Inspected for:
Linda or Bret Anderson
3510 Alta Vista Avenue
Santa Rosa, CA

11/30/2020

Linda or Bret Anderson

Re: 3510 Alta Vista Avenue
Santa Rosa, CA

Dear Linda or Bret,

As requested, a visual inspection of the above referenced property was conducted on November/30/2020. 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,

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 corrective work should be performed by licensed and qualified contractors.

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

Exterior
- Lot:
  - Steps:
    Step treads/risers are inconsistent.
    Steps do not have proper handrails.

  - Pool/Spa:
    A built-in pool is present. Pools, spas and ponds are a drowning hazard, particularly with children. No safety measures were in place.

Exterior Structures
- Patio/Deck:
  - Railing:
    Railing is lower than allowed by current construction standards.

Plumbing System
- Fuel Supply:
  - Location:
    The gas valve at the laundry/dryer location is not capped.

- Water Heater:
  - Gas Venting:
    The gas vent pipe immediately above the tank is improperly sloped.

Electrical System
- Carport Panel:
  - Over Current Protection:
    Not all of the pool circuits are GFCI protected.

Interior Rooms
- Windows:
  Glass is cracked/broken at the right/front bedroom window.

- Stairs:
  Steps do not have a proper handrail.
  The guardrail is lower than allowed by current construction standards.

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

Exterior

Lot:

Walkways:
Walkway at the left side has pipes that terminate onto the walkway and the surface appears lower than the surrounding areas.

Grade & Drainage:
Evidence of water penetration and standing water were observed in the foundation crawlspace area, basement, and garage.

Trim & Windows:

Trim:
Trim is decayed/damaged at various areas.

Exterior Structures

Patio/Deck:

Deck:
Weathered deck boards were found.

Steps/Stairs:
The composite deck boards are deteriorated/damaged.

Roof

Low-Sloped Roof:

Condition:
The upper low sloped sections of the roof could not be inspected.

Attic:

Leaks:
Moisture staining was found on the roof sheathing at various areas throughout the attic and some decay was found above the master bedroom.

Other Comments:
Animal feces/droppings and trails were found.

Foundation Area

Support System:

Mid-Span Support:
Decayed/damaged wood post found under the living room or dining room.

Ventilation & Insulation:

Ventilation:
Some screens are damaged/missing.

Heating System

Furnace:

Condition:
This is an older appliance that is likely beyond its expected life.

Distribution:
Sections of the ducting have been damaged.

Furnace:
Condition:
This is an older appliance that is likely beyond its expected life.

Plumbing System
Water Heater:
Safety Valve:
The temperature/pressure relief valve installation is improper.

Seismic Bracing:
While two straps are present, they do not appear to have been installed as specified and may not perform as intended.

Kitchen Fixtures:
Sink:
Water leaks at the sprayer handle when the faucet is operated.

Supply & Drain:
"Gurgling" noted when the sink was drained.

Bathroom Fixtures:
Shower:
Water drained slowly from the master bathroom shower.

Electrical System
Carport Panel:
Other Comments:
The conduit adjacent to the panel is corroded.

General Wiring:
Grounding & Bonding:
The ground rod extends above soil level.
The clamp on the ground rod (grounding electrode) is loose.

Attic Area Wiring:
fiberglass insulation is against some of the recessed "can" lights as well as in the electrical junction boxes.

Electrical Fixtures:
Exterior Fixtures:
Weather resistant receptacle outlet covers are aged and do not close reliably.

Interior Fixtures:
The floor receptacle outlet is improper.

Kitchen
Fixtures:
Counter & Cabinets:
The cabinet under the sink is wet.

Doors:
I was unable to open a secondary door at the kitchen area.

Skylights:
Moisture stains were observed adjacent to the skylight.

Interior Rooms

Walls:

Moisture stains were observed on the wall in the living room.

Studio

Interior:

Walls:

Moisture stains were observed on the interior surfaces of the exterior walls.

Carport

Exterior:

Trim:

Exterior wood members are decayed/damaged.

Interior:

Walls:

The block wall at the left/rear was damp and other walls show signs of efflorescence.

Floor Above Framing:

Wood is decayed/damaged at the deck framing above.

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122 Calistoga Rd. #196
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http://FullCircleInspect.com/

Report Contents

General Conditions

Client Information:

Client:

Linda or Bret Anderson
Bret was present at the beginning and end of the inspection.

Agent:

Doug Swanson. Present for the inspection.

Building Information

Inspection Address:

3510 Alta Vista Avenue
Santa Rosa, CA

Modifications have been made since original construction. Building modifications normally require local building department approval, which includes submitted plans and specifications of the work to be performed, city licenses, building permits, on-site progress inspections, and a final sign-off by a building inspector employed by the building department. Verification of permits is beyond the scope of this home inspection. The local building department should be contacted for information regarding the permit history for this property. If any work was done without permits from the local building department, permits should be obtained, the work inspected by a building inspector and any needed corrective work performed by licensed and qualified contractors.

Structure Type:

This is a wood-framed, two-story, single family residence
Perimeter foundation with a crawlspace.

Occupancy:

Largely vacant at time of inspection with areas of stored personal property..

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/ The most recent pest inspection tag found is from North Coast Termite Control. The pest inspection was conducted approximately concurrently with the home inspection.

General Information:

File Number:

1120-7863

Date & Time:

Inspection began at approximately 09:00 AM and finished at approximately 3:15 PM
11/30/2020

Inspector:

Gunnar Alquist

Weather:

The temperature was approximately 45° - 65° and the sky was clear at time of inspection.

Orientation:

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

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:

Asphalt. Cracks are present in the driveway. Cracks of this type are not uncommon and typically due to expansion/contraction and/or soil movement/settling.

Walkways:

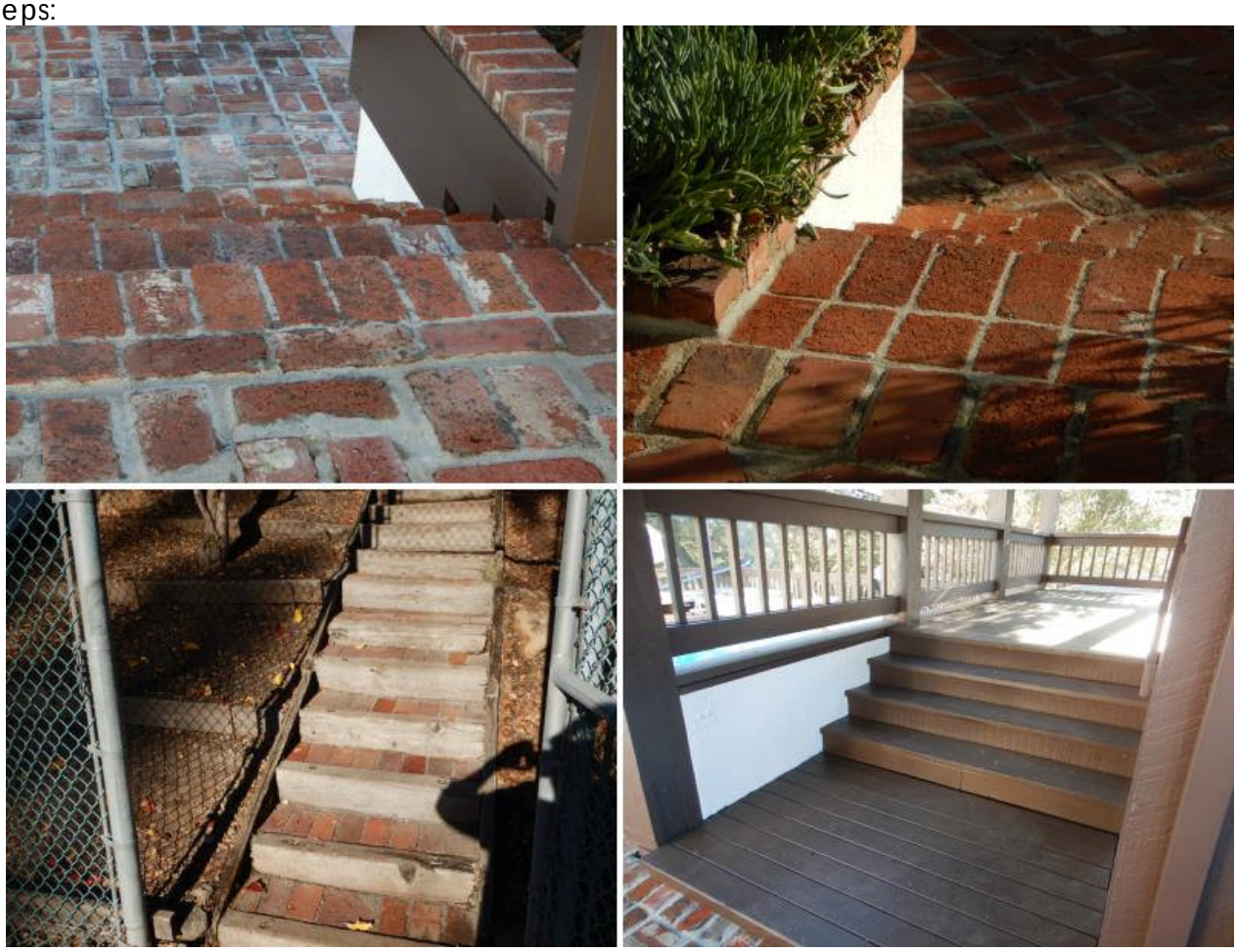
Walkway surface consists of asphalt and brick pavers.

Cracks are present in the walkway. Cracks of this type are not uncommon and typically due to expansion/contraction and/or soil movement/settling.

Pavers are uneven. Displaced/uneven surfaces can cause an individual to trip/fall. I recommend corrections, as needed.

Walkway at the left side has pipes that terminate onto the walkway and the surface appears lower than the surrounding areas. I am concerned that water will collect and stand in this area. This will contribute to water accumulation under the house as well. I recommend diverting water away from this area.

Steps:



Step treads/risers are inconsistent. Typically, the maximum difference in riser height or tread depth for any stairway is 3/8". Current construction standards require that risers not exceed 7 3/4 inches in height and that tread depth be no less than 10 inches. As the current configuration could cause an individual to trip/fall, this should be corrected.

Steps do not have proper handrails. 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.

Retaining Walls:


Walls consist of wood and block.

Sections of the wood retaining walls are leaning somewhat.

The presence of the stucco prevented review of the condition of the block retaining walls.

Grade & Drainage:

Structure is on a sloped/terraced lot.

Evidence of water penetration and standing water were observed in the foundation crawlspace area, basement, and garage. The client reported that the drain in the basement had been blocked by tree roots, which has since been corrected; however, this will likely clog again in the future as the tree will continue to grow. I was unable to verify the condition of the buried drain lines as they are not accessible. A camera can be inserted into the drain piping to allow inspection of the interior. In any case, the basement drain is to collect water that penetrates into the basement and will not address water at the exterior before it enters the foundation area. My primary recommendation is to ensure that water is diverted away from the home with the use of perimeter or "french" drains.

Soil Conditions:

Geotechnical and soils engineering is beyond the scope of this inspection and report and stability of soils cannot be determined through a home inspection. Client should consult with a soils engineer if information regarding geologic or soils conditions is desired.

Slab Foundation:

Slabs are primarily viewed from the exterior perimeter. Interior floor coverings restrict review of the condition of the concrete slab. If the floor coverings are removed, it is likely that cracks will be found in the concrete. I recommend periodic sealing of cracks with epoxy or caulking. I was unable to visually verify if the structure is properly anchored to the slab foundation as the sill plates are enclosed within the finished walls. Further review would require opening walls to look for anchor bolts.

Pool/Spa:

A built-in pool is present. Pools, spas and ponds are a drowning hazard, particularly with children. Homeowners may be held personally liable for injury or death caused by drowning in a pool, pond or spa. Pools, spas, ponds, piping, pumps, timers, and ancillary equipment are not a part of a home inspection and were not reviewed as a part of this inspection. I recommend having a qualified contractor or technician inspect and verify safety and proper operation. Efforts should be taken to provide any needed effective barriers, fences, covers and alarms to prevent unsupervised individuals, particularly children and anyone temporarily or permanently incapacitated or inebriated, from accessing the pool and to help prevent drowning. Safety upgrades including, but not limited to, installation of anti-entrapment drain covers should be addressed before this pool is used.

No safety measures were in place. Corrections should be made to increase the safety of this pool. Ideally, all available efforts would be made to reduce the risk of drowning.
(1) An enclosure that meets the requirements of Section 115923 and isolates the swimming pool or spa from the private single-family home. None present.
(2) Removable mesh fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device. None present.
(3) An approved safety pool cover, as defined in subdivision (d) of Section 115921. None present.
(4) Exit alarms on the private single-family homes doors that provide direct access to the swimming pool or spa. The exit alarm may cause either an alarm noise or a verbal warning, such as a repeating notification that "the door to the pool is open." None present.
(5) A self-closing, self-latching device with a release mechanism placed no lower than 54 inches above the floor on the private single-family homes doors providing direct access to the swimming pool or spa. None present.
(6) An alarm that, when placed in a swimming pool or spa, will sound upon detection of accidental or unauthorized entrance into the water. The alarm shall meet and be independently certified to the ASTM Standard F2208 "Standard Safety Specification for Residential Pool Alarms," which includes surface motion, pressure, sonar, laser, and infrared type alarms. A swimming protection alarm feature designed for individual use, including an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water, is not a qualifying drowning prevention safety feature. None present.
(7) Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the devices set forth above, and have been independently verified by an approved testing laboratory as meeting standards for those devices established by the ASTM or the American Society of Mechanical Engineers (ASME). None found.

Current California Business & Professions Code §7195 requires a home inspector (1) notify the client if at least two of the above noted safety devices are not present and (2) verification of ASTM standards. However, no documentation was available at the inspection and ASTM standards could not be verified. The pool, equipment and surrounding area should be reviewed by a qualified contractor or technician and corrections, upgrades or repairs made, as needed. As the only likely way to ensure ASTM compliance of any of these safety measures would be to install new equipment, I recommend installation of new pool safety measures and/or equipment, as needed, by licensed and qualified contractors to make this pool as safe as practical. In my opinion, the most effective of these safety devices is a permanent fence/enclosure that isolates the pool from the house and remainder of the yard. While the Consumer Products Safety Commission document "Safety Barrier Guidelines for Residential Pools" does not meet the current California standards, it is still a useful reference tool. More information can be obtained at the following websites.
http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=115922&lawCode=HSC
https://www.cpsc.gov/s3fs-public/362%20safety%20barrier%20guidelines%20for%20pools.pdf
https://www.cpsc.gov/s3fs-public/359.pdf
https://www.cpsc.gov/s3fs-public/5005.pdf
https://www.nspf.org/sites/default/files/sitefinity/Files/nspfpreventingentrapment.pdf

Manufactured Siding:

Plywood Siding:

The siding on the exterior of the master bedroom extension appears to be regular plywood rather than a siding material. I do not know if this material is designed for exterior/siding use. Evidence of weathering was observed to the exterior. This should be periodically inspected and repainted, as needed.

Masonry:

Stucco Siding:

Cracks observed in stucco siding. Stucco is a cementitious material and will crack when the structure flexes or moves. Periodic sealing or patching of large cracks and voids is recommended to prevent leaking to the interior surfaces of the walls. This should be done as a part of regular maintenance.

Trim & Windows:

Trim:

Wood.

Trim is decayed/damaged at various areas. Damage may extend into siding and inaccessible areas. As this is not an inspection for wood destroying organisms (WDO) and other areas of damage may be present, I recommend review of this home by a California Structural Pest Control Board licensed "branch 3" inspector and corrections, treatment, or repairs made, as needed.

Windows:

Window frames are wood.

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

We do not verify soil stability or footing depth under the patio/deck. Decks and patios are often an afterthought and consideration is not given to the soil and footings during construction. If information about the foundation is desired, a licensed structural engineer or soils engineer should be consulted.

Patio/Deck:

Patio:

Patio surfaces consist of tile and brick pavers.

Deck:

Wood deck supported on wood framing.

Weathered deck boards were found. Exterior decks are subject to the weather and therefore have a limited life. This should be inspected by a licensed branch 3 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. Deck surface consists of wood framing with a composite/plastic decking material.

Railing:

Railing is lower than allowed by current construction standards. Current construction standards require a minimum height of 42 inches from the deck surface to the top of the guardrail. My primary recommendation is to upgrade or replace this guardrail to help increase safety.

Steps/Stairs:

The composite deck boards are deteriorated/damaged. This could be a result of a defective material. I was unable to determine the remaining useful life and I recommend replacement.

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:

Combination hip and low pitch roof.

Roof Access:

Roof was viewed from the perimeter and accessible locations as the material can be damaged if walked on. Review is limited to areas visible from the perimeter.

Eaves:

The construction of this roof is such that it has minimal eave protection for the walls. As a result, these walls are more vulnerable to the effects of weather. Windows and doors can leak due to wind blown rain. Installation of awnings or covers can help to protect these areas. Keeping siding well sealed and painted is recommended to preserve the condition of the exterior surfaces.

Metal Roof:

Type:

Formed metal tile with a granule coated surface.

Client is advised that this type of roof can be damaged by being walked on and will usually void the warranty. The roof should be walked on only by trained personnel. Unknown if the warranty is transferable and I suggest obtaining documentation from the seller. Ideally, this roof would be reviewed by the roofing contractor who originally installed this roof or a comparable factory-trained roofing contractor.

Condition:

The visible sections of the roof appear to be less than 50% through its useful life.

Low-Sloped Roof:

Condition:

The upper low sloped sections of the roof could not be inspected. As I could not determine the condition of the roof, I am concerned about the stains in the attic as well as the interior. I recommend review of this roof by a licensed roofing contractor. It may be necessary to use a drone to allow aerial photograph of the upper roof.

Roof Drainage:

Type:

Metal gutters.

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.

Attic:

Access:

Access hatch is located at the upstairs hallway closet. Accessed at time of inspection. Limited review at low sections due to restricted clearance.

Framing:

Rafter framing with plywood sheathing.

Insulation:

Insulation consists of loose fill fiberglass and 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.

Leaks:


Moisture staining was found on the roof sheathing at various areas throughout the attic and some decay was found above the master bedroom. Stains were observed in the living room as well. As I was unable to inspect the condition of the upper roof, I cannot provide any information as to whether I believe any of this is due to current or past leaking. I recommend review of the roof by a licensed roofing contractor for more information.

Ventilation:

Attic ventilation is limited. Excess heat in the attic during the summer months can contribute to accelerated wear of the roofing material and moisture can collect during the cold winter months. While no adverse conditions were observed in the attic at time of inspection as a result of the ventilation, increasing ventilation can help to reduce interior temperature during the warm months. This can be modified by installation of eyebrow/dormer or ridge vents by a licensed roofing contractor.

Other Comments:

Animal feces/droppings and trails were found. While no accompanying odor was noticed at this time, I was unable to verify if this represents an infestation that has been corrected or is temporarily dormant. Vermin/animals will damage wiring, ducting and piping by gnawing on the materials, gain access to wall cavities, foul these areas with feces and may pose a health risk. I recommend consulting the current owner for information regarding any past infestations and corrections. As inspections for wood-destroying organisms (WDO) are covered by a "branch 3" license through the Structural Pest Control Board, "termite" inspectors generally do not comment on the presence of general pests (ants, spiders, rodents, etc.). If no documentation of correction can be provided by the current owner, I suggest consulting with a California Structural Pest Control Board licensed "branch 2" pest control company for further review and corrections, as needed.

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:

Interior access is located at the foyer closet and the basement.

I was unable to determine if I was able to fully access to the entire foundation crawlspace due to the presence of rigid ducting.

Foundation:

Concrete block. Unable to determine if all block cells are solid filled with concrete as the mud sill obscures review of the top of the foundation.

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.

For the most part, the anchor bolt spacing appears to be typical for the presumed time of original construction; however, current structures are required to have bolts with a larger diameter, larger washers below the nuts, and additional framing anchors and/or hold-down hardware to further attach the wood structure to the mudsill and increase resistance to seismic movement. If upgrades or modifications are desired, they should be designed and overseen by a licensed structural engineer. For more information, I suggest review documents at the following websites.
www.seismic.ca.gov/pub/CSSC_2005_HOGreduced.pdf
http://www.strongtie.com/
http://www.strongtie.com/ftp/fliers/F-SEISRETRGD12R.pdf

Ceiling:

Stains were observed on the basement ceiling. This is located under the approximate area of the downstairs bathroom and was dry.

Grade & Drainage:

Soil was dry at time of inspection.

Moisture stains and efflorescence on the foundation walls indicate standing water has collected in the crawlspace area in the past. Efflorescence was also observed on the foundation walls. While seasonal water is not uncommon in foundation crawlspaces in this area, water has come into contact and damaged a wood post/support. This is a recurring condition; however, I cannot determine if this has been corrected or is continuing. One course of action would be to hire a civil engineer to review this home and design a drainage system. Another course would be to inspect the crawlspace during the rainy winter months to determine how much water actually enters the crawlspace as well as the basement area and whether or not a drainage system is necessary. If excessive levels of moisture is found, installation of a drain system may be necessary to intercept water before it enters the foundation area. Please refer to the exterior/drainage notes earlier in this report for related information.

Support System:

Floor System:

The floor support is provided by 2x10 wood joists with plywood sheathing.

Girders:

4x10 wood girders.

Mid-Span Support:

Foundation wall and wood posts supported on concrete piers provide mid span support.

Decayed/damaged wood post found under the living room or dining room. As this is not an inspection for wood destroying organisms (WDO) and other areas of damage may be present, I recommend review of this home by a California Structural Pest Control Board licensed "branch 3" inspector and corrections, treatment, or repairs made, as needed.

Ventilation & Insulation:

Insulation:

No insulation present.

Ventilation:

Ventilation of the foundation crawlspace area is limited. While no evidence of moisture damage could be found at time of inspection, increasing ventilation should be considered. Increasing ventilation can be achieved with a few different methods. Adding perimeter vents will often provide increased air flow. Where vents are not practical, installation of a vapor/moisture barrier or retarder on the soil can help to contain much of the moisture in the soil, thereby permitting the existing vents to function more effectively. As an alternative, a ducted vent/fan system can be used to introduce air from the exterior and provide increased air flow to specific areas. At a minimum, this area should be regularly inspected by a licensed "branch 3" wood destroying pest inspection company for any signs of damage or infestation that would require correction or treatment.

Some screens are damaged/missing. Any damaged or missing screens should be replaced to prevent animals from gaining entry to the foundation crawlspace area.

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:

Type:

Brand: Janitrol.

Gas-fired forced air furnace. Input: 200,000 BTU per hour.

Location:

Basement.

Condition:

Gas shutoff valve and electric disconnect present.

The label states that this furnace is for non-residential use. I do not know if there are any potential safety issues with this furnace been installed in a residence. More information can be obtained from a licensed heating contractor.

This is an older appliance that is likely beyond its expected life. Corrosion was observed in the visible portion of the burner compartment as well as around the exterior at the base. While this appliance operated at time of inspection, I am concerned about continued reliability and safety. 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.

Gas Venting:

I was unable to view the sections of the gas vent pipe that are enclosed within finished walls.

Filters:

Filters are located at the blower.

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 sheet metal ducting.

Sections of the ducting have been damaged. The ducting is partially crushed and separations were observed at seams/connections. 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.

Furnace:

Type:

Brand: Janitrol.

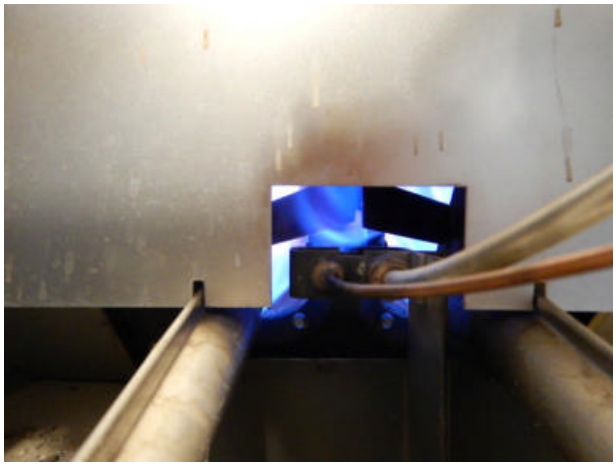
Gas-fired forced air furnace. Input: 90,000 BTU per hour.

Location:

Upstairs hall closet.

Condition:

Gas shutoff valve and electric disconnect present.



This is an older appliance that is likely beyond its expected life. I was unable to remove the flame shield. While this appliance functioned at the time of the inspection, 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.

Gas Venting:

Mineral staining was found at the base of the gas vent pipe. This indicates moisture has condensed on the interior of the gas vent pipe and may be due to the single-walled gas vent pipe or possibly improper venting of combustion gases. As this can result in corrosion/damage of the gas vent pipe and unsafe operation of the furnace, the heating system should be reviewed and corrections made by a licensed heating contractor.

The gas vent pipe has inadequate clearance to the paper on the gypsum wall board. Normally, a minimum clearance of 1 inch to combustible material and a collar or thimble is required where the metal gas vent pipe penetrates through a ceiling or wall. While no evidence of scorching or charring was observed at time of inspection, the gas vent pipe should be isolated from contact with the ceiling and the appropriate collar/thimble installed to close the gap. A licensed heating contractor should be hired to make corrections, as needed.

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 sheet metal ducting.

Client is advised that older sheet metal ducting tends to be inefficient due to leaks at seams and connections. Sealing seams and connections with metal tape or a comparable material can reduce air loss through openings in the ducting and thereby increase efficiency. However, it is unlikely that this will meet the current California Title 24 requirements for new installations.

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:

Unable to locate main shutoff. I suggest consulting with seller regarding this item. If no shutoff is present, one should be installed on the incoming supply pipe by a licensed plumbing contractor.

Water Pressure:

Water pressure at time of inspection was approximately 60-65 psi. This is within normal parameters.

Materials:

Where visible, distribution piping is copper.

Pipe insulation is falling off of much of the supply piping. Replacement of insulation will help to reduce heat loss from the hot water piping.

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:


Meter is located at the left/front of the main house.

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/gaselectricsafety/turngasoff/index.shtml If the current owner or occupant removes any existing gas appliances, the valves should be capped to prevent gas leaks.

The gas valve at the laundry/dryer location is not capped. A cap should be installed on any unused valve to prevent a fire or explosion caused by leaking gas. Corrections should be made by a licensed plumbing contractor.

No trap found adjacent to the gas-fired furnaces. 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: Rheem. Unable to determine the capacity due to the earthquake strap placement.

Location:

Basement

Gas Venting:

The gas vent pipe immediately above the tank is improperly sloped. This will not allow the water heater to draft or exhaust the combustion gases properly and may allow the exhaust gases, potentially including carbon monoxide, to accumulate in this area. The minimum allowable slope is typically ¼ inch of vertical rise per foot of horizontal run. The gas vent pipe should be repaired or replaced by a licensed heating or plumbing contractor.

Safety Valve:

The temperature/pressure relief valve installation is improper. A T/P valve is designed to discharge water from the tank should the water in the tank become too hot or the pressure too high. In this particular case, the end of the discharge line points outward. The pipe should extend to the exterior, turn downward and terminate between 6 and 24 inches from the exterior grade to prevent scalding water from shooting out horizontally should the valve discharge. The temperature/pressure (T/P) relief valve was not tested at time of inspection as it is designed as a safety valve only and may leak after testing. Corrections should be made by a licensed plumbing contractor.

Seismic Bracing:

Seismic/earthquake bracing for the water heater is inadequate. While two straps are present, they do not appear to have been installed as specified and may not perform as intended. The intent of seismic bracing is to restrict the water heater from falling over in the event of an earthquake. The distance from the tank to the wall is greater than 1 inch. A length of ABS pipe was present to fill the distance, but I am concerned that this will not be adequate and could allow the tank to move laterally during an earthquake. Most manufacturers' instructions require this space be filled with a bracket or a framework installed to limit movement. Complete instructions can be obtained from the manufacturer of the kit. These should be reviewed and corrections made, as needed. More information can be obtained from the Division of the State Architect or from the pamphlet titled The Homeowners' Guide to Earthquake Safety. www.seismic.ca.gov/pub/CSSC_2005_HOGreduced.pdf

Condition:

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

Gas and cold water shutoff valves present.

Water heater operated at time of inspection.

Some corrosion was observed at the supply connections. This is due to the galvanized fittings used to make these connections and may indicate past leaking. I recommend these be replaced with brass or dielectric fittings to prevent continued corrosion. The water heater should be monitored for any reappearance of moisture that would require further repair.

This water heater system is equipped with a circulation pump. Circulation pumps are typically used to decrease the time necessary for hot water to reach plumbing fixtures throughout the building by circulating hot water through the piping; however, heat loss through the piping will reduce efficiency and increase gas usage. The circulation pump functioned, but was rather noisy. This may indicate aging bearings and limited remaining life.

Kitchen Fixtures:

Sink:

Water leaks at the sprayer handle when the faucet is operated. This is likely contributing to the water found in the cabinet under the sink. I recommend corrections by a licensed plumbing contractor.

Supply & Drain:

"Gurgling" noted when the sink was drained. This commonly indicates the water "weir" is being siphoned out of the p-trap and typically indicates a blocked or improper vent. I noticed an island loop in the sink cabinet, which should allow the drain to vent properly, but the gurgling is an indication that it isn't functioning. This should be reviewed and corrected by a licensed plumbing contractor.

Bathroom Fixtures:

Sink:

Hot water flow was restricted at the half bathroom sink. Cold water flow was fined. I recommend review by a licensed and qualified plumbing contractor and corrections, as needed.

Supply & Drain:

Older shutoff valves and drain fittings are present at interior plumbing fixtures. Client is advised that older valves often do not function properly and fittings are more prone to leaking due to aged washers and packing. Replacement of older fittings should be undertaken as a part of routine maintenance and repairs.

Shower:

Water drained slowly from the master bathroom shower. This may be due to a partially blocked trap or drain line. Drain should be cleaned or corrections made, as needed.

Laundry:

Washer Hookup:

Present, not tested. Unable to evaluate condition of drain lines.

Dryer Hookup:

Both gas and 240 volt electric are available.

The end of the gas valve is uncapped. The gas valve should be capped if not in use to prevent fire or explosion. A cap should be installed by a licensed plumbing contractor.

The dryer exhaust duct runs up through the attic. This type of exhaust duct can become clogged with lint and should be cleaned out regularly, both at the bottom and at the roof cap. As lint can burn, the duct should be cleaned annually to help prevent build-up of excess lint.

Miscellaneous:

Wet Bar Sinks:

Some of the wet bar sinks do not have even and full flow. I recommend corrections by a licensed plumbing contractor.

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.

Electrical Service Equipment:

General:

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

Service is 200 amperes, 240 volts.

Over Current Protection:

Over current protection is provided by circuit breakers. Service disconnect (main) is present.

Conditions have been reported with this brand of electrical panel (Zinsco/Sylvania) that include arcing at the circuit breaker/buss bar connections. This condition is largely due to the method of attachment between the circuit breakers and the buss bars. As a result of this design, this panel is more likely to fail than a modern panel. To the best of my knowledge, there is no governmental or officially recognized agency currently tracking failures from these circuit breakers or panels and any information that I have been able to find regarding failures is anecdotal. This brand of panel was very commonly used in structures built between the early 1960s through the late 1980s. Consequently, I find this brand of panel in the vast majority of buildings constructed during that time period. Some electrical contractors are reluctant to perform work on these panels, typically citing liability concerns regarding failure. As these panels are no longer being manufactured, upgrade/replacement parts can be difficult and expensive to obtain should the need arise. While no evidence of arcing was observed within this panel at time of inspection, positive determination of the breaker/buss bar connection can only be made by having an electrician remove the circuit breakers in order to inspect the buss bars. However, removing and replacing circuit breakers to examine the buss bar could loosen a connection that had acceptable contact before it was disturbed. As a result, the most prudent course would be to replace this existing panel with a new panel equipped with modern circuit breakers. A licensed electrical contractor can provide more information, costs and any upgrades.

Interior Panel:

General:

Located at the foyer closet.

Clearance to access this panel is restricted. Generally, a minimum clear workspace of 30 inches wide by 36 inches deep is required to allow adequate access to the panel. In addition, panels should not be installed in a clothes closet to keep the panel away from combustible items. As this panel is installed in a clothes closet, corrections would require moving the panel. I recommend review and any needed corrections by a licensed electrical contractor.

Over Current Protection:

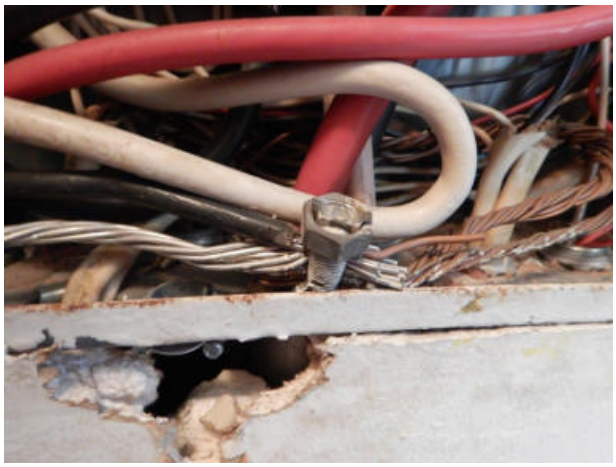
Over current protection is provided by circuit breakers.

Panel make: Zinsco.

Circuit breaker panel is the same brand as the service equipment panel. Please refer to the service equipment notes for related information.

Conductors:

A split bolt connector has been used to connect the grounding wires together. While this was common at time of original construction, current construction standards do not allow more than three grounding conductors under a single terminal. Ideally, a grounding terminal block would be installed in the panel.



Interior Panel:

General:

Located at the foyer closet.

Clearance to access this panel is restricted. Please refer to the previous panel for related information.

Over Current Protection:

Over current protection is provided by circuit breakers.

Panel make: Zinsco.

Circuit breaker panel is the same brand as the service equipment panel. Please refer to the service equipment notes for related information.

Conductors:

A split bolt connector has been used to connect the grounding wires together. Please refer to the previous panel for related information.

Carport Panel:

General:

Located in the closet under the steps.

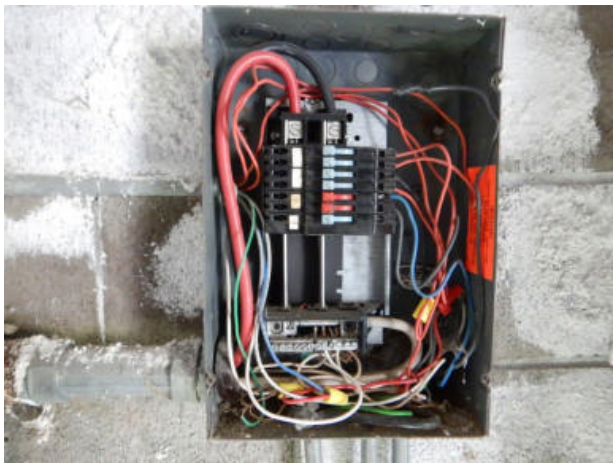
Over Current Protection:

Over current protection is provided by circuit breakers.

Panel make: Zinsco.

<u>Not all of the pool circuits are GFCI protected.</u> Current construction standards require all electrical circuits for new pools and related equipment to be GFCI protected. I suggest hiring a licensed electrical contractor to upgrade the pool electrical with GFCI devices as well as make any needed or additional upgrades or corrections to help increase safety.

Circuit breaker panel is the same brand as the service equipment panel. Please refer to the service equipment notes for related information.



Conductors:

A split bolt connector has been used to connect the grounding wires together. Please refer to the previous panel for related information.

Other Comments:

The conduit adjacent to the panel is corroded. I am unable to determine the condition of the buried portions of this conduit; however, I am concerned that it may be corroded/damaged.

General Wiring:

Conductor Type:

Branch circuit conductors are copper.

Grounding & Bonding:

Ground rod is present.

The ground rod extends above soil level. Current construction standards require that ground rods be in contact with the earth for a minimum of 8 feet. As most standard ground rods are 8 feet long, the top of the rod should be even with the soil level. Corrections will likely require driving the rod so the top of the rod is even with soil grade. The appropriate person to make corrections is a licensed electrical contractor.

The clamp on the ground rod (grounding electrode) is detached. This clamp should be properly secured or replaced, as needed.

Ideally, a secondary ground rod would be installed to ensure proper grounding of the electrical system. Any modification to the electrical system should be performed by a licensed electrical contractor.

No "bonding" jumper found on the water heater supply piping or the gas supply piping. Metal piping is currently required to be connected (bonded) to the electrical grounding system. This may not have been required at time of construction. Should the metal piping become energized (through a short-circuit or other means), the bonding circuit is intended to conduct the electrical current to ground. Normally, a bonding jumper is provided between the inlet and outlet water supply pipes at the water heater, at any dielectric plumbing fittings as well as on a rigid section of the gas supply line to ensure that all of the metal supply piping is properly bonded. While this does not necessarily indicate that the plumbing system is unsafe, bonding of the hot water piping or the gas supply piping could not be verified and installation of bonding jumpers is advised.

GFCI Protection:

This building does not have GFCI (ground fault circuit interrupter) devices installed at the bathroom, kitchen, garage, laundry, or exterior 120 volt receptacle outlets. GFCI devices will interrupt (turn off) power to specific protected receptacle outlets if an imbalance occurs. These devices increase the safety of the electrical system when properly installed and installation should be considered as a safety upgrade. Although this is a straightforward job and installation instructions are included with the device, any modifications to the electrical system should be made by a licensed electrical contractor.

AFCI Protection:

No arc-fault circuit interrupters (AFCI) present. This electrical system predates the requirement for AFCI protection. If client is interested in upgrading the electrical circuits, a licensed electrical contractor should review the system to determine if AFCI installation is practical and installation of upgrades, as needed.

Attic Area Wiring:

fiberglass insulation is against some of the recessed "can" lights as well as in the electrical junction boxes. These lights do not appear to be designed for direct contact with building insulation. Fixtures installed in direct contact with insulation must be IC rated (insulation contact). Non IC lights are a latent fire hazard. As a general rule, I recommend insulation be kept away from the lights unless IC is verified. I also recommend cleaning insulation out of the junction boxes and closing the openings with knockout seals.

Foundation Area Wiring:

Some electrical cables are not attached to the framing. Typically, nonmetallic sheathed (romex) cables are required to be secured every 4 ½ feet. Securing cables is advised.

Electrical Fixtures:

Exterior Fixtures:

Weather resistant receptacle outlet covers are aged and do not close reliably. Aged covers should be replaced for safety.

Kitchen Fixtures:

Receptacle outlets that serve the counter surfaces and appliances are not GFCI (ground fault circuit interrupter) protected. For more information, please refer to the GFCI notes above.

Bathroom Fixtures:

Receptacle outlets are not GFCI (ground fault circuit interrupter) protected. For more information, please refer to the GFCI notes above.

Interior Fixtures:

The floor receptacle outlet is improper. A floor outlet is required to be recessed below floor level and a strong metal cover with removable or openable doors should be used to protect the device from damage. Corrections should be made by a licensed electrical contractor.

Some of the oversized rocker switches do not function properly. These are older switches and replacement will become necessary.

Fireplace

The fireplace inspection is limited to readily accessible components of the fireplace and chimney only. As a home inspection does not include an inspection of the inaccessible portions, particularly the interior of the chimney, now would be a good time to have the chimey and fireplace cleaned and a thorough evaluation of the fireplace system to determine if any upgrades or corrections are needed.

Living Room Fireplace:

Type:

Masonry fireplace.

Cracks were observed in the mortar parging above the throat damper. A visual review was conducted of the readily accessible areas; however, portions (particularly sections of the chimney) are not fully accessible. If this fireplace has not been inspected within the last year, I recommend an inspection conforming to NFPA 211 (14.4) "Level II" (or comparable) by a qualified chimney sweep or fireplace specialist. The period of time around transfer of ownership is an excellent chance to have this done. I also advise annual cleaning and inspection to allow continued safe operation.

Fireplaces are a common source of burns, particularly with children. The areas in front of the fireplace, in particular, can become very hot when in use and remain hot for extended periods of time afterwards. Caution is advised and efforts should be taken to maintain a safe distance from a fireplace that is in use or has recently been used. For more information, please review information at the following websites:
https://www.cpsc.gov/newsroom/news-releases/1975/cpsc-issues-fireplace-safety-tips
https://www.hpba.org/

Gas burner was briefly operated at time of inspection.

Exterior & Chimney:

Stucco exterior. I was unable to evaluate the exterior of the chimney as I did not climb on the roof.

Kitchen Fireplace:

Type:

Masonry fireplace.

Deteriorated mortar and cracked brick observed in the firebox. A licensed masonry contractor should be hired to make any needed repairs.

Gas burner was briefly operated at time of inspection.

Exterior & Chimney:

Stucco exterior. I was unable to evaluate the exterior of the chimney as I did not climb on the roof.

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 tile.

Cracks and chips present in tile and grout. Patching of grout is advised. Ideally, damaged tile would be replaced.

The cabinet under the sink is wet. This is a result of a leak at the sink above.

Walls & Ceilings:

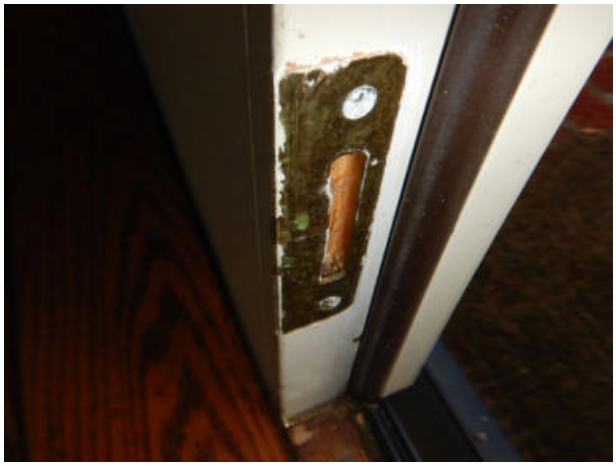
The ceiling adjacent to the fireplace is moisture damaged. Please refer to the skylight notes below for related information.

Windows:

Serviceable.

Doors:

I was unable to open a secondary door at the kitchen area. The threshold and head locks are missing or damaged. I recommend corrections to allow proper operation.



Skylights:

Moisture stains were observed adjacent to the skylight. This is a particularly difficult junction because it is a large skylight and debris will tend to collect on the uphill side of the skylight, which could cause water to leak to the interior. Skylight should be reviewed by a licensed roofing contractor.

Plumbing:

Sink:

Stainless steel bowl.

Water leaks from the sprayer handle while the faucet is on. I suspect this is contributing to the water under the sink. Please refer to the plumbing section of this report for related information.

Supply & Drain:

"Gurgling" noted when the sink was drained. This commonly indicates the water "weir" is being siphoned out of the p-trap and typically indicates a blocked or improper vent. Corrections should be made by a licensed plumbing contractor.

Disposal:

Make: In Sink Erator.

Appliances:

Ventilation:

No metal hood present. The cabinet above the cooktop is wood. I recommend installation of a metal range hood.

Range:

Brand: Kenmore, gas cook top.

Oven:

Brand: Kitchen-Aid, electric wall oven.

Basic functions of this appliance were operated.

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

Dishwasher:

Brand: Electrolux.

Microwave:

Brand: Kitchen-Aid.

Grill:

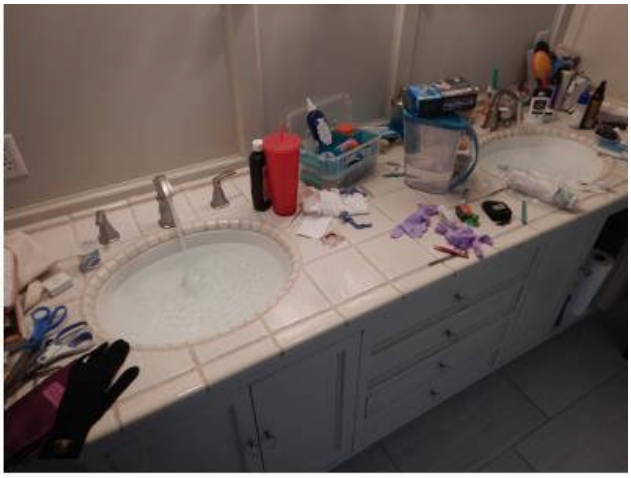
Personal property was piled on top of the grill. As a result, this could not be tested. I recommend verification of operation once the property has been removed.

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:

Three sinks present.
No overflow drain provided at the single sink. This is as originally designed/manufactured. Caution is advised as the sink could overflow if not monitored while the faucet is on.

Toilet:

Wall-hung toilet.

Shower & Surround:


Tile surround walls and pan. Single lever faucet.

The condition of the shower pan liner could not be verified. As this shower is located above a finished ceiling, I did not fill the pan with water and it is likely that a pest inspector will not fill the pan either. If the waterproof pan liner leaks, filling the pan with water would result in moisture damage to the finished ceiling below. I recommend obtaining a signed damage waiver from the seller to allow a pest inspector to fill the shower pan with water and test the condition of the waterproof pan liner.

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

Water drained slowly from the shower. This may be due to a partially blocked trap or drain line and cleaning or repairs are advised.

Ventilation:
Exhaust fan makes unusual noises. This may indicate a need for cleaning or worn bearings and limited remaining life.

Counter & Cabinets:
Serviceable.

Floor:
Floor covering is tile.

Walls & Ceiling:
Serviceable.

Doors:
Serviceable.

Skylights:
Dirty plastic panels obscured review of the skylight.

Upstairs Hall Bathroom:

Sink:

Two sinks present.

Supply & Drain:

Plumbing fittings and valves are older. I suggest preventative replacement.

Toilet:

Serviceable.

Tub & Surround:

Tile surround walls

Single lever faucet.

Ventilation:

No mechanical ventilation provided. As a window is present, a ventilation/exhaust fan may not have originally been required. However, many people will not open a window when showering if the weather is cold, which can contribute to excess moisture/humidity in the bathroom. I suggest installation of an exhaust fan to discharge humid air to the exterior.

Counter & Cabinets:

Serviceable.

Floor:

Floor covering is tile.

Walls & Ceiling:

Serviceable.

Doors:

Serviceable.

Windows:

Serviceable.

Downstairs Hall Bathroom:

Sink:

Serviceable.

Supply & Drain:

Plumbing fittings and valves are older. I suggest preventative replacement.

Toilet:

Wall-hung.

Shower & Surround:

Tile surround walls and pan.

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

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

Single lever faucet.

Ventilation:

No mechanical ventilation provided. As a window is present, a ventilation/exhaust fan may not have originally been required. However, many people will not open a window when showering if the weather is cold, which can contribute to excess moisture/humidity in the bathroom. I suggest installation of an exhaust fan to discharge humid air to the exterior.

Counter & Cabinets:

Serviceable.

Floor:
Floor covering is tile.

Walls & Ceiling:
Serviceable.

Doors:
Serviceable.

Windows:
Serviceable.

Half Bathroom:

Sink:
Hot water flow was restricted. This could be due to obstruction with in the valve or the supply. Please refer to the plumbing section of this report for related information.

Supply & Drain:
Plumbing fittings and valves are older. I suggest preventative replacement.

Toilet:
Serviceable.

Counter & Cabinets:
Serviceable.

Floor:
Floor is concrete.

Walls & Ceiling:
Walls are papered.

Doors:
Serviceable.

Windows:
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, carpet, tile and brick.

Walls:

Moisture stains were observed on the wall in the living room. This area was dry at time of inspection, however no determination could be made as to whether this represents an active leak. Client should consult with the seller regarding this staining and any related repairs. If no documentation can be provided, this should be reviewed by a licensed roofing contractor.

Ceilings:

Serviceable.

Windows:

Glass is cracked/broken at the right/front bedroom window. Broken glass can cause lacerations and cracked or broken windows should be replaced by a licensed glazing contractor.

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:

Serviceable.

Stairs:

Steps do not have a proper handrail. Typically, when more than three risers are present, a stairway should have a guardrail with a continuous handrail that can be easily gripped; however, I am of the opinion that even a single step should be provided with a handrail as many people need some assistance to negotiate a stairway. Handrails should have a minimum clearance from the wall or guardrail of no less than 1½ inches, should not project into the stairway more than 4½ inches, should be between 34 and 38 inches above the nosing and the ends of the handrail should "return" back to the wall or newel post to help prevent catching/hooking loose clothing or belongings on the projecting end. The diameter of a circular handrail should be between 1¼ and 2 inches. Handrails are intended to help prevent an individual from falling when ascending or descending a stairway.

The guardrail is lower than allowed by current construction standards. When this home was built, guardrails were required to be between a minimum of 36 inches high, but current requirements are 42 inches high. I recommend corrections.

Alarms:

Smoke Alarm:

Located at some bedrooms and the 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. Replacing smoke alarms when the home changes ownership helps to ensure that the smoke alarms are current. 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 top and bottom of the stairs. Manufacturers recommend that all carbon monoxide alarms be replaced every 10 years. Replacing CO alarms when the home changes ownership helps to ensure that the alarms are current.

Miscellaneous Fixtures:

Central Vacuum:

A central vacuum system is a feature of this home. The unit was operated during this inspection. Evaluating pressure, air flow or attachments is beyond the scope of this inspection.

Studio

Interior:

Floors:

Plywood.

Walls:

Moisture stains were observed on the interior surfaces of the exterior walls. These areas were dry at time of inspection, however no determination could be made as to whether these represent active leaks. Further review would require "leak-testing" the exterior of the home to determine if these represent active leaks.

Roof Framing:

Rafters with plywood sheathing.

Moisture stains were observed at several areas. The condition of the roof suggests that this is due to leaking that has been corrected.

Windows:

Serviceable.

Exterior Doors:

Serviceable.

Carport

Exterior:

Roof:

Metal tile.

Roof Condition:

Viewed from accessible areas. I did not climb on the roof.

Roof condition appears to be the same as that on the main house.

Siding:

Siding material consists of stucco.

Trim:

Wood.

Exterior wood members are decayed/damaged. Some of this damage appears to be structural posts. Replacement of damaged trim or any necessary repairs are advised.

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:

The block wall at the left/rear was damp and other walls show signs of efflorescence. Efflorescence is a white powdery build-up that occurs when water penetrates through concrete or masonry to the interior. As described earlier in this report, I recommend diverting exterior drainage away from the foundation.

Floor Above

Framing:


Wood is decayed/damaged at the deck framing above. 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.

Doors:

Etched label indicates safety glass is present.

Steps:

Steps do not have a proper handrail. Typically, when more than three risers are present, a stairway should have a guardrail with a handrail that can be easily gripped. Handrails should have a minimum clearance from the wall or guardrail of no less than 1½ inches, should not project into the stairway more than 4½ inches, should be between 34 and 38 inches above the nosing and the ends of the handrail should "return" back to the wall or newel post to help prevent catching/hooking loose clothing or belongings on the projecting end. The diameter of a circular handrail should be between 1¼ and 2 inches in diameter. Handrails are intended to help prevent an individual from falling when ascending or descending a stairway.

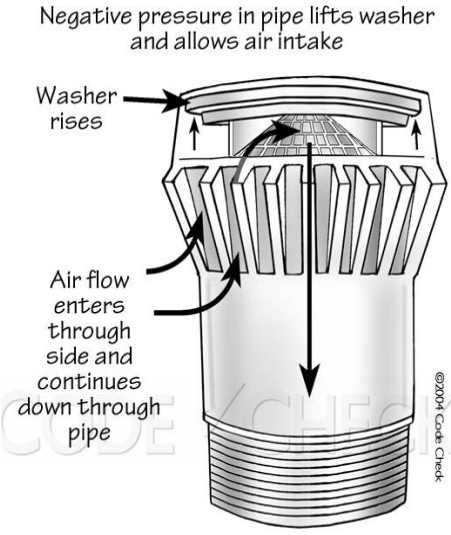
Glossary of Terms

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.

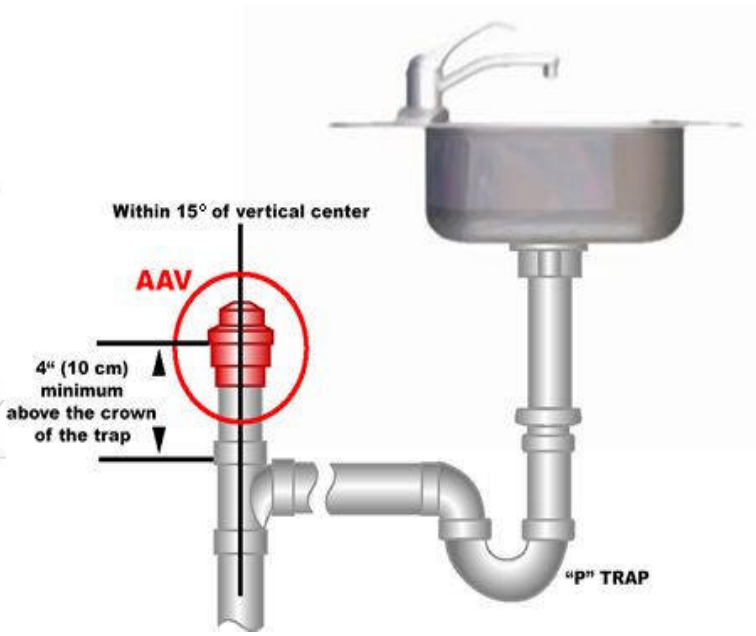
AFCI: Arc fault circuit interrupter. AFCIs are newly-developed electrical devices designed to protect against fires caused by damaged or deteriorated wiring or cords in the electrical wiring.

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.

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.

Building Drain. That part of the lowest piping of a drainage system that receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and coveys it to the building sewer beginning 2 feet (610 mm) outside the building wall.

Building Sewer. That part of the horizontal piping of a drainage system that extends from the end of the building drain and that receives the discharge of the building drain and conveys it to a public sewer, private sewer, private sewage disposal system, or another point of disposal.

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.

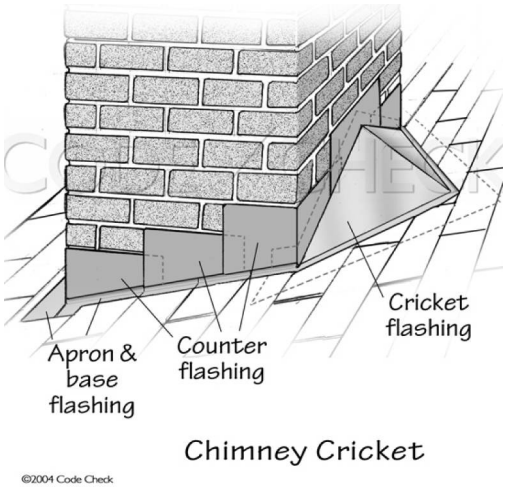
Conductor: A wire capable of carrying an electrical current. Generally, copper or aluminum.

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

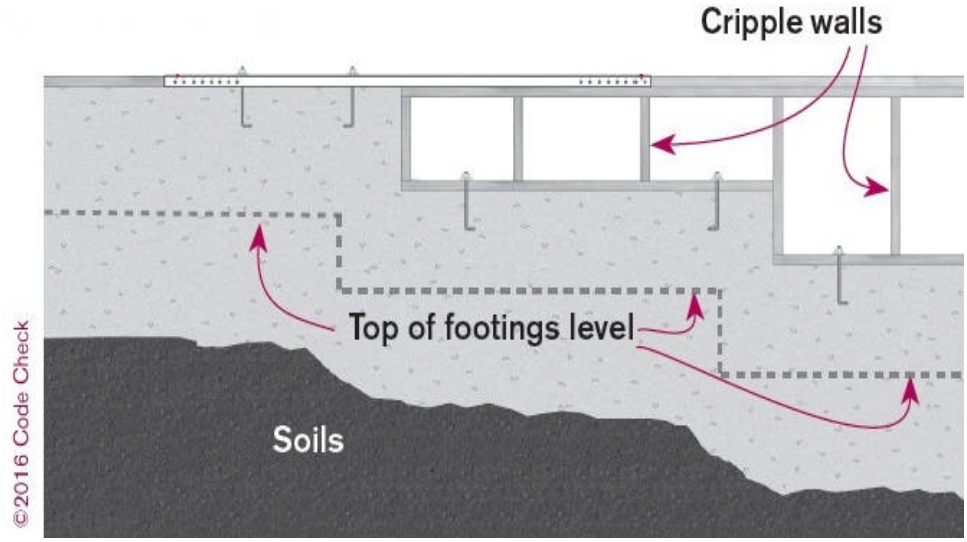
CPVC: (Chlorinated Polyvinyl Chloride) An off-white or buff colored piping. This material is commonly used as water supply piping in mobile and manufactured homes.

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 perpindicular 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.



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.

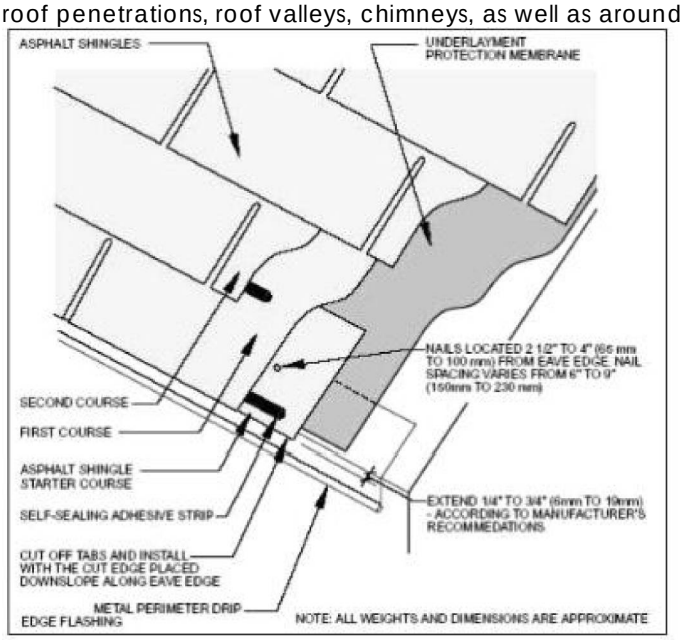
Efflorescence: White “fuzzy” mineral build-up, typically found on concrete, unglazed tile or masonry, caused by moisture leaching minerals out of the masonry.

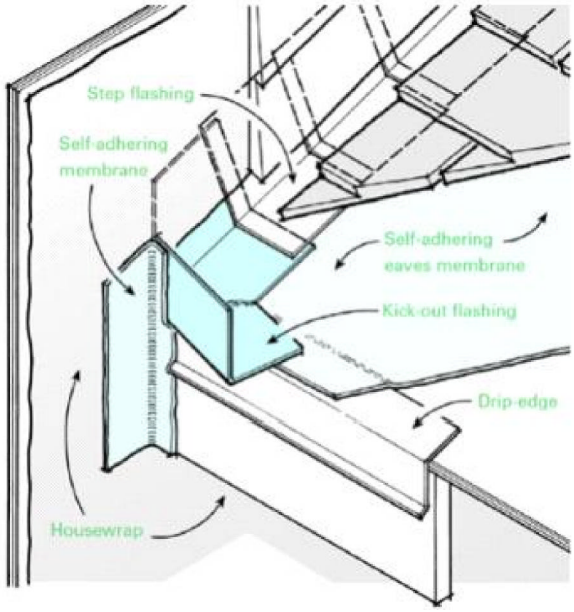
Eave: The bottom, horizontal edge of the roof.

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.





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.

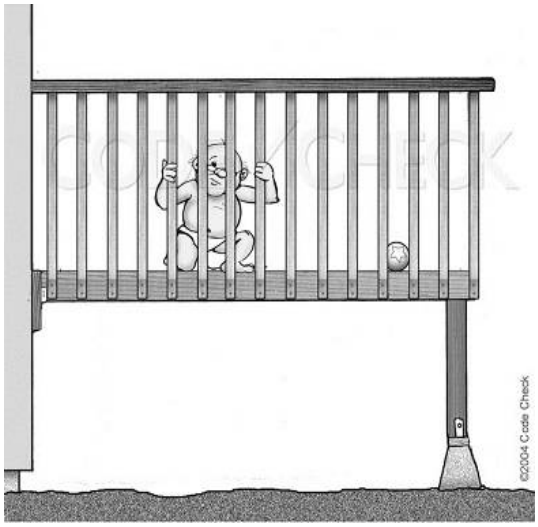
Grade: The top surface of the soil. Also may refer to the slope of the top surface of the soil.

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).

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

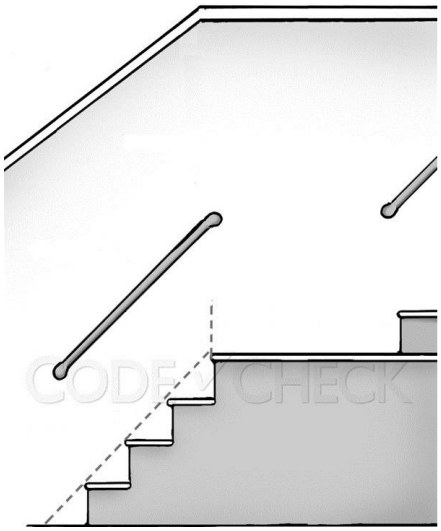
Guardrail: A barrier placed along the open side of a deck, stairway, or elevated walking surface that minimizes the possibility of a fall to the lower level. Also referred to as a guard.



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.

Handrail: A horizontal or sloping rail intended to be grasped by the hand for guidance or support when ascending a stairway or ramp.



Hardscape: Exterior walkways, pathways, driveways, patios, 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.

PEX: Cross-Linked Polyethylene. Commonly abbreviated PEX, XPE or XLPE, is used predominantly in building services pipework systems, hydronic radiant heating and cooling systems, and domestic water piping.

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.

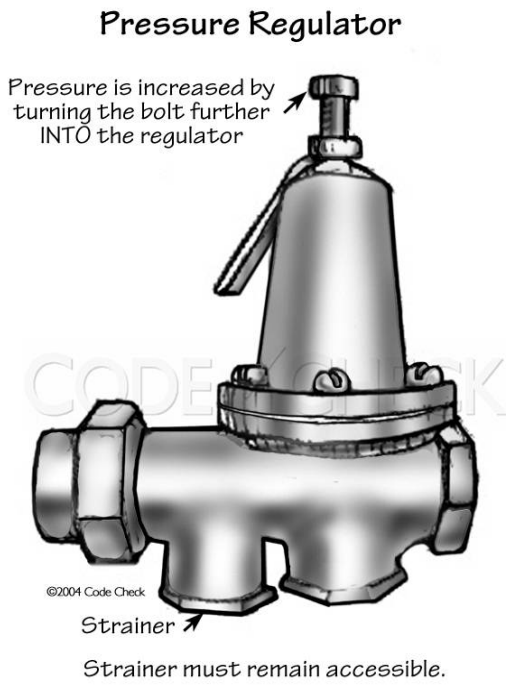
Platform Framing: Type of construction in which the wall studs for each story rest on the floor framing system (platform) and the wall studs are the height of each story. This type of construction is more common in the western half of the country.

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.



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 with 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.

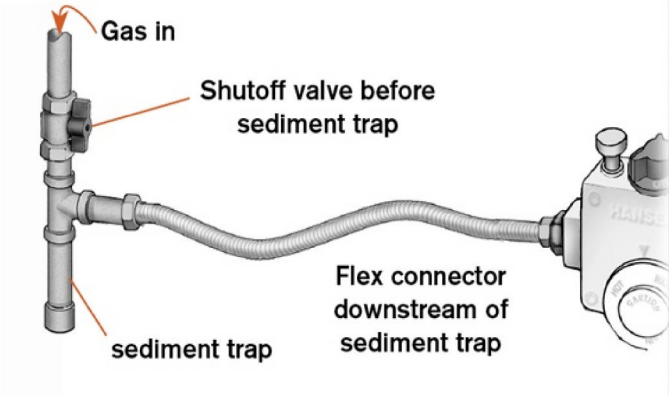
Roof: The structural, and rain proof cover of a building.

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 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 lenght 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.

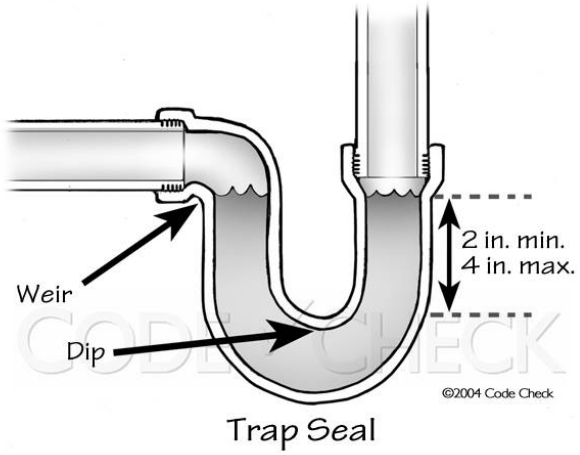
Volt: The potential of electricity. Analogous to pressure when measuring the potential of water.

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.



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