Inspection Report

Inspection Address:
5318 Manila Ave
Oakland, CA

Inspection Date:
7/22/2019

Prepared For:
[redacted]

Prepared By:
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Introduction

DESCRIPTION

Weather:	• Clear
Temperature at Start:	• 60 - 70° F
Property Orientation:	• Front of the building faces the street
Property Age:	• 1919, from public information
Property Type:	• Single family
Attendance:	• Clients, Agent, Structural pest inspector, Cleaners

OBSERVATIONS & RECOMMENDATIONS

IMPORTANT NOTICE
We performed this inspection for the exclusive use of the client(s) named in this report. If anyone other than our client(s) for this inspection reads this report, we wish to emphasize that by contract, **our sole responsibility is to our client(s)** and **no third party may rely on this report** for any purpose. If anyone else wishes to obtain current information on the condition of this property, we can perform, for a fee, a follow-up inspection on their behalf. This report is only valid for six months after the inspection date. After that date, the property should be re-inspected.

Evidence of a Remodel or Addition
It appeared that parts of the property were remodeled and/or the building were extended by the construction of an addition, subsequent to original construction. Confirmation should be obtained from the owner, or in their absence the local building department, that all necessary permits for appropriate construction and/or remodeling were secured, appropriate inspections were performed and all requisite final signatures have been obtained.

Location/Direction Conventions Used In This Report
The “right side” or “left side” of a building are assigned as if we were standing at the street and were looking towards the front of the building. Locations will be described as “left” or “right”, “front” or “rear”, and "right front". (For example, “left front” would be the left side, toward the front).

Comments in Blue with Symbol
Some of the report comments are in blue and have an exclamation mark icon, which is our way of highlighting comments that are also in the Primary Recommendations section at end of this report. To learn about the purpose and scope of the Primary Recommendations section, please see that section.

Photographs In This Report
The photos included in this report are for illustrative purposes only. Not every condition or observation will have an associated photo. There is no relationship between the presence or absence of a photograph and the relative importance of, or quantity of, each condition represented. Significant findings may or may not include an accompanying photo.

Report a Snapshot in Time
As with any inspection of this nature, the conditions described in this report are only a snapshot in time. Conditions will most certainly have changed since the date of inspection, and will continue to change as the property and its components age. Changes in occupancy and the behavior of residents can also change or affect conditions in and around the property. We do not offer a guarantee or warranty as to the performance of this property in the future.

Definition of “Acceptable”
When an item in this report is noted as being in “acceptable” condition, we mean that it was providing generally adequate service within the limits of its age - and any defects, deficiencies or potential problems noted during the inspection.

Permits Required for Most Improvements
When contractors are hired to perform work, we strongly recommend getting permits as required by the authority having jurisdiction.

While getting permits is not a guarantee of quality workmanship, the inspection process can reveal issues while they can still be fixed. To determine which projects may require a permit, we recommend consulting with the local building department.

Not a Code Inspection
The presence or extent of building code violations was not the subject of this inspection, nor was it included in the report. No warranty is offered on the legal use, or uses of the property. Information with regard to these issues may be available from the appropriate building department and/or zoning agency.

Environmental Issues Excluded
Environmental hazards or conditions, including, but not limited to, toxic, reactive, combustible or corrosive contaminants, wildfire, geologic or flood hazards are specifically excluded from this inspection and report.

We Evaluate for Function, Operability, and Condition
The purpose of this inspection is to evaluate the property for function, operability and condition of systems and components. Its purpose is not to list or attempt to address cosmetic flaws. It is assumed that the client will be the final judge of aesthetic issues as the inspector's tastes and values will always be different from those of the client.

Public Records
Important information about this property may be a matter of public record. However, search of public records is not within the scope of this inspection. We recommend interested parties thoroughly review all appropriate public records and disclosures.

Not a Pest Inspection
Any observations made in this report regarding evidence of pests or wood destroying organisms, are not a substitute for inspection by a licensed structural pest inspector or exterminator. Your inspector may only report on a portion of the currently visible conditions and cannot render an opinion regarding their cause or remediation.

Energy Conservation Information
Consumer-related questions regarding energy conservation, and programs available to assist owners in financing energy conservation projects, can be obtained by contacting the gas and electric service provider or Energy Upgrade CA: https://www.energyupgradeca.org

Structure

DESCRIPTION

Foundation Types:	• Perimeter wall with crawl space, basement, & garage
Foundation Materials:	• Concrete
Floor Structure:	• Wood joists with wood plank subfloor
Interior Supports:	• Intermediate support walls
Wall Structure:	• Wood stud
Roof & Ceiling Structure:	• Wood joist & rafter with skip sheathing
Crawl Space Access:	• Basement
Crawl Space Inspection:	• Accessible areas entered and inspected
Attic Access:	• Ceiling hatch - kitchen
Attic Inspection:	• From the access opening

OBSERVATIONS & RECOMMENDATIONS

1.0 Foundation Overview

Bench footings were installed to support the soil under the foundation when the floor level was lowered. The design and materials of such footings can vary significantly, from engineered and steel reinforced concrete in some cases, to a thin layer of concrete in others – which would not be adequate to retain the soils that are supporting the original foundation. A determination as to the design or extent of steel reinforcing is beyond the scope of this inspection. For more information, the installing contractor or licensed structural engineer should be consulted.

Concrete caps were installed on top of the original foundation in several areas. Foundation caps are typically poured on the top of an existing foundation, typically steel reinforced, and can strengthen the older building support system; but the connection to the original foundation could not be determined. Caps should not be considered equivalent to a new foundation. In some cases, the additional weight of a cap may cause settling, especially if the footings are inadequate and the soil is too weak to support the added weight. We recommend periodic monitoring for settlement

The foundation consisted of both relatively modern, steel reinforced concrete and older outdated portions. The older concrete foundation did not appear to be steel reinforced and typically did not have footings that extended very far into the soil. Foundations of this type are typically more susceptible to cracking, settlement, and deterioration from moisture entry, and earthquake damage. For information as to the structural adequacy of building foundations, a licensed structural engineer should be consulted.

1.1 Foundation Condition

The foundation concrete was generally soft and showed minor surface deterioration, which is typical of foundations from this era. While the foundation may not meet current standards, it appeared to be strong enough to hold the mudsill anchors used in seismic upgrades. For a final determination of the adequacy of the foundation, a licensed structural engineer should be consulted.

1.2 Cripple Walls

The cripple wall framing was damaged by apparent wood destroying organism activity near the rear porch. We recommend review and repairs as necessary by a licensed contractor. If a current pest report is not available, we recommend having the property inspected by a licensed structural pest inspector for more information.

The cripple wall framing was damaged by apparent wood destroying organism activity at the right rear corner. We recommend review and repairs as necessary by a licensed contractor. If a current pest report is not available, we recommend having the property inspected by a licensed structural pest inspector for more information.

The mudsill at the left side was not continuous and notched in several areas, and it is unlikely to perform as intended in a large earthquake. We recommend further evaluation by a licensed structural engineer.

1.3 Floor Structure

In the areas where the floor framing was visible, it was in acceptable condition. Due to the design of the building, much of the floor framing was not visible; thus it could not be inspected.

1.4 Seismic

Anchor bolts were not found, leading to the conclusion that too few existed, if any at all. We recommend anchoring the mudsill with bolts or other approved hardware at regular intervals to the foundation, in accordance with present standards.

The visible cripple walls were not retrofitted with bracing panels. Unbraced cripple walls are typical for buildings of this age, but the absence of bracing panels is considered a deficiency as they are prone to collapse in a large earthquake. We recommend the installation of cripple wall bracing by a licensed contractor.

It did not appear the garage opening was braced adequately to withstand seismic forces. This lack of support is often described as a soft story condition and this area of the structure will be more likely damaged in an earthquake. We recommend a seismic review of the structure by a licensed structural engineer.

The front porch columns are weak from a seismic resistance perspective, and may fail in a large earthquake. This condition can be addressed when any seismic retrofit upgrades are performed to the building. A licensed structural engineer or general contractor should be consulted for repair recommendations.

⚠ Seismic upgrades were not installed on this building, and it will be prone to significant damage in a large earthquake. Due to the conditions noted and the design of the structure, we recommend retaining a licensed structural engineer to seismically evaluate the building and determine what corrective measures would be necessary and beneficial.

1.5 Moisture

The soil at the front crawl space was covered with plastic sheeting, which is typically installed in an attempt to reduce moisture levels in the crawl space atmosphere. This should be considered a beneficial feature as it can help reduce the humidity of the living areas above and may improve indoor air quality.

The vapor barrier was attached to the foundation mudsill. This condition is considered to be conducive to pest and moisture damage to the mudsill. We recommend the vapor barrier be properly attached to the side of the foundation to remove any contact with wood framing in the crawl space.

Plastic / wood contact

Staining was observed in the basement in several areas, indicating past water intrusion. We recommend periodic monitoring and improvements are as necessary if ongoing water intrusion is noted.

Efflorescence was observed on portions of the foundation walls. This whitish, fuzzy material is a deposit left when moisture in the foundation evaporates on the inside surface, depositing crystals. This indicates an occasional surplus of moisture on the outside of the foundation. Steps could be taken to improve the exterior drainage where appropriate, and for more information, please see the Exterior section.

1.6 Wall Structure

The wall structure, adjacent to the finished areas of the building, was not visible; however symptoms of non-performance were not observed.

1.7 Attic

The small size of the attic access opening can make entry and exit difficult. As an upgrade, the opening should be enlarged to make physical access and regular inspection more practical.

One or more attic vents were not properly screened, which could allow the entry of insects, birds, and small animals. We recommend review and repairs as necessary by a licensed contractor.

Wasp nests were observed in the attic, but no wasp activity was noted. Keeping screens and vents in good condition will limit future infestation.

1.8 Roof Structure

The roof framing was mostly not visible due to restricted access; thus it could not be thoroughly inspected. Where visible, the framing was in acceptable condition, although the roof framing did not conform to present standards, and may be susceptible to sagging and cracking when stressed.

1.9 Structure - General

Generally speaking, the visible structural elements were in acceptable condition for a building of this age and type of construction. Instances of needed repair or correction were noted in this report. A licensed contractor, possibly in conjunction with a licensed structural engineer should examine those portions of the structure specified as deficient in this report to ensure that the entire structure is safe and durable.

One or more pest inspection tags were observed in the basement. We recommend reviewing all available pest reports to better understand the history and condition of the building.

LIMITATIONS / ADDITIONAL INFO

Foundation and Framing Covered By Finished Surfaces
The foundation, mudsill, and adjacent framing were not visible at the garage, as they were covered by finished surfaces. Therefore defects could be concealed behind the finished surfaces. If more information is desired regarding the structural elements, we recommend removal of interior finishes to make them temporarily accessible.

Concealed Roof Structure
Due to the design of the roof, some of the roof structure was not visible. Thus, the sheathing, rafters, and other structural components were not visible and could not be inspected. Inspection at the time of reroofing is usually the best way to review the roof structure.

Not All of The Rafters Were Visible
The attic was partially inaccessible and not all the rafters were visible, thus not all could be inspected.

For More Information, Consult A Structural Engineer
If there are any doubts remaining about the condition of the structural system, we recommend retaining a licensed structural engineer who is experienced in the design of residential buildings of this era, to review the structure.

Additional Crawl Space Information
The accessible areas of the crawl space were entered for a closer examination. Crawl space conditions can vary between seasons, for example dry crawl space during the summer can get very wet in the winter, and vice versa. The observations in this report are only a snapshot in time and there are many factors that can alter the amount of crawl space moisture; including: exterior drainage, landscaping, neighboring properties, underground streams, etc.

Evaluation Based On Symptoms
Most of the time, many, if not all, structural components are inaccessible. Thus, our evaluation is based only on our observations of symptoms of movement, damage, and deterioration. If there are no visible symptoms, conditions requiring repair may go undetected. We make no comment on the internal conditions of soils, foundations and framing, except as reflected in their performance.

Foundation Cracking
Cracking is common in concrete or masonry foundations. Minor cracks caused by shrinkage or settling can be found in even relatively new foundations. Moderate or larger cracks may indicate ongoing settling or movement and the eventual need for foundation repair. There is no way to determine if a crack will grow in size or if new cracks will form. Most large cracks were once small. Crack monitoring devices, available online, are a good way to accurately monitor foundation cracking over time.

Information on Seismic Strengthening
For more information about methods to seismically strengthen a building, we recommend consulting the Association of Bay Area Governments (ABAG) website: http://quake.abag.ca.gov/residents/steps. For standard retrofitting details, review “Plan Set A”: http://quake.abag.ca.gov/wp-content/documents/Plan-Set-A.pdf

Exterior

DESCRIPTION

Lot Topography: • Gently sloping

Slope Orientation: • To the front

Vehicle Pavement: • Concrete

Walking Surfaces: • Concrete

Retaining Wall Materials: • Concrete

Siding Materials: • Stucco

Secondary Siding Materials: • Wood siding

Door Materials: • Wood • Vinyl

Window Materials: • Wood • Vinyl • Aluminum frame

OBSERVATIONS & RECOMMENDATIONS

2.0 Site, Grading, and Drainage

The grade at the left side was close to or above the level of the wood framing. Such a "faulty grade" condition can promote damage to the wood framing, and we recommend regrading or repairs to the structure as necessary by a licensed contractor. If a current pest report is not available, we recommend having the property inspected by a licensed structural pest control inspector for more information.

Some areas near the building did not have an appreciable slope away from the building. This can encourage water accumulation and lead to water entry and damage. We recommend monitoring both interior and exterior areas during heavy or extended rains, and if water entry or accumulation is observed, appropriate corrective measures should be undertaken.

A partial drainage system was installed on this site. We recommend observing drainage performance for a full cycle of seasons or until deficiencies emerge. If negative conditions arise, then appropriate modifications should be made.

Clay drainage tile was still in use on this property. This material tends to break down over time and its performance becomes less than reliable. We recommend upgrading to a more reliable drainage piping material.

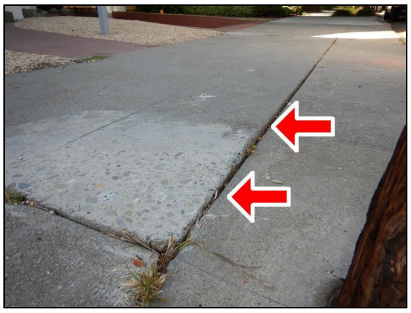
Several downspouts were not properly extended away from the building. This condition can allow water to pool near the foundation, often leading to excess moisture around the foundation or below the building. We recommend the discharges from all downspouts be routed sufficiently away from the structure (usually at least 5 to 10 feet).

2.1 Driveway / Parking

The driveway sloped toward the garage and a drain was installed to intercept rain water. However, given the age of the building, it is possible that this drain is connected to the sewer lateral, which is an outdated configuration. We recommend further evaluation by a licensed drainage contractor.

2.2 Walking Surfaces

Trip hazards were observed in the public sidewalk adjacent to this building. In most jurisdictions, sidewalk maintenance is the responsibility of the property owner. We recommend removal of all trip hazards for improved safety and to reduce the potential for personal injury.



Trip hazards

As of July 2019, the City of Oakland now requires sidewalk trip hazards to be repaired before close of escrow, or as part of a large remodel. We recommend consulting with the City of Oakland for more information.

2.3 Exterior Covers

The attachment of the patio cover to the neighbors outbuilding was minimal and will be prone to sagging or failure. We recommend review and repairs as necessary by a licensed contractor.

Weak cover attachment

2.4 Retaining Walls

The retaining walls were in acceptable condition.

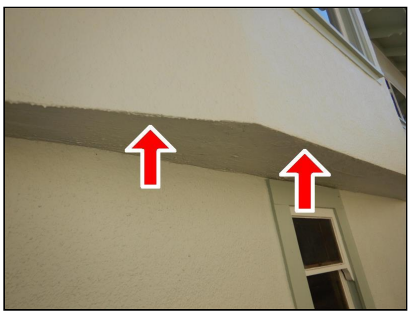
2.5 Grounds

One or more large trees were observed on or immediately adjacent to the property that could damage the building if they fall over, or if large branches should separate from the trunk. Evaluation of the stability and condition of these trees is beyond the scope of this inspection. We recommend periodic advice and services of an experienced arborist for evaluation.

The barbecue at the backyard was not inspected as it was outside the scope of this inspection.

2.6 Stucco Siding

Patching from previous stucco repairs was observed in several areas. This may indicate previous repair to the wood framing behind the stucco, due to moisture related damage. We recommend the current owner be consulted to learn more about these repairs and their significance. A current pest control report also should be consulted.



Missing drip edge flashings

As is typical for older buildings, the stucco overhangs were not provided with flashings to create a drip edge. Current standards require flashings to create a drip edge to minimize water entrapment and subsequent damage. To determine if damage is present in these areas, we recommend test-hole openings by a licensed structural pest inspector.

2.7 Wood Siding

The wood siding at the rear addition was generally in acceptable condition.

2.8 Paint and Stain

Exterior finishes on the building were generally in acceptable condition. Keep in mind that paints and stains will deteriorate from sun and weather exposure over time. The condition of the exterior finishes should be periodically monitored and recoated to prevent unnecessary damage to the underlying surfaces.

2.9 Doors, Windows, and Glazing

One or more retrofit “flush-fin” windows or doors were observed. This type of opening relies on caulking or special sealants to maintain a watertight installation. The doors and windows should be reviewed periodically for leakage and to ensure that any visible sealant is in good condition. We also recommend contacting the installing contractor to determine the status of permits, and the extent of any warranties or guaranties that may be available. The manufacturer’s installation specifications and warranties for these windows should be obtained if possible for future reference.

One or more of the doors had inside key locks. Deadbolts and other locks with removable inside keys can prevent escape in a fire emergency and are prohibited in most jurisdictions and by fire departments. If you desire keyed locks for security, always leave keys inside the locks when the building is occupied. Thumb latches are safer and lock replacement should be considered.

A wood window at the right side was damaged by wood destroying organisms. We recommend all damaged or deteriorated windows be repaired, if possible, or replaced if necessary by a licensed contractor. If a current pest report is not available, we recommend having the property inspected by a licensed structural pest inspector for more information.

We could not confirm that the door glass at the front porch was safety glass. An etched emblem in the corner of each pane will usually identify safety glass, but no such emblem was found. We recommend the installation of safety glass (or safety film) by a licensed contractor to prevent injury to occupants from broken glass shards.

The weep holes in the bottom of the bathroom window were unusual in size and placement, indicating that the holes may have been drilled after manufacture. We recommend further evaluation and testing of the window by a licensed contractor to ensure that it performs as intended.

Unusual weep hole

2.10 Decks, Porches, and Balconies

The surface of the front porch had gaps or was cracked. We recommend sealing the cracks to prevent moisture related damage to the framing below.

The front porch stairs appeared to have been recently repaired or rebuilt. This type of structure is prone to water damage and can be very expensive to repair. We recommend obtaining a history of repairs and modifications, if possible, to determine the nature of these repairs and if any warranties or guaranties still apply.

2.11 Stairs and Railings

The treads and risers in several stairways were not uniform and therefore posed a potential fall hazard. The stairs should be modified, if possible to conform to current standards, but this may be impractical. If the stairs are not successfully modified or

rebuilt, users of the stairs should be warned to exercise special caution to avoid personal injury. A sturdy handrail is recommended if one is not already present.

Note: Current standards prohibit stair treads, risers, and nosing dimensions to vary by more than 3/8 inch per flight.

Several railings were hazardous as they could allow small children to fall through. We recommend immediate modification of all railings by a licensed contractor to bring them in conformance with current standards and local requirements to minimize safety hazards.


Open railings

Note: Current standards prohibit guardrail openings of 4 inches or larger. Stairway guardrails prohibit openings of 4 ⅜ inches or larger. The triangular area formed by the bottom of the guardrail, the tread, and the riser must not allow passage of a 6 inch sphere. A guardrail height is required to be 42 inches and between 34-38 inches at stairways.

A guardrail was not provided at the right side of the driveway. We recommend the installation of guardrails where needed by a licensed contractor to reduce the potential for personal injury.

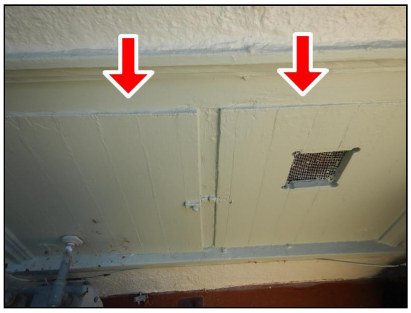
Missing guardrail

A stairway railing at the rear was not “graspable”, and therefore may not be effective in stopping a fall. To reduce the potential for personal injury, the railing should be modified or replaced by a licensed contractor. In some situations, an additional handrail can be installed if modification to the existing railing is not practical.

The height of several guardrails did not meet current standards, creating a potential fall hazard. As an upgrade, the height of the guardrails could be raised or new railings of the proper height could be installed to minimize the fall potential.

2.12 Exterior - General

The doors for the exterior cabinets at the right side were painted shut, and the interiors could not be inspected. We recommend further evaluation as hidden defects or damage could exist.



Sealed cabinet doors

LIMITATIONS / ADDITIONAL INFO

Soils Evaluation not Performed
An opinion on soil stability and potential movement may be available from a licensed soil or geotechnical engineer who is familiar with conditions in this area. Hillside structures are prone to landslides and movement, while flatland buildings can be prone to liquefaction. A licensed specialist should be consulted, if specific information on the characteristics and performance of this particular site is desired.

Freshly Painted Exterior
As with any recently refinished and freshly painted surface, the exterior may have conditions present that were not visible at the time of the inspection.

Inquire About Exterior Repairs
Obvious repairs to the siding were observed. The owner may have information about the condition that required the repairs, what repairs were done and any permits required, issued and completed because of the repair work. We recommend consultation with the owner about these issues.

Inspect Stucco Below Grade Periodically
Stucco terminated below the finished grade in some areas. This configuration is outdated and may promote infestation by wood destroying organisms. We recommend periodic inspections for wood destroying organisms by a licensed structural pest inspector.

Fencing Not Inspected
The fences and gates were not inspected and are not included in this report. Fences at the perimeter of the lot typically approximate the property lines, but only a licensed surveyor can verify their exact location.

Drainage Information
A drainage system should be designed to collect and divert roof runoff, other surface water, and subsurface water. It is typically installed in solid and perforated pipe and flows continuously downhill to a point of discharge. Designs and materials for these systems vary widely, making it impossible to evaluate the integrity of the system with any certainty. For more information and testing of the drainage system, a contractor specializing in drainage systems should be consulted.

Please See Interior Section
For information about the interior aspects of the windows, please see the Interior section.

Screens Not Inspected
The door and windows screens were not inspected; as such a task was beyond the scope of this inspection. We recommend reviewing the screens to ensure they will function as desired.

Rekeying Exterior Doors
Exterior door locks should be rekeyed after transfer of ownership to ensure personal safety and security.

Safety Glass Labeling
All safety glass should be labeled using either an etching or ceramic-blasting method to produce a permanent emblem in the surface of the glass that must remain visible after it has been installed. During our inspection, we will look for the emblem as evidence that the glass is, indeed, safety glass. However, current standards do allow for installation of safety glass that does not display the specified emblem, under certain circumstances.

Garage

DESCRIPTION

Garage Type: • Attached • Tandem

Garage Door #/Type: • 1 roll-up

Garage Door Materials: • Metal

Garage Door Openers: • Overhead opener

OBSERVATIONS & RECOMMENDATIONS

3.0 Garage Fire Separation

Voids were observed in the fire resistive wall and ceiling of the garage. We recommend that the all voids be patched to help prevent the spread of fire and dangerous gases from the garage to the living areas.

3.1 Garage Interior

The garage floor was a concrete slab. The slab was in acceptable condition.

The ceiling of the garage was stained at the front. We recommend monitoring these stains, and if moisture is found, we recommend further evaluation followed by repairs as necessary by a licensed contractor.

3.2 Vehicle Doors

The garage door was opened and in generally acceptable condition.

The height of the garage door opening was low, and may prevent the entry of taller vehicles. We recommend carefully measuring vehicles before attempting entry into the garage to prevent damage to auto or building.

The garage door opener operated when tested, including the automatic stop and reverse features, which functioned both when meeting resistance and when the floor beam was interrupted.

The garage door control button was mounted lower than allowed by current standards, which require the button to be at least 5-feet above a walking surface to keep it out of the reach of children. We recommend repositioning of the button by a licensed garage door contractor.

The height of the emergency release handle did not meet current standards as it was too close to the floor. Current standards require the handle to be at least 6-feet above the floor to keep out of the reach of children. We recommend repositioning handle for improved safety.

LIMITATIONS / ADDITIONAL INFO

Garage Size Caution

The information regarding the size and type of garages is intended to provide helpful information for our clients. However, it should be noted that vehicles come in a wide variety of sizes and shapes, and this information should not be relied upon or considered as a substitute for measuring and testing vehicles to ensure they will fit as needed.

SB 969 Information

As of July 1, 2019, Senate Bill 969 requires battery backup on automatic garage door openers when a garage door and/or opener are replaced. This allows operation during a power outage, and although s garage door may be operated manually in the absence of electric power, the battery backup protects those unable to do open the door manually in an emergency.

Roofing

DESCRIPTION

Primary Roofing Materials:	• Asphalt composition shingles (3-tab)
Estimated Age:	• 5-10 years • 15-20 years
Visible Layers:	• 2+ layers
Secondary Roofing Materials:	• Modified bitumen
Estimated Age:	• 20+ years
Roof Slope:	• Medium
Roof Inspection Methods:	• From the edges • From the climbable valleys & ridges
Flashings:	• Sheet metal • Mastic/Sealant
Roof Drainage:	• Metal gutters • Plastic gutters

OBSERVATIONS & RECOMMENDATIONS

4.0 Asphalt Composition Shingle Roofing

The roofing at the right side was generally worn from exposure and was near the end of its expected service life. Even with routine maintenance, the need for replacement should be expected within the next few years and we recommend budgeting for this expense.

4.1 Modified Bitumen Roofing

The modified bitumen roofing at the rear addition was generally worn from exposure and was nearing the end of its expected service life. Even with routine maintenance, the need for replacement should be expected within the next few years and we recommend budgeting for this expense.

Worn roofing

4.2 Flashings

Fasteners were driven through the roof flashings or the roofing, and these penetrations were susceptible to leakage. We recommend sealing or replacing these fasteners with neoprene washer fasteners for better durability. The need for periodic sealing or maintenance should be anticipated.

A cricket flashing was not installed on the uphill side of the chimney. This configuration can lead to collection of debris, deterioration, and leaks. This area should be cleaned and monitored regularly to help prevent damage. We recommend the installation of a chimney cricket when the roof is replaced.

Edge flashing was not installed at the right side and the roof / gutter intersection will be prone to leakage and/or water damage. We recommend that suitable edge flashings be installed by a licensed roofing contractor.

The edge flashings were loose at the right side front exposing the edge of the roof to leaks and subsequent damage. We recommend review and repairs as necessary by a licensed roofing contractor.

The mastic or sealant used to seal the chimney was cracked or deteriorated. We recommend sealing by a licensed roofing contractor and periodically in the future, as a normal part routine maintenance. As an upgrade, metal flashings should be installed when the roof is replaced for reduced maintenance.

Deteriorated mastic

The modified bitumen roofing was adhered directly to the metal flashings, a method that will be prone to water entry. Because it is difficult to properly adhere membrane roofing to metal flashings, most manufacturers recommend "sandwiching" the flashing between two roofing layers to ensure a water tight and durable seal. We recommend diligent maintenance, or as an upgrade, reinstallation of the flashings by a licensed roofing contractor in accordance with the roofing manufacturer's installation instructions.

Caulking or mastic was used as a sealant for one or more roof-to-wall intersections. The sealant was in acceptable condition, but tends to crack and deteriorate with exposure, and meticulous maintenance will be required to prevent leaks. Proper sidewall flashings (that extend behind the water resistant barrier of the siding) should be installed when the roof is replaced.

4.3 Roof Drainage

Debris was found in the gutters. The debris should be removed to ensure proper drainage, and then the gutters should be kept clear to reduce the potential for backups and subsequent water penetration into the building, which could result in damage to exterior and interior building elements and finishes. The condition of the gutters can be better evaluated after the debris has been removed.

4.4 Roof Ventilation

The attic did not appear to be adequately vented. The temperature in an attic space can rise to a very high level on a hot day, sometimes causing discomfort in the living area and always potentially damaging elements of the roof structure and the roof surface through overheating. We recommend improvements to attic ventilation by increasing airflow and controlling moisture entry into the attic space at the time of reroofing.

4.5 Roofing - General

⚠ The roofing was in need of repairs and some of the roofing was near the end of its expected service life. It may be more cost effective to replace the roof given its age. We recommend the advice and services of several licensed roofing contractors to review options and cost estimates.

LIMITATIONS / ADDITIONAL INFO

Steep Roofing Not Walked
Portions of the roof were too steep to walk safely. The comments in this report are therefore based upon limited visual observations.

Cannot Guarantee Leak-free Roof
Our comments do not constitute a warranty that the roof is free of leaks, or will remain free of leaks.

Benefits of Cleaning Roof Drainage
The roof drainage system should be monitored on a regular basis and be cleaned out whenever debris has accumulated. Regular cleaning will prevent clogging of the downspouts and potentially damaging leaks.

All Roofs Need Maintenance
All roof systems require annual (or even more frequent) maintenance. Failure to perform routine roof maintenance will usually result in leaks and accelerated deterioration of the roofing and flashings. Any estimate of remaining life expectancy must be based upon the assumption that the roof will receive periodic maintenance.

Attic Ventilation
Attic ventilation can be provided by eave/soffit, gable or ridge vents. Attic fans or wind driven turbines are sometimes used to augment passive ventilation. Ventilation openings should be divided equally between upper (gable or ridge) and lower (soffit or eave) vents.

Plumbing

DESCRIPTION

Water Source:	• Appeared to be municipal/community supply
Water Pressure:	• ~90 psi
Water Service:	• ¾ inch copper
Main Water Shutoff Location:	• Garage - front
Water Distribution Piping:	• Galvanized • Copper
Waste Disposal:	• Appeared to be municipal/community sewer
Sewer Cleanout Location:	• Exterior - left side • Exterior - right side
Drain & Vent Piping:	• Cast iron • Galvanized • Copper • ABS
Gas Service:	• Natural gas - 275 CF/H meter
Gas Shutoff Location:	• Exterior - right side

OBSERVATIONS & RECOMMENDATIONS

5.0 Main Water Supply

The visible portions of the main water supply piping were in acceptable condition.

The main water supply shut-off valve was located, but testing the operation of this valve is not within the scope of this inspection. Operation of the valve from time to time will keep it functional and maximize its useful life.

Main water shutoff valve

System pressure, as judged by a water pressure tester, was greater than 80 psi. Excessive pressure can result in damage to valves, seals and washers in fixtures and appliances. We recommend installation of a pressure regulator, adjusted to 70 psi, or less.

5.1 Water Distribution Piping

The water flow dropped when multiple fixtures were used simultaneously in the bathroom, indicating that corrosion or deposits restricted flow in the older galvanized piping. This condition will worsen over time, and the only remedy is to replace the outdated piping. We recommend periodic monitoring, followed by corrective action taken if problems are observed.

An uncapped water valve was observed at the laundry area. If it remains unused, we recommend proper capping by a licensed plumbing contractor to reduce the chances of a water leakage.

5.2 Faucets

A faucet aerator in the kitchen was clogged. For a smoother flow of water with less splashing, we recommend the aerator be cleaned or replaced as necessary to restore proper operation.

5.3 Bath and Shower Fixtures

The water control valve for the shower was reversed, which can result in water scalding or burns. We recommend reconfiguration of the hot and cold water controls by a licensed plumbing contractor.

Note: Current standards dictate that the control for the hot water is always located to the left and that for the cold is located to the right. For so-called “single handle” valves; turning the handle should initially provide cold water, then gradually transition to hot water as the handle is turned.

When the shower diverter was operated, a significant amount of water also leaked out of the spout. This condition wastes water and can diminish the performance of the shower. We recommend review and repairs as necessary by a licensed plumbing contractor.

5.4 Sinks

There was a recessed area at a sink in the bathroom (where it joined the underside of the countertop) that was not properly caulked. This area is considered a “fouling ring” that can trap bacteria and may pose a health concern. We recommend eliminating the fouling ring by bridging the gap with an appropriate caulking material.

5.5 Bathtubs

The bathtub was in acceptable condition.

5.6 Toilets

The toilet was operated and appeared to flush properly.

The clearance to the front (or side) of the toilet was less than that which is presently accepted for convenient use. We recommend that adequate clearance be provided when the bathroom is next remodeled.

5.7 Drain & Waste Piping

The drain piping was actively leaking below the toilet, creating an unsanitary condition. We recommend immediate repairs or replacement of the damaged / leaking drain piping by a licensed plumbing contractor.

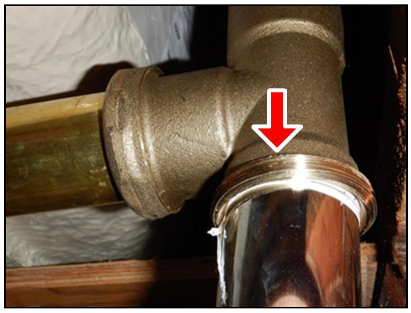
Leaking drain piping

Note: The "closet bend" for the toilet was made of lead. Lead is soft and difficult to secure a toilet base to - often resulting in a leaking wax seal.

The drain piping was actively leaking below the bathroom sink, creating an unsanitary condition. We recommend immediate repairs or replacement of the damaged / leaking drain piping by a licensed plumbing contractor.

The drain piping was not properly supported in the basement laundry area. To prevent damage to the piping, we recommend review and repairs as necessary by a licensed plumbing contractor.

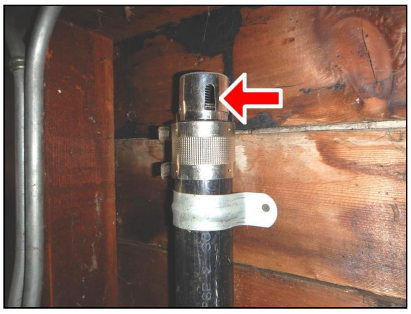
The nut for a slip joint fitting was missing below the bathtub, and this joint could be prone to leaking. We recommend review and repairs as necessary by a licensed plumbing contractor.



Missing slip joint nut

5.8 Plumbing Vents

An "in-line" vent was installed at the laundry area. Most municipalities do not allow the installation of such vents because their mechanical parts can fail and allow sewer gases to enter the living areas. We recommend review and repairs as necessary by a licensed plumbing contractor in accordance with current standards.



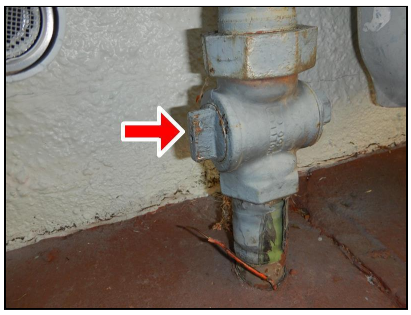
In-line vent

5.9 Sewer Cleanouts & Lateral

Because it was buried, we could not determine the condition of the sewer lateral, or confirm if the property was connected to a municipal sewer system. Many Bay Area jurisdictions now require testing at time of sale or transfer to ensure water tightness. Replacement can be expensive, and we recommend a lateral inspection by a licensed plumbing contractor.

5.10 Gas Service

A meter wrench was not located in the vicinity of the main gas valve. A proper wrench should be located near the main gas valve to provide a convenient means for shutoff in an emergency. A main gas valve can be turned 90 degrees in either direction to shut the gas supply off.



Main gas shutoff valve

The gas meter was in acceptable condition.

An automatic seismic gas shut-off valve was not installed. Fires can cause significant damage after a large earthquake and this type of valve is intended to automatically shut off the gas in an earthquake. We recommend the installation of an automatic seismic shutoff valve by a licensed plumbing contractor.

5.11 Gas Distribution

The visible sections of the gas piping were in acceptable condition, with exceptions noted below. Leaks were not detected at any of the exposed gas piping. Pressure testing may reveal leaks, but this procedure is beyond the scope of this inspection.

An uncapped gas valve was observed at the basement laundry area. If it remains unused, it should be properly capped to reduce the chance of a gas leakage.

5.12 Plumbing - General

The plumbing system was generally in acceptable condition; however, instances of repair or correction were observed. We recommend hiring a licensed plumbing contractor to examine the plumbing system and repair, augment, or modify as necessary to ensure that the entire system is safe and dependable.

LIMITATIONS / ADDITIONAL INFO

Senate Bill 407 Information
Some important provisions of SB407 took effect January 1, 2017. This law requires the installation of water conserving plumbing fixtures in all single family homes built prior to 1994. This is not a time-of-sale requirement, it applies to all single family homes built before 1994, whether the home is being sold or not. In addition, this law requires an owner to disclose in writing, if the property includes any noncompliant plumbing fixtures at time of sale. Please see: http://jmcinspections.com/sb407-what-you-need-to-know

Galvanized Water Piping
Galvanized steel water pipe is subject to rusting and scale/mineral buildup. Over time, the accumulation of these deposits will restrict water flow. When water flows fall below acceptable levels, many building owners choose to re-pipe with copper or PEX.

Copper Water Lines
Copper is better than galvanized piping because it is less prone to corrosion and flow reduction. It should last the lifetime of the building.

For Water Quality Questions, Ask The Supplier
For information concerning water quality, we suggest contacting the municipality or utility company that provides water to this property.

What To Do If You Smell Gas
A persistent sulfuric “rotten egg” odor signals a natural gas leak and the local gas utility should be contacted **immediately** if the odor is detected. It is typical to smell the odor when lighting natural gas appliances like kitchen ranges, but the odor should not persist. Once you have contacted the local utility, keep the area clear until the service call is over.

Water Heating

DESCRIPTION

Water Heater Location: • Basement

Number / Type: • 1 tank type water heater

Manufacturer: • Bradford White

Age: • Year of manufacture: 2005

Storage Capacity: • 40 gallons

1st Hour Rating: • Not determined

Energy Source: • Natural gas

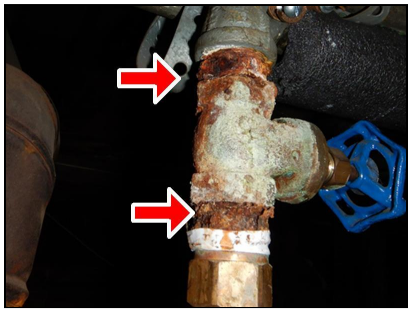
Btu Rating: • 40,000 Btu/h

Tank Insulation: • Manufactured with insulation • Exterior insulation blanket

OBSERVATIONS & RECOMMENDATIONS

6.0 Water Connections

The water connections for the water heater were heavily corroded, and leaks could be imminent. The connections should be examined by a licensed plumber and replaced as appropriate.



Corroded water heater connections

6.1 Pressure & Temperature Relief

The discharge pipe for the temperature and pressure relief valve for the water heater was too short, creating a potential scalding hazard for anyone in the vicinity during a valve discharge. For improved safety we recommend reconfiguration of the discharge pipe to conform to current standards.

Short discharge pipe

The discharge pipe for the temperature and pressure relief valve for the water heater was not routed to an acceptable exterior location. We recommend the discharge pipe be reconfigured as necessary by a licensed plumbing contractor to meet current standards and local requirements.

6.2 Gas Connection

The gas connector was an appropriate flexible type and was in acceptable condition.

A sediment trap was not installed on the gas connection to prevent particles that might be present in the gas from clogging the burners. Under some conditions, clogged burners can pose a fire hazard. For greater safety, we recommend installation of a sediment trap by a licensed plumbing contractor.

6.3 Combustion Air

The combustion air supply for the water heater was adequate.

6.4 Ignition

The water heater pilot was controlled by a thermocouple, which is designed to close the pilot gas valve if the pilot is extinguished. This thermocouple was in acceptable condition, but was not tested.

6.5 Burner

The water heater was a newer Flammable Vapor Ignition Resistant (FVIR) design; therefore the burner was not visible.

6.6 Exhaust Venting

The water heater vent connector and flue were outdated. Outdated components can shorten the life span of the water heater. While we observed no significant concerns with the operation of the venting system at the time of our inspection, we recommend outdated components be replaced at the time the water heater is replaced.

Note: Venting systems may perform adequately when tested, but also may malfunction in different weather / atmospheric conditions or depending how occupants use the building. The test performed during this inspection is only a snapshot in time, and not a guarantee of future performance in all conditions.

6.7 Seismic Restraint

The water heater was not adequately blocked against the adjacent wall. If a water heater is not touching the adjacent wall, both blocking and straps are necessary to help limit building damage in the event of a major earthquake. We recommend the installation of proper blocking in accordance with the strap manufacturer's guidelines.

6.8 Water Heating - General

The water heater was near the end of its expected service life. Although it was still operating, the need for replacement should be anticipated, and we recommend budgeting for this expense.

For attention to the items noted in this section, we recommend review and repairs as necessary by a licensed plumbing contractor.

Consideration should be given to replacing the old, natural gas-burning water heater with an electric heat pump water heater. Heat pump water heaters work essentially like refrigerators in reverse, using electricity to move heat from the exterior air to the interior of the tank, and do not generate heat directly. Therefore, heat pumps can be two to three times more energy efficient. Heat pump water heaters typically have higher initial costs than conventional storage water heaters, but they have lower operating costs which can offset the initial costs, and using electricity reduces the reliance on fossil burning fuels.

LIMITATIONS / ADDITIONAL INFO

FVIR Water Heater
Flammable Vapor Ignition Resistant (FVIR) is newer type of water heater designed to prevent the ignition of flammable vapors caused by spillage of flammable liquids onto the floor. This is important when water heaters are located in garages or rooms with a direct connection to garages. Generally, this allows the water heater to be installed on the floor of the garage (or room), instead of being elevated on a platform.

Sacrificial Anode Rod Replacement
Modern water heaters include a device known as an anode rod, which helps prevent tank corrosion. Corrosion will attack the anode rod first, thereby extending the life of the steel tank. Eventually, the anode rod will completely dissolve, and will no longer be able to perform its function. Timely anode replacement can significantly increase the life span of a water heater.

Tank Flushing Pros & Cons
Periodically flushing the sediment from the bottom of the tank is recommended by most manufacturers. However, drain valves often become blocked with deposits and sediment in old tanks may actually be "sealing" the rust holes in the tank. Therefore, unless the tank is flushed regularly from the beginning, flushing is not recommended.

Temperature and Pressure Relief Discharge Piping
The function of a relief valve is to allow excessive pressure to safely escape the tank without causing damage to the vessel or the property. Without this device, a malfunctioning water heater could explode, and it is important for this drain to terminate in a safe location. If water is ever observed coming out of the drain, a licensed plumbing contractor should be contacted immediately.

Electrical

DESCRIPTION

Service Type:	• Overhead drop
Service Voltage (nominal):	• 120-240 volts
Main Panel Location:	• Exterior - right side
Main Disconnect Location:	• In main panel
System Amperage:	• 100 amps
Size Determined By:	• Main breaker
Visible Grounding Sources:	• Water supply piping • Driven rod
Overcurrent Protection:	• Circuit breakers
Conductor Materials:	• Copper
Visible Wiring Types:	• Knob & tube • Metal clad (BX/MC) • NM cable "Romex"

OBSERVATIONS & RECOMMENDATIONS

7.0 Electrical Service

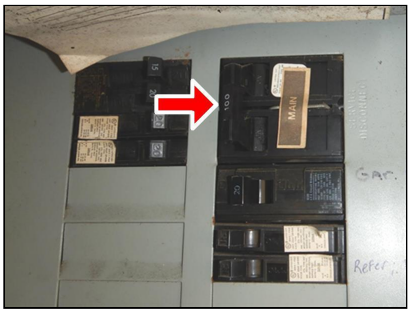
The service drop was in acceptable condition.

A seal on the electric meter was broken. The electric utility should be notified, as they may wish to investigate this situation before replacing broken meter seals. The local building department should be consulted regarding any relevant permits.

The service capacity met current minimum standards, but may require upgrading if remodeling and/or changes in patterns of use increase demand.

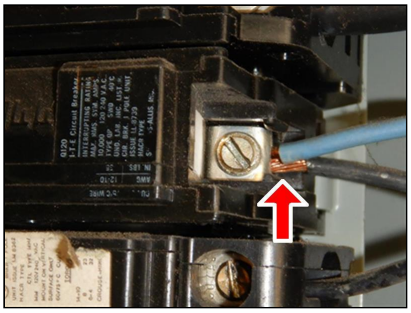
7.1 Main Disconnect / Main Panel

The function of the main disconnect was provided by a two-pole circuit breaker mounted in the main distribution panel. The breaker appeared to be in good condition, although it was not tested during this inspection.



Main electrical disconnect

One or more circuit breaker terminals in the main electrical panel had multiple wires installed. Such “double tapping” can be a hazard because positive connection for all the wires at the terminal is not assured. Correction of double tapping requires reconfiguration of all of the affected circuitry so that a single wire only, connects to each circuit breaker terminal. We recommend review and repairs as necessary by a licensed electrical contractor.



Double tapped breaker

We observed multi-wire branch circuits in the main electrical panel. Multi-wire branch circuits share a common neutral wire, and can overheat when wired improperly. Since the wires were not properly grouped together where they entered the panel, we could not determine if these circuits were properly wired. We recommend further evaluation and repairs as necessary by a licensed electrical contractor.

Not all of the circuits were labeled. We recommend labeling of the balance of the circuits and verifying the accuracy of the existing labeling to facilitate repairs and maintenance.

7.2 System Grounding and Bonding

The visible portions of the electrical system grounding and bonding were in acceptable condition.

An intersystem bonding termination was not installed near the main panel. Current standards require such a device to provide a convenient termination point for connecting ground wires from low voltage systems, such as from telephone and cable systems. We recommend installation by a licensed electrical contractor.

7.3 Branch Circuitry

Substandard electrical splices were observed in the basement. "Running" splices indicate work by unprofessional or untrained workers and current standards require splices to be made inside junction boxes. We recommend review and repairs as necessary by a licensed electrical contractor.

Open electrical boxes were observed in the basement. All open electrical boxes should be covered with an acceptable cover to protect the wiring connections and reduce the risk of shock. We recommend review and repairs as necessary by a licensed electrical contractor.

7.4 Knob & Tube Wiring

Active knob & tube wiring was present. This type of wiring is ungrounded, and as a matter of course, we recommend replacement of all older, outdated wiring as remodeling and maintenance projects are undertaken.

7.5 Receptacle Outlets

Some of the kitchen receptacles were 3-prong type but were not grounded. All ungrounded 3-prong receptacles should have a grounding wire added or be replaced with a 2-prong receptacle. It is important to note that surge protection required by sensitive electronic equipment such as TVs and computers require a grounded 3-prong receptacle in order to work properly.

A receptacle was located above the kitchen range. This location is a potential safety hazard as electrical cords can be melted. We recommend moving of the receptacle outlet by a licensed electrical contractor to eliminate this hazard.

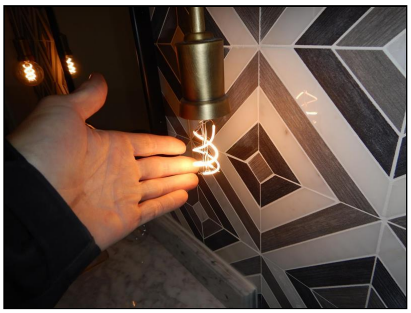
Outlet above range

7.6 Switches

The cover plates for several switches were missing. These cover plates should be replaced immediately to reduce the risk of electrical shorts and hazardous shocks.

7.7 Lighting

A light bulb in the bathroom was damaged. We recommend replacement as necessary by a licensed electrical contractor to assure that the fixture is safe and dependable.



Damaged light bulb

7.8 GFCI Protection

Ground Fault Circuit Interrupter (GFCI) protection is a modern safety feature designed to help prevent shock hazards and electrocution. Both GFCI breakers and outlets should be tested monthly to ensure they are still functional.

GFCI protection was not provided for all of the receptacles where this type of protection is presently required (example: kitchen). GFCI protection is a modern, inexpensive safety feature designed to help prevent shock, particularly in wet locations. We recommend the installation of GFCI protection by a licensed electrical contractor in all areas where it is presently required. See: http://jmcinspections.com/what-is-gfci-protection

GFCI receptacles were installed to replace some older 2-prong outlets. The GFCI protection will provide shock protection, but it is important to note that surge protection required by sensitive electronic equipment such as TVs and computers require a grounded 3-prong receptacle in order to work properly. In addition, the receptacles were not labeled with "No Equipment Ground" warning stickers, and we recommend their installation.

7.9 AFCI Protection

Arc Fault Circuit Interrupter (AFCI) protection is a newer technology that is designed to protect against fires caused by arcing faults in the electrical wiring. Both AFCI breakers and outlets should be tested monthly to ensure they are still functional.

AFCI breakers were not installed in the electrical system, but it appeared that the panels were installed before AFCI was required. Current standards required AFCI breakers when new circuits are installed in bedrooms and many other parts of a building. We recommend the installation of AFCI breakers in the course of future electrical upgrades.

7.10 Electrical - General

The electrical system was generally in acceptable condition, but some instances of repair or correction were observed. We recommend a licensed electrical contractor examine the electrical system and repair, augment, or modify as necessary to ensure that the entire system is safe and dependable.

Portions of the electrical system use older technology. Modern systems feature improvements in safety and upgrading the outdated portions of the electrical system should be considered, especially when undertaking remodeling projects.

LIMITATIONS / ADDITIONAL INFO

Knob & Tube Wiring Certifications
Special procedures should be followed prior to insulating an attic or covering knob & tube wiring, including an inspection of the wiring by a licensed electrician who can certify it as safe. The certification is required to be filed with the local jurisdiction having authority and a warning notice also is required to be posted stating that live wiring is present beneath the insulation.

Low Voltage Systems Not Included
Review of any low voltage electrical devices and their associated wiring, including but not limited to: telephone wiring, TV antennas, cable TV, internet, stereo systems, fire and burglar alarms, intercoms, yard lighting, landscape water (sprinkler) timers or other water features, is not within the scope of this inspection. For information about such systems, an appropriate professional should be consulted.

Representative Sampling of Outlets
A representative sample of the outlets was tested in each room. Nationally recognized inspection standards require testing a minimum of one outlet in every room, where accessible. Before plugging in sensitive electronic equipment like computers and TVs, we recommend testing outlets with a receptacle tester to verify that the receptacle is properly grounded. Such testers have their limitations, and only an electrician can make such determinations.

Arc Fault Circuit Interrupter (AFCI) Protection
AFCI is a newer technology that is designed to protect against fires caused by arcing wiring faults. Annually, over 40,000 fires are attributed to residential wiring. These fires result in over 350 deaths and over 1,400 injuries each year. Arcing faults are one of the major causes of these fires. For more information, please see: http://jmcinspections.com/afci-protection

Ground Fault Circuit Interrupter (GFCI) Protection
GFCI protection is a modern safety feature designed to help prevent shock and electrocution. GFCI breakers and receptacles de-energize a circuit or a portion of a circuit when a dangerous condition exists. GFCI protection is inexpensive and can provide a substantially increased margin of safety. Please see: http://jmcinspections.com/what-is-gfci-protection

Heating / Cooling

DESCRIPTION

HVAC Types:	• Forced air furnace
Plant Location:	• Basement
Manufacturer:	• Rheem
Age:	• 40+ years (estimated)
Heating Energy Source:	• Natural gas
Btu Rating:	• 100,000 Btu/h
Heating Efficiency:	• 70% (estimated)
Cooling Type:	• Cooling not installed
Filter Location:	• Ducting near unit
Filter Size:	• 14x20
Filter Media:	• Disposable
Number of Zones:	• Single zone

OBSERVATIONS & RECOMMENDATIONS

8.0 Forced Air

Forced-air central heating systems use air for their heat transfer medium. Such systems rely on ductwork as a means of air distribution, and a cold air return(s) to bring back colder air to the furnace for re-heating. The heat exchanger is an important component that separates exhaust gases from the interior air.

Given the advanced age of the furnace, the heat exchanger could be cracked or deteriorated to the point where it may not be safe to use. We recommend further evaluation by a licensed HVAC contractor.

Note: The heat exchanger was inaccessible and was not examined. As they age, heat exchangers can crack and allow products of combustion into the living areas.

8.1 HVAC Power / Disconnect

The local disconnect was in acceptable condition.

8.2 Gas Connection

The flexible gas connector was an outdated uncoated brass type, many of which had a manufacturing defect. Over time, the end pieces can separate from the tubing; causing gas leaks and fires. We recommend the installation of an approved connector by a licensed plumbing contractor.

The flexible gas connector that supplied the furnace passed through a hole in the furnace cabinet. This is not a generally accepted configuration, as the metal of the cabinet could cut the section of the connector passing through the hole, from vibration (or being bumped or jostled) thereby causing a gas leak. We recommend review and repairs as necessary by a licensed HVAC contractor.

A sediment trap was not installed on the gas connection to prevent particles that might be present in the gas from clogging the burners. Under some conditions, clogged burners can pose a fire hazard. For greater safety, we recommend installation of a sediment trap by a licensed plumbing contractor.

8.3 Ignition

The pilot for the furnace was not burning at the time of the inspection. Lighting of pilots is not within the scope of this inspection. Whenever we encounter a system or appliance that has been turned off or deactivated, we must, for safety reasons, assume that it has been shut down for a reason. We recommend a licensed HVAC contractor evaluate and repairs as necessary to restore function.

8.4 Combustion Air

The combustion air supply appeared to be adequate.

8.5 Exhaust Venting

The vent connector and flue were outdated. Outdated components can shorten the life span of a heating system. We recommend replacement when new equipment is installed.

8.6 Air Filters

The filter had accumulated debris that decreased its effectiveness and blocked airflow. This condition can dramatically decrease the efficiency of the system, decrease the service life of the plant and increase maintenance costs. A new replacement air filter should be installed and secured in the correct orientation.

The filter housing door was missing, allowing air to circulate around the filter, thereby defeating its purpose. A door or cover should be installed on the filter housing to keep dust out of the occupied interior, and helping keep the blower and ductwork clean.

8.7 Distribution

Duct tape, or other unapproved tape, was used to seal the ducting in the crawl space. This suggested that this work was done by a non-professional. Tape that is not UL listed for HVAC ducting is not rated for high temperatures and will not be effective. All unapproved tape should be removed, and the ducting should be resealed with appropriate tape or other means approved for the application, by a licensed HVAC contractor.

8.8 System Controls

The thermostat was not operated. We recommend testing the thermostat to ensure proper operation. For more information, a licensed HVAC contractor should be consulted.

8.9 Heating / Cooling - General

The furnace was beyond its expected service life. Due to the advanced age, low efficiency, and condition of the heating equipment, any funds being considered for repair would better be invested in replacement with a new, more efficient system. We recommend consultation with a licensed HVAC contractor for advice and cost estimates.

LIMITATIONS / ADDITIONAL INFO

Furnace Construction Limits Our Inspection
The configuration of most HVAC plants, and particularly their heat exchangers, prevents visual access to many critical interior surfaces. In addition, inspection standards do not allow an inspector to disassemble a plant beyond those panels that can be easily removed. Thus, any observations available to an inspector will be limited.

Carbon Monoxide Warning
Carbon monoxide (CO) is a colorless, odorless gas. You can't see it - you can't smell it - but it can poison or kill you. Early symptoms of carbon monoxide poisoning resemble those of the flu – headaches, dizziness and nausea. Continued exposure can cause unconsciousness or death. Rusted, cracked, or damaged heat exchangers can also lead to carbon monoxide production. For this reason, we only recommend licensed HVAC contractor to work on this equipment. Please see: http://jmcinspections.com/what-is-carbon-monoxide

Carbon Monoxide Alarm Requirement
California now requires all dwellings with gas appliances or attached garages to have carbon monoxide alarms installed within. The International Association of Fire Chiefs recommends a carbon monoxide alarm on every floor of your dwelling, including a finished basement. An alarm should be located within 10 feet of each bedroom door and there should be one near or over any attached garage.

Duct Air Loss Testing
Current energy standards require that ducts be tested for leaks when a new central air conditioner or furnace is installed or replaced. A leakage rate of more than 15% (for existing ducts) or 6% (for new ductwork) must be repaired. For more information, we recommend consulting with a licensed HVAC contractor.

Sustainability

DESCRIPTION

Attic / Roof Insulation: • Loose fill fiberglass • 8-10 inches total thickness

Wall Insulation: • Not visible, finishes conceal exterior framing

Floor Insulation: • None

Insulated Glazing: • Partial

Thermostat Types: • Learning type

On-site Energy Generation: • None

OBSERVATIONS & RECOMMENDATIONS

9.0 Insulation

Insulation was present in the attic, but the coverage was uneven. We recommend the redistributing the insulation or the installation of additional insulation to bring the building into conformance with the current energy standards in order to increase the energy efficiency of the building and reduce utility bills.

Insulation, if present in the exterior walls adjacent to the finished areas, was not visible, thus it was not inspected.

Insulation was not installed beneath the floors, which is common in older buildings. We recommend installation of insulation under the floors to make the building more comfortable as well as reducing energy bills.

9.1 On-site Energy Generation

The building did not have on-site power generation. The installation of on-site power generation (e.g. solar panels) could offset the power needs of this building, and we recommend consultation with installation contractors for advice, options, and cost estimates.

9.2 Sustainability - General

We found the building to be only moderately energy efficient. Adding insulation, improving air-sealing, and adding on-site generation will make the building more comfortable and reduce or eliminate utility costs.

Note: If enhancing the sustainability of the building is of interest, then retaining a licensed energy conservation professional to evaluate the structure and identify the most cost effective manner to increase sustainability will be well worth the effort.

LIMITATIONS / ADDITIONAL INFO

Zero Net Energy Buildings
By 2020, California will require that all new homes be "zero net energy" - meaning that they produce as much energy as they consume. This is usually achieved by a mix of high efficiency building techniques and a solar electric system. While this requirement does not apply to existing buildings, they can still be retrofitted to reduce the owners carbon footprint and even supply energy for their neighbors.

Efficiency Standards
Insulation, weather-stripping, double-glazed windows and doors, and set-back thermostats are features that help reduce heat loss and/or gain and increase comfort while reducing energy costs. Current minimum standards require attic insulation levels of at least R-30, wall insulation of at least R-11 (2 x 4 framing), and floor insulation of at least R-19. It's important to note that air sealing of the ceiling structure and installation of insulation are usually the most cost effective methods to increase the thermal efficiency of a building.

Environmental

DESCRIPTION

Suspect Materials: • Lead paint • Asbestos • Transite asbestos

Fuel Tanks: • No evidence observed

OBSERVATIONS & RECOMMENDATIONS

10.0 Lead

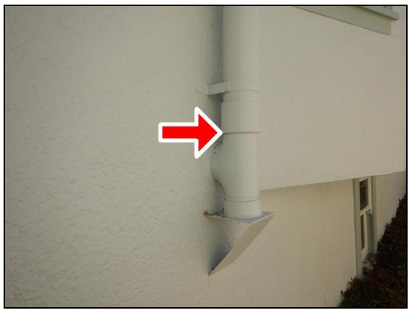
The paint in or near the jambs of old double-hung windows can be sources of lead paint dust. This dust can be breathed by occupants each time a window is raised or lowered. Young children are particularly at risk as they are susceptible to lead poisoning and subsequent developmental problems after exposure from crawling through lead paint dust on the floor. We recommend testing of old windows for lead content, and if lead is detected, the windows should either be sealed off or replaced to prevent lead dust from being released inside the building.

A rule regarding lead paint (and other contaminants) was created in 2010. Called the "Renovation, Repair, and Painting" (RRP) rule, it imposes a strict protocol on work done to buildings built before 1978. We recommend verifying that painting contractors are RRP certified before hiring them. More information about this program, we recommend consulting this website: http://www.epa.gov/getleadsafe

10.1 Asbestos

Some of the visible ducting was covered with a material that appeared to be asbestos. The removal of asbestos requires a licensed abatement firm and will increase the cost of duct removal. As a precaution, care should be taken to not disturb this material. For more information, a licensed abatement firm should be consulted.

We recommend removal of the abandoned Transite flue at the exterior right side by an asbestos certified contractor. This type of flue likely contains asbestos fibers and the flue should not be disturbed until it can be removed.



Abandoned Transite flue

The exhaust flue for the water heater and furnace was a Transite (asbestos cement) material. The removal of asbestos containing material requires a licensed abatement firm. As a precaution, care should be taken to not disturb this material. For more information, a licensed abatement firm should be consulted. When a new gas appliance is installed, we recommend removal of the Transite material.

LIMITATIONS / ADDITIONAL INFO

Lead Paint Information

This building may contain lead paint. The CPSC banned the manufacture of paint with more than 0.06% lead content as of February 1978, but existing stores of paint were used for years after. A new rule regarding lead paint (and other contaminants) is now in effect. Called the "Renovation, Repair, and Painting" (RRP) rule, it imposes a strict protocol on work done to buildings built before 1978. We recommend verifying that painting contractors are RRP certified before hiring them. More information about this program, we recommend consulting this website: http://www.epa.gov/getleadsafe

Asbestos Information

Asbestos is found in many older homes because of its widespread use in building materials before it was banned in 1978. Exposure to asbestos has been identified as a health hazard and should be avoided. It may be possible to significantly reduce or eliminate the dispersal of asbestos fibers by painting the material with products designed for this purpose. Removal or containment of these materials should only be done by properly trained and equipped professionals. The presence of asbestos can only be determined by laboratory analysis, which is beyond the scope of our inspection. Please see: https://www.epa.gov/sites/production/files/2016-10/documents/asbestos.pdf

Fireplaces / Chimneys

DESCRIPTION

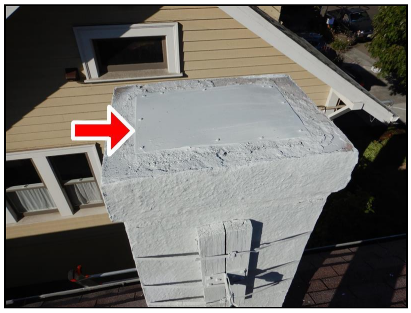
Fireplace Location: • Living room

Chimney Materials: • Brick and mortar

OBSERVATIONS & RECOMMENDATIONS

11.0 Fireplaces

The chimney was capped and it should not be used. If it is desired to restore the function, a licensed masonry contractor should be consulted. Consideration should be given to removal of the unreinforced masonry chimney structure, as it is prone to collapse in a large earthquake.



Capped chimney

11.1 Chimneys

The exterior of the chimney was covered with stucco and therefore the masonry could not be inspected.

The top of the chimney flue was capped and therefore the fireplace should not be used. If it is desired to restore function to the fireplace served by this chimney, we recommend consultation with a licensed masonry/fireplace contractor. Removal could also be considered for improved seismic safety.

Laundry

DESCRIPTION

Location: • Basement

Equipment: • None

OBSERVATIONS & RECOMMENDATIONS

12.0 Laundry Overview

Laundry appliances were not installed at the time of this inspection.

12.1 Clothes Washers

When a clothes washer is installed, we recommend the installation of metal-sheathed “no-burst” type washer hose connectors rather than the rubber or plastic types typically used to reduce the potential for hose failure and associated damage.

12.2 Clothes Dryers

Natural gas was the only dryer heat source provided.

The back draft damper in the dryer vent termination was stuck open, apparently from a buildup of lint. We recommend cleaning and repairs as necessary to ensure proper operation of the back draft damper and dryer vent.

LIMITATIONS / ADDITIONAL INFO

Dryer Vent Information

Typical standards for dryer vents require a 4-inch diameter, smooth wall duct, no longer than 14 feet, with a hood damper at the exterior termination. A flexible vent (6 feet max.) may be used at the dryer connection only, but cannot go through crawl spaces, floors or walls. Dryer vents need periodic cleaning, to prevent a buildup of lint, which can be a fire hazard. Please read the CPSC safety alert on their website: http://www.cpsc.gov/PageFiles/118931/5022.pdf

Kitchen

DESCRIPTION

Kitchen Appliances: • Food waste disposer • Dishwasher • Gas range

Exhaust Type: • Hood (ducted)

OBSERVATIONS & RECOMMENDATIONS

13.0 Disposers

The disposer was turned on and responded to user controls.

13.1 Dishwashers

⚠ The dishwasher door could not be closed and therefor the unit could not be tested. We recommend further evaluation by a licensed appliance contractor.

The dishwasher was not securely attached to the cabinets. We recommend properly attaching the dishwasher according to the manufacturer's installation instructions to prevent damage.

13.2 Cooking Equipment

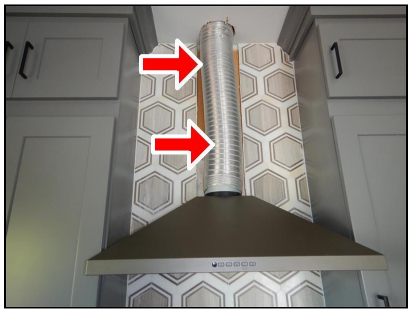
The range was turned on with the normal operating controls and was in acceptable condition.

An anti-tip bracket was installed on the back of the range, which is an important safety device. Without this bracket, the range could tip forward and possibly cause serious burns or injury to both children and adults.

13.3 Kitchen Ventilation

The kitchen ventilation system responded to user controls when tested.

⚠ The corrugated flex duct used in the kitchen ventilation system is substandard, as it can allow grease build-up and become a fire hazard. We recommend replacement of this duct with an approved material by a licensed contractor.



Corrugated kitchen vent

LIMITATIONS / ADDITIONAL INFO

Excluded Kitchen Appliances

Review of the following kitchen appliances was beyond the scope of this inspection: refrigerators, microwaves, freezers, wine refrigerators, water filters, trash compactors, food warmers, warming drawers, steam ovens, espresso machines, instant hot water dispensers, chilled water dispensers, ice makers, blenders, and portable dishwashers. Information about the function/operation of such appliances should be obtained from the owner/occupant or a licensed appliance contractor.

Interior

DESCRIPTION

Bedrooms: • 2 bedrooms

Bathrooms: • 1 bathroom

Wall and Ceiling Materials: • Lath and plaster • Drywall • Wood paneling

OBSERVATIONS & RECOMMENDATIONS

14.0 Interior Finishes

The interior wall, floor, and ceiling surfaces were generally in acceptable condition. We did not attempt to list all cosmetic flaws and suggest that most of these items will be addressed by routine maintenance upgrading.

14.1 Doors and Windows

Several of the windows were stuck, painted shut, or difficult to open. As a part of routine maintenance, all stuck or difficult windows should be repaired to restore functional use. This is especially important for bedroom windows as they are also used as escape openings in emergencies. We recommend review and repairs as necessary by a licensed contractor.

A window would not stay open at the rear addition. We recommend review and repairs as necessary by a licensed contractor to restore proper window operation.

One or more window sash cords were broken, which will prevent proper window operation. We recommend exercising great care when unlatching any windows with broken cords on the top sash until they can be repaired by a licensed contractor. In addition, all malfunctioning or failed counterbalance mechanisms should be repaired immediately to reduce the risk of injury from falling window sashes

An interior door at the rear addition did not have an emblem to indicate the glass was a safety type. Old doors with plate glass can pose a significant laceration hazard when they break. We recommend upgrading the door with safety glass or the installation of an approved safety film by a licensed glazing contractor.

Unlabeled door glass

14.2 Smoke Alarms

One or more of the smoke alarms were an older ionization sensor type. We recommend replacement of all ionization smoke alarms with units that utilize photoelectric technology as they have been proven to be more effective than ionization smoke alarms.

14.3 Carbon Monoxide Alarms

The carbon monoxide alarms were appropriately located. Periodic testing is recommended to ensure that the alarms are still functional.

14.4 Bathrooms

The shower walls were in acceptable condition.

Neither a curtain, nor an enclosure was installed around the shower. To protect the floor and the adjacent surfaces, we recommend the installation of a curtain or glass enclosure.

The bathroom depended solely upon a window for ventilation and removal of excess moisture. Although not conducive to conscientious use in the winter, this may have met minimum standards at the time the bathroom was constructed or remodeled. As an upgrade, we recommend the installation of a bathroom fan to reduce the possibility of moisture related damage.

14.5 Cabinetry

Some cabinet door knobs or pulls were missing. We recommend replacement of as necessary to facilitate easy use of the cabinetry.

LIMITATIONS / ADDITIONAL INFO

Freshly Painted Surfaces May Conceal Items of Concern
As with any recently refinished and freshly painted surface, conditions may be present that were not readily apparent at the time of our inspection. We do not suggest that this inspection will identify all such conditions.

Security Alarm Not Tested
A security alarm was installed, but the system was not tested. We recommend consultation with the owner and/or an alarm company regarding the operation and maintenance of this system.

Secure Building Contents
Unsecured building contents such as televisions, computers, bookshelves, and other items can become missile hazards in an earthquake. For more information about how to secure these items please see the Association of Bay Area Governments (ABAG) website http:quake.abag.ca.gov/ preparedness /contents.

Representative Sampling of Windows
A representative sample of the windows was operated in each room, but not every window was opened, closed and latched. Nationally recognized inspection standards require testing a minimum of one window in every room, where accessible.

Window Requirements for Egress
Basements and sleeping rooms below the fourth story should have at least one escape or rescue window for emergency egress. Current standards require the window to have at least 5.0 - 5.7 square feet in clear opening area, at least 24 inches high, at least 20 inches wide, and with a sill not more than 44 inches from the floor.

Important Smoke Alarm Information
The smoke alarms were not tested. For future reference, testing with the built-in test button only verifies proper battery and horn function, but does not test the smoke sensor. We recommend regular "smoke" testing to verify proper function. Photoelectric smoke alarms are superior to the older ionization type, as they will respond more quickly to smoldering fires - which are the most fatal type of building fires. Please see: http://jmcinspections.com/photoelectric-vs-ionization-smoke-alarms

Carbon Monoxide Alarm Requirement
Since 2011, California has required all dwellings with gas appliances or attached garages to have carbon monoxide alarms installed. Current standards require a carbon monoxide alarm on every floor of your dwelling, including the basement. An alarm should be located within 10 feet of each bedroom door and there should be one near or over any attached garage.

Smoke and Carbon Monoxide Alarm Maintenance
Smoke and carbon monoxide alarms should be tested at least once a month (by using the test button) and cleaned of dust or cobwebs as needed. If the testing mechanism does not work properly, the alarm should be replaced immediately. Most manufacturers recommend replacing smoke alarms every 10 years and carbon monoxide alarms every 5-10 years.

Primary Recommendations

Please note: The following is a list of the recommendations we believe to be the most important. Those recommendations should not be considered the only significant items. The reader should establish their own priorities after thoroughly studying this report, reviewing all the recommendations in the report, and consulting experts or specialists as desired.

Structure

1.4 **Seismic**

Seismic upgrades were not installed on this building, and it will be prone to significant damage in a large earthquake. Due to the conditions noted and the design of the structure, we recommend retaining a licensed structural engineer to seismically evaluate the building and determine what corrective measures would be necessary and beneficial.

Exterior

2.11 **Stairs and Railings**

Several railings were hazardous as they could allow small children to fall through. We recommend immediate modification of all railings by a licensed contractor to bring them in conformance with current standards and local requirements to minimize safety hazards.

Roofing

4.5 **Roofing - General**

The roofing was in need of repairs and some of the roofing was near the end of its expected service life. It may be more cost effective to replace the roof given its age. We recommend the advice and services of several licensed roofing contractors to review options and cost estimates.

Plumbing

5.7 **Drain & Waste Piping**

The drain piping was actively leaking below the toilet, creating an unsanitary condition. We recommend immediate repairs or replacement of the damaged / leaking drain piping by a licensed plumbing contractor.

The drain piping was actively leaking below the bathroom sink, creating an unsanitary condition. We recommend immediate repairs or replacement of the damaged / leaking drain piping by a licensed plumbing contractor.

5.10 **Gas Service**

An automatic seismic gas shut-off valve was not installed. Fires can cause significant damage after a large earthquake and this type of valve is intended to automatically shut off the gas in an earthquake. We recommend the installation of an automatic seismic shutoff valve by a licensed plumbing contractor.

Water Heating

6.0 **Water Connections**

The water connections for the water heater were heavily corroded, and leaks could be imminent. The connections should be examined by a licensed plumber and replaced as appropriate.

6.7 **Seismic Restraint**

The water heater was not adequately blocked against the adjacent wall. If a water heater is not touching the adjacent wall, both blocking and straps are necessary to help limit building damage in the event of a major earthquake. We recommend the installation of proper blocking in accordance with the strap manufacturer's guidelines.

6.8 **Water Heating - General**

The water heater was near the end of its expected service life. Although it was still operating, the need for replacement should be anticipated, and we recommend budgeting for this expense.

Electrical

7.3 **Branch Circuitry**

Substandard electrical splices were observed in the basement. "Running" splices indicate work by unprofessional or untrained workers and current standards require splices to be made inside junction boxes. We recommend review and repairs as necessary by a licensed electrical contractor.

Heating / Cooling

8.0 **Forced Air**

Given the advanced age of the furnace, the heat exchanger could be cracked or deteriorated to the point where it may not be safe to use. We recommend further evaluation by a licensed HVAC contractor.

8.2 **Gas Connection**

The flexible gas connector was an outdated uncoated brass type, many of which had a manufacturing defect. Over time, the end pieces can separate from the tubing; causing gas leaks and fires. We recommend the installation of an approved connector by a licensed plumbing contractor.

8.3 **Ignition**

The pilot for the furnace was not burning at the time of the inspection. Lighting of pilots is not within the scope of this inspection. Whenever we encounter a system or appliance that has been turned off or deactivated, we must, for safety reasons, assume that it has been shut down for a reason. We recommend a licensed HVAC contractor evaluate and repairs as necessary to restore function.

8.9 **Heating / Cooling - General**

The furnace was beyond its expected service life. Due to the advanced age, low efficiency, and condition of the heating equipment, any funds being considered for repair would better be invested in replacement with a new, more efficient system. We recommend consultation with a licensed HVAC contractor for advice and cost estimates.

Fireplaces / Chimneys

11.0 **Fireplaces**

The chimney was capped and it should not be used. If it is desired to restore the function, a licensed masonry contractor should be consulted. Consideration should be given to removal of the unreinforced masonry chimney structure, as it is prone to collapse in a large earthquake.

Kitchen

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Interior

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