

February 12, 2012

Mr. & Mrs. Buyer
1 Home Street
Pittsburgh, PA 15206

Date and time of inspection:
Property location:
Inspector:

February 12, 2012 at 9:00 am
521 5th Street
Tim Raufer

The report contains the following:

- General Information
- Conclusions and Recommendations
- Description of Components
- General Limitations and Exclusions as per [ASHI Standards of Practice](#)

The inspection was performed according to the American Society of Home Inspectors' Standards of Practice. These Standards were made available to you when the inspection was scheduled (prior to the inspection). The purpose of the inspection is to provide the client with information regarding the condition of the systems and components of the home as inspected at the time of the inspection.

Please do not hesitate to call us if you have any questions regarding the inspection procedures or the report. Thank you for employing us.

Sincerely,

Tim Raufer
VBinspect.com
Certified ASHI Member #249115



GENERAL INFORMATION

Approximate age:	30 - 35 years
Main entry faces:	east
Building type:	end unit attached townhouse
Space below grade:	crawlspace
Utility status:	water, electric- all on, no gas service
Weather:	30°F. snowing
	1"-2" of snow on the ground
Garage:	none
House vacant:	yes
Present at inspection:	buyer, buyer's family
Accompanied inspector during inspection:	buyer, buyer's family
Inspection performed by:	Tim Raufer
Starting time:	9:00 a.m.
Completion time:	11:30 a.m.
Contract received?	yes

CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations listed below are based on the observation and operation procedures that are outlined in the ASHI Standards of Practice. This information was included in the pre-inspection packet that was made available to you prior to the inspection. Items listed below will include recommendations for monitoring and repairs, important specific maintenance items, further evaluation by others, precautionary and informational items, and items that are considered significantly deficient or near the end of their economic service life. Please be advised that conclusions and recommendations are based on the opinion and past experience of the inspector, and it is possible that other inspectors, contractors, municipal building enforcement officials, and experts will disagree with the conclusions and recommendations listed below. In general, as per the ASHI Standards of Practice, the home inspector does not determine the methods, materials, or costs of corrections. The methods, materials, and costs of correction should be determined by the appropriate contractor or specific tradesperson. You may also decide that repairs/replacements are not cost effective - it is up to you to decide what to do with the information that we, and others, provide.

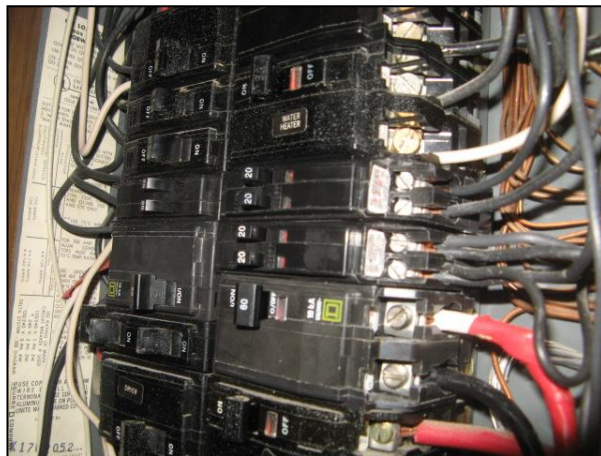
UNSAFE SYSTEMS/COMPONENTS

Unsafe is defined by the ASHI Standards of Practice as "A condition in a readily accessible, installed system or component that is judged to be a significant risk of bodily 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." Please note that almost all electrical issues are considered to be unsafe or potentially unsafe. Additionally, items that are potentially unsafe are also in this category - and you may decide that you can live with the risk, and it is not cost effective to perform repairs/replacements - it is up to you. The following systems/components are considered to be unsafe or potentially unsafe:

1. There were problems and concerns with the electric system which include the following:

a. There were two "double taps" on one of the half sized 20-amp circuit breakers at the left side of the main electric panel. A "double tap" occurs when there are two wires connected to one terminal on an overload protection device (breaker).

The panel and breakers were manufactured by Square D. Certain breakers manufactured by Square D are designed to accept multiple wires taps. The double tapped breaker was



not designed to accept multiple wires, and this is not a recommended installation. The circuits in question should be reconfigured to eliminate the double tap.

b. In the main electric panel there were two wires that had been joined together using a wire nut and connected to a single breaker. Although acceptable, this suggests that the panel is filled to its maximum capacity because there is no room to accommodate an individual breaker for each of these circuits. Installation of a larger electric panel should be considered as a future improvement.

c. It is recommended that ground fault protection (GFI) devices be installed for all outlets in wet, or potentially wet, areas such as kitchen, bathroom, basement, garage and exterior outlets. A GFI device provides an additional measure of safety at wet areas where there is a risk of shock. Please consult with the [Technical Links](#) portion of our website for more information regarding GFI locations.

GFI devices were observed in the bathrooms.

d. In order to turn off all the power to the house in the event of an emergency, the main breaker is located in the meter bank at the left side of the exterior.

Alternatively, each of the circuit breakers could be turned off individually.

As per our conversation, there was a 100 amp electric service. This may be considered minimal under peak-loading conditions. The main breaker tripped during the inspection when multiple baseboard heaters, the hot water tank, and the electric furnace were operated simultaneously. Often, normal usage will not result in peak loading. Caution should be exercised when operating the furnace and multiple space heaters simultaneously.

You may wish to consider installing a larger (150 or 200 amp) electric service as a future improvement, to increase safety and performance under peak loading conditions.

It is recommended that the above mentioned items be further evaluated by a qualified and experienced electrical contractor in order to determine the exact scope of corrective measures that are needed.

2. There were concerns with the railings and steps on the property which include the following:

a. There was a high step riser (10"-12") at the front entry patio leading up to the front door. This can present a tripping hazard, especially for guests. It is recommended that the step be marked with a contrasting colored stripe to draw attention it. Eventual replacement of the step leading up to the patio is recommended.

b. Although common for an older railing, the openings in the handrail leading to the 2nd floor were larger than 4". Typically, modern railings are constructed so that a 4" sphere cannot pass through. This can present an entrapment hazard for a small child. If this is a concern, modification of this railing is recommended.

- c. There were no anti-skid traction marks on the tub in the second floor bathroom. Although common for a house of this age, this may present a slip and fall hazard. A textured bath mat is recommended.

The above mentioned items are considered to be potentially unsafe, particularly for guests, small children or the elderly. Repair/modification is recommended.

SYSTEMS/COMPONENTS THAT WERE NOT INSPECTED

The following systems/components were designated to be inspected as per the ASHI Standards of Practice, and were present at the time of the inspection, but were not inspected:

3. The roof was snow covered at the time of the inspection. Shingles on the back (west facing) roof was observed from a ladder at the eaves by sweeping snow from several shingles. There was a heavy-weight asphalt shingle observed. There did not appear to be signs of significant cracking, granule loss or deterioration due to age. The shingles, gutters, and ridge vents on the subject unit and the neighboring units appeared to be the same. It is understood that new roofs were installed approximately 5 years ago. You should consult with the homeowner's association regarding this. The typical service life for this type of shingle is approximately 25-30 years.



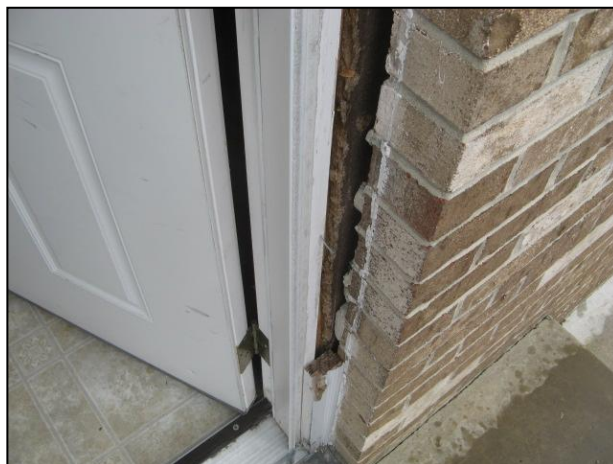
SYSTEMS/COMPONENTS THAT ARE NEARING OR AT THE END OF THEIR ECONOMIC LIFE

The following systems/components may still be functional or semi-functional, but they are statistically close to failure or they have already served their typical economic life:

SYSTEMS/COMPONENTS THAT ARE NOT FUNCTIONING PROPERLY

The following items include systems/components that are not functioning properly, or are not installed as they should be but are still functional or semi-functional:

4. The brick moulding was damaged and lacking from the right side of the back entry door. Replacement of the brick mould is recommended. Although a storm door frame had been installed, there was no storm door. Replacement of the storm door is recommended as well. You should consult with a carpenter or handyman regarding this.



5. There was a single defective sash balance string on the Andersen window at the back left bedroom. The string did not retract when the window was opened. This will make the window difficult to operate and strain the other remaining sash balance.

On Andersen windows, there is a spring balance located at the top of the window, which should retract the string and counter-balance the window. If a trim nail was installed through the spring whenever the window casing was installed, it will prevent the spring from retracting properly. You should consult with a carpentry or window contractor familiar with Andersen windows regarding this. A typical installation sticker from an Andersen window (in a different property) can be seen in the accompanying photo.



There was separation on some of the sash frame joints on one of the Andersen windows in the back right bedroom. This condition is illustrated in the accompanying photo. Early signs of separation were also observed on the sash frames at the front second floor windows. This prevented the windows from closing/locking fully. Repair of the damaged sash frames is recommended.

You should consult with a contractor who is familiar with Andersen windows regarding repair of these items.



6. There were concerns with the plumbing system which include the following:

a. Slow drainage was observed from the sink in the 2nd floor bathroom. Cleaning of the trap/drain is recommended.

b. Slight but active leakage was observed from the joint between the drain piping below the kitchen sink and the garbage disposal. Repair of the leaking fitting is recommended.

c. The drain from the hot water tank overflow pan was discharging directly into the crawlspace. Whenever the water had been turned on to the property at the beginning of the inspection, the hot water tank drain was open and the tank was overflowing directly into the crawlspace. As a future improvement, it is recommended that the hot water tank overflow pan be connected to a drain pipe in the crawlspace, to avoid flooding the crawlspace in the event of a leak.



Whenever laundry appliances are installed, the washing machine should also be connected to an overflow pan with a drain pipe.

d. The flush valves in both the first- and second- floor toilets should be adjusted or replaced. The toilets did not flush properly, and continued to run after the tank was filled.

e. Leakage was observed from the valve behind the toilet in the first floor powder room, even after the valve was turned off. Replacement of the valve is needed.

You should consult with a plumbing contractor regarding further evaluation and repair of the above mentioned items.

7. There were concerns with the crawlspace which include the following:

a. There were two vapor barriers installed in the crawlspace. The top vapor barrier had apparently been installed as a part of the radon mitigation system. The edges of the vapor barrier, where it had been sealed to the foundation wall, had been installed in a make-shift fashion. There were many gaps and openings at the seal between the vapor barrier and the foundation.

As per our conversation, it is recommended that the vapor barrier be reinstalled or repaired so that there is a positive seal between the vapor barrier and the foundation wall. Typically, this would be done using furring strips and sealant to

anchor the vapor barrier to the wall. Sealant alone had been used in the past.

The purpose of a vapor barrier is to prevent latent moisture from the soil from penetrating into the crawlspace to create high humidity. High humidity can eventually lead to condensation, rot, growth of mold/mildew, etc. The vapor barrier is also a necessary component of the radon mitigation system.

The floor framing was checked at various areas with an electronic moisture meter and was relatively dry. This suggests that there has not been excessive humidity or moisture in the crawlspace.

b. Gaps and openings in the vapor barrier will reduce the effectiveness of the radon reduction system. The radon mitigation fan was off because the power had been off. After the fan has been switched back on consistently, it is recommended that a Radon test be performed to confirm the effectiveness of the system. You should consult with a radon testing contractor regarding this.

c. There was staining, efflorescence and signs of past water penetration at the back left corner of the crawlspace. This condition is illustrated in the accompanying photo. Some of the stained areas were wet when checked with an electronic moisture meter at the time of the inspection.

As per our conversation, there was a downspout from the roof drainage system discharging directly adjacent to the foundation at this corner of the exterior. The downspout should be extended to discharge water downhill, away from the house.



The joint between the back patio and the foundation should be re-sealed periodically with high-quality masonry caulking to prevent water entry at the joint.

Water droplets and ponding was observed below the vapor barrier at several areas at the back of the crawlspace. The crawlspace should be observed for signs of water penetration



over time. If frequent water penetration, and a lack of drying, becomes problematic, a French drain system may be appropriate.

d. There was insulation dislodged at various areas of the crawlspace. The dislodged insulation should be reinstalled or re-secured. As per our conversation, recommended minimum insulation levels have increased substantially since the house was constructed and upgrading insulation should be considered as a future improvement.



e. There was water supply piping exposed in the crawlspace. The crawlspace is vented directly to the exterior via foundation vents. In the winter the crawlspace will be close to the exterior temperature. Insulation should be placed around the water supply pipes in the crawlspace to help prevent freezing.

f. There was C-PVC piping providing water to some of the kitchen plumbing fixtures as seen from the crawlspace. C-PVC piping should be supported at least every 4'. Some of the piping appeared to be minimally supported. Installation of additional clamps, hangers or supports is recommended.

g. The metal plate at the top of steel column supporting the wood beam at the middle of the crawlspace was deformed and it is recommended that an additional steel plate be installed to help distribute the weight of the beam to the column more evenly. You should consult with a carpenter or handyman regarding this.



h. There was a drain pipe at the front of the crawlspace. The source or destination of the drain could not be determined with certainty, but it is likely that this an overflow pipe connected to the storm sewer or rain conductors to drain water from the crawlspace in the event of a leak. You should consult with the builder or owner's association regarding this.

Additional information on modern crawlspace design and performance can be found in the [Technical Links](#) portion of our website.

OTHER ITEMS

The following items, in the opinion of the inspector, are cost effective to increase the overall factor of safety or life cycle of a system/component, are key items to remember, or need to be further evaluated to determine if they are a problem:

8. The aluminum counter flashing that covers the top of the step flashing on the subject house, and tucks below the drip edge on the neighboring property was dislodged and should be re-secured so that water does not penetrate behind the counter flashing. This condition is illustrated in the accompanying photo.



9. There were open caulk joints between the vinyl siding and the windows at the back of the house. The open joints should be re-caulked periodically as a maintenance item. This condition is illustrated in the accompanying photo.



10. There was bird nesting material above the downspout at the back of the house. It is recommended that the nesting material be removed. In some cases, birds can carry diseases that are dangerous to humans such as histoplasmosis and caution should be exercised.

11. The synthetic foam siding at the front of the house is believed to be original to the property, and is showing signs of deterioration and weathering due to age. There were cracks in the siding to the right side of the 2nd floor. In general, the siding appeared to be in serviceable condition, however, eventual replacement should be considered as a future



improvement.

12. There were drill marks at the front entry patio indicative of past treatment for termites. You should consult with the current owners or homeowners association regarding any records or history of treatment.

Mud sheltered tunnels from termites were observed on the foundation wall at the front of the crawlspace. No live insects were observed. There did not appear to be mud sheltered tunnels or evidence of termite activity on the framing at the front of the basement. The framing was observed at a representative number of areas by removing insulation. Periodic re-inspection for termite activity is recommended. You should consult a pest control contractor regarding this.



13. There were outside hose spigots at the front and back of the house. The corresponding inside valve should be turned off for the winter and the outside spigot opened in order to drain any water collected in the line. This will help to prevent freezing and bursting of the pipe.

14. There was a large evergreen tree at the front left corner of the house that was encroaching on the roof, gutters and siding. This presents an attraction for carpenter ants and the tree should be trimmed away from the house by an arborist.

15. As an information item, the laundry area was set up to accommodate a 4 prong electric dryer.

16. The laundry area was located in a finished area of the house. It is recommended that burst-resistant stainless steel hoses be installed instead of conventional rubber hoses. It is also recommended that a drip pan be installed below the washing machine in order to minimize the risk of damage in the event of a leak.

17. It is recommended that the flexible dryer vent be replaced with a rigid metal vent in order to comply with the manufacturer's recommended installation and improve dryer venting. Please visit the [Technical Links](#) portion of our website for more information on proper dryer venting.

18. The electric baseboard heaters in each room were operated, responded to normal controls and appeared to be functioning properly. Clearance from Drapes, furniture and stored goods should be maintained around the units when in operation. The units should be cleaned or dusted periodically to ensure efficient operation.

As per our conversation, you may wish to consider thermostat controls with integral

timers as a future improvement to comfort and control. You should consult with an electrician regarding this.

19. The heating system is equipped with a heat pump and electric furnace and was operated on both the normal heat pump mode and emergency heat mode. In the normal heat mode the heat pump will come on first and the back up electric furnace heat will come on as required. When the outside temperature is below freezing the heat pump may not operate at all and heat will be supplied by the electric furnace. In the emergency heat mode, only the electric furnace will operate.

Be aware the temperature of the air at the registers when the heat pump is operating will be lower than the normal temperature of gas, electric or oil forced air furnaces and the heat pump may operate for longer periods. This is normal for heat pump operation. If you increase the temperature at the thermostat more than 3 to 5 degrees, the electric furnace may begin to operate and shut off the heat pump. It is suggested the thermostat be kept at a steady setting in the normal mode for the most efficient operation. Most heat pumps do not operate below freezing and the back up heat becomes the primary heat source.

When the heat pump was operated, supply air temperatures of approximately 95 - 100 degrees F were observed. In general, this is an indication that the heat pump is operating properly.

When the furnace was operated in the electric resistance mode, warm air temperatures of approximately 100 - 105 degrees F were observed. In general, this is an indication that the furnace is functioning properly. It was not possible to determine with certainty if there are two banks of electric resistance heaters.

Annual servicing of the heating and cooling systems is recommended in order to ensure its continued proper operation.

It was not possible to operate the heat pump in the air conditioning mode due to cold temperatures at the time of the inspection.

20. The air handler for the heat pump/AC/electric resistance heat was located in the attic. There was limited service access to the unit, and it was not possible to access the unit directly in the course of the inspection. It was therefore not possible to observe the discharge pipe for the condensate drain from the air conditioner, presence of an condensate overflow pan, unit wiring, etc.

From the central return grille in the second floor hallway, the evaporator coil was observed and appeared to be relatively clean. You should consult with an HVAC contractor regarding annual cleaning and servicing of the unit. An HVAC contractor may recommend installation of an additional service access hatch.

21. The ceilings in each room were "washed" or scanned with a flashlight and no obvious signs of leakage, staining or patching were observed.

22. The property was vacant, and prior to the inspection, had been winterized. At the beginning of the inspection the water was turned on from a remote valve by the property manager. At the end of the inspection, the water supply was turned off by the inspector at a valve where it enters the house at the right side of the crawlspace. Pressure was

relieved from the house piping by opening the sink and shower faucets after the main valve was off.

Please note, in case of emergency or a leak, in order to turn off all of the water to the property, it will be necessary to operate the individual shutoff valves at each fixtures, or operate the valve in the crawlspace.

23. The power to the property was off at the time of the inspection. After checking with the listing agent, the main breaker at the meter bay was turned to the on position by the inspector. The power was left on, so the heating system could be left at a low setting to help prevent freezing of the pipes. The house thermostat was set to approximately 45 - 50 degrees F. the electric baseboard heaters in the kitchen and 2nd floor bath were set at their lowest setting (approx 45degrees). All other lights, heaters, fixtures etc were turned off.

DESCRIPTION OF COMPONENTS

STRUCTURAL SYSTEM

FOUNDATION- concrete block

FLOOR STRUCTURE- dirt in the crawlspace, 2"x10" joists with a plywood sub-floor for the first floor, second floor structure could not be observed-finish restricting view

WALL STRUCTURE- the wall structure could not be observed - it is assumed that the walls are 2"x4" wood framing and drywall, solid masonry construction for the firewall between adjacent units

CEILING STRUCTURE- drywall, bottom cord of the 2"x6" & 2"x4" roof trusses second floor ceiling joists as observed from the attic

ROOF STRUCTURE- 2"x6" & 2"x4" roof trusses, 24" on center with a plywood roof deck

ATTIC ACCESS- hatch in the back right bedroom

METHOD OF OBSERVATION- from the hatch opening only due to limited access and the presence of blown in cellulose insulation

EXTERIOR

WALL COVERINGS- foam synthetic siding, vinyl siding, brick

ROOFING SYSTEM

METHOD OF OBSERVATION- from a ladder at the back eave

TYPE OF ROOF COVERING- asphalt shingles, approx. 6 years old

PLUMBING SYSTEM

WATER SUPPLY PIPING- service line (as it enters the basement) is ½" copper; interior piping is ½" copper & C-PVC as seen in the crawlspace.

DRAIN, WASTE AND VENT PIPING- PVC plastic, copper

HOT WATER TANK- Reliance, 55 gal. electric, approx. 6 years old

VENTED – n/a

MAIN WATER SHUTOFF- valve at the back right side of the crawlspace

MAIN FUEL SHUTOFF- main breaker below the meter at the left side of the exterior

ELECTRICAL SYSTEM

SERVICE AMPERAGE AND VOLTAGE- 125-amp, 240-volt

MAIN PANEL- located in the water heater closet below the steps

MAIN POWER SHUT OFF- main breaker below the meter at the left side of the exterior

SUBPANELS- none

WIRING METHODS- twelve 120-volt circuits and seven 240-volt circuits. Wiring where visible was: plastic sheathed copper (Romex) for the 120 volt circuits; plastic sheathed multi-strand copper & plastic sheathed copper for the 240 volt circuits.

SMOKE ALARMS- Smoke alarms should be located on all levels and in all sleeping areas. Batteries should be changed on a regular basis.

HEATING SYSTEM

ENERGY SOURCE- Electric/ heat pump

SYSTEM TYPE- Rheem, 2 ½ -ton split system heat pump, with electric resistance backup approx. 6 years old, also individual electric baseboard units in each room

VENTED – n/a

CENTRAL AIR CONDITIONING SYSTEM

ENERGY SOURCE- Heat pump

SYSTEM TYPE- Rheem, 2 ½ -ton split system heat pump approx. 6 years old

INSULATION AND VENTILATION SYSTEMS

ATTIC INSULATION- 6"-8" of loose fill cellulose insulation

ATTIC VENTILATION-ridge vent

FIREPLACES AND SOLID FUEL BURNING APPLIANCES

DESCRIPTION- none

GENERAL LIMITATIONS AND EXCLUSIONS

General Limitations:

- A. Inspections performed in accordance with these Standards of Practice
 - 1. Are not technically exhaustive.
 - 2. Will not identify concealed conditions or latent defects.
- B. These Standards of Practice are applicable to buildings with four or fewer dwelling units and their garages or carports.

General exclusions:

- A. The Inspector is not required to perform any action or make any determination unless specifically stated in these Standards of Practice, except as may be required by lawful authority.
- B. Inspectors are NOT required to determine:
 - 1. The condition of systems or components which are not readily accessible.
 - 2. The remaining life of any system or component.
 - 3. The strength, adequacy, effectiveness, or efficiency of any system or component.
 - 4. The causes of any condition or deficiency.
 - 5. The methods, materials or costs of corrections.
 - 6. Future conditions including, but not limited to, failure of systems and components.
 - 7. The suitability of the property for any specialized use.
 - 8. Compliance with regulatory requirements (codes, regulations, laws, ordinances, etc.)
 - 9. The market value of the property or its marketability.
 - 10. The advisability of the purchase of the property.
 - 11. The presence of potentially hazardous plants or animals including, but not limited to wood destroying organisms or diseases harmful to humans
 - 12. The presence of any environmental hazards including, but not limited to toxins, carcinogens, noise and contaminants in soil, water, and air.
 - 13. The effectiveness of any system installed or methods utilized to control or remove suspected hazardous substances.
 - 14. The operating costs of systems or components.
 - 15. The acoustical properties of any system or components.
- C. Inspectors are NOT required to offer:
 - 1. Or perform any act or service contrary to law.
 - 2. Or perform engineering services.
 - 3. Or perform work in any trade or any professional service other than home inspection.
 - 4. Warranties or guarantees of any kind.
- D. Inspectors are NOT required to operate:
 - 1. Any system or component which is shut down or otherwise inoperable.
 - 2. Any system or component which does not respond to normal operating controls.
 - 3. Shut-off valves.
- E. Inspectors are NOT required to enter:

1. Any area which will, in the opinion of the inspector, likely be dangerous to the inspector or other persons or damage the property or its systems or components.
 2. The under-floor crawl spaces or attics, which are not readily accessible.
- F. Inspectors are NOT required to inspect:
1. Underground items including but not limited to underground storage tanks or other underground indications of their presence, whether abandoned or active.
 2. Systems or components which are not installed.
 3. Decorative items.
 4. Systems or components located in areas that are not entered in accordance with these Standards of Practice.
 5. Detached structures other than garages and carports.
 6. Common elements or common areas in multi-unit housing, such as condominium properties or cooperative housing.
- G. Inspectors are NOT required to:
1. Perform any procedure or operation which will, in the opinion of the inspector, likely be dangerous to the inspector or other persons or damage the property or its systems or components.
 2. Move suspended ceiling tiles, personal property, furniture, equipment, plants, soil, snow, ice, or debris.
 3. Dismantle any system or component, except as explicitly required by these Standards of Practice.