



Inspected for:
Wendy or Andrew Welling
88 Calistoga Road
Santa Rosa, CA

Full Circle Inspections, Inc.



09/03/2020

Wendy or Andrew Welling

Re: 88 Calistoga Road
Santa Rosa, CA

Dear Wendy or Andrew,

As requested, a visual inspection of the above referenced property was conducted on September/03/2020. 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 this type of inspection is essentially a negative process, I only focus on problematic conditions that I believe should be corrected and generally do not make positive comments. Consequently, the inspection report might be considered by some to be alarming. While I provide a "highlights" section for your convenience, you should not rely on it in place of the full 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, that are disclosed to you, or that you find independently. Also, please be aware that failure to correct any preexisting/known conditions could adversely affect home warranty coverage. The warranty policy should be thoroughly reviewed should you choose to purchase one.

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

Sincerely,

A handwritten signature in blue ink, appearing to read 'Gunnar Alquist'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Gunnar Alquist
Full Circle Inspections, Inc.
122 Calistoga Rd. #196
Santa Rosa, CA 95409
707 528-7010
Gunnar@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, problematic, or unsatisfactory conditions noted within the report should be brought to the attention of licensed and qualified contractors to provide an in-depth evaluation, written cost, and time estimates for corrective work. Any repairs should be performed by licensed and qualified contractors.

The items listed below are of concern or in need of correction or repair. Other unsatisfactory conditions may also be present and more specific information can be found in the narrative portion of this report.

Roof

Shingle Roof:

Condition:

The "dish" antenna bracket has been attached to the roof through the shingles.

Foundation Area

Foundation & Grade:

Grade & Drainage:

No check valve present on discharge line of the sump pump.

Heating System

Furnace/Heater:

Distribution:

A section of the ducting has been damaged.

Plumbing System

Supply:

Water Pressure:

Water pressure at time of inspection was approximately 95 psi.

Electrical System

General Wiring:

Attic Area Wiring:

The porcelain light fixture is hanging by the electrical wiring.

Foundation Area Wiring:

Electrical cable is lying on soil.

Full Circle Inspections, Inc.

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122 Calistoga Rd. #196

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General Conditions

Client Information:

Client:

Wendy or Andrew Welling
Present for the inspection.

Agent:

Doug Swanson. Present for the beginning of the inspection.

Building Information

Inspection Address:

88 Calistoga Road
Santa Rosa, CA

Structure Type:

This is a wood-framed, one-story, 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/>

General Information:

File Number:

0920-7758

Date & Time:

Inspection began at approximately 2:00 PM and finished at approximately 4:00 PM
09/03/2020

Inspector:

Gunnar Alquist

Weather:

The temperature was approximately 75° - 80° and the sky was clear and smoky at time of inspection.

Orientation:

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

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 on the California Real Estate Inspection Association Standards of Practice and the California Business & Professions Code §7195-7199 and is not a criticism of the current owner, building, or maintenance. The inspection and report are not intended to verify code compliance, 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. 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. If you are not the named client, I recommend you obtain an inspection from an independent inspector to ensure your interests are best represented. As verification of product or appliance recalls is beyond the scope of this type of 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 comments made about systems/conditions that are excluded in the Inspection Agreement are provided for convenience only and do not represent an inspection. Any opinions expressed regarding adequacy, capacity, or expected life of components are general estimates based on the inspector's experience with similar components and variations are to be expected between estimates and your actual experience. Any included photographs or digital images are only intended to help provide clarification for specific items and will not include all problem areas or conditions noted in, nor are they intended to substitute for, the written report. Any problematic conditions or systems described in this report should fully be reviewed (within any applicable contractual time constraints, including - but not limited to - a real estate contingency period), and corrected and certified 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 by licensed contractors as well. I do not provide work estimates as costs can fluctuate widely and I recommend that any bids for corrective work be obtained, within any applicable time constraints, to provide a more complete idea as to actual costs. Documentation of properly completed repair work should be provided in the form of a completed building permit, contract, work order and/or receipt. To the best of my knowledge and belief, all statements and information in this report are true and correct. If the report is resold, given, transferred, or otherwise allowed to be used by another person, the client agrees that Full Circle Inspections, Inc. will be held harmless. This report is covered by the Inspection Agreement. If litigation consultation services are desired, an additional contract for litigation consultation will be necessary.

Environmental & Toxic Concerns:

The identification of toxic materials, asbestos, formaldehyde, lead, "Chinese" drywall, mold or other environmental hazards or conditions is beyond the scope of a home inspection and can only be made in a laboratory. If concerned, a qualified industrial hygienist or testing laboratory should be consulted. Many products used in construction may contain materials that can be toxic/hazardous. While the use of some of these materials has decreased since the late 1970s; they are still found to varying degrees, particularly in products imported from overseas. Further evaluation by sampling of suspect material for undesirable or toxic substances by a qualified testing laboratory would be prudent.

Exterior

The noninvasive inspection of the exterior of the home is intended to determine general conditions of soil slope/grade in the area adjacent to the home as well as the exterior conditions of the home. Siding, trim, windows, and other exterior items on the house are evaluated for obvious defects and no destructive testing is performed. It would be best to have a licensed contractor fully investigate any listed recommendations for corrective work prior to the end of the inspection contingency period. Any corrective work, whether discovered during this inspection or discovered or created while performing repairs, should be completed, documented and certified by a licensed and qualified contractor.

Lot:

Driveway:

Poured concrete. Cracks are present in the driveway slab. 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:

Poured concrete. Cracks are present in the concrete 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:

Structure is on a sloped lot.

Surface drains are present. Verification of drainage systems is beyond the scope of this inspection. Drainage systems should be regularly cleared of debris to ensure continued operation. Client is advised to consult with the seller for any available information regarding this system.



Soil Conditions:

While this inspection and report does not verify soils or geologic conditions, expansive soils are commonly found in this area. This type of soil will expand when wet and contract when dry, often leaving cracks in the soil and gaps between the foundation and the surrounding grade. This is typically a seasonal condition triggered by winter rains, although excessive landscape irrigation can also result in soil movement. As stability of soils cannot be determined through a home inspection, client should consult with a soils engineer if excessive cracks or evidence of heaving/settling are found.

Manufactured Siding:

Lap Siding:

The lap siding is a manufactured product that consists of cellulose fibers held together with a portland cement. This material tends to be resistant to moisture and insect damage but is somewhat more brittle than solid wood products.

Voids were observed at the butt joints of the siding. Installation instructions of this type of siding generally allow the choice of either caulking or installation of flashing under the seams at the field butt joints, but flashing under all seams is the recommended treatment. In my experience, the weather barrier under unflashed seams of the siding can become damaged over time as the caulking ages and separates. I was unable to positively verify if any of the butt joints were flashed or the condition of the weather barrier. I recommend consulting with the builder for the installation instructions for this specific siding and information as to which detail/method was used at the butt seams. Seams of the siding panels will expand and contract with changes in weather and will require periodic reapplication of caulking. A good quality flexible caulking that conforms to ASTM C920 Grade NS, Class 25 or higher (such as Sikaflex 1A or equivalent) should be used to seal any vertical seams, at the perimeter of plumbing penetrations, and at the sides of window/door openings. The installation instructions available on the manufacturers' websites should be reviewed for specific information.



Panel Siding:

The panel siding is a manufactured product that consists of cellulose fibers held together with a portland cement. This product is similar to the siding noted above. Please refer to the lap siding notes for related information about the type and maintenance of this siding.

Trim & Windows:

Trim:

Wood.

Windows:

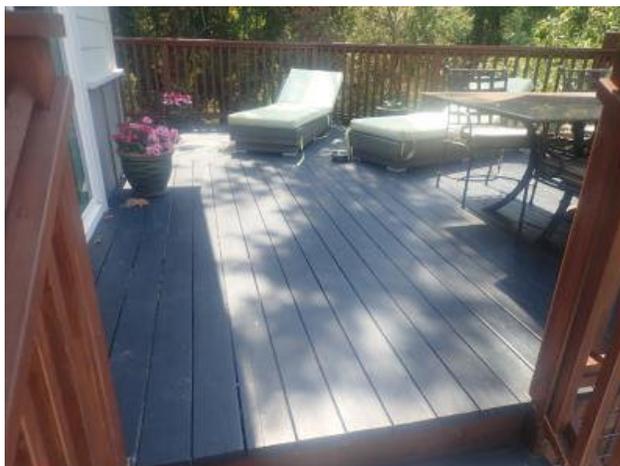
Window frames are vinyl.

Dual-glazing is present in the windows. No evidence of failed seals were found at time of inspection. As determination of failed seals can be difficult to see and identification can be affected by light conditions, weather, dirty glass, etc., I recommend that the current owner disclose any known discolored or "fogged" windows that may have occurred or become apparent at other times or under different conditions.

Exterior Structures

Porch:

Structure:



Wood deck supported on wood framing.

We do not verify soil stability or footing depth under the deck supports. If information about the foundation is desired, a licensed structural engineer or soils engineer should be consulted.

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

Railing:

Intact.

Rear Deck:

Structure:

Wood deck supported on wood framing.

We do not verify soil stability or footing depth under the deck supports. If information about the foundation is desired, a licensed structural engineer or soils engineer should be consulted.

Deck framing consists of pressure treated lumber which is more resistant to deterioration than untreated framing lumber.

Railing:

Intact.

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. It would be best to have a licensed roofing contractor fully investigate any listed recommendations for corrective work prior to the end of the inspection contingency period. Any corrective work, whether discovered during this inspection or discovered or created while performing repairs, should be completed, documented and certified by a licensed and qualified roofing contractor.

General:

Style:

Gable roof.

Roof Access:

Observed from surface of roof.

Flashings:

Through

Penetrations:

Intact.

Skylight:

Intact.



Shingle Roof:

Type:

Laminated composition (asphalt) shingle.

Condition:



The "dish" antenna bracket has been attached to the roof through the shingles. My primary recommendation is to relocate the hardware and repair the roof or to install proper flashing to prevent moisture damage to the roof sheathing. At a minimum, bolt penetrations should be kept well sealed/coated with mastic (asphalt patching compound).

The wear observed on the roof shingles is typical of material that is less than 25% through its useful life.

Roof Drainage:

Type:

Metal gutters.

Attic:

Access:

Access hatch is located at the master bedroom closet. Access was limited due to insulation covering joists and restricted clearance. As fully accessing the attic could result in damaging finished ceilings, review was limited. Viewed from accessible areas.

Framing:

Rafter framing with plywood over spaced sheathing.

A scorched rafter was found adjacent to the furnace gas vent pipe. I suspect this is older and may be from the previous furnace. No evidence of excessive heat observed at the plastic gas vent pipe.



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 and it is possible that the insulation is concealing damage or other problems.

Ventilation:

Attic ventilation is provided by eave, eyebrow dormer, and ridge vents.

Foundation Area

Inspection of the foundation area is limited to those areas that are accessible. Inspection for wood destroying pests/organisms (WDO) is beyond the scope of a home inspection and should be performed by a licensed and qualified WDO pest inspector. Verification of engineering, load calculations, footing depth, or stability of the foundation system is beyond the scope of a home inspection. It would be best to have a licensed contractor fully investigate any listed defects and recommendations for corrective work prior to the end of the inspection contingency period. Most construction and repair work does require permits and inspections by the local building department. Any corrective work, whether discovered during this inspection or discovered or created while performing repairs, should be completed, documented and certified by a qualified and licensed contractor.

Foundation & Grade:

Access Location:

Exterior access is located at the left side of the structure.

The foundation crawlspace area is difficult to enter. I suggest excavation of soil adjacent to the access opening and installation of a box or curb surrounding the opening to prevent soil and water from flowing down into the foundation crawlspace area. Installation of a cover/roof over the opening will help to prevent rain from entering this area.



Foundation:

Poured concrete. Cracks are present in the concrete. These types of cracks can be due to expansion and contraction of the concrete, settling and/or often occur during curing immediately after the concrete is poured. No evidence of excessive cracking was found at time of inspection.

Anchor bolts are present. Determining the exact installation details, proper location/spacing, and adequacy of these anchoring/fastening systems is an engineering evaluation and beyond the scope of a general home inspection.

Grade & Drainage:

Soil was damp at time of inspection. Moisture penetration into the crawlspace is common under buildings in this area and is not normally of concern as long as ventilation is adequate. Periodic inspection of crawlspace for excess moisture is advised.

A sump pump is present. The sump was dry at time of inspection. I operated the pump motor at time of inspection; however, I was unable to determine whether the pump can pump water. Client is advised that pumps can break down at any time. Pump should be reviewed during the rainy season to ensure proper operation.

No check valve present on discharge line of the sump pump. A check valve should be installed on the drain line to prevent water from flowing back into the sump after the pump turns off.



Support System:

Floor System:

The floor support is provided by 4x6 wood girders with solid wood sheathing.

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 and could conceal damage and/or other problems.

Ventilation:

Ventilation of the foundation crawlspace area is limited. A moisture/vapor retarder is present on the soil of the crawlspace. Vapor/moisture retarders typically consist of plastic sheeting loosely placed directly on the soil and are intended to help the present ventilation to operate more efficiently by trapping much of the moisture in the soil. I recommend regular inspections of the crawlspace by a licensed "branch 3" wood destroying pest inspection company to ensure that the moisture/vapor retarder is serving its purpose.

Heating System

The heater is operated and visually reviewed. As the furnace is not dismantled as a part of the inspection, examination of the heat exchanger is limited to those areas that are readily visible, and condition of other inaccessible items/components cannot be evaluated. Thermostats are tested for basic operation only and accuracy or timer operation is not verified. Determining the proper sizing of heating units and ducting is beyond the scope of this inspection. Adequacy, efficiency or the even distribution of air throughout a building cannot be addressed as a part of a home inspection, however a subjective evaluation is made. I suggest consulting with the seller for information regarding past maintenance as well as any known or noticed deficiencies in the heating system. It would be best to have a licensed contractor address any recommendations for corrective work prior to the end of the inspection contingency period. Any corrective work, whether discovered during this inspection or discovered or created while performing repairs, should be completed, documented and certified by a licensed and qualified contractor.

Furnace/Heater:

Type:

Brand: Bryant.

Gas-fired forced air furnace. Input: 60,000 BTU per hour.



Location:

The furnace is located in the attic.

Condition:

Gas shutoff valve and electric disconnect present.

This appliance was operated at time of inspection. Regular maintenance is recommended to ensure continued operation.



Gas Venting:

Intact.

Filters:

Filter is located at the return air grill.

I recommend replacement of filters or cleaning (if reusable filters are present) every three months or as recommended by the furnace manufacturer. Please refer to the manufacturer's operation instructions for specific information.

Thermostat:

Setback type thermostat present. Basic functions were operable. Accuracy, calibration and/or timer functions of the thermostat were not verified.

Distribution:

Where visible, the distribution method consists of flexible plastic sheathed ducting.

A section of the ducting has been damaged. The ducting under the front of the living room is partially crushed. This will reduce the air flow through the ducting and the efficiency of the heating system. Ducting should be repaired or replaced, by a licensed heating contractor.

**Air Conditioning:****Make:**

Brand: Bryant.

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.



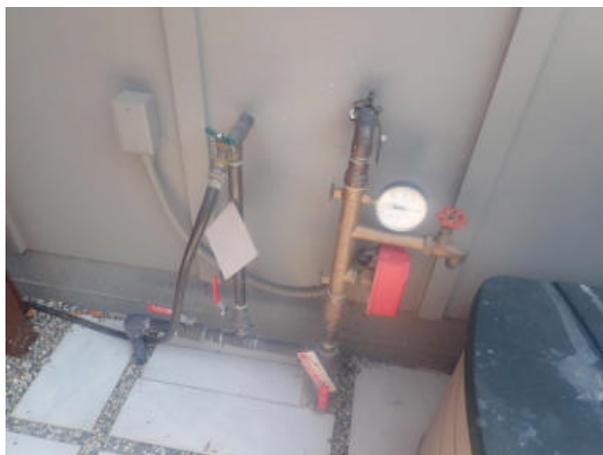
Plumbing System

All underground piping related to water supply, gas supply, drain/waste, or sprinkler uses are excluded from this inspection. Evaluation of the water meter is not included and inspection of the plumbing system begins at the building. Evaluation of water flow from faucets is subjective and judged by operating fixtures and visual observations of flow. Plumbing fixtures are operated, however minor items such as a dripping faucet may not be noted as these are considered routine maintenance. Main and branch shutoff valves are not operated as this can result in leaking around the valve stems. Periodic operation of shutoff valves at the main and individual plumbing fixtures is advised to ensure proper operation. Quarter-turn ball valves tend to be less problematic than gate and globe valves. Plumbing fixtures were not evaluated for current California water-savings compliance requirements; however, I do suggest upgrading any non-compliant fixtures to meet current standards. Unless otherwise noted, I run hot and cold water at sinks, showers and tubs to check drainage flow; however, the condition of the interior and buried sections of the water supply and sewer/drain pipes cannot be evaluated. If the home was constructed prior to circa 1970, buried clay, Transite, or Orangeburg sewer drain piping may be present between the house and city sewer piping. Having a licensed plumbing contractor conduct a video "sewer lateral" inspection is the only way to discover damage or any failure in this portion of the system. It would be best to have a licensed plumbing contractor address any recommendations for corrective work prior to the end of the inspection contingency period. Any corrective work, whether discovered during this inspection or discovered or created while performing repairs, should be completed, documented and certified by a licensed and qualified plumbing contractor.

Supply:

Main Shutoff:

Main water shutoff is located at the right side of the structure.



Water Pressure:

Water pressure at time of inspection was approximately 95 psi. This is above acceptable levels. Water pressure over 80 psi can damage fittings and fixtures, which can lead to leaks and water damage. This is normally corrected by installing a pressure reducing valve near the main shutoff. A licensed plumbing contractor should be consulted for installation or corrections, as needed.



Materials:

Where visible, distribution piping is copper.

Fire Sprinklers:

A fire sprinkler system is present. This is a specialized system and beyond the scope of this inspection. General information and maintenance information can be obtained through the National Fire Sprinkler Association: <http://www.nfsa.org/>
 Owner information can be found at: <http://www.nfsa.org/info/fyi/homeown.html>
 Maintenance information can be found at: <http://www.nfsa.org/info/fyi/maint.html>

Drain:**Material:**

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

PVC and ABS drain piping have been connected together at the hall bathtub. While it appears that a conditionally approved solvent/cement has been used to make the connections, mixing different types of plastic piping is generally not approved without the use of special "transition" fittings. To the best of my knowledge, mixed use of these two materials does not commonly lead to leaks or related problems, and no leaking or loose fittings were found at time of inspection as a result. However, I cannot warranty that leaks will not develop in the future and the most prudent course of action would be to have this corrected by a licensed plumbing contractor.

**Fuel Supply:****Location:**

Meter is located at the right 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/gaselectric_safety/turngasoff/index.shtml If the current owner or occupant removes any existing gas appliances, the valves should be capped to prevent gas leaks.

Some of the gas supply piping is a corrugated stainless steel tubing (CSST). Current standards for this type of gas tubing requires bonding of the gas tubing/piping to the grounding electrode system. I recommend consulting with a licensed electrical

contractor to ensure the metal piping of this home is properly bonded. The following statement is now required by California Business & Professions Code §7196.2. "Manufacturers of yellow corrugated stainless steel tubing believe that yellow corrugated stainless steel tubing is safer if properly bonded and grounded as required by the manufacturers installation instructions. Proper bonding and grounding of this product can only be determined by a licensed electrical contractor." A bonding clamp was observed on the gas piping.

No sediment trap 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. I recommend review of the installation instructions for each gas fired appliance and installation of sediment traps, as needed.

Water Heater:

Type:

Brand: Bradford-White.

50 gallon gas-fired water heater.



Location:

Garage.

This appliance is unprotected. Normally, when a water heater is located in an area where it can be damaged by a vehicle, protection is provided in the form of a bollard (concrete filled metal pole) or similar device. Installation of a bollard or other protection is advised.



Gas Venting:

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. <http://ssc.ca.gov/>

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.

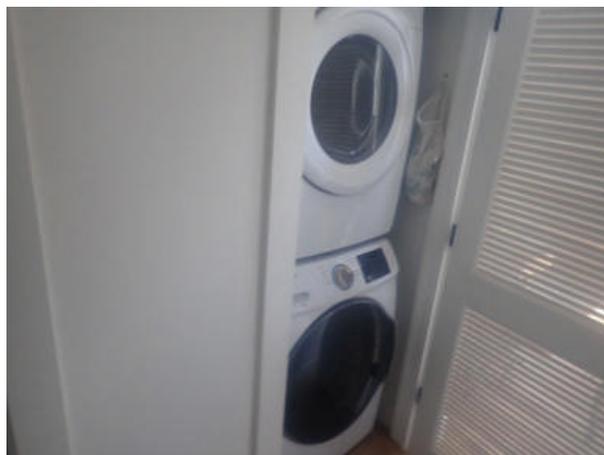
Typically, when street pressure is high, an expansion tank is installed above the water heater to allow expansion of the hot water. I recommend that a licensed plumbing contractor install an expansion tank.

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

Laundry:**Location:**

Laundry is located at the hall closet.

Review was limited due to the presence of the laundry appliances. This area can be reviewed once the appliances have been removed.



Electrical System

The noninvasive inspection of the electrical system is a combination of a visual evaluation of accessible panels, wiring, receptacle outlets, switches, and basic operation of accessible switches, light fixtures and receptacle outlets. Condition of inaccessible, concealed, and buried items cannot be evaluated. It would be best to have a licensed electrical contractor fully investigate any listed recommendations for corrective work prior to the end of the inspection contingency period. Any corrective work, whether discovered during this inspection or discovered or created while corrective work is performed, should be completed, documented and certified by a licensed and qualified electrical contractor.

Electrical Service:

Type:

Service wires are underground. Underground conductors cannot be reviewed.

Service is 200 amperes, 240 volts.

Electrical Service Equipment:

General:

Service equipment is located at the right side of the garage.



Over Current

Protection:

Over current protection is provided by circuit breakers.

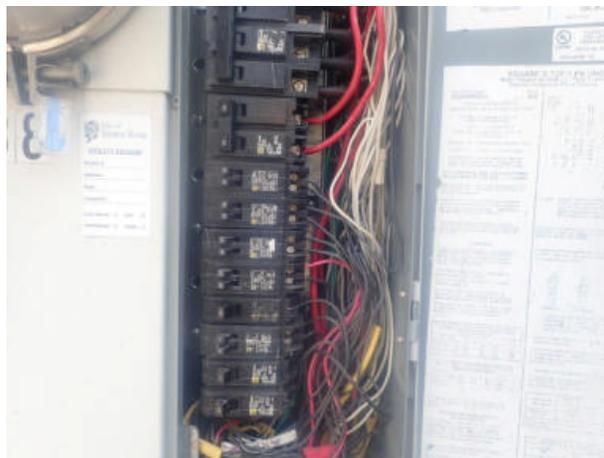
Panel make: Square D.

Service disconnect (main) is present.



Conductors:

Numerous conductors in the panel make review of the wiring and connections difficult. Review was limited.

**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 & Bonding:

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. The grounding connection is not visible. Current construction standards require that the connection be readily accessible.

Corrugated stainless steel tubing (CSST) is present in this home. Current standards for this type of gas tubing require bonding of the CSST to the grounding electrode system of the electrical system. The following statement is now required by California Business & Professions Code §7196.2. "Manufacturers of yellow corrugated stainless steel tubing believe that yellow corrugated stainless steel tubing is safer if properly bonded and grounded as required by the manufacturers installation instructions. Proper bonding and grounding of this product can only be determined by a licensed electrical contractor." While a bonding clamp was observed on the gas piping, according to the State of California, only a licensed electrical contractor can evaluate whether or not the bonding is adequate. This should be evaluated by a licensed electrical contractor.

More information is available at

<http://csstsafety.com/CSST-FAQs.html>

<http://csstsafety.com/CSST-solution.html>

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.

AFCI Protection:

AFCI circuit breakers are present. These devices are intended to interrupt power to circuits if arcing is detected. I did not verify operation of the AFCI devices as the home was occupied. I recommend verification of operation once the home is vacant. Most manufacturers recommend monthly testing of each device by pressing the "test" button and replacing, if needed.

Attic Area Wiring:

The porcelain light fixture is hanging by the electrical wiring. This should be properly secured/attached to the junction box.

Unable to view the majority of the electrical wiring due to the presence of insulation.



Foundation Area Wiring:



The sump pump receptacle outlet is not GFCI protected. Ideally, this would be supplied by a GFCI device to help increase safety. The device itself can be installed in a convenient, interior location to allow easy reset and have an indicator that will light-up if the device has been "tripped".

Electrical cable is lying on soil. Cables are not secured to the underside of the floor framing. This cable should be raised and attached to the substructure framing to prevent damage to the insulation and/or conductors. The cable sheathing should be examined for damage concurrently with raising/attaching. If damage is found, the cable should be replaced by a licensed electrical contractor. Typically, nonmetallic sheathed (romex) cables are required to be secured every 4 ½ feet. Securing cables is advised.

Electrical Fixtures:

Exterior Fixtures:

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

Garage Fixtures:

120 volt 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.

Kitchen

The kitchen review is a combination of a visual inspection and basic functional operation of built-in appliances, and plumbing fixtures. To ensure safety, you should review the operation instructions for each appliance prior to use. Many modern appliance manufacturers now have installation instructions available online. Stand alone refrigerators/freezers, if present, are typically considered personal property and are outside the scope of the inspection; and, in any case, 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 household 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 a solid, manmade material.

Floor:

Floor covering is wood.

Walls & Ceilings:

Serviceable.

Windows:

Serviceable.

Plumbing:

Sink:

Stainless steel bowl.

Single lever faucet.



Supply & Drain:

No airgap present on the dishwasher drain line. Installation of an airgap is advised.

Disposal:

Make: In Sink Erator.

Appliances:

Ventilation:

Fan/Hood operated when tested.

Range:

Brand: Bertazzoni, gas range.

Control knobs must be held/pushed-in in order for the burners to ignite. I recommend review of the manufacturer's operation instructions for more information,



Dishwasher:

Brand: Bosch.

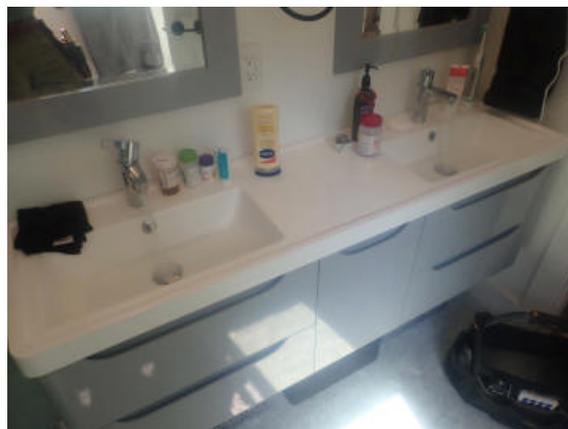
Bathrooms

Bathrooms are visually inspected for signs of moisture and leaking. Plumbing fixtures are operated to check for water flow. Minor items such as a dripping faucet are not always noted as they are considered a part of routine maintenance.

Master Bathroom:

Sink:

Two sinks present.



Toilet:

Serviceable.

Shower & Surround:

Tile surround walls with a prefabricated shower pan.

Labels in the corner of the shower enclosure doors identify the presence of safety glass.

Single lever faucet.



Ventilation:

Operable.

Counter & Cabinets:

Serviceable.

Floor:

Floor covering is tile.

Walls & Ceiling:

Serviceable.

Doors:

The door is misaligned and sticks at the jamb. I recommend adjustment or corrections, as needed.

Windows:

Serviceable.

Hall Bathroom:

Sink:

Single lever faucet.



Toilet:

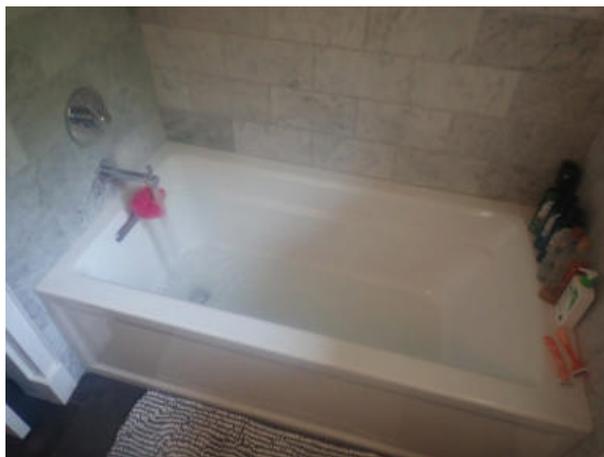
Serviceable.

Tub & Surround:

Tile surround walls

Single lever faucet.

Valve handle rotates freely past the off position without stopping. Single lever faucets normally will stop rotating when the valve is at the "off" position. Oftentimes this can be corrected by adjustment under the valve handle. If this does not correct operation, a licensed plumbing contractor should be hired to review this valve and make the necessary repairs.



Ventilation:

Operable.

Counter &

Cabinets:

Serviceable.

Floor:

Floor covering is tile.

Walls & Ceiling:

Serviceable.

Doors:

Serviceable.

Windows:

Serviceable.

Half Bathroom:

Sink:

Single lever faucet.



Toilet:

Serviceable.

Ventilation:

Operable.

Counter & Cabinets:

Serviceable.

Floor:

Floor covering is tile.

Walls & Ceiling:

Serviceable.

Doors:

Serviceable.

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 wood and carpet.

Walls:

Serviceable.

Ceilings:

Serviceable.

Windows:

Serviceable.

Exterior Doors:

Labels in glazed doors indicates the presence of safety glass.

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

Interior Doors:

The door at the left/front bedroom is misaligned and rubs at the jamb. I recommend adjustment or repair to allow the door to operate freely.

Closets:

The closet door at the hallway is misaligned and sticks at the jamb. I recommend adjustment or repair to allow the door to operate freely.

Alarms:

Smoke Alarm:

Located at the bedrooms and hallway. Smoke alarms should be tested on a monthly basis to ensure proper operation. The National Fire Protection Association advises that all smoke alarms be replaced every 10 years. The National Fire Protection Association and the Consumer Products Safety Commission recommend use of both ionization and photoelectric, or combination-type smoke alarms to protect against the widest range of fire types. More information regarding smoke alarms can be found at:

<https://www.cpsc.gov/s3fs-public/559.pdf>

https://www.usfa.fema.gov/prevention/outreach/smoke_alarms.html

<https://www.nfpa.org/Public-Education/By-topic/Smoke-alarms>

<https://www.nfpa.org/Public-Education/By-topic/Smoke-alarms/Ionization-vs-photoelectric>

Carbon Monoxide

Alarm:

Located at the hallway. Manufacturers recommend that all carbon monoxide alarms be replaced every 10 years.

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:

Separation wall between the garage and house is intact.

Ceiling:

Serviceable.

Vehicle Door:

One metal sectional overhead door.

Door springs are "safety" type.

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

The height of the "electric-eye" sensors for the opener is excessive. Most garage door manufacturers' installation instructions require the sensor to be installed no more than 6" above the slab. The installation instructions for this opener should be reviewed and corrections made, as needed.



Doors:

A self-closer is present on the door between the house and garage.

Other Comments:

Review of the garage was limited due to 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.

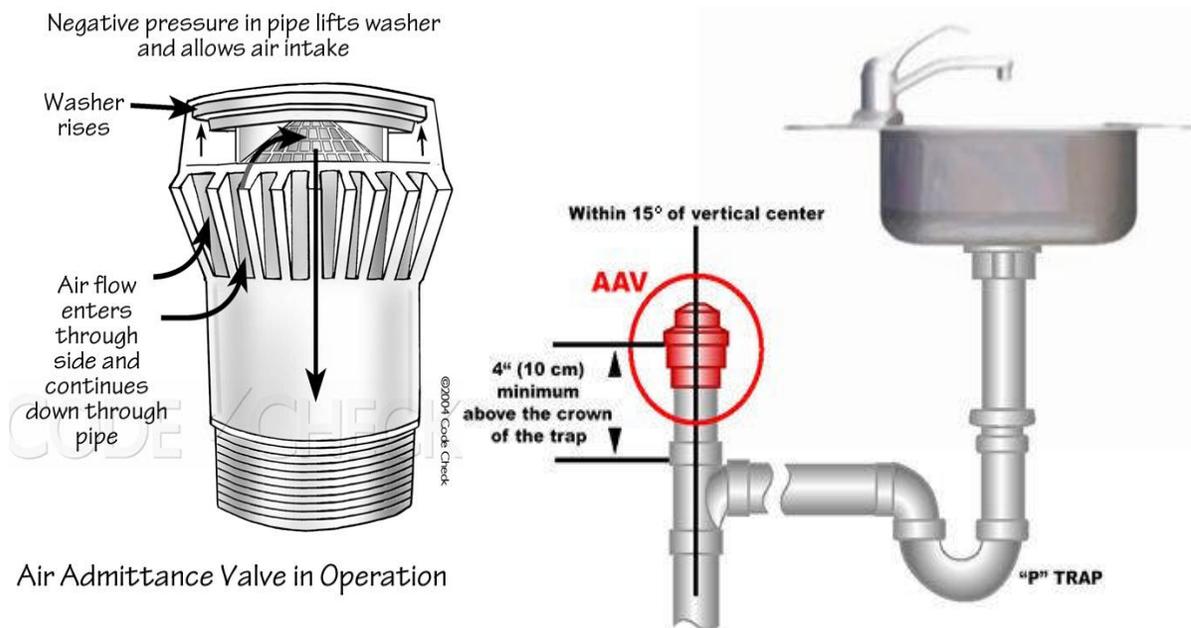
Glossary of Terms

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 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 Admittance Valve in Operation

Air Gap: An intentional separation of air between the water supply and the drain receptor (sink, tub, shower pan, etc.). This separation can also be provided by 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.

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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 no bolting is present, 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.

Blocking: Wood members typically installed between wood members (such as floor or ceiling joists) to provide support by transferring the load to adjacent framing members.

Bonding: Connecting together non current-carrying electrically conductive components. Metal piping, in particular, should be connected to the electrical grounding system to help prevent electrical shock/electrocution.

Branch Circuit: The electrical circuit used for receptacle outlets, lights, and appliances.

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.

Buss Bar: Metal bars (typically copper or aluminum) in an electrical circuit panel box, which are used to distribute the electrical voltage/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.

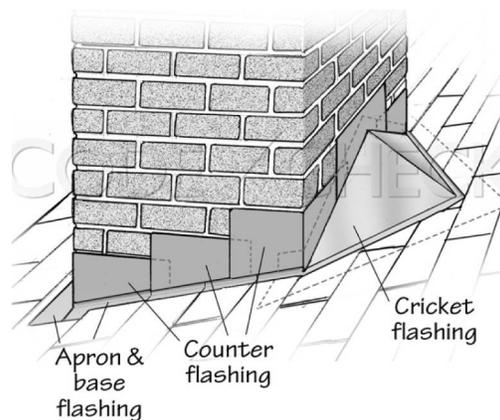
Conductor: A wire capable of carrying an electrical current. Generally, copper or aluminum.

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

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.

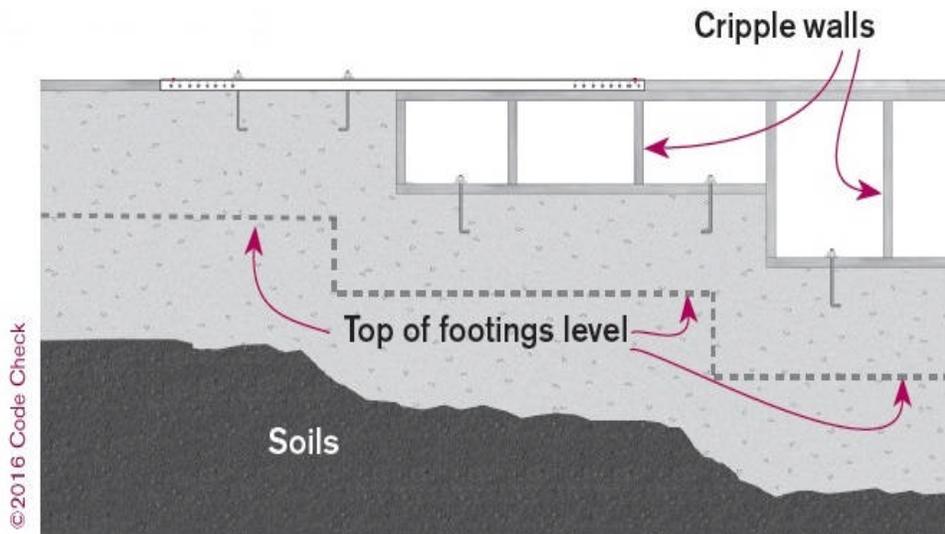
Cricket: A small roof, which can be installed uphill of a chimney, but is often located at other areas as well, such as where the roof slopes toward a perpendicular wall. The peak of the cricket is oriented perpendicular to the primary slope of the roof and the intent is to direct water around the obstacle. The lack of a cricket will allow debris to build up and could result in leaks.



Chimney Cricket

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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.

Drip Leg: A drip leg or drip, if present, may be found at the lowest point of the gas supply piping where any condensed moisture is likely to collect. Different from a Sediment Trap, the gas flow does not change direction as it does in a sediment trap and drips are used in gas piping systems when moisture is present in the gas supplied by the gas utility supplier. Any requirement for drip legs would originate from the gas utility supplier or the local building department.

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

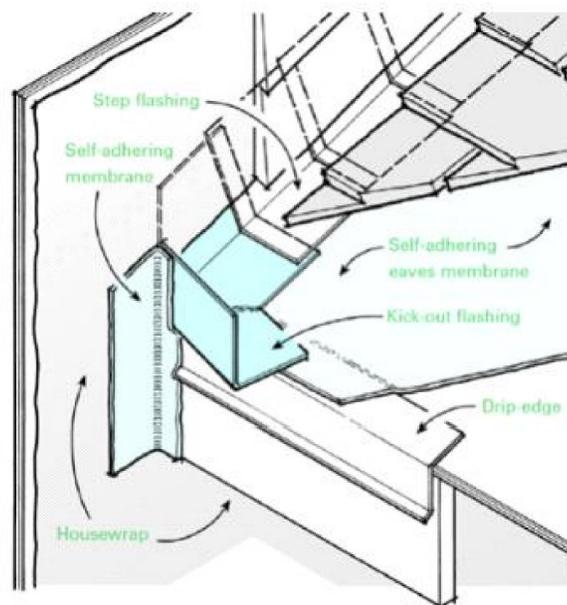
Efflorescence: White "fuzzy" mineral build-up, typically found on concrete, unglazed tile or masonry, caused by moisture leaching minerals out of the masonry.

Eave: The bottom, horizontal edge of the roof.

Equipment Grounding Conductor: The grounding conductor/wire that attaches a device (such as a receptacle outlet, light fixture or other electrical device) 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.



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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 light frame 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 (GFI/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: Connecting the electrical system to the earth. In modern residential construction, a wire/conductor is embedded in the concrete foundation or attached to the steel reinforcing of the foundation at the time of construction which provides grounding for the electrical system. This "ufer" ground is then connected to the ground attachment in the service equipment. As the conductor is encased in concrete, this type of ground is not visible for inspection. Ground can also be provided by driving an approved "made rod" into the earth. The metal water and gas supply pipes are also bonded (connected) to the grounding system to provide a direct path to earth for any electrical current that might be present in the metal piping. While using the metal supply piping was an acceptable method of grounding an electrical system at one time, the use of plastic piping in the past few decades has rendered this method obsolete and a separate grounding system is necessary.

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).

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

Gutter: A trough installed at the eaves to intercept and redirect 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.

Hardscape: Exterior walkways, pathways, driveways, etc.

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.

HVAC: 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.

Main Disconnect: The primary means of disconnecting electrical power to a building or a branch circuit distribution panel. Also known as main switch or main breaker.

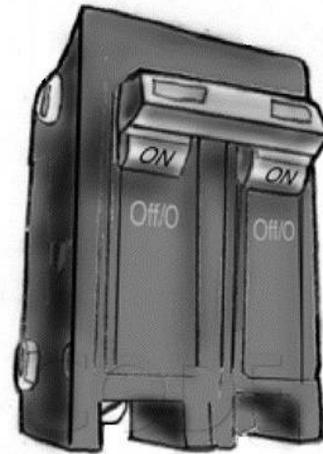
Mansard: Type or design of a roof with two slopes and usually two types of roof membrane. A steeply sloped section (often nearly vertical) of roof is located at the perimeter of the structure that is primarily decorative, and a low-sloped (often nearly flat) section that typically provides the roof for 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 bolting. They are designed to resist lateral loads through bending of the frame elements. Generally used to reinforce openings against earthquake damage.

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.

Overcurrent Protection Device: A device that prevents excessive amperage from running through an electrical circuit. Most common are circuit breakers, but fuses are also an effective means to protect circuit wiring from high current.



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".

Potable: Water intended for consumption.

Pressure Reducing Valve: Generally located adjacent to the main water supply shutoff valve, these are typically used when the water utility pressure is excessive and will reduce water pressure to acceptable levels. These should only be adjusted by a licensed plumbing contractor.

Pressure Regulator



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.

Receptacle Outlet: A point on the household electrical system to which the plug/cord of an appliance or light fixture can be connected and is not intended for a specific (permanent or semi permanent) appliance.



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.

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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.

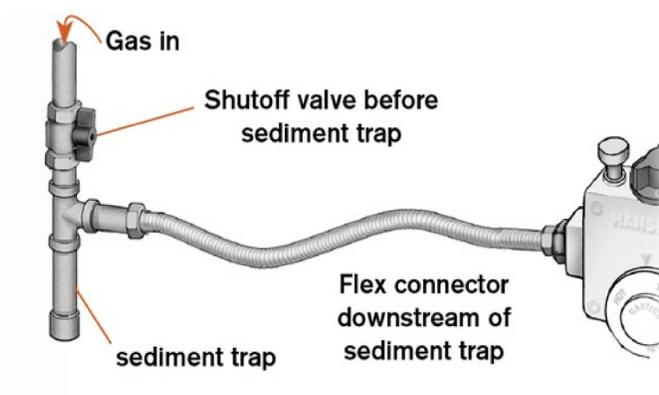
Roof: The structural, and rain proof cover of a building.

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 just before the gas shutoff valve and the flexible gas connector to the appliance. Often incorrectly referred to as a "drip" or "drip-leg", the gas flow must change direction and 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, 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 property owner.

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 colloquially referred to as the "main electrical panel", this is where the power conductors entering the building can be switched-off to disconnect the premises' wiring from the power source. Usually located at or adjacent to the electric meter.

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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.

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 regular maintenance.

Shear: In construction, this refers to a sideways or lateral force. i.e., A shear wall or shear panel is designed to resist sideways movement. This movement can be applied by earthquakes or wind.

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: 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); however, solid wood sheathing was commonly used prior to the 1960s and is used in decorative applications, as well.

Siding: Exterior wall covering. Can consist of a variety of materials such as wood, plastic, metal, cement 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 length measures 1½" x 3½" x 92¼".

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

Switched Outlet: A receptacle outlet that is connected to a toggle switch. Typically intended for table or floor lamps; however, can operate an appliance.

Transfer Switch: Used in conjunction with a backup generator, 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 power from the utility is interrupted.

Truss: Engineered and manufactured support members typically used for roof systems instead of rafters and ceiling joists; however, some are designed to 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.

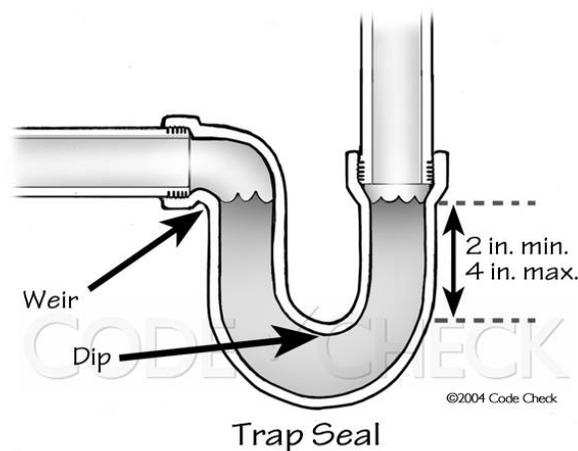
Volt: The potential of electricity. Analogous to pressure when measuring the potential of water.

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>