00
Install asphalt shingle over existing roofing Square foot 1.20 - 1.70
Tear off existing roof and install new asphalt shingle roof Square foot 2.50 - 4.00
Instl 1-ply membrane rubberized roof Square foot get estimate
Instl new 4-ply built-up tar & gravel Square foot get estimate
Remove asbestos from pipes in bsmt (with probable minimum) Linear foot get estimate
Concrete drive or patio Square foot 3.00 - 4.00
with removal of old Square foot 2.25 - 3.00
Clean chimney flue Each 100 - 200
Add flue liner for gas fuel 900 - 1,200
Add flue liner for oil or wood 2,800 - 3,500

WHEN CHOOSING A CONTRACTOR:

- * Get a minimal of 3 estimates
 - * Verify that contractor is licensed and insured
 - * Have contractor make a copy of their license and insurance to keep for your records.
 - * Check references with previous clients
- s.f. = square feet l.f. = lineal feet square = 100 square feet

EXTERIOR

Install automatic irrigation system.....	each 1,200-1,800
Exterior Regrading.....	each 500-1,500
Install Invisible Fence.....	each 800-1500
Add/Replace Concrete Driveway.....	each 5,000-10,000
Raise Sunken Concrete Slab [Mud-jacking].....	each 250-500
Add/Replace Asphalt Driveway.....	each 2,500-5,000
Sealcoat Asphalt Driveway.....	each 150-250
Install Seamless Aluminum Gutters/Downspouts.....	l.f. 3-4
Install Aluminum/Vinyl Siding.....	square 100-150
Install Aluminum/Vinyl Soffet/Facia Trim.....	each 1,500-2,500
Wood Thermo Replacement Windows.....	each 450-600
Vinyl Thermo Replacement Windows	each 300-400
Interior/Exterior Storm Windows.....	each 100-150
Steel Insulated Exterior Replacement Door.....	each 350-600
Chimney Sweep.....	each 150-250
Repair Masonry Chimney....[estimates will vary].....	each 500-1,500
Replacae Electrical Service Entrance Cable.....	each 250-300
16' Steel Sectional Garage Door Replacement.....	each 800-900
Replace Garage Door Opener.....	each 400-500
Install new wolmanized/cedar deck.....	s.f. 12-18
[16' x 16' deck app. \$2500-\$3500]	
Install new asphalt shingles over shingles.....	square 100-120
[1000-1500 s.f. house app. \$1500-\$2000]	
Remove 2 layers & install new shingles.....	square 160-200
Remove 3 layers install new plywood & shingles.....	square 250-300
Remove shingles & install new poly-membrane flat roof.....	square 400-600
Repair/replace worn roof valleys.....	each 250-500
Add roof ventilation.....	each 100-125
Add family room/bedroom addition.....	s.f. 150-200
Install new drilled & cased well.....	each 3,000-6,000
Install new septic field.....	each 5,000-12,000

INTERIOR

Basement waterproofing.....	per wall 1,500-2,500
Basement waterproofing entire basement.....	each 8,000-12,000
Repair basement rod hole leaks.....	each 75-100
Repair basement vertical cracks.....	each 300-400
Replace sump pump.....	each 250-350
Install sump pump back-up system.....	each 400-500
Install 40-50 gallon gas hot water heater.....	each 400-550
Add/replace water softener.....	each 800-1500
Replace all galvanized water supply pipes.....	each 1500-2500
Replace garbage disposal.....	each 250-350
Replace dishwasher.....	each 400-600
Replace toilet wax seal.....	each 125
Replace toilet.....	each 250-500
Reglaze bathtub.....	each 350-500
Bathtub liner.....	each 700-1000
Replace bathtub.....	each 1500-2500
Replace lav. sink/faucet.....	each 250-500
Replace defective ceramic shower pan.....	each 1500-3000
Upgrade electrical system from 60 amps to 100 amps.....	1000-1500
Install G.F.I. outlets where needed.....	each 75-100
Add 220 line or gas line for dryer hook-up.....	each 250-350
Install new gas forced air furnace.....	each 1500-3000
Install new gas boiler.....	each 2500-4000
Install central air to forced air furnace.....	each 1500-2500
Install central humidifier to furnace.....	each 400-500
Install electronic air filter on furnace.....	each 400-600
Install ceramic tile/hardwood floors.....	s.f. 8-10
Refinish hardwood floors.....	s.f. 2.50-3.50
Add 6" attic insulation	s.f. 1-1.50
Install new carpet.....	Sq. yard 18-25
Finish basement.....	s.f. 15-25
Total kitchen renovation.....	each 4000 and up

This table is designed to give you a general guideline, as to repairs/replacements/upgrade costs. You will have to take the time to calculate the square footage in most cases, but this should give you a general idea of what costs you can expect for these most common items.

NACHI

(National Association of Certified Home Inspectors)

Standards of Practice

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1. Definitions and Scope

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

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

II. A home inspection will not reveal every concern that exists or ever could exist, but only those material defects observed on the day of the inspection.

1.2. A Material defect is a condition with a residential real property or any portion of it that would have a significant adverse impact on the value of the real property or that involves an unreasonable risk to people on the property. The fact that a structural element, system or subsystem is near, at or beyond the

end of the normal useful life of such a structural element, system or subsystem is not by itself a material defect.

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

2. Standards of Practice

2.1. Roof

I. The inspector shall inspect from ground level or eaves:

- A. The roof covering.
- B. The gutters.
- C. The downspouts.
- D. The vents, flashings, skylights, chimney and other roof penetrations.
- E. The general structure of the roof from the readily accessible panels, doors or stairs.

II. The inspector is not required to:

- A. Walk on any roof surface.
- B. Predict the service life expectancy.
- C. Inspect underground downspout diverter drainage pipes.
- D. Remove snow, ice, debris or other conditions that prohibit the observation of the roof surfaces.
- E. Inspect antennae, lightning arresters, or similar attachments.

2.2. Exterior

I. The inspector shall inspect:

- A. The siding, flashing and trim.
- B. All exterior doors, decks, stoops, steps, stairs, porches, railings, eaves, soffits and fascias.
- C. And report as in need of repair any spacings between intermediate balusters, spindles, or rails for steps, stairways, balconies, and railings that permit the passage of an object greater than four inches in diameter.
- D. A representative number of windows.
- E. The vegetation, surface drainage and retaining walls when these are likely to adversely affect the structure.
- F. And describe the exterior wall covering.

II. The inspector is not required to:

- A. Inspect or operate screens, storm windows, shutters, awnings, fences, outbuildings, or exterior accent lighting.
- B. Inspect items, including window and door flashings, which are not visible or readily accessible from the ground.
- C. Inspect geological, geotechnical, hydrological and/or soil conditions.
- D. Inspect recreational facilities.
- E. Inspect seawalls, break-walls and docks.
- F. Inspect erosion control and earth stabilization measures.

- G. Inspect for safety type glass.
- H. Inspect underground utilities.
- I. Inspect underground items.
- J. Inspect wells or springs.
- K. Inspect solar systems.
- L. Inspect swimming pools or spas.
- M. Inspect septic systems or cesspools.
- N. Inspect playground equipment.
- O. Inspect sprinkler systems.
- P. Inspect drain fields or drywells.
- Q. Determine the integrity of the thermal window seals or damaged glass.

2.3. Basement, Foundation & Crawlspace

I. The inspector shall inspect:

- A. The basement.
- B. The foundation
- C. The crawlspace.
- D. The visible structural components.
- E. Any present conditions or clear indications of active water penetration observed by the inspector.
- F. And report any general indications of foundation movement that are observed by the inspector, such as but not limited to sheetrock cracks, brick cracks, out-of-square door frames or floor slopes.

II. The inspector is not required to:

- A. Enter any crawlspaces that are not readily accessible or where entry could cause damage or pose a hazard to the inspector.
- B. Move stored items or debris.
- C. Operate sump pumps with inaccessible floats.
- D. Identify size, spacing, span, location or determine adequacy of foundation bolting, bracing, joists, joist spans or support systems.
- E. Provide any engineering or architectural service.
- F. Report on the adequacy of any structural system or component.

2.4. Heating

I. The inspector shall inspect:

- A. The heating system and describe the energy source and heating method using normal operating controls.
- B. And report as in need of repair electric furnaces which do not operate.
- C. And report if inspector deemed the furnace inaccessible.

II. The inspector is not required to:

- A. Inspect or evaluate interiors of flues or chimneys, fire chambers, heat exchangers, humidifiers, dehumidifiers, electronic air filters, solar heating systems, solar heating systems or fuel tanks.
- B. Inspect underground fuel tanks.
- C. Determine the uniformity, temperature, flow, balance, distribution, size, capacity, BTU, or supply adequacy of the heating system.
- D. Light or ignite pilot flames.
- E. Activate heating, heat pump systems, or other heating systems when ambient temperatures or when

other circumstances are not conducive to safe operation or may damage the equipment.

F. Override electronic thermostats.

G. Evaluate fuel quality.

H. Verify thermostat calibration, heat anticipation or automatic setbacks, timers, programs or clocks.

2.5. Cooling

I. The inspector shall inspect:

A. The central cooling equipment using normal operating controls.

II. The inspector is not required to:

A. Determine the uniformity, temperature, flow, balance, distribution, size, capacity, BTU, or supply adequacy of the cooling system.

B. Inspect window units, through-wall units, or electronic air filters.

C. Operate equipment or systems if exterior temperature is below 60 degrees Fahrenheit or when other circumstances are not conducive to safe operation or may damage the equipment.

D. Inspect or determine thermostat calibration, heat anticipation or automatic setbacks or clocks.

E. Examine electrical current, coolant fluids or gasses, or coolant leakage.

2.6. Plumbing

I. The inspector shall:

A. Verify the presence of and identify the location of the main water shutoff valve.

B. Inspect the water heating equipment, including combustion air, venting, connections, energy sources, seismic bracing, and verify the presence or absence of temperature-pressure relief valves and/or Watts 210 valves.

C. Flush toilets.

D. Run water in sinks, tubs, and showers.

E. Inspect the interior water supply including all fixtures and faucets.

F. Inspect the drain, waste and vent systems, including all fixtures.

G. Describe any visible fuel storage systems.

H. Inspect the drainage sump pumps testing sumps with accessible floats.

I. Inspect and describe the water supply, drain, waste and main fuel shut-off valves, as well as the location of the water main and main fuel shut-off valves.

J. Inspect and determine if the water supply is public or private.

K. Inspect and report as in need of repair deficiencies in the water supply by viewing the functional flow in two fixtures operated simultaneously.

L. Inspect and report as in need of repair deficiencies in installation and identification of hot and cold faucets.

M. Inspect and report as in need of repair mechanical drain-stops that are missing or do not operate if installed in sinks, lavatories and tubs.

N. Inspect and report as in need of repair commodes that have cracks in the ceramic material, are improperly mounted on the floor, leak, or have tank components which do not operate.

II. The inspector is not required to:

A. Light or ignite pilot flames.

B. Determine the size, temperature, age, life expectancy or adequacy of the water heater.

C. Inspect interiors of flues or chimneys, water softening or filtering systems, well pumps or tanks, safety or shut-of valves, floor drains, lawn sprinkler systems or fire sprinkler systems.

D. Determine the exact flow rate, volume, pressure, temperature, or adequacy of the water supply.

- E. Determine the water quality or potability or the reliability of the water supply or source.
- F. Open sealed plumbing access panels.
- G. Inspect clothes washing machines or their connections.
- H. Operate any main, branch or fixture valve.
- I. Test shower pans, tub and shower surrounds or enclosures for leakage.
- J. Evaluate the compliance with local or state conservation or energy standards, or the proper design or sizing of any water, waste or venting components, fixtures or piping.
- K. Determine the effectiveness of anti-siphon, back-flow prevention or drain-stop devices.
- L. Determine whether there are sufficient clean-outs for effective cleaning of drains.
- M. Evaluate gas, liquid propane or oil storage tanks.
- N. Inspect any private sewage waste disposal system or component of.
- O. Inspect water treatment systems or water filters.
- P. Inspect water storage tanks, pressure pumps or bladder tanks.
- Q. Evaluate time to obtain hot water at fixtures, or perform testing of any kind to water heater elements.
- R. Evaluate or determine the adequacy of combustion air.
- S. Test, operate, open or close safety controls, manual stop valves and/or temperature or pressure relief valves.
- T. Examine ancillary systems or components, such as, but not limited to, those relating to solar water heating, hot water circulation.

2.7. Electrical

I. The inspector shall inspect:

- A. The service line.
- B. The meter box.
- C. The main disconnect.
- D. And determine the rating of the service amperage.
- E. Panels, breakers and fuses.
- F. The service grounding and bonding.
- H. A representative sampling of switches, receptacles, light fixtures, AFCI receptacles
- I. And test all GFCI receptacles and GFCI circuit breakers observed and deemed to be GFCI's during the inspection.
- I. And report the presence of solid conductor aluminum branch circuit wiring if readily visible.
- J. And report on any GFCI-tested receptacles in which power is not present, polarity is incorrect, the receptacle is not grounded, is not secured to the wall, the cover is not in place, the ground fault circuit interrupter devices are not properly installed or do not operate properly, or evidence of arcing or excessive heat is present.
- K. The service entrance conductors and the condition of their sheathing.
- L. The ground fault circuit interrupters observed and deemed to be GFCI's during the inspection with a GFCI tester.
- M. And describe the amperage rating of the service.
- N. And report the absence of smoke detectors.
- O. Service entrance cables and report as in need of repair deficiencies in the integrity of the insulation, drip loop, or separation of conductors at weatherheads and clearances.

II. The inspector is not required to:

- A. Insert any tool, probe or device into the main panel, sub-panels, downstream panels, or electrical fixtures.

- B. Operate electrical systems that are shut down.
- C. Remove panel covers or dead front covers if not readily accessible.
- D. Operate over current protection devices.
- E. Operate non-accessible smoke detectors.
- F. Measure or determine the amperage or voltage of the main service if not visibly labeled.
- G. Inspect the alarm system and components.
- H. Inspect the ancillary wiring or remote control devices.
- I. Activate any electrical systems or branch circuits which are not energized.
- J. Operate overload devices.
- K. Inspect low voltage systems, electrical de-icing tapes, swimming pool wiring or any time-controlled devices.
- L. Verify the continuity of the connected service ground.
- M. Inspect private or emergency electrical supply sources, including but not limited to generators, windmills, photovoltaic solar collectors, or battery or electrical storage facility.
- N. Inspect spark or lightning arrestors.
- O. Conduct voltage drop calculations.
- P. Determine the accuracy of breaker labeling.

2.8. Fireplace

I. The inspector shall inspect:

- A. The fireplace, and open and close the damper door if readily accessible and operable.
- B. Hearth extensions and other permanently installed components.
- C. And report as in need of repair deficiencies in the lintel, hearth and material surrounding the fireplace, including clearance from combustible materials

II. The inspector is not required to:

- A. Inspect the flue or vent system.
- B. Inspect the interior of chimneys or flues, fire doors or screens, seals or gaskets, or mantels.
- C. Determine the need for a chimney sweep.
- D. Operate gas fireplace inserts.
- E. Light pilot flames.
- F. Determine the appropriateness of such installation.
- G. Inspect automatic fuel feed devices.
- H. Inspect combustion and/or make-up air devices.
- I. Inspect heat distribution assists whether gravity controlled or fan assisted.
- J. Ignite or extinguish fires.
- K. Determine draft characteristics.
- L. Move fireplace inserts, stoves, or firebox contents.
- M. Determine adequacy of draft, perform a smoke test or dismantle or remove any component.
- N. Perform an NFPA inspection.

2.9. Attic, Ventilation & Insulation

I. The inspector shall inspect:

- A. The insulation in unfinished spaces.
- B. The ventilation of attic spaces.
- C. Mechanical ventilation systems.
- D. And report on the general absence or lack of insulation.

II. The inspector is not required to:

- A. Enter the attic or unfinished spaces that are not readily accessible or where entry could cause damage or pose a safety hazard to the inspector in his or her opinion.
- B. To move, touch, or disturb insulation.
- C. To move, touch or disturb vapor retarders.
- D. Break or otherwise damage the surface finish or weather seal on or around access panels and covers.
- E. Identify the composition of or the exact R-value of insulation material.
- F. Activate thermostatically operated fans.
- G. Determine the types of materials used in insulation/wrapping of pipes, ducts, jackets, boilers, and wiring.
- H. Determine adequacy of ventilation.

2.10. Doors, Windows & Interior

I. The inspector shall:

- A. Open and close a representative number of doors and windows.
- B. Inspect the walls, ceilings, steps, stairways, and railings.
- C. Inspect garage doors and garage door openers by operating first by remote (if available) and then by the installed automatic door control.
- D. And report as in need of repair any installed electronic sensors that are not operable or not installed at proper heights above the garage door.
- E. And report as in need of repair any door locks or side ropes that have not been removed or disabled when garage door opener is in use.
- F. And report as in need of repair any windows that are obviously fogged or display other evidence of broken seals.

II. The inspector is not required to:

- A. Inspect paint, wallpaper, window treatments or finish treatments.
- B. Inspect central vacuum systems.
- C. Inspect safety glazing.
- D. Inspect security systems or components.
- E. Evaluate the fastening of countertops, cabinets, sink tops and fixtures, or firewall compromises.
- F. Move furniture, stored items, or any coverings like carpets or rugs in order to inspect the concealed floor structure.
- G. Move drop ceiling tiles.
- H. Inspect or move any household appliances..
- I. Inspect or operate equipment housed in the garage except as otherwise noted.
- J. Verify or certify safe operation of any auto reverse or related safety function of a garage door.
- K. Operate or evaluate security bar release and opening mechanisms, whether interior or exterior, including compliance with local, state, or federal standards.
- L. Operate any system, appliance or component that requires the use of special keys, codes, combinations, or devices.
- M. Operate or evaluate self-cleaning oven cycles, tilt guards/latches or signal lights.
- N. Inspect microwave ovens or test leakage from microwave ovens.
- O. Operate or examine any sauna, steam-jenny, kiln, toaster, ice-maker, coffee-maker, can-opener, bread-warmer, blender, instant hot water dispenser, or other small, ancillary devices.
- P. Inspect elevators.
- Q. Inspect remote controls.

- R. Inspect appliances.
- S. Inspect items not permanently installed.
- T. Examine or operate any above-ground, movable, freestanding, or otherwise non-permanently installed pool/spa, recreational equipment or self-contained equipment.
- U. Come into contact with any pool or spa water in order to determine the system structure or components.
- V. Determine the adequacy of spa jet water force or bubble effect.
- W. Determine the structural integrity or leakage of a pool or spa.

3. Limitations, Exceptions & Exclusions

3.1. Limitations:

- I. An inspection is not technically exhaustive.
- II. An inspection will not identify concealed or latent defects.
- III. An inspection will not deal with aesthetic concerns or what could be deemed matters of taste, cosmetic, etc.
- IV. An inspection will not determine the suitability of the property for any use.
- V. An inspection does not determine the market value of the property or its marketability.
- VI. An inspection does not determine the advisability or inadvisability of the purchase of the inspected property.
- VII. An inspection does not determine the life expectancy of the property or any components or systems therein.
- VIII. An inspection does not include items not permanently installed.
- IX. These Standards of Practice apply only to homes with four or fewer dwelling units.

3.2. Exclusions:

- I. The inspectors are not required to determine:
 - A. Property boundary lines or encroachments.
 - B. The condition of any component or system that is not readily accessible.
 - C. The service life expectancy of any component or system.
 - D. The size, capacity, BTU, performance, or efficiency of any component or system.
 - E. The cause or reason of any condition.
 - F. The cause for the need of repair or replacement of any system or component.
 - G. Future conditions.
 - H. The compliance with codes or regulations.
 - I. The presence of evidence of rodents, animals or insects.
 - J. The presence of mold, mildew or fungus.
 - K. The presence of air-borne hazards.
 - L. The presence of birds.
 - M. The presence of other flora or fauna.
 - N. The air quality.
 - O. The existence of asbestos.
 - P. The existence of environmental hazards.
 - Q. The existence of electro-magnetic fields.

- R. The presence of hazardous materials including, but not limited to, the presence of lead in paint.
 - S. Any hazardous waste conditions.
 - T. Any manufacturer recalls or conformance with manufacturer installation or any information included in the consumer protection bulletin.
 - U. Operating costs of systems.
 - V. Replacement or repair cost estimates.
 - W. The acoustical properties of any systems.
 - X. Estimates of how much it will cost to run any given system.
- II. The inspectors are not required to operate:
- A. Any system that is shut down.
 - B. Any system that does not function properly.
 - C. Or evaluate low voltage electrical systems such as, but not limited to:
 - 1. Phone lines.
 - 2. Cable lines.
 - 3. Antennae.
 - 4. Lights.
 - 5. Remote controls.
 - D. Any system that does not turn on with the use of normal operating controls.
 - E. Any shut off valves or manual stop valves.
 - F. Any electrical disconnect or over current protection devices.
 - G. Any alarm systems.
 - H. Moisture meters, gas detectors or similar equipment.
- III. The inspectors are not required to:
- A. Move any personal items or other obstructions, such as, but not limited to:
 - 1. Throw rugs.
 - 2. Furniture.
 - 3. Floor or wall coverings.
 - 4. Ceiling tiles
 - 5. Window coverings.
 - 6. Equipment.
 - 7. Plants.
 - 8. Ice.
 - 9. Debris.
 - 10. Snow.
 - 11. Water.
 - 12. Dirt.
 - 13. Foliage.
 - 14. Pets
 - B. Dismantle, open, or uncover any system or component.
 - C. Enter or access any area which may, in the opinion of the inspector, to be unsafe or risk personal safety.
 - D. Enter crawlspaces or other areas that are unsafe or not readily accessible.
 - E. Inspect underground items such as, but not limited to, underground storage tanks or other indications of their presence, whether abandoned or actively used.
 - F. Do anything which, in the inspector's opinion, is likely to be unsafe or dangerous to the inspector or

others or damage property, such as, but not limited to, walking on roof surfaces, climbing ladders, entering attic spaces or negotiating with dogs.

G. Inspect decorative items.

H. Inspect common elements or areas in multi-unit housing.

I. Inspect intercoms, speaker systems, radio-controlled, security devices or lawn irrigation systems.

J. Offer guarantees or warranties.

K. Offer or perform any engineering services.

L. Offer or perform any trade or professional service other than home inspection.

M. Research the history of the property, report on its potential for alteration, modification, extendibility, or its suitability for a specific or proposed use for occupancy.

N. Determine the age of construction or installation of any system structure, or component of a building, or differentiate between original construction or subsequent additions, improvements, renovations or replacements thereto.

O. Determine the insurability of a property.

P. Perform or offer Phase 1 environmental audits.

Q. Inspect on any system or component which is not included in these standards.

4. Glossary of Terms

4.1. Accessible: Can be approached or entered by the inspector safely, without difficulty, fear or danger.

4.2. Activate: To turn on, supply power, or enable systems, equipment, or devices to become active by normal operating controls. Examples include turning on the gas or water supply valves to the fixtures and appliances and activating electrical breakers or fuses.

4.3. Adversely Affect: Constitute, or potentially constitute, a negative or destructive impact.

4.4. Alarm System: Warning devices, installed or free-standing, including but not limited to: Carbon monoxide detectors, flue gas and other spillage detectors, security equipment, ejector pumps and smoke alarms.

4.5. Appliance: A household device operated by use of electricity or gas. Not included in this definition are components covered under central heating, central cooling or plumbing.

4.6. Architectural Service: Any practice involving the art and science of building design for construction of any structure or grouping of structures and the use of space within and surrounding the structures or the design, design development, preparation of construction contract documents, and administration of the construction contract.

4.7. Component: A permanently installed or attached fixture, element or part of a system.

4.8. Condition: The visible and conspicuous state of being of an object.

4.9. Crawlspace: The area within the confines of the foundation and between the ground and the underside of the lowest floor structural component.

4.10. Decorative: Ornamental; not required for the operation of essential systems and components of a home.

- 4.11. Describe: Report in writing a system or component by its type, or other observed characteristics, to distinguish it from other components used for the same purpose.
- 4.12. Determine: To arrive at an opinion or conclusion pursuant to examination.
- 4.13. Dismantle: To open, take apart or remove any component, device or piece that would not typically be opened, taken apart or removed by an ordinary occupant.
- 4.14. Engineering Service: Any professional service or creative work requiring engineering education, training, and experience and the application of special knowledge of the mathematical, physical and engineering sciences to such professional service or creative work as consultation, investigation, evaluation, planning, design and supervision of construction for the purpose of assuring compliance with the specifications and design, in conjunction with structures, buildings, machines, equipment, works or processes.
- 4.15. Enter: To go into an area to observe visible components.
- 4.16. Evaluate: To assess the systems, structures or components of a dwelling.
- 4.17. Examine: To visually look. See Inspect.
- 4.18. Foundation: The base upon which the structure or wall rests; usually masonry, concrete, or stone, and generally partially underground.
- 4.19. Function: The action for which an item, component, or system is specially fitted or used or for which an item, component or system exists; to be in action or perform a task.
- 4.20. Functional: Performing, or able to perform, a function.
- 4.21. Home Inspection: The process by which an inspector visually examines the readily accessible systems and components of a home and operates those systems and components utilizing these Standards of Practice as a guideline.
- 4.22. Household Appliances: Kitchen and laundry appliances, room air conditioners, and similar appliances.
- 4.23. Inspect: To visually look at readily accessible systems and components safely, using normal operating controls and accessing readily accessible panels and areas in accordance with these Standards of Practice.
- 4.24. Inspected Property: The readily accessible areas of the buildings, site, items, components, and systems included in the inspection.
- 4.25. Inspector: One who performs a real estate inspection.
- 4.26. Installed: Attached or connected such that the installed item requires tool for removal.
- 4.27. Material Defect: Refer to section 1.2.
- 4.28. Normal Operating Controls: Devices such as thermostats that would be operated by ordinary occupants which require no specialized skill or knowledge.
- 4.29. Observe: To see through visually directed attention.

- 4.30. Operate: To cause systems to function or turn on with normal operating controls.
- 4.31. Readily Accessible: An item or component is readily accessible if, in the judgment of the inspector, it is capable of being safely observed without movement of obstacles, detachment or disengagement of connecting or securing devices, or other unsafe or difficult procedures to gain access.
- 4.32. Recreational Facilities: Spas, saunas, steam baths, swimming pools, tennis courts, playground equipment, and other exercise, entertainment or athletic facilities.
- 4.33. Report: A written communication (possibly including digital images) of any material defects seen during the inspection.
- 4.34. Representative Number: A sufficient number to serve as a typical or characteristic example of the item(s) inspected.
- 4.35. Safety Glazing: Tempered glass, laminated glass, or rigid plastic.
- 4.36. Shut Down: Turned off, unplugged, inactive, not in service, not operational, etc.
- 4.37. Structural Component: A component which supports non-variable forces or weights (dead loads) and variable forces or weights (live loads).
- 4.38. System: An assembly of various components to function as a whole.
- 4.39. Technically Exhaustive: A comprehensive and detailed examination beyond the scope of a real estate home inspection which would involve or include, but would not be limited to: dismantling, specialized knowledge or training, special equipment, measurements, calculations, testing, research, analysis or other means.
- 4.40. Unsafe: A condition in a readily accessible, installed system or component which is judged to be a significant risk of personal injury during normal, day-to-day use. The risk may be due to damage, deterioration, improper installation or a change in accepted residential construction standards.
- 4.41. Verify: To confirm or substantiate.