



Inspected for:
Daveen & Stephanie Chopra
2142 Vintage Circle
Santa Rosa, CA



04/29/2015

Daveen & Stephanie Chopra

Re: 2142 Vintage Circle
Santa Rosa, CA

Dear Daveen & Stephanie,

As requested, a visual inspection of the above referenced property was conducted on April/29/2015. As noted in the Inspection Agreement, this inspection report documents the visually inspected conditions of the property at the time of the inspection. Please take time to review limitations contained in the Inspection Agreement.

As a home inspection is essentially a negative process, I focus on problematic conditions that I believe should be addressed and generally do not make positive comments. Consequently, the inspection report tends to be somewhat alarming. While I provide a "highlights" section for the report for your convenience, you should not rely on it in place of the report. The report should be read in its entirety to ensure that all findings are thoroughly understood. I advise you to obtain competitive estimates from licensed and qualified contractors for correction of any items noted in the report. Also, please be aware that failure to correct any preexisting conditions noted in this report is likely to adversely affect home warranty coverage. The home warranty policy should be thoroughly reviewed should you choose to purchase one.

Thank you for choosing me to perform your home inspection. If you have any questions regarding the inspection report or the conditions noted, the best way to contact me is by email.

Sincerely,

Scott Wright
Full Circle Inspections, Inc.
122 Calistoga Rd. #196
Santa Rosa, CA 95409
707 528-7010
Scott@FullCircleInspect.com

Report Highlights

The information briefly listed in this section of the report is limited, has been provided as a convenience only and may not reflect all of the concerns of the Client. The inspection report should be read in its entirety to provide as complete a picture of the property as possible. Any hazardous or unsatisfactory conditions noted within the report should be brought to the attention of a licensed and qualified contractor to provide you with an in-depth evaluation and written cost estimate for corrective work. Any repairs should be performed by licensed and qualified contractors.

The items listed below are hazardous or potentially unsafe and should be corrected by the appropriately licensed contractor. Other improper conditions may also be present and more specific information can be found in the narrative portion of this report.

Exterior Structures

Patio/Deck:

Steps/Stairs:

Step treads/risers are inconsistent.

Steps do not have a proper handrail.

The items listed below are of potential concern or in need of correction or repair. Other improper conditions may also be present and more specific information can be found in the narrative portion of this report. I recommend obtaining repair estimates from appropriately licensed contractors before the release of conditions for purchase of this property.

Exterior

Manufactured Siding:

Lap Siding:

Decayed/damaged sections of siding were observed at various areas.

Exterior Structures

Patio/Deck:

Deck:

Decayed/damaged deck boards were found.

Rear deck has been supported directly from the house with a wood ledger board.

Railing:

Wood is decayed/damaged.

Cover:

Wood support members are decayed/damaged.

Roof

Flashings:

Roof/Wall Flashings:

Roof/wall flashing is not complete.

Voids are present at the left chimney roof to wall connection.

Tile Roof:

Condition:

Loose tiles were found at the rear chimney.

Roofing at the shoulder of the left chimney is improper.

Attic:

Access:

I was unable to access the front bedroom attic.

Foundation Area

Support System:

Floor System:

Stair framing in the crawlspace is not properly supported.

Heating System

Furnace:

Condition:

This is an older heater that is beyond its expected life.

Plumbing System

Supply:

Water Pressure:

Water pressure at time of inspection was approximately 110 psi.

Bathroom Fixtures:

Toilet:

The toilet bowls are loose at the floor.

Electrical System

Electrical Fixtures:

Exterior Fixtures:

GFCI at the front door won't reset.

Interior Rooms

Interior Rooms:

Windows:

Evidence of leaking was observed adjacent to the family room window.

Indications of "failed seals" were observed between the glass panes at multiple locations.

Garage

Interior:

Doors:

The self closing device does not close the door that separates the house and garage.

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General Conditions

Client Information:

Client Name:

Daveen & Stephanie Chopra

Building Information

Inspection Address:

2142 Vintage Circle
Santa Rosa, CA.

Structure Type:

This is a wood framed, split level single family residence
Perimeter foundation with a crawlspace.

Occupancy:

Occupied at time of inspection. The presence of furniture and personal property will restrict review.
Furniture and personal property is not moved as a part of the inspection.

Utilities Status:

All utilities were on at time of inspection.

Wood Destroying

Organisms:

Damaged or potentially infested wood conditions that are specifically described in the California Business & Professions Code §8505-8698.5 as wood destroying organisms are the responsibility of a pest inspector licensed by the California Structural Pest Control Board. Discovery, diagnosis and treatment of conditions including, but not limited to fungus, dry rot, termites, beetles and other wood destroying organisms is the specific responsibility of a pest inspector. If an inspection for wood destroying organisms (pest inspection) has already been performed, the report should be reviewed and treatment or repairs made, as needed. If no inspection for wood destroying organisms has been performed one should be arranged and repairs or treatment made, as needed. A permit should be filed with the local building department for any work done and any repairs should conform to current building codes.

<http://www.pestboard.ca.gov/pestlaw/bpcode.htm>.

General Information:

File Number:

0415-5602.

Date & Time:

Inspection began at approximately 09:00 AM and finished at approximately 11:45 AM
04/29/2015.

Inspector:

Scott Wright.

Agent:

Doug Swanson. Present for the inspection.

Weather:

The temperature was approximately 65 - 70° and the sky was clear at time of inspection.

Orientation:

For purposes of describing conditions noted in this report, orientation is referenced from the driveway.

Report Limitations:

This report is intended only as a general guide to help the client make their own evaluation of the overall condition of the structure, and is not intended to reflect the value of the premises, nor make any representation as to the advisability of purchase. The report expresses the professional observations made by the inspector, based upon a visual inspection of the conditions that existed at the time of the inspection and is not a criticism of the building or maintenance. The inspection and report are not intended to provide a repair or "punch" list, to be technically exhaustive, or to imply that every possible defect was discovered. Underground, concealed, or enclosed systems or components cannot be inspected. Identification of toxic materials or biological growths/infestations can only be made in a laboratory and if concerned about mold, lead, asbestos, Chinese drywall or any similar item or condition, a qualified industrial hygienist should be consulted. A full description of the scope of this inspection and report is listed in the Inspection Agreement. This report is provided for the named client only and is not transferable. As verification of product or appliance recalls is beyond the scope of a home inspection, I recommend documenting all appliance serial numbers and searching the Consumer Products Safety Commission website for any known conditions/problems at <http://www.recalls.gov/>

Any general comments about systems/conditions that are excluded in the Inspection Agreement are informational only and do not represent an inspection. Any opinions expressed regarding adequacy, capacity, or expected life of components are general estimates based on personal information with similar components and variations are to be expected between estimates and actual experience. Any photographs or images that are included are intended to help provide clarification for these specific items and may not include all problem areas noted in the written report. Any problematic conditions or systems described in this report should fully be reviewed and repaired or corrected by a licensed contractor or professional qualified in that particular trade or area of expertise, and any other problems or conditions discovered or created during the process of repairs corrected as well. I do not provide work estimates as costs can fluctuate widely and I recommend that any bids for corrective work be obtained prior to the expiration of any contractual real estate contingencies. Documentation of properly completed repair work should be provided in the form of a completed building permit, contract, work order and/or receipt from a licensed contractor or qualified professional. Permits from the local building department are required for nearly all forms/types of construction or repair work. The inspector has no interest, present or contemplated, in this property or its improvement and no involvement with tradespeople or benefits derived from any sales or improvements. To the best of my knowledge and belief, all statements and information in this report are true and correct.

Environmental & Toxic Concerns:

The identification of toxic materials and environmental hazards is beyond the scope of a home inspection. Many products used in construction may contain materials that can be toxic/hazardous. Formaldehyde, lead and asbestos are the most well known, but other chemicals can be found in varying amounts. While the use of some of these materials has decreased since the late 1970s; they may still be found, particularly in products imported from overseas. Further evaluation by sampling of suspected material for undesirable or toxic substances by a qualified testing laboratory would be prudent. I suggest reading the publication: "Buyers Guide to Earthquake Safety & Environmental Hazards" available at: <http://www.propertyid.com/govbooklets/govenviro.pdf>

Exterior

Lot:

Driveway:

Concrete. Cracks are present in driveway surface. Cracks of this type are not uncommon and usually due to curing, expansion/contraction and/or soil movement/settling. Patching cracks can help to prevent excess moisture from gaining entry under the driveway and causing further cracking. Corrective measures should be taken if surface becomes uneven or damaged.



Walkways:

Concrete. Cracks are present in walkway. Please refer to the driveway notes for related information.

Fences:

Wood post and board fence. Weathering of wood fences is common and expected.

Grade & Drainage:

Home is built on a sloped lot. I suggest diverting water away from the house, as practical.

Soil Conditions:

Geotechnical and soils engineering is beyond the scope of this report. Client should consult with a soils engineer if information regarding soils is desired.

Manufactured Siding:

Lap Siding:



The lap siding used on this house is a manufactured product that consists of wood fibers bound together with a synthetic adhesive. These types of sidings were introduced when the cost of solid wood siding became prohibitive. Some types of manufactured siding have been the focus of "class action" lawsuits resulting from swelling, buckling and delamination of siding. However, these defects are not found in all types and brands of manufactured siding. Identification of specific brands is difficult from the exterior as the manufacturer's name is typically stamped on the back side. In general, this type of product can be more susceptible to swelling due to moisture intrusion than solid wood siding; even with a non-defective product. As such, it is important to keep the exterior of the home, particularly the edges and cut seams of siding and trim, well sealed with paint and caulking to prevent moisture damage.

Decayed/damaged sections of siding were observed at various areas. As this is not a pest inspection and other areas of damage may be present, a licensed pest inspection company should inspect this building for wood destroying organisms and repairs should be made, as needed.

Voids/gaps were found at various areas. While siding installation should include priming/painting any cut ends, in actual practice this is rarely done. As a result, moisture can penetrate into the cut ends, which will lead to damage over time. Sealing all cracks/voids between siding and trim as well as penetrations and holes is recommended to prevent moisture intrusion. I recommend not caulking under the lower edge of horizontal siding members to allow any water that might get behind the siding a path out. I also suggest the use of a flexible and paintable caulking, such as Sikaflex 15 LM or equivalent.

Other
Observations:



Stains are present under the rear cantilevered chimney. It appears that moisture is traveling along the top of the metal flashing, and over the top of the door. I recommend sealing this area to prevent damage to the trim. Corrections should be made by a licensed contractor.

Trim & Windows:

Trim:

Wood.

Unprotected horizontal trim can retain moisture on the trim and against the siding. Water can penetrate between the trim and siding, which will often lead to damage to the siding, trim, and possibly enclosed framing. I am unable to determine the condition of the siding behind the trim. My primary recommendation is to install metal flashing over the top exposed edge to protect the wood from moisture and damage. At a minimum, horizontal trim should be kept well caulked and painted to protect it, and the adjacent siding, from moisture damage.

Sections of the trim are close to the roof shingles. As this can promote moisture damage, I advise cutting trim to provide a minimum of 1 inch gap between the base of the trim and the roof. The cut edge should be painted to retard water penetration into the material.



Windows:

Window frames are metal

Dual glazing is present in the windows of this home.

Some glazing showed evidence of failed seals (moisture between the panes). This is primarily a visual defect which is typically determined by the presence of discoloration or moisture between the panes of glass (however, some loss of insulation value is possible). This condition can be difficult to identify and climactic or lighting conditions can impede identification of affected windows. Client should consult with a licensed glazing contractor for further review and replacement of glazing, as needed.

Exterior Structures

Patio/Deck:

Deck:



Wood decks supported on wood framing.

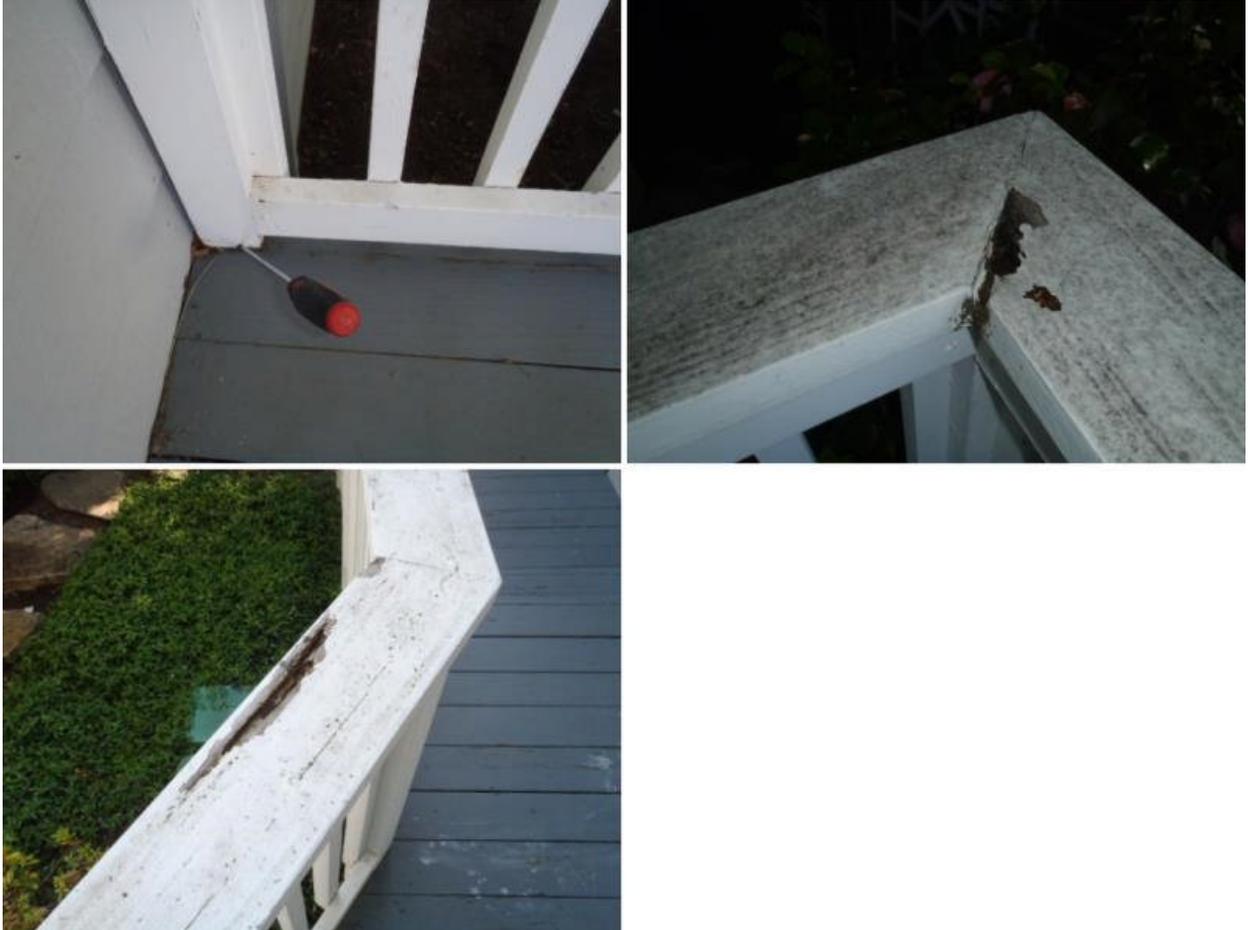
Decayed/damaged deck boards were found. Exterior decks are subject to the weather and therefore have a limited life. Decay/damage of this type is specifically described as having been caused by a wood destroying pest or organism in the California Business & Professions Code §8505 and is the responsibility of a pest inspector licensed by the California Structural Pest Control Board. This should be inspected by a licensed pest inspector and any damaged lumber replaced with new material or treatment made, as needed.

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=bpc&group=08001-09000&file=8500-8519>.

Rear deck has been supported directly from the house with a wood ledger board. Moisture can/will penetrate behind the ledger and become trapped for extended periods. This can lead to hidden moisture damage to the siding and structure. I was unable to determine the condition of wood behind the ledger board. A licensed pest inspection company should review this area for damage as a part of a routine pest inspection. There are several methods to correct this condition. One is to completely detach the deck from the house and support with post & piers. Another method is to separate the ledger from the house with metal hardware that is designed to provide a separation between the house and deck. Any modifications should be made by a licensed and qualified contractor.

Low elevation of lower rear deck restricts view of area under the deck structure. Further review will require removal of deck boards.

Railing:



Railing is lower than allowed by current construction standards. The minimum height of a railing from the level of the deck has recently changed from 36 inches to 42 inches. While not required, raising the railing will help to increase safety.

Wood is decayed/damaged. Damage may extend into inaccessible areas. As this is not a pest inspection and other areas of damage may be present, a licensed pest inspection company should inspect this building and repairs should be made, as needed.

Steps/Stairs:



Step treads/risers are inconsistent. Typically, the maximum difference in riser height or tread depth for any stairway is $\frac{3}{8}$ ". Current construction standards require that risers not exceed $7\frac{3}{4}$ inches in height and that tread depth be no less than 10 inches. This could lead to an individual tripping/falling and should be corrected.

This report was prepared by Full Circle Inspections, Inc. for the sole use of Daveen & Stephanie Chopra only and should not be relied upon by any other parties.

Steps do not have a proper handrail. I advise installation of a handrail at any stairway or steps. Handrails are intended to help prevent an individual from falling when ascending or descending and should conform to current construction standards. Specific information can be obtained through the local building department.

Cover:

Wood framed cover present. Wood support members are decayed/damaged. Damaged wood members should be replaced with new material.



Roof

This section of the report is an opinion of the general quality and condition of the roofing material and visible elements of installation. While every effort is made to locate potential leaks, the only way to determine whether a roof is absolutely water tight is to observe it during a prolonged rainfall. Many times, this situation is not present during the inspection. Estimates on remaining life are based on past experience with similar materials and does not constitute a warranty or certification. This report is issued in consideration of the foregoing disclaimer.

General:

Style:

Hip roof.

Roof Access:

Second story roof could not be accessed due to height. Roof condition was determined by the condition of the lower roof and upper roof was viewed from the ground with binoculars. Client is advised that this is a limited review.

Eaves:

Sheathing at the front is not properly supported. The sheathing should have bearing over a rafter. Blocking or other support should be added for proper support.



Flashings:

Roof/Wall

Flashings:

Roof/wall flashing is not complete. This installation will allow water to flow down the exterior siding/trim, which will likely lead to moisture damage to the siding and any other adjacent wood framing or trim members. Flashing should direct water away from the wall or any wood members. I recommend installation of a diverter flashing to direct water back onto the roof where it can be picked-up by the gutters.

Voids are present at the left chimney roof to wall connection. This should be properly flashed or sealed to prevent moisture intrusion. A licensed roofing contractor should review and make corrections as needed.



Tile Roof:

Type:

Concrete tile.

Tile roofs have several advantages and a few disadvantages when compared to the more common composition (asphalt) shingle roofs. The obvious advantages include life expectancy and fire resistance. The disadvantages include a need for periodic maintenance and the potential to break tiles. Tiles will occasionally slip down (particularly at changes in the roof plane) and/or crack for no apparent reason. Maintenance usually involves periodically checking for loose or cracked tiles and replacement or repairs, as needed. Debris can also dam water at valleys and roof/wall connections which can lead to roof leaks. Client is advised that this type of roof can be damaged by being walked on. Roof should be walked on only by trained personnel.

Condition:



The wear observed on the roof tiles is typical of material that is more than 50% through its useful life. Cracks are not uncommon in tile roofs and annual review of the roof is advised. This can often be achieved by viewing from the ground with binoculars.

Loose tiles were found at the rear chimney. These should be properly secured by a licensed roofing contractor.

Roofing at the shoulder of the left chimney is improper. The trim was cut above the roof line to raise the first run of shingles. If any moisture gets under the tiles, it will be trapped behind the trim, causing damage. corrections should be made by a licensed roofing contractor.

Roof Drainage:

Type:

Metal gutters.

Moisture stains on the eave boards indicate water will flow between the gutter and the fascia. This can allow moisture to damage the fascia board. Installation of flashing under the leading edge of the shingles can help to direct water into the gutters and away from this vulnerable area.

Stains/corrosion indicate that gutters will leak at connections. This is common and requires periodic sealing as a part of home maintenance.

An extender system is connected to some gutter downspouts to aid in lot drainage. As this system is buried, an evaluation is limited to the visible areas. The gutters should be cleared periodically as a part of routine maintenance.

Debris is present in the gutters. Debris should be routinely cleaned from the gutters. Debris build up can cause overflows and damage to gutters.

**Attic:****Access:**

Access hatch is located at the master bedroom closet and front bedroom closet.

I was unable to access the front bedroom attic. Storage in the closet and clearance between the shelf and wall blocked access. I recommend review when access has been made.

Master bedroom attic was viewed from the access hatch. Attic was not entered due to restricted clearance and the possibility of damaging finished ceilings. Review was limited.

Framing:

Truss and rafter framing with plywood sheathing.

Insulation:

Insulation consists of fiberglass batts. The presence of this insulation limits review of the attic. Insulation is not moved or disturbed to allow inspection.

Ventilation:

Attic ventilation is provided by eave and dormer vents.

Foundation Area

Foundation & Grade:

Access Location:

Interior access is located at the garage. Foundation area was accessed as a part of this inspection.

Foundation:

Poured concrete.

Anchor bolts are present.

Grade & Drainage:

Soil was dry at time of inspection.

Support System:

Floor System:

The floor support is provided by wood joists with plywood sheathing.

Stair framing in the crawlspace is not properly supported. The bottom edge of the stair stringer should have full bearing. While no sagging or cracking was found, I recommend installation of proper support.



Mid-Span Support:

Wood posts supported on concrete piers provide mid span support.

Ventilation & Insulation:

Insulation:

Fiberglass insulation is present. Insulation was briefly pulled back by the inspector beneath plumbing fixtures to inspect for active drain leaks. However, client is advised that this insulation restricts review of framing and sub floor sheathing.

Ventilation:

Screened openings. Ventilation appeared adequate at time of inspection. Care should be taken to ensure that vent openings are not blocked as adequate air circulation in a foundation crawlspace area is important to prevent excess humidity/moisture from building up.

Other

Observations:

Debris was found in the crawlspace. Removal of wood debris and trash from the crawl space area is advised.

Heating System

The heater is visually reviewed. Examination of the heat exchanger is limited as the unit is not dismantled as a part of this inspection. Thermostats are tested for basic functions only. Determining the proper sizing of heating units is beyond the scope of this inspection. Adequacy, efficiency or the even distribution of air throughout a building cannot be addressed by a visual inspection, however a subjective evaluation is made. Normal service and maintenance should be made on a yearly basis by a licensed heating contractor.

Furnace:

Type:

Brand: Payne.

Gas fired forced air unit.



Location:

Garage.

Condition:

Gas shutoff valve and electric disconnect present.

This is an older heater that is beyond its expected life. While continued operation may be possible, older heaters have a greater chance of having a cracked heat exchanger, do not have the safety features that are present on current models and tend to require increased maintenance and repairs. In addition, many furnace contractors are unwilling to perform maintenance/repairs on older appliances due to the potential hazards and liability involved. Installation of a new, efficient heater is my primary recommendation. At a minimum, this heater should be reviewed by PG&E or a licensed heating contractor prior to occupancy or use, any necessary corrections/repairs made to ensure safe operation, and then inspected on an annual basis thereafter.

Flue/Vent:

Intact.

Filters:

Filter is located at the return air grill.

Thermostat:

Operable. Accuracy and/or calibration of the thermostat were not verified.

Ducting:

Distribution method consists of flexible plastic sheathed ducting.

Air Conditioning:

Make:

Condenser is located at the left side of the house.

Electric disconnect present within sight of unit.

The appliance was operated at time of inspection. Refrigerant line was cold adjacent to the evaporator and cool air was observed at the interior registers. The inspection does not include pressure testing or review for leaking, therefore no representation is made regarding coolant charge or line integrity. I recommend cleaning and servicing by a licensed heating contractor.



Plumbing System

All underground piping related to water supply, gas supply, waste, or sprinkler use are excluded from this inspection. Condition of underground piping cannot be detected by a visual inspection. Evaluation of water flow is subjective and judged by operating fixtures and visual observations of flow. Plumbing fixtures are tested for operation, however minor items such as a dripping faucet may not be noted as it is considered routine maintenance. Main and branch shutoff valves are not operated as this can result in leaking around the valve stems. Periodic testing and operation of shutoff valves is advised to ensure proper operation when needed.

Supply:

Main Shutoff:

Main water shutoff is located at the front of the structure.



Water Pressure:

Water pressure at time of inspection was approximately 110 psi. This is above acceptable levels. Water pressure over 80 psi can damage fittings and fixtures, which can lead to leaks and water damage. A pressure reducing valve was present but I did not test or adjust this valve. The pressure reducing valve should be adjusted or replaced by a licensed plumbing contractor. However, adjustment of the water pressure may adversely affect water flow at shower heads and other plumbing fixtures. Water flow at plumbing fixtures should be evaluated concurrently with adjustment of the pressure reducing valve.



Materials:

Where visible, distribution piping is copper.

Exterior Hose Bibbs:

Hose bibb leaks around the valve stem when the faucet is on. This is common and tightening the packing nut, repacking or replacement of the hose bibb valve will typically correct this leaking.

Drain:

Material:

Where visible, drain lines consist of ABS (plastic) piping.

Fuel Supply:

Location:

Gas is supplied by local utility. Meter is located at the left side.

I recommend keeping a wrench adjacent to the meter to allow the gas to be shut off, if necessary. PG&E maintains a website with current information regarding gas and when to shut it off. <http://www.pge.com/myhome/edusafety/gas/electricsafety/turngasoff/index.shtml>.

No sediment traps found adjacent to the gas-fired appliances. Often confused with "drip legs" (used when the gas has a high moisture content), sediment traps are typically required to be installed immediately adjacent to specific gas-fired appliances (generally furnaces and water heaters), and are intended to prevent debris within the pipe from entering and obstructing the orifice or control valve of the appliance. This has apparently not been enforced by the local building departments until recently. I recommend review of the installation instructions for each gas fired appliance and installation of sediment traps, as needed.



Water Heater:

Type:

Unable to determine the make and capacity due to the insulation blanket present.



Location:

Garage.

No drain pan present under this appliance. Although located in a garage and possibly not required, if a leak were to develop, the water would flood the floor in this area. As many people store personal property on the floor of the garage, I suggest installation of an adequately sized pan that drains to the exterior.

Flue/Vent:

Intact.

Safety Valve:

A temperature/pressure (T/P) relief valve with a discharge line is present. The T/P valve is a safety device that will release water from the tank should the pressure or temperature raise to a level that is too high. High temperature can cause scalding/injury and high pressure can result in rupture/explosion of the tank or plumbing. The valve was not tested at time of inspection as it is designed as a safety valve only and may leak after testing. I recommend review of the manufacturer's operation instructions.

Seismic Bracing:

Earthquake straps are present. I recommend review of the state pamphlet titled The Homeowners' Guide to Earthquake Safety. www.seismic.ca.gov/pub/CSSC_2005_HOGreduced.pdf.

Condition:

Gas and cold water shutoff valves present.

Water heater operated at time of inspection.

No expansion tank present. During the heating cycle, water will tend to expand. High water pressure can prevent heated water from expanding back into the main supply and water will often vent out of the temperature/pressure relief valve. In some cases, supply angle valves and supply risers under sinks can also leak.

Typically, when street pressure is high, an expansion tank is installed above the water heater to allow expansion of the hot water. I recommend that a licensed plumbing contractor install an expansion tank. Although the main street pressure could not be tested, the presence of a pressure reducing valve (noted in the supply section) indicates main street pressure in excess of 80 psi.

Temperature Setting	Time to Produce 2nd & 3rd Degree Burns on Adult Skin
170° F	Nearly instantaneous
160° F	About 1/2 second
150° F	About 1-1/2 seconds
140° F	Less than 5 seconds
130° F	About 30 seconds
125° F	About 2 minutes
120° F	More than 5 minutes

Bathroom Fixtures:**Toilet:**

The toilet bowls are loose at the floor. A loose toilet will cause the wax seal to deform and allow leaking to occur around the base of a toilet. This is a potentially unsanitary condition which can often damage flooring and framing if left unrepaired. The wax seal located between the floor flange and the underside of the toilet bowl will probably need to be replaced and the toilet properly anchored to the floor to remedy this condition. The closet flange should be secured to the subfloor to prevent the pipe from moving. It is possible that some damaged wood will be found and require repair once the toilet is removed. Applying caulk around the base of the toilet after it has been resecured can help to keep the toilet secure.

Laundry:

Location:

Laundry is located at the upstairs hall.



Washer Hookup:

Inspector does not disconnect hoses or operate valves. No active leaks observed at time of inspection. Hoses can develop leaks at any time and should be inspected periodically as a part of routine maintenance. The drain lines also cannot be evaluated. Laundry appliances are not tested or moved during the inspection and the condition of any walls or flooring hidden by them cannot be judged.

Dryer Hookup:

240 volt, electric. A gas pipe is present for future gas installation.

Lint/debris adjacent to the dryer exhaust duct indicates that this will leak warm/moist air into the foundation crawlspace area. I recommend cleaning, sealing or repairs, as needed to direct the air and lint to the exterior.



Electrical System

Electrical Service:

Type:

Service wires are underground. Underground conductors cannot be reviewed.

Main electrical service is 200 amperes, 240 volts.

Service Equipment:

General:

Service equipment is located at the left side of the structure.

Circuits are not properly and clearly labeled. While the circuits are partially labeled, the labeling is vague/incomplete. Accurate and complete identification and labeling of all individual branch circuits is advised.



Over Current

Protection:

Over current protection is provided by circuit breakers.

Service disconnect (main) is present.



General Wiring:

Conductor Type:

Branch circuit conductors are copper. Stranded conductors to 240 volt circuits are aluminum. This material is acceptable for this use.

Grounding System:

Grounding system has likely been provided by a concrete encased electrode or "ufer" ground. A "ufer" utilizes the foundation system for grounding and is not visible. Grounding is checked at receptacle outlets and visually at the panel.

No "bonding" jumper found between the hot and cold water supply pipes above the water heater. Metal piping is currently required to be connected (bonded) to the electrical grounding system to ensure safety. This may not have been required at time of construction. Should the metal piping become energized (through a lightning strike or other means) the bonding circuit is intended to conduct the electrical current to ground. Bonding clamps were found on the cold water as well as the gas supply pipes. While hot and cold water pipes are often connected together via plumbing fixtures, the use of nonmetallic and dielectric plumbing fixtures and fittings has prompted changes in bonding requirements. This includes installation of a bonding jumper between the hot and cold water supply pipes at the water heater to ensure that both the hot and cold water supply piping are properly bonded. While this does not necessarily indicate that the plumbing system is unsafe, bonding of the hot water piping could not be verified and installation of a bonding jumper is advised as an upgrade.

GFCI Protection:

Specific 120 volt receptacle outlets are GFCI (ground fault circuit interrupter) protected. These safety devices monitor the flow of electricity and will interrupt (turn off) power to specifically protected receptacle outlets if an imbalance occurs. This device can be identified by the presence of the "Test" and "Reset" buttons located on the face of the receptacle. Periodic testing of this device is recommended to ensure proper operation. Testing can be done by pressing the "Test" button on the face of the receptacle. The "Reset" button should pop out and power to the receptacle outlet will be interrupted. Several receptacle outlets can be protected by one device. The "Reset" button is then pressed to re-engage power to the protected receptacle outlet(s). The device should not be blocked by furniture or personal property to allow the device to be tested and/or reset, if needed. Ideally, appliances such as refrigerators/freezers should not be plugged into a GFCI protected receptacle outlet as the device may occasionally "trip", cutting off power to the appliance.

Electrical Fixtures:

Exterior Fixtures:

Weather resistant covers are present on exterior receptacle outlets and these are GFCI protected.

GFCI at the front door won't reset. The receptacle outlet was tripped at the time of inspection, and would not reset. Repairs should be made by a licensed electrical contractor.

Garage Fixtures:

Receptacle outlets for the garage area are GFCI protected.

Kitchen Fixtures:

Receptacle outlets that serve the kitchen counter surfaces are GFCI protected.

Bathroom Fixtures:

Receptacle outlets are GFCI protected.

Fireplace

The fireplace inspection is limited to readily accessible components of the fireplace and chimney only.

Fireplace: Living Room

Type:

Manufactured, "zero clearance" fireplace unit.

This type of fireplace is typically designed for small, wood burning fires and not intended for a source of primary heat for the home. Large fires can cause damage to the interior of the firebox and chimney. If more information is desired regarding the intended use of the fireplace, the manufacturer should be contacted. A visual review was conducted of the readily accessible areas. If this fireplace has not been cleaned and inspected within the last year, I recommend cleaning and a more complete inspection conforming to NFPA 211 (14.4) "Level II" inspection by a qualified chimney sweep or fireplace specialist.



Gas burner was briefly operated at time of inspection.

A gas-fired appliance that consists of a burner and decorative logs is present in this fireplace. This fireplace should not be used with solid fuel (wood, paper, etc) unless modified/corrected for use with solid wood.

Exterior & Chimney:

Metal flue in a wood framed chase with wood siding.

A spark arrester is present. Review of chimney is limited due to the length of the flue and the presence of the spark arrester. The spark arrester was not removed as a part of this inspection.

Fireplace: Family Room

Type:

Manufactured, "zero clearance" fireplace unit. Please refer to the previous fireplace for related information.

Gas burner was briefly operated at time of inspection.



Exterior & Chimney:

Metal flue in a wood framed chase with wood siding.

A spark arrester is present. Review of chimney is limited due to the length of the flue and the presence of the spark arrester. The spark arrester was not removed as a part of this inspection.

Fireplace: Master Bedroom:**Type:**

Manufactured, "zero clearance" fireplace unit.

Please refer to the previous fireplace for related information.

Gas burner was briefly operated at time of inspection.

**Exterior & Chimney:**

Metal flue in a wood framed chase with wood siding.

A spark arrester is present. Review of chimney is limited due to the length of the flue and the presence of the spark arrester. The spark arrester was not removed as a part of this inspection.

Kitchen

The kitchen review is a combination of a visual inspection and basic functional test of built-in appliances. To ensure safety, you should review the operation instructions for each appliance prior to use. Most appliance manufacturers now have the installation instructions available online. Stand alone refrigerators/freezers, if present, are typically considered personal property and are outside the scope of the inspection, and no opinion is offered as to the adequacy or accuracy of operation. Clocks, timing devices and thermostat accuracy are not tested and appliances are not moved during the inspection. Some appliances have been recalled for defects over the years. I do not verify recalls and recommend that you visit the Consumer Products Safety Commission Website and perform a search for the model numbers of the appliances in this home. <http://www.cpsc.gov/>

Fixtures:

Counter & Cabinets:

Counter surface is stone. As stone is a natural material, periodic application of a sealer may be necessary. Unable to determine if the stone has been recently sealed or the recommended frequency of application. A tile or stone supplier should be able to provide recommendations for sealer products.

Floor:

Floor covering is tile.

Walls & Ceilings:

Serviceable.

Windows:

Serviceable.

Plumbing:

Sink:

Serviceable.



Disposal:

Make: In Sink Erator.

Appliances:

Ventilation:

Down draft type fan. Fan/Hood operated when tested.

Range:

Brand: General Electric, gas cook top.

Basic functions of this appliance were operated.



Oven:

Brand: General Electric. electric wall oven.

Basic functions of this appliance were operated.

Operation of the "self cleaning" feature is beyond the scope of this inspection. Confirming proper operation prior to close of escrow is advised.



Dishwasher:
Brand: Bosch.



Microwave:
Brand: General Electric. Unit was operated;
however no test/evaluation for microwave
radiation leakage was performed.



Bathrooms

Bathrooms are visually inspected for signs of moisture and leaking. Minor items such as a dripping faucet are not always noted as they are considered a part of routine maintenance.

Half Bathroom:

Sink:

Serviceable.



Toilet:

The toilet bowl is loose at the floor. Please refer to the plumbing section of this report for related information.

Ventilation:

Operable.

Counter &

Cabinets:

Serviceable.

Floor:

Floor covering is tile.

Walls & Ceiling:

Serviceable.

Doors:

Serviceable.

Mid Level Bathroom:

Sink:

Serviceable.



Toilet:

The toilet bowl is loose at the floor. Please refer to the plumbing section of this report for related information.

Tub & Surround:

Tile surround walls with a fiberglass tub.



Ventilation:

No mechanical ventilation provided. As a window is present, a ventilation/exhaust fan is not required; however, I suggest installation of an exhaust fan to discharge humid air to the exterior of the house.

Counter & Cabinets:

Serviceable.

Floor:

Floor covering is tile.

Walls & Ceiling:

Serviceable.

Doors:
Serviceable.

Windows:
Serviceable.

Master Bathroom:

Sink:



Two sinks present. Serviceable.

Toilet:

The toilet bowl is loose at the floor. Please refer to the plumbing section of this report for related information.

Shower & Surround:



Tile surround walls and pan.

Cracks/voids present in grout. While missing grout is common and often recurs, this should be patched, regouted or caulked, as needed.

Tile is chipped. All loose and damaged ceramic wall tile should be replaced by a licensed tile contractor. If any damage to the wall is discovered behind the tiles after removal, any needed repairs should be made before replacement/installation of tile. Repairs should be made by a licensed and qualified contractor.

Tub & Surround:

Tile surround walls with a fiberglass tub.

"Whirlpool" tub was filled to a level above the jets to allow operation of the pump and jets.

The entire base of this tub is not supported with mortar. The bottom of this type of tub unit is typically required by the manufacturer to be supported on a mortar base. The rim of the tub is usually not strong enough to support the weight of a tub full of water. While no stress cracks were observed in the surface of the tub at time of inspection, cracks may begin to appear due to the limited support. Additional mortar should be placed to fully support the tub unit.

**Ventilation:**

Operable.

Counter &**Cabinets:**

Serviceable.

Floor:

Floor covering is tile.

Walls & Ceiling:

Serviceable.

Doors:

Serviceable.

Windows:

Serviceable. Labels in the corner of the tub area window identify the presence of safety glass.

Interior Rooms

The condition of walls behind wall coverings and furnishings cannot be judged. Only the general condition of visible portions of floors is included in this inspection. As a general rule, cosmetic deficiencies are considered normal wear and tear and are not reported. Determining the source of odors or like conditions is not a part of this inspection. The condition of floors underlying floor coverings is not inspected. As minor flaws such as a torn screen or cracked window can be overlooked, client should review these items personally.

Interior Rooms:

Floors:

Floor coverings consist of tile and carpet. Wood

Tile is cracked near the entry. Any loose or damaged tile should be replaced by a licensed tile contractor.

Walls:

Serviceable.

Ceilings:

Serviceable. "Vaulted" ceilings are present in this home. Review of attic areas above this type of ceiling are limited due to the type of construction. Verification of proper construction or ventilation is impractical without destructive testing.

"Nail pops" were observed. This is primarily a cosmetic condition caused by shrinkage of wood framing members. A nail can be pushed out slightly as the wood dries and shrinks. The joint compound over the nail can then become loose and fall out. Patching typically is accomplished by tightening/setting the nail and "spackling" over the exposed nail head.

Windows:



Evidence of leaking was observed adjacent to the family room window. I suspect this is due to an active leak. The exterior of this window should be reflashed or resealed, as needed. Unable to determine the condition of enclosed framing without destructive testing. The enclosed framing should be examined for damage concurrently with repairs. If damage is found, any damaged wood should be removed and replaced with new material.

Signs of moisture were found at other windows. It is difficult to determine if some of the stains are from condensation, or are leaking. I recommend review by a licensed window contractor. Further inspection could involve placing a "moisture meter" on this area while "leak-testing" the exterior with sprayed water to determine if this is caused by a leak at the window flashing. If found to be leaking, the exterior window flashing should be corrected or replaced by a licensed and qualified contractor.

Indications of "failed seals" were observed between the glass panes at multiple locations. Please refer to the window notes at the exterior section of this report for more information.

Exterior Doors:

Serviceable.

As a general rule, having a qualified locksmith re-key or change any exterior locks is advised.

Interior Doors:

Serviceable.

Stairs:

Serviceable.

Other Comments:

The interior rooms have been recently painted. New paint can hide moisture stains, cracks or other defects that may have otherwise been visible prior to painting. I advise consulting with the seller for information regarding the condition of the interior walls and ceilings prior to the application of this coat of paint.

Smoke Alarm:**Located:**

I recommend ensuring that all bedrooms and the hallway have new smoke alarms. The national Fire Protection Association (NFPA) advises replacement of any smoke alarms that are 10 years old or older to ensure proper operation.

Carbon Monoxide Alarm:**Located:**

Located at the hallway.

Garage

Interior:

Slab:

Concrete. Cracks are present in the slab surface. Concrete will crack for a variety of reasons, including expansion/contraction, settling and/or curing. Currently, the surface is not uneven. If the slab becomes uneven or displaced, repairs should be made.

Walls:

Serviceable. Separation wall between the garage and house is intact.

Ceiling:

Moisture staining observed on the ceiling. This area was dry at time of inspection, however no determination could be made as to whether this is due to active leaking. Client should consult with the seller regarding this staining and any related repairs. If no documentation can be provided, a licensed plumbing contractor should review the upstairs plumbing and make repairs, as needed.



Vehicle Door:

One metal sectional overhead door.

Garage door openers should reverse when obstructed while closing. This opener reversed when tested. This device should be tested by the homeowner on a monthly basis to ensure continued proper operation.

Doors:

The self closing device does not close the door that separates the house and garage. Repairs/corrections are advised as this is intended to slow the spread of a garage fire to the house.

Other Comments:

Review of garage was limited due to large amounts of stored personal property. The areas that were blocked from review should be inspected once personal property has been removed. If adverse conditions or damage are found, appropriate repairs should be made.

Glossary of Terms

ABS Pipe: (Acrylonitrile Butadiene Styrene) Black plastic pipe used for sewer and drainage. This product has been commonly used in residential and light commercial construction throughout most of California since the late 1960s. This material is subject to ultraviolet breakdown unless inhibitors are mixed into the material during fabrication. Painting the material can slow damage when it is exposed to the sun.

AFCI: Arc fault circuit interrupter. AFCIs are newly-developed electrical devices designed to protect against fires caused by damaged or deteriorated wiring or cords in the home electrical wiring.

Air Conditioner: An electrical appliance used to cool the interior of a building by means of a refrigeration condenser. The condenser is typically located outdoors and consists of a compressor, a fan and "finned" radiator coils. This is normally connected to an evaporator unit located in the coil box on the forced air heating system with piping and charged with a refrigerant gas. The refrigerant is then pumped from the condenser unit to the evaporator unit and the blower for the heating unit circulates the air throughout the interior.

Air Admittance Valve: Pressure-activated, one-way mechanical valves that are used in a plumbing drain, waste, and vent (DWV) system in place of conventional, through-the-roof, pipe venting. Normally closed, AAVs open when wastewater discharges, allowing air to circulate for proper drainage. When closed, AAVs prevent the escape of sewer gas and maintain the trap seal.

Air Gap: An anti siphon device typically installed on a dishwasher drain to prevent sink drain water from contaminating the dishwasher. The air gap is usually a vented cap located adjacent the sink faucet, and is connected in-line between the dishwasher and the sink drain or garbage disposal.

Amp: Abbreviation for Ampere. The base unit of electric current. The rate at which electricity is used.

Anchor Bolt: A bolt used to secure the mudsill to the foundation. Modern anchor bolts are "L" or "J" shaped rods, which are threaded on one end. During construction, these bolts are inserted into the top of the foundation as the concrete is poured. The mudsill is secured to the foundation with washers and nuts after the concrete has partially cured. When a home does not have bolts, anchors can be "retrofitted" into existing foundations as a part of seismic upgrading, with mechanical or epoxied anchors, as long as the concrete is in good condition. The primary intent of seismic upgrading is to prevent the wood frame of the structure from moving off of the foundation and to limit the structural damage caused by an earthquake.

Angle Stop: A valve used to shut off the flow of water to a plumbing fixture such as a sink or toilet. Older angle stops often have aged washers and packing, and can leak around the valve stem. These valves should be opened and closed annually to keep the valve stem and packing in good condition. Valves should be reviewed periodically for leaking. Leaking valves can be re packed or replaced.

Anti Siphon Device: A valve installed on piping designed to prevent cross contamination of the potable water by providing a separation in the system. These devices are typically installed on exterior hose and irrigation plumbing. In residential construction, these valves are integral with commercially available sprinkler valves and are also installed on exterior hose bibs.

Balloon Framing: Type of construction in which the studs are continuous from the foundation to the roof. Mid level floors are inserted after the exterior walls are raised. This type of construction is more common to the eastern half of the United States.

Barge Rafter: The exposed (sometimes decorative) rafter at a gable end.

BTU: (British Thermal Unit) Amount of heat energy needed to raise one pound of water one degree Fahrenheit. The more heat energy needed, the higher the BTU input rating. Most household gas fired heating appliances, such as furnaces and water heaters are designed for input ratings in the tens of thousands of BTUs per hour.

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Buss Bar: Metal bars in an electrical circuit panel box, which are used to distribute the electrical current from the mains to the circuit breakers or fuses.

Check Valve: A one-way valve installed to prevent water from flowing the wrong way through a pipe.

Circuit: Electrical conductors and components through which current from a power source flows.

Circuit Breaker: An electrical device used to protect electrical conductors and equipment from damage should the current exceed a maximum value (measured in Amperes). The circuit breaker interrupts the circuit by means of an electromagnet that separates contacts if the current reaches, or exceeds, a specific value. The major advantage of circuit breakers over fuses is the ability to be reset should the breaker "trip". As springs can become worn in older circuit breakers, this value can decrease and "tripping" becomes more frequent. Replacement of older circuit breakers eventually becomes necessary.

Conductor: A wire capable of carrying an electrical current. Generally, copper or aluminum.

Conduit: A pipe or raceway, constructed of metal or plastic, used to enclose and protect the conductors/wires from damage.

Convenience Receptacle Outlet: A receptacle outlet that is not intended for a specific (permanent or semi permanent) appliance.

CPVC: (Chlorinated Polyvinyl Chloride) An off-white or buff colored piping. This material is commonly used as water supply piping in mobile and manufactured homes.

Creosote: A by-product given off when wood burns. Creosote collects on the walls of the chimney flue. This material is combustible and, if sufficient amounts build up, can ignite in the flue. Wood burning fireplaces, or stoves, and flues should be periodically cleaned by a qualified chimney sweep. Frequency of cleaning depends on the type of wood burned and how often the fireplace is used. If a wood-burning stove is used as a primary source of heat, the flue and appliance should be cleaned and inspected annually.

Cripple Wall: Short wood framed walls constructed between the foundation and the floor system, sometimes referred to as a "pony" wall. Commonly found in structures built on sloped lots and in older buildings.

Dead Front: A metal panel, installed at the front of an electrical circuit breaker or fuse panel box. This panel covers the electrical buss bars, wiring and connections inside the panel box to prevent accidental contact with energized electrical systems.

Dedicated Outlet: An electrical outlet that has a specific use or is connected to a specific appliance. Furnaces, dishwashers and electric dryers, along with other major appliances, are typically connected to dedicated outlets.

Ducting: A tube, typically fabricated of metal or plastic, through which air is distributed to heat or cool a building.

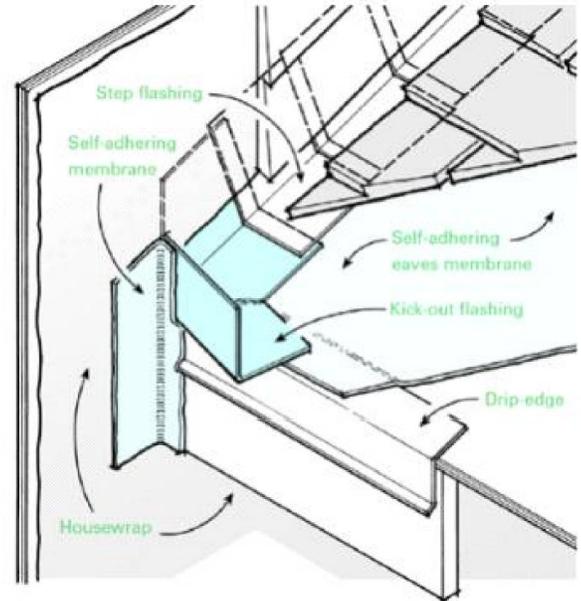
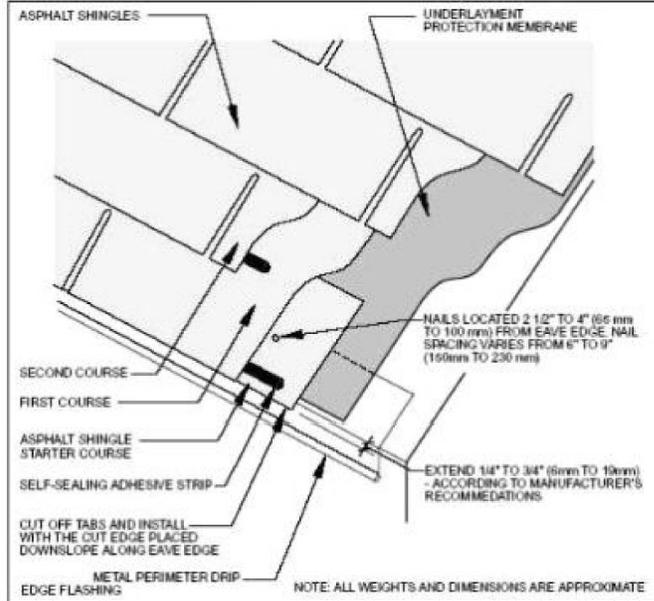
Efflorescence: White "fuzzy" mineral build-up, typically found on concrete, unglazed tile or masonry, caused by moisture leaching minerals out of the masonry.

Eave: The bottom, horizontal edge of the roof.

Equipment Grounding Conductor: The grounding conductor/wire that is attached to a device (such as a receptacle outlet, light fixture or other electrical device) and to the grounding terminal block in the circuit breaker or fuse panel.

Fire Wall: A wall designed to slow the spread of a fire from one area to another. Modern multi family dwellings such as apartments and condominiums should have a firewall between residential units. This usually consists of layers of 5/8", type "X" wallboard with all seams and openings sealed. Commercial buildings have much more stringent standards for fire walls. Doors through firewalls are fire rated and fitted with a device that will automatically close the door to maintain the integrity of the fire wall.

Flashing: A sheet metal or waterproof membrane used to direct water away from vulnerable areas such as roof penetrations, roof valleys, chimneys, as well as around windows and doors in walls.



Footing: The lowest part of the foundation. Has the sole purpose of transmitting the structural loads of the structure to the earth. "Spread" footings resemble an inverted "T" and distribute the loads over a larger area of soil. Other types of footings will provide support for retaining walls, bridges, etc.

Foundation: Provides the support for the structure. Foundations are typically masonry and can be block or poured concrete

Framing: The structural "skeleton" of a building. Typically wood lumber is used in most residential construction. However, metal is also used occasionally in home construction.

Fuse: An electrical device used to protect electrical conductors and equipment from damage should the current exceed a maximum value (measured in Amperes). When excessive current is run through a fuse, the metal conductor in the fuse melts and opens the circuit. Unlike circuit breakers, fuses cannot be reset. Care should be taken not to install a fuse with an amperage rating higher than the one being replaced.

Gable: The vertical triangular end of a roof from eaves to ridge. Also, the type or design of a roof that has gable ends.

Gambrel: Type of roof with two slopes. The steeper slope is found above the eaves and the shallower slope is found below the ridge. This type of roof is most commonly associated with barns, but is also found in residential construction.

GFCI Device: Also known as a Ground Fault Interrupter or Ground Fault Circuit Interrupter (GFCI). GFCI devices are required for convenience outlets in new residential construction at locations that are near water sources. These areas include kitchens, bathrooms, near sinks, in garages and at exterior locations, as well as to whirlpool tubs and pools. GFCI devices are designed to interrupt (turn off) power to specific protected outlets if an imbalance or short circuit occurs. One device will often be wired so that it protects more than one outlet in a given circuit. The reset will be located either at the device or at the circuit breaker in the electrical panel. If an outlet in one of these areas does not function, the cause can often be traced to a "tripped" GFCI device. Resetting the device should restore power to the affected outlet. If this does not, the problem may be a defective appliance or GFCI device.

Girder: A beam used in the support of a floor. Sizes typically range from 4x6 to 6x12, depending on the load and span of the girder. However, the most common sizes used are 4x6 and 4x8. Some types of construction utilize girders as the primary floor support with thick (1 1/16" - 1 1/2") sub floor sheathing. Girders can be solid wood, laminated wood or metal.

Glazing Compound: Soft, putty-like material used to hold a glass pane in a wood window sash. This material hardens over time and will fall out, necessitating periodic re-glazing.

Grade: The top surface of the soil. Also may refer to the slope of the top surface of the soil.

Ground: A conductor that attaches the electrical system to the earth. In modern residential construction, a wire that is embedded in the concrete foundation at the time of construction provides ground. This "ufer" ground is then attached to the ground attachment in the main electrical panel. As this wire is encased in concrete, this type of ground is not visible for inspection. Ground can also be provided by driving an approved "ground rod" into the earth. The metal water and gas supply pipes are also "bonded" to the ground system to provide a direct path to earth for any electrical current.

Grounding Electrode: The point at which the electrical system is attached to the earth (grounded). Typically provided by a ground rod or concrete encased electrode (Ufer).

Grounding Electrode Conductor: The conductor/wire that attaches the electrical service to the grounding electrode.

Gutter: A trough installed at the eaves to intercept and re direct rainwater.

Half Hot Outlet: One of the receptacles in a "half hot" outlet is wired to a switch and the other is always "hot" allowing two different appliances to be plugged in.

Hip: The diagonal intersection between two connecting planes of a roof that extends from the ridge to an outside corner of an exterior wall. Also, the type or design of a roof that has hips instead of gables at outside corners.

Heat Pump: This is an electrically powered appliance used to heat or cool the interior of a building. A refrigerant gas is distributed through a closed loop between a compressor and an evaporator. Heat is generated during the compression cycle and the gas is distributed to a finned radiator. The gas then is allowed to expand in the evaporator. This part of the process significantly cools down the gas and it is distributed to another finned radiator where it can absorb heat energy. The direction of the gas is determined by the need for heating or cooling of the interior.

HVA/C: Heating, Ventilation and Air Conditioning.

I Joist: Manufactured wood joist that resembles a capital "I" in cross section. Using principles similar to "I-Beams", this structural member can be constructed of a combination of solid wood, plywood and/or wafer board, and is marketed by a variety of manufacturers.

Jamb: The frame that encloses a window or door.

Joist: Structural framing member installed horizontally on edge and used to support floors and/or ceilings.

Laminated Veneer Lumber: (LVL) Similar to plywood except that the layers of veneer are generally parallel to each other instead of perpendicular.

Mansard: Type or design of a roof with two slopes and usually two types of roof membrane. A steeply sloped section (often nearly vertical) of roof is located at the perimeter of the structure that is primarily decorative, and a low-sloped (often nearly flat) section that typically provides the roof for the majority of the building. Most commonly found on commercial buildings, but also associated with some types of Victorian architecture.

MDF: Medium Density Fiberboard. Similar in manufacture to particleboard, but made with smaller particles. Used in interior finish materials, such as molding and cabinetry. This material is susceptible to swelling from moisture.

Moment Frame: Steel moment frames generally consist of beams and columns joined by a combination of welding and

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bolting. They are designed to resist lateral loads through bending of the frame elements.

Mud Sill: Typically, a 2x4 or 2x6 pressure treated or redwood board which is installed between the foundation and the wood frame of the structure.

P-Trap: "U" shaped drain fitting found under a sink, shower or bathtub. The p-trap for a toilet is formed into the porcelain bowl. This provides a water "weir" that prevents sewer gases from venting into the interior of the building.

Parging: A sand and cement mortar plaster coating typically applied to masonry.

Particleboard: Manufactured wood construction material consisting of small chunks of wood glued together to form a solid sheet. Typically used in cabinets and as a base for resilient flooring.

Pilot Light: Also known as a "standing pilot". A continuously burning gas flame used to ignite a burner on a gas appliance, such as a water heater, furnace or range/oven.

Platform Framing: Type of construction in which the wall studs for each story rest on the floor framing system (platform) and the wall studs are the height of each story. This type of construction is more common in the western half of the country.

Plenum: A sheet metal box connected to the heater to which the ducting is attached.

Plywood: Manufactured wood construction material consisting of layers of wood veneer glued together with adjacent layers alternating at right angles in relation to each other to form a solid sheet. Commonly used for structural floor, roof and wall sheathing. Common thickness ranges from 1/8" to 1 1/4".

PVC Piping: (Polyvinyl Chloride) Plastic pipe used for water supply, sewer and electrical conduit. The most common use for this piping in residential construction in the western part of the country is sprinkler piping. Also used for main municipal water supply and private well installations. This material is subject to ultraviolet breakdown unless inhibitors are mixed into the material during fabrication. Painting the material can slow damage from the sun.

Rafter: Structural roof framing member typically installed at an incline to provide the slope for the roof.

Rafter Tail: The projecting section of a rafter between the exterior wall and the eave.

Return Air: A furnace duct through which the interior air is returned to the furnace to be heated (or cooled) and then distributed to the interior through the distribution ducting.

Ridge: The horizontal line of intersection at the peak connecting two planes of a roof.

Romex: A brand name for a non-metallic sheathed electrical cable. This is a plastic sheathed electrical cable used in residential construction to provide electrical power to outlets, switches and appliances.

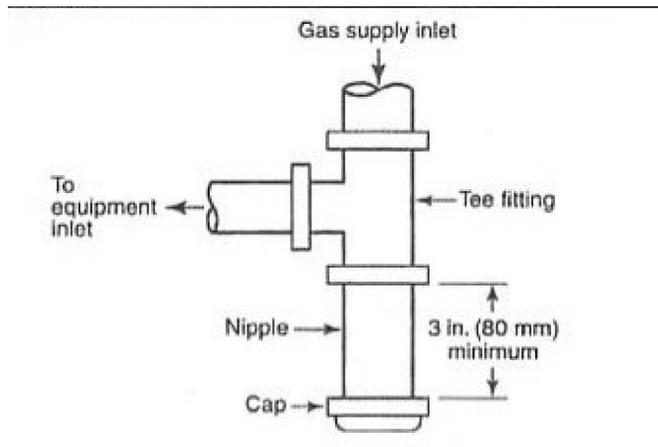
Roof: The structural, and rain proof cover of a building.

Roof Pitch: The incline slope of a roof or the ratio of the total rise to the total width of a house, i.e., a 6-foot rise and 24-foot width is a one-fourth pitch roof.

Roof Slope: The incline slope of a roof. Usually defined in number of inches of rise (vertical) per foot (12 inches) of run (horizontal). i.e., a 4 in 12 slope rises 4 inches per 1 foot of horizontal run.

Sash: The part of a window frame that holds the glass.

Sediment Trap: A short, downward projecting, capped section of pipe that should be located adjacent to a gas fired appliance, typically after the gas shutoff valve and as close to the appliance as practical. The intent is to provide a depository for any loose particles or debris that might be present in the gas piping system before the debris has a chance to clog or foul the gas fired appliance.



Seismic Upgrades: Retrofitted metal hardware and lumber materials added to the structure of a home, typically in and around the foundation area. These can include, but are not limited to: Anchor bolts, used to secure the mud sill to the foundation; framing anchors (such as A-35s), used to secure a wood floor framing system to the mud sill; and shear wall panels (typically plywood or wafer board) which add lateral strength to stud framed walls.

Separation Wall: A separation between two areas that serve different uses/functions. In residential construction, the wall between the garage and the house is not a fire wall, but does provide a separation between living space and vehicle storage. While not a rated fire assembly, it is generally accepted that the intent is to slow the spread of a fire from the garage to the house.

Service Entrance Conductors: The portion of the overhead service conductors which connect the service drop to the service equipment. Typically the responsibility of the homeowner.

Service Equipment: The necessary electrical equipment, usually consisting of circuit breakers or fuses and their accessories, connected to the load end of service conductors to a building or other structure, or an otherwise designated area, and intended to constitute the main control and cutoff for the electrical service. Often referred to as the "main electrical panel", this is the panel where the grounding occurs and is generally where the main disconnect can be found. Usually located at or adjacent to the electric meter.

Service Drop: The portion of overhead service conductors between the pole and the first point of attachment to the building. Typically the property of the utility company.

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Shake: Similar to a wood shingle except that shakes are split while shingles are cut. Splitting results in a non-uniform wedge. However, shakes are typically thicker than wood shingles and therefore tend to last longer as a roofing material. Shakes are installed in a manner similar to wood shingles with successive courses overlapping the seams between the previous shakes. Due to the nature of the material, uneven wear of a shake roof is common. Periodic replacement of damaged or worn shakes is a necessary part of home maintenance.

Shear: In construction, this refers to a sideways or lateral movement. i.e., A shear wall or shear panel is designed to resist sideways movement.

Shear Wall: Also known as a shear panel. An engineered wall designed to resist lateral movement caused by earthquakes and/or high winds. Typically, a wood framed wall is sheathed with plywood or wafer board and nailed with a specific nail spacing to provide this strength. Manufactured shear wall systems are also available. A shear wall is usually connected to the foundation with special "hold down" anchors that are embedded in the foundation.

Sheathing: Wood member used to cover a floor, wall or roof surface. The most common materials used for sheathing in modern construction are plywood and wafer board (OSB).

Siding: Exterior wall covering. Can consist of a variety of materials such as wood, plastic, metal or masonry.

Shingle: Thin, tapered pieces of overlapping building material used to cover a roof or a wall. Shingles are installed in rows or "courses" and overlapped so that vertical seams are covered by successive rows of shingles. The most common type of roofing shingle in residential construction is the composition shingle, also called the asphalt shingle. Wood shingles are more common as an exterior wall siding material but are sometimes still found on roofs. Wood shakes which are thicker and more irregular than shingles are also used as a roofing material.

Stain: A pigmented finish applied to wood siding and trim to help protect it from the weather while still allowing the character of the wood to be seen. Stains applied to exterior woodwork typically do not last as long as paint and, therefore, require more frequent application. Stains come in "transparent" and "full bodied", with the latter having more pigment and binders.

Stop: The raised section of a jamb against which a door or window closes.

Stud: Structural framing member installed vertically to form interior and exterior walls. A typical 2x4 stud measures 1½" x 3½" x 92¼".

Swale: A trench or gutter typically installed at grade level to intercept surface water runoff from a hill.

Transfer Switch: When a backup generator is used, a transfer switch is required to isolate the household electrical system from the electrical utility. Transfer switches can be manual, which require an individual to start the generator and "throw" the switch, or automatic, which will turn-on the generator and "throw" the switch when the power is interrupted.

Truss: Engineered and manufactured support members typically used for roof systems instead of rafters and ceiling joists; however, they can be used as floor joists. The long, outer perimeter sections of lumber are referred to as "chord" members while the shorter interior sections are referred to as "web" members.

Valley: The diagonal intersection between two connecting planes of a roof that extends from the ridge to an inside corner of an exterior wall.

Valve: A mechanical device used to start, stop or regulate the flow of gas or water.

Volt: The "potential" of electricity. Analogous to pressure when measuring the potential of water.

Wafer board: Manufactured wood construction material consisting of wood chips that are glued together to form a solid sheet. Also known as "oriented strand board" (OSB). Commonly used for structural floor, roof and wall sheathing as well as exterior siding.

Wall Board: Also known by the trade names "Drywall" and "Sheetrock", this is a gypsum material sandwiched between paper skins to form an interior wall surface that is affixed to the wall studs and ceiling joists with the use of screws or nails. The seams are then covered with a paper or fiberglass reinforcing tape and smoothed with vinyl joint compound.

Watt: The amount of electricity used. Voltage multiplied by amperage equals wattage.

Weir: The water seal that remains in the bend of a p-trap. The intent of the weir is to prevent sewer gases from venting into the interior of the house.

Additional construction related definitions can be obtained at:

<http://www.builderspace.com/glossary.html>