Windermere
REAL ESTATE

NOTICE TO BUYER: SELLER-PROCURED INSPECTION REPORT

The following notice is given with respect to the Purchase and Sale Agreement dated _____ between _____ ("Buyer") and **Ralph Kappelhoff** **Debbie Kappelhoff** ("Seller") concerning **13327 157th Ave NE** **Redmond** **WA 98052** ("the Property").

Seller has given or is giving Buyer the following Inspection Report(s) concerning the Property (check all that apply):

- ☒ Whole House Inspection
- ☐ Sewer Inspection
- ☐ Pest Inspection
- ☒ Other: **Septic Inspection**

The Inspection Report(s) are intended to be a part of any Seller Disclosure Statement (NWMLS Form 17) that is provided in this transaction, whether or not the two documents are attached to each other. The Inspection Report(s) were procured by Seller and are provided for informational and disclosure purposes only. The Inspection Report(s) are not intended to constitute a warranty, either express or implied, about the condition of the Property. Buyer is advised to procure their own inspections from professional inspectors chosen by Buyer or hire the inspectors that prepared the Inspection Report(s). Buyer has the opportunity to inspect the Property to Buyer's satisfaction.

AuthentiSIGN Ralph Kappelhoff 02/14/23
Seller DATE

AuthentiSIGN Debbie Kappelhoff 02/14/23
Seller DATE

Buyer's Acknowledgment of Receipt

The undersigned Buyer acknowledges receipt of the foregoing Notice and the above-referenced Inspection Report(s).

_____
Buyer DATE

_____
Buyer DATE

Ralph & Debbie Kappelhoff
13327 157th Ave NE
Redmond, WA, 98052

Per the seller, the following items listed on the pre-sale inspection summary dated February 21, 2023, are being corrected by the seller as part of preparation for sale in good faith.

1) The following actions items have been completed by seller as of February 28, 2023.

2.5 Walkway Cracks – filled with sealing compound as request by inspector
2.5 Walkway Wood Separator – repaired
3.5 Gutters and Downspouts – replaced by Rock Roofing on Feb 27, 2023
5.3 Attic Baffles – all baffles reconnected using screws instead of staples
6.4 Garage Fire Separation – repaired with non-combustible calc
6.5 Garage Passage Door – 2 new spring returns added to close door properly
7.12 Receptacles – all receptacles pointed out as lose by the inspector have been corrected
7.13 GFCI in Laundry Room – a GFCI has been added and tested
7.13 GFCI on Lower Deck – this GFCI tested OK before the inspector left
7.15 Luminaries in Basement Bathroom – bulb has been replaced and works
8.8 Forced Air Vent Air Gap – added additional bracing to the vent to center it
8.8 Forced Air Vent Air Gap – cut one inch gap around the vent
10.6 Water Heater Expansion Tank – seismic strapping added
11.8 Johnson Tee Air Gap – a ¼" hole has been drilled into the vent
12.5 Toilet in Master Bath – the toilet has been tightened to the floor
12.22 West Guest Bedroom Bathroom – calc has been added between the backsplash and sink
12.30 East Guest Bathroom Sink – stopper has been located and added back to the sink
12.34 East Guest Bedroom Bathroom Countertop – backsplash has been added to back of sink
12.34 East Guest Bedroom Bathroom Ventilation – repaired
15.7 Window in Guest Room – the opening mechanism has been repaired
15.8 Smoke Detectors – additional smoke detector added in the basement bedroom
15.8 Smoke Detectors – additional smoke detector added in the Master Suite
18.4 Crawl Space Floor Insulation – additional insulation supports installed
20.5 Pest Control – this was an issue in 2020 and we contracted with United Pest Solutions to eliminate the problem. We have seen no pest activity for over a year and continue to maintain a contract for regular inspections and pest control work with United Pest Solutions. Crawl space floor has been cleaned up.

3) If requested in the Purchase and Sale Agreement, the Seller will consider the following corrections by closing:

7.8 Service Panel – seller disagrees that this is an issue but will implement the recommendation if the buyer feels it is needed

17210 BOTHELL WAY NE
BOTHELL, WA 98011
WWW.ROCKROOFING.COM

Rock Roofing
a brilliant decision

Reg # ROCKRI*982RQ
Off (425) 486-8683
Fax (425) 486-8102

INVOICE

Customer: Ralph Kappelhof
13327 157th Ave NE
Redmond, WA, 98052

Date: 11/28/2022

Site Address	City State ZIP	Job Type	Installed	Product	Color	Subtotal
13327 157th Ave NE	Redmond, WA, 98052	Re-Roof	11/17/2022	Northgate	Weathered Wood	$40,924.00

Extras:

Paid in full

Thank for choosing us!!!

Subtotal	$40,924.00
Tax	$3,560.39
Total with Tax	$44,484.39
Previous Payment	$0.00
Remaining Balance	$44,484.39

20yr Workmanship Warranty

Thank You,
Rock Roofing Inc.

Sales tax must be paid unless a resale certificate is on file with Rock Roofing Inc.
Balance due on receipt. **NO ONLINE BANKING CHECKS accepted due to length of time to receive.**
Credit account balances due in full by the 10th of Each Month.
Late charges will be assessed at 1.5% of the balance if delinquent.

This is to certify that

Rock Roofing Inc

has achieved CertainTeed's highest credential level and therefore is authorized to operate and represent itself as a SELECT ShingleMaster™, and can offer the CertainTeed SureStart™ PLUS warranty extensions.

CertainTeed
SELECT
ShingleMaster™

To become a SELECT ShingleMaster, this company has met the following conditions. Each of these criteria, by itself, is stringent, and highlights this contractor as a model in the trade.

1

All job supervisors, plus at least 50% of the shingle installation workforce, must be Master Shingle Applicators™. And, at least one employee is qualified as a Shingle Quality Specialist™.

2

The company owner has agreed to abide by the terms and conditions described in the "Code of Ethics and Professional Practices," and has qualified as a fiscally responsible business owner.

3

Proof of current workers' compensation insurance, as required by law, and liability insurance covering roofing have been submitted and are on file at CertainTeed.

4

The company has been in business for at least five years, or accredited in the CertainTeed ShingleMaster™ program for at least one year, or have prior industry experience that CertainTeed considers a comparable qualification.

A SELECT ShingleMaster™ since:

2006

Valid through January 31, 2023

Kelly Warren
Sr. Manager – Channel & Contractor Programs
Strategy and Communications, Exterior Products Sales

CertainTeed
SAINT-GOBAIN

5-STAR WARRANTY

The Best Warranty Protection in the Industry

Five-Star Protection

Now that you've selected your contractor and your shingles, it's time to protect your investment.

SureStart PLUS 5-Star protection covers you for up to 50 years for the cost of materials and labor, tear-off, and disposal in the event of a manufacturing defect. And, we cover you for 25 years should there be a defect in your contractor's workmanship!

Lifetime Limited Warranty Shingles	5-STAR PROTECTION
Coverage	**50 years***
Materials & Labor	✔
Tear-off	✔
Disposal	✔
Workmanship	✔**

NOTE: XT™25, XT™30 IR and Patriot shingles carry 25 years with 5-STAR coverage, including the features as indicated above.

Fully transferable from the original property owner/consumer to the first subsequent owner for 15 years from the date of installation—five years longer than the typical warranty.

*Applies to single-family detached houses. Duration for all other types of structures is limited to 30 years.

**Workmanship is covered for 25 years.

Flat Roof Sections: If a CertainTeed Flintlastic self-adhered roof system is part of the job, up to 10 squares will be covered for 12, 15 or 20 years depending upon the specific system installed. Refer to the Commercial Systems Specifications Manual for all other Flintlastic systems.

See CertainTeed's Asphalt Shingle Products Limited Warranty for complete details, conditions, limitations and exclusions. For a copy, go to www.certainteed.com or call 800-782-8777.

SureStart PLUS Protection for Your Investment

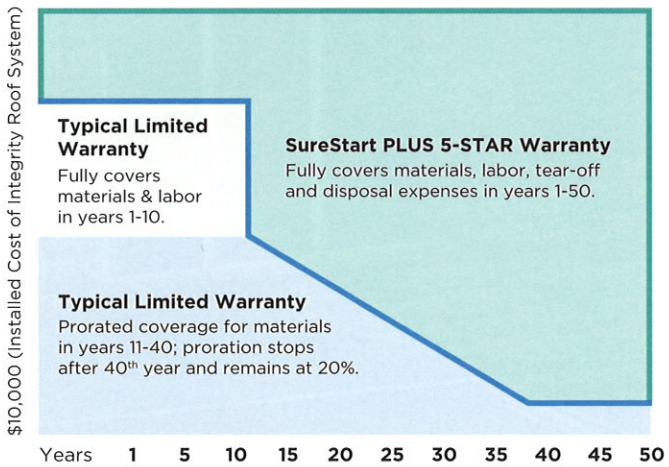
Example of approximate cost for an average residential reroofing project:

Installed cost of an Integrity Roof System: $10,000

Projected Replacement Cost of an Integrity Roof System (assumes 2% Annual Inflation)		Value Provided by a Typical Limited Warranty	Value Provided by SureStart PLUS 5-STAR Coverage
Year	Projected Cost	Amount Provided	Amount Provided
1	$10,200	$6,120	$10,200
5	$11,041	$6,625	$11,041
10	$12,190	$7,314	$12,190
11	$12,434	$3,233	$12,434
20	$14,859	$2,972	$14,859
30	$18,114	$2,415	$18,114
40	$22,080	$1,472	$22,080
50	$26,916	$1,794	$26,916

This example is based on most shingle manufacturers limited warranties and is for illustrative purposes only. **Actual costs will vary by region and roof type.**

CertainTeed's SureStart PLUS 5-STAR Protection versus Limited Lifetime Warranty



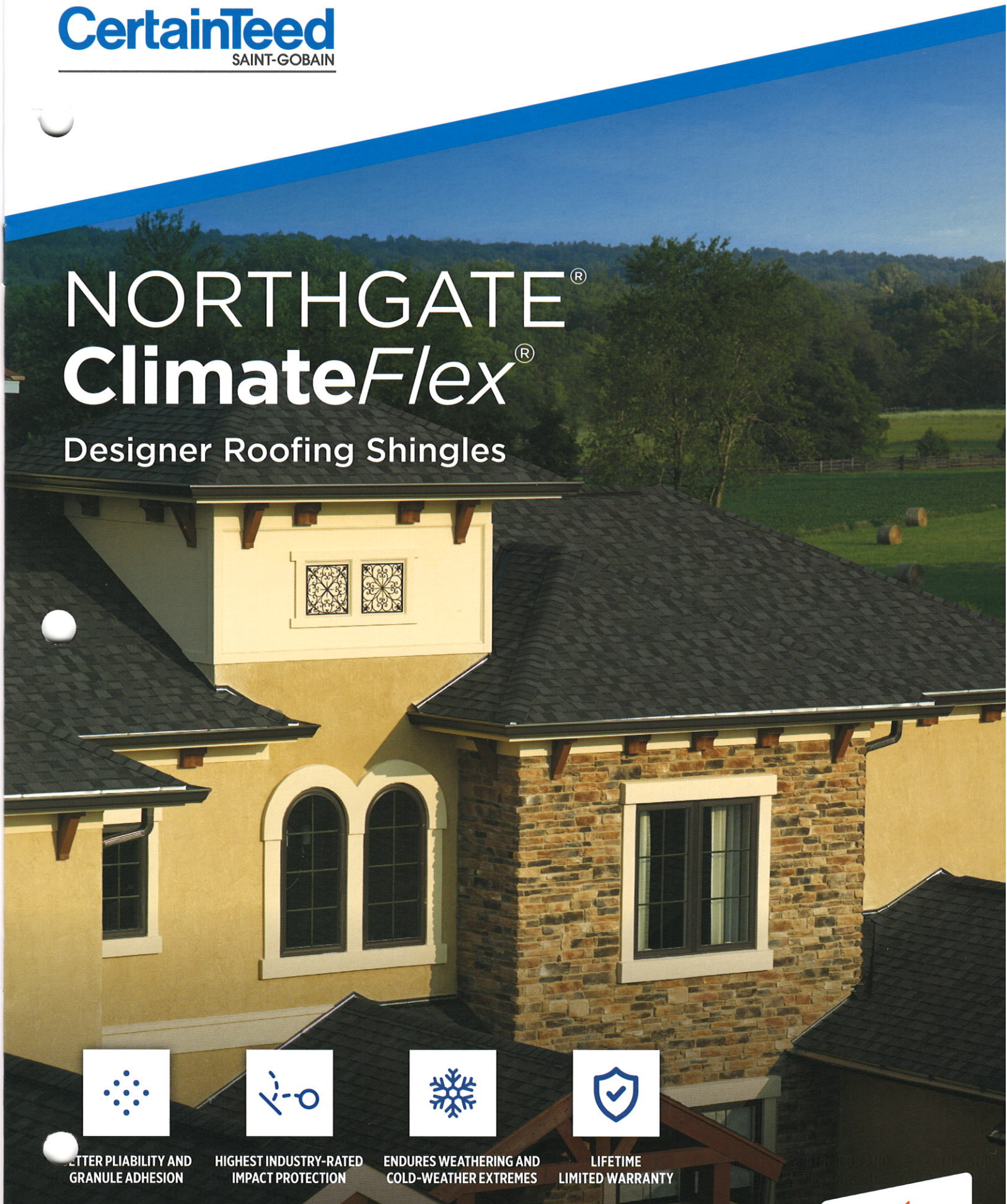
Warranty coverage comparison over time
(Example is for a residential home; see warranty for details)

With SureStart PLUS protection, the amount of coverage remains constant for the full term of the warranty.

CertainTeed
SAINT-GOBAIN

NORTHGATE® ClimateFlex®

Designer Roofing Shingles



ETTER PLIABILITY AND GRANULE ADHESION

HIGHEST INDUSTRY-RATED IMPACT PROTECTION

ENDURES WEATHERING AND COLD-WEATHER EXTREMES

LIFETIME LIMITED WARRANTY

NORTHGATE ClimateFlex | Shown in Max Def Moire Black

SAINT-GOBAIN

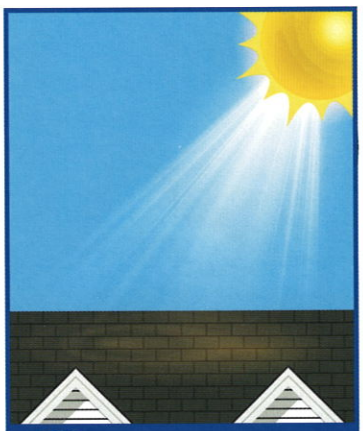
Technology that protects the beauty of your roof and strengthens its performance.

NORTHGATE Climate*Flex* | Shown in Max Def Weathered Wood

ClimateFlex®

Outstanding durability. Featuring the latest advances in polymer science, CertainTeed's ClimateFlex technology works at a molecular level to make shingles strong and pliable. The rubber-like qualities of the ClimateFlex asphalt formula provides each shingle with improved hail resistance, cold-weather flexibility, and granule adhesion.

With NorthGate ClimateFlex, you give your home the curb appeal of designer roofing and the protective resilience of polymer-modified asphalt, all backed by CertainTeed's manufacturer warranty - the most comprehensive and valued warranty in the industry.



POLYMER-BLENDED ASPHALT

Deeper-embedded granules with greater adhesion vs. standard asphalt, helping prevent UV damage

ENHANCED PROTECTION

Highest industry-rated impact protection against hail & other weather-related impacts

EXTREME ENDURANCE

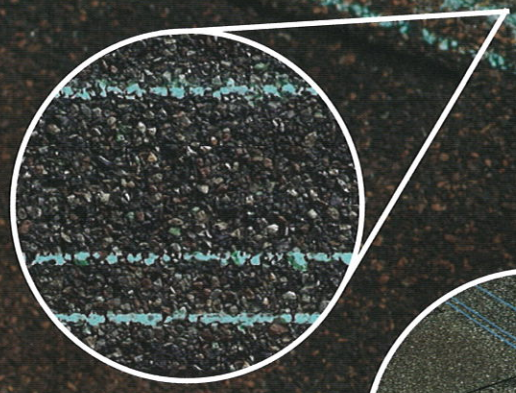
Allows for easier cold-weather installation and greater weathering endurance than standard asphalt shingles

INVESTING IN THE LONG-TERM

Enhanced leak protection and peace of mind with a Lifetime Limited Warranty, which may qualify your home for insurance discounts

NailTrak®

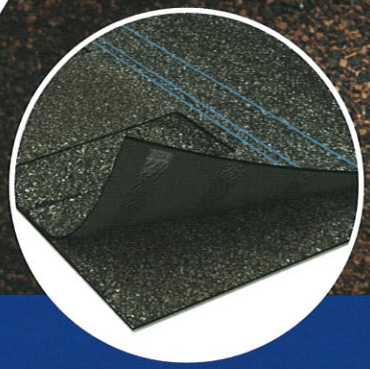
Fast, Accurate, Visible



1-1/2" extra-wide nailing area improves efficiency and accuracy

QuadraBond®

Advanced Layering



An industry-leading four strips of our Quadra-Bond adhesive for durability

WIDER, SAFER, PROVEN

For more than fifteen years, contractors have used NailTrak to install shingles with speed, accuracy, and confidence. With a nailing area three times wider than that of a typical laminate shingle, NailTrak helps ensure each shingle is installed per manufacturer's specifications.

NorthGate ClimateFlex shingles also feature CertainTeed's specially formulated Quadra-Bond® adhesive, which laminates shingle layers at an industry-leading four points for superior resistance to delamination.

Together, our NailTrak and Quadra-Bond technologies deliver the strength and durability that gives homeowners greater peace of mind that their home and possessions are protected.

StreakFighter®

Algae Resistance

HELP MAINTAIN THE NATURAL BEAUTY OF YOUR ROOF

Those streaks you see on other roofs in your neighborhood? That's algae, and it's a common eyesore on roofing throughout North America.

CertainTeed's StreakFighter technology uses the natural anti-algae properties of copper-containing surface granules to help prevent algae from forming on shingles, reducing the need for costly and time-consuming algae cleaning and maintenance while helping your roof maintain its curb appeal for years to come.

Granule with StreakFighter Technology

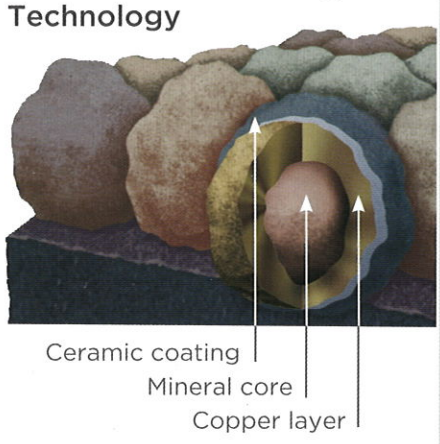
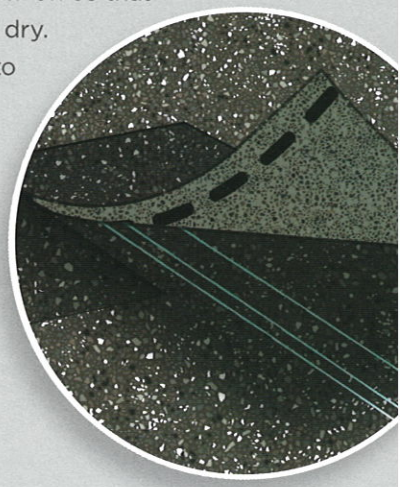


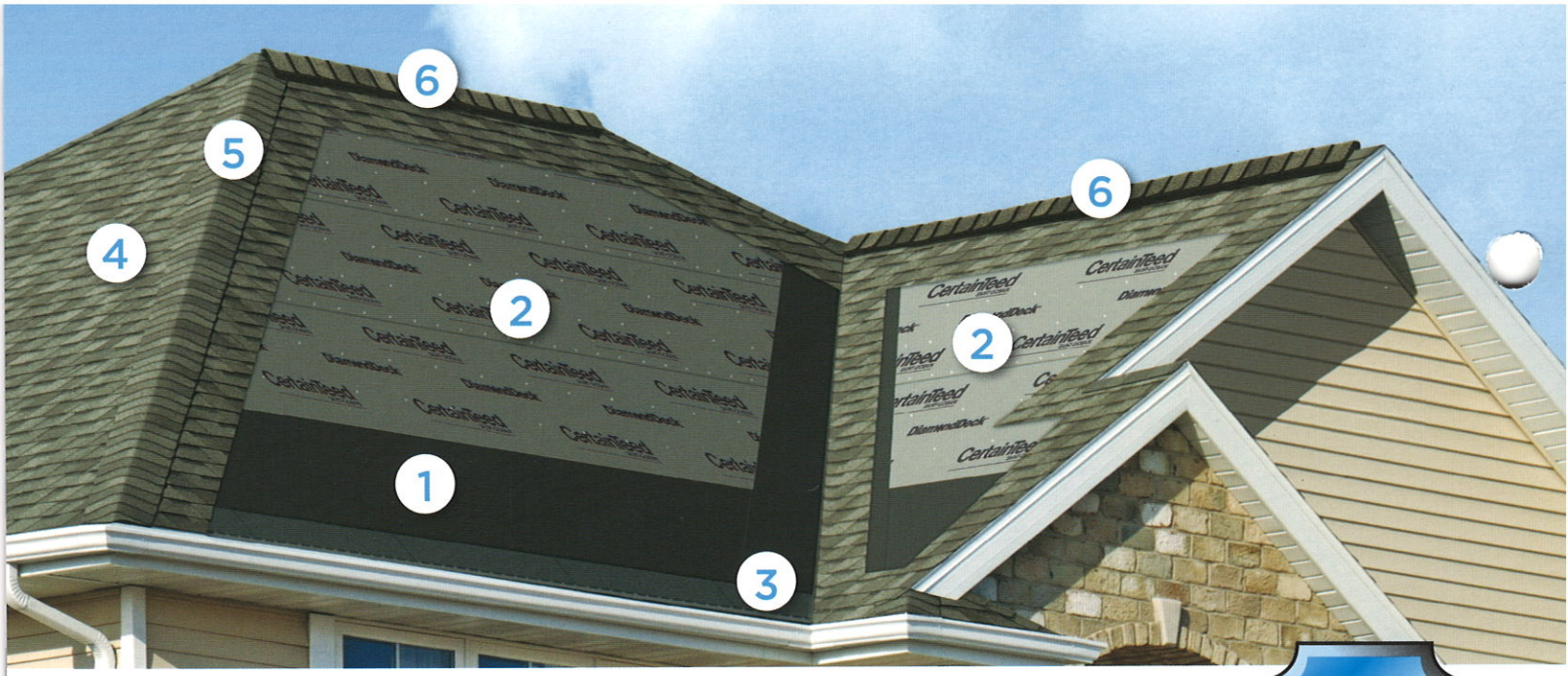
Diagram for illustrative purposes only.

CertaSeal™

Uplift Protection

Certa*Seal*™ is a fast-activating modified asphalt sealant with a 20-year record of proven performance. Designed to seal shingles together upon installation, it protects roofs from wind uplift and shingle blow-off so that homes stay safe and dry. It's also engineered to remain flexible after installation, unlike harder sealants that can dry out and crack over time.





Integrity Roof System™

A COMPLETE APPROACH TO LONG LASTING BEAUTY AND PERFORMANCE

With as much care as you take in selecting the right contractor, choosing the right roof system is equally as important. A CertainTeed Integrity Roof System combines key elements that help ensure you have a well-built roof for long-lasting performance.

1. Waterproofing Underlayment

The first step in your defense against the elements. Self-adhering underlayment is installed at vulnerable areas of your roof to help prevent leaks from wind-driven rain and ice dams.

2. Water-Resistant Underlayment

Provides a protective layer over the roof deck and acts as a secondary barrier against leaks.

3. Starter Shingles

Starter Shingles are the first course of shingles that are installed and designed to work in tandem with the roof shingles above for optimal shingle sealing and performance.

4. Shingles

Choose from a variety of Good-Better-Best styles to complement any roof design and fit your budget.

5. Hip & Ridge Caps

Available in numerous profiles, these accessories are used on the roof's hip and ridge lines for a distinctive finishing touch to your new roof.

6. Ventilation

A roof that breathes is shown to perform better and last longer. Ridge Vents, in combination with Intake Vents, allow air to flow on the underside of your roof deck, keeping the attic cooler in the summer and drier in the winter.

NorthGate® CimateFlex® available in areas shown

learn more at:

certainteed.com/roofing

SAINT-GOBAIN

CertainTeed

CEILINGS • DECKING • FENCE • GYPSUM • INSULATION • RAILING • ROOFING • SIDING • TRIM

20 Moores Road, Malvern, PA 19355 Professional: 800-233-8990 Consumer: 800-782-8777 certainteed.com

17210 BOTHELL WAY NE
BOTHELL, WA 98011
WWW.ROCKROOFING.COM

Rock Roofing
a brilliant decision

Reg # ROCKRI*982RQ
Off (425) 486-8683
Fax (425) 486-8102

INVOICE

Customer
Ralph Kappelhof
13327 157th Ave NE
Redmond, WA, 98052

Date 2/27/2021

Site Address	City State ZIP	Job Type	Installed	Product	Color	Subtotal
13327 157th Ave NE	Redmond, WA, 98052	Gutter	2/27/2023	5k	white	$4,095.00

Extras:

Subtotal	$4,095.00
Tax	$356.27
Total with Tax	$4,451.27
Previous Payment	$0.00
Remaining Balance	$4,451.27

20yr Workmanship Warranty

Thank You,
Rock Roofing Inc.

Sales tax must be paid unless a resale certificate is on file with Rock Roofing Inc.
Balance due on receipt. **NO ONLINE BANKING CHECKS accepted due to length of time to receive.**
Credit account balances due in full by the 10th of Each Month.
Late charges will be assessed at 1.5% of the balance if delinquent.

Invoice

SUNSET GLASS COMPANY, INC.
14320 NE 21ST, STE #1 • BELLEVUE, WA 98007
(425) 454-5087 • FAX (425) 637-8884 • SUNSETGLASS.COM
CONTRACTOR NO. SUNSEG*372 NO

Date 12/30/2022
Invoice # 185017

Bill To
Ralph Kappelhof
13327 157th Ave NE
Redmond 98052

Project
**REVISED 10/2
**Revised 10/11

P.O.

Rep	S.O. No.	Terms
LisOS	185017	

LOCATION	DESCRIPTION	QTY	PRICE
Office	22 X 67-3/8 - 1/2 OA - 1/8 Clear Tempered Insulated Glass - Mll Spacer	3	1,044.33
Formal Dining Room	22 X 67-3/8 - 1/2 OA - 1/8 Clear Tempered Insulated Glass - Mill Spacer	1	384.11
Family Room	22 X 67-3/8 - 1/2 OA - 1/8 Clear Tempered Insulated Glass - Mill Spacer	1	384.11
Breakfast Dining Room	20 X 67-3/8 - 1/2 OA - 1/8 Clear Tempered Insulated Glass - Mill Spacer	1	327.05
Guest Bedroom	24-7/8 X 42-7/8 - 11/16 OA - 1/8 Clear Annealed Insulated Glass - Mill Spacer - 5/8 Flat White Grids, 2x4 EQUAL	2	508.78
Entry Transoms	18-7/8 X 36-7/8 - 11/16 OA - 1/8 Clear Annealed Insulated Glass - Mill Spacer - 5/8 Flat White Grids, 2x3 EQUAL	3	587.04
	Subtotal of Glass		3,235.42
	Fall 15% Discount Good through 10/22/2022		-485.31
	Tan Pecora AC-20	3.75	223.76
	Tan Sonolastic	1	25.63
	Black 1/32" Glazing Tape - Sold per Foot	96	57.60
	Disposal Charge	11	88.00
	Fuel Surcharge Includes Measure Trip	3	43.50
	Total of All Labor Attributable to Job/Including measure, travel time and checking in of product. Any changes made will be updated to this estimate. Additional trip is needed for critical measurement. Windows to be replaced will be marked. Customer to be home for walk through. Last trip to install.	40	4,200.00
	***Note:Grid depth may not match existing.	1	0.00
	**LEAD TIME - Install date can be 3 to 4 weeks after acceptance of estimate depending on the size of the project. In some cases it can be sooner. Install date you are given can change if we do not get the glass or items from the vendor. Sunset Glass is not responsible for Vendor Delays. Orders cannot be cancelled due to a delay.	1	0.00

SUBTOTAL	
SALES TAX (8.7%)	
TOTAL	
PAYMENTS / CREDITS	
BALANCE DUE	

nvoice

SUNSET GLASS COMPANY, INC.
14320 NE 21ST, STE #1 • BELLEVUE, WA 98007
(425) 454-5087 • FAX (425) 637-8884 • SUNSETGLASS.COM
CONTRACTOR NO. SUNSEG*372 NO

Date 12/30/2022
Invoice # 185017

Bill To
Ralph Kappelhof
13327 157th Ave NE
Redmond 98052

Project
**REVISED 10/2
**Revised 10/11

P.O.

Rep	S.O. No.	Terms
LisOS	185017	

LOCATION	DESCRIPTION	QTY	PRICE
	***WARRANTY - Ten year warranty against failure on insulated units from vendor only to original purchaser. One year non transferable warranty for labor from Sunset Glass for original purchaser.	1	0.00

Late payment may incur finance charges. Customer agrees to pay for all court costs, attorney fees, and collection charges which may be accrued while collecting on a delinquent account.

SUBTOTAL	$7,388.60
SALES TAX (8.7%)	$642.81
TOTAL	**$8,031.41**
PAYMENTS / CREDITS	**-$8,031.41**
BALANCE DUE	**$0.00**

February 21, 2023

Mr. & Mrs. Ralph & Debbie Kappelhoff
13327 157th Ave. NE
Redmond, WA.

Re: 13327 157th Ave. NE
Redmond, WA.

Dear Ralph & Debbie;

At your request, a visual inspection of the above referenced property was conducted on 02/20/2023. We have inspected the major structural components, plumbing, heating and electrical systems for signs of significant non-performance, excessive or unusual wear and general state of repair.

Clark Inspections inspectors, inspect all homes and buildings according to the stringent professional standards and code of ethics set forth by the American Society of Home Inspectors (ASHI). The ASHI standards are designed to identify and disclose to the client certain conditions of the major systems as these conditions exist at the time of the inspection. These standards are designed for a visual inspection of the readily accessible areas of the included system. A copy of these standards will be provided upon request or can be obtained by calling the ASHI automatic "Information-On-Demand" phone number at 1-800-743-2744

Home or building inspections performed under these standards should not be construed as a compliance inspection of any governmental or non-governmental codes or regulations. Inspections performed under these standards are essentially visual; are based on the experience and opinion of the inspector; and are not intended to be technically exhaustive. Inspections performed under these standards are not meant to be warranties nor guarantees of adequacy of performance of the structures, systems, or their component parts.

This inspection does not include an inspection for construction or other materials which might be hazardous to your health. It is possible that such materials may be present and not noted in this report.

This inspection does not include the testing or inspection of security systems, intercoms, communication systems, video, or sprinkler systems. These items are highly specialized and individualistic. Clark Inspections recommends that you have the seller and/or real estate agent/broker demonstrate the operation and serviceability of these systems to you prior to the closing of the sale.

Mechanical equipment is inspected for operability only and may contain undisclosed defects which may significantly impair it's usefulness.

Defects are examined and a determination is made on how a particular defect will affect interrelated building parts and whether immediate repairs are required.

Since all buildings have defects, it is important to know and understand what they are and how they affect the house and property. Some of the defects mentioned in this report may be quite typical, and found in other homes of comparable age and price. Some however, may not. We make our best attempt to distinguish this for you in both verbal and written reports.

REPORT SUMMARY

The comments in this report are categorized. General information is given on the type of materials and construction methods. Specific information is given pertaining to the condition of a component and applicable repair and maintenance work that may be required.

Statements, representations, or conclusions offered by the inspector are the considered opinion of the inspector, but these statements, representations, or conclusions do not constitute an expressed or implied warranty of any kind. Neither the inspector nor Clark Inspections Inc. shall be liable for any direct, special, incidental, or consequential damages under an circumstances whatsoever, whether arising in tort, negligence, or contract, nor for any loss, claim, expense, or damage caused by or arising out of his or its inspection of a structure, nor will the inspector or Clark Inspections Inc. indemnify or hold others harmless for any loss, claim, expense, or damage arising out of his or its inspection of a structure.

ACTION ITEMS, SIGNIFICANT DEFECTS AND/OR HEALTH AND SAFETY ISSUES

Non-operational (Action) items, safety or health issues, areas with limited viewing for proper inspection and components that do not serve their intended function (Significant Defects) are listed here. These items will likely require further evaluation and repair by licensed tradespeople.
Please Read entire report

BUILDING SITE

2.5 WALKWAY
One or more of the wooden dividers separating the concrete walkway sections were infested by wood destroying organisms and have deteriorated to a point where they are becoming a trip hazard. Replacement with mortar is recommended.

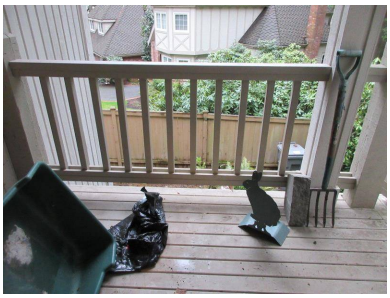
BUILDING EXTERIOR

3.5 GUTTERS AND DOWNSPOUTS
There is a build-up of organic debris inside the gutters. Proper maintenance of gutters and downspouts is essential and should be performed routinely in order to prevent clogging. Maintenance consists primarily of keeping leaves and other organic debris out of the system. Failure to clean the gutters will result in water splash on the building when they overflow. Gutters can be damaged under the weight of the water and organic matter inside the gutter. Gutters should be cleaned as necessary to maintain a free flow of water into the downspouts.

The gutters are corroded and beginning to leak. Replacement of the gutters will be required in the near future.

3.6 PAINT
The paint is weathered from age and exposure. Paint protects the wood from cupping, checking, warping and rot. Repainting the house will be required in the near future.

3.10 PORCH RAILING
The spacing between the balusters is too wide. This is a hazard to small children. The balusters should be spaced close enough together so that a 4" sphere cannot pass through. Upgrading the porch railing is recommended if small children are present.



GARAGE

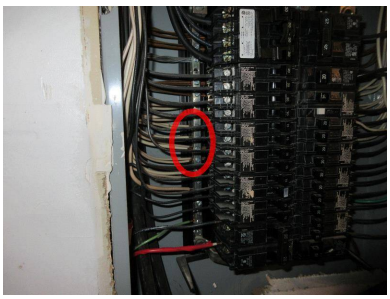
ATTACHED GARAGE

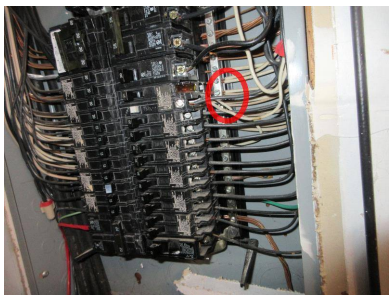
6.4 FIRE SEPARATION
There are voids (adjacent the pipe penetrations) in the fire resistive barrier between the living space and garage that will allow flames to penetrate. The gypsum barrier slows the spread of a fire from the garage to the structure and/or living space. Patching the voids with a fire retardant caulk is recommended.

6.5 PASSAGE DOOR
The self closing hinge has been disabled and therefore the door is no longer part of the fire rated assembly between the living space and garage. Resetting the self closing hinge spring is recommended.

ELECTRICAL SYSTEM

7.8 SERVICE PANEL
Several of the neutral wires are double tapped on the buss bar. Double tapping means that two conductors share a single terminal. Double tapped terminals can loosen and overheat and therefore are not permitted unless the terminal is specifically listed for multiple wires. This defect is easily repaired by connecting the two wires to a "pig tail", securing them with a wire cap, and then inserting the pig tail conductor under the terminal.





7.12 RECEPTACLES
There are several loose receptacles throughout the home. This is a potential shock and a fire hazard. All loose receptacles should be repaired as necessary.

7.13 GFCI RECEPTACLES
The GFCI receptacle in the lower level northwest entry does not trip when a ground fault is introduced. This is caused by an improperly wired or defective GFCI. Repair or replacement of this GFCI is recommended.

The installation of additional GFCI protection in the laundry room receptacle is recommended.


Defective GFCI

7.15 LUMINARIES
The southeast guest bedroom bathroom luminaries is not working. Testing the luminaries with a voltage tester revealed that there is current to them. Light bulbs should be replaced in non-functional luminaries and then they should be tested for proper operation.

HEATING SYSTEM

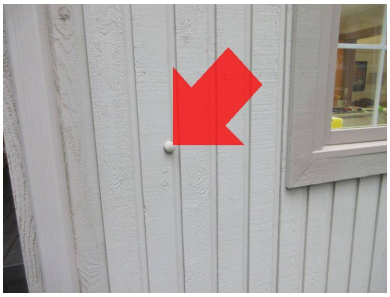
FORCED AIR HEATING SYSTEM

8.8 VENT
The furnace vent connector is too close to a combustible material. This is a hazard. A minimum clearance of 6" is required between the single wall vent connector and the combustible material. The double wall type B vent requires only 1" of clearance. Repairs are recommended.

KITCHEN

11.8 AIR GAP

An air gap called a Johnson Tee is installed in the kitchen wall. This air gap protects the dishwasher from contamination caused by a backflow of waste water. The cap protruding on the exterior wall opposite the dishwasher is not drilled. This renders the air gap non-functional. Drilling a 1/4" hole in the end of the cap will restore its function. The remaining visible portions of the Johnson Tee were properly installed and functioning as intended.



BATHROOMS

PRIMARY BEDROOM BATHROOM

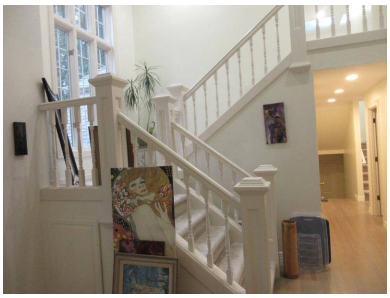
12.5 TOILET

The toilet is loose where it mounts to the floor. A loose toilet will eventually start to leak and will damage the flooring material, underlayment and subfloor. The most reliable fix for this condition is to remove the toilet and install a new wax seal. The toilet should then be securely mounted to the floor.

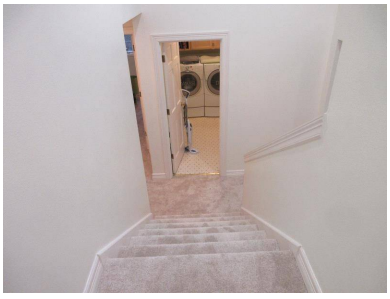
INTERIOR

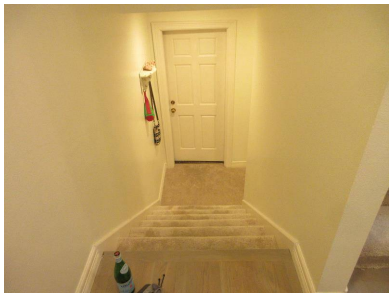
15.2 STAIRS

The stair railing baluster spacing is too wide. This is a hazard for small children. The baluster spacing should be reduced as a safety upgrade. Current standards require that a 4-3/8" sphere not pass through the railing.



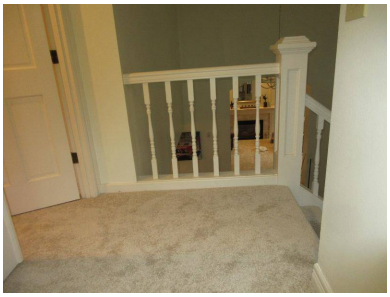
There is no handrail in the stairwells. This is a safety hazard. The installation of a graspable handrail that conforms to present industry standards is recommended.





15.3 GUARD RAILINGS

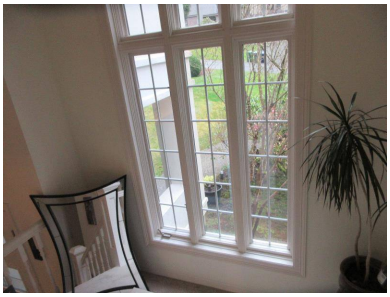
The spacing between the balusters is too wide. This is a hazard to small children. The balusters should be spaced close enough together so that a 4" sphere cannot pass through. Upgrading the guard railing is recommended if small children are present.



15.7 WINDOWS
Several of the windows do not operate smoothly which makes it difficult to close completely. We recommend repairs as necessary to restore the windows proper operation.

The latch/locking mechanism for one of the guest bedroom windows does not operate properly. We recommend repairs or replacement as necessary.

The stairway landing window glass is not labeled as tempered safety glass. The existing glass is nonconforming by current building standards and would be hazardous if broken. The installation of safety glass is recommended as a safety upgrade.



15.8 SMOKE DETECTORS
There is a smoke detector in the hallway outside of the bedrooms. Additional smoke detectors should be installed inside the bedrooms near the door.

Smoke detectors are examined for location only. They are not tested. Smoke detector batteries should be replaced when you move in and every year thereafter. Once batteries have been replaced, the smoke detectors should be tested for proper operation.

FOR MAXIMUM PROTECTION: Use both Ionization and Photoelectric smoke alarms in every

bedroom/hallway on every level of your home.

At least one carbon monoxide monitor should be installed for each floor. The best place to install the monitor is in an open area near the gas appliance.

MAINTENANCE ITEMS AND/OR COMPONENTS NEARING THE END OF THEIR SERVICE LIFE

Any item that in the opinion of the inspector is nearing the end of its normal service life and/or conditions that need repair, maintenance and/or upgrades, but have not affected basic functions are listed herein.

BUILDING SITE

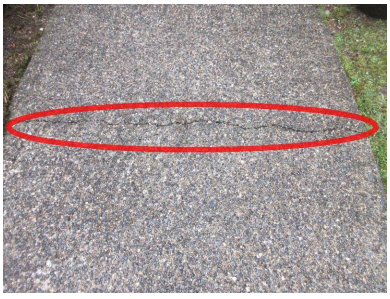
2.4 DRIVEWAY

The driveway has cracked and settled differentially. This was probably caused by inadequate preparation of the soil prior to the placement of the concrete. This condition can be repaired by removing and replacing it. The driveway remains functional despite this condition.

One or more of the wooden dividers separating the concrete driveway sections were infested by wood destroying organisms and have deteriorated to a point where they are becoming a trip hazard. Replacement with mortar is recommended.

2.5 WALKWAY

Cracks were observed in the concrete surface of the walkway. Minor cracks can be sealed to minimize moisture entry and further settlement of the concrete.



BUILDING EXTERIOR

3.1 PRIMARY EXTERIOR WALL CLADDING

Excessive cracking was observed adjacent the west chimney chase. There is no way to determine, without invasive inspection, if water has leaked past the building paper into the chimney chase framing. Therefore, it is possible that water intrusion has damaged the floor, wall and/or ceiling-roof structure even though there is no evidence of such damage. We recommend the services of a qualified siding contractor for the repair and/or replacement as needed.

ROOF

4.3 CHIMNEYS

Chimney chase covers for fireplaces that are concave can hold water which will result in corrosion of the sheet metal. When rust holes form the cover will leak. Chase cover replacement for the west fireplace is recommended. The new chase cover should be sloped for drainage.

ATTIC

5.3 VENTILATION

Wind baffles locations are compromised in some areas of the attic. The proper placement of wind baffles in front of all soffit vents is recommended.

WATER HEATER

10.6 EXPANSION TANK

The expansion tank is not adequately secured to the wall. As code requirements start to call for engineered expansion tank supports we recommend the installation of seismic restraints to secure the expansion tank instead of allowing it to simply depend on piping connections that could result in damage to the water pipe and leakage during an earthquake.

KITCHEN

11.3 FLOORING MATERIAL

The hardwood floor is water damaged in front of the sink and dishwasher. This damage is cosmetic and can probably be sanded out when the floor is refinished.

BATHROOMS

WEST GUEST BEDROOM BATHROOM

12.22 COUNTERTOP

The backsplash is not caulked. Cracking of the grout allows water to enter the gap between the back splash and counter and is difficult to clean. Caulking should be installed at this location.

EAST GUEST BEDROOM BATHROOM

12.30 SINK

The drain stop is missing. It should be replaced.

12.34 COUNTERTOP

The backsplash is missing. The installation of a backsplash is recommended.

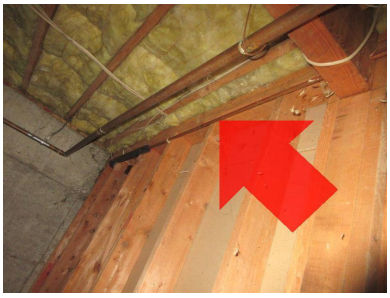
12.35 VENTILATION

The luminaries/fan diffuser in the southeast guest bedroom bathroom is loose. Loose and/or damaged luminaries covers/diffusers should be replaced or repaired as necessary.

PLUMBING SYSTEM

14.4 INTERIOR WATER SUPPLY PIPES

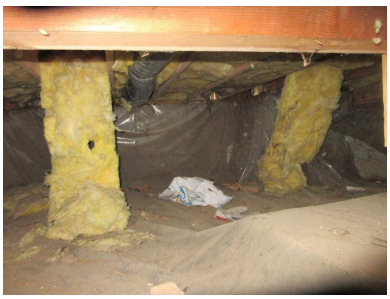
There are water pipes in the crawlspace that are not adequately insulated and could freeze. The installation of foam pipe insulation on all exposed water pipes is recommended.



INSULATION

18.4 FLOOR INSULATION

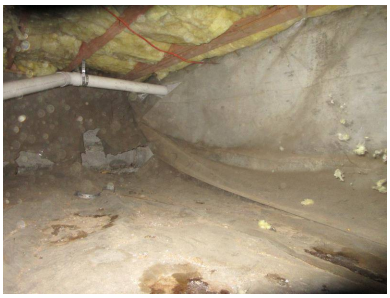
Some of the insulation batts were not properly secured and have falling down. The fallen batts should be reinstalled and secured.



18.5 DUCT INSULATION
Some of the duct insulation is missing or has fallen off the ducts. This increases the amount of heat loss. The installation of new duct insulation is recommended in areas where insulation is missing.

CRAWLSPACE

20.4 VAPOR RETARDER
The foundation walls are covered with the plastic vapor retarder. This allows the transmission of water vapor from the soil up and into the exterior wall framing. The plastic vapor retarder should be removed from the foundation.



The support post concrete piers are covered with the plastic vapor retarder. This allows the transmission of water vapor from the soil up and into the floor framing. The plastic vapor retarder should be removed from the piers.

20.5 PEST CONTROL
Soil is in contact with at least one of the wood posts in the crawl space. Good building practice requires that foundation walls or pier footings supporting wood frame construction, extend at least 8" above the finish grade with at least a 6" clearance between the top of the soil and the bottom of the wood finish materials. Soil in direct contact with wood creates a hospitable environment for wood destroying organisms. Establishing these minimum clearances is recommended.

There is evidence of rodent activity in the crawlspace. The first step in eliminating rodents from the crawlspace is to seal all possible entry points using wire mesh, caulking, wood, stainless steel wool, aerosol foam or mortar. Careful work sealing cracks, holes, gaps, and covering ground water drain inlets will discourage rodent activity. Once this work is completed, snap traps baited with peanut butter should be installed and monitored. The absence of rodents in the traps typically means that the rodents have been excluded from the area.

Scrap-wood and other cellulose debris was observed on the crawl floor. This wood debris creates conducive conditions for wood boring insects. The removal of all cellulose debris is recommended.

Several of these items will likely require further evaluation and repair by licensed tradespeople. Other minor items are also noted in the report and could be mentioned but none of them affect the habitability of the house.

Thank you for selecting our firm to do your home inspection. If you have any questions regarding the inspection report or the home, please feel free to call us.

Sincerely,

Terry Clark
206-660-9200
Clark Inspections

Confidential Inspection Report

13327 157th Ave. NE
Redmond, WA 98052

February 20, 2023

Prepared for: Ralph & Debbie Kappelhoff

WSDA/PCO #55210. Certified ASHI Member Inspector #202240 Terry Clark (206) 660-9200

Inspection Table of Contents

2/22/2023

Mr. & Mrs. Ralph & Debbie Kappelhoff
13327 157th Ave. NE
Redmond,WA

Dear Ralph & Debbie,

Thank you for inviting Clark Inspections to inspect for you. We appreciate having the opportunity to perform this home inspection and are happy to help with all of your inspection needs. Enclosed is our report for the property located at;

13327 157th Ave. NE

We have inspected the major structural components, plumbing, heating, and electrical systems for signs of significant non-performance, excessive or unusual wear and general state of repair.

This inspection report is designed to be easy to understand. Please take time to review it carefully. If you have any questions regarding this inspection, or receive information from another building inspection professional, contractor, or tradesperson, that is in conflict with this report, or any major defect in your home or building that was not described in your verbal or written reports, please call our office immediately. We are happy to answer any questions you may have.

Thank you for the opportunity to be of service.

Sincerely,

Terry Clark

Clark Inspections

GENERAL INFORMATION

CLIENT & SITE INFORMATION:

1.1 DATE OF INSPECTION:
2/20/2023.

1.2 INSPECTOR'S NAME:
Terry Clark.

1.3 CLIENT NAME:
Mr. & Mrs. Ralph & Debbie Kappelhoff.

1.4 MAILING ADDRESS:
13327 157th Ave. NE
Redmond WA.

1.5 CLIENT E-MAIL ADDRESS
kappelhoff@msn.com.

1.6 ADDRESS OF PROPERTY INSPECTED
13327 157th Ave. NE
Redmond WA.


South elevation


North elevation

CLIMATIC CONDITIONS:

1.7 WEATHER:
Overcast, Rain.

1.8 APPROXIMATE OUTSIDE TEMPERATURE:
47 degrees.

BUILDING CHARACTERISTICS:

1.9 MAIN ENTRY FACES:
South.

1.10 ESTIMATED AGE OF BUILDING:
The building is approximately 35 years old.

1.11 BUILDING TYPE:
Three story single family residence.

1.12 SPACE BELOW GRADE:
Slab on grade, Ground floor living area, Crawlspace.
SCOPE, PURPOSE AND LIMITATIONS

1.13 RESIDENTIAL
The purpose of this inspection was to discover and evaluate major defects, deficiencies and deferred maintenance found in the main components of the house and in the building site immediately around the building inspected. A major defect or deficiency is a system or component that in the judgment of the inspector, would cost in excess of $500.00 to repair or replace, is not performing it's intended function, or adversely affects the habitability of the dwelling or building. Defects are examined and a determination is made on how a particular defect will affect interrelated building parts and whether immediate repairs are required.

The major components in this report are categorized. General information is given on the type of materials and construction methods. Specific information is given pertaining to the condition of a component and applicable repair and maintenance work that may be required.

Since all buildings have defects, it is important to know and understand what they are and how they affect the house and property. Some of the defects mentioned in this report may be quite typical, and found in other homes of comparable age and price. Some, however, may not. We make our best attempt to distinguish this for you in both the verbal and written reports.

Clark Inspections inspectors inspect all homes and buildings according to the stringent professional standards and code of ethics set forth by the American Society of Home Inspectors (ASHI). The ASHI standards are designed to identify and disclose to the client certain conditions of the major systems as these conditions exist at the time of the inspection. These standards are designed for a visual inspection of the readily accessible areas of the included system. A copy of these standards will be provided upon request or can be obtained by calling the ASHI automatic "Information-On-Demand" phone number at 1-800-743-2744.

Home or building inspections performed under these standards should not be construed as a compliance inspection of any governmental or non-governmental codes or regulations. Inspections performed under these standards are essentially visual; are based on the experience and opinion of the inspector; and are not intended to be technically exhaustive. Inspections performed under these standards are not meant to be warranties nor guarantees of adequacy of performance of the structures, systems, or their component parts.

This inspection does not include an inspection for construction or other materials which might be hazardous to your health. It is possible that such materials may be present and not noted in this report.

This inspection does not include the testing or inspection of security systems, intercoms, communication systems, video, or sprinkler systems. These items are highly specialized and individualistic. Clark Inspections recommends that you have the seller and/or real estate agent/broker demonstrate the operation and serviceability of these systems to you prior to the closing of the sale.

Mechanical equipment is inspected for operability only and may contain undisclosed defects which may significantly impair it's usefulness.

Statements, representations, or conclusions offered by the inspector and/or by Clark Inspections are based solely upon a

visual examination of the exposed areas of the structure inspected. Areas of the structure which are not exposed to the naked eye cannot be inspected, and no conclusions, representations, or statements offered by the inspector are intended to relate to areas not exposed to view. Hidden defects could have a significant impact on the visually based conclusions, statements, and representations made by the inspector.

Statements, representations, or conclusions offered by the inspector are the considered opinion of the inspector, but these statements, representations, or conclusions do not constitute an expressed or implied warranty of any kind. Neither the inspector nor Clark Inspections shall be liable for any direct, special, incidental, or consequential damages under any circumstances whatsoever, whether arising in tort, negligence, or contract, nor for any loss, claim, expense, or damage caused by or arising out of his or its inspection of a structure, nor will the inspector or Clark Inspections indemnify or hold others harmless for any loss, claim, expense, or damage arising out of his or its inspection of a structure.

If you receive information from another building inspection professional, contractor or trades person that is in conflict with ours, or if you discover a major defect in your home or building that was not described in your verbal or written reports, please call us immediately.
GENERAL COMMENTS

1.14 RECOMMENDATIONS
Certain building designs and/or building site topography may not qualify for earthquake insurance. Each company has its own underwriting policies. You should check with your insurance agent to determine whether or not your insurance company will write an earthquake policy on this property.

There may be information pertinent to this property which is a matter of public record. A search of public records is not within the scope of this inspection. We recommend you review all applicable public records that pertain to this property.

We make no representations as to the extent of presence of code violations, nor do we warrant the legal use of this building. This information can be obtained from the local building and/or zoning department.

1.15 BUILDING CODES
A code is a system of rules and procedures, the purpose of which is to provide minimum standards to safeguard life, health, and property by regulating certain aspects of building design, construction, use and maintenance. Local codes are usually based on model codes. A community may amend or adopt only parts of a model code. These local codes may not always be the latest version of the model code. Code enforcement is nearly always a local government responsibility and is handled in several ways depending on the type of code and community involved. All model codes and most local codes, grant the code compliance inspector or building official the right to interpret the code to suit special situations. This makes the building official the final authority, not the code book.

Answering the question "Does this meet code?" depends on the building's age, when remodels and upgrades were performed and which codes if any are enforced. This information may not be readily available to the home inspector. Private inspectors usually can determine if an item complies with applicable national model codes, if they know when the work was done and what code was applicable at that time. Local municipalities adopt and enforce national model codes at their discretion. Private building inspectors are typically not permitted to perform code compliance inspections. Code compliance inspections are typically performed by the local code enforcement official. Private building inspectors check to determine whether or not an item performs its intended function or is in need of repair.

Code enforcement usually is a local question and subject to the interpretation by the building code enforcement official. Most communities do not require an existing building to meet "code" prior to sale.

Specific code questions can be referred to the local building official. however, you must realize that if city inspectors check a building, they have the authority to require corrections of any violation. Private building inspectors act solely in an advisory capacity. Their objective reports are a tremendous benefit to anyone purchasing or selling real estate.

BUILDING SITE

The evaluation of the building site and grounds includes grading, roof water and surface drainage systems, fencing, gates, walkways, curbs, driveways, patios, and retaining walls connected to or directly adjacent the structure. These items are visually examined for proper function, excessive or unusual wear and general state of repair. Components or portions of components may not be visible because of soil, vegetation, storage of personal effects and/or the nature of construction. In such cases these items are considered inaccessible and are not inspected. Lawn irrigation systems, fountains, and low voltage decorative garden lights are not included in this inspection.
The following components were inspected:

2.1 ROOF WATER DRAIN SYSTEM
A below grade roof water drain system is used to divert rain water discharged from the downspouts away from the foundation wall. Below grade drain system designs vary and it is virtually impossible to evaluate the integrity of the system definitively, due to the fact that it is entirely underground. There is a high incidence of defects in these systems, due to the fact that historically, very few municipalities inspected or enforced design or quality standards.

Defects in these drain systems are one of the most common causes of water or moisture problems in ground floor occupancies, basements and crawlspaces. Overflowing gutters and clogged downspouts and scuppers also frequently cause or exacerbate moisture or water entry problems in and around the building. When water entry or moisture problems are discovered we recommend checking the entire roof water drain system to insure that it is functioning properly.

Occasionally, (once a year) flushing out the drain lines with a garden hose will reduce the build-up of debris and sludge which could impede drainage. This type of maintenance is most effective if the end of the drain line terminates in open air or in a storm sewer. If the drain line terminates in a dry well or leach field, then the washing of debris down the line is not advisable. The debris may eventually clog the perforations in the line which allow the water to escape. This could render the drain system inoperative. It is always best to prevent debris from entering at the inlet.

2.2 GRADING
The building site is well drained. The finish grade slopes away from the house. No evidence of recent building site flooding, drainage or soil stability problems was observed.

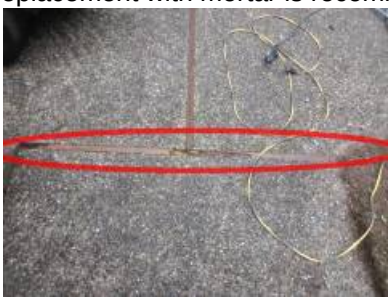
2.3 VEGETATION
Dense shrubbery and trees planted too close to the building can damage siding and the roof overhang and interfere with drainage and air movement, thus promoting fungus growth and accelerated deterioration of exterior finishes and wood. Trees and shrubs in contact with the building also provide carpenter ants with a route into walls or attics. Trees and shrubs should be trimmed back, where required. When landscaping, trees and shrubs should be planted back away from the building so that they have room to grow.

2.4 DRIVEWAY
The driveway has cracked and settled differentially. This was probably caused by inadequate preparation of the soil prior to the placement of the concrete. This condition can be repaired by removing and replacing it. The driveway remains functional despite this condition.

One or more of the wooden dividers separating the concrete driveway sections were infested by wood destroying organisms and have deteriorated to a point where they are becoming a trip hazard. Replacement with mortar is recommended.

2.5 WALKWAY
Cracks were observed in the concrete surface of the walkway. Minor cracks can be sealed to minimize moisture entry and further settlement of the concrete.

One or more of the wooden dividers separating the concrete walkway sections were infested by wood destroying organisms and have deteriorated to a point where they are becoming a trip hazard. Replacement with mortar is recommended.

BUILDING EXTERIOR

The evaluation of the building exterior includes the paint, stain, siding, windows, doors, flashing, trim, fascia, eaves, soffits, decks, porches balconies and railings. These items are visually examined for proper function, excessive or unusual wear and general state of repair. Components or portions of components may not be visible because of soil, vegetation, storage of personal effects and/or the nature of construction. In such cases these items are considered inaccessible and are not inspected.
The following components were inspected:

3.1 PRIMARY EXTERIOR WALL CLADDING
Portions of the house is clad with a foam insulating board fastened directly to the wall and then covered with fiberglass mesh and acrylic stucco. Modern synthetic stucco systems use a secondary water barrier in back of the foam board to protect the wall framing from water intrusion. These secondary barriers work well if they are properly installed. The visible portions of the stucco board are in serviceable condition.

Hard coat stucco, often referred to as "real stucco" or traditional stucco is also used as an exterior wall cladding. Hard coat stucco is the exterior equivalent of plaster, made of Portland Cement, sand and water. Hard coat stucco can be thought of as a thin coat of concrete, with the cement acting as a binder, the aggregate (sand) providing the bulk and the strength, and the water initiating the chemical reaction. Like plaster, it requires periodic maintenance as cracks develop. The amount of maintenance required depends largely upon the mix of the stucco, the lath used (if any), and the surface to which the stucco is applied.

Hard coat stucco is not a moisture barrier like synthetic stucco. Water and moisture migrate through it; however, if asphalt impregnated building paper and flashings are properly installed, they intercept water and prevent it from going into the wall framing. It is important to minimize water exposure and water infiltration through the stucco from direct rainfall and roof drainage overflow. It is also important to keep the roof, chimney crown, and roof flashings in good condition, and keep door and window openings well sealed and caulked to reduce the risk of water infiltration, leakage and damage.

Excessive cracking was observed adjacent the west chimney chase. There is no way to determine, without invasive inspection, if water has leaked past the building paper into the chimney chase framing. Therefore, it is possible that water intrusion has damaged the floor, wall and/or ceiling-roof structure even though there is no evidence of such damage. We recommend the services of a qualified siding contractor for the repair and/or replacement as needed.


Noteable cracking around chimney chase


Observed above the roof line

3.2 SECONDARY EXTERIOR WALL CLADDING
Cedar channel siding is used as an exterior wall cladding. Cedar is a wood that is durable and moderately resistant to decay. Maintaining the finish on the exposed siding will maximize its service life. The siding shows minor wear and deterioration typically caused when the exterior finish is not maintained. The deterioration is cosmetic and does not affect the function of the siding. No action is indicated.

3.3 PEST CONTROL
Good building practice requires that foundation walls or pier footings supporting wood frame construction, extend at least 8" above the finish grade with at least a 6" clearance between the top of the soil and the bottom of the wood finish materials. Soil in direct contact with wood creates a hospitable environment for wood destroying organisms. These minimum standards should be maintained throughout the building exterior.

3.4 SOFFITS AND OVERHANGS
The building has adequate overhangs. Overhangs protect the exterior walls, windows, doors, siding and exterior finish from the ravages of direct rain fall. Buildings with adequately sized overhangs will generally require less frequent exterior maintenance and are less likely to suffer from moisture related problems on the exterior walls.

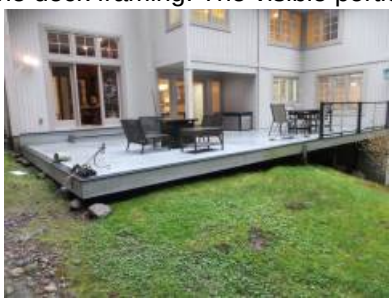
3.5 GUTTERS AND DOWNSPOUTS
Roof runoff is collected and channeled into the downspouts by aluminum gutters fastened to the rafter tails. Gutters should be cleaned regularly to prevent clogging and overflow.

There is a build-up of organic debris inside the gutters. Proper maintenance of gutters and downspouts is essential and should be performed routinely in order to prevent clogging. Maintenance consists primarily of keeping leaves and other organic debris out of the system. Failure to clean the gutters will result in water splash on the building when they overflow. Gutters can be damaged under the weight of the water and organic matter inside the gutter. Gutters should be cleaned as necessary to maintain a free flow of water into the downspouts.

The gutters are corroded and beginning to leak. Replacement of the gutters will be required in the near future.

3.6 PAINT
The paint is weathered from age and exposure. Paint protects the wood from cupping, checking, warping and rot. Repainting the house will be required in the near future.

3.7 DECK
The lower deck is installed close to the ground making it more vulnerable to deterioration. The proximity of the deck to the ground also prevented an inspection of the deck framing. The visible portions of the deck are in good condition.

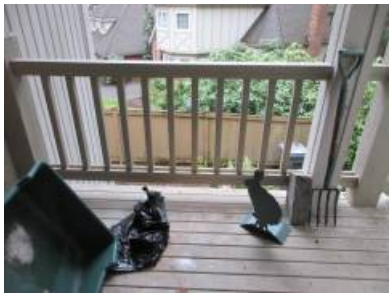


3.8 DECK RAILINGS
The deck railings are well constructed and are performing their intended function.

3.9 PORCH
The front porch is in good condition.

3.10 PORCH RAILING
The west porch railings are well constructed and are performing their intended function.

The spacing between the balusters is too wide. This is a hazard to small children. The balusters should be spaced close enough together so that a 4" sphere cannot pass through. Upgrading the porch railing is recommended if small children are present.



3.11 EXTERIOR DOORS
The exterior doors are properly installed and are functioning as intended.

3.12 EXTERIOR WINDOWS
The wood windows used in this home are vulnerable to deterioration if they get wet. Protecting the windows from exposure to

moisture is essential. This can be accomplished by maintaining gutters and downspouts, protecting lower windows from garden sprinklers and by maintaining the paint and caulk on and around the windows.

ROOF

We evaluate the condition of the roof system by inspecting the roofing material, skylights, flashings, penetrations and roof water drainage system for damage and deterioration. If we observe conditions such as damage, deterioration, defects in materials or workmanship, these items will be noted in your report. We may also offer opinions concerning repair and replacement. Opinions stated herein concerning the condition of the roof and roof service life are based on the condition of the roof system at the time of the inspection. These opinions do not constitute a warranty that the roof is, or will remain, free of leaks. All roof systems require annual maintenance and occasional repair. Failure to perform routine roof maintenance will usually result in leaks and accelerated deterioration of the roofing material. Our estimate of the life expectancy of the roof is based on the assumption that the roof will be properly repaired and maintained during that period.
The following components were inspected:

4.1 GENERAL INFORMATION
The roofing material is asphalt composition shingles. The slope or pitch of the roof is steep. Metal gutters are used to collect the roof water drainage. The roofing material was just recently installed.

4.2 INSPECTION METHOD
The roof was too steep to walk on safely. Therefore the inspector examined the roof from the edge and from windows.

4.3 CHIMNEYS
Chimney chase covers for fireplaces that are concave can hold water which will result in corrosion of the sheet metal. When rust holes form the cover will leak. Chase cover replacement for the west fireplace is recommended. The new chase cover should be sloped for drainage.

4.4 GAS APPLIANCE VENTS
The visible portion of the gas appliance type B vent is properly installed and in good condition.

4.5 FLASHINGS
Metal flashings are used to seal around chimneys, vents and roof to wall intersections. The flashings are properly installed and are performing their intended function.

4.6 GENERAL COMMENTS
The roofing material was properly installed and is in like new condition. With proper care and maintenance this roof should remain serviceable for up to 35 more years.

ATTIC

The attic contains the roof framing and serves as a raceway for components of the plumbing, electrical and mechanical systems. There are often heating ducts, bathroom vent ducts, electrical wiring, chimneys and gas appliance vents in the attic. We examine the visible portions of the various systems and components for proper function, excessive or unusual wear, general state of repair, roof leakage, attic venting and misguided improvements. When low clearance and/or deep insulation prohibit walking in an unfinished attic, inspection will be performed from the access opening only.
The following components were inspected:

5.1 AREA
Upper.

5.2 ACCESS
The attic access is located in the primary bedroom closet.

5.3 VENTILATION
The attic is adequately vented.

Wind baffles prevent wind from blowing through the soffit vents and pushing the insulation away from the vent opening. The absence of wind baffles will often result in the exposure of large areas of the ceiling to cold temperatures. Wind baffles also prevent insulation from blocking the vents.

Wind baffles locations are compromised in some areas of the attic. The proper placement of wind baffles in front of all soffit vents is recommended.

5.4 MECHANICAL VENTILATION SYSTEMS
The visible portions of the air ducts for the bathroom fans are properly installed and are performing their intended function.

5.5 PEST CONTROL
The first step in preventing rodents from entering the attic is to seal all possible entry points using wire mesh, caulking, wood, stainless steel wool, or aerosol foam. Careful work sealing cracks, holes and gaps over 1/4" in size will discourage activity.
The following components were inspected:

5.6 AREA
Lower.

5.7 ACCESS
Guest Bedroom closet. Due to limited clearances, the attic was inspected from the access hole only.

5.8 VENTILATION
The attic is adequately vented.

5.9 MECHANICAL VENTILATION SYSTEMS
The visible portions of the air ducts for the bathroom fans are properly installed and are performing their intended function.

GARAGE

The garage often contains major components of the plumbing, heating and electrical systems. These components are discussed under their respective headings. Components that were tested and/or inspected in the garage and reported here include the garage floor, overhead door(s), automatic openers and fire resistive barriers.
ATTACHED GARAGE - The following components were inspected:

6.1 GARAGE FLOOR
There are small shrinkage cracks visible in the concrete, however, there is no vertical displacement of any portion of the slab. Shrinkage cracks are common in garage floors and are not considered a structural defect. The garage floor is properly installed and is functioning as intended.

6.2 OVERHEAD GARAGE DOORS
The garage is fitted with three roll-up doors. The garage doors are properly installed and are performing their intended function.

6.3 GARAGE DOOR OPENER
The garage door openers were tested and were functional. The auto stop reverse safety switches were functioning as intended.

6.4 FIRE SEPARATION
There are voids (adjacent the pipe penetrations) in the fire resistive barrier between the living space and garage that will allow flames to penetrate. The gypsum barrier slows the spread of a fire from the garage to the structure and/or living space. Patching the voids with a fire retardant caulk is recommended.

6.5 PASSAGE DOOR
The self closing hinge has been disabled and therefore the door is no longer part of the fire rated assembly between the living space and garage. Resetting the self closing hinge spring is recommended.

6.6 EXTERIOR DOOR(S)
The exterior door to the garage has been properly installed and is in good condition.

ELECTRICAL SYSTEM

An electrical system consists of the service, distribution, wiring and convenience outlets (switches, lights and receptacles). Our examination of the electrical system includes the exposed and accessible wiring, service panels, subpanels, overcurrent protection devices, light fixtures and all accessible wall receptacles. We look for adverse conditions such as improper installation of aluminum wiring, lack of grounding, overfusing, exposed wiring, open-air wire splices, reversed polarity and defective GFCIs. The hidden nature of the electrical wiring prevents inspection of every length of wire. Telephone, video, audio, security system and other low voltage wiring is not included in this inspection. We recommend you have the seller demonstrate the serviceability of these systems to you.
The following components were inspected:

7.1 ELECTRICAL SYSTEM SPECIFICATIONS
The voltage is 120/240 single phase three wire service. The power is delivered to this building via an underground service lateral. The amperage rating of this service is 200. Copper wire is used for all 120 volt circuits. Aluminum is used for some of the 240 volt circuits. Non-metallic sheathed cable (Romex) is the type of wiring used throughout the house. The grounding of the service is provided by a water pipe and driven rod.

7.2 UNDERGROUND SERVICE LATERAL
The underground service lateral was not visible for inspection. However, there was 120/240 volt power to the building which suggests that it is functioning as intended.

7.3 SERVICE PANEL LOCATION
The service panel is located in the garage.

7.4 MAIN DISCONNECT LOCATION
The main disconnect is an integral part of the service panel. The ampacity of the main disconnect is 200 amps.

7.5 SERVICE ENTRANCE CONDUCTORS/CABLES/RACEWAYS
The service entrance conductors are 4/0 aluminum and have an ampacity of 200 amps. The service entrance conductors are properly installed and in serviceable condition.

7.6 SERVICE AMPACITY
The capacity of the electrical service is 200 amps. A 200 amp service is adequate for this house with the existing electrical equipment. There is also room to add additional circuits if necessary.

7.7 SERVICE GROUNDING AND BONDING
The service grounding electrode conductor attachment point was not visible for inspection. The adequacy of the service ground was not determined. The evaluation of this connection may require removal of finish materials and is beyond the scope of this inspection.

7.8 SERVICE PANEL
The electrical service panel is properly installed and in serviceable condition except where noted below.

Several of the neutral wires are double tapped on the buss bar. Double tapping means that two conductors share a single terminal. Double tapped terminals can loosen and overheat and therefore are not permitted unless the terminal is specifically

listed for multiple wires. This defect is easily repaired by connecting the two wires to a "pig tail", securing them with a wire cap, and then inserting the pig tail conductor under the terminal.

The circuits are labeled. The accuracy of the labeling was not verified. Do not assume the labeled circuit is off unless it has been checked with a voltage tester.


7.9 OVER CURRENT PROTECTION
Circuit breakers are used for over current protection. The circuit breakers are properly installed and the ampacity of the connected wires is compatible with that of the circuit breakers. The circuit breakers were not tested.

7.10 WIRING
There were no defects observed in the visible and accessible wiring.

7.11 ALUMINUM WIRING
This house uses stranded aluminum wire for service entrance conductors and for dedicated major appliance circuits. This type of aluminum wire circuitry is typically found in most houses and is considered safe and reliable when installed correctly.

7.12 RECEPTACLES
All of the readily accessible receptacles were tested. Testing revealed defects requiring repair. These defects are outlined below.

There are several loose receptacles throughout the home. This is a potential shock and a fire hazard. All loose receptacles should be repaired as necessary.

7.13 GFCI RECEPTACLES
A ground fault circuit interrupter (GFCI) is a device that detects ground faults (current leakage to ground). It protects you from electrocution. GFCI protection is required for receptacles in bathrooms, kitchens, garages, unfinished basements, crawlspaces and at exterior receptacles. GFCI protected receptacles were found in the bathrooms, kitchen, garage and exterior.

The GFCI receptacle in the lower level northwest entry does not trip when a ground fault is introduced. This is caused by an improperly wired or defective GFCI. Repair or replacement of this GFCI is recommended.

The reset button for the GFCI protected receptacles in the guest bedroom bathrooms is located in the garage.

The installation of additional GFCI protection in the laundry room receptacle is recommended.


Defective GFCI

7.14 AFCI RECEPTACLES
AFCI protection is required for all 15 and 20 amp branch circuits to have protection from the entire branch circuit when that circuit has outlets in dwelling family homes, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas.

Replacement receptacles are now required to be arc-fault circuit interrupter (AFCI) protected. This means that if you are replacing an old outlet in an old home in a location that needs AFCI protection in a new home, the replacement outlet needs to be AFCI protected.

7.15 LUMINARIES
All of the accessible luminaries were tested and were found to be functional except where noted below.

The southeast guest bedroom bathroom luminaries is not working. Testing the luminaries with a voltage tester revealed that there is current to them. Light bulbs should be replaced in non-functional luminaries and then they should be tested for proper operation.

7.16 SWITCHES
All of the accessible switches were tested and were found to be properly wired and functional.

7.17 CEILING FAN
The ceiling fans were tested and were functioning as intended.

HEATING SYSTEM

A natural gas, propane or oil fired furnace or boiler consists of the self contained furnace or boiler, ducts or pipes for heated air or water distribution, thermostats for regulating the amount of heat and a vent system for removing the combustion gases from the building. The readily accessible portions of these items are examined for defects and are tested using normal operator controls. Most heating systems should be serviced annually by a qualified service technician. Failure to perform regular maintenance will affect the reliability of the heating system and will reduce service life.
FORCED AIR HEATING SYSTEM - The following components were inspected:

8.1 AREA SERVED
Upper floor.

8.2 GENERAL INFORMATION
Heat is provided by a natural gas fired forced air furnace. The furnace is located in the attic. The furnace is approximately 6 years old. The input rating of the furnace is 60,000 BTU. This BTU rating is typical of a home of this size and age.

8.3 GAS PIPING
The flex connector is properly installed and is performing its intended function.

8.4 AUTOMATIC GAS VALVE
The automatic gas valve or safety valve is designed to prevent the emission of fuel into the furnace if it does not detect heat for ignition. These valves are generally very reliable. The automatic gas valve was functioning as intended.

8.5 BURNERS
The gas burners are properly installed and are functioning as intended.

8.6 COMBUSTION AIR
The combustion air provides the oxygen for the fuel burning appliances. Combustion air also aids in the movement of combustion gases up the flue. Adequate ventilation around all fuel burning appliances is vital for their safe operation. The air can come from inside the house or from outside providing that the amount of air reaching the appliance is sufficient to maintain efficient combustion and draft. The combustion air supply is adequate.

8.7 HEAT EXCHANGER

The heat exchanger is not visible without disassembling and removing it from the furnace. Cracks typically develop in heat exchangers after 10-20 years. Have your gas furnace technician check the heat exchanger during the next major service.

8.8 VENT
The furnace uses a type B vent from the top of the furnace to the exterior. The visible portion of the B vent is properly installed and is functioning as intended.

The furnace vent connector is too close to a combustible material. This is a hazard. A minimum clearance of 6" is required between the single wall vent connector and the combustible material. The double wall type B vent requires only 1" of clearance. Repairs are recommended.

8.9 BLOWER
The blower draws air from the return air ducts and pushes it over the heat exchanger where it is heated. The air is then pushed through the distribution ducts into the rooms. The blower was tested and was functioning as intended.

8.10 AIR FILTER
The air filter is located in the blower compartment. The air filter should be cleaned or replaced at least 2-3 times during the heating season.

8.11 DUCTS
The ducts are constructed out of sheet metal and flex duct. The ducts are properly installed and are performing their intended function.

8.12 THERMOSTAT
The thermostat is properly installed and the unit responded to the basic controls. This is a programmable device with options for automatic temperature settings (up and down). Testing the automatic operations of this thermostat is beyond the scope of this inspection.

8.13 CONDENSATE DRAIN/PUMP
High efficiency furnaces like this one produce condensate water inside the furnace that must be collected and disposed of. The water is collected and disposed of via a plastic drain pipe. The drain pipe appears functional.

8.14 GENERAL COMMENTS
The furnace responded to the thermostats call for heat and all major components were functional. This type of furnace should be serviced annually.
FORCED AIR HEATING SYSTEM - The following components were inspected:

8.15 AREA SERVED
Lower floor.

8.16 GENERAL INFORMATION
Heat is provided by a natural gas fired forced air furnace. The furnace is located in the utility room. The furnace is approximately 4 years old. The input rating of the furnace is 80,000 BTU. This BTU rating is typical of a home of this size and age.

8.17 GAS PIPING
The flex connector is properly installed and is performing its intended function.

8.18 AUTOMATIC GAS VALVE
The automatic gas valve or safety valve is designed to prevent the emission of fuel into the furnace if it does not detect heat for ignition. These valves are generally very reliable. The automatic gas valve was functioning as intended.

8.19 IGNITION
The furnace uses an electronic hot surface ignition. This component was functioning as intended.

8.20 BURNERS
The gas burners are properly installed and are functioning as intended.

8.21 COMBUSTION AIR
The combustion air provides the oxygen for the fuel burning appliances. Combustion air also aids in the movement of combustion gases up the flue. Adequate ventilation around all fuel burning appliances is vital for their safe operation. The air can come from inside the house or from outside providing that the amount of air reaching the appliance is sufficient to maintain efficient combustion and draft. The combustion air supply is adequate.

8.22 HEAT EXCHANGER
The heat exchanger is not visible without disassembling and removing it from the furnace. Cracks typically develop in heat exchangers after 10-20 years. Have your gas furnace technician check the heat exchanger during the next major service.

8.23 VENT
The PVC plastic vent pipe for the condensing furnace is properly installed and is functioning as intended.

8.24 BLOWER
The blower draws air from the return air ducts and pushes it over the heat exchanger where it is heated. The air is then pushed through the distribution ducts into the rooms. The blower was tested and was functioning as intended.

8.25 AIR FILTER
The air filter is located in the return air plenum adjacent to the furnace. The air filter should be cleaned or replaced at least 2-3 times during the heating season.

8.26 DUCTS
The ducts are constructed out of sheet metal and flex duct. The ducts are properly installed and are performing their intended function.

8.27 THERMOSTAT
The thermostat is properly installed and the unit responded to the basic controls. This is a programmable device with options for automatic temperature settings (up and down). Testing the automatic operations of this thermostat is beyond the scope of this inspection.

8.28 CONDENSATE DRAIN/PUMP
High efficiency furnaces like this one produce condensate water inside the furnace that must be collected and disposed of. A small vessel with an automatic pump is installed to receive the condensate water and pump it to the exterior of the house. This pump is properly installed and is functioning as intended.

8.29 GENERAL COMMENTS
The furnace responded to the thermostats call for heat and all major components were functional. This type of furnace should be serviced annually.

AIR CONDITIONER/ HEAT PUMP

Heat pump and air conditioning systems consist of the condenser located outside, the air handler or furnace on the inside, refrigerant lines, ducts, air filters, thermostat, condensate drains and condensate pump. These items are visually examined for proper function, excessive or unusual wear, and general state of repair. The heat pump or air conditioner is tested whenever possible. Air conditioning systems are not tested if the outside temperature is too cool for proper operation. Detailed testing of the many components of the heat pump or air conditioning equipment or predicting their life expectancy requires special equipment and training and is beyond the scope of this inspection.

Heat pumps are air conditioners designed to operate "in either direction". When heating, air is cooled and exhausted to the outside, while the "waste" heat is distributed through the living space by a blower and ducts. Heat pumps operate most efficiently in moderate to hot climates where winter temperatures are not extreme and where there is a need for air conditioning. Additional electric strip heaters are generally installed when winter capability is marginal. The cost of operating the supplemental strip heaters is significantly higher than operating the heat pump in its regular mode. Limiting changes of the temperature setting on the thermostat to two degrees will usually prevent the strip heater from coming on. Insulation, weather stripping and other energy saving steps can help minimize the need for the back-up capability.

Heat pumps and air conditioners are technically complex pieces of equipment. Detailed analysis of all components of the system is beyond the scope of this inspection. For greatest efficiency and service life, we recommend regular annual maintenance by an HVAC contractor.
The following components were inspected.:

9.1 GENERAL INFORMATION
Unit Type - Heat Pump, Age - The heat pump is approximately 4 years old, Location of condenser - The condenser is located on the east side of the house.

9.2 CONDENSER
The condenser contains all the equipment necessary to reclaim the refrigerant gas and convert it back to a liquid. It consists of a compressor, condenser, hot gas discharge line, condenser fan, electrical panel box, and some accessory components. The condenser was tested and was functioning as intended.

9.3 REFRIGERANT LINES
The accessible refrigerant lines appear to be in good condition.

9.4 AIR HANDLER
The furnace contains the blower and backup heat. The furnace blower was tested and was functioning as intended.

9.5 BLOWER
The blower draws air from the return air ducts and pushes it over the AC coils where it is cooled. The air is then pushed through the distribution ducts into the rooms. The blower was tested and was functioning as intended.

9.6 THERMOSTAT
The thermostat is properly installed and the unit responded to the basic controls. This is a programmable device with options for automatic temperature settings (up and down). Testing the automatic operations of this thermostat is beyond the scope of this inspection.

9.7 ELECTRICAL DISCONNECT
An electrical disconnect is installed in back of the condenser.

9.8 GENERAL COMMENTS
Testing of the heat pump in the cooling mode revealed an air temperature differential of approximately 20-22 degrees. This is in the normal range and suggests that the heat pump is functioning as intended. The heat pump was also tested in the heating mode and functioned as intended. This test confirms that the reversing valve is functional.

WATER HEATER

Our review of water heaters includes the tank, gas and/or water connections, electrical connections, venting and safety valves. These items are examined for proper function, excessive or unusual wear, leakage and general state of repair. The hidden nature of piping and venting prevents inspection of every pipe, joint, vent and connection.
The following components were inspected:

10.1 LOCATION OF UNIT
The water heater is located in the basement. The water heater is located in the utility room.

10.2 GENERAL INFORMATION
The water heater fuel is natural gas. The capacity of the water heater is 50 gallons. The input rating of the burner is approximately 60,000 BTU. The water heater is approximately 6 years old. Water heaters of this type typically last about 10-15 years.

10.3 PRESSURE RELIEF VALVE
The pressure relief valve is properly installed. The valve was not tested, as this could cause the valve to leak.

10.4 SHUTOFF VALVE
The shutoff valve for the water supply to the water heater is properly installed and is functioning as intended.

10.5 WATER CONNECTIONS AT TANK
The water connections at the tank are properly installed and are performing their intended function.

10.6 EXPANSION TANK
The expansion tank is not adequately secured to the wall. As code requirements start to call for engineered expansion tank supports we recommend the installation of seismic restraints to secure the expansion tank instead of allowing it to simply depend on piping connections that could result in damage to the water pipe and leakage during an earthquake.

10.7 AUTOMATIC GAS VALVE
The automatic gas valve or safety valve is designed to prevent the emission of fuel into the appliance if it does not detect heat for ignition. These valves are generally very reliable. The automatic gas valve was functioning as intended.

10.8 BURNER
The gas burner is properly installed and is functioning as intended.

10.9 GAS PIPING
The flex connector is properly installed and is performing its intended function.

10.10 VENT
The water heater uses a type B vent from the top of the draft hood to the exterior. The visible portion of the B vent is properly installed and is functioning as intended.

10.11 COMBUSTION AIR
The combustion air provides the oxygen for the fuel burning appliances. Combustion air also aids in the movement of combustion gases up the flue. Adequate ventilation around all fuel burning appliances is vital for their safe operation. The air

can come from inside the house or from outside providing that the amount of air reaching the appliance is sufficient to maintain efficient combustion and draft. The combustion air supply is adequate.

10.12 SEISMIC RESTRAINT
The water heater is secured to the wall. This prevents it from falling over during an earthquake and rupturing gas and water lines.

10.13 GENERAL COMMENTS
The water heater is properly installed and is performing its intended function.

KITCHEN

The kitchen was inspected for proper function of components, active leakage, excessive or unusual wear and general state of repair. We inspect built-in appliances using normal operating controls. This includes running the dishwasher, operating the garbage disposal and microwave and checking the burners or heating elements in the stove and oven. Accuracy and/or function of clocks, timers, temperature controls and self cleaning functions on ovens is beyond the scope of our testing procedure. Refrigerators are not tested or inspected unless specifically noted.
The following components were inspected:

11.1 COUNTERTOPS
The countertops are covered with slab quartz. The counter tops are properly installed and are in good condition.

11.2 CABINETS
The finish on the kitchen cabinets is slightly worn. The cabinets are otherwise in good condition.

11.3 FLOORING MATERIAL
The floor is covered with hardwood. The floor is properly installed and is in good condition.

The hardwood floor is water damaged in front of the sink and dishwasher. This damage is cosmetic and can probably be sanded out when the floor is refinished.

11.4 VENTILATION
Ventilation in the kitchen is provided by a down draft vent system that is an integral part of the cooktop unit. The vent is ducted to the exterior. The vent fan is properly installed and is performing its intended function.

11.5 SINK FAUCET
The sink faucet is properly installed and is in good condition.

11.6 SINK
The kitchen sink is properly installed and is in good condition.

11.7 DRAINS, TRAPS AND TRAP ARMS
The sink drain is properly installed and is performing its intended function.

11.8 AIR GAP
An air gap called a Johnson Tee is installed in the kitchen wall. This air gap protects the dishwasher from contamination caused by a backflow of waste water. The cap protruding on the exterior wall opposite the dishwasher is not drilled. This renders the air gap non-functional. Drilling a 1/4" hole in the end of the cap will restore its function. The remaining visible portions of the Johnson Tee were properly installed and functioning as intended.

11.9 OVEN
The oven was tested and was functioning as intended.

11.10 COOKTOP
The cooktop burners were tested and were functioning as intended.

11.11 DISHWASHER
The dishwasher was tested and was functioning as intended.

11.12 REFRIGERATOR
The refrigerator is functioning as intended.

BATHROOMS

Our inspection of the bathrooms consists of testing of the plumbing fixtures for condition and function. Defects such as leaks, cracked or damaged sinks, tubs and toilets will be listed under the heading of the bathroom in which they were found. The bathroom floor, tub and shower walls are examined for water damage. Ventilation fans are tested for proper operation. Cabinets and countertops are examined for excessive wear and deterioration. Hydromassage tubs are tested and the pump and related equipment are examined when accessible.
BATHROOM

12.1 LOCATION
Primary Bedroom.

12.2 SHOWER
The shower walls are properly installed and are in good condition. Most ceramic tile is applied directly over gypsum board rather than on a concrete board such as "Durock" or "Wonder Board". Where the tile is applied directly over the gypsum board, it is critical that the tile grout be maintained to prevent water intrusion behind the tile. Missing or cracked grout should be repaired. Inside corners, and penetrations in the tile should be kept sealed with a high quality caulk.

The shower pan was tested by filling it with water and letting it stand for 20 minutes. There was no evidence of leakage underneath.

12.3 BATHTUB
The bathtub is properly installed and is in good condition.

12.4 FLOORING MATERIAL
The floor is covered with vinyl tiles. The floor is properly installed and is in good condition.

It is important to maintain the caulking around bathtubs and showers, especially at the intersection between the tub or shower and the floor. Failure to maintain this seal will often result in damage to flooring materials, subflooring and framing.

12.5 TOILET
The toilet is loose where it mounts to the floor. A loose toilet will eventually start to leak and will damage the flooring material, underlayment and subfloor. The most reliable fix for this condition is to remove the toilet and install a new wax seal. The toilet should then be securely mounted to the floor.

12.6 SINK
The bathroom sinks are properly installed and are in good condition.

12.7 DRAINS, TRAPS AND TRAP ARMS
The sink drains are properly installed and are performing their intended function.

12.8 FAUCET FIXTURES
The faucet fixtures were tested and were functioning as intended.

12.9 CABINETS
The finish on the bathroom cabinet is slightly worn. The cabinet is otherwise in good condition.

12.10 COUNTERTOP
The countertop is covered with ceramic tile. The countertop is properly installed and in good condition.

12.11 VENTILATION
Ventilation in this bathroom is provided by a ceiling fan. This fan was operated and was found to be working satisfactorily.

12.12 GFCI RECEPTACLES
A ground fault circuit interrupter (GFCI) is a device that detects ground faults (current leakage to ground). It protects you from electrocution. GFCI protection is required for receptacles in bathrooms, kitchens, garages, unfinished basements, crawlspaces and at exterior receptacles. GFCI protected receptacles were found in this bathroom.
BATHROOM

12.13 LOCATION
Guest Bedroom. West.

12.14 BATHTUB
The bathtub is properly installed and is in good condition.

12.15 TUB WALLS
The tub walls are properly installed and are in good condition. Most ceramic tile is applied directly over gypsum board rather than on a concrete board such as "Durock" or "Wonder Board". Where the tile is applied directly over the gypsum board, it is critical that the tile grout be maintained to prevent water intrusion behind the tile. Missing or cracked grout should be repaired. Inside corners, and penetrations in the tile should be kept sealed with a high quality caulk.

12.16 FLOORING MATERIAL
The floor is covered with sheet vinyl. The floor is properly installed and is in good condition.

It is important to maintain the caulking around bathtubs and showers, especially at the intersection between the tub or shower and the floor. Failure to maintain this seal will often result in damage to flooring materials, subflooring and framing.

12.17 TOILET
The toilet was flushed and was functioning as intended.

12.18 SINK
The bathroom sink is properly installed and is in good condition.

12.19 DRAINS, TRAPS AND TRAP ARMS
The sink drain is properly installed and is performing its intended function.

12.20 FAUCET FIXTURES
The faucet fixture was tested and was functioning as intended.

12.21 CABINETS

The finish on the bathroom cabinet is slightly worn. The cabinet is otherwise in good condition.

12.22 COUNTERTOP
The countertop is covered with ceramic tile. The countertop is properly installed and in good condition.

The backsplash is not caulked. Cracking of the grout allows water to enter the gap between the back splash and counter and is difficult to clean. Caulking should be installed at this location.

12.23 VENTILATION
Ventilation in this bathroom is provided by a ceiling fan. This fan was operated and was found to be working satisfactorily.

12.24 GFCI RECEPTACLES
A ground fault circuit interrupter (GFCI) is a device that detects ground faults (current leakage to ground). It protects you from electrocution. GFCI protection is required for receptacles in bathrooms, kitchens, garages, unfinished basements, crawlspaces and at exterior receptacles. GFCI protected receptacles were found in this bathroom.
BATHROOM

12.25 LOCATION
Guest Bedroom East.

12.26 SHOWER
The shower walls are properly installed and are in good condition. Most ceramic tile is applied directly over gypsum board rather than on a concrete board such as "Durock" or "Wonder Board". Where the tile is applied directly over the gypsum board, it is critical that the tile grout be maintained to prevent water intrusion behind the tile. Missing or cracked grout should be repaired. Inside corners, and penetrations in the tile should be kept sealed with a high quality caulk.

The shower pan was tested by filling it with water and letting it stand for 20 minutes. There was no evidence of leakage underneath.

12.27 GLASS ENCLOSURE
The glass shower enclosure is labeled as tempered safety glass, is properly installed and in good condition.

12.28 FLOORING MATERIAL
The floor is covered with ceramic and vinyl tiles. The floor is properly installed and is in good condition.

It is important to maintain the caulking around bathtubs and showers, especially at the intersection between the tub or shower and the floor. Failure to maintain this seal will often result in damage to flooring materials, subflooring and framing.

12.29 TOILET
The toilet is in serviceable condition, however, the flush handle has to be manipulated to get the flapper valve mechanism to function properly. Adjustment of the flush handle linkage is recommended for more reliable operation.

12.30 SINK
The bathroom sink is properly installed and is in good condition.

The drain stop is missing. It should be replaced.

12.31 DRAINS, TRAPS AND TRAP ARMS
The sink drain is properly installed and is performing its intended function.

12.32 FAUCET FIXTURES
The faucet fixture was tested and was functioning as intended.

12.33 CABINETS
The finish on the bathroom cabinet is slightly worn. The cabinet is otherwise in good condition.

12.34 COUNTERTOP
The countertop is covered with plastic laminate. The countertop is properly installed and in good condition.

The backsplash is missing. The installation of a backsplash is recommended.

12.35 VENTILATION
The exhaust fan is intermittently noisy and is not likely to be used in its present condition. We recommend that it be serviced or replaced to restore quiet operation.

The luminaries/fan diffuser in the southeast guest bedroom bathroom is loose. Loose and/or damaged luminaries covers/diffusers should be replaced or repaired as necessary.

12.36 GFCI RECEPTACLES
GFCI protected receptacles were found in this bathroom.
BATHROOM

12.37 LOCATION
Main Floor, Powder Room.

12.38 FLOORING MATERIAL
The floor is covered with hardwood. The floor is properly installed and is in good condition.

12.39 TOILET
The toilet was flushed and was functioning as intended.

12.40 SINK
The bathroom sink is properly installed and is in good condition.

12.41 DRAINS, TRAPS AND TRAP ARMS
The sink drain is properly installed and is performing its intended function.

12.42 FAUCET FIXTURES
The faucet fixture was tested and was functioning as intended.

12.43 CABINETS
The finish on the bathroom cabinet is slightly worn. The cabinet is otherwise in good condition.

12.44 COUNTERTOP
The countertops are covered with slab quartz. The counter tops are properly installed and are in good condition.

12.45 VENTILATION
Ventilation in this bathroom is provided by a ceiling fan. This fan was operated and was found to be working satisfactorily.

12.46 GFCI RECEPTACLES
GFCI protected receptacles were found in this bathroom.

LAUNDRY ROOM

Appliances are tested when present and when circumstances allow.
The following components were inspected:

13.1 CABINETS
The finish on the laundry room cabinets is slightly worn. The cabinets are otherwise in good condition.

13.2 COUNTERTOP
The counter top is covered with plastic laminate. The counter top is properly installed and in good condition.

13.3 FLOORING MATERIAL
The floor is covered with sheet vinyl. The floor is properly installed and is in good condition.

13.4 VENTILATION
Ventilation in this laundry room is provided by a ceiling fan. This fan was operated and was found to be working satisfactorily.

13.5 SINK
The laundry sink is properly installed and is in good condition.

13.6 SINK FAUCET
The sink faucet is properly installed and is in good condition.

13.7 DRAINS, TRAPS AND TRAP ARMS
The sink drain is properly installed and is performing its intended function.

13.8 APPLIANCES
The hookups for the washer are properly installed and in serviceable condition. The washer itself was operated through a partial cycle, however we did not conform the complete operation of the cycle timer.

The hookups for the dryer are properly installed and in serviceable condition. The dryer itself was operated through a partial cycle, however we did not confirm the complete operation of the cycle timer.

13.9 DRYER VENT
The visible portions of the dryer vent are properly installed and in serviceable condition. Dryer ducts should be cleaned annually as part of routine home maintenance. A dryer duct that is clogged with lint is a fire hazard.

PLUMBING SYSTEM

A plumbing system consists of the water heater, domestic water supply lines, drain, waste and vent lines and gas lines. Inspection of the plumbing system is limited to the water heater, visible faucets, fixtures, valves, drains, traps, exposed pipes and fittings.These items are examined for proper function, excessive or unusual wear, leakage, and general state of repair. Valves are not tested except where specifically noted. The hidden nature of piping prevents inspection of every pipe and joint. A sewer lateral test, necessary to determine the condition of the underground sewer lines, is beyond the scope of this inspection. If desired, a qualified individual could be retained for such a test. Our review of the plumbing system does not include landscape irrigation systems, off site community water supply systems or private (septic) waste disposal systems. Review of these systems should be performed by qualified and licensed specialists prior to the close of escrow.
The following components were inspected:

14.1 PLUMBING SYSTEM SPECIFICATIONS
The building is on a public water supply system. The building is on a private (septic) sewage disposal system. Copper tubing is used for the water supply piping. ABS plastic is used for the drain, waste and vent pipes.

14.2 MAIN WATER SHUTOFF VALVE
The main water supply shutoff valve is located in the garage. It was tested and was functional.

14.3 MAIN WATER LINE
The main water line is buried underground and was not visible for inspection. The flow indicator on the water meter was checked with all the water shut off in the house. There was no movement of the flow indicator. This suggests that there are no leaks in the main water line. You should check the meter periodically (2-4 times a year) with all the water in the house shut off. Movement of the flow indicator on the meter means that there is a leak either inside the house or in the main line underground.

14.4 INTERIOR WATER SUPPLY PIPES
The visible portions of the copper water supply pipes are properly installed and functional. Copper is considered one of the most desirable materials for interior supply pipes and is expected to last the lifetime of the building.

There are water pipes in the crawlspace that are not adequately insulated and could freeze. The installation of foam pipe insulation on all exposed water pipes is recommended.

14.5 WATER PRESSURE
The water pressure is 60 PSI. This is in the normal range of 30-80 PSI.

14.6 DRAIN AND WASTE PIPES
ABS plastic is used for drain, waste and vent pipes. All of the visible drain pipes were properly installed and functional. ABS is a durable, reliable material and should last the lifetime of the building. All drain, waste and vent pipes were stress tested by filling bathtubs and fixtures to the overflow and then draining them while simultaneously flushing the toilet and running the sinks and showers. No leaks were observed and all fixtures emptied in a reasonable amount of time with no fluctuation in the rate of flow down the drain. This is commonly referred to as "functional drainage".

14.7 VENT PIPES
The visible portions of the vent pipes are properly installed and are performing their intended function.

14.8 FAUCET FIXTURES
All faucet fixtures were tested and were functioning as intended.

14.9 HOSE BIBBS AND EXTERIOR SUPPLY PIPES
The hose bibbs on this building are the frost free type. These hose bibbs typically will not freeze as long as the hoses are removed. Failure to remove hoses during freezing weather could result in a cracked pipe and leakage. The bibbs were tested and were functioning as intended.

14.10 GAS PIPING
The visible portions of the gas piping were properly installed and are performing their intended function. There was no odor of gas leakage at the time of the inspection.

14.11 GAS METER
The gas meter is located on the east side of the building. The main gas shut off valve is installed on the high pressure line emanating out of the ground. This valve requires a wrench to open and close. Keeping a gas valve wrench or adjustable wrench accessible near the gas meter is recommended.

14.12 SEPTIC SYSTEM
The house uses a private (septic) sewage disposal system. The septic system was not inspected. Our general house

inspection will sometimes reveal major defects in the septic system (e.g., complete blockage, complete drain field failure), providing that it is not raining and the ground is dry. However, we still recommend that you have the septic tank pumped out and the septic system inspected by a qualified septic system service company, prior to the closing of the sale. Ask for a "Septic Tank Operational Report". It is also recommended that you have the tank pumped out every four years and avoid introducing grease and non-biodegradable foreign matter into the septic system.

INTERIOR

Our review of the interior includes inspection of walls, ceilings, floors, doors, windows, cabinetry, countertops, steps, stairways, balconies and railings. These features are examined for proper function, excessive wear and general state of repair. In some cases, all or portions of these components may not be visible because of furnishings and personal effects. In such cases these items are not inspected.
The following items were inspected:

15.1 GENERAL COMMENTS
The interior wall, floor, and ceiling surfaces were properly installed and generally in serviceable condition, taking into consideration normal wear and tear.

15.2 STAIRS
The stairs were used several times during the inspection. The stair components are properly installed with exceptions noted below.

The stair railing baluster spacing is too wide. This is a hazard for small children. The baluster spacing should be reduced as a safety upgrade. Current standards require that a 4-3/8" sphere not pass through the railing.

There is no handrail in the stairwells. This is a safety hazard. The installation of a graspable handrail that conforms to present industry standards is recommended.



15.3 GUARD RAILINGS
The spacing between the balusters is too wide. This is a hazard to small children. The balusters should be spaced close enough together so that a 4" sphere cannot pass through. Upgrading the guard railing is recommended if small children are present.

15.4 WALLS AND CEILINGS
There are minor cracks in the walls and/or ceilings. This is a common condition with this type of construction and does not indicate a structural deficiency. The cracks can be repaired or painted over during routine maintenance. Cracks in drywall that have been repaired will often reoccur several months after the repairs have been completed. This is due to seasonal movement of the structure caused by changes in humidity.

15.5 DOORS
All of the doors were tested and were found to be functioning as intended.

15.6 CLOSET DOORS
All of the closet doors were tested and were found to be functioning as intended.

15.7 WINDOWS
The window frames are constructed from wood and have insulated glass in them. All of the windows were tested and/or inspected.

Several of the windows do not operate smoothly which makes it difficult to close completely. We recommend repairs as necessary to restore the windows proper operation.

The latch/locking mechanism for one of the guest bedroom windows does not operate properly. We recommend repairs or replacement as necessary.

The stairway landing window glass is not labeled as tempered safety glass. The existing glass is nonconforming by current building standards and would be hazardous if broken. The installation of safety glass is recommended as a safety upgrade.

15.8 SMOKE DETECTORS
There is a smoke detector in the hallway outside of the bedrooms. Additional smoke detectors should be installed inside the bedrooms near the door.

Smoke detectors are examined for location only. They are not tested. Smoke detector batteries should be replaced when you move in and every year thereafter. Once batteries have been replaced, the smoke detectors should be tested for proper operation.

Ionization technology is generally more sensitive than photoelectric technology at detecting small particles, which tend to be produced in greater amounts by flaming fires, which consume combustible materials rapidly and spread quickly. Sources of these fires may include paper burning in a wastebasket or a grease fire in the kitchen.

Photoelectric technology is generally more sensitive than ionization technology at detecting large particles, which tend to be produced in greater amounts by smoldering fires, which may smolder for hours before bursting into flame. Sources of these fires may include cigarettes burning on couches or bedding.

FOR MAXIMUM PROTECTION: Use both Ionization and Photoelectric smoke alarms in every bedroom/hallway on every level of your home.

At least one carbon monoxide monitor should be installed for each floor. The best place to install the monitor is in an open area near the gas appliance.

15.9 BUILT-IN VACUUM
Each inlet of the built-in vacuum system was tested. Reasonable suction was observed at each inlet and all were functioning as intended.

FIREPLACES, WOOD STOVES AND SPACE HEATERS

The following components were inspected:

16.1 MASONRY FIREPLACES
The visible portions of the masonry fireplaces were evaluated. The fireplaces are in good condition and no defects or deficiencies were observed.

Efflorescence is the process of the deposit of salts, usually white, formed on a surface, the substance having emerged in solution from within the concrete or masonry and has been deposited by evaporation.

16.2 GAS LOGS
The gas logs were tested and were functioning as intended. When operating these gas logs, make sure that the fireplace damper is open otherwise deadly combustion gases will spill into the room. The installation of a carbon monoxide detector in the room near the fireplace is recommended as a safety upgrade.

The gas supply for the fireplace is located on the wall or floor adjacent to the hearth. The key that turns on this valve should be kept out of the reach of children.

16.3 DAMPERS
The fireplace dampers are functioning as intended. A fireplace damper that is left open when the fireplace is not being used allows huge quantities of heated air to escape up the chimney. Keeping your fireplace damper closed will result in a significant reduction in heating costs.

16.4 GLASS DOORS
The glass doors were tested and were functioning as intended.

ENVIRONMENTAL ISSUES

Environmental issues include but are not limited to carbon monoxide, radon, asbestos, lead paint, lead contamination, toxic waste, formaldehyde, electromagnetic radiation, buried fuel oil tanks, ground water contamination and soil contamination. The absence of a statement on any of the environmental issues listed above does not necessarily mean that they are not present. We make reference to these substances only when we recognize them during the normal inspection process. Most of the toxic substances listed above cannot be identified without laboratory testing. If further study or analysis seems prudent, the advice and services of the appropriate specialists are advised.
The following items may exist in this building:

17.1 CARBON MONOXIDE
Many of us encounter CO regularly and never know it because it's invisible and odorless. That's why victims of CO poisoning often have no warning that they are in danger... until it's too late. Symptoms include headache, nausea, chronic fatigue, confusion and dizziness. Extreme exposure can even cause a coma or death.

Carbon monoxide is a product of incomplete (poor) combustion. It's a direct and cumulative poison. When combined with blood hemoglobin, CO replaces oxygen in the blood until it completely overcomes the body. Death from CO occurs suddenly. The victim inhaling the toxic concentration of the gas becomes helpless before realizing that danger exists.

According to the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) (Ventilation Standard 62- 89), a concentration of no more than 9 parts per million (ppm) (0.0009%), of CO is permissible in residential living spaces. In addition, the Occupational Safety and Health Administration (OSHA) has set an eight-hour work place maximum of 35 ppm. And in flue gas, the Environmental Protection Agency (EPA) and the American Gas Association (AGA) have established the maximum allowable concentration of CO at 400 ppm (See charts).

To ensure safe and efficient combustion, it is imperative that all gas burning appliances be inspected and serviced regularly (once a year) if used in normal service conditions).

17.2 FORMALDEHYDE

Formaldehyde, a colorless gas with a pungent odor, is so commonly used today that virtually everyone is likely to be exposed to at least small amounts of it, and a significant number of people are developing symptoms due to exposure to large amounts of formaldehyde in their homes or workplaces. It was an integral component of the urea formaldehyde foam insulation (UFFI) that was installed in more than five hundred thousand homes in the 1970's. (The use of formaldehyde in insulation was banned by the Consumer Product Safety Commission in 1982, but this ruling was overturned by a federal court in 1983.) In addition, it is present in a large variety of consumer products. It is a major part of the resins used as glue in particle board, plywood, and other pressed wood products used extensively in the construction of homes and furniture. Some cosmetics, paper towels, upholstery, permanent press fabrics, carpets, milk, toilet seats, pesticides, and explosives contain it too. Formaldehyde is also present in the exhaust from combustion appliances and in tobacco smoke.

The most common symptoms of excessive formaldehyde exposure are burning eyes, itching, shortness of breath, tightness in the chest, coughing, headaches, nausea, and asthma attacks. Large amounts of the gas have produced cancer in laboratory animals, and government policy assumes that any substance that can cause cancer in animals may also cause it in humans.

People who live in homes that have been "tightened" for maximum energy conservation are most likely to suffer from the effects of formaldehyde gas. The formaldehyde gas seeps from the walls, furniture, carpet, etc. into the air, building up to high levels in the "tightened" home, which can be irritating, particularly to sensitive people.

To minimize your exposure to formaldehyde, ventilate your home - in good weather, open the windows to provide a constant supply of fresh air. Some methods of heat recovery, such as heat recovery ventilators (also known as air-to-air heat exchangers), are available that can ventilate the home while also conserving energy.

You can seal exposed, raw surfaces of particle board and plywood with oil enamel, varnish, wallpaper, or vinyl floor coverings. If you have UFFI insulation, make certain it is completely sealed in the walls or, as a last resort, have it removed.

17.3 ASBESTOS

Asbestos is a naturally occurring mineral fiber that has been used in more than 3,000 different construction materials and manufactured products. It is commonly found in heating system insulation, decorative spray-on ceiling treatments, vinyl flooring, cement shake siding and a variety of additional materials. Some asbestos-containing materials were still being installed into the late 1980s.

The asbestos content of different materials varies according to the product and how it is used. Among those materials with higher concentrations of asbestos are insulating products on heating systems and the backing on sheet vinyl flooring. However, an uncontrolled disturbance of any asbestos-containing material in any concentration may be dangerous to your health!

Why is it a problem? Breathing asbestos fibers could kill you. When disturbed, asbestos breaks down into fibers up to 1,200 times thinner than a human hair. When inhaled, they become trapped in lung tissues. Medical research tells us that up to 30 years after inhalation, asbestos fibers can cause lung cancer or mesothelioma, a related terminal cancer of the tissue lining the chest cavity.

Because asbestos is a naturally occurring mineral and has been so widely used in manufactured products, including

automobile brake linings, it can be found almost everywhere. Trace amounts are in the air we breathe every day. Most of us have asbestos fibers in our lungs.

On the other hand, there's no known safe level of asbestos exposure. That's why medical, environmental health and regulatory organizations stress the need to protect health by minimizing exposure to airborne asbestos fibers. This is particularly true when asbestos fibers accumulate at elevated levels. Elevated levels result from uncontrolled disturbances and removal of asbestos-containing materials.

How do I know if it's asbestos? Don't guess! Look for asbestos markings on the product or track the product back to its manufacturer or supplier. If these approaches don't work, submit a small sample for laboratory analysis. Cost is minimal. Laboratories are listed in the yellow pages under "Asbestos - Consulting and Testing." Ask a laboratory technician to instruct you how to safely take a sample. If you decide not to check for asbestos in a suspected material, you should assume it contains asbestos and treat it accordingly.

INSULATION

Insulation, weatherstripping, dampers, storm windows, insulated glass and set-back thermostats are features that help reduce heat loss and increase the comfort and thermal efficiency of your home. We examine these items and identify approximate R values for insulation. When appropriate, we offer suggestions for upgrading. Our review of insulation is based upon a random sampling of accessible areas and does not constitute a warranty that all such areas are uniformly insulated or are insulated to current standards.
The following items were inspected:

18.1 ATTIC INSULATION
The attic is insulated with blown in fiberglass insulation. The approximate R value of this insulation is 30. This provides good resistance to heat transfer.

18.2 VAULTED CEILING
The insulation in the vaulted ceiling was not visible for inspection. Houses of this age typically have 12" R-30 fiberglass batt insulation between the rafters.

18.3 WALL INSULATION
The walls are insulated with fiberglass batt insulation. The 2x6 walls suggest that it is 6" R-19 fiberglass.

18.4 FLOOR INSULATION
The floors are insulated with R-21 fiberglass batts. The floor insulation has been properly installed and is in good condition except where noted below.

Some of the insulation batts were not properly secured and have falling down. The fallen batts should be reinstalled and secured.

18.5 DUCT INSULATION
Some of the duct insulation is missing or has fallen off the ducts. This increases the amount of heat loss. The installation of new duct insulation is recommended in areas where insulation is missing.

STRUCTURE

The structural elements of most residential buildings include a foundation, footings, floor, wall, ceiling and roof framing. The visible portions of these items are examined for proper function, wear, deterioration or signs of non-performance. Some structural components or portions of them are inaccessible because they are buried below grade or hidden behind finished surfaces. Therefore, much of the structural inspection is performed by identifying resultant symptoms of movement, damage and deterioration. Where there are no visible symptoms, components or conditions requiring repair may go undetected and identification will not be possible. We make no representations as to the internal conditions or stabilities of soils, concrete footings and foundations, except as exhibited by their performance.

The following components were inspected:

19.1 GENERAL INFORMATION
The foundation is constructed from poured in place concrete. A perimeter foundation wall supports the exterior walls of the building. Interior load bearing components are supported by pier footings and/or continuous spread footings. The floor structure is constructed out of wood joists. The subflooring is plywood. The stud walls are constructed from 2 X 6 dimensional lumber. The exterior wall sheathing is plywood. The roof structure is constructed out of a combination of manufactured trusses and conventional stick framing. The roof sheathing is plywood installed over a layer of open sheathing.

19.2 FOUNDATION
The foundation is constructed in a manner typical of buildings of this type and age. There are minor shrinkage cracks in the foundation. Shrinkage cracks are common in poured concrete foundation walls. They do not affect the performance of the foundation. No action is indicated.

19.3 MUDSILL
The mudsill is typically a 2x4 or 2x6 member that is laid flat directly on the top of or cast into the top of the foundation wall. The mudsill is usually bolted to the foundation wall and serves as a base for the rest of the floor framing. Most of the mudsill is inaccessible and cannot be evaluated. The visible portions of the mudsill are properly installed and are performing their intended function.

19.4 ANCHOR BOLTS
Anchor bolts are bolts that are cast into the top of the concrete foundation and retain the mudsill. The anchor bolts primary function, is to prevent the building from being displaced from its foundation during an earthquake. Anchor bolts have grown in diameter over the years as have the nuts and washers that retain the mudsill. Generally speaking, the newer the building, the better resistance it will have to seismic activity. Anchor bolts are installed and are performing their intended function.

19.5 BEAMS AND POSTS
The beams and posts are properly installed and are performing their intended function.

19.6 FLOOR JOISTS
The visible portions of the floor joists are properly installed and are performing their intended function.

19.7 SUBFLOORING
The subfloor was covered with insulation and finished surfaces and was not visible for inspection. There was no evidence present suggesting that defects or deficiencies are present.

19.8 WALLS
The walls are covered with finished surfaces and therefore were not visible for inspection. No evidence of defects or deficiencies was observed.

19.9 ROOF STRUCTURE
The roof structure is constructed from a combination of factory-built, engineered trusses and site cut and assembled dimensional lumber. The roof structure is constructed in a manner consistent with buildings of this type and is performing its intended function. No defects or deficiencies were observed.

19.10 ROOF SHEATHING
The roof sheathing is installed in a manner consistent with buildings of this type and is performing its intended function. No defects or deficiencies were observed.

CRAWLSPACE

The crawl space is where some of the building's structural elements and portions of its mechanical systems are located. These include foundation, structural framing, electrical, plumbing and heating. The visible portions of accessible systems and components are examined for proper function, excessive or unusual wear and general state of repair. Some items observed in the crawlspace will be discussed under the individual systems to which they belong. It is not unusual to find occasional moisture and dampness in crawl spaces. However, significant and/or frequent water accumulation can adversely affect the building foundation and support system and creates conditions conducive to various types of wood destroying organisms. We check for signs of excessive moisture and water entry. Unfortunately, water entry is often seasonal and therefore evidence may not be present at the time of the inspection.
The following components were inspected:

20.1 CRAWLSPACE ACCESS
The crawlspace access is located in the basement utility room. The crawlspace was entered and all accessible areas were inspected.

20.2 MOISTURE
The soil was damp under the vapor barrier, however, no evidence of water intrusion or standing water problems was observed.

20.3 VENTILATION
The crawlspace is adequately ventilated. Vents should be kept unobstructed and clear of leaves and other organic debris. Screens should be maintained to prevent rodent entry.

20.4 VAPOR RETARDER
The soil under the house is covered with a polyethylene plastic vapor retarder. This component is typically referred to as a "vapor barrier". While not a true vapor barrier, it does reduce the transmission of water vapor from the soil to the air. The vapor retarder is performing its intended function. The vapor retarder should be maintained so that it covers at least 85% of the entire surface of the soil.

The foundation walls are covered with the plastic vapor retarder. This allows the transmission of water vapor from the soil up and into the exterior wall framing. The plastic vapor retarder should be removed from the foundation.

The support post concrete piers are covered with the plastic vapor retarder. This allows the transmission of water vapor from the soil up and into the floor framing. The plastic vapor retarder should be removed from the piers.



20.5 PEST CONTROL

Soil is in contact with at least one of the wood posts in the crawl space. Good building practice requires that foundation walls or pier footings supporting wood frame construction, extend at least 8" above the finish grade with at least a 6" clearance between the top of the soil and the bottom of the wood finish materials. Soil in direct contact with wood creates a hospitable environment for wood destroying organisms. Establishing these minimum clearances is recommended.

There is evidence of rodent activity in the crawlspace. The first step in eliminating rodents from the crawlspace is to seal all possible entry points using wire mesh, caulking, wood, stainless steel wool, aerosol foam or mortar. Careful work sealing cracks, holes, gaps, and covering ground water drain inlets will discourage rodent activity. Once this work is completed, snap traps baited with peanut butter should be installed and monitored. The absence of rodents in the traps typically means that the rodents have been excluded from the area.

Scrap-wood and other cellulose debris was observed on the crawl floor. This wood debris creates conducive conditions for wood boring insects. The removal of all cellulose debris is recommended.

Wood boring insect activity in the Puget Sound area usually does not occur unless there is a ventilation problem inside or underneath the structure, a water leakage/rotting condition in the house or significant quantities of soil to untreated wood contact in a crawlspace or outside around the building exterior. Carpenter ant, termite and wood boring beetle activity is most often a direct result of rot damaged wood and/or excessively moist, humid or damp conditions inside, around or underneath the building. Structural damage from termites and ants in most cases does not extend much past the moisture source and/or rot damaged wood. Eliminating high moisture conditions, improving ventilation, correcting the conditions that are conducive to rotting wood and replacing rot damaged wood will usually eliminate the wood boring insect activity, providing that the building is properly maintained thereafter.

The best way to avoid wood boring insect problems is by preventative maintenance. This includes:

- × Good construction practices which exclude water and prevent high moisture conditions.
- × Removal of wood debris and form wood from the crawlspace and around the building exterior.
- × Maintaining the roof water drain system.
- × Maintaining good yard drainage away from the foundation wall.
- × Avoiding wood-soil contact in the crawlspace or around the house exterior.
- × Storing fire wood 6" above grade and in a dry area.

There should be no soil to wood contact in any part of the building exterior or crawlspace, unless that wood is pressure treated. For the greatest safety to permanent structures there should be no soil to wood contact of any kind. Untreated wood in direct contact with exterior flatwork should also be avoided.

Good building practice requires that foundation walls or pier footings supporting wood frame construction, should extend at least 8" above the finish grade with at least a 6" clearance between the top of the soil and the bottom of the wood finish materials. Untreated wood should be raised 1-2" above surrounding flatwork and should have a moisture barrier such as 30 lb. asphalt impregnated felt installed between the concrete and wood. For additional information and treatment options, you should retain the services of a qualified pest control operator.