



Iron Mountain Home Inspection Training Academy



RESIDENTIAL REPORT

1234 Main Street

Buyer Name



Agent

Agent Name
555-555-5555

FULL PDF HOME INSPECTION REPORT

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How to Read Your Home Inspection Report



Watch on  YouTube

SUMMARY



DEFERRED MAINTENANCE



RECOMMENDATION



SAFETY HAZARD

- ⊖ 2.1.1 Roof - Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations: Damaged Fascia, Soffit, and Trim
- ⊖ 2.1.2 Roof - Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations: Damaged Roof Exceeding Service Life, Resulting in Extensive Water Leakage and Structural Damage
- ⊖ 2.1.3 Roof - Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations: Down spouts drain near house
- ⊖ 2.1.4 Roof - Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations: Damaged gutters
- ⊖ 2.1.5 Roof - Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations: No gutters installed
- ⊖ 3.1.1 Exterior - Siding, Flashing & Trim, exterior doors, eaves, soffit vents, windows and fascia: Property Exterior Assessment and Recommendations for Siding Maintenance and Debris Management
- ⊖ 3.1.2 Exterior - Siding, Flashing & Trim, exterior doors, eaves, soffit vents, windows and fascia: Exterior Window Trim Concerns and Operational Issues
- ⊖ 3.1.3 Exterior - Siding, Flashing & Trim, exterior doors, eaves, soffit vents, windows and fascia: Damaged doors
- ⊖ 3.2.1 Exterior - Walkways, Patios & Driveways: Driveway Cracking/walkway cracking
- ⊖ 3.3.1 Exterior - Decks, Balconies, Porches & Steps: Missing hand rail
- ⚠ 3.3.2 Exterior - Decks, Balconies, Porches & Steps: Deck - Deck in poor condition (close to failure)
- ⊖ 4.1.1 Basement, Foundation, Crawlspace & Structure - Basements & Crawlspaces: Improper crawl space cover or missing cover
- ⊖ 4.1.2 Basement, Foundation, Crawlspace & Structure - Basements & Crawlspaces: Crawl Space Assessment and Recommendations

- 5.1.1 HVAC - Heating and cooling equipment : Units near or at the end of their service life (HVAC)/Inoperable HVAC units
- 5.2.1 HVAC - Normal Operating Controls/distribution system/Presence of installed heat/ac source : Upgraded thermostats/power off to units
- 6.1.1 Doors, Windows & Interior - Interior doors, windows, floors, ceilings : Interior defects: multiple issues
- 6.1.2 Doors, Windows & Interior - Interior doors, windows, floors, ceilings : Ceiling Damaged by Water and Mold (ceiling failure)
- 6.1.3 Doors, Windows & Interior - Interior doors, windows, floors, ceilings : Roof leaks in multiple areas of the home
- 6.2.1 Doors, Windows & Interior - Counter tops & Cabinets and kitchen appliances : Kitchen: multiple defects
- 7.2.1 Plumbing - Water Supply, Distribution Systems, Fixtures, Drain, waste and vent systems : Multiple defects: plumbing
- 7.3.1 Plumbing - Hot Water Systems, Controls, Flues & Vents: Assessment and Recommendations for Water Heater Systems
- 7.4.1 Plumbing - Bathrooms : Multiple defects: bathroom (comment 1)
- 7.4.2 Plumbing - Bathrooms : Multiple defects: bathroom (comment 2)
- 7.4.3 Plumbing - Bathrooms : Loose toilet base (common defect)
- 8.1.1 Electrical - Service Entrance Conductors: Utility Concerns and Electrical Recommendations for Property Restoration
- 8.2.1 Electrical - Main & Subpanels, Service & Grounding, Main Overcurrent Device: Electrical Assessment and Recommendations
- 8.3.1 Electrical - Switches & Receptacles: Loose outlets or receptacles (upgrades recommended)
- 8.3.2 Electrical - Switches & Receptacles: Covers missing or damaged/loose light fixtures
- 8.3.3 Electrical - Switches & Receptacles: outdated GFCIs
- 8.3.4 Electrical - Switches & Receptacles: Upgrade smoke detection/carbon monoxide system or alarm system
- 9.1.1 Rear building - Ceiling, floor, walls and fire walls, garage door, windows and entrance doors: Rear building: Exterior defects
- 9.1.2 Rear building - Ceiling, floor, walls and fire walls, garage door, windows and entrance doors: Rear building: Interior defects
- 9.1.3 Rear building - Ceiling, floor, walls and fire walls, garage door, windows and entrance doors: General issues in kitchen
- 9.1.4 Rear building - Ceiling, floor, walls and fire walls, garage door, windows and entrance doors: Defects for garage side of rear building

1: INSPECTION DETAILS

Information

In Attendance

Property location

Client

Selection for persons in attendance.

Occupancy

Occupied, Utilities Off

Style

Ranch

Type of Building

Single Family, Detached

2: ROOF

Information

Roof Type/Style

Roof

Combination

Roof type and style.

Inspection Method

Roof

Ground

Inspection method is performed using a ladder, drone or magnification from the ground.

Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations: Coverings, roof drainage systems, flashing, skylights, soffit vents, chimney and other roof penetrations

Roof

Asphalt

Roof system photos are for your information:

1. Estimated age of roof: 32 years.
2. Gutters installed: Partial installation.
3. The service life of this roof is: 25 to 30 years depending on conditions.
4. Shingle type: Architectural (dimensional shingles).
5. The rear roof is EPMD membrane.

Additional roofing information:

Roofs are constructed in different materials depending on the property. Common materials are Asphalt, metal, concrete, wood (cedar shake), Slate (stone), clay, and rubber membrane (flat). See the examples in the images for roofing terms, roofing types and roofing materials. Asphalt is the most common due to its availability and cost effectiveness.

Purpose of a roof:

The purpose of a roof is to provide protection and shelter for a building or structure. Here are the primary functions and purposes of a roof:

1. **Weather Protection:** The roof acts as a barrier against the elements, such as rain, snow, hail, wind, and sunlight. It prevents water from entering the building, protecting the interior from moisture damage and ensuring a dry and comfortable living or working environment.
2. **Structural Support:** The roof structure, including the framing, trusses, and beams, provides support for the weight of the roof itself, as well as any additional loads such as snow accumulation or equipment installed on the roof. It transfers the weight to the walls or support columns, ensuring the stability and integrity of the entire structure.
3. **Thermal Regulation:** The roof plays a role in insulating the building and regulating its temperature. It helps to keep the interior cool in hot weather by reflecting sunlight and preventing excessive heat absorption. Additionally, insulation materials installed within the roof system can improve energy efficiency by reducing heat loss in cold weather.
4. **Ventilation and Airflow:** Proper roof design includes ventilation systems to allow air circulation in the attic or roof space. This helps remove excess heat, moisture, and pollutants, preventing damage to the roof structure and promoting a healthier indoor environment.
5. **Protection from Pests:** A well-constructed roof with proper sealing and screening can help keep out pests such as birds, insects, and small animals, preventing them from entering the building and causing damage or creating unsanitary conditions.
6. **Aesthetics and Architectural Style:** The roof significantly contributes to the overall appearance and architectural style of a building. It can enhance the curb appeal and aesthetics, making a visual statement and harmonizing with the surrounding environment or architectural design.
7. **Longevity and Durability:** A properly installed and well-maintained roof can have a long lifespan, protecting the building for many years. Quality roofing materials, regular inspections, and timely repairs or replacements contribute to the durability and longevity of the roof.

Overall, the purpose of a roof is to provide a protective covering that safeguards the building, its occupants, and its contents from the elements, while also supporting the structural integrity and energy efficiency of the structure.

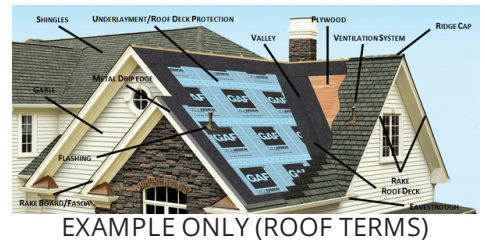
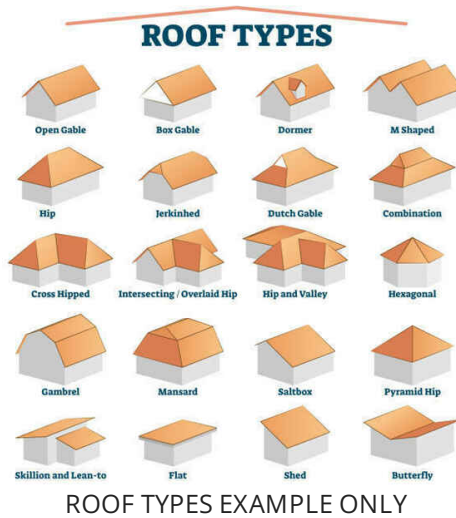
How roofs are installed (components of a roof):

The process of installing a roof can vary depending on the specific type of roofing material and the design of the building. However, here are the general steps involved in installing a roof:

1. **Preparation:** Before installing the roof, the existing roof covering, if any, is removed. The roof deck is inspected and repaired if necessary. Any damaged or rotted materials are replaced, and the deck is cleaned and cleared of debris.
2. **Underlayment:** A layer of underlayment is installed on the roof deck to provide an extra layer of protection against moisture. This can be a synthetic underlayment or asphalt-saturated felt paper.

3. Flashing: Flashing is installed around roof penetrations, such as chimneys, skylights, vents, and valleys, to prevent water from seeping into vulnerable areas. Flashing materials can include metal, rubber, or specialized flashing membranes.
4. Starter Course: A starter course is installed along the eaves of the roof to provide a secure base for the first row of shingles or other roofing materials. It helps to prevent wind uplift and ensures proper alignment of the roof covering.
5. Roofing Material Installation: The roofing material is installed according to the manufacturer's instructions. This can include shingles, metal panels, tiles, or other roofing materials. Each material has its own specific installation process, which may involve nailing, fastening, or adhesive application.
6. Ridge Vents and Ventilation: If the roof design requires ventilation, ridge vents or other types of ventilation systems are installed along the ridge line to allow for proper airflow and heat dissipation.
7. Finishing Touches: Once the roofing material is installed, the final touches are completed. This can include the installation of ridge caps, hip caps, or other finishing elements to provide a watertight and aesthetically pleasing finish.

It's important to note that installing a roof is a complex task that requires knowledge and expertise. It is recommended to hire professional roofers who are experienced in the specific roofing material you choose. They can ensure proper installation, adherence to building codes, and provide warranties for their workmanship.





Limitations

General

ROOF DISCLAIMER

Our review is not a warranty of the roof system or how long it will be watertight in the future. This inspection is made on the basis of what is visible and accessible around the Eaves using a Ladder or a Telescoping pole or Drone on the day of the inspection and in most cases without walking the roof as walking the roof is forbidden by OSHA. Many leaks occur only under conditions of prolonged rain or other increased weather patterns, and these conditions may not be present at the time of the inspection. Additionally, if several items are noted with roofing defects a Separate review from a qualified Roofer should be considered and conducted and if so the outcome of this more advanced inspection and findings should be followed for updates and or repairs by qualified Roofers over our General Inspection recommendations as we do not quote code nor are we Roofers. For an accurate cost on what repair or replacement cost will be, a qualified roofing contractor should be contacted. Buyers are encouraged to ask the current owner about the presence of any roof leaks. All roof coverings require periodic maintenance, and an annual inspection is recommended especially after storms or long periods of rain and or Nor-Easters, Hail etc.

Deficiencies

2.1.1 Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations

 Recommendation

DAMAGED FASCIA, SOFFIT, AND TRIM

ROOF

Several sections of the fascia, soffit, and trim around the residence display signs of damage. It is advisable to address these areas promptly by securing them and subjecting them to a thorough pressure washing process. These components play a crucial role in safeguarding the home against water infiltration.

Recommendation

Contact a qualified roofing professional.



EXAMPLE ONLY



2.1.2 Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations



DAMAGED ROOF EXCEEDING SERVICE LIFE, RESULTING IN EXTENSIVE WATER LEAKAGE AND STRUCTURAL DAMAGE

ROOF

Defects explained:

This property comprises two structures, both exhibiting signs of roofing deterioration. The roofs of both buildings have exceeded their anticipated service life, resulting in water ingress into their interiors. Additionally, mold and fungus proliferation have been observed in both areas.

On the main house, a tarp is currently deployed to mitigate water infiltration into a bedroom section. This structure features asphalt shingles. Conversely, the rear building is outfitted with EPDM membrane roofing, characteristic of flat roofs. Regrettably, the flat roof suffers from improper sloping, leading to water accumulation. Corrective measures necessitate the adjustment of the roof slope and the installation of gutters on both buildings.

Given the presence of EPDM roofing on the rear building, consultation with a roofing company proficient in handling both roofing materials is strongly recommended. Damage to the electrical system and or wiring in the ceiling or edges of the walls are present. The effects the rear building due to the lighting fixtures being in the area.

The severity of the roofing issues is evident through multiple damaged areas, precipitating significant moisture intrusion. Water has breached the walls and permeated the roof framing and sheathing, indicating the need for comprehensive repairs. This entails the evaluation and remediation of the affected areas by a qualified roofing contractor.

Please refer to the accompanying image for reference regarding shingle types.

In summary, addressing these roofing concerns promptly is imperative to mitigate further damage and uphold the structural integrity of both buildings.

Additional information on Water entering a home from the roof:

When water infiltrates a roof and enters a home over an extended period, it can lead to a cascade of structural and electrical issues. Let's break down the effects on both aspects:

1. Structural Impact:

- **Roof Sheathing:** The first layer typically affected by water intrusion is the roof sheathing, which comprises plywood or oriented strand board (OSB) panels. When continuously exposed to moisture, these materials can warp, swell, and eventually rot, compromising their structural integrity.
- **Roof Framing:** Moisture can penetrate beyond the sheathing, reaching the roof framing members, such as rafters or trusses. These wooden elements are susceptible to decay, weakening the roof's ability to support loads and potentially leading to sagging or even structural failure.
- **Insulation:** In many roofing systems, insulation is installed between the roof framing and the interior ceiling. Prolonged exposure to water can saturate and degrade insulation material, reducing its effectiveness and promoting mold growth.
- **Ceiling Materials:** Water that seeps through the roof can damage ceiling materials such as drywall or plaster. This can result in discoloration, sagging, and ultimately structural instability if the ceiling becomes too compromised.

2. Electrical Impact:

- **Wiring Damage:** Water infiltration poses a significant risk to the electrical system. Moisture can corrode electrical wiring, junction boxes, and outlets, leading to short circuits, electrical fires, and electrocution hazards.
- **Fixture Damage:** Light fixtures, ceiling fans, and other electrical fixtures mounted on or near the ceiling are vulnerable to water damage. Water intrusion can cause these fixtures to malfunction or become a safety hazard.
- **Appliance Damage:** Water exposure can also affect appliances located in the vicinity of the affected area. For example, water leaking into a ceiling may reach nearby appliances, such as refrigerators or HVAC systems, causing electrical malfunctions and potentially rendering them inoperable.

Prolonged water intrusion through a failed roof can cause extensive damage to multiple layers of the roofing system, as well as compromising the structural integrity of the home. Additionally, it poses

significant risks to the electrical system, including wiring, fixtures, and appliances, which can lead to safety hazards and electrical malfunctions. Therefore, addressing roof leaks promptly is crucial to prevent further damage and ensure the safety and stability of the home.

Recommendation

Contact a qualified roofing professional.

ROOFING MATERIALS
BY A GLANCE

CLAY TILE	SLATE TILE	CONCRETE TILE	METAL	WOOD SHINGLES & SHAKES	SPANDX-TELE	ASPHALT SHINGLE
<ul style="list-style-type: none"> Long lasting Low maintenance Ability of colors Non-combustible 	<ul style="list-style-type: none"> Beautiful appearance Fireproof Long lasting Low maintenance 	<ul style="list-style-type: none"> Durability Low maintenance Available in many colors Light weight Easy to install 	<ul style="list-style-type: none"> Long lasting Low maintenance Energy efficient Low weight Recyclable Can be installed over existing roofs 	<ul style="list-style-type: none"> Natural look Long lasting Easy to repair Low weight Long lasting 	<ul style="list-style-type: none"> Long lasting Low maintenance Good insulation Very expensive Very heavy 	<ul style="list-style-type: none"> Easy to install Quality of shingles Subtle to most observers Easy to repair Fire resistant
<ul style="list-style-type: none"> Heavy weight Can cause roof sagging Expensive Difficult to install Prone to mold and mildew Can leak 	<ul style="list-style-type: none"> Expensive Heavy weight 	<ul style="list-style-type: none"> Expensive 	<ul style="list-style-type: none"> High initial cost Can cause roof sagging Can rot Can be a fire hazard 	<ul style="list-style-type: none"> Can rot Can be a fire hazard High maintenance Fire hazard 	<ul style="list-style-type: none"> Very expensive Very heavy 	<ul style="list-style-type: none"> Easy to install Quality of shingles Subtle to most observers Easy to repair Fire resistant

HOW LONG DO SHINGLES LAST (EXAMPLE ONLY)



2.1.3 Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations



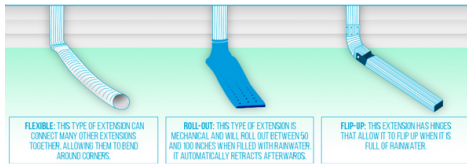
DOWN SPOUTS DRAIN NEAR HOUSE

ROOF

Down spouts drain near the homes foundation, this can cause water to seep near or under the home. Down spout extensions should be installed.

Recommendation

Contact a qualified professional.



EXAMPLE ONLY



2.1.4 Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations



DAMAGED GUTTERS

ROOF

Gutters are damaged at the time of inspection, recommend a qualified contractor to evaluate and repair.

Recommendation

Contact a qualified gutter contractor



2.1.5 Coverings, roof drainage systems, flashing, skylights, chimney and other roof penetrations



NO GUTTERS INSTALLED

ROOF

Absence of Gutters Throughout Property; Recommendation for Installation to Divert Water Away from Structures.

Gutters are notably absent from the rear building. Additionally, gutters are solely present on the front portion of the main residence.

Recommendation

Contact a qualified gutter contractor



3: EXTERIOR

Information

Inspection Method

Visual

Walkways, Patios & Driveways:

Driveway/ Material/photos

Exterior

Concrete

Exterior drive way/walk way
photos for your information.

Siding, Flashing & Trim, exterior doors, eaves, soffit vents, windows and fascia: Siding Material

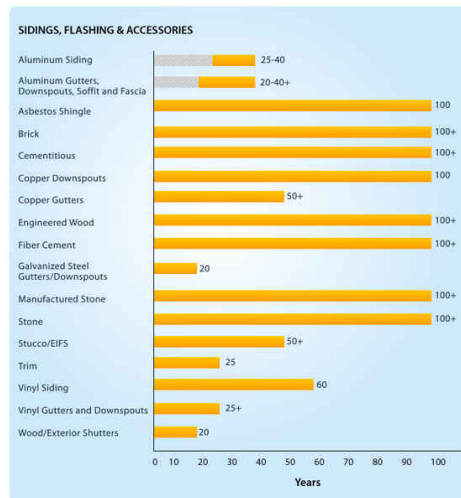
Exterior

Vinyl, Brick, Other

Exterior Siding/door photos for your information.



TYPES OF SIDING MATERIALS
EXAMPLE ONLY



EXAMPLE ONLY FOR SERVICE LIFE OF
SIDING





Decks, Balconies, Porches & Steps: Appurtenance

Exterior

Rear deck

Exterior photos of the decks, balconies, porches and steps for your information.

Additional information on how decks are built:

Building a deck involves several key steps to ensure a sturdy and functional structure. Here is a general outline of how decks are typically built:

1. Design and planning: Determine the size, shape, and layout of your deck. Consider factors such as the desired location, purpose, local building codes, and any necessary permits. Create a detailed plan that includes dimensions, materials, and any special features.
2. Site preparation: Clear the area where the deck will be built. Remove vegetation, rocks, and other debris. Level the ground if necessary, ensuring proper drainage away from the house.
3. Foundation and footings: Decide on the type of foundation for your deck. Common options include concrete footings, concrete piers, or helical screw piles. Dig holes for the footings, ensuring they reach below the frost line and are of the appropriate size and depth. Install the footings according to local building codes and specifications.
4. Ledger board installation: If attaching the deck to the house, install a ledger board. This board is attached to the exterior wall of the house, providing support and stability for the deck. Ensure the ledger board is level and securely fastened to the house's framing.
5. Support posts and beams: Install support posts on top of the footings, typically using metal post brackets or embedded anchors. Attach beams to the support posts, creating the framework for the deck. Ensure the posts and beams are level and securely attached.
6. Joist installation: Attach joists horizontally between the support beams, creating the deck's substructure. Space the joists according to the manufacturer's guidelines and local building codes. Use joist hangers or brackets to secure the joists to the beams.
7. Decking installation: Install the deck boards on top of the joists, starting from the outer edge and working your way inward. Use appropriate fasteners, such as screws or nails, recommended for the specific decking material you're using. Leave a small gap between the deck boards to allow for expansion and drainage.
8. Railing installation: Install the railing around the perimeter of the deck, if desired or required by local building codes. Choose a railing style that fits your design and ensure it is securely attached to the deck's framework.
9. Stairs and landings: If your deck requires stairs or landings, construct them according to the design and local building codes. Ensure the steps are uniform in height and width for safety and ease of use.
10. Finishing touches: Apply any desired finishes or treatments to the deck, such as staining, sealing, or painting. Install any additional features, such as lighting, benches, or planters.

Throughout the construction process, it's important to follow all relevant building codes, obtain any necessary permits, and use appropriate safety measures. It's also recommended to consult local building authorities or a professional contractor to ensure compliance with regulations and to obtain specific guidance based on your location and project requirements.

Decks, Balconies, Porches & Steps: Material

Wood

Additional information on deck building materials:

There are several different materials commonly used for building decks, each with its own characteristics, benefits, and considerations. Here are some popular deck materials:

1. Pressure-treated wood: Pressure-treated wood is the most common and affordable option for deck construction. It is treated with preservatives to resist rot, decay, and insect damage. Pressure-treated wood is durable and readily available, but it requires regular maintenance such as staining or sealing to prolong its lifespan.
2. Cedar: Cedar is a popular choice for its natural beauty and resistance to rot and insects. It has a warm, reddish-brown appearance and contains natural oils that provide some resistance to decay and moisture. Cedar decks require regular maintenance to preserve their color and prevent weathering.
3. Redwood: Redwood is similar to cedar in terms of its beauty and resistance to decay. It has a rich, reddish color and natural tannins that offer some protection against insects and rot. Redwood decks require regular maintenance to maintain their appearance and structural integrity.
4. Composite decking: Composite decking is made from a combination of wood fibers and recycled plastic. It offers the look of wood with low maintenance requirements. Composite decking is resistant to rot, warping, and insect damage. It does not require staining or sealing, but periodic cleaning is recommended to remove dirt and debris.
5. PVC (Polyvinyl chloride) decking: PVC decking is made from synthetic materials that are highly resistant to moisture, mold, and rot. It is durable, low-maintenance, and available in a variety of colors and styles. PVC decking is less prone to fading, staining, or splintering compared to natural wood, but it can be more expensive.
6. Aluminum decking: Aluminum decking is a lightweight and durable option that is resistant to rust, decay, and insect damage. It is low-maintenance and available in various finishes and colors. Aluminum decking can be more expensive upfront, but it offers long-term durability and requires minimal upkeep.
7. Tropical hardwoods: Tropical hardwoods, such as ipe, cumaru, or tigerwood, are known for their natural beauty, durability, and resistance to decay and insects. They offer exceptional strength and longevity but can be more expensive and require special tools and expertise for installation.

When choosing a deck material, consider factors such as budget, desired aesthetics, maintenance requirements, durability, and environmental impact. It's also important to check local building codes and regulations to ensure compliance with specific material requirements in your area.

Limitations

General

EXTERIOR LEGAL DISCLAIMER

Areas that visually appear to be deteriorated may be probed, if accessible. We cannot be held responsible for any hidden defects found after the inspection. Additional defects may be found when repairs are made to items listed in this report or when remodeling is done on the exterior. Siding and/or structural defects may be hidden behind dense vegetation, vines, snow, stored items, debris or finishes and cannot be included with this inspection. Vegetation, grading, surface drainage, and retaining walls are reviewed when any of these items may potentially adversely affect the building.

De ciencias

3.1.1 Siding, Flashing & Trim, exterior doors, eaves, soffit vents, windows and fascia

PROPERTY EXTERIOR ASSESSMENT AND RECOMMENDATIONS FOR SIDING MAINTENANCE AND DEBRIS MANAGEMENT

EXTERIOR



1. The siding on the main home exhibits signs of deterioration including looseness, staining, and cracks in multiple areas.
2. The rear building features a mix of vinyl siding, concrete, and a material resembling stucco.
3. Debris is scattered across the yard, detracting from the property's appearance and cleanliness.

Recommendations:

- Secure and pressure wash the siding on both structures to restore their appearance and integrity.
- Arrange for the removal of debris from the yard to enhance aesthetics and safety.
- Consider refinishing the material on the rear building to improve its condition and visual appeal.
- Engage a siding contractor to conduct a thorough evaluation and perform necessary repairs for both structures.

Recommendation

Contact a qualified siding specialist.





3.1.2 Siding, Flashing & Trim, exterior doors, eaves, soffit vents, windows and fascia

EXTERIOR WINDOW TRIM CONCERNS AND OPERATIONAL ISSUES

 Recommendation

EXTERIOR

Exterior Trim Damage and Window Operational Issues:

Damage is visible around the exterior trim of the windows, with torn screens also noted. While the windows can be opened and closed, some may require extra effort and show signs of wear on their hardware and framing components.

Recommendation

Contact a qualified window repair/installation contractor.



3.1.3 Siding, Flashing & Trim, exterior doors, eaves, soffit vents, windows and fascia

DAMAGED DOORS

EXTERIOR



The exterior doors exhibit noticeable signs of wear and damage. The screen doors are damaged, with loose door hardware and visible dents and markings. Additionally, alignment issues are observed. It is recommended to assess and repair these issues promptly.

Recommendation

Contact a qualified door repair/installation contractor.



3.2.1 Walkways, Patios & Driveways

DRIVEWAY CRACKING/WALKWAY CRACKING

EXTERIOR

Driveway and walkway cracks observed, which may indicate movement in the soil. Recommend monitor and/or have concrete contractor patch/seal.

Recommendation

Contact a qualified concrete contractor.



Recommendation



3.3.1 Decks, Balconies, Porches & Steps

MISSING HAND RAIL

EXTERIOR

 Recommendation

- 1. Missing handrails observed at the time of inspection. Recommend a qualified contractor to evaluate and repair.

Recommendation

Contact a qualified professional.



3.3.2 Decks, Balconies, Porches & Steps

DECK - DECK IN POOR CONDITION (CLOSE TO FAILURE)

EXTERIOR (REAR)

 Safety Hazard

Assessment of Rear Deck:

The rear deck is in a state of disrepair, with the majority of the deck boards exhibiting rot. Additionally, a section of the handrails is missing, and multiple types of materials have been utilized in its construction. The deck shows signs of deterioration, including holes, and is nearing failure. It is strongly recommended to engage a deck contractor for a thorough evaluation and necessary repairs.

Additional information: Issues pertaining to rotted decking boards (lumber):

Rotted deck boards can pose several dangers and should be addressed promptly to ensure the safety and structural integrity of the deck. Here are some potential dangers associated with rotted deck boards:

1. **Structural instability:** Rotted deck boards can weaken the overall structure of the deck. When the wood is decayed, it loses its strength and may not be able to support the weight and load properly. This can result in an unstable deck that could collapse or cause accidents, leading to injuries.
2. **Trip and fall hazards:** Rotted deck boards often develop soft spots or holes, creating an uneven surface. This can create tripping hazards for anyone walking on the deck, especially if the rot is widespread or affects commonly used areas. Uneven or deteriorated boards may also break underfoot, leading to falls and injuries.
3. **Nail and fastener failure:** Rotted wood may no longer provide a secure anchor for nails, screws, or other fasteners. Over time, the rot can cause the wood fibers to deteriorate, reducing the holding power of the fasteners. This can result in loose or detached deck boards, posing a risk to anyone on or below the deck.
4. **Insect infestation:** Rotted wood is an attractive environment for wood-destroying insects such as termites or carpenter ants. If rotted deck boards are left untreated, it can provide a gateway for these pests to invade other areas of the deck or even your home's structure. Insect infestations can cause further damage and compromise the safety of the deck.
5. **Mold and mildew growth:** Rotted wood is often moist and prone to mold and mildew growth. These fungi can compromise the air quality around the deck and potentially cause health issues, particularly for individuals with respiratory conditions or allergies. Mold and mildew can also spread to other areas of the deck or adjacent structures if left unaddressed.

To address the dangers of rotted deck boards, it is essential to replace the damaged boards as soon as possible. Ensure that any underlying structural components, such as joists or beams, are inspected for rot as well. Additionally, consider taking preventive measures, such as regular inspections, proper maintenance, and using materials that are resistant to rot, to avoid future problems. If you're unsure about the extent of the damage or how to proceed, it's recommended to consult a professional contractor experienced in deck repair and construction for proper assessment and guidance.

How decks are built:

Building a wooden deck involves several key steps to ensure a sturdy and functional structure. Here is a general outline of how wooden decks are typically built:

1. **Design and planning:** Determine the size, shape, and layout of your deck. Consider factors such as the desired location, purpose, local building codes, and any necessary permits. Create a detailed plan that includes dimensions, materials, and any special features.
2. **Site preparation:** Clear the area where the deck will be built. Remove vegetation, rocks, and other debris. Level the ground if necessary, ensuring proper drainage away from the house.
3. **Foundation and footings:** Decide on the type of foundation for your deck. Common options include concrete footings, concrete piers, or helical screw piles. Dig holes for the footings, ensuring they reach below the frost line and are of the appropriate size and depth. Install the footings according to local

building codes and specifications.

4. Ledger board installation: If attaching the deck to the house, install a ledger board. This board is attached to the exterior wall of the house, providing support and stability for the deck. Ensure the ledger board is level and securely fastened to the house's framing.

5. Support posts and beams: Install support posts on top of the footings, typically using metal post brackets or embedded anchors. Attach beams to the support posts, creating the framework for the deck. Ensure the posts and beams are level and securely attached.

6. Joist installation: Attach joists horizontally between the support beams, creating the deck's substructure. Space the joists according to the manufacturer's guidelines and local building codes. Use joist hangers or brackets to secure the joists to the beams.

7. Decking installation: Install the deck boards on top of the joists, starting from the outer edge and working your way inward. Use appropriate fasteners, such as screws or nails, recommended for the specific decking material you're using. Leave a small gap between the deck boards to allow for expansion and drainage.

8. Railing installation: Install the railing around the perimeter of the deck, if desired or required by local building codes. Choose a railing style that fits your design and ensure it is securely attached to the deck's framework.

9. Stairs and landings: If your deck requires stairs or landings, construct them according to the design and local building codes. Ensure the steps are uniform in height and width for safety and ease of use.

10. Finishing touches: Apply any desired finishes or treatments to the deck, such as staining, sealing, or painting. Install any additional features, such as lighting, benches, or planters.

Throughout the construction process, it's important to follow all relevant building codes, obtain any necessary permits, and use appropriate safety measures. It's also recommended to consult local building authorities or a professional contractor to ensure compliance with regulations and to obtain specific guidance based on your location and project requirements.

Recommendation

Contact a qualified deck contractor.





4: BASEMENT, FOUNDATION, CRAWLSPACE & STRUCTURE

Information

Inspection Method

Foundation

Visual

Foundation photos for your
information.

Basements & Crawlspace: Crawl space photos/Duct work/plumbing/basement images

Crawl space

Photos of the crawl space or basement for your information.

Additional information on how crawl spaces are built:

Building a crawl space involves several steps to create a raised foundation with accessible space beneath a house. Here's a general outline of the process:

1. Excavation and Site Preparation:

- Excavation: Clear the area where the crawl space will be located by removing any vegetation, debris, or topsoil.
- Leveling: Ensure the ground is properly leveled and graded to provide a stable base for the crawl space.

2. Foundation Walls:

- Footings: Construct concrete footings along the perimeter of the crawl space area to provide support for the foundation walls.
- Foundation wall construction: Build the foundation walls using concrete blocks, poured concrete, or other suitable materials. Ensure the walls are properly aligned, leveled, and reinforced as required by local building codes.

3. Ventilation and Insulation:

- Ventilation: Install vents or other ventilation systems along the foundation walls to allow air circulation and prevent moisture buildup within the crawl space. The number and placement of vents will depend on local climate conditions and building code requirements.
- Insulation: Apply insulation to the crawl space walls and floor to help maintain a consistent temperature within the space and prevent heat loss or gain. Common insulation materials include foam boards, fiberglass batts, or spray foam insulation.

4. Moisture Barrier:

- Moisture barrier installation: Install a vapor barrier, typically made of heavy-duty plastic sheeting, over the ground within the crawl space. This helps prevent moisture from seeping into the space and causing issues such as mold or rot. The vapor barrier should overlap and be securely fastened to the crawl space walls and any piers or supports.

5. Access and Utilities:

- Access openings: Create access openings or crawl space doors to allow entry for maintenance, repairs, or inspections. These openings should be properly sealed to prevent moisture infiltration.
- Utilities installation: Install necessary utilities such as plumbing, electrical wiring, and HVAC ducts within the crawl space, ensuring they are properly insulated and protected.

6. Crawl Space Flooring:

- Flooring material: Choose a suitable flooring material for the crawl space, such as a vapor-impermeable material like concrete, or install a layer of gravel or crushed stone for improved drainage.

7. Pest Control and Maintenance:

- Pest prevention: Take measures to prevent pests from entering the crawl space by sealing any potential entry points and considering additional pest control methods.
- Regular maintenance: Periodically inspect the crawl space for any signs of moisture, damage, or pest activity. Address any issues promptly to maintain the integrity and functionality of the crawl space.

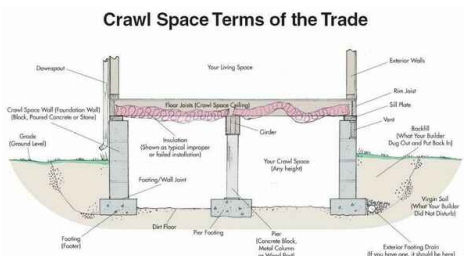
It's important to note that building a crawl space requires compliance with local building codes and regulations. It is recommended to consult with professionals, such as contractors, architects, or structural engineers, who have expertise in crawl space construction to ensure the design and implementation meet safety and code requirements specific to your location and project.



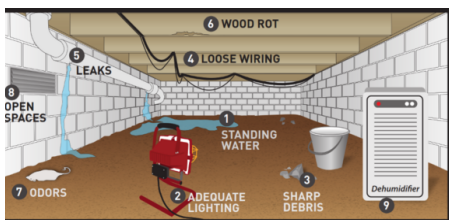
EXAMPLE ONLY ENCAPSULATION
WITH DEHUMIDIFIER



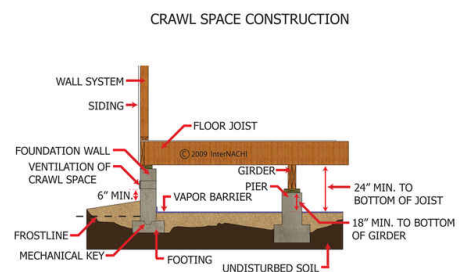
EXAMPLE ONLY REPAIR WITH JACK



Crawl space terms EXAMPLE ONLY



EXAMPLE ONLY (COMMON CRAWL SPACE DEFECTS)



EXAMPLE ONLY (TERMS)

Limitations

General

FOUNDATION/STRUCTURAL DISCLAIMER

Any repairs to Sub flooring that are performed under the home is not a validation that more damages cant be discovered when updates or remodeling of interior spaces are realized. Some foundation cracking is typical of settlement and/or shrinkage and does not usually indicate a structural decency. Defects may be present at hidden foundation areas that could allow water infiltration or may have been caused by structural movement. Please ask your Inspector for further information if there are still questions prior to the end of your Discovery Period. Only the readily visible portions of the foundation and structure were observed. Foundation surfaces that are hidden behind surfaces cannot be observed by the inspector and we are not allowed to remove Insulation with out written permission. Some times bathroom(s) or kitchen flooring can have two or three layers and only a Visual inspection of Laminate or hard wood or flooring is conducted inside the home and never do we remove flooring to review under these area(s) that have sub flooring issues discovered in the Crawl space.

Basements & Crawlspaces

INSULATION BLOCKING VIEW

CRAWL SPACE

Insulation blocks areas of the subfloor in a crawlspace. Home inspectors are not permitted to remove this insulation to view the flooring.

Deficiencies

4.1.1 Basements & Crawlspace

 Recommendation

IMPROPER CRAWL SPACE COVER OR MISSING COVER

FOUNDATION

1. Damaged crawl space cover or no crawl space cover observed. A tight seal on a crawl space cover helps to keep moisture, rodents and insects out of the crawl space. Recommend a qualified contractor to evaluate and repair.
2. See the example below of a new crawl space cover. These covers are sold in two parts, the top cover slips over the base to create a seal.
3. Older crawl space covers are normally constructed from metal or wood. Over time the wooden door can rot and the metal door can rust.

Recommendation

Contact a qualified professional.



EXAMPLE ONLY (NEW CRAWL SPACE COVER)



4.1.2 Basements & Crawlspace

 Recommendation

CRAWL SPACE ASSESSMENT AND RECOMMENDATIONS

CRAWL SPACE

The crawl space presents several issues, including loose insulation, a damaged moisture barrier, junction boxes lacking covers (posing a fire hazard), damaged ductwork, and signs of common wood fungus. Crawl space remediation is strongly advised to address these concerns. Additionally, parts of the floor are uneven.

Considering the property's construction in 1972, it is common practice to add additional floor supports such as concrete piers and girder beams or metal piers for reinforcement (refer to examples marked with green arrows for crawl space remediation).

Prior to listing the property, it is recommended to obtain a termite and moisture letter to provide assurance to potential buyers. Installing a 6-mil barrier and considering the installation of a dehumidifier can help mitigate moisture-related issues.

It's important to note that insulation in humid crawl spaces can exacerbate moisture problems under the subfloor. As humidity levels rise, insulation can trap moisture, leading to condensation and potential moisture damage. Therefore, proper ventilation and moisture control measures are essential in crawl space environments to prevent such issues.

Note: additional joist hangers have been affixed to the girder beams, resulting in reduced settlement issues within the crawl space. Joist hangers, which are metal clips located at the ends of the joists, contribute to this structural enhancement.

Recommendation

Contact a foundation contractor.



EXAMPLE ONLY (NOT INSPECTED HOME) SUMP PUMP AND DEHUMIDIFIER

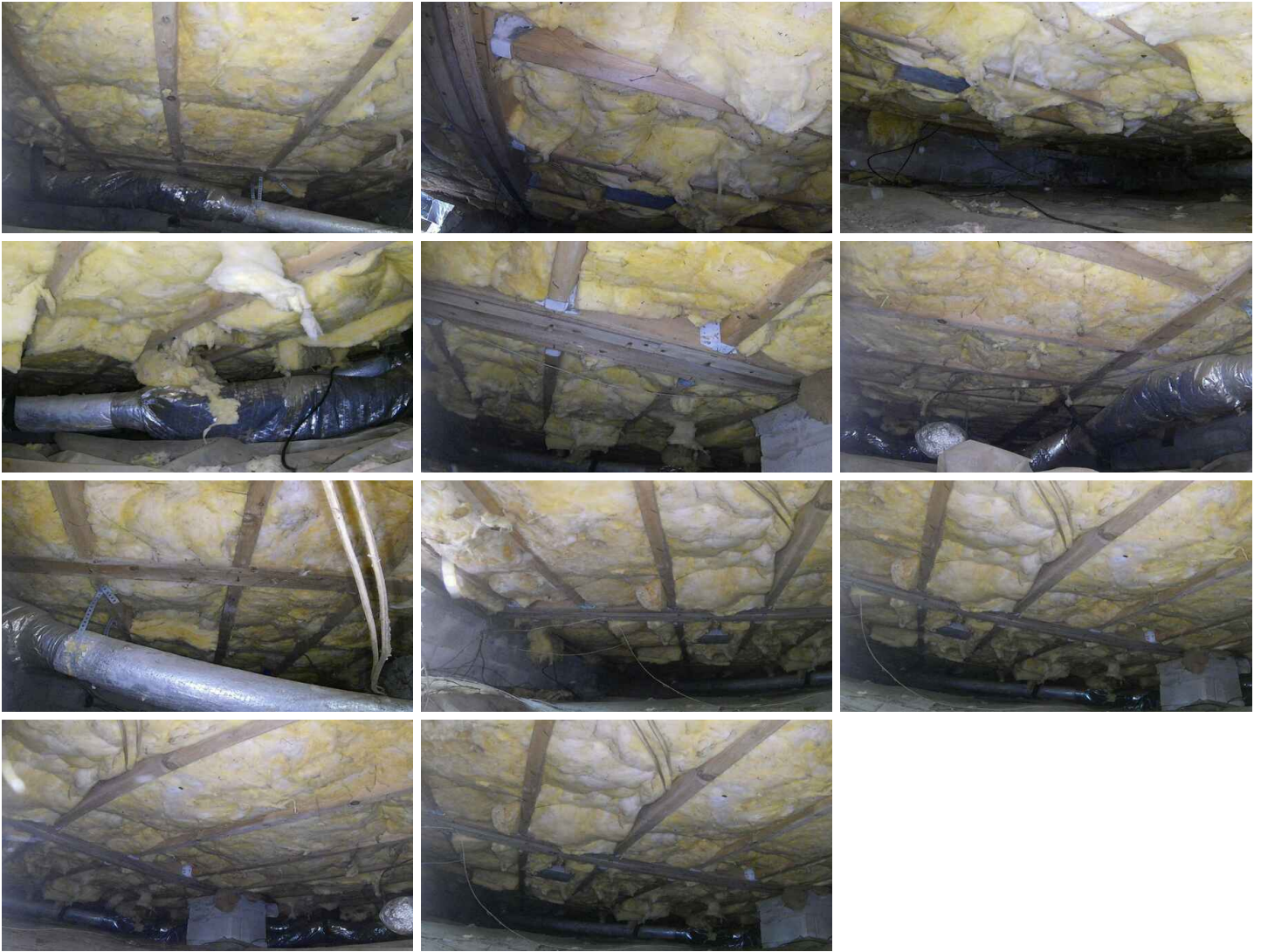


EXAMPLE ONLY_SUPPORT ADDED UNDER HOME



EXAMPLE ONLY - BEFORE AND AFTER FULL ENCAP





5: HVAC

Information

Heating and cooling equipment :

Energy Source

Multiple

Electric

Heat source information.

Information: types of residential systems

The Four Types of HVAC Systems

Type #1: Heating and Air Conditioning Split System

A split system is an outdoor unit containing the condenser and compressor, and an indoor unit containing the evaporator coil and blower. Split-system central air conditioning is most popular type of residential heating and air-conditioning. The indoor unit is often connected to a furnace or heat pump.

HVAC split systems will typically have:

- An outdoor unit that houses the condenser coil, compressor, electrical components, and a fan.
- Refrigerant that circulates to and from the indoor and outdoor unit via a series of pipes (refrigerant lines).
- An evaporator coil that usually sits above the furnace inside the home.
- A blower that sends warm air over the cold evaporator coil, which absorbs heat from the air.
- Ducts that carry air throughout your building. Supply ducts pull in air while return ducts blow it out.
- A thermostat that controls the systems and sets your desired temperature.
- The occasional optional accessories for quality indoor air, such as air scrubbers, purifiers, humidifiers, UV lamps, and so on.

Type #2 Hybrid Heat Pump System

In a hybrid heating and cooling system, a heat pump (powered by electricity) is used in conjunction with a furnace that burns natural gas, propane, or fuel oil. Don't be fooled by the name heat pump – these systems also cool your home.

In fact, heat pumps are air conditioners that can also work in reverse to efficiently heat your home. It's one system that efficiently heats and cools your home.

These systems have a furnace for when temperatures dip below 40 degrees. A heat pump isn't very efficient, and that's when the furnace kicks on to do the heating.

On all but the coldest of nights (where you'll need a furnace backup), a heat pump can take heat out of the air outside and transport it into your home. And in the summer, it functions just like an air conditioner, so you'll get year-round energy savings from one product.

An ideal hybrid heat split system will have:

- A heat pump that heats and cools the refrigerant.
- A furnace, plus the evaporator coil for conversion of the refrigerant and circulation of air.
- Ductwork to channel the air around your building.
- The thermostat for adjusting and controlling the system.
- Optional accessories for improved indoor air quality.

Want more information on what the right type of AC & heating units are right for your home? Consultations and quotes are risk-free. Go here to schedule one.

Type #3 Ductless Mini-Split Heat Pump

A duct-free HVAC system provides a solution for spaces where conventional ducted systems aren't compatible. They can also be great compliments to existing ducted types of HVAC systems.

Ductless mini-split units are installed directly into the zones of the home that need heating and cooling. You can have as many as four indoor air handling units (four zones or rooms) for each outdoor unit.

Ductless mini-split systems will have the following:

- The heat pump unit outdoors that contains the usual compressor, condenser, and fan.
- A fan coil that is compact.
- Wires and tubing for the refrigerant (only requires a 3-inch hole), connecting the outdoor unit to the fan coil.
- The thermostat (aka control panel).
- Optional accessories to clean the air and make it more pleasant before its distribution through the house.

Type #4 Packaged Heating & Air Conditioning System

A packaged HVAC system contains the compressor, condenser, and evaporator all in one unit, often located on a roof or near the foundation.

It is a good solution for homes and offices without adequate space for all the separate components of split systems. They are sometime used in small commercial buildings and often include electric coils or a furnace for heating.

Packaged HVAC systems include:

- The air conditioner/heat pump together with the evaporator/fan coil in one unit.

- Thermostat/control interface for a complete control of the system.
- Optional air quality improvers. Things like the air purifiers, cleaners, ventilators or UV lamps, which are geared towards making the air extra clean before it circulates your home or office.

Type # 5 Geo thermal

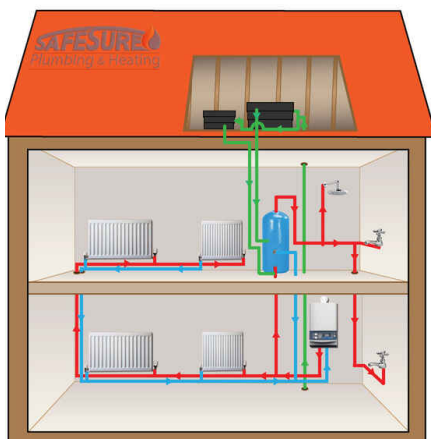
A geothermal heat pump or ground source heat pump is a type of heat pump used to heat and/or cool a building by exchanging heat with ground.

Type# 6 Boiler units (radiator heat)

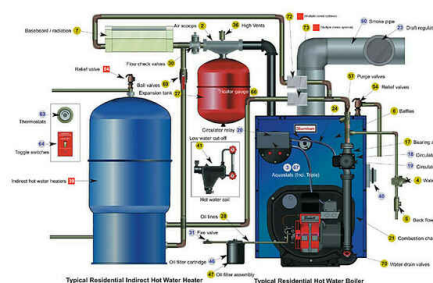
A boiler is a common component of HVAC systems that is used for heating purposes. Here's a general overview of how a boiler works in an HVAC system:

1. Heat Generation: The boiler generates heat by burning fuel, such as natural gas, oil, or propane, or through electrical resistance. The fuel is ignited, and the heat is transferred to the boiler's combustion chamber.
2. Heat Exchanger: The boiler contains a heat exchanger, which is a metal chamber or pipe system. As the fuel burns, the heat is transferred to the water or steam circulating through the heat exchanger.
3. Circulation System: The heated water or steam produced by the boiler is circulated through a system of pipes. In a hydronic system, the hot water is pumped to radiators, baseboard heaters, or radiant floor heating systems, where it releases heat to warm the surrounding space. In a steam system, the steam travels through pipes to radiators, which then release heat into the room.
4. Expansion Tank: The boiler system includes an expansion tank, which helps accommodate the expansion and contraction of the water or steam as it heats and cools. This helps prevent damage to the system and maintains proper pressure levels.
5. Controls and Safety Features: The boiler is equipped with controls and safety features to ensure efficient and safe operation. These may include thermostats, pressure relief valves, temperature sensors, and flame sensors. The controls regulate the fuel supply, water temperature, and system pressure to maintain a comfortable and safe heating environment.
6. Venting: Combustion gases produced during the fuel-burning process are vented safely to the outside of the building through a flue or chimney. This ensures that harmful gases, such as carbon monoxide, are expelled from the building.
7. Water Supply: The boiler system may require a water supply for the continuous circulation of water. This water supply can be connected to a municipal water source or a separate water storage tank.
8. Maintenance and Servicing: Regular maintenance and servicing of the boiler are essential to ensure its efficient and safe operation. This may include cleaning the heat exchanger, checking and adjusting controls, inspecting and maintaining venting systems, and addressing any repairs or component replacements as needed.

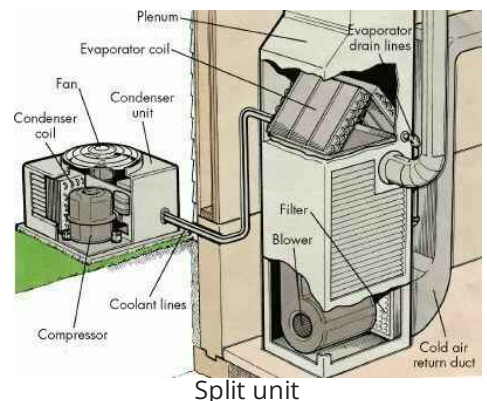
Boilers are versatile heating systems that can provide both space heating and domestic hot water. They are commonly used in residential, commercial, and industrial settings. The specific operation and features of a boiler may vary depending on the type and model of the unit. It is important to consult the manufacturer's instructions and, if needed, seek the assistance of a qualified HVAC technician for proper installation, maintenance, and repairs.



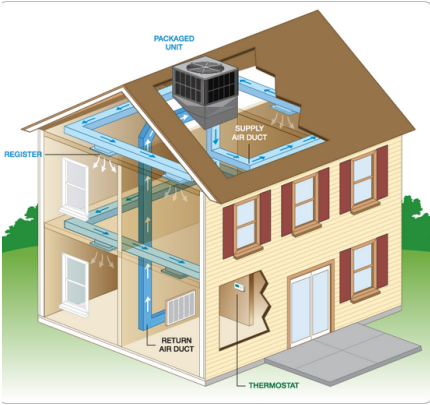
BOILER UNIT FLOW



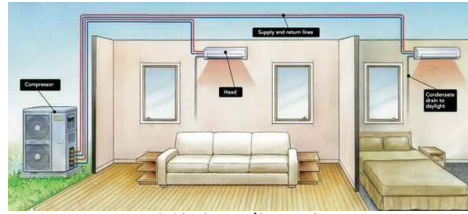
BOILER UNIT



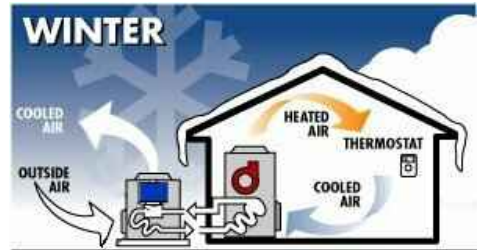
Split unit



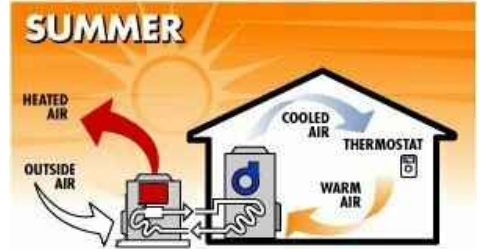
Packaged unit



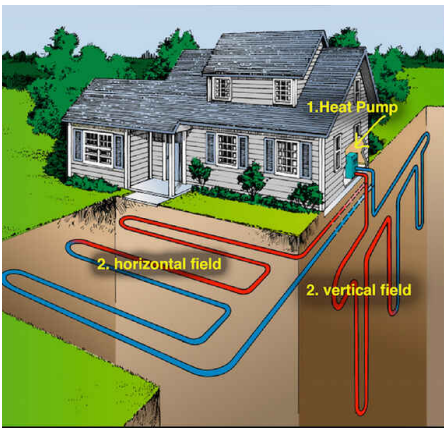
Mini split unit



Typical Heat Pump System



Heat pump summer and winter



Geo thermal (not common)

Heating and cooling equipment : Brand (heating and cooling)

HVAC

Goodman, Other

Original Findings:

Manufacturer year for packaged unit: 2000 (main house)

Manufacturer year for condenser unit: 2006 (rear building), manufacture year for furnace or air handler: 2006 (units for the rear building).

Modern air conditioners can last between 15-20 years due to improvements in technology. *Older air conditioners last around 12-15 years.* The health and efficiency of your A/C depends on a number of factors, including whether or not you properly maintained the unit throughout its lifetime. The service life of units also depends on manufacture specifications. *Older units should be serviced by HVAC contractors, this is considered general maintenance and should be completed annually.*

How HVAC systems work:

HVAC systems, which stands for Heating, Ventilation, and Air Conditioning systems, are designed to provide thermal comfort and maintain indoor air quality in residential, commercial, and industrial buildings. Here's a general overview of how HVAC systems work:

- 1. Heating:** The heating component of an HVAC system is responsible for warming the indoor space during cold weather. It typically consists of a heating source, such as a furnace or heat pump, that generates heat. The heat is then distributed throughout the building using ductwork or radiant heating systems.
- 2. Ventilation:** Ventilation is crucial for maintaining healthy indoor air quality by removing stale air, pollutants, and odors from the building and introducing fresh outdoor air. HVAC systems incorporate various methods of ventilation, such as natural ventilation (open windows), mechanical ventilation (fans and blowers), or balanced ventilation systems with heat recovery.
- 3. Air Conditioning:** The air conditioning component of an HVAC system is responsible for cooling the indoor space during hot weather. It typically involves a cooling unit, such as a central air conditioner or a heat pump, which removes heat from the indoor air and releases it outside. The cooled air is then distributed throughout the building using ductwork or other air distribution methods.
- 4. Thermostat Control:** HVAC systems are controlled by a thermostat, which allows users to set the desired temperature and control the operation of the heating and cooling components. The thermostat senses the temperature in the building and sends signals to the HVAC system to adjust its operation accordingly.
- 5. Air Distribution:** HVAC systems use ductwork to distribute conditioned air throughout the building. Supply ducts deliver heated or cooled air to different rooms, while return ducts bring the air back to the HVAC system for reconditioning. Air registers and grilles are installed in various locations to control the airflow and direct it into the desired areas.
- 6. Filtration:** HVAC systems often include air filters that help remove dust, allergens, and other airborne particles from the circulating air. Filters help improve indoor air quality by capturing pollutants and preventing them from being recirculated.
- 7. Refrigerant Cycle (for cooling):** Air conditioning systems utilize a refrigerant cycle to cool the indoor air. The refrigerant, a special fluid, undergoes a cycle of compression, condensation, expansion, and evaporation, absorbing heat from the indoor air and releasing it outside.
- 8. Energy Efficiency:** Modern HVAC systems are designed to be energy-efficient, with features such as variable-speed motors, programmable thermostats, zoning capabilities, and improved insulation. Energy-efficient HVAC systems help reduce energy consumption and lower utility costs.

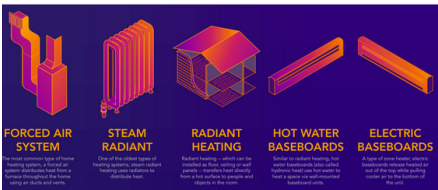
It's important to note that HVAC systems can vary in design and components depending on the specific building and HVAC system type. The above overview provides a general understanding of how HVAC systems work, but for specific details or troubleshooting, it is recommended to consult with a qualified HVAC technician or professional.



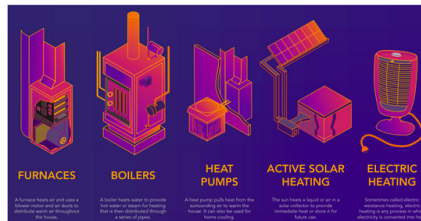
Heating and cooling equipment : Heat Type

Forced Air

Heating system diagrams.



heating system fig 2



heating system fig 1

Normal Operating Controls/distribution system/Presence of installed heat/ac source : Distribution systems

Interior area

Insulated

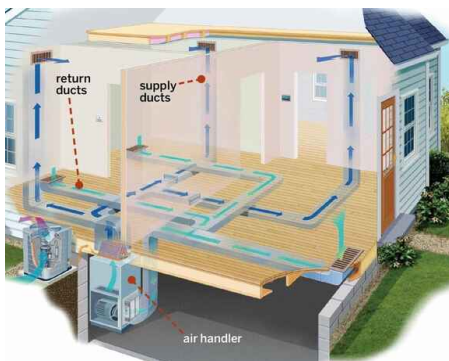
Distribution system (duct work).

Additional information on duct work installation:

The installation of ductwork in a house involves a series of steps to ensure proper airflow and efficient distribution of conditioned air throughout the building. Here's a general overview of how ductwork is installed in a house:

- 1. System Design:** The first step is to design the duct system based on the heating and cooling needs of the house. This involves determining the size and layout of the ducts, the number and location of supply and return vents, and considering factors such as the building's size, layout, insulation levels, and airflow requirements.
- 2. Material Selection:** Ductwork can be made from various materials, including sheet metal, flexible ducts, fiberglass ductboard, or ducts with an insulated lining. The choice of material depends on factors such as cost, accessibility, noise considerations, and local building codes.
- 3. Planning and Marking:** Before installation, the route and placement of the ducts are planned and marked on the floors, walls, and ceilings. This helps ensure that the ducts are installed in the intended locations and that they don't interfere with other building components.
- 4. Duct Fabrication:** If sheet metal ducts are used, they are typically fabricated in a workshop or on-site using specialized tools. The duct sections are cut, bent, and assembled according to the design specifications. Joints and seams are sealed to minimize air leaks.
- 5. Duct Installation:** The ducts are installed in the designated areas using appropriate hangers, supports, or straps. They are secured in place and connected to the HVAC equipment, such as the air handler or furnace.
- 6. Sealing and Insulation:** Proper sealing of duct joints and connections is crucial to prevent air leakage, which can reduce system efficiency. Ductwork is sealed using foil tape, mastic, or other approved sealing materials. Additionally, insulation may be applied to ducts located in unconditioned spaces to prevent heat gain or loss.
- 7. Vents and Registers:** Supply and return vents, as well as registers, are installed in the walls, floors, or ceilings. These components allow the conditioned air to enter the living spaces and provide a way for air to return to the HVAC system.
- 8. Balancing and Testing:** Once the ductwork is installed, the system is balanced and tested to ensure proper airflow and performance. This involves adjusting dampers, measuring airflow rates, and verifying that the system meets design specifications.

It's important to note that ductwork installation requires proper knowledge and skills, and it's often performed by HVAC professionals. Following local building codes and industry standards is essential to ensure safety and efficiency. Consulting with a qualified HVAC contractor is recommended for the design and installation of ductwork in your specific home.



Normal Operating Controls/distribution system/Presence of installed heat/ac source : Thermostat image

Interior

Thermostat image.

Additional information on thermostat operation:

Thermostats are devices used to control heating, ventilation, and air conditioning (HVAC) systems. They work by sensing the temperature in the environment and sending signals to the HVAC system to adjust the heating or cooling output. Here's a general overview of how thermostats work:

1. **Temperature Sensing:** The thermostat contains a temperature sensor, typically a thermistor or a bimetallic strip. These sensors detect changes in temperature and provide a corresponding electrical signal.
2. **Setpoint and User Input:** The thermostat allows users to set their desired temperature, known as the setpoint. This is typically done using buttons or a dial on the thermostat. The setpoint represents the temperature at which the user wants the HVAC system to activate.
3. **Comparison and Control Logic:** The thermostat continuously compares the actual temperature in the environment to the setpoint. Based on this comparison, the thermostat's control logic determines whether the HVAC system needs to be activated to adjust the temperature.
4. **Output Signal:** When the actual temperature deviates from the setpoint, the thermostat sends an output signal to the HVAC system. This signal can be in the form of electrical voltage, current, or digital communication (depending on the thermostat type).
5. **HVAC System Activation:** The output signal from the thermostat triggers the HVAC system to turn on or off, depending on whether heating or cooling is required. For example, if the temperature is below the setpoint, the thermostat will send a signal to activate the heating system. Once the temperature reaches or exceeds the setpoint, the thermostat will send a signal to deactivate the heating system.
6. **Additional Features:** Thermostats may include additional features, such as programmable schedules, Wi-Fi connectivity, and smart home integration. These features allow users to set different temperature profiles throughout the day, remotely control the thermostat using mobile apps, and integrate the thermostat with other smart devices for enhanced automation and energy savings.

It's important to note that thermostats can vary in design and functionality, depending on the type and model. Some thermostats use simple mechanical mechanisms, while others are digital or programmable. The specific operation and programming options may differ, so it's essential to consult the manufacturer's instructions for your particular thermostat model.

Overall, thermostats play a crucial role in maintaining desired comfort levels and energy efficiency by controlling HVAC systems based on temperature settings and feedback.



Limitations

General

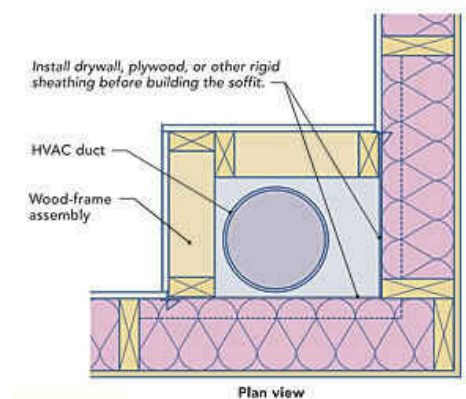
HVAC DISCLAIMER

All heating units should be professionally serviced prior to the start of each heating season to maintain efficiency and for personal safety. WE DO NOT REVIEW HEAT EXCHANGERS NOR CERTIFY EQUIPMENT HAS BEEN CORRECTLY INSTALLED. Failure to perform your required walk-thru could leave you exposed to unforeseen costs. If HVAC is verified at time of Inspection and also verified at Walk-thru by you or an authorized representative this is proof system was working and also validated by you prior to taking possession. Our review on Inspection Day is not a Warranty or a Guarantee to how long a system will last or perform without issues. Where possible always purchase a proper Home warranty! We do not determine if a System is Installed properly or if a Permit is Pulled. Our review is based on Thermostat and operation and Maintenance of equipment visually seen! Any suggestion from a qualified HVAC contractor that Home Inspectors are certified HVAC contractors is misleading and falsely represents what our standards for review of HVAC equipment actually is! Air conditioning units should be professionally serviced prior to the start of each cooling season for best performance and exterior compressor units should be left uncovered in the winter months to avoid excess moisture build-up and premature corrosion. Any space heaters present in the building should always be operated in full accordance with the manufacturer's recommended procedures and safety precautions to prevent oxygen depletion and possible build-up of carbon monoxide. ONLY DUCT WORK THAT IS VISABLE CAN BE REVIEWED AND INSPECTION IS NOT A VALIDATION AS TO QUALITY OF AIR AND OR OVERALL CONDITIONS OF DUCT WORK. ONLY A QUALIFIED HVAC CONTRACTOR CAN MAKE STATEMENTS TO CONDITIONS OF HVAC EQUIPMENT AND OR DUCT WORK. SHOULD ISSUES ARISE OUT OF THIS INSPECTION THAT REQUIRE ADDITIONAL INSPECTIONS/CORRECTIONS IT IS SUGGESTED TO HAVE HVAC SYSTEM(S) REVIEWED FROM A LICENSED HVAC PROFESSIONAL AND THEN THOSE ITEMS DISCOVERED FROM THIS INDUSTRY PROFESSIONAL SHOULD THEN BE FOLLOWED FOR CORRECTION PRIOR TO CLOSING.

Normal Operating Controls/distribution system/Presence of installed heat/ac source

NON VISIBLE DUCT WORK DUE TO CONSTRUCTION LAYOUT

Due to how HVAC contractors install ducts in the home not all duct work is visible inside home with out entry into walls and ceilings.



Hidden duct work

De ciencias

5.1.1 Heating and cooling equipment

UNITS NEAR OR AT THE END OF THEIR SERVICE LIFE (HVAC)/INOPERABLE HVAC UNITS

EXTERIOR OR INTERIOR (BOTH BUILDINGS)



The HVAC units are approaching or have reached the end of their service life. Here are the manufacturer years for each unit:

- Packaged Unit (Main House): 2000
- Condenser Unit (Rear Building): 2006
- Furnace or Air Handler (Rear Building): 2006

The unit in the main home is currently non-operational. The power to both the rear and main building was shut off preventing testing. While the rear units may still be operational, being 18 years old, they should undergo servicing. Damage is observed on all units. Recommend an HVAC contractor to evaluate and repair.

The main home utilizes a packaged unit, which provides both heating and cooling. In contrast, the rear building features a condenser unit located on the side and an air handler inside. Considering its smaller size and cost-effectiveness, remediation for the rear building to include a mini-split system is recommended. Note that removing the larger unit will decrease the heating and cooling output in the garage area.

Modern air conditioners, benefitting from technological advancements, typically have a lifespan of 15-20 years, while older units generally last around 12-15 years. The longevity and efficiency of an A/C unit depend on various factors, including proper maintenance throughout its lifespan. Older units should undergo regular servicing by HVAC contractors, typically conducted annually as part of general maintenance.

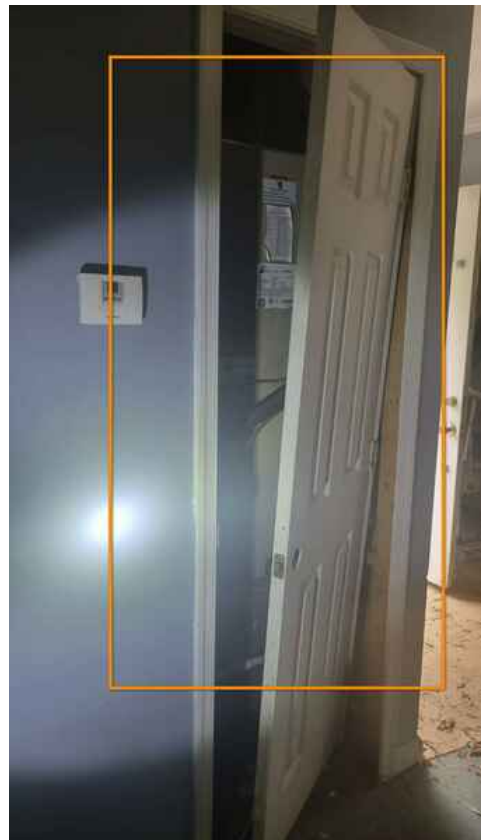
It is advised to engage an HVAC contractor to evaluate and address the systems in both homes to ensure their optimal functioning and longevity.



EXAMPLE OF MINI SPLIT HVAC SYSTEM

Recommendation

Contact a qualified heating and cooling contractor





5.2.1 Normal Operating Controls/distribution system/Presence of installed heat/ac source

 Recommendation

UPGRADED THERMOSTATS/POWER OFF TO UNITS

INTERIOR

Testing of the heating and air conditioning systems was hindered by the homeowner's decision to shut off the power. Upgrading the thermostats is advisable in this scenario.

Recommendation

Contact a qualified heating and cooling contractor



6: DOORS, WINDOWS & INTERIOR

Information

Counter tops & Cabinets and kitchen appliances : Kitchen sink

Kitchen

Photos of the kitchen sink for
your information.



Interior doors, windows, floors, ceilings : Interior doors, windows, floors and ceiling photos

interior

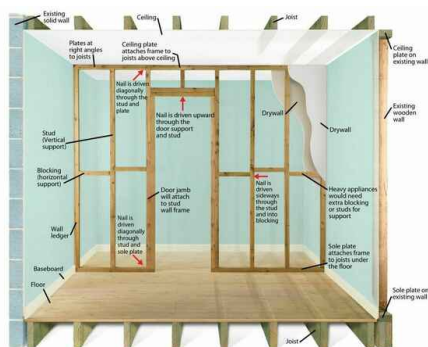
Interior doors, window, floor and ceiling photos for your information.

Additional information on drywall installation:

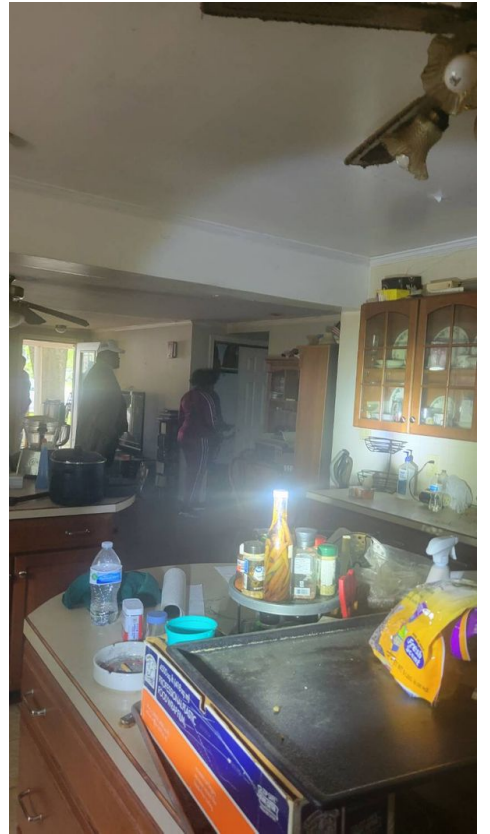
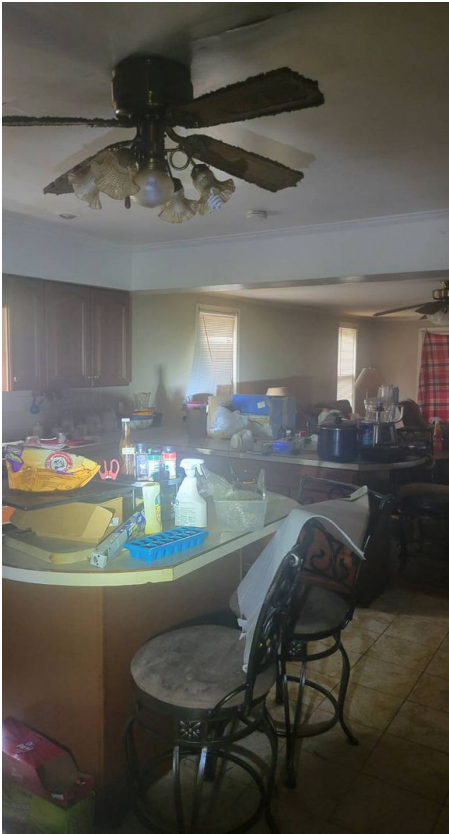
Installing drywall, also known as gypsum board or sheetrock, is a common method for creating interior walls and ceilings in residential and commercial buildings. Here's a general overview of how drywall is installed:

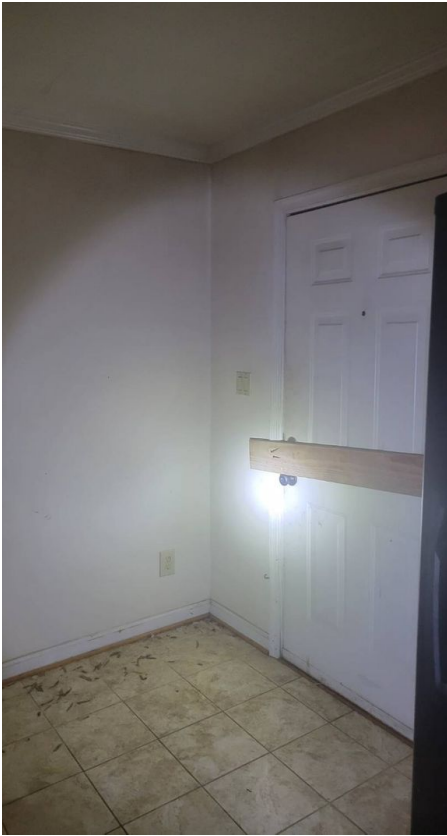
1. Preparation: Before installing drywall, the wall studs or ceiling joists should be in place. Any electrical or plumbing work should be completed, and insulation may be installed if needed. The framing should be free of any protrusions or obstructions.
2. Measurement and Layout: Drywall sheets are typically 4 feet wide and come in various lengths. Measurements are taken to determine the required size and quantity of drywall sheets. Layout lines may be marked on the framing to guide the installation.
3. Cutting Drywall: Drywall sheets are cut to size using a utility knife or a drywall saw. Measurements are transferred to the drywall, and then a straight edge is used as a guide for making the cuts. Score the front side of the drywall, and then snap it along the score line. Finally, cut through the paper backing on the back side.
4. Installation: Drywall is typically installed horizontally, starting from the ceiling and moving down to the floor. The first sheet is positioned against the ceiling, with the tapered edge facing down. It is secured to the framing using drywall screws or nails. Screws are preferred as they provide better holding power and minimize the risk of popping or cracking.
5. Taping and Joint Compound: Once the drywall is installed, joints between the sheets, as well as screw or nail indentations, need to be covered with joint tape and joint compound. Joint tape is applied over the joints, and joint compound is used to cover the tape and fill in the gaps. Multiple layers of compound may be applied, allowing each layer to dry and sanding between coats.
6. Finishing: After the joint compound has dried, the finished surface is achieved through a process called drywall finishing. This involves applying additional layers of joint compound, sanding, and smoothing the surface until it is flat and even. The finish can be customized based on the desired level of smoothness or texture.
7. Priming and Painting: Once the drywall is finished and sanded, it is ready for priming and painting. A coat of primer is applied to seal the drywall surface, and then one or more coats of paint are applied to achieve the desired color and finish.

It's important to note that drywall installation requires proper techniques and tools, and it's often performed by experienced professionals or skilled DIYers. Working with drywall can be physically demanding and may involve working on ladders or scaffolding. It's recommended to follow local building codes and consult with professionals for guidance and assistance if needed.



DRYWALL INSTALLTION





Counter tops & Cabinets and kitchen appliances : Cabinetry and counter tops

Kitchen

combination

Photos of cabinets and counter tops for your information.

Additional information on installing cabinets and counter tops:

Installing kitchen cabinets and countertops involves careful planning, precise measurements, and attention to detail. Here's a general overview of how kitchen cabinets and countertops are installed:

1. **Planning and Design:** Determine the layout and design of your kitchen cabinets, considering factors such as storage needs, functionality, and aesthetics. Create a detailed plan that includes the cabinet dimensions, placement, and any special features or accessories.

2. **Remove Existing Cabinets:** If you have existing cabinets, remove them carefully, taking care not to damage the walls or surrounding surfaces. Disconnect any plumbing or electrical connections if necessary.

3. **Preparing the Space:** Ensure the walls are clean, smooth, and level. Make any necessary repairs, such as patching holes or fixing uneven surfaces. Install a ledger board along the wall to provide temporary support for the base cabinets during installation.

4. **Install Base Cabinets:** Start with the base cabinets. Begin at a corner and work your way along the wall. Use shims to level and align the cabinets, ensuring they are plumb and level. Secure the cabinets to the wall studs using screws or appropriate fasteners.

5. **Install Upper Cabinets:** After the base cabinets are installed, proceed with the installation of the upper cabinets. Again, use shims to ensure they are level and aligned. Secure the cabinets to the wall studs.

6. **Install Cabinet Doors, Drawers, and Hardware:** Install the cabinet doors, drawers, and any hardware or accessories, such as handles or knobs. Adjust the hinges and drawer slides to ensure proper alignment and smooth operation.

7. **Measure and Cut Countertops:** Measure the dimensions for the countertops carefully, accounting for any wall irregularities or obstacles. Transfer the measurements to the countertop material and cut it to the appropriate size. If using solid surface or quartz countertops, professional cutting and fabrication may be required.

8. **Install Countertops:** Place the countertops on the base cabinets, ensuring they fit properly and are level. Secure the countertops to the cabinets using screws or adhesive, following manufacturer instructions. Make any necessary cutouts for sinks, cooktops, or other fixtures.

9. **Connect Plumbing and Electrical:** If you had to disconnect plumbing or electrical connections, reconnect them according to local codes and regulations. Ensure proper sealing and secure connections.

10. **Finishing Touches:** Make any final adjustments, such as aligning doors and drawers, adjusting hardware, or adding trim. Seal any gaps between the cabinets and walls using caulk or trim pieces.

It's important to note that the installation of kitchen cabinets and countertops can be complex, and it may require specialized tools and skills. It's recommended to consult with professionals or experienced contractors to ensure the proper installation and achieve the desired outcome.



Limitations

General

INTERIOR ROOM DISCLAIMER

INTERIOR OF HOME

Most wall and ceiling cracking is typical and not usually caused by structural movement. Lastly we are not allowed to open walls or ceilings to perform destructive Testing. Normal shrinkage, settlement and seasonal changes in wood framing may cause minor cracking in walls and ceilings. If soft walls or damaged walls or ceilings are discovered we cannot see into these walls or ceilings to determine if other issues are present. Failure to investigate potential issues could leave you exposed to unexpected costs that are beyond this type of inspection. Furniture and other personal possessions and/or stored items may prevent a complete examination of wall and/or floor surfaces.

General

ATTIC LIMITATION

Limitations:

Observation of the attic was not possible due to the presence of excessive mold in the interior and moisture damage. As a result of the significant moisture damage, it is recommended to engage a roofing contractor to evaluate and repair the affected areas. The extent of the damage can be visually assessed from the interior. Seller items were blocking multiple areas of the home. This property is distressed.

General

GENERAL PROPERTY AND BUILDING INTERIOR DISCLAIMER

GENERAL PROPERTY CIRCUMSTANCES

This inspection has focused on the major elements of the property. As noted, some items are only sample tested or partially reviewed. Additionally, this inspection may have been impeded by limited accessibility, especially in occupied homes. Therefore, please do not expect that every defect will be reported. Clients might anticipate and budget an amount not less than \$1000.00 to cover unforeseen and undiscovered defects and/or minor repairs. This inspection does not determine whether proper building permits have been obtained for work performed at this property prior to this inspection. We recommend that the client inquire with the current owner and the local building department as to the disposition of building permits, if any were required. Lastly we are not allowed to pull wires apart to look at connections behind wiring and or Caps or Junction boxes. If Electrical issues are noted in the Attic this does not mean we open junction boxes or tampered with wiring connections as this is beyond the scope of this Inspection.

Building interior disclaimer

Furniture and other personal possessions and/or stored items may prevent a complete examination of wall and/or floor surfaces. Normal shrinkage, settlement and seasonal changes in wood framing may cause minor cracking in walls and ceilings. Most wall and ceiling cracking is typical and not usually caused by structural movement. Lastly we are not allowed to open walls or ceilings to perform destructive Testing. If soft walls or damaged walls or ceilings are discovered we cannot see into these walls or ceilings to determine if other issues are present. Failure to investigate potential issues could leave you exposed to unexpected costs that are beyond this type of inspection

Deficiencies

6.1.1 Interior doors, windows, floors, ceilings



Recommendation

INTERIOR DEFECTS: MULTIPLE ISSUES

INTERIOR

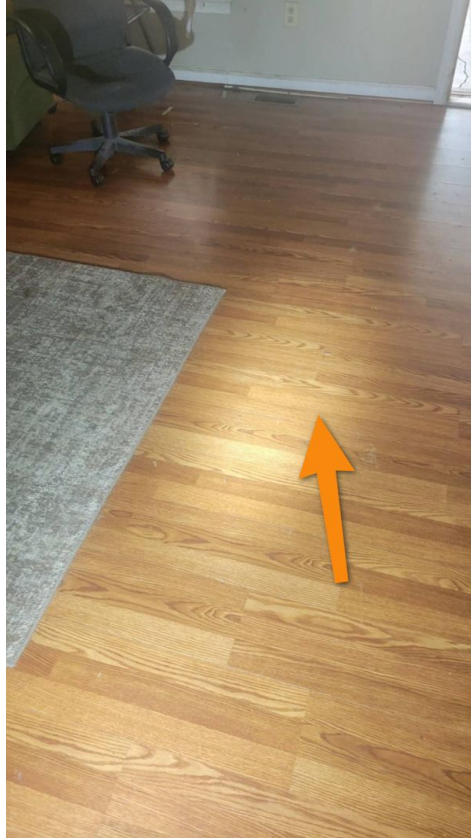
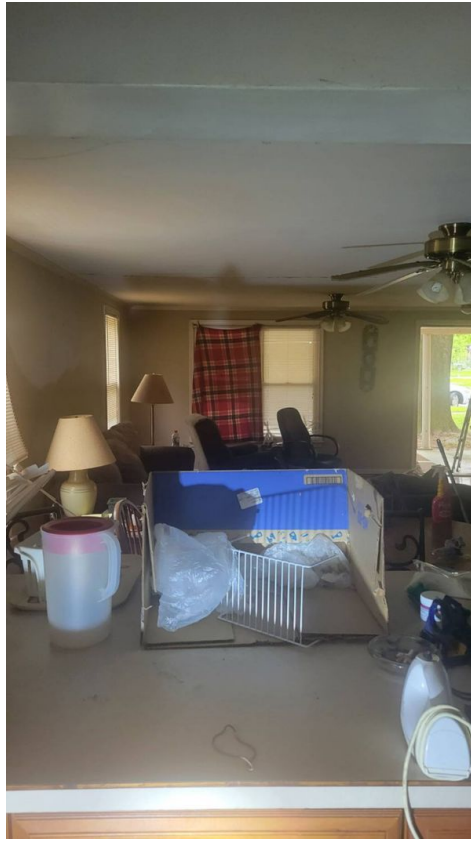
1. Multiple interior defects were noted during the inspection of the home, including:
 - Cracks in the ceilings and walls, as well as settlement cracks attributed to wear in the crawl space (typical for the age of the home).
 - Damaged flooring, uneven flooring, and worn light fixtures.
 - Damaged cabinets, aged and worn appliances, and a missing fan hood.
 - Damaged doors and door hardware, along with typical wear on cabinets and flooring.
 - Damaged or loose light fixtures, debris scattered throughout the home, and loose sink faucets.
 - General wear on windows, making them difficult to open and close, with loose window hardware.
 - Damage to walls and floor molding, as well as damaged ceiling fans.

2. *It is recommended to enlist the services of a qualified contractor to thoroughly evaluate and repair these areas of the home.*

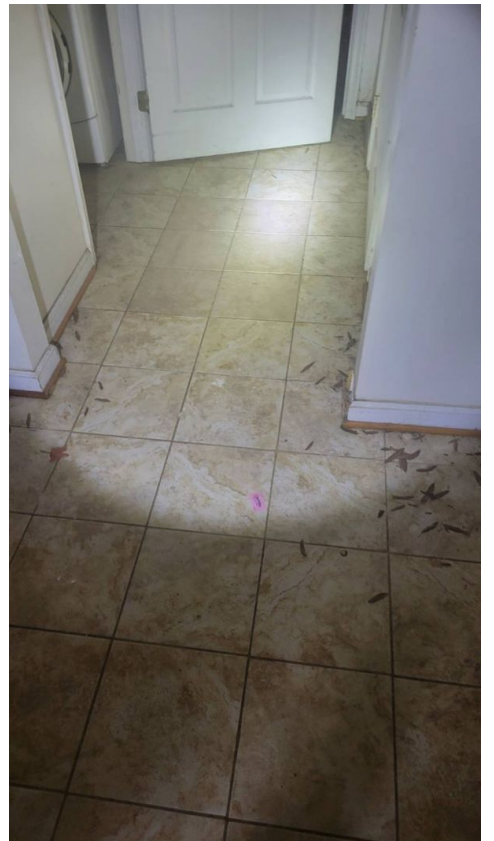
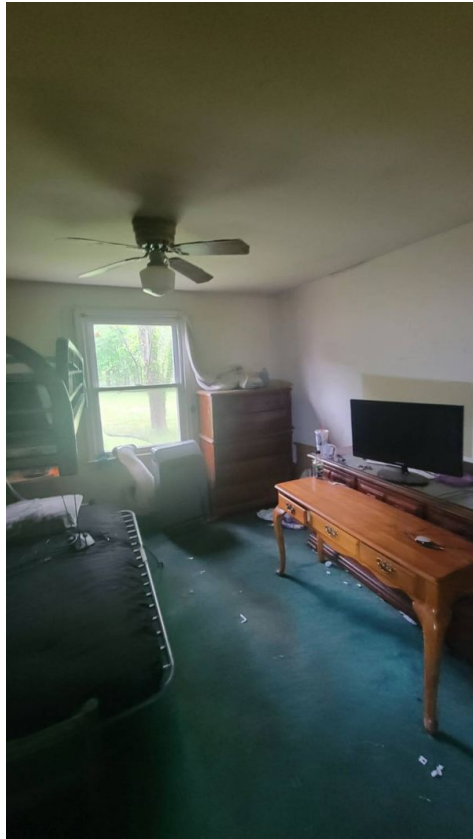
Recommendation

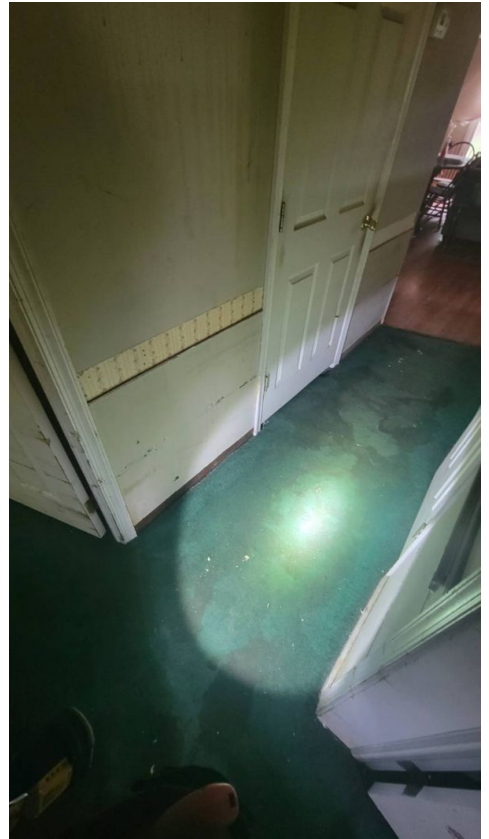
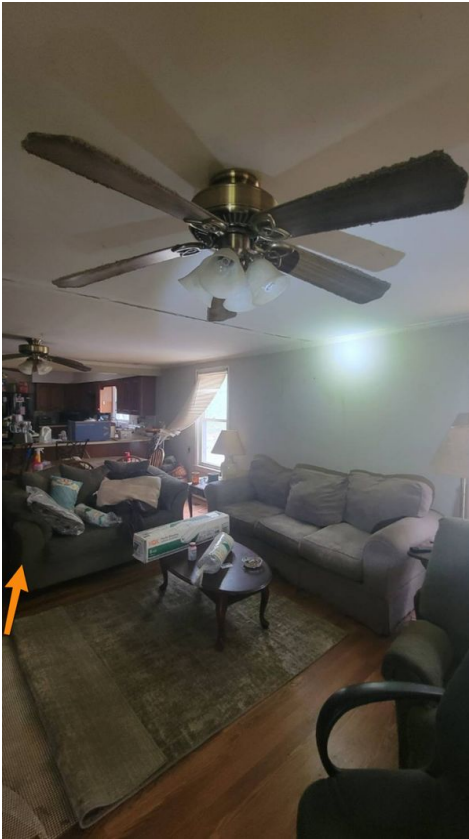
Contact a qualified professional.











6.1.2 Interior doors, windows, floors, ceilings
CEILING DAMAGED BY WATER AND MOLD (CEILING FAILURE)
INTERIOR (REAR BEDROOM)

 Safety Hazard

In the rear bedroom, the ceiling has collapsed due to water ingress from the damaged roof, necessitating the placement of a tarp over the affected area. Extensive mold growth is evident, affecting not only the ceiling but also the drywall, ceiling framing, wall framing and roof sheathing. Given the nature of mold, its spread to the adjacent bathroom ceiling is also observed. It is recommended to promptly evaluate and repair these areas to mitigate further damage.

Mold poses significant health risks, including respiratory issues, allergic reactions, and potential exacerbation of asthma symptoms. Mold spores can become airborne and spread throughout the home, leading to widespread contamination. Moreover, certain types of mold produce mycotoxins, which can be harmful when ingested or inhaled. Therefore, addressing mold growth promptly is essential to safeguard the health and well-being of occupants and prevent further structural deterioration.

Repairing a ceiling that has collapsed due to water damage, particularly when mold has spread through the ceiling and into the affected room, requires a comprehensive approach to ensure both structural integrity and safety. Here's a step-by-step guide to address such a scenario:

Assessment and Safety Precautions:

- Before beginning any repairs, ensure the safety of the area. Turn off electricity to prevent any electrical hazards.
- Wear appropriate personal protective equipment (PPE) such as gloves, goggles, and a mask to protect against mold spores and debris.

Addressing the Source of Water Intrusion:

- Begin by addressing the root cause of the water damage, which is likely the poor condition of the roof. Repair or replace the damaged roof to prevent further water ingress.

Removal of Damaged Materials:

- Carefully remove any remaining debris from the collapsed ceiling, ensuring no loose materials remain.
- Cut away and remove the damaged drywall, insulation, and any other affected materials. This may involve cutting beyond the visible damage to ensure complete removal of mold-infested areas.

Drying Out the Area:

- Thoroughly dry out the affected area to prevent further mold growth. Use fans and dehumidifiers to aid in the drying process. This step is crucial before proceeding with repairs.

Mold Remediation:

- Once the area is dry, conduct mold remediation to eliminate any remaining mold spores. This may involve scrubbing surfaces with a mixture of water and detergent, or using specialized mold-killing solutions.
- Dispose of any contaminated materials in accordance with local regulations.

Repairing the Ceiling:

- Replace the removed drywall, insulation, and any other damaged materials with new, mold-resistant alternatives.
- Ensure proper installation and sealing of the ceiling to prevent future water intrusion.

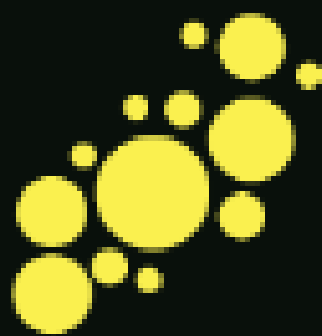
Finishing Touches:

- Once the repairs are complete, apply a mold-resistant primer and paint to the ceiling to further prevent mold growth.
- Consider installing mold-resistant drywall or ceiling tiles in the repaired area for added protection.

- The number of layers that need to be repaired depends on the extent of the damage. In this scenario, it's likely that multiple layers, including drywall, insulation, and possibly ceiling framing, will need to be addressed to fully repair the ceiling and mitigate the effects of water damage and mold growth.

Recommendation

Contact a qualified professional.



TYPES OF MOLDS

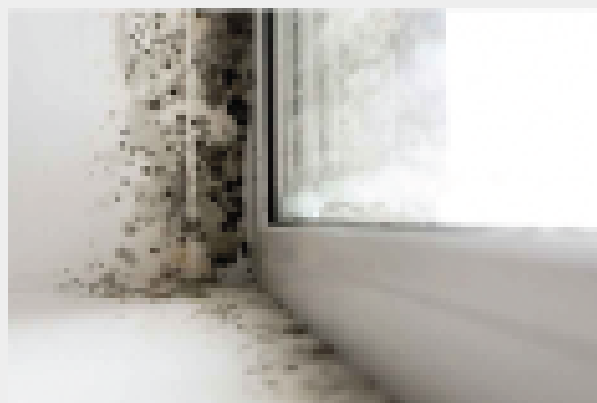
1. Acremonium

Is considered a toxigenic mold. It changes its appearance over time, from a tiny moist mold into a powdery substance.



2. Cladosporium

is an allergenic mold type that grows both in warm and cold settings. It commonly thrives in carpets, fabrics, and upholsteries, as well as inside cupboards and under floorboards.



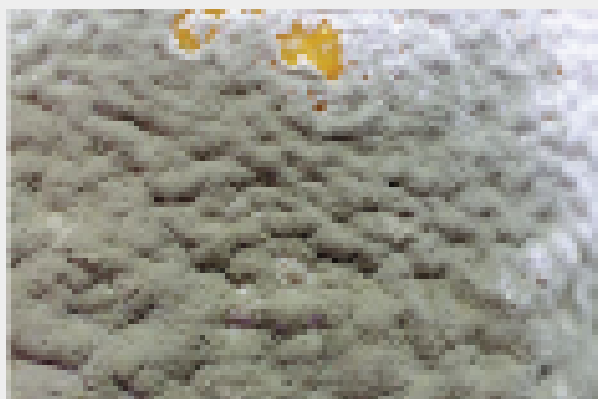
3. Trichoderma

is an allergenic mold that is white-colored with green patches. Its common habitat are wet areas such as carpets, wallpaper, and other damp fabric.



4. Aspergillus

A common mold sprouting around certain properties, can actually cause severe reactions.



5. Aureobasidium

Typically found on wooden furniture, all surfaces, painted walls, and wallpaper, Aureobasidium can be easily noticed because of its black and pink color.



6. Alternaria

Usually found in the sink, shower, and dark areas at home, the Alternaria mold threatens homeowners with asthma attacks and allergic reactions.





6.1.3 Interior doors, windows, floors, ceilings
ROOF LEAKS IN MULTIPLE AREAS OF THE HOME
INTERIOR BEDROOMS

 Recommendation

While the majority of the damage is concentrated in the bedroom where the ceiling has collapsed, water infiltration is evident in multiple areas of the ceiling, particularly noticeable along the edges of surrounding rooms. It is advisable to engage various contractors specialized in roofing, drywall, painting, and insulation, or alternatively, consult a general contractor to ensure comprehensive repairs and avoid potential complications.

Recommendation

Contact a qualified professional.



6.2.1 Counter tops & Cabinets and kitchen appliances



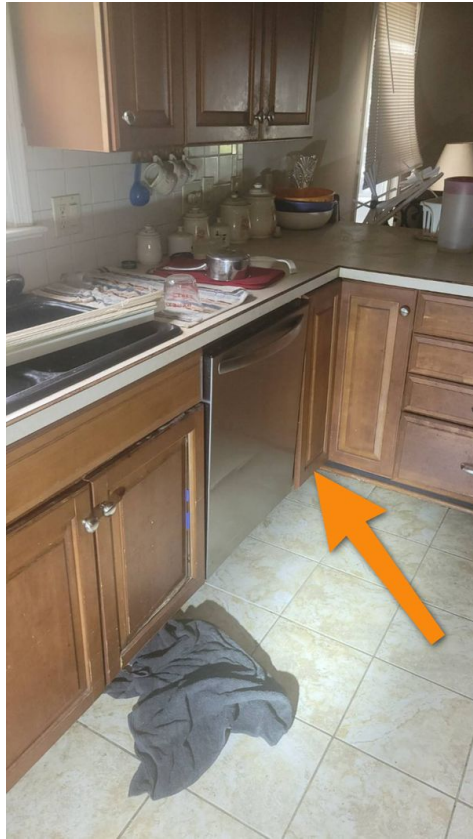
KITCHEN: MULTIPLE DEFECTS

KITCHEN (MAIN HOUSE)

In the kitchen, various issues have been noted, such as worn or damaged appliances, the absence of a stove hood/fan/light, and indications of wear on the dishwasher. Additionally, there is no anti-tip device installed, which is crucial for preventing the stove from tipping over if someone accidentally steps on the oven door. Typical wear on the cabinets is observed. Furthermore, the sink faucets are loose. It's essential to highlight that the utilities were turned off in the home, raising the probability of encountering plumbing issues like clogs and leaks during remediation due to the property's poor condition.

Recommendation

Contact a qualified professional.



7: PLUMBING

Information

**Hot Water Systems, Controls,
Flues & Vents: Power
Source/Type**
Electric

**Washer and dryer: Washer and
dryer photos**
Laundry area
Recommend having a new
washer and dryer installed.

Water Source

Public

Water is typically supplied to houses from the city through a municipal water supply system. Here's a general overview of how water reaches your house from the city:

1. Water Treatment Plant:

- The journey begins at a water treatment plant where the city sources its water. The water is usually obtained from lakes, rivers, or underground wells.

2. Water Treatment:

- At the water treatment plant, the water undergoes a series of processes to remove impurities and ensure it meets quality and safety standards. Treatment processes may include filtration, disinfection (such as chlorination), and sometimes additional steps like softening or fluoridation.

3. Water Storage:

- After treatment, the water is stored in large reservoirs or water towers to maintain a steady supply for the city. These storage facilities help ensure a continuous flow of water, even during periods of high demand.

4. Water Distribution Network:

- From the water storage facilities, the treated water is distributed through a network of underground pipes, often referred to as the water distribution system or water mains. These pipes are typically made of materials like cast iron, ductile iron, or PVC.

5. Water Meters and Valves:

- Along the distribution network, water meters are installed at individual properties to measure the amount of water consumed. Valves are also installed to regulate the flow of water and isolate specific sections of the network if repairs or maintenance are needed.

6. Service Lines:

- Service lines connect the water distribution network to each individual property. These lines, typically made of copper, plastic, or galvanized steel, bring the water from the main supply to your house.

7. Water Meter and Shut-off Valve:

- At your property, there is a water meter that measures your water usage. A shut-off valve is also located near the meter, allowing you to turn off the water supply to your house if needed.

8. Plumbing System:

- Inside your house, the water supply enters your plumbing system, which includes pipes, fixtures (such as faucets and showers), and appliances that require water. The plumbing system distributes the water throughout your house for various uses, such as drinking, bathing, and cleaning.

It's important to note that the specific infrastructure and processes may vary depending on the location and the city's water supply system. Local regulations and practices also influence how water is delivered to houses.

Additional information on water sourced from a well:

When water is sourced from a well, it follows a different process compared to receiving water from a city's municipal supply. Here's a general overview of how water comes from a well:

1. Well Drilling:

- Wells are typically drilled into the ground to access underground water sources. Professional well drillers use specialized equipment to dig deep into the earth's surface until they reach the water table.

2. Water Table:

- The water table refers to the level below the ground where water saturates the soil or rocks. It can vary in depth depending on the location and geological conditions. The well is drilled below the water table to ensure a constant supply of water.

3. Submersible Pump or Jet Pump:

- Once the well is drilled, a submersible pump or a jet pump is installed inside the well to extract water from the water table.

- A submersible pump is placed directly in the well and is submerged in water. It pushes water up to the surface through a pipe connected to the pump.

- A jet pump is installed above the ground or in a separate pump house near the well. It uses suction to pull water from the well and push it through pipes to the house.

4. Pressure Tank:

- To maintain consistent water pressure and minimize the cycling of the pump, a pressure tank is typically installed near the house. The tank stores a reserve of pressurized water and helps regulate the water flow.

5. Distribution System:

- From the pressure tank, the water is distributed throughout the house via a plumbing system. Pipes carry the water to fixtures, faucets, appliances, and other water outlets within the property.

6. Filtration and Treatment:

- Depending on the quality of the well water, filtration and treatment systems may be installed to remove impurities, sediment, or harmful contaminants.

- Filtration systems can include sediment filters, activated carbon filters, or other specialized filters depending on the specific water quality concerns.

- Treatment systems such as water softeners, disinfection systems, or pH correction systems may be used if needed.

It's important to note that the specifics of well systems can vary depending on factors such as the type of well (e.g., drilled well, dug well), local regulations, and the geological characteristics of the area. Proper well maintenance, regular testing of water quality, and adherence to local regulations are essential for ensuring the safety and reliability of well water. Consulting with a professional well contractor or plumber is recommended for the installation and maintenance of well systems.

Main Water Shut-off Device: Location

Limited view, Front yard under meter

If a shut off valve is not installed in a conspicuous area like on the wall of the garage or in the closet the only place for the valve is under the meter in the front yard. Some times this meter can be difficult to reach even for the utility company due to the valve being covered with dirt. A valve can be cut into a location inside the home making it easier to reach. A plumbing contractor can cut into the wall close to the main source and add this valve. Other areas are located under the home in the crawl space, this makes the valve difficult for the homeowner to reach. Consider contacting a plumber to create and easy access for the valve if not located in a common area.

Locating and Operating Your Main Water Shut-Off Valve:

Knowing where your home's main water supply is located, and how to turn it off, is as important as knowing how to find and reset an electric circuit-breaker.

Every home was required to have a main water shut-off valve installed inside the home when it was built. For most emergencies or repairs, shutting off the proper inside valve is all you will need to do. However, there are also underground shut-off valves installed outside at the property line. If it's necessary to shut off this valve, please call a registered master plumber or WSSC Water at 301-206-4003 to work this valve.

Where are my supply valves?

It is important to understand that different plumbing arrangements will dictate where the proper main supply valve is located. Some homes have the water meter located inside, while others are located outside, underground within a "pit" at or near the property line or right-of-way. Some homes also have submeters, which typically are inside even if the main meter is outside/underground. Newer homes have fire sprinkler systems, while older ones generally do not. Home construction also differs greatly; basements, crawl-spaces, and slab-on-grade. Water shut-off valves may have round "wheel" handles or lever handles.

Locating the proper valve

Basements – the shut-off valve is typically located near the front foundation wall. The main water may come through the concrete floor or through the wall. The valve is typically within three to five feet of where the main water enters. In some cases, the main water may enter in a different area, like a mechanical room, up through the floor, near the water heater or furnace.

Crawl-space plus a basement – the shut-off valve may be where the water enters the basement; in some older homes, the shut-off may be inside the crawl space. If your shut-off valve is located in a crawl space, you may want to consider a secondary valve located in the basement.

Crawl-space with no basement – the shut-off valve typically is located near the water heater or under the kitchen sink, but anywhere is possible. If it is located inside the crawl space, you may want to consider a second valve located in the living space, for example, near the water heater or under a sink.

Slab-on-grade construction – the shut-off valve typically is located near the water heater or under the kitchen sink, but anywhere is possible.

Which valve should you operate?

If your home has a fire sprinkler system, care is needed when selecting a shut-off valve. Unless it is a sprinkler pipe that is leaking, you should only shut off the plumbing supply and leave the sprinkler piping charged/live.

If the water shut-down is for a broken sprinkler line or sprinkler head, locate the first valve (that is, the one closest to the main water line entry point) and operate that valve as described below.

For all other general plumbing shut-offs, emergency and non-emergency:

1. For homes with fire sprinklers and an inside main water meter, locate and operate the second valve (it will be above the main meter and past (downstream of) the fire sprinkler system "tee"). If you have a submeter, its second valve will only isolate the irrigation and/or hose bibbs.
2. For homes with fire sprinklers and an outside main water meter, locate and operate the second valve, it will be past (downstream of) the fire sprinkler "tee."
3. For homes without fire sprinklers and with an inside main water meter, either valve will shut off supply to the home, but operating the second valve is a good practice and a safeguard if you are not sure if your home has fire sprinklers.
4. For homes without fire sprinklers and with an outside main water meter, you likely have only one shut-off valve that will shut down the entire home.

How to close the main valve (Shut-off/Turn-off)

1. Round "wheel" handle valves will turn off by turning the handle clockwise. It may take two or more full revolutions.
2. Slowly turn level handle valves ¼ turn, until the handle is not parallel with the pipe. It should stop at a ¼ turn.
3. Open a tub or sink faucet (hot and cold) on the highest level of the home to relieve pressure, and watch that spout to ensure that water has stopped flowing. Then continue to open faucets throughout the home to drain-down as needed.

4. If draining down the home, be sure to de-energize the water heater and boiler where applicable by shutting off power to electric water heaters and any type of boiler. For gas water heaters, turn thermostat down to the pilot-only setting; if you drain the heater, turn off the gas.

Opening the main valve (Open/Turn-on)

1. Close all faucets except a tub or sink on the highest level of the home.
2. Partially turn on valves slowly; extra slow for lever handles; stop after $\frac{1}{2}$ revolution on wheel handle, $\frac{1}{2}$ of a $\frac{1}{4}$ turn for lever handle; with water flowing, slowly turn off highest open faucet.
3. Listen for water pressure to equalize (noise ends); fully open main valve. Bleed air from lines by slowly opening (hot and cold) on all faucets, one at a time, until air stops flowing, then close each faucet; repeat the process on all faucets until complete.
4. Turn power on to electric water heaters and boilers only after the water system is full and all air has been bled out. If gas was turned off, carefully follow re-starting directions on the appliance jacket or call a registered plumber or your gas company for service.

Water Supply, Distribution Systems, Fixtures, Drain, waste and vent systems : Water Supply Material

Whole house

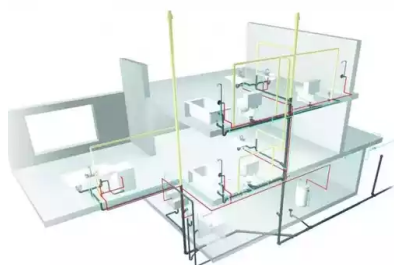
Copper, Galvanized, PVC, Cast iron drain line

Plumbing photos for your information.

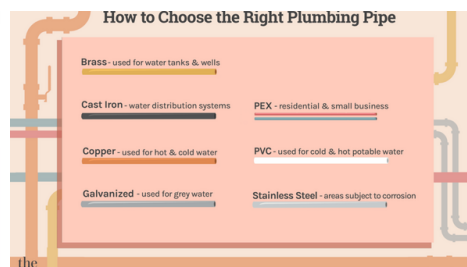
Water supply lines, which bring water into buildings, can be made from various materials. The choice of material depends on factors such as local building codes, water quality, budget, and personal preferences. Here are some common materials used for water supply lines:

1. **Copper:** Copper pipes are widely used for water supply lines due to their durability, corrosion resistance, and long lifespan. They can withstand high temperatures and are suitable for both hot and cold water applications. Copper pipes are often joined using soldering or compression fittings.
2. **PEX (Cross-linked Polyethylene):** PEX pipes have gained popularity in recent years. They are flexible, making them easier to install and maneuver around obstacles. PEX is resistant to corrosion and scale buildup and can handle high temperatures. PEX pipes are typically joined using crimp or clamp fittings.
3. **CPVC (Chlorinated Polyvinyl Chloride):** CPVC pipes are made of a thermoplastic material and are commonly used for hot and cold water supply lines. They are resistant to corrosion and can handle high temperatures. CPVC pipes are joined using solvent cement or threaded fittings.
4. **PVC (Polyvinyl Chloride):** PVC pipes are mainly used for cold water supply lines and not recommended for hot water applications. They are less expensive than other options and easy to install. PVC pipes are joined using solvent cement or threaded fittings.
5. **Galvanized Steel:** Galvanized steel pipes were commonly used in the past but are now less popular due to their tendency to corrode and restrict water flow over time. If your building has older plumbing, it may have galvanized steel pipes. It is often recommended to replace them with more modern materials.
6. **Polyethylene (PE):** High-density polyethylene (HDPE) pipes are used for water supply lines in some applications, particularly for underground installations. They are resistant to chemicals and can handle high pressures. PE pipes are typically joined using heat fusion or mechanical fittings.

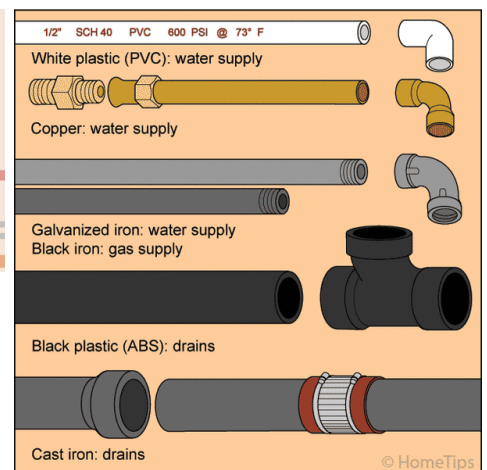
It's essential to consult local building codes and regulations and consider factors such as water quality, budget, and specific requirements when choosing the appropriate material for water supply lines. Professional plumbers or contractors can provide guidance on the best choice of materials for your specific situation.



EXAMPLE OF PLUMBING LINE RUN



EXAMPLE



EXAMPLE ONLY

Hot Water Systems, Controls, Flues & Vents: Capacity

40 gallons

The unit is roughly 20 years old, with two water heaters present on the property.

Typically, the service life of a hot water heater ranges from 10 to 15 years. However, the specific water heater in the main house could not be identified due to obstructions blocking access to the area.



Hot Water Systems, Controls, Flues & Vents: Manufacturer

Whirlpool

I recommend flushing & servicing your water heater tank annually for optimal performance. Water temperature should be set to at least 120 degrees F to kill microbes and no higher than 130 degrees F to prevent scalding.

[Here is a nice maintenance guide from Lowe's to help.](#)

Limitations

General

PLUMBING DISCLAIMER

Supply and drainage piping is observed in exposed areas only. The condition of piping within walls or under ground or under other surfaces cannot be determined as a part of this inspection. Wells and septic systems are specifically excluded from this inspection as well as water Treatment equipment and or Sprinkler systems - separate, specialized testing and inspection of these systems is recommended (and may be required by law). All plumbing work should be performed by licensed plumbers. Additionally if corrosion and or rust is noted at time of inspection on drain piping or supply piping remember this is a Visual inspection "only" as there could be issues below the earth or in areas that supply or drain piping are not accessible from a visual inspection. Only a Licensed Plumber can evaluate these areas with a Lighted Boroscope or other approved tools to actually determine if there are issues within Drain/Supply piping as again this is Outside the area of a Visual non evasive inspection. Please Ask your Home inspector any question that needs to be clarified prior to end of discovery period..

General

LIMITED VIEW

Limited view on plumbing lines inside of walls or directly behind fixtures due to the construction of the home.

Water Supply, Distribution Systems, Fixtures, Drain, waste and vent systems

PLUMBING LINES OR DRAIN LINES IN CONCRETE SLAB

CONCRETE SLAB

Sections of the plumbing lines in concrete slabs cannot be observed. All plumbing lines are observable on homes that are on crawl spaces (persons can crawl under home). The main drain line on homes that are on a slab are also in/under the slab. If issues arise with these types of homes it is common for plumbing contractors to have to enter the slab to correct the issue.

Water Supply, Distribution Systems, Fixtures, Drain, waste and vent systems

COULD NOT TEST TUB JETS/CLEAN AND SERVICE TUB JETS

The tub "bubble pump" could not be tested at the time of inspection due to restrictions. These jets can shoot out a dark sludge that can stain the tub. It is recommended to fill the tub with water and to add a solution that cleans the jets. This also helps to remove the bacteria from other persons in the tub and tub jets. The access for the tub jets is usually a square shaped panel located around the tub or on the outer wall adjacent to the tub.

Water Supply, Distribution Systems, Fixtures, Drain, waste and vent systems

LIMITED VIEW ON PLUMBING PIPES

Because of how home homes are built plumbing pipes and go through floors and walls depending on how the plumber installs them and the time frame during the install. typically speaking homes with crawl spaces have "exposed plumbing" were the distribution pipes and plumbing material is easily visible.

Bathrooms

BATHROOM DISCLAIMER

We recommend periodic cleaning (removal of built-up dust and dirt) of bathroom ventilation (exhaust) fans to maintain proper operation. Periodic review of caulking and grouting at all tiled areas and backsplash is strongly recommended to prevent moisture damage to the underlying surfaces. Repairs should always be made with the proper materials. Water leaks may not appear during the inspection if the home is vacant due to lack of normal usage, but may appear after repeated usage, and we cannot be held responsible for these.

Bathrooms

LIMITED VIEW ON LINES AND PLUMBING APPLIANCES/EXTENSIVE REMEDIATION REQUIRED

WHOLE HOUSE

Limitations:

1. Limited visibility of plumbing lines due to obstructing materials.
2. Plumbing lines behind the vanity and within floors/walls are inaccessible for visual inspection.
3. Inability to test the water due to restrictions.
4. Recommended plumbing contractor evaluation and repairs due to the poor condition of the home.
5. Distressed property status further complicates assessment and remediation efforts.

De ciencias

7.2.1 Water Supply, Distribution Systems, Fixtures, Drain, waste and vent systems

**MULTIPLE DEFECTS: PLUMBING**

INTERIOR

The plumbing system in the home displays noticeable signs of corrosion and potential failure. Considering the existing issues, it is advisable to conduct plumbing upgrades. Homes constructed during this period typically feature cast iron drains, galvanized lines, and other plumbing components that may be susceptible to age-related deterioration. It is common for individuals renovating homes, known as "flippers," to upgrade plumbing systems to approved materials like PEX. Additionally, multiple drains were found disconnected under the sinks. It is recommended to enlist the expertise of a plumber to evaluate and address these issues promptly.

Given that this property consists of two dwelling units, it follows that there are two drain lines in place. The drain line from the rear building is buried underground and extends to the street. Substandard plumbing is observed in all areas, *necessitating the expertise of a licensed plumber. It is important to exercise caution with unlicensed plumbers, as flippers may employ them for cost-saving measures. However, unlicensed plumbers may lack the necessary expertise for larger projects, potentially resulting in delays and future issues.* Refer to the example image for PEX plumbing. PEX and PVC materials are commonly used due to their affordability and durability.

Recommendation

Contact a qualified plumbing contractor.



PEX AND PVC PLUMBING EXAMPLE (USED IN NEW CONSTRUCTION)



7.3.1 Hot Water Systems, Controls, Flues & Vents



ASSESSMENT AND RECOMMENDATIONS FOR WATER HEATER SYSTEMS

INTERIOR AND REAR BUILDING

The unit is approximately 20 years old and includes two water heaters located on the property. Both water heaters in the home are nearing the end of their service life and exhibit signs of damage. It is advisable to ensure that water heaters are equipped with drain pans, drain lines, and TPR valves with proper attachments. One water heater serves the main home, while another services the rear building. Evaluation and repair are recommended. It is worth noting that it is common for property renovators, or "flippers," to opt for upgrades to tankless water heaters.

Please note that this property comprises two dwellings, each equipped with its own set of amenities. This includes two water heaters, two roofs, two sets of HVAC units, three electrical panels, and two kitchens. Essentially, the systems are duplicated, resulting in double the power and water consumption.

Recommendation

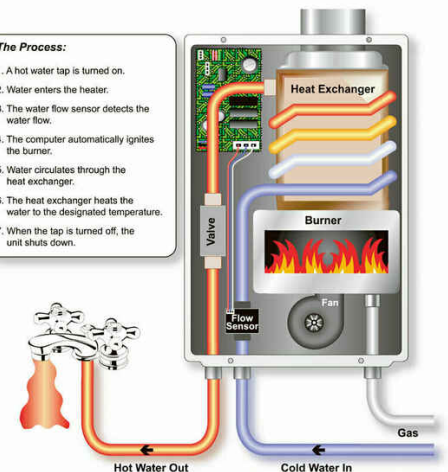
Contact a qualified plumbing contractor.



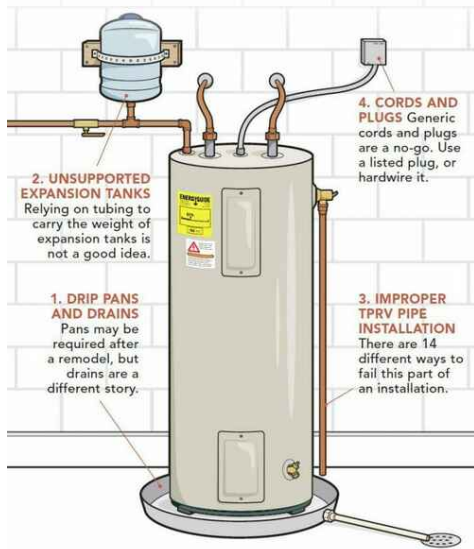
How Does a Tankless Water Heater Work?

The Process:

1. A hot water tap is turned on.
2. Water enters the heater.
3. The water flow sensor detects the water flow.
4. The computer automatically ignites the burner.
5. Water circulates through the heat exchanger.
6. The heat exchanger heats the water to the designated temperature.
7. When the tap is turned off, the unit shuts down.



EXAMPLE FOR TANKLESS WATER HEATER



ELECTRIC

7.4.1 Bathrooms

 Recommendation

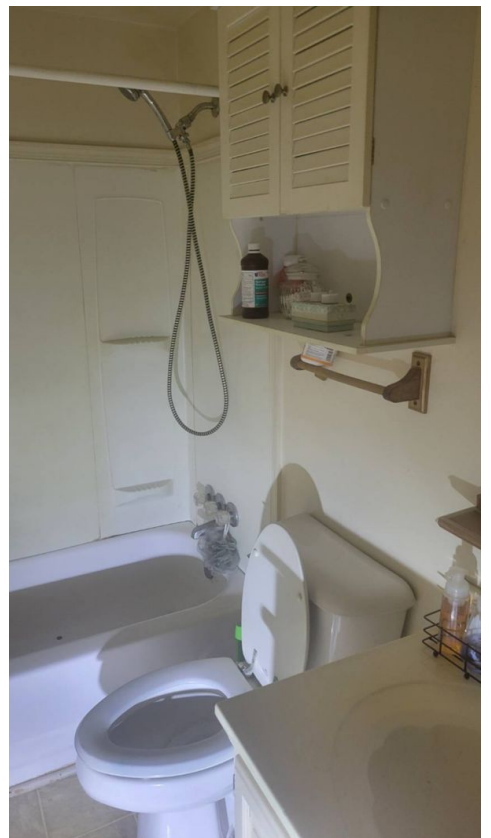
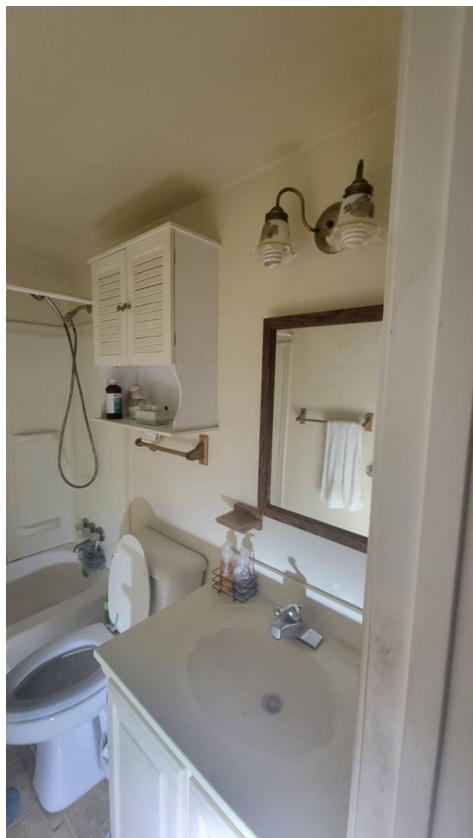
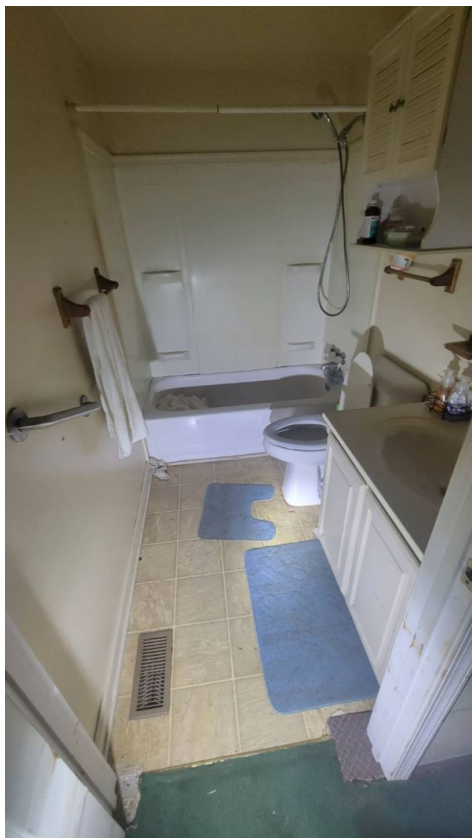
MULTIPLE DEFECTS: BATHROOM (COMMENT 1)

BATHROOM

Multiple defects observed in the bathroom include damaged flooring, a damaged vanity, poor painting, loose or damaged sink faucets, a loose toilet base, and issues with the bathroom fan. Remediation of the bathroom is recommended. Additionally, upgrading the GFCI receptacles and light fixtures is advised. Given the property's condition, plumbing issues can be anticipated. Therefore, it is recommended to engage a plumber to evaluate, upgrade, or remediate the space.

Recommendation

Contact a qualified professional.





7.4.2 Bathrooms

MULTIPLE DEFECTS: BATHROOM (COMMENT 2)

BATHROOM SHARED (NEAR COLLAPSED CEILING)

Multiple defects are evident in the shared bathroom, which is adjacent to the collapsed ceiling area. Mold originating from the bedroom with the collapsed ceiling has infiltrated the bathroom ceiling and walls. Additionally, issues include a loose or damaged vanity, aged and loose toilet, loose or damaged tub and sink faucets, damaged flooring, and an aged fan with observed issues. Considering the overall condition of the property, a comprehensive remediation by a qualified contractor is strongly recommended.

Recommendation

Contact a qualified professional.





7.4.3 Bathrooms

LOOSE TOILET BASE (COMMON DEFECT)

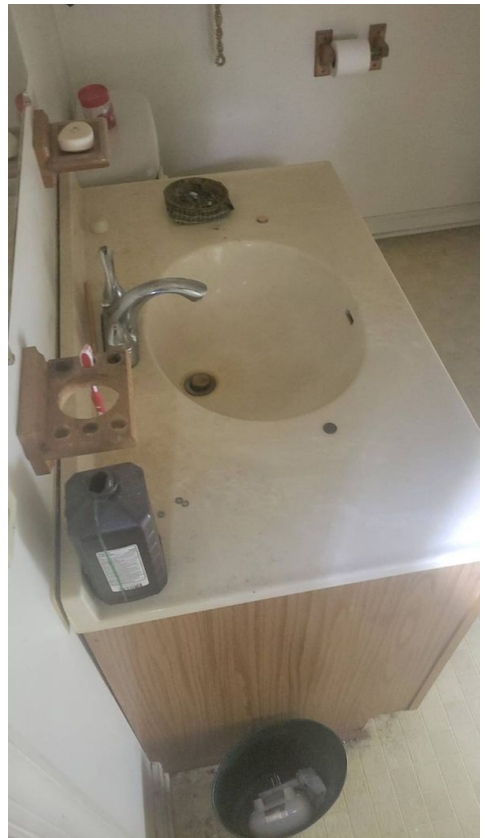
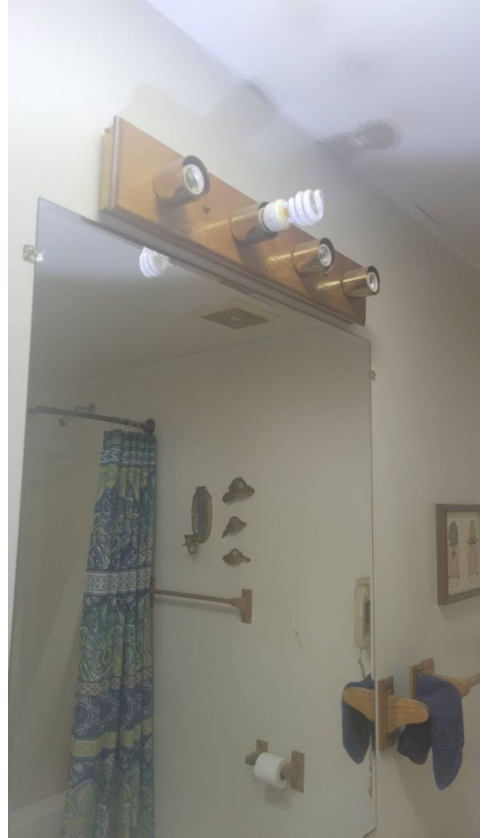
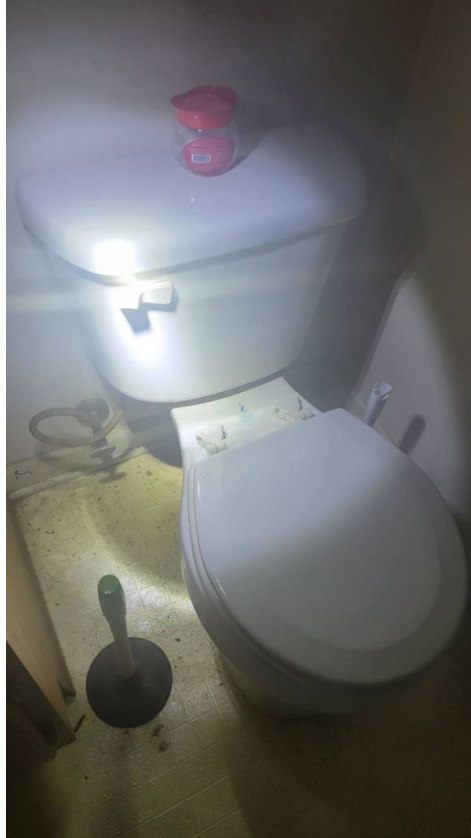
BATHROOM (MASTER)

 Recommendation

The bathroom exhibits multiple defects, including damaged flooring, a damaged vanity, subpar painting, loose or damaged sink faucets, a loose toilet base, and issues with the bathroom fan. Remediation of the bathroom is recommended. Additionally, upgrading the GFCI receptacles and light fixtures is advised. Considering the property's condition, plumbing issues are foreseeable. Therefore, engaging a plumber to evaluate, upgrade, or remediate the space is recommended.

Recommendation

Contact a qualified professional.





8: ELECTRICAL

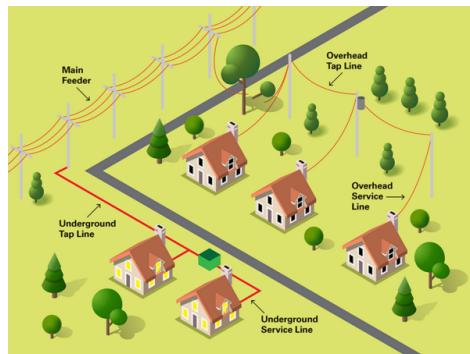
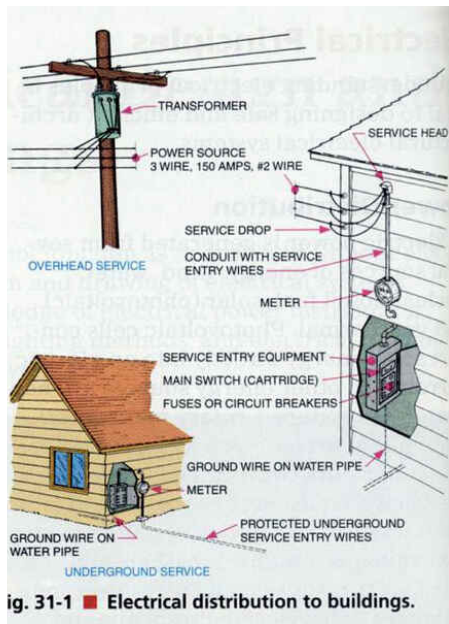
Information

Service Entrance Conductors: Electrical Service Conductors

Exterior

Overhead

Service entrance conductor photos for your information.



Overhead and underground service description



Main & Subpanels, Service & Grounding, Main Overcurrent Device: Main Panel Location

Back, Detached building

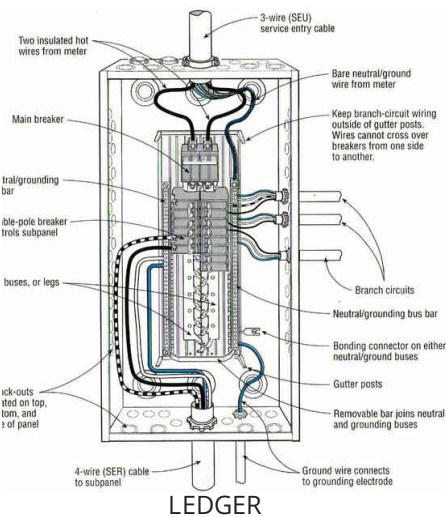
Electrical Panel photos for your information.

Additional information:

There are several types of electrical wires commonly used in residential houses. The specific types of wires used depend on the application and electrical codes in your region. Here are some common types of electrical wire:

1. **Non-Metallic Sheathed Cable (NM or Romex):** NM cable is the most common type of electrical wire used in residential applications. It consists of two or more insulated conductors (typically black, white, and bare copper) wrapped in a plastic sheathing. NM cable is used for general wiring, such as lighting, outlets, and appliances.
2. **Underground Feeder Cable (UF):** UF cable is designed for underground or direct burial applications. It has similar construction to NM cable but includes a moisture-resistant outer jacket. UF cable is used for outdoor wiring, such as outdoor lighting, underground circuits, and outdoor outlets.
3. **Armored Cable (AC or BX):** Armored cable consists of insulated conductors wrapped in a flexible metal sheath. The metal sheath provides protection against physical damage and can also serve as the grounding conductor. Armored cable is used in areas where additional protection is required, such as exposed areas or where there is a risk of damage from rodents.
4. **Conduit and THHN Wire:** Conduit is a protective tubing that holds individual THHN (Thermoplastic High Heat-resistant Nylon) wires. THHN wire is a single conductor with insulation rated for high temperatures. Conduit and THHN wire are commonly used in commercial or industrial applications but can also be used in residential installations where additional protection is needed or required by local codes.
5. **Low Voltage Wiring:** Low voltage wiring is used for low-power systems, such as doorbells, intercoms, security systems, and audiovisual equipment. It typically consists of smaller gauge wires with insulation specifically designed for low-voltage applications.

It's important to note that electrical codes and regulations may vary depending on your location. It's always best to consult with a licensed electrician or follow local electrical codes and guidelines when selecting and installing electrical wire in residential applications.





Main & Subpanels, Service & Grounding, Main Overcurrent Device: Panel Capacity

150 AMP

The NEC is updated periodically, and different states or local jurisdictions may adopt specific versions of the code. However, some general standards and practices commonly followed for residential electrical panels include:

1. **Main Service Disconnect:** The main electrical panel must have a clearly labeled main service disconnect that can shut off power to the entire panel. It is typically located at the top or bottom of the panel and should be easily accessible.
2. **Panel Ratings:** Residential electrical panels are typically rated for 100 to 200 amps, although larger panels are available for higher-demand installations. The panel rating should match the capacity of the electrical service provided to the house.
3. **Circuit Breakers:** Residential panels commonly use circuit breakers as the primary means of protection for individual circuits. The breakers must be properly sized to protect the wiring and equipment connected to the circuit. The capacity of the panel determines the number of circuit breakers that can be installed.
4. **Panel Construction:** Residential electrical panels are typically constructed with a metal enclosure for safety and durability. The panel should be properly grounded, and the cover should be securely fastened.
5. **Labeling and Marking:** As mentioned earlier, electrical panels should be properly labeled to identify the circuits and corresponding breakers/fuses. This helps with troubleshooting, maintenance, and safety.

It's important to note that electrical codes and standards can vary by country, region, or local jurisdiction. It is always recommended to consult the specific electrical code adopted in your area or seek guidance from a licensed electrician to ensure compliance with the current standards and regulations.



Limitations

General

ELECTRICAL LEGAL DISCLAIMER

Only qualified electricians should perform all electrical repairs or modifications. The condition of wiring is typically only observed in the electrical panel(s)
- junction box covers, outlet and switch covers or junction boxes are not removed. Lights that do not appear to function are often the result of burned out bulbs. AFCI (arc fault circuit interrupter) devices and only tested in vacant houses. Smoke detectors are visually checked but not tested in accordance with industry standards. Low voltage systems (door bells, telephones, alarm systems, cable, phone, internet etc.) are not included in this inspection. Lastly if there are a number of Electrical issues noted on inspection report for the Home you are buying a separate review from a Qualified Licensed Electrician of the Electrical systems is recommended and there findings should be considered as a result of there inspection going forward as we do not quote code nor pull wires out of insulation in the Crawl space or Attic nor do we pull apart wires to review connections and or certify that your electrical system wont have problems in the future. You are required to perform a walk-thru prior to closing so if your homes electrical system was noted in satisfactory condition by you or your allowed representative then this is proof that no visual conditions were noted by **Iron Mountain Home Inspection Training Academy** and You and or allowed representative prior to taking possession. If items are discovered at Home Inspection and or walk-thru please have your Real-Estate professional represent you prior to closing to have Selling/Owner or Listing or FSBO side correct any issues discovered during Inspection and or required Walk-thru prior to you taking possession.
SMOKE AND CARBON MONOXIDE DETECTORS SHOULD BE PERIODICALLY CHECKED FOR FUNCTION.

Switches & Receptacles

LIMITATION ON ELECTRICAL SYSTEM

Limitation:

The power is turned off in the home, preventing fixtures, receptacles, panels, and switches from being fully operated during the inspection. Additionally, due to water damage in this home, an electrical contractor is recommended to perform necessary repairs.



Carbon Monoxide Detectors/Smoke detectors

SMOKE/CARBON MONOXIDE DETECTOR DISCLAIMER

Smoke Alarm/Carbon Monoxide alarms Info- Smoke/CO2 alarms. During our inspection, we do not operate these alarms . We also do not smoke-test alarms, which is the only definitive test to confirm proper function. If there are no fire extinguishers in the house it is recommend that a fire extinguisher be accessible in the kitchen, garage, and second floor if present. Smoke alarms should be replaced every 10 years if not sooner.

De ciencias

8.1.1 Service Entrance Conductors

 Recommendation

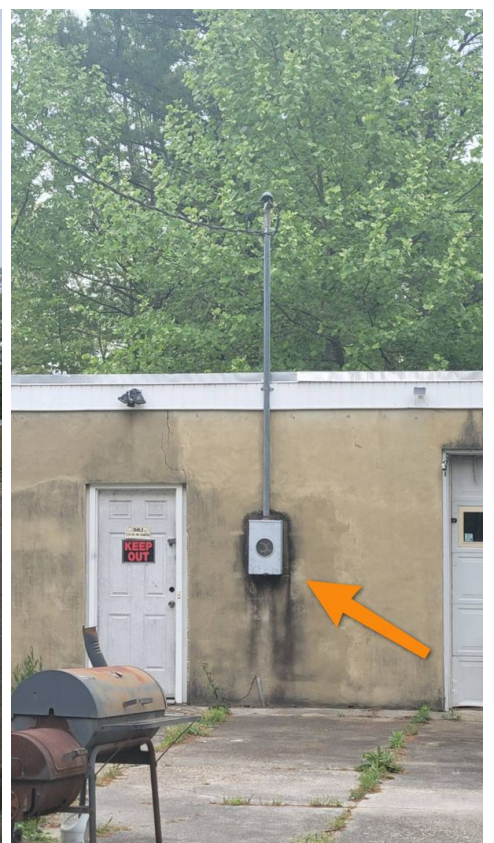
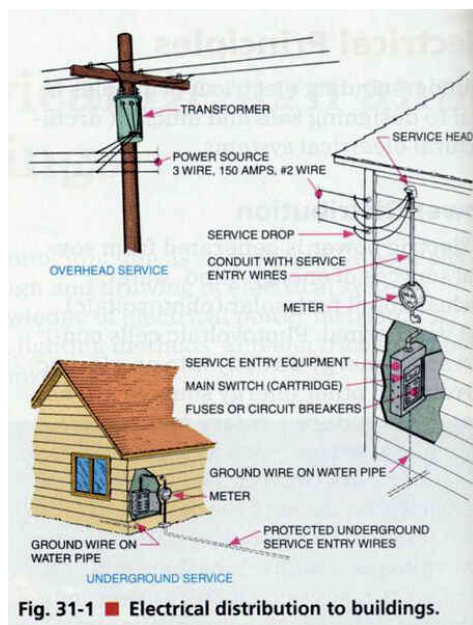
UTILITY CONCERNS AND ELECTRICAL RECOMMENDATIONS FOR PROPERTY RESTORATION

EXTERIOR

This home is equipped with two utility meters from the utility company. The meter serving the rear building has been disconnected due to safety concerns related to the collapsed ceiling. It is advisable to contact the utility company when ready to restore power. Additionally, considering the extensive water damage, it is recommended to engage an electrician to assess and address any electrical issues before restoring power.

Recommendation

Contact your local utility company



8.2.1 Main & Subpanels, Service & Grounding, Main Overcurrent Device

 Recommendation

ELECTRICAL ASSESSMENT AND RECOMMENDATIONS

MULTIPLE AREAS

This property features three electrical panels, all rated at 150 amps. The panel serving the main home is equipped with a lock, while the one for the detached property has been upgraded. The exterior panel for the main home appears to be in fair condition and has not been upgraded. However, the panel in the garage presents significant issues, with its cover removed and wires protruding, indicating possible amateur electrical work. Additionally, multiple receptacles covers and light covers throughout the property are loose or damaged.

The leaking ceiling in the detached building has likely compromised the wiring, rendering it unsafe to restore power due to the risk of electric shock or fire. Therefore, it is recommended that an electrician conduct a thorough diagnostic assessment of the property. They should provide a detailed quote for necessary electrical repairs, remediation, and upgrades.

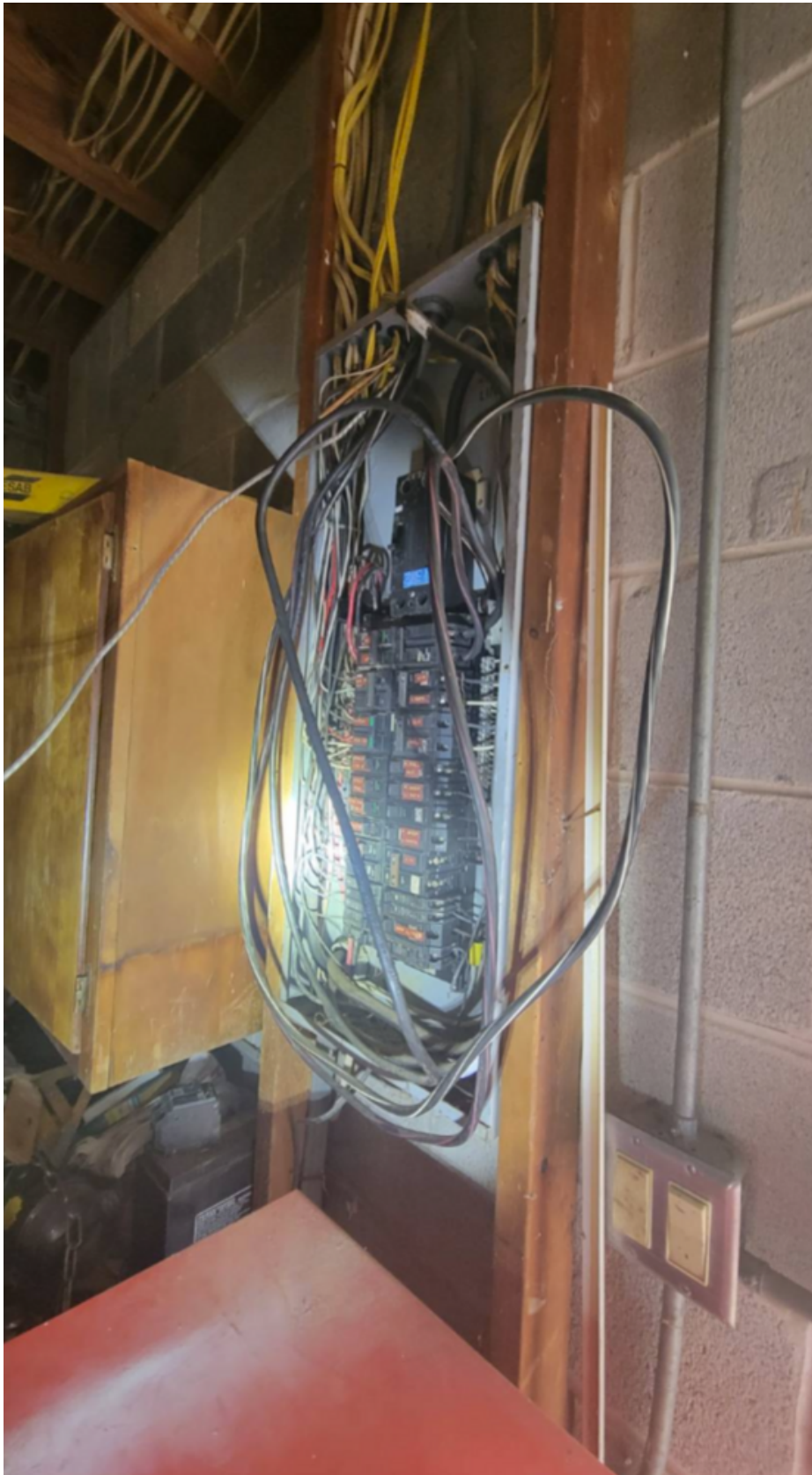
In the detached area, the wiring for lights, switches, and receptacles is likely damaged. It is advisable to have an electrician evaluate and repair these components to ensure the safety and functionality of the electrical system in that area.



Main home

Recommendation

Contact a qualified electrical contractor.



Garage



Detached building

8.3.1 Switches & Receptacles

LOOSE OUTLETS OR RECEPTACLES (UPGRADES RECOMMENDED)

MULTIPLE

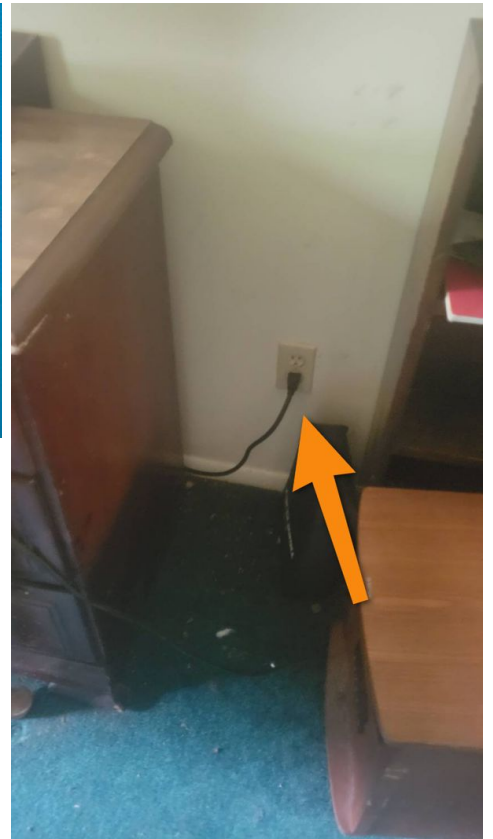
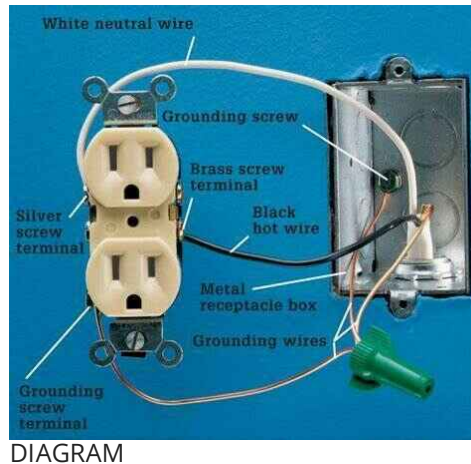
 Recommendation

Loose outlets or receptacles were noted during the inspection. It is recommended to engage a qualified contractor to evaluate and repair these issues.

Additionally, excessively loose outlets can result in loose wires behind the wall. Upgrading the GFCIs is advised to enhance safety. As the power was off during the inspection, it is prudent to anticipate multiple wiring issues in the home, particularly in areas affected by water damage. It is recommended to upgrade the 240-volt receptacle and the light fixtures. Consulting with an electrical contractor for evaluation and repair is strongly recommended.

Recommendation

Contact a qualified electrical contractor.







8.3.2 Switches & Receptacles

COVERS MISSING OR DAMAGED/LOOSE LIGHT FIXTURES

— Recommendation

MULTIPLE

Several light fixtures were observed to be damaged or loose during the inspection. Additionally, one or more receptacles, switches, or lighting fixtures were found to be missing covers. It is recommended to enlist the services of a qualified contractor to evaluate and address these issues promptly.

Recommendation

Contact a qualified electrical contractor.





8.3.3 Switches & Receptacles

OUTDATED GFCIS

ALL AREAS WITH IN 6 FEET OF WATER

 Recommendation

Outdated GFCIs were identified in the home.

A ground fault circuit interrupter (GFCI) is essential for preventing electrocution. When a person's body begins to experience a shock, the GFCI detects this and promptly cuts off the power, preventing injury. These devices are typically installed in areas where electrical circuits could accidentally come into contact with water, ensuring enhanced safety.

As the power was off during the inspection, it is reasonable to expect other electrical issues such as open grounds and shorts. Therefore, it is recommended to have an electrician evaluate and repair the electrical system for optimal safety and functionality.

How GFCIs work:

A Ground Fault Circuit Interrupter (GFCI) is a safety device designed to protect against electric shocks and electrical fires caused by ground faults. Here's how a GFCI works:

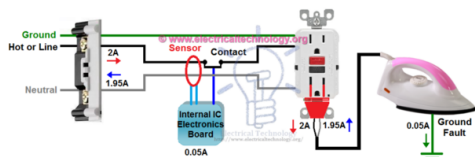
1. **Sensing Current Imbalance:** The GFCI continuously monitors the electrical current flowing through the circuit. It compares the current entering the circuit with the current returning from the circuit. In a properly functioning circuit, the incoming and returning currents should be equal.
2. **Detecting Ground Faults:** If there is a ground fault, where electricity is leaking or taking an unintended path to ground, the current balance is disrupted. The GFCI detects this current imbalance, even a small amount as low as 4-6 milliamperes (mA), and responds quickly.
3. **Tripping the GFCI:** When a ground fault is detected, the GFCI responds by tripping or interrupting the circuit, cutting off the electrical power within milliseconds. This quick response prevents electric shocks and reduces the risk of electrical fires.
4. **Protecting Against Electric Shocks:** By interrupting the circuit, the GFCI protects against electric shocks. When a person comes into contact with faulty equipment or a path to ground, the GFCI detects the current leakage and interrupts the circuit, preventing the flow of electricity through the person's body.
5. **Manual Reset:** After tripping, the GFCI needs to be manually reset to restore power to the circuit. This is typically done by pressing a reset button on the GFCI outlet or GFCI breaker.

GFCIs are commonly installed in areas where water and electricity are likely to come into contact, such as bathrooms, kitchens, laundry rooms, outdoor outlets, and garages. They provide an extra layer of protection against electrical hazards and are an important safety feature in residential and commercial buildings.

It's worth noting that GFCIs should be periodically tested to ensure proper functionality. Most GFCIs have a built-in test button that allows you to simulate a ground fault and verify that the device trips and cuts off the power. Regular testing and maintenance of GFCIs are essential for ensuring their continued effectiveness in protecting against electrical hazards.

Recommendation

Contact a qualified electrical contractor.



How GFCI Works?

EXAMPLE ONLY HOW GFCI WORKS



8.3.4 Switches & Receptacles

 Deferred Maintenance

UPGRADE SMOKE DETECTION/CARBON MONOXIDE SYSTEM OR ALARM SYSTEM

WHOLE HOUSE

1. Recommend upgrading the smoke detection/carbon monoxide system. Newer systems include Wi-Fi options that notify the homeowner through an application in the event that the homeowner is not present at the property.
2. Recommend having the alarm system upgraded if an alarm system is on the premises.

Recommendation

Contact a qualified professional.



EXAMPLE ONLY NEWER UNIT

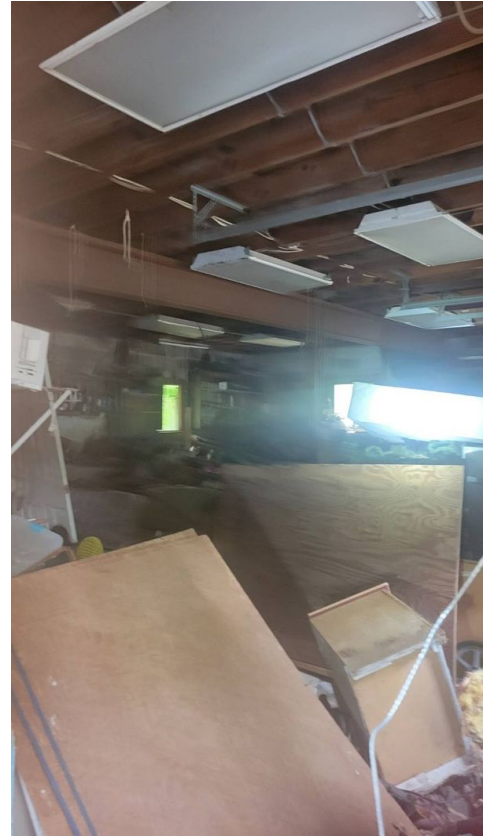
9: REAR BUILDING

Limitations

Ceiling, floor, walls and fire walls, garage door, windows and entrance doors

LIMITED VIEW

Limited view on areas of the garage due to the garage being full of the sellers' items. There should be a clear path for inspection.



Deficiencies

9.1.1 Ceiling, floor, walls and fire walls, garage door, windows and entrance doors

REAR BUILDING: EXTERIOR DEFECTS

REAR BUILDING



Multiple exterior defects were observed on the rear building, which consists of concrete blocks with a combination of siding and stucco-like material as its exterior finish. Cracks and damage are evident in multiple areas, suggesting substandard workmanship. The flat roof is improperly sloped, resulting in leaks into the interior of the property. Additionally, the absence of gutters on the building exacerbates water-related issues, which may lead to electrical problems. Debris is scattered around the structure, and there are loose, damaged, or aged light fixtures on the exterior. Evaluation and repair are recommended.

Behind the rear building is a smaller shed structure that remains unfinished, lacking protection from the elements. This condition may compromise the stability of the shed. It is advisable to engage a general contractor or shed builder to evaluate and repair the shed structure.

Although a finish coat seemed to have been applied to sections of the rear building, the workmanship does not meet professional standards. Refer below for instructions on properly applying a stucco finish to a concrete block building and view the accompanying image to understand the layers of the stucco finish for correct protocol.

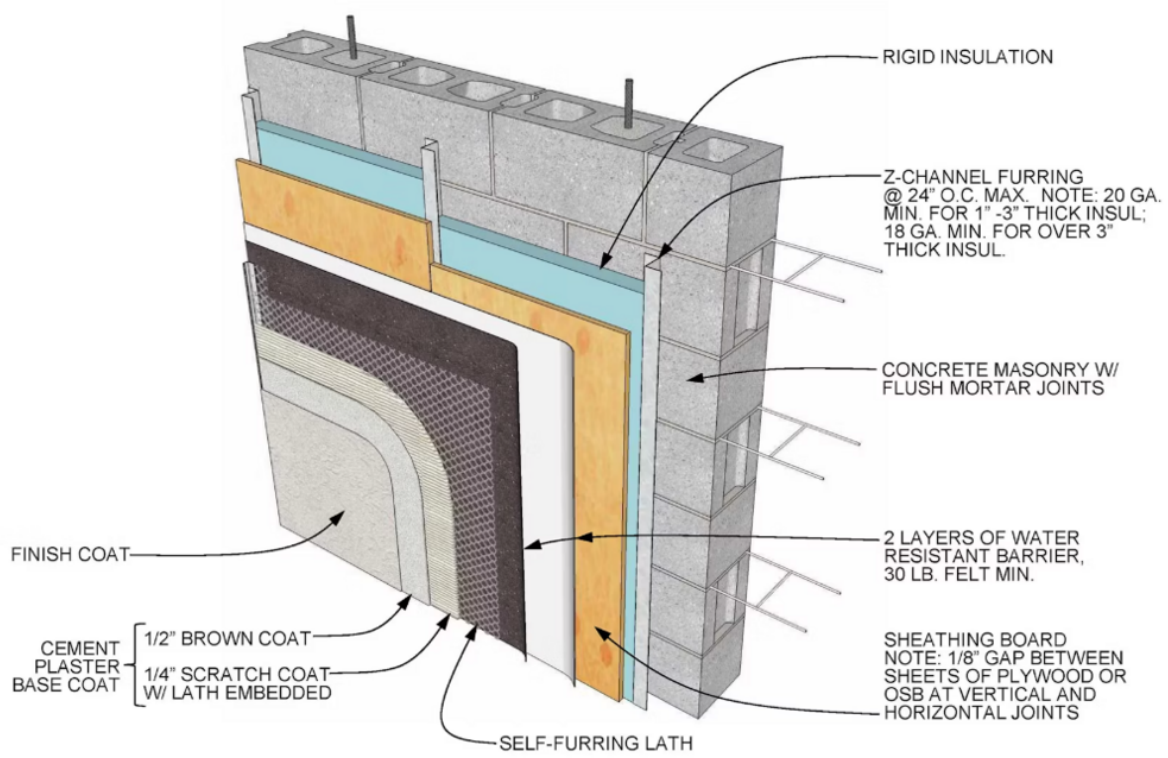
Applying masonry stucco layers to a concrete building involves several steps to ensure proper adhesion and durability:

1. **Surface Preparation:** The concrete surface must be thoroughly cleaned to remove any dirt, debris, or loose material. Any existing coatings or finishes should be removed to create a clean and uniform substrate.
2. **Priming:** A bonding agent or primer may be applied to the concrete surface to enhance adhesion between the concrete and the stucco layers. This helps prevent delamination and ensures a strong bond.
3. **Scratch Coat:** The first layer of stucco, known as the scratch coat, is applied directly to the primed concrete surface. This layer is typically mixed to a thicker consistency and contains aggregate for improved adhesion and strength. The scratch coat is scored or scratched with a trowel to create a rough texture, allowing subsequent layers to bond more effectively.
4. **Brown Coat:** Once the scratch coat has cured sufficiently, the brown coat is applied. This layer is smoother and thinner than the scratch coat and helps to provide a level surface for the final finish coat. The brown coat may also contain fibers or additives to improve flexibility and durability.
5. **Finish Coat:** The final layer of stucco, known as the finish coat, is applied once the brown coat has cured. This layer is mixed to a finer consistency and can be textured or colored to achieve the desired aesthetic. The finish coat adds durability, weather resistance, and visual appeal to the stucco surface.
6. **Curing and Protection:** After the finish coat is applied, the stucco must be allowed to cure properly. This typically involves keeping the surface moist and protected from direct sunlight and extreme temperatures. Once cured, the stucco surface may be sealed or painted for added protection and aesthetics.

By following these steps, masonry stucco layers can be effectively applied to a concrete building, providing both structural integrity and visual appeal. Proper surface preparation, application techniques, and curing procedures are essential to ensure a durable and long-lasting stucco finish.

Recommendation

Contact a qualified professional.



Masonry stucco layers







9.1.2 Ceiling, floor, walls and fire walls, garage door, windows and entrance doors

REAR BUILDING: INTERIOR DEFECTS

REAR BUILDING



Numerous interior defects are evident in the rear building. The flat roof has failed, resulting in water leakage throughout the structure, affecting multiple areas. Water pooling on the roof has left impressions, indicating improper slope (flat roofs are not entirely flat). Additionally, water is infiltrating the garage section of the building. The building is deemed unsafe due to the risk of ceiling collapse from water weight on the structure.

The extensive water damage has compromised the electrical system. Although the meter is disconnected, it is likely that wiring and light fixtures on the ceiling and in parts of the wall have been damaged. An electrical contractor is recommended for assessment.

The rear glass doors are damaged, with a hole in the bottom covered by a wood block. The kitchen exhibits signs of general wear, with missing or non-operational plumbing, and multiple lights and switches lacking covers, likely affected by water intrusion. Cabinets show signs of typical wear. Appliances are aged and damaged, and the flooring throughout the building is also damaged. Countertops show signs of wear, and the kitchen sink and faucet are in poor condition. GFCIs need to be installed in this area.

Water has leaked into the closet area, weakening the wall, base of the structure, and the entire closet area. In the bathroom, the sink is cracked, the vanity is loose, plumbing is poorly installed, and the toilet base and faucets are loose or damaged.

Ductwork in the ceiling is likely damaged from moisture intrusion. The roof sheathing, roof framing, ceiling framing, wall framing, parts of the structure and drywall have all been affected by the moisture intrusion from the failed flat roof.

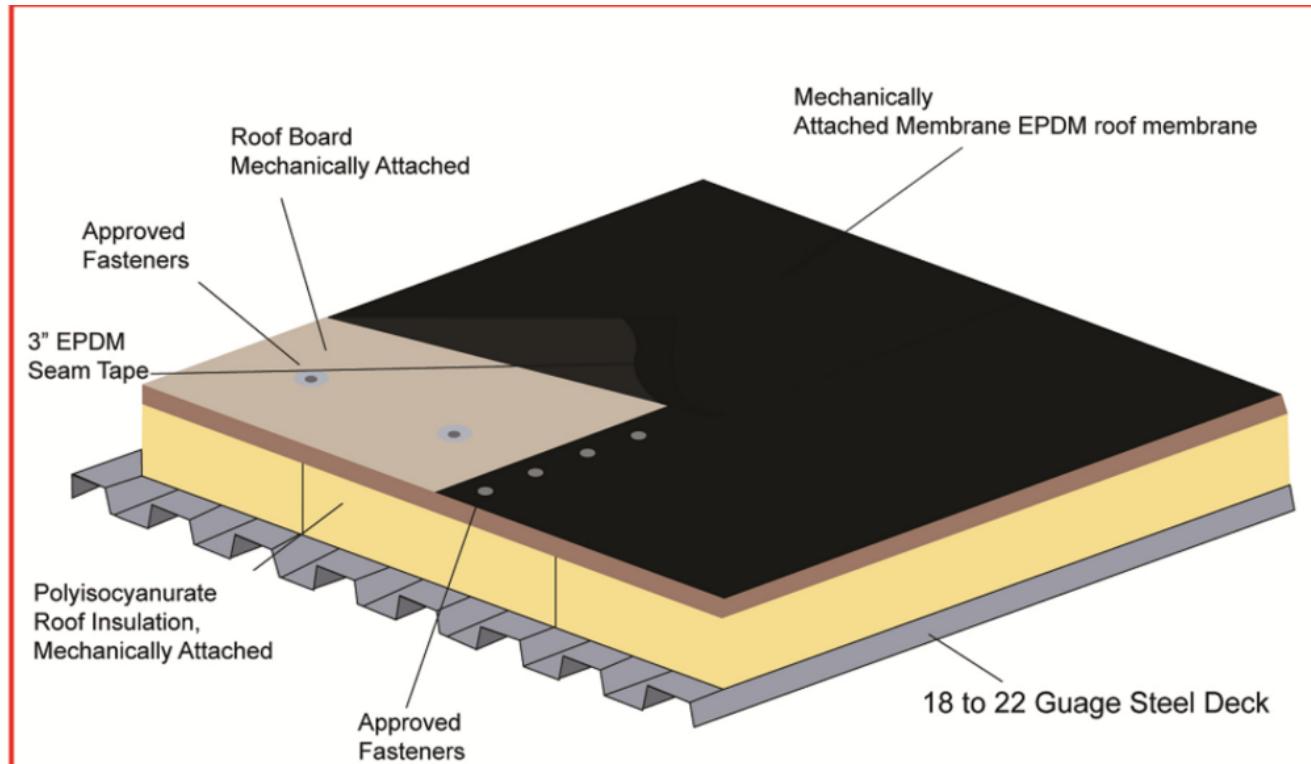
A qualified contractor is recommended to evaluate and repair the building. Due to the extensive work required, an experienced general contractor is preferred. It is advisable to map out a schedule and contract for large repairs to avoid issues with money and time.



EXAMPLE OF FLAT ROOF MEMBRANE

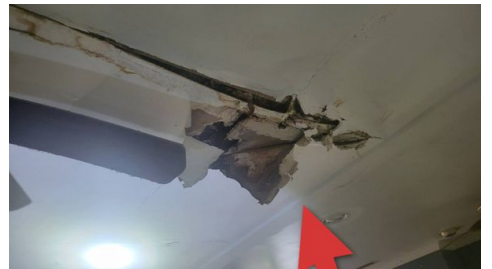
Recommendation

Contact a qualified professional.

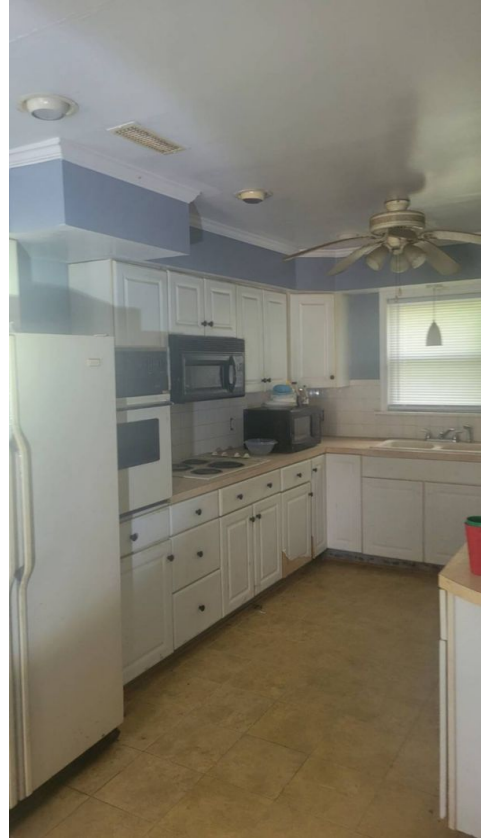


EXAMPLE OF FLAT ROOF MEMBRANE LAYERS











Meter pulled by the electric company

9.1.3 Ceiling, floor, walls and fire walls, garage door, windows and entrance doors



GENERAL ISSUES IN KITCHEN

REAR BUILDING

The rear building features a full kitchen with several defects: the cabinets exhibit signs of wear and damage, the appliances show signs of aging and damage, the countertops display signs of damage, and both the flooring and backsplash show signs of wear. Remediation is recommended.

To address the cabinet issues, they can be remediated by sanding and painting them or replaced entirely with new cabinets.

Recommendation

Contact a qualified professional.



9.1.4 Ceiling, floor, walls and fire walls, garage door, windows and entrance doors
DEFECTS FOR GARAGE SIDE OF REAR BUILDING
GARAGE SECTION

 Recommendation

The garage section of the rear building is experiencing water leakage into the structure. It has a separate electrical panel, but the panel cover has been removed and wiring is hanging out. It seems that previous work was being performed on the panel, and this area also contains switches and receptacles. It is advisable to have an electrician conduct a full diagnostic on both buildings and recommend repairs. With three panels and two meters on the property, there is a significant amount of wiring installed, so an electrician is recommended for evaluation and repair. Additionally, a roofer should be recommended to replace the roof.

The presence of numerous seller items in this area limits viewing capabilities. Additionally, the area serves as storage for the water heater, which is at the end of its service life. General cosmetic defects are also evident in this space.

Recommendation

Contact a qualified professional.





STANDARDS OF PRACTICE

Roof

I. The inspector shall inspect from ground level or the eaves: A. the roof-covering materials; B. the gutters; C. the downspouts; D. the vents, flashing, skylights, chimney, and other roof penetrations; and E. the general structure of the roof from the readily accessible panels, doors or stairs. II. The inspector shall describe: A. the type of roof-covering materials. III. The inspector shall report as in need of correction: A. observed indications of active roof leaks. IV. The inspector is not required to: A. walk on any roof surface. B. predict the service life expectancy. C. inspect underground downspout diverter drainage pipes. D. remove snow, ice, debris or other conditions that prohibit the observation of the roof surfaces. E. move insulation. F. inspect antennae, satellite dishes, lightning arresters, de-icing equipment, or similar attachments. G. walk on any roof areas that appear, in the inspectors opinion, to be unsafe. H. walk on any roof areas if doing so might, in the inspector's opinion, cause damage. I. perform a water test. J. warrant or certify the roof. K. confirm proper fastening or installation of any roof-covering material.

Exterior

I. The inspector shall inspect: A. the exterior wall-covering materials, flashing and trim; B. all exterior doors; C. adjacent walkways and driveways; D. stairs, steps, stoops, stairways and ramps; E. porches, patios, decks, balconies and carports; F. railings, guards and handrails; G. the eaves, soffits and fascia; H. a representative number of windows; and I. vegetation, surface drainage, retaining walls and grading of the property, where they may adversely affect the structure due to moisture intrusion. II. The inspector shall describe: A. the type of exterior wall-covering materials. III. The inspector shall report as in need of correction: A. any improper spacing between intermediate balusters, spindles and rails. IV. The inspector is not required to: A. inspect or operate screens, storm windows, shutters, awnings, fences, outbuildings, or exterior accent lighting. B. inspect items that are not visible or readily accessible from the ground, including window and door flashing. C. inspect or identify geological, geotechnical, hydrological or soil conditions. D. inspect recreational facilities or playground equipment. E. inspect seawalls, breakwalls or docks. F. inspect erosion-control or earth-stabilization measures. G. inspect for safety-type glass. H. inspect underground utilities. I. inspect underground items. J. inspect wells or springs. K. inspect solar, wind or geothermal systems. L. inspect swimming pools or spas. M. inspect wastewater treatment systems, septic systems or cesspools. N. inspect irrigation or sprinkler systems. O. inspect drainfields or dry wells. P. determine the integrity of multiple-pane window glazing or thermal window seals.

Basement, Foundation, Crawlspace & Structure

I. The inspector shall inspect: A. the foundation; B. the basement; C. the crawlspace; and D. structural components. II. The inspector shall describe: A. the type of foundation; and B. the location of the access to the under-floor space. III. The inspector shall report as in need of correction: A. observed indications of wood in contact with or near soil; B. observed indications of active water penetration; C. observed indications of possible foundation movement, such as sheetrock cracks, brick cracks, out-of-square door frames, and unlevel floors; and D. any observed cutting, notching and boring of framing members that may, in the inspector's opinion, present a structural or safety concern. IV. The inspector is not required to: A. enter any crawlspace that is not readily accessible, or where entry could cause damage or pose a hazard to him/herself. B. move stored items or debris. C. operate sump pumps with inaccessible floats. D. identify the size, spacing, span or location or determine the adequacy of foundation bolting, bracing, joists, joist spans or support systems. E. provide any engineering or architectural service. F. report on the adequacy of any structural system or component.

HVAC

I. The inspector shall inspect: A. the heating system, using normal operating controls. II. The inspector shall describe: A. the location of the thermostat for the heating system; B. the energy source; and C. the heating method. III. The inspector shall report as in need of correction: A. any heating system that did not operate; and B. if the heating system was deemed inaccessible. IV. The inspector is not required to: A. inspect or evaluate the interior of flues or chimneys, fire chambers, heat exchangers, combustion air systems, fresh-air intakes, humidifiers, dehumidifiers, electronic air filters, geothermal systems, or solar heating systems. B. inspect fuel tanks or underground or concealed fuel supply systems. C. determine the uniformity, temperature, flow, balance, distribution, size, capacity, BTU, or supply adequacy of the heating system. D. light or ignite pilot flames. E. activate heating, heat pump systems, or other heating systems when ambient temperatures or other circumstances are not conducive to safe operation or may damage the equipment. F. override electronic thermostats. G. evaluate fuel quality. H. verify thermostat calibration, heat anticipation, or automatic setbacks, timers, programs or clocks.

Doors, Windows & Interior

I. The inspector shall inspect: A. a representative number of doors and windows by opening and closing them; B. floors, walls and ceilings; C. stairs, steps, landings, stairways and ramps; D. railings, guards and handrails; and E. garage vehicle doors and the operation of garage vehicle door openers, using normal operating controls. II. The inspector shall describe: A. a garage vehicle door as manually-operated or installed with a garage door opener. III. The inspector shall report as in need of correction: A. improper spacing between intermediate balusters, spindles and rails for steps, stairways, guards and railings; B. photo-electric safety sensors that did not operate properly; and C. any window that was obviously fogged or displayed other evidence of broken seals. IV. The inspector is not required to: A. inspect paint, wallpaper, window

treatments or finish treatments. B. inspect floor coverings or carpeting. C. inspect central vacuum systems. D. inspect for safety glazing. E. inspect security systems or components. F. evaluate the fastening of islands, countertops, cabinets, sink tops or fixtures. G. move furniture, stored items, or any coverings, such as carpets or rugs, in order to inspect the concealed floor structure. H. move suspended-ceiling tiles. I. inspect or move any household appliances. J. inspect or operate equipment housed in the garage, except as otherwise noted. K. verify or certify the proper operation of any pressure-activated auto-reverse or related safety feature of a garage door. L. operate or evaluate any security bar release and opening mechanisms, whether interior or exterior, including their compliance with local, state or federal standards. M. operate any system, appliance or component that requires the use of special keys, codes, combinations or devices. N. operate or evaluate self-cleaning oven cycles, tilt guards/latches, or signal lights. O. inspect microwave ovens or test leakage from microwave ovens. P. operate or examine any sauna, steamgenerating equipment, kiln, toaster, ice maker, coffee maker, can opener, bread warmer, blender, instant hot-water dispenser, or other small, ancillary appliances or devices. Q. inspect elevators. R. inspect remote controls. S. inspect appliances. T. inspect items not permanently installed. U. discover firewall compromises. V. inspect pools, spas or fountains. W. determine the adequacy of whirlpool or spa jets, water force, or bubble effects. X. determine the structural integrity or leakage of pools or spas.

Plumbing

I. The inspector shall inspect: A. the main water supply shut-off valve; B. the main fuel supply shut-off valve; C. the water heating equipment, including the energy source, venting connections, temperature/pressure-relief (TPR) valves, Watts 210 valves, and seismic bracing; D. interior water supply, including all fixtures and faucets, by running the water; E. all toilets for proper operation by flushing; F. all sinks, tubs and showers for functional drainage; G. the drain, waste and vent system; and H. drainage sump pumps with accessible floats. II. The inspector shall describe: A. whether the water supply is public or private based upon observed evidence; B. the location of the main water supply shut-off valve; C. the location of the main fuel supply shut-off valve; D. the location of any observed fuel-storage system; and E. the capacity of the water heating equipment, if labeled. III. The inspector shall report as in need of correction: A. deficiencies in the water supply by viewing the functional flow in two fixtures operated simultaneously; B. deficiencies in the installation of hot and cold water faucets; C. mechanical drain stops that were missing or did not operate if installed in sinks, lavatories and tubs; and D. toilets that were damaged, had loose connections to the floor, were leaking, or had tank components that did not operate. IV. The inspector is not required to: A. light or ignite pilot flames. B. measure the capacity, temperature, age, life expectancy or adequacy of the water heater. C. inspect the interior of flues or chimneys, combustion air systems, water softener or filtering systems, well pumps or tanks, safety or shut-off valves, floor drains, lawn sprinkler systems, or fire sprinkler systems. D. determine the exact flow rate, volume, pressure, temperature or adequacy of the water supply. E. determine the water quality, potability or reliability of the water supply or source. F. open sealed plumbing access panels. G. inspect clothes washing machines or their connections. H. operate any valve. I. test shower pans, tub and shower surrounds or enclosures for leakage or functional overflow protection. J. evaluate the compliance with conservation, energy or building standards, or the proper design or sizing of any water, waste or venting components, fixtures or piping. K. determine the effectiveness of anti-siphon, backflow prevention or drain-stop devices. L. determine whether there are sufficient cleanouts for effective cleaning of drains. M. evaluate fuel storage tanks or supply systems. N. inspect wastewater treatment systems. O. inspect water treatment systems or water filters. P. inspect water storage tanks, pressure pumps, or bladder tanks. Q. evaluate wait time to obtain hot water at fixtures, or perform testing of any kind to water heater elements. R. evaluate or determine the adequacy of combustion air. S. test, operate, open or close: safety controls, manual stop valves, temperature/pressure-relief valves, control valves, or check valves. T. examine ancillary or auxiliary systems or components, such as, but not limited to, those related to solar water heating and hot water circulation. U. determine the existence or condition of polybutylene plumbing. V. inspect or test for gas or fuel leaks, or indications thereof.

Electrical

I. The inspector shall inspect: A. the service drop; B. the overhead service conductors and attachment point; C. the service head, gooseneck and drip loops; D. the service mast, service conduit and raceway; E. the electric meter and base; F. service-entrance conductors; G. the main service disconnect; H. panelboards and over-current protection devices (circuit breakers and fuses); I. service grounding and bonding; J. a representative number of switches, lighting fixtures and receptacles, including receptacles observed and deemed to be arc-fault circuit interrupter (AFCI)-protected using the AFCI test button, where possible; K. all ground-fault circuit interrupter receptacles and circuit breakers observed and deemed to be GFCIs using a GFCI tester, where possible; and L. smoke and carbon-monoxide detectors. II. The inspector shall describe: A. the main service disconnect's amperage rating, if labeled; and B. the type of wiring observed. III. The inspector shall report as in need of correction: A. deficiencies in the integrity of the serviceentrance conductors insulation, drip loop, and vertical clearances from grade and roofs; B. any unused circuit-breaker panel opening that was not filled; C. the presence of solid conductor aluminum branch-circuit wiring, if readily visible; D. any tested receptacle in which power was not present, polarity was incorrect, the cover was not in place, the GFCI devices were not properly installed or did not operate properly, evidence of arcing or excessive heat, and where the receptacle was not grounded or was not secured to the wall; and E. the absence of smoke detectors. IV. The inspector is not required to: A. insert any tool, probe or device into the main panelboard, sub-panels, distribution panelboards, or electrical fixtures. B. operate electrical systems that are shut down. C. remove panelboard cabinet covers or dead fronts. D. operate or re-set over-current protection devices or overload devices. E. operate or test smoke or carbon-monoxide detectors or alarms. F. inspect, operate or test any security, fire or alarms systems or components, or other warning or signaling systems. G. measure or determine the amperage or voltage of the main service equipment, if not visibly labeled. H. inspect ancillary wiring or remote-control devices. I. activate any electrical systems or branch circuits that are not energized. J. inspect low-voltage systems, electrical de-icing tapes, swimming pool wiring, or any timecontrolled devices. K. verify the service ground. L. inspect private or emergency electrical supply sources, including, but not limited to: generators, windmills, photovoltaic solar collectors, or battery or electrical storage facility. M. inspect spark or lightning arrestors. N. inspect or test de-icing equipment. O. conduct voltage-drop calculations. P. determine the accuracy of labeling. Q. inspect exterior lighting.

