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HOME INSPECTION

1234 Main St.
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Prepared for:

John Smith
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Prepared by:

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January 2, 2013

Date of Inspection: January 1, 2013
Engineer: Dave Pioli, P.E., Licensed Home Inspector
Home Inspector License Number: 203

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Complete Wood Destroying Organism Inspection Report

- Wood Destroying Organism Diagram and Legend (Included with hard copy of report, if required)

NOTE: The Wood Destroying Organism Report is a part of this report. It is included as a stand-alone section and may be separated from the body of this report if needed.

ATTACHMENTS:

- Inspection Field Notes
- Agreement For Services
- Professional Engineer's Resume
- Pre-Title Checklist
- Photos

SUMMARY

The purpose of this summary is to help you organize **some of the recommended work**, with emphasis on the first year. This list should not be considered all-inclusive, since there may be other things you might want to add.

Immediate and next few months:

- Repair plumbing leak at toilet
- Replace carpeting in upper level and stretch lower level carpeting
- Install vapor barrier over 100% of crawlspace floor
- Remove wood debris from crawlspace
- Control standing water in crawlspace
- Maintain heating unit and check for CO emissions
- Upgrade caulking in bathrooms
- Improve water heater pressure relief piping
- Improve water heater earthquake straps
- Install GFCI's
- Make minor electrical repairs
- Paint the exterior trim
- Repair/replace window screens
- Adjust the garage door opener
- Install smoke alarms
- Install carbon monoxide detector
- Repair or upgrade the weather-stripping at front door
- Further investigate dryer vent discharge and upstairs fan bath discharge
- Clean bathroom and laundry area exhaust fans
- Repair handrail to upstairs
- Repair dog/cat damage to trim and wallboard

First year:

- Eliminate earth/wood contact at column at front
- Replace vinyl flooring in bathrooms
- Trim plants away from siding
- Eliminate siding/soil contact
- Further investigate downspout discharge if standing water in crawlspace persists

Five years:

- Replace heating unit
- Resurface roof

Ten years:

- Replace water heater

Annual:

- Test GFCI's monthly
- Test smoke alarms monthly
- Maintain heating unit
- Clean the gutters
- Control mold in crawlspace

INTRODUCTION

This report was prepared from the perspective of what an owner would benefit from knowing. It discusses things beyond immediate concern. Therefore, this report needs to be read completely to fully understand the information.

Dave Pioli, P.E. performed a limited structural and mechanical inspection of this property. A copy of his resume is attached.

This written report is the complete response to your request for an inspection of this property and should be read in full. It supersedes any discussions that may have occurred during the inspection. If you have any questions about this report or our inspection, please call our office immediately for clarification.

If there is any area of this property where you have a particular concern based either on this report or your own personal observations, we recommend a more exhaustive technical evaluation.

Our primary purpose is to provide an understanding of the house you are considering. We do of course look for problems, particularly those we would consider major deficiencies. Please keep in mind that we generally define a major deficiency as one that would cost approximately $1,000 or more to correct. Any house will have minor items deserving attention. Often these are matters of personal preference. It is not the intent of our inspection to detail every minor defect we might find.

Our inspection and report do not include code compliance, mold investigations, environmental investigations, indoor air quality analysis, municipal regulatory compliance, subsurface investigation, verification of prior uses or records research related to the property.

Our report is limited to observations at the time of the inspection, using visual observations, simple tools and normal homeowner operational controls. No destructive or invasive testing was performed. Our report is not to be considered a guarantee of condition and no warranty is implied.

We offer several types of inspections. The Standard Home Inspection relies on visual evidence, while the Exhaustive Inspection relies on visual evidence plus analysis, invasive testing and extended on-site evaluation. Details can be found in the Agreement For Services (pre-inspection agreement).

Based on discussions prior to our inspection, you have chosen the Standard Home Inspection.

This report is based on examining the major systems, specifically the HVAC system, plumbing, electrical and structural systems. It provides an opinion about the condition and is not an exhaustive technical evaluation. No surface materials, belongings or furniture were moved. We are not responsible for conditions that could not be seen or were not within the scope.

This inspection is in compliance with the Standards of Practice as set forth by the State of Washington, Chapter 308-408C WAC.

The following definitions are used in this report:

Average Typical for this part of the country and for buildings of similar age and type.

Excellent Component is in new condition.

Good Component is sound and performing its function, although it may show signs of normal wear and tear. Maintenance may be required.

Fair Component falls into one or more of the following:

- Repairs or workmanship not in compliance with commonly accepted practice.
- Repair is required.
- Approaching end of expected service life.

Poor Component has failed or cannot be relied upon. Repair or replacement is required.

Ratings are determined by comparison to buildings of similar age and type. Some details of workmanship and materials may be examined more closely in higher quality buildings.

This report is not intended to determine the insurability of this home or its components, materials or systems. Insurance companies use many different standards and criteria to determine what is or is not covered. For example, some do not cover certain types of siding or electrical systems. If this is a concern to you, we suggest that you further investigate this with your insurance agent.

Attached to the hard copy of this report are the Inspection Field Notes, which contain additional information and are considered part of this report.

All directions (left, right, etc.) are taken from the viewpoint of facing the front of the building or via north, south, east and west.

DESCRIPTION

This house is a duplex townhouse, 2-story residence. As we understand, this home was constructed in 1990. There is a crawlspace under all of this building, which was accessible for inspection under this unit only.

STRUCTURE

Our evaluation is based mostly on indirect observations. We look for cracks, bulges and other evidence of distress. As with any limited inspection, it is possible that there are structural deficiencies that cannot be known. The foundation footing and most of the framing was inaccessible or not visible, limiting this inspection.

The sub-structure consists of concrete foundation walls, while the super-structure consists of stick framing. This is a standard method of construction.

Where visible the foundation is generally in good condition.

While there was no visible evidence of significant rot, it should not be assumed that no rot exists. Rot can result from moisture underneath the siding, behind trim or in the walls should insulation or other obstacles restrict drying. It is possible that you will encounter rot should you disassemble portions of this structure not normally visible. This is typical for any home.

For all practical purposes, there has been little or no settlement or movement of the house and it can be described as structurally sound.

SITE

The driveway and sidewalk material were in good condition.

SEISMIC CONDITION

This is not a complete assessment of the seismic condition, which requires a detailed inspection, measurements, computations and drawings.

Modern structural design accounts for two types of loading on a structure. These are in the vertical direction from gravity and lateral loads from wind and earthquakes. Contrary to popular belief, it is common for design of the lateral restraints to be controlled via wind loads, as opposed to seismic loading. The lateral loads from seismic events vary with the type of construction, soil conditions and the specific vibrations produced by the seismic event. Structures on granular or compacted dry soil tend to experience shaking of lower amplitude than on softer, saturated, fine grained or organic soils.

This is a modern house and its construction was subject to modern building standards as enforced by the local building official. Although nearly all pertinent seismic framing and anchorage features were not visible during our inspection, you may reasonably expect that the house at least meets those minimum standards, as long as proper approval and inspections were conducted.

FOUNDATION WATER

There was standing water on approximately 5% of the crawlspace floor. This exists in the vicinity of where the sewer pipe penetrates the foundation. It appears that some water has seeped around the space between the sewer pipe and the concrete wall. Sealing this gap may somewhat reduce standing water.

One way to address standing water in the crawlspace is to raise the floor of the crawlspace with gravel. This consists of removing the vapor barrier and any debris and importing enough pea gravel or other free draining gravel to above the level of past standing water. The vapor barrier would then be re-installed. In this way all the standing water is contained below the level of the vapor barrier. If standing water cannot be controlled via these measures, then the installation of a sump pump in the crawlspace is recommended. It may be necessary to regrade a small portion of the crawlspace floor to allow the area to drain to the sump and/or installation of a French drain type system.

We recommend that you consider investigating the location of the downspout discharge. It is possible that the downspouts drain into a gravel-filled trench or pit near the foundation. This may be contributing to the water seepage into the structure. It may be necessary to do some exploratory excavation to determine this or to hire a drainage contractor to video scope the buried lines. The gutter downspouts should discharge ten to fifteen feet away from the house to minimize "short circuits" of water into the foundation.

VENTILATION

Ventilation is important for all buildings. Attic ventilation reduces the amount of trapped moisture and increase roof life by reducing heat. Crawlspace ventilation is needed to remove ground moisture.

The amount of attic ventilation appears to be adequate and there is no evidence of excessive moisture in the attic.

We were able to locate ductwork for what appeared to be the kitchen fan, laundry area fan and the master bathroom. However, we were unable to confirm the fan exhaust for the upstairs hall bathroom and/or dryer.

We did note accumulation of lint behind the dryer implying a significant leak. Repairs are needed.

Screened vents provide crawlspace ventilation. The amount of ventilation appears to be adequate. Crawlspace ventilation is extremely important to minimize the effects of any water that might seep into this area. We recommend keeping all of the vents open.

The entire dirt floor of the crawlspace was mostly covered with a vapor barrier material (polyethylene is commonly used) to help keep the humidity level low and dampness out of the wood framing. The floor of this crawlspace was only partially covered with a vapor barrier. We suggest covering the entire dirt surface. Rocks, bricks or chunks of concrete can be used to hold the vapor barrier in place. Wood should never be used as it can promote rot and wood-destroying-insect infestation.

There is some wood and cellulose debris on the crawlspace floor. This material tends to retain moisture, restrict ventilation and is a habitat for wood destroying organisms and should be removed.

The dryer vent duct should be cleaned periodically to reduce the build-up of lint, which is a fire hazard and restricts airflow. The flapper valve or screen, at the exterior should also be checked and cleaned. This ductwork should discharge to the exterior.

See Section Environmental for a discussion on mold.

HEATING

Fuel	gas
Distribution	forced hot air

This house is heated by a forced hot air heating unit. The heating unit was in operation.
In general, the dependable service life of gas forced hot air furnaces is approximately 20 years.

We recommend that the heating unit be cleaned and serviced immediately, for proper operation. This cleaning and servicing should include the burner, controls, fan motor, blower, filter, etc. We also suggest periodically cleaning all ductwork.

We recommend that a heating contractor conduct an analysis to determine if there are leaks in the heat exchanger. Leaks allow contamination of the interior air, which is a health hazard.

For energy efficiency it is necessary to clean or replace the furnace filter twice a year.

ENERGY EFFICIENCY

The important areas of energy efficiency are conduction and infiltration losses. Conduction (loss through the walls and ceiling) is primarily controlled by insulation. Infiltration loss (drafts) is controlled by caulking and weather-stripping.

Where visible the insulation material was fiberglass.

In this house, the insulation appears to be adequate but a significant improvement in energy efficiency will be realized with attention to infiltration losses.

Where visible, attic insulation consisted of 14 inches of insulation. This essentially conforms to present standards of heat conservation.

Where visible, there is fiberglass blanket insulation under the floors. This conforms to present standards of heat conservation practice.

The presence of insulation within the walls could not be confirmed from visual evidence. Since this is a relatively newer home it is likely that the walls are insulated with 3 to 4 inches of insulation.

The windows are "thermal pane" (double glazed) windows. If kept maintained, these windows should serve you well. The seal was checked in these windows and no problems were noted. Such defects are not always visible because of varying temperature and humidity conditions.

The weather-striping was poor at the front door. As we discussed, this door has some previous damage and the door is questionable and you should consider removal and replacement of the entire unit.

PLUMBING

Water supply	municipal
Sewer/septic	municipal
Supply piping	copper and PEX
Waste piping	plastic
Location of main water shutoff valve	not observed

An expansion tank was present on the water supply piping.

Water volume in the various plumbing fixtures was normal. Most fixtures were tested and found to be in working order.

There is an obvious plumbing leak visible in the crawlspace around the toilet from the main floor powder room. Repairs are needed.

Where visible the drain piping was in good condition.

The water heater was in operation and has a capacity of 40 gallons. Water heaters can be expected to last up to ten years. Anticipate replacing this unit in the next 10 years.

We recommend adding or improving the strapping securing the water heater. This strapping tends to reduce movement of the water heater and therefore damage to the water supply or the electrical system during a seismic event. Typically metal straps are used, which are secured either to the framing or adjacent concrete wall.

The water heater was equipped with a temperature pressure relief (TPR) valve. The associated piping was poor. Repairs are needed.

The temperature of the water was not checked. This temperature should be checked periodically, using a thermometer at a hot water faucet. We recommend a temperature of 120 degrees for safety and energy efficiency.

The capacity of the water heater however may not be adequate for the needs of this house and a larger unit is recommended when this one is replaced.

ELECTRICAL

Amperage	100 Amperes
Voltage	120 – 240 volts
Service panel breaker or fuses	breakers
Type of branch wiring	MN
Service: overhead or underground	underground
Presence of service-grounding conductor and electrode	not visible

Our investigation of the electrical system is limited to the visible components, entrance cable, meter, service panel, outlets and the visible portions of the wiring. A large portion of the electrical system is hidden.

The cover of the electrical service panel was removed to investigate the conditions inside.

The apparent capacity is adequate.

We were unable to detect power at the rear deck outlet. This condition should be further investigated.

The main breaker service panel appears to be a relatively modern unit and was in good condition.

Aluminum wiring has been used for major circuits (240 volts) and/or incoming power supply. This use of aluminum wiring is generally accepted by the electrical code and is typical. No aluminum wiring was noted (at the service panel) in the branch wiring.

The main breaker is located on the exterior of the building in the fenced in backyard. We recommend installing a padlock to prevent unexpected power loss.

The current version of the National Electrical Code (NEC) requires that nearly all branch circuits in the interior of the home be equipped with arc fault circuit interrupters (AFCI). This code requirement applies to new homes and renovations. The purpose of an AFCI is to detect arc faults (essentially loose wires) in electrical circuits that could cause a fire.

For improved safety, we suggest the installation of AFCI protection on the branch circuits. An electrical can easily advise where the protection is needed and install the devices. Monthly, the operation of the AFCI should be tested using the test button on the device (located in the service panel).

This house is equipped with a ground fault circuit interrupter (GFCI) in the kitchen and bathrooms. The purpose of a GFCI circuit is to provide positive protection against a shock hazard as it will "trip" almost instantaneously, thus protecting you. Should a GFCI circuit interrupter trip, simply reset it for continuing operation. Periodically you should test the GFCI circuit interrupter for proper operation. When you push the test button, the GFCI circuit interrupter should trip to the "OFF" position.

Ground fault circuit interrupters (GFCIs) are recommended for the exterior outlets. Additionally, repairs are needed to the GFCI outlet in the garage. This poor condition of the outlet may explain the lack of power at the rear. Repairs are needed.

INTERIOR

As an owner you are best able to judge the condition of the interior. We are concerned with things that are technically significant, such as stains that might indicate roof or plumbing leaks.

The quality of the interior materials is standard. However, there has been significant wear and above average damage to such things as:

- Carpeting is significantly stained at upper level
- Wood baseboard, trim and stairs stringers have been damaged by dog or cat activity
- Rear screen door has hole in it from apparent cat activity
- The vent control strip is damaged at the front upstairs bedroom window
- Fan in front bedroom is wobbly or out of adjustment
- Closet doors missing in both bedrooms and laundry area
- Most windows missing screens and/or damaged
- Poor caulking at tub resulting in water seepage under vinyl flooring; will need vinyl flooring if not corrected soon
- damage to front entrance door

A number of the appliances are quite old and their serviceability is questionable. The reliable operation of these appliances should not be assumed.

Unless otherwise noted in the Inspection Field Notes, **the appliances were not tested**. The condition of these can change unexpectedly. We have included a "Pre-Title Checklist" with this report for your use.

EXTERIOR

Siding		vinyl
Windows:	Frame	vinyl
	Glazing	double

The siding was in good condition.

It should be remembered that with low maintenance siding, painting of the trim might be overlooked. It is important that all exposed wood be well maintained, including painting and protection of any cracks or splits that might occur.

The exterior trim paint is in poor condition. The windows in this home are of standard quality. While some maintenance and repairs will always be needed, these should be serviceable for many years to come.

As discussed in "INTERIOR," many of the window screens are either damaged or missing.

ROOFING

Roof surfacing	composition
Ventilation System	soffit and canned vents
Number of layers	one
Gutter downspout empties	into pipe

The roof was examined directly by going onto the roof. The roofing is in good condition with an estimated remaining useful life of 7 years.

There is plant and tree debris in the gutters, which should be cleaned out annually and regularly maintained.

This building is equipped with skylight(s). Although there was no evidence of leakage at the time of inspection, you should keep in mind that skylights are vulnerable to leakage and should be inspected and maintained regularly.

At the time of resurfacing the existing roof surface should be removed for inspection of the sheathing and the application of new flashing and building paper. This will result in a longer lasting roof.

Regardless of age of the roof, minor leakage should be expected periodically.

We noted only minor amounts of moss on the roof surface. This should be monitored.

ENVIRONMENTAL SCAN

This is not a complete investigation of hazardous materials in the building or soils. Such an investigation is costly and is beyond the scope of this inspection.

There is some increased concern about radon contamination in single family homes. Radon gas occurs naturally and forms during the decay of uranium, an element According to the US Department of Ecology the following counties are in Zone 3, Low Potential and (less than 2 pCi/L):

- Snohomish
- King
- Pierce
- Skagit

For more information on radon visit: www.epa.gov/iaq/radon/zonemap/washington.htm.

Our inspection does not make any attempt to know or verify the prior uses of this property and cannot determine whether or not illegal activities have been engaged in on or near the property, including but not limited to, the use or manufacture of illegal substances, criminal events or the presence of substances banned or controlled by federal, state or local law. If this is of concern to you, we recommend that you make appropriate inquiries into past uses to resolve your concerns.

Indoor air quality and mold, is a growing concern. Mold and mildew, fostered by excess moisture conditions, may lead to respiratory health conditions and for a smaller group of people, may be toxic. While we may comment on readily visible evidence of mold, this inspection should not be considered a mold investigation. Individuals specifically trained for such work, if desired, should undertake such an investigation.

Organizations like the Environmental Protection Agency (EPA) and the Centers for Disease Control (CDC) have not established levels considered safe or unsafe for mold. This is not for lack of trying; it is a matter of complexity. If you find mold, it often can be removed via chlorine bleach solution (diluted Clorox) and monitoring to determine if it returns. Controlling moisture will typically eliminate the opportunity for mold to survive. For more information:

www.iaqa.com
www.epa.gov/iaq/molds/index.html
www.cdc.gov (search on mold)

No readily visible evidence of mold was found during our inspection. However some evidence of excess moisture was noted in the crawlspace. However, this inspection should not be considered a specific mold investigation.

LIFE and FIRE SAFETY

While we may make references to code compliance, this is not a code investigation. Such an investigation is beyond the scope of this inspection.

The fireplace is manufactured gas unit. At the time of the inspection this appeared to be functioning properly. As with any special equipment, fireplaces need to be operated properly and safely. You should try to secure a copy of the manufacturer's operating instructions in order to understand fully the way these fireplaces function and the safety precautions one should follow.

All the smoke detectors were missing. These should be reinstalled immediately. We recommend abandoning the units stacked in the hallway and purchasing new alarms.

We recommend that smoke detectors be installed and maintained in each bedroom and at least one per floor. This is an inexpensive safety precaution.

Carbon monoxide can be a by-product of burning oils, natural gas and other fuels. It is odorless and colorless, which means that it can go undetected. The symptoms of carbon monoxide poisoning can be mistaken for a cold. Proper maintenance of equipment, including flues and vents is the best way to avoid carbon monoxide poisoning.

Carbon monoxide emissions occur during improper operation of automobiles or lawn equipment in a garage, kerosene heaters, any gas appliance, fireplaces or outdoor grills leaking fumes into a window or door.

We recommend maintaining a carbon monoxide detector.

The handrail is missing to the upper level. Repairs are needed.

GENERAL

The porches were generally in good condition.

There was no access under this deck so we cannot comment on the condition of the supports under the deck.

The garage door opener is equipped with photo-eyes that actuate an auto-reverse function. This appeared to be operational.

The garage door is in need of adjustment. This door should be set to reverse when resistance to closing is applied.

The plants around this house are too close. This can cause premature deterioration of the paint and siding. These should be trimmed to provide several inches clearance from the siding.

Some of the siding is close or touching the ground. As a result, splashback (during rainstorms) and upward migration of water from the adjacent ground will lead to rot and deterioration. We recommend re-grading to eliminate the earth/wood contact.

CONCLUSION

There is no one way to build or remodel a house. You may encounter contractors whose opinions differ from ours. We cannot be responsible for action you take, unless we have the opportunity to review the conditions, before repairs are made.

If you have questions, call our engineer. There is no additional charge for a reasonable number of phone consultations. **Should a re-inspection be necessary, an additional fee will be charged.**

Thank you for the opportunity to be of assistance.

Sincerely,

Dave Pioli, P.E.
Principal

WSDA Inspection Control Number: 0000000
WSDA PI License Number: 60967

WOOD DESTROYING ORGANISM INSPECTION REPORT

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January 2, 2013

WOOD DESTROYING ORGANISM
INSPECTION REPORT

This report is intended to be a Complete Wood Destroying Organism Inspection Report as defined by the Washington State Department of Agriculture (WSDA). The intent of this document is to meet the requirements of WAC 16-228-2005 ***Wood destroying organism inspections and reporting criteria.*** This report is typically referred to as a "pest inspection".

Our objective is to identify evidence of wood destroying organisms (WDO). Because of the insidious habits of WDO's, no responsibility is assumed for conditions that were not visible. This is not a warranty or guarantee that there are no WDO's.

Within this report we refer to rot and fungal wood rot interchangeably. Rot is a fungus and is a WDO.

Based on observations in the accessible areas, no WDO activity was evident.

There are conducive conditions for WDO's at this property. These include:

- Exterior wall surfacing in close/direct contact with the ground
- Plants in contact with the house
- Plumbing leak at downstairs toilet
- Earth/wood contact at column at entrance area
- Wood and/or cellulose debris in crawlspace
- Standing water in crawlspace
- Inadequate vapor barrier in crawlspace

These should be corrected, as practical, to reduce the potential for WDO activity.

Only the unit of interest was entered for inspection.

WAC 16-228-2045 requires that a diagram be prepared for WDO Inspection Reports. A copy (of the diagram) is available upon request and will be included with the bound hard copy of this report.

LEGEND FOR
COMPLETE WOOD DESTROYING ORGANISM
INSPECTION DIAGRAM

ANOTATION:	DESCRIPTION:
ACTIVITY:	
F:	Fungal wood rot
CA:	Carpenter ant activity
MA:	Moisture ant activity
T:	Dampwood termite activity
S:	Subterranean termite activity
AB:	Anobiid beetle activity
FS:	Frass: insect excrement or byproduct of insect feeding or tunneling
X:	Structural damage

CONDUCIVE CONDITIONS:

ES	Earth/siding contact
PS	Pavement and/or patio in contact with siding
EW	Earth/wood contact
VB:	Incomplete vapor barrier
P:	Plants in contact with wood or siding
FW:	Form wood or cardboard forms, remaining in crawlspace
CD:	Cellulose or other debris
GD:	Poor control of gutter/downspout discharge or leaking gutters
D:	Debris or firewood in contact with siding
PL:	Plumbing leak
M:	Excessive moisture, standing water or evidence of standing water
IC:	Inadequate clearance between framing or wood and earth

GENERAL:

IA:	Inaccessible area
CSA:	Crawlspace access
V:	Existing vent
NV:	New or proposed vent
DS:	Detached structure

APPENDIX B
ABBREVIATIONS USED IN THE FIELD NOTES
Criterium-Pioli Engineers

WALLS

WS	Wood Siding
CLAP board	Clapboard
CS	Cedar Shingle
ASB	Asbestos
STCO	Stucco
ST	Stone
AL	Aluminum
VNL	Vinyl
BLK	Block
BRK	Brick
VN	Veneer
PLY	Plywood
T111	Texture 1-11
HB	Hardboard

ROOF

pane	
pane	
A/F	Asphalt/fiberglass
CS	Cedar shakes/shingles
SL	Slate
ASB	Asbestos
T&G	Tar and gravel
BF	Bituminous felt
RR	Roll roofing
MTL	Metal
SS	Standing seam
BU	Built-up
MB	Modified bitumen
TD	Torched down
MEMB	Membrane

GUTTERS/LEADERS

CPR	Copper
AL	Aluminum
GALV	Galvanized steel
WD	Wood
VL	Vinyl

HEATING

O	Oil
G	Gas
E	Electric resistance
HP	Heat pump
HW	Hot water
HA	Hot air
ST	Steam
F	Forced
G	Gravity
RAD	Radiator
CONV	Convector
GR	Grill
BB	Baseboard
RH	Radiant heat
PR	Pipe riser
RA	Return Air
PMP	Pump
FAN	Blower/Fan
TPV	Temperature/pressure Relief Valve
PV	Pressure relief valve
ASV	Automatic shutoff valve

COOLING

EVAP	Evaporative coil/cooler
COND	Condensing Unit
REF	Refrigerant
RL	Refrigerant line
AH	Air handler
FAN	Blower/fan

PIPING

CPR	Copper
CU	Copper
GALV	Galvanized Steel
CI	Iron
BR	Brass
LD	Lead
PB	Lead
PVC	Polyvinyl chloride
CPVC	Chlorinated polyvinyl chloride
PBS	Polybutylene styrene
ABS	Acrylonitrile butadiene styrene

ELECTRICAL

GFCI	Ground fault circuit interrupter
GFI	Ground fault interrupter
V	Voltage, volts
A	Amperage, amps
CPR	Copper
CU	Copper
AL	Aluminum
R	Receptacle, outlet
SW	Switch
K&T	Knob and tube
BX	BX (metal clad) wiring

INTERIOR WALLS

PL	Plaster
DW	Drywall, gypsum board, sheetrock
PT	Painted
PP	Papered
WP	Wall paper
PAN	Paneled
WD	Wood
TL	Tile

CEILINGS

PL	Plaster
DW	Drywall, gypsum sheetrock
PT	Painted
PP	Papered
WP	Wall paper
AC	Acoustic tile
AT	Acoustic tile
PAN	Paneled
WD	Wood
TL	Tile

WINDOWS

SP	Single Pane
1P	Single Pane
DP	Double (thermal) pane
2P	Double (thermal) pane
IG	Insulating glass
DH	Double Hung
CSMT	Casement
SL	Slider
F	Fixed
AWN	Awning
JAL	Jalousie

DOORS

HC	Hollow core
SC	Solid core
WD	Wood
INSUL	Insulated
PAN	Panel
SGD	Single glass door
PATIO	Patio/atrium door
W/GL	With glass
BI-F	Bi-fold
SL	Sliding doors
DS	Door Stop

OTHER ABBREVIATIONS

OK	Satisfactory

INSPECTION FIELD NOTES

Client_____ Date_____ Inspection Location _____
Address_____ Along Y N _____
_____ Weather_____ Type Stories_____
Engineer_____ Approximate Age_____

KEY

E = Excellent, G = Good, F = Fair, P = Poor, S = Serviceable, NS = Not Serviceable, NA = Not Applicable
NV = Not visible, O = Operating, NO = Not Operating, A = Average, BA = Below Average, AA = Above Average
UK = Unknown, NI – Needs Investigation, (*) = See Report for More Detail

CONDITION

1.0 EXTERIOR

____ 1.1 Exterior Walls: Material/Type_____
____ Trim _____
____ Caulking _____ Pointing_____ Other_____
____ Paint/Stain: Walls_____ Trim_____
_____

____ 1.2 Roof: Material/Type_____ Exp. Life_____
____ Flashing _____
____ Eaves/Soffits/Fascias _____
____ Penetrations/Skylights _____
____ Gutters/Leaders/Downspouts _____
_____

____ 1.3 Windows: Material/Type_____
____ Stormsash: None_____ Not All_____ Material/Type_____
_____

____ 1.4 Doors: Material/Type_____
____ Storm Doors: None_____ Not All_____ Material/Type_____
_____

____ 1.5 Grounds: Slope_____ Low Spots_____
____ Drainage Systems_____
____ Sprinkler Systems/Hose Bibbs_____
____ Retaining Walls_____
____ Driveways/Walkways/Entryway_____
____ Fences/Gates_____
____ Shrubs/Plantings_____
_____

____ 1.6 Decks/Porches/Balconies/Patios:_____
____ Type_____ _____ _____
____ Material_____ _____ _____
____ Condition_____ _____ _____
____ Railings & Safety_____ _____ _____
_____

____ 1.7 Chimney: No./Location_____ _____ _____
____ Material/Type/Use_____ _____ _____
____ Clearance/Height_____ _____ _____
____ Weathertightness_____ _____ _____
____ Lining_____ _____ _____
_____

____ 1.8 Utilities: Gas Meter/Piping_____
____ Elec. Entrance Over/Under Ground_____ Ext. Wiring_____
_____

Note: These inspection field notes are used to collect field data and should be considered only in conjunction with your narrative report.

2.0 STRUCTURAL

CONDITION

____ 2.1 Basement/Crawl Space: _____
____ Accessible Y N Partial _____
____ Basement Finished Y N Partial _____
____ Walls/Footings/Piers: Material/Type _____ Cracks Y N NV_____
____ Bulging/Distortion: Y N NV_____
____ Floor/Slab: Material_____ Cracks Y N NV_____
____ Columns: Material/Type_____
____ Girders: Material/Type_____
____ Floor Joists: Material/Type_____
____ Vapor Barrier Y N NV_____
____ Moisture/Water Y N NV_____
____ Sump Pump Y N Number_____ Discharge_____
____ Doors/Access_____
____ Windows/Vents_____
_____
_____

____ 2.2 Attic: Accessible Y N Partial_____
____ Roof Rafters: Material/Type _____
____ Floor Joists: Material/Type _____
____ Flooring _____
____ Leaks/Weathertightness _____
_____
_____

____ 2.3 Other Framing: _____
____ Walls NV_____
____ Special Structural Systems_____
_____
_____

____ 2.4 Ventilation _____
____ Basement/Crawl Space_____
____ Attic_____
____ Mechanical Ventilation_____
_____
_____

____ 2.5 Energy Efficiency: _____
____ Basement Insulation Y N NV Material/Type _____ Approx. Amt._____
____ Floor/Slab Insulation Y N NV Material/Type _____ Approx. Amt._____
____ Wall Insulation Y N NV Material/Type _____ Approx. Amt._____
____ Attic Insulation Y N NV Material/Type_____ Approx. Amt._____
____ Caulking/Weatherstripping Y N NV Material/Type_____
_____

____ 2.6 Wood Boring Insects and Rot:_____
____ Evidence of Rot or Other Problems Y NV_____
____ Evidence of Termites or Other Insects Y NV_____
_____
_____

Note: These inspection field notes are used to collect field data and should be considered only in conjunction with your narrative report.

CONDITION

3.0 MECHANCIAL SYSTEMS (See also Section 1.8)

____ 3.1 Heating System: Fuel_____ Type_____
____ Manufacturer/Capacity _____ Age (est.)_____
____ Operating Y N _____ Maintenance_____
____ Zones/Controls_____
____ Pumps/Fans_____ Filters_____
____ Combustion Air _____ Humidifier_____
____ Distribution Piping/Ducts_____
____ Gas Meter/Oil Tanks_____
____ Clearance to Combustibles_____
____ Fire/Life Safety/Flue_____
_____

____ 3.2 Cooling System: Type_____ Rem. Life (est.)_____
____ Manufacturer/Capacity _____
____ Operating Y N _____ Maintenance_____
____ Air Flow/Temperature _____
____ Zones/Controls _____
____ Ductwork_____ Refrigerant Lines _____
_____

4.0 PLUMBING SYSTEM (See also Section 1.8)

____ 4.1 Water Supply: Source: Private _____ Municipal_____
____ Piping Material/Type _____ Water Pump/Pressure_____
_____

____ 4.2 Supply Lines: Material/Type _____
____ Installation _____
_____

____ 4.3 Waste Disposal: Private _____ Municipal_____
____ Drain/Waste Lines: Material/type_____ Installation/Venting_____
____ Well & Septic Separation_____
_____

____ 4.4 Water Heater: Type/Manufacturer/Capacity_____
____ Fuel/Venting _____ Insulation/Timer_____
____ Pressure Relief Valve/Drain _____
_____

5.0 ELECTRICAL SYSTEM (See also Section 1.8)

____ 5.1 Electric Service: Amps _____ Voltage_____
____ Entrance Panel _____ Main Y NV_____ Grounding_____ Brkrs/Fuses_____
____ No. Circuits_____ Circuits I.D._____ Circuits Overfused_____
____ Wiring: Material/Type_____ Alum Y NV_____
_____

6.0 SECURITY

____ 6.1 Alarm System Y N NV_____
____ Window Locks Y N Partial _____
____ Door Locking Hardware_____ Fences/Screens/Gates_____
_____

Note: These inspection field notes are used to collect field data and should be considered only in conjunction with your narrative report.

CONDITION

7.0 ENVIRONMENTAL SCAN

NOTE: Limited Scan, Based Only on Available Visual Evidence of Certain Known Hazardous Materials

____ 7.1 Hazardous Materials: _____
____ Evidence of Asbestos Y NV Location/Condition _____
____ Evidence of UFFI Y NV Location/Condition _____
____ Evidence of UST Y NV Location/Condition _____
____ Other _____
Further Investigation Required Y OPTIONAL _____
_____

8.0 SAFETY

____ 8.1 Smoke Alarms: Type _____ Operating Y N _____
____ Location _____
_____

____ 8.2 Other: Glass _____
____ Woodstoves/Fireplaces _____
____ Fire Sprinkler _____
____ Emergency Egress _____
____ Handrails/Stairs _____
____ Evidence of animal/rodent infestations _____
____ Site Hazards _____
_____

9.0 POOLS AND WHIRLPOOL BATHS (Supplementary Field Notes May Apply)

____ 9.1 Swimming Pools: Lining _____ Filters & Equipment _____
____ Deck/Apron _____ Safety _____
_____

____ 9.2 Whirlpool Baths: Location/Type _____
____ Installation/Ventilation _____
_____

10.0 GARAGES & OUTBUILDINGS

____ 10.1 Garages & Outbuildings: _____
____ Type _____ _____ _____
____ Foundation _____ _____ _____
____ Walls _____ _____ _____
____ Roof _____ _____ _____
____ Rot or Insect Activity Y NV _____ _____ _____
____ Elec. Gar. Dr. Opener Y N With Auto Rev. Y N _____ _____
_____

---------- *OPTIONAL SECTION* ----------

SUMMARY	PRIORITY ITEMS
1. Overall Current Condition is: _____	1. _____
2. Overall Maintenance Has Been: _____	2. _____
3. General Quality: _____	3. _____
4. Restrictions or Obstructions to Inspection: Y N _____	4. _____
5. Investigate Inaccessible Areas: _____	5. _____

Note: These inspection field notes are used to collect field data and should be considered only in conjunction with your narrative report.

Client_______________________________ Date_______________________________ Page ___ of _____

CONDITION

12.0 INTERIOR – ROOM BY ROOM

____ 12.X Room: Location ______________________________
____ Ceiling: Material ____________ Finish____________ Cracks____________ Leaks____________
____ Walls: Material ____________ Finish____________ Cracks____________ Leaks____________
____ Floor: Material ____________ Finish____________ Slope____________
____ Windows: Material/Type ____________ Operation____________ W'Strip________
____ Cords/Panes/Seals/Screens______________________________
____ Doors: Material/Type______________________________
____ Hardware: Door______________________________ Window______________________________
____ Trim: Material/Type______________________________
____ Heat/AC____________ FP/Stove____________ T'stat____________
____ Elec. Outlets____________ GFCI____________ Polarity____________ Grounded____________

____ 12.X Room: Location ______________________________
____ Ceiling: Material ____________ Finish____________ Cracks____________ Leaks____________
____ Walls: Material ____________ Finish____________ Cracks____________ Leaks____________
____ Floor: Material ____________ Finish____________ Slope____________
____ Windows: Material/Type ____________ Operation____________ W'Strip________
____ Cords/Panes/Seals/Screens______________________________
____ Doors: Material/Type______________________________
____ Hardware: Door______________________________ Window______________________________
____ Trim: Material/Type______________________________
____ Heat/AC____________ FP/Stove____________ T'stat____________
____ Elec. Outlets____________ GFCI____________ Polarity____________ Grounded____________

____ 12.X Room: Location ______________________________
____ Ceiling: Material ____________ Finish____________ Cracks____________ Leaks____________
____ Walls: Material ____________ Finish____________ Cracks____________ Leaks____________
____ Floor: Material ____________ Finish____________ Slope____________
____ Windows: Material/Type ____________ Operation____________ W'Strip________
____ Cords/Panes/Seals/Screens______________________________
____ Doors: Material/Type______________________________
____ Hardware: Door______________________________ Window______________________________
____ Trim: Material/Type______________________________
____ Heat/AC____________ FP/Stove____________ T'stat____________
____ Elec. Outlets____________ GFCI____________ Polarity____________ Grounded____________

____ 12.X Room: Location ______________________________
____ Ceiling: Material ____________ Finish____________ Cracks____________ Leaks____________
____ Walls: Material ____________ Finish____________ Cracks____________ Leaks____________
____ Floor: Material ____________ Finish____________ Slope____________
____ Windows: Material/Type ____________ Operation____________ W'Strip________
____ Cords/Panes/Seals/Screens______________________________
____ Doors: Material/Type______________________________
____ Hardware: Door______________________________ Window______________________________
____ Trim: Material/Type______________________________
____ Heat/AC____________ FP/Stove____________ T'stat____________
____ Elec. Outlets____________ GFCI____________ Polarity____________ Grounded____________

Note: These inspection field notes are used to collect field data and should be considered only in conjunction with your narrative report.

AGREEMENT FOR SERVICES
Building Inspection

This is the complete agreement regarding engineering services to be provided by Criterium – Pioli Engineers related to the property described below. This is intended to be a legally binding agreement. Please read it carefully.

CLIENT: _____
LOCATION OF PROPERTY:
(Street) _____
*(City/state)*_____

INSPECTION SCHEDULE:
DATE: _____*(weather permitting)*
TIME: ___AM PM *(approximate)*
ENGINEER:_____

DESCRIPTION OF PROPERTY:

Approximate year constructed? _____ Approximate total size? _____ Sq Ft
Single family? ___YES _____NO Condominium? ___YES ___NO Other?_____
Additional buildings? __YES ___NO If Yes, describe _____

INSPECTION SERVICES TO BE PROVIDED ***(see page 2 for descriptions, initial choice)*:**

____STANDARD HOME INSPECTION
____STRUCTURAL INSPECTION
____EXHAUSTIVE INSPECTION
____SPECIALTY INSPECTION

TOTAL FEE: $____ The fee is to be paid at or before the inspection. If the property differs significantly from the description above, the fee may be adjusted. A 24-hour notice of cancellation is requested. Otherwise, a cancellation fee applies. If a reinspection is requested, a separate agreement and an additional fee will apply.

The Standard Home Inspection is performed in accordance with the Standards of Practice State of Washington, Chapter 308-408C WAC. This inspection does not include investigation of mold, asbestos, lead paint, water, soil, air quality, or other environmental issues.

The results of the inspection will be provided in a written report prepared exclusively for your benefit.

You are encouraged to be at the inspection to discuss your questions and concerns. However, **the written report is the exclusive source of information regarding our observations and conclusions.** All discussions that occur at the inspection are preliminary in nature and should **not** be the basis for any final decisions regarding this property. Further, owning any property involves some risk. No inspection can reveal everything that might be of interest or significance to you regarding this property.

Our inspection is not a guarantee or warranty regarding the condition of this building. Except as otherwise noted herein, our maximum liability for loss suffered by the CLIENT due to any cause is limited to our inspection fee. If you bring an action against the ENGINEER and the ENGINEER prevails, ENGINEER shall be entitled to recover costs and expenses, including reasonable attorneys' fees and costs.

_____ _____
Client Initial Engineer Initial

AGREEMENT FOR SERVICES (continued)
Building Inspection

CHOICE OF INSPECTION SERVICES:

After reviewing these descriptions, both the client and engineer should initial where noted, to indicate the type of inspection chosen. As our client, you are making a choice of services to be provided. If you have any questions, please contact us immediately. Phone: 425-486-4000 Fax: 425-486-4007

_____ *(int'l)* _____ *(int'l)*

STANDARD HOME INSPECTION: A **limited** visual inspection to identify significant deficiencies and/or repairs needed in the major systems (structure, heating, air conditioning, plumbing, electrical, roof, exterior, interior, insulation, ventilation, fireplaces and stoves, site, attached garages or carports) as well as provide a general understanding of the property. This is a limited inspection based on visible evidence readily available during the inspection (without moving furnishings, removing finishes, etc.) and is the opinion of the engineer performing the inspection. **Our maximum liability for loss suffered by the CLIENT due to any cause is limited to our inspection fee.**

_____ *(int'l)* _____ *(int'l)*

LIMITED STRUCTURAL INSPECTION: An inspection and evaluation that is limited to reasonably available and visible structural components. Activities such as probing with an awl, measuring framing members, and limited excavation around the foundation and/or determination of squareness, levelness and plumbness may be included in such an evaluation. Unless otherwise recommended or designated in writing, no soils investigation or invasive testing is included. Further, no inspection or evaluation of any other systems such as plumbing, electrical, mechanical or interiors is included.

_____ *(int'l)* _____ *(int'l)*

EXHAUSTIVE INSPECTION: A STANDARD HOME INSPECTION plus invasive testing and/or equipment disassembly as approved by client and property owner, in advance, to gather all reasonably available and relevant information about the property. This inspection is specifically **not limited** to readily available visible evidence and requires invasive testing which may include moving furnishings, removing wall coverings and/or drilling into wall cavities (to check for structural damage, for example) and requires the current owner's written permission. Unlike the Standard or Limited Inspection, **our maximum liability for loss suffered by the CLIENT due to any cause is limited to our inspection fee or $10,000.00, whichever is greater.** In addition, because of the additional services provided under an Exhaustive Inspection, the results of the inspection take longer than a Standard Inspection.

_____ *(int'l)* _____ *(int'l)*

SPECIALTY INSPECTION: An inspection and evaluation that is limited only to the following:

- _____
- _____

The components in our **STANDARD, EXHAUSTIVE** and **LIMITED STRUCTURAL INSPECTIONS** are not included in this inspection. This inspection and evaluation is limited to reasonably available and visible components of the items listed above

MOLD EXCLUSION: This inspection is not for the specific purpose of determining the presence of organic substances in the building. If, however, during the inspection, we knowingly encounter such substances, we will notify you of the presence of these substances without accepting any liability whatsoever for any damage or harm caused by the substances. It is your responsibility to determine if further testing is required and to retain an independent, qualified professional to perform such tests.

The above is understood and accepted.

_____ _____

Client Signature (one signature binds all parties) *(Date)*

_____ _____

Engineer Signature *(Date)*

IF PAYING BY CREDIT CARD:

Please specify: Type of credit card - MasterCard - VISA (circle one), Card Number_____,
Expiration Date _____, The V-code (the 3 digit code on the back of your card)_____,
The Cardholder Name (as it appears on the card)_____,
The Mailing Address of Cardholder_____.

CRITERIUM®
PIOLI ENGINEERS

23614 45TH AVENUE, SE
BOTHELL, WA 98021
425 486-4000
425 486-4007 fax
800 945-4189 (WASHINGTON)

PROFESSIONAL QUALIFICATIONS AND EXPERIENCE

DAVE PIOLI, P.E.

Area of Expertise

Dave Pioli, P.E. is a licensed Professional Engineer in Washington and Oregon. He provides inspection services and specializes in the area of structural evaluations and environmental issues for residential and commercial buildings.

Qualifications

Mr. Pioli is the Principal of Criterium–Pioli Engineers, an engineering firm that specializes in building inspections. He has inspected thousands of residential and commercial buildings in the greater Seattle area. Evaluations have included structural soundness, Capital Needs Assessments, Condominium Reserve Studies, design plans of repair, as well as hazardous materials, slope stability, and safety. Additional projects include Comprehensive Needs Assessments for multi-family housing, fraternity/sorority houses and funeral homes.

Mr. Pioli also has experience as a residential remodeling contractor.

Prior to his affiliation with Criterium-Pioli Engineers, he was the sole proprietor of Environmental Engineering where he was responsible for the design of methane gas studies for construction near abandoned landfills, and preparation of permit and construction drawings for topsoil manufacturing.

Mr. Pioli was employed with EMCON as a Project Engineer for the design of several solid waste landfills and hazardous waste projects. He also served as Project Manager for the design and construction of recycling facilities.

Previously, he was an engineer for Glacier Environmental Services, Inc. He was responsible for the removal of underground storage tanks and environmental clean up projects.

Education and Professional Affiliation

The Ohio State University, BS in Civil Engineering, 1983
Professional Engineer, State of Washington, 1988
Professional Engineer, State of Oregon, 1988
National Academy of Building Inspection Engineers, Professional Member
Board certified Building Inspection Engineer, NABIE, 2008
Structural Pest Inspector, Washington State Department of Agriculture
Vice Chair, Home Inspectors Licensing Board, State of Washington
Licensed Home Inspector, State of Washington, License #203

PRE - TITLE CHECKLIST

The attached report is intended to focus on the major engineering systems (structure, heating, plumbing and electric) in the building you're considering. While spot checks of many components (such as switches, outlets, fixtures, etc.) were made during the inspection and any significant deficiencies noted in this report, it's important to understand that the condition of these components can change at any time. Therefore, we highly recommend at least one more visit to these premises be made before taking title. This checklist is offered as a guide for this final visit.

Allow sufficient time to comfortably complete this list. Please note that not all of these items will apply to every building.

Property Address _____ Date Completed _____
_____ By _____

	OK	***Not OK***		***Ok***	***Not OK***
GARBAGE DISPOSER	____	____	LAWN SPRINKLER SYSTEM	____	____
KITCHEN STOVE	____	____	SWIMMING POOL EQUIPMENT	____	____
DISHWASHER	____	____	WINDOW LOCKS	____	____
REFRIGERATOR	____	____	SIDEWALKS	____	____
CLOTHES WASHER	____	____	DRIVEWAY	____	____
CLOTHES DRYER	____	____	SEPTIC/WASTE SYSTEM	____	____
WATER PUMP	____	____	AIR CONDITIONING	____	____
WATER HEATER	____	____	GARAGE DOOR OPENER	____	____
LIGHT FIXTURES	____	____	ELECTRICAL OUTLETS	____	____
PLUMBING FIXTURES	____	____	SUMP PUMP	____	____
FIREPLACE/WOODSTOVE	____	____	HEATING SYSTEM	____	____
ALL WINDOW SCREENS AVAILABLE	____	____	DOOR LOCKS & LATCHES (ALL KEYS AVAILABLE)	____	____

MISCELLANEOUS ITEMS AND NOTES

Often weeks and months pass between our initial inspection and your closing on the property. Your involvement in making this final inspection will help assure you of the home you deserve.

In association with CRITERIUM ENGINEERS, serving the nation since 1957

Description:
Elevation view

Photo Number
1

Description:
Cracking and distress in concrete driveway access

Photo Number
2

Description:
Poor mounting and sealing of water spigot at front

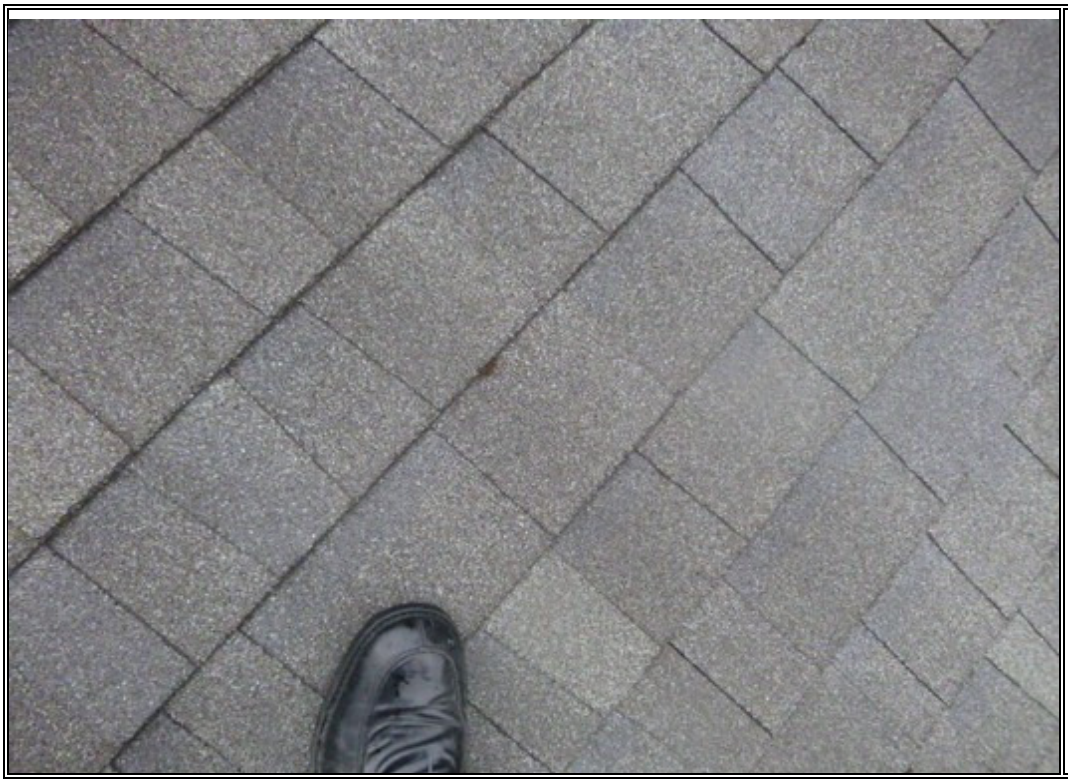
Photo Number
3

Description:
Earth siding contact at entrance side

Photo Number
4

Description:
Earth siding contact at entrance side

Photo Number
5



Description:
roof

Photo Number
6

Description:
roof

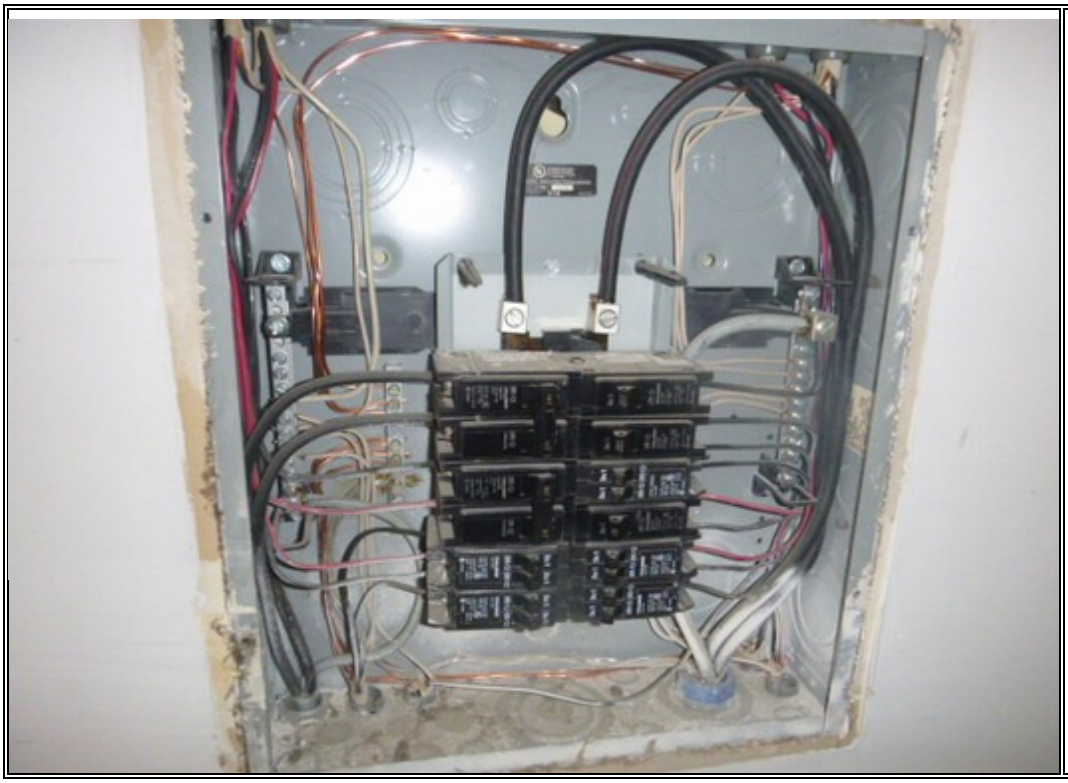
Photo Number
7

Description:
roof

Photo Number
8

Description:
Wear in roof

Photo Number
9



Description:
panel

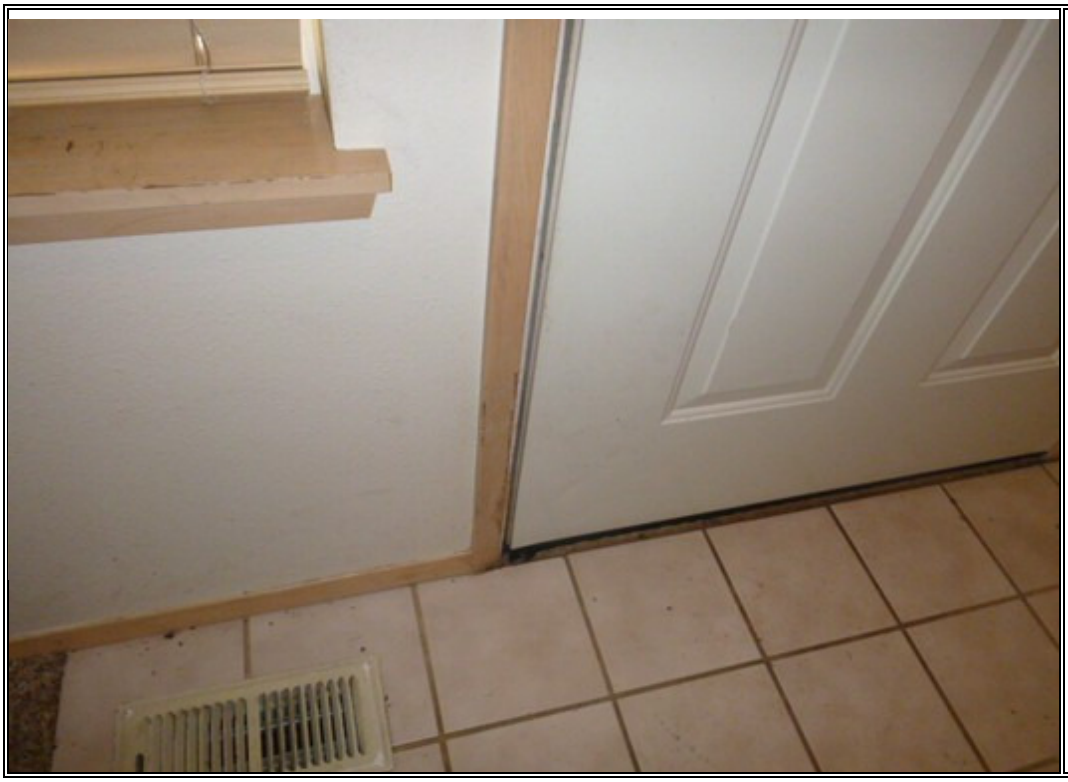
Photo Number
10

Description:
Cubby hole accessed from garage

Photo Number
11

Description:
Poor outlet in garage

Photo Number
12

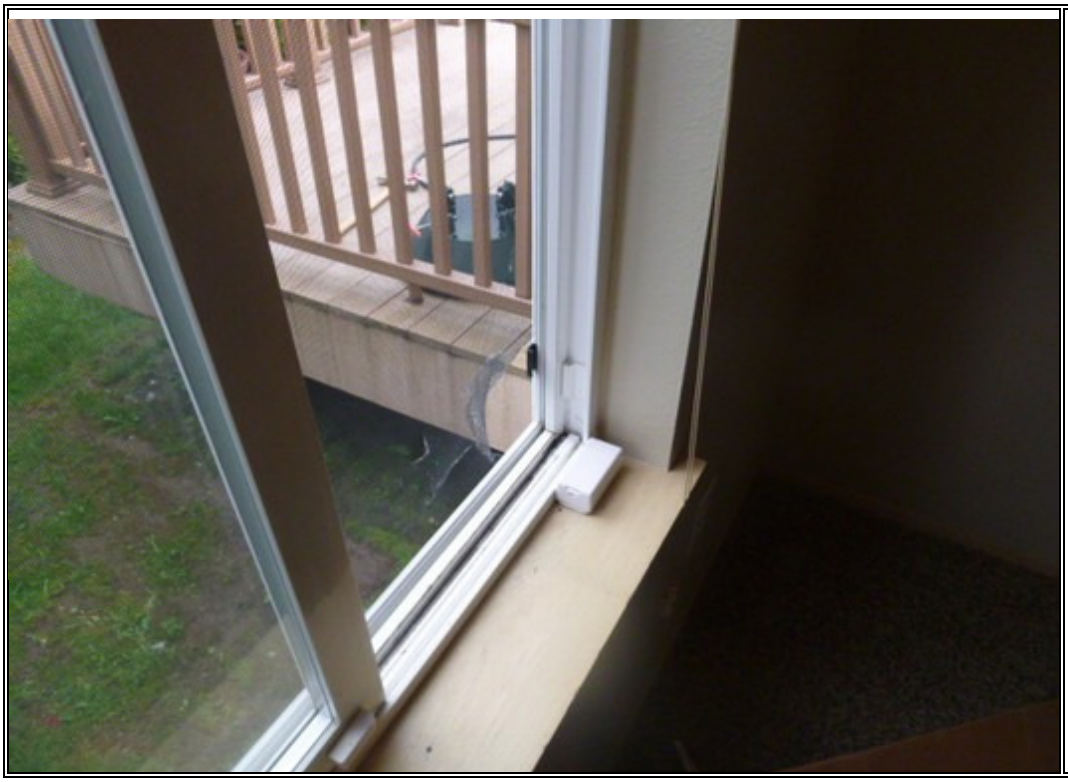


Description:
Poor weather-stripping and damage to front door area.

Photo Number
13

Description:
Damage to front door and marginal installation of handle.

Photo Number
14



Description:
Damaged screen

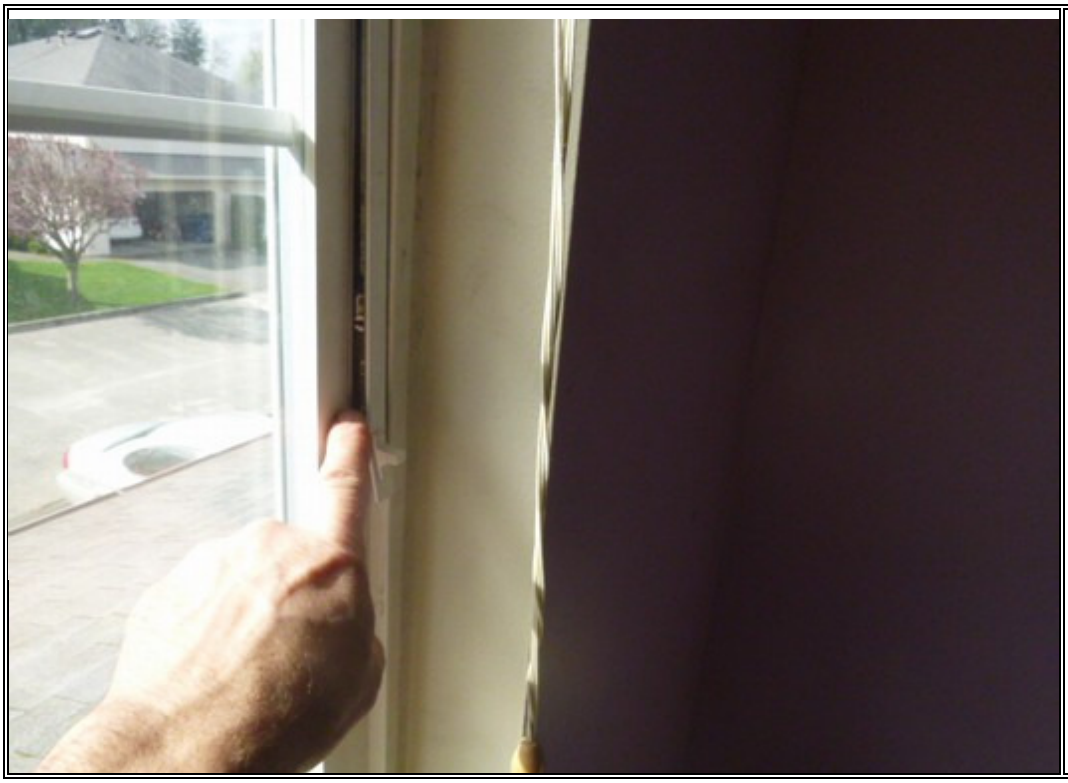
Photo Number
15

Description:
Handrail is loose

Photo Number
16

Description:
Damage to carpet, wallboard, and trim at upper level

Photo Number
17



Description:
Damaged vent louver.

Photo Number
18

Description:
Poor caulking and water seepage under vinyl flooring

Photo Number
19

Description:
Poor caulking and water seepage under vinyl flooring

Photo Number
20

Description:
Attic

Photo Number
21

Description:
Attic storage

Photo Number
22

Description:
Water leak at toilet in crawlspace

Photo Number
23

Description:
Water leak at toilet in crawlspace

Photo Number
24

Description:
Standing water and water seepage at pipe penetration in crawlspace

Photo Number
25

Description:
water seepage at pipe penetration in crawlspace at sewer pipe

Photo Number
26

Description:
Standing water and water seepage at pipe penetration in crawlspace e

Photo Number
27

Description:
Poor vapor barrier and wood debris

Photo Number
28