



HEDDERMAN SERVICES

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MECHANICAL INSPECTION

1119 Del Norte St
Houston, TX 77018



Inspector

Scott Gillis

TREC#22819

281-355-9911

office@hedderman.com



PROPERTY INSPECTION REPORT FORM

Brian Adler & Emily Merritt <i>Name of Client</i>	05/25/2022 12:00 pm <i>Date of Inspection</i>
1119 Del Norte St, Houston, TX 77018 <i>Address of Inspected Property</i>	
Scott Gillis <i>Name of Inspector</i>	TREC#22819 <i>TREC License #</i>
<i>Name of Sponsor (if applicable)</i>	<i>TREC License #</i>

PURPOSE OF INSPECTION

A real estate inspection is a visual survey of a structure and a basic performance evaluation of the systems and components of a building. It provides information regarding the general condition of a residence at the time the inspection was conducted. *It is important* that you carefully read ALL of this information. Ask the inspector to clarify any items or comments that are unclear.

RESPONSIBILITY OF THE INSPECTOR

This inspection is governed by the Texas Real Estate Commission (TREC) Standards of Practice (SOPs), which dictates the minimum requirements for a real estate inspection.

The inspector IS required to:

- use this Property Inspection Report form for the inspection;
- inspect only those components and conditions that are present, visible, and accessible at the time of the inspection;
- indicate whether each item was inspected, not inspected, or not present;
- indicate an item as Deficient (D) if a condition exists that adversely and materially affects the performance of a system or component **OR** constitutes a hazard to life, limb or property as specified by the SOPs; and
- explain the inspector's findings in the corresponding section in the body of the report form.

The inspector IS NOT required to:

- identify all potential hazards;
- turn on decommissioned equipment, systems, utilities, or apply an open flame or light a pilot to operate any appliance;
- climb over obstacles, move furnishings or stored items;
- prioritize or emphasize the importance of one deficiency over another;
- provide follow-up services to verify that proper repairs have been made; or
- inspect system or component listed under the optional section of the SOPs (22 TAC 535.233).

RESPONSIBILITY OF THE CLIENT

While items identified as Deficient (D) in an inspection report DO NOT obligate any party to make repairs or take other actions, in the event that any further evaluations are needed, it is the responsibility of the client to obtain further evaluations and/or cost estimates from qualified service professionals regarding any items reported as Deficient (D). It is recommended that any further evaluations and/or cost estimates take place prior to the expiration of any contractual time limitations, such as option periods.

Please Note: Evaluations performed by service professionals in response to items reported as Deficient (D) on the report may lead to the discovery of additional deficiencies that were not present, visible, or accessible at the time of the inspection. Any repairs made after the date of the inspection may render information contained in this report obsolete or invalid.

REPORT LIMITATIONS

This report is provided for the benefit of the named client and is based on observations made by the named inspector on the date the inspection was performed (indicated above).

ONLY those items specifically noted as being inspected on the report were inspected.

This inspection IS NOT:

- a technically exhaustive inspection of the structure, its systems, or its components and may not reveal all deficiencies;
- an inspection to verify compliance with any building codes;
- an inspection to verify compliance with manufacturer's installation instructions for any system or component and DOES NOT imply insurability or warrantability of the structure or its components.

NOTICE CONCERNING HAZARDOUS CONDITIONS, DEFICIENCIES, AND CONTRACTUAL AGREEMENTS

Conditions may be present in your home that did not violate building codes or common practices in effect when the home was constructed but are considered hazardous by today's standards. Such conditions that were part of the home prior to the adoption of any current codes prohibiting them may not be required to be updated to meet current code requirements. However, if it can be reasonably determined that they are present at the time of the inspection, the potential for injury or property loss from these conditions is significant enough to require inspectors to report them as Deficient (D). Examples of such hazardous conditions include:

- malfunctioning, improperly installed, or missing ground fault circuit protection (GFCI) devices and arc-fault (AFCI) devices;
- ordinary glass in locations where modern construction techniques call for safety glass;
- malfunctioning or lack of fire safety features such as smoke alarms, fire-rated doors in certain locations, and functional emergency escape and rescue openings in bedrooms;
- malfunctioning carbon monoxide alarms;
- excessive spacing between balusters on stairways and porches;
- improperly installed appliances;
- improperly installed or defective safety devices;
- lack of electrical bonding and grounding; and
- lack of bonding on gas piping, including corrugated stainless steel tubing (CSST).

Please Note: items identified as Deficient (D) in an inspection report DO NOT obligate any party to make repairs or take other actions. The decision to correct a hazard or any deficiency identified in an inspection report is left up to the parties to the contract for the sale or purchase of the home.

This property inspection report may include an inspection agreement (contract), addenda, and other information related to property conditions.

INFORMATION INCLUDED UNDER "ADDITIONAL INFORMATION PROVIDED BY INSPECTOR", OR PROVIDED AS AN ATTACHMENT WITH THE STANDARD FORM, IS NOT REQUIRED BY THE COMMISSION AND MAY CONTAIN CONTRACTUAL TERMS BETWEEN THE INSPECTOR AND YOU, AS THE CLIENT. THE COMMISSION DOES NOT REGULATE CONTRACTUAL TERMS BETWEEN PARTIES. IF YOU DO NOT UNDERSTAND THE EFFECT OF ANY CONTRACTUAL TERM CONTAINED IN THIS SECTION OR ANY ATTACHMENTS, CONSULT AN ATTORNEY.

ADDITIONAL INFORMATION PROVIDED BY INSPECTOR

Hedderman Engineering Inc.:

>It is the purpose of this report to give our client my educated and experienced opinion of the condition and function of the stated property as visually inspected by Hedderman Engineering Inc. The inspection performed on this property is of a general nature and includes the following systems: electrical, mechanical, and plumbing. This does not include any specialized inspections and/or inspections of any hazardous materials (such as done in environmental inspections) or any of the following; structural systems, mold, audio/visual components, lighting control systems, hazardous materials and gases, rated walls, lead paint, destructive insects or pest, security items, water or air treatment systems, etc. This inspection is limited to those components which were visible and readily accessible at the time of the inspection. It is noted that this report contains the opinions of this inspector of the stated property as it appeared on the day of the inspection and is in no way a warranty of any component in the days and future following the inspection. All mechanical components are judged on the basis of age, condition, and the function of those items as they appeared on the day of the inspection and are not guaranteed to continue functioning in that manner in the future. It is recommended that the our client purchase a home warranty policy to protect oneself from both unexpected and anticipated problems that may occur in the future.

>It is noted that Hedderman Engineering Inc. is not responsible for any problems found in the house during or after components are opened up, disassembled, uncovered, made visible, or made accessible by another entity after the inspection is completed.

>If a builder or service contractor examines an area of question and comes to the conclusion that there is no repair needed, have them present to you in writing that the item is in compliance with a prevailing code and is functioning properly, and not in need of repair.

>It is the intent of this inspector to work in compliance with the Standards Of Practice For Real Estate Inspectors. It is not required of this company to exceed these standards. You may obtain a copy of the document referred to above by contacting the Texas Real Estate Commission. It is also noted that this inspection is not a "code inspection", but rather an inspection of the condition and function of the stated property.

>Although this report may include observations of some building code violations, total compliance with mechanical, plumbing, electrical codes, specifications, and/or legal requirements are specifically excluded. We do not perform "code" inspections, and since building codes change every few years, our inspections are not performed with the intention of bringing every item in the property into compliance with current code requirements. Rather, the standard of our inspections is a **performance standard** to determine if the items inspected are functioning at the time of the inspection, or are in need of repair. This is particularly applicable to Home Warranty policies, where the standards of the Home Warranty service company are often different than our stated

performance standard for judging whether a piece of equipment is functional or in need of repair. If you intend to rely on a Home Warranty policy, then it is recommended that you contact the appropriate service companies for a more in-depth analysis of what may be required to meet their standards should a claim be made against the policy.

>If there are any questions or concerns please contact Hedderman Engineering, Inc. at 281-355-9911 or Office@HeddermanEngineering.com.

I. STRUCTURAL SYSTEMS

- A. Foundation**
Comments:
- B. Grading and Drainage**
Comments:
- C. Roof Covering Materials**
Comments:
- D. Roof Structures & Attics**
Comments:
- E. Walls (Interior and Exterior)**
Comments:
- F. Ceilings and Floors**
Comments:
- G. Doors (Interior and Exterior)**
Comments:
- H. Windows**
Comments:
- I. Stairways (Interior and Exterior)**
Comments:
- J. Fireplaces and Chimneys**
Comments:
- K. Porches, Balconies, Decks and Carports**
Comments:

The structural portions of this property were inspected by an engineer from Hedderman Engineering Inc. per the inspection agreement between this firm and our client. All comments regarding the structure and property grade are found in the structure report that is created and provided by the engineers at Hedderman Engineering Inc.

According to HAR, the house was built in 1968.

Orientation - House Facing North:

For the purpose of the inspection, North is considered to be the front of the house.

I=Inspected NI=Not Inspected NP=Not Present D=Deficient

I NI NP D

II. ELECTRICAL SYSTEMS

A. Service Entrance and Panels

Comments:

Electrical System Description:

The electrical service is provided by a 120/240 volt, single-phase, 125-ampere overhead service to an electric meter located at the rear of the garage.

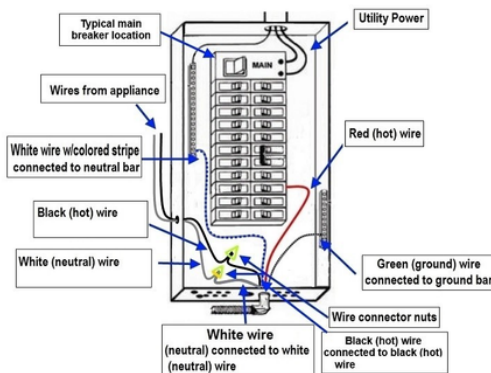
Electrical Wiring Information

<u>Service Wires</u>	<u>Branch Circuit Wires</u>	<u>Grounded or Ungrounded System</u>
2/0 Aluminum	Copper	Grounded

Breaker Panel Information

<u>Location</u>	<u>Manufacturer</u>	<u>Rating - Amps</u>
Rear of Garage	Eaton	200-amperes

Circuit Breaker Wiring Diagram



Breaker Panel Equipment - Acceptable:

The interior of the breaker panel equipment was inspected and the breakers were all properly sized for the circuits they were protecting, the grounding and bonding were properly connected, no knockout clips were

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missing, and the wiring appeared to be in acceptable condition at the time of the inspection.

Breakers - Routine Check:

It is a general recommendation that all circuit breakers be tripped off and on at least once a year to ensure that they are still physically able to trip off. Occasionally, the points on a breaker will fuse to the main bus in the panel, preventing the breaker from tripping off, even if there is an overload on the circuit. If this condition occurs, it can be a fire hazard.

AFCI Breakers Not Present - Home built pre-AFCI:

The breaker panel(s) did not contain any Arc Fault Circuit Interrupters (AFCI). This is an “as-built” condition, that does not meet current building code standards. AFCI devices are intended to protect against fires caused by electrical arcing in the wiring, by shutting off the power to the circuit when an electrical arc is detected in the circuit. Homes built prior to 2002 were not required by the National Electrical Code (NEC) to be protected by AFCI devices. Since this home was built prior to 2002, the breaker panel is not required to be retrofitted with new AFCI breakers. If adding AFCI breakers is desired, it is recommended that you contact an electrician for further information.

Breaker panel legend:

The circuit breakers were labeled to identify the circuits they were protecting. We did not trip off every breaker and trace out every circuit and, therefore, could not verify the accuracy of the labeling. If further investigation is desired, it is recommended that an electrician be contacted.

B. Branch Circuits, Connected Devices, and Fixtures

Type of Wiring: Copper -
Comments:

GFCI Outlet - Functional : All bathrooms, Exterior of house, Garage, Garage door opener outlet - Outlets that were protected by ground fault circuit interrupt (GFCI) devices were present and functioning properly at the time of the inspection. The GFCI devices were checked and the power to the outlets turned off when the test buttons were pressed. It is pointed out that GFCI devices can stop tripping and/or resetting properly at any point. The devices should be tested periodically and replaced when necessary.

Ceiling Fans - Functional :

No items that were in need of repair were observed for the operation of the ceiling fan(s) at the time of the inspection.

Light Fixtures - Functional:

The light fixtures throughout the house were operated and were observed to be functional at the time of the inspection.

Exterior Light Fixtures - Sensors/Timers:

Several of the exterior lights appeared to be on a daylight sensor or timer, and will not come on until it gets dark. Since it was not dark, the lights were not checked at the time of the inspection. Further investigation is recommended.



1: GFCI - Missing at outlet

Kitchen counter tops, Exterior north, Utility room, Washing machine, Kitchen island -

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A GFCI device was not installed at one or more locations that are currently required to have GFCI protection. It is recommended that an electrician install GFCI devices at all of the currently required locations.

Obtain Cost Estimate

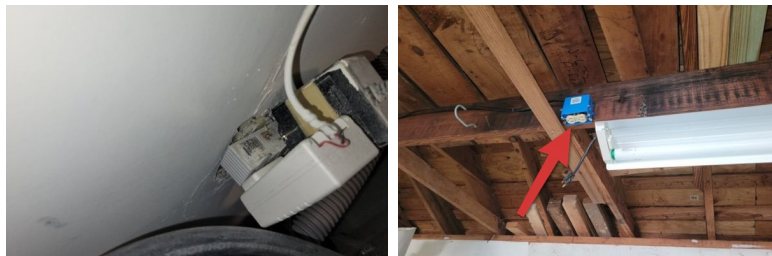
Recommendation: Contact a qualified professional.

2: Cover Plate - Damaged/Missing

Utility Room, Garage

A missing or damaged cover plate was observed.

Obtain Cost Estimate



3: Outlet - Loose in wall

Family Room

An outlet was loose on the wall and needs to be secured.

Obtain Cost Estimate



4: Outlet - Ungrounded

Northeast Bedroom

A three prong outlet that was not grounded properly and needs to be repaired. It is recommended that an electrician be contacted, and the necessary repairs made to the outlet.

Obtain Cost Estimate



5: Recessed lights - In contact with insulation

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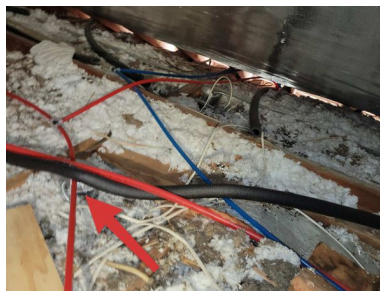
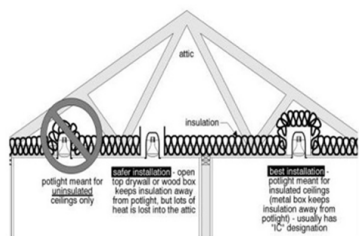
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The insulation was in contact with the recessed lights, which can be a fire hazard and shorten the life of the light bulbs. It is recommended that the insulation be pulled back to provide a three inch air space.

Obtain Cost Estimate



6: Light Fixture - Closet missing cover

One or more of the closet light fixtures are missing covers. For safety purposes, it is recommended that protective covers be installed over the bare bulbs.

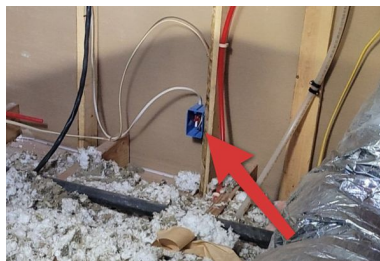
Obtain Cost Estimate

7: Open junction box

Attic near furnace

An open junction box that was missing a cover was observed.

Obtain Cost Estimate



8: Unprotected wire splice

In Attic Above Kitchen Area

Wiring that was spliced and not enclosed in a junction box was observed.

Obtain Cost Estimate



9: Gas and/or Water Piping - Bonding Not visible

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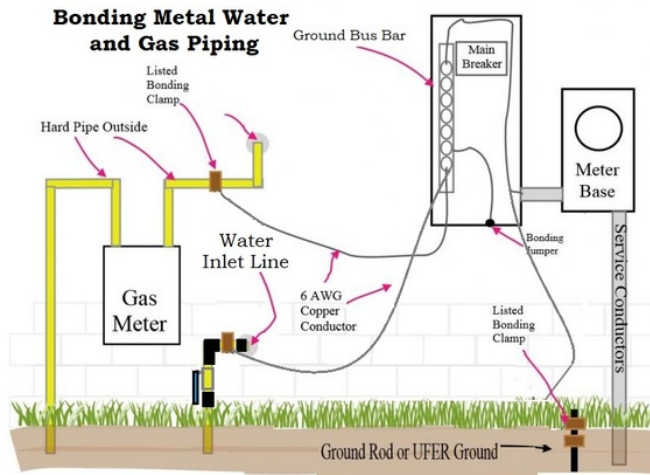
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The location(s) where the water supply piping and/or gas supply piping were bonded together and/or back to the electrical ground system were not visible at the time of the inspection. It is recommended that an electrician be contacted to determine if the plumbing in the house is properly bonded and to make any needed repairs.

Obtain Cost Estimate



Recommendation: Contact a qualified professional.

10: Smoke and Carbon Monoxide Detectors

We could not determine if the smoke and/or carbon monoxide detectors are connected to the security alarm system as is common practice, therefore, to avoid triggering the security alarm we did not operationally check each device. Further investigation is recommended with a service company who specializes in this field to determine if the devices are interconnected as currently required and functioning properly. For safety purposes, it is recommended that smoke detectors and carbon monoxide detectors be replaced every ten years. Further investigation is recommended.

Recommendation: Contact a qualified professional.

11: Smoke detectors - Current standards not met

The house does not meet the current code concerning smoke alarms. This house is an older home and, if bringing the house into current standards is desired, it is recommended that you contact a service contractor to make all of the needed repairs. Smoke detectors are currently required to be connected in a manner that causes one detector to engage each other detector should an alarm be tripped, They are also required to be hardwired into the electrical system and contain a battery back up. Lastly, smoke detectors are required inside each bedroom, outside of bedroom areas, hallways, stairwells, and at each level of the structure.

Obtain Cost Estimate

Recommendation: Contact a qualified professional.

12: Carbon Monoxide Detectors - Current standards not met

Carbon monoxide detectors were not installed at all of the currently required locations and it is recommended that approved carbon monoxide detectors be installed. Currently, carbon monoxide detectors are required outside each sleeping area.

Obtain Cost Estimate

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Recommendation: Contact a qualified professional.

13: Low Voltage Systems - Not inspected

It is pointed out that low voltage systems, low voltage wiring, and low voltage connections were not included in the scope of the inspection and were not checked, including: audio/visual systems, alarm systems, data lines, and phone lines. If further investigation is desired, it is recommended that a service company be contacted.

Recommendation: Contact a qualified professional.

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III. HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS

A. Heating Equipment

Comments:

Type of System: Forced Air

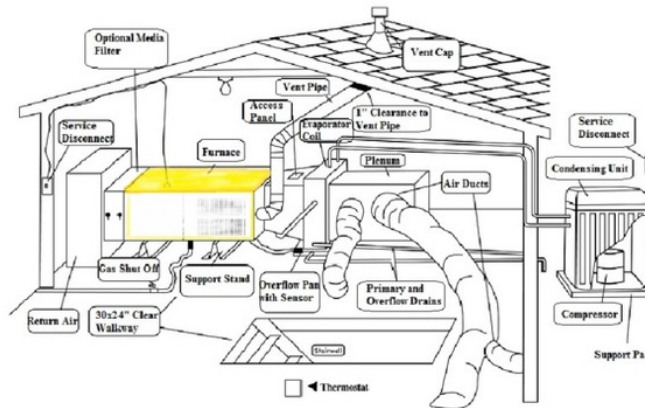
Energy Sources: Natural Gas

It is pointed out that our inspection of the air conditioning and heating system(s) is a limited, visual inspection in accordance with the TREC SOP, where we check the equipment as it has been installed to determine whether or not the system(s) is cooling and/or heating at the time of the inspection. Our inspection is a cursory inspection of the apparent function, as we do not determine the sizing, adequacy, or design of any component in the system, or the compatibility of the individual components, nor the installation of the system(s) to be in conformity to the latest building code requirements. If you desire an in-depth analysis of the HVAC system(s) by a qualified service technician using specialized diagnostic equipment, then it is recommended that a service company be contacted to analyze the system(s). This is particularly important if the system(s) is an older system and has only a limited amount of remaining life due to its age and/or condition.

Gas Furnace Description:

The heating for the property was provided the following natural gas-fired equipment:

<u>ZONE</u>	<u>BRAND</u>	<u>BTU</u>	<u>DATE</u>	<u>LOCATION</u>
House	Comfort Maker	110K	2019	Attic



Heating Equipment - Functional:

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The heating equipment was observed to be operating and functional at the time of the inspection. The heating equipment responded to the thermostat(s) and the equipment appeared to be heating the air adequately.

Heat Exchanger - Information:

Gas furnaces are constructed in such a way that the units must be dismantled in order to view the entire heat exchanger inside. The equipment was not dismantled, and the heat exchanger was not able to be viewed for evidences of cracks. If further investigation is desired, it is recommended that a service company be contacted to dismantle the equipment. It is pointed out, for safety purposes, the heat exchanger should be inspected by an HVAC service company once a year.

B. Cooling Equipment

Comments:

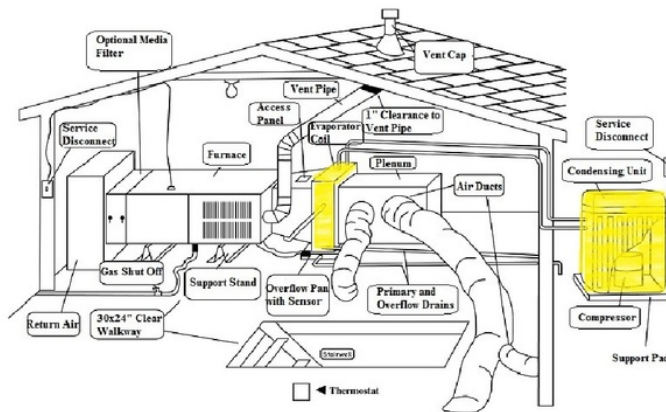
Type of System: Split system

The inspection of the HVAC system is cursory in nature in accordance with the TREC SOP. We measure the temperature drop (ΔT) across the indoor coil(s) at the time of the inspection and our observations have been recorded in this report. It is pointed out that our measurements of the cooling performance of the equipment is only at a "point in time", and cannot reflect whether the equipment has been recently serviced, or what the future performance of the equipment will be after the day of the inspection. Further investigation with the homeowner is recommended to determine when the equipment was last serviced. It is pointed out that an HVAC license is required to check the refrigerant pressures for the A/C equipment, therefore the refrigerant pressure was not checked during the inspection.

A/C Equipment Description:

The type of air conditioning for the property is a forced air split system. The cooling equipment for the property was as follows:

Zone	Brand	Size/Age Condenser	Size/Age Coil	Temp Drop Degrees
House	Comfort Master	4-ton 2019	4-ton 2019	20 Degrees



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Condensing Unit Equipment - Functional:

The condensing unit equipment was functional at the time of the inspection. The equipment responded to the corresponding thermostat, and the compressor components and fan motor components appeared to be operating as evidenced by the cooling performance of the system.

Coil Equipment - Functional:

The coil equipment was operating and was providing a degree of cooling at the time of the inspection.

Cooling Performance - Acceptable:

The cooling performance of the equipment was observed to be adequate according to industry standards. The air conditioning equipment was observed to be cooling between 16-20 degrees across the indoor coil at the time of the inspection.

Overflow Pan - Water sensor present:

The overflow pan under the evaporator coil was equipped with a water sensor that is intended to shut off the air conditioning equipment if the pan fills with water.



Cooling Performance:

We measure the temperature drop (ΔT) across the indoor coil(s) at the time of the inspection and our observations have been recorded in this report. It is pointed out that our measurements of the cooling performance of the equipment is only at a "point in time", and cannot reflect whether the equipment has been recently serviced, or what the future performance of the equipment will be after the day of the inspection. Further investigation with the homeowner is recommended to determine when the equipment was last serviced.

1: Primary Drain Line - Terminated outside

East Side

The primary condensate drain line terminates outside at the side of the foundation. Over time, the constant moisture that is produced by the HVAC system and emptied onto the ground can contribute to foundation settlement. The drain line should be rerouted to an approved location.

Obtain Cost Estimate

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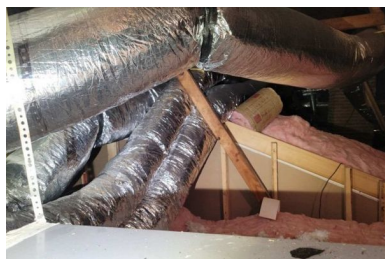
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C. Duct Systems, Chases, and Vents

Type of ducts: Flex ducts, Rigid ducts -

Comments:



Ductwork - Flex and Rigid ducts :

The air ducts in the attic consisted of some newer flex ducts and some older rigid ducts. Due to the age of the rigid air ducts, further investigation is recommended with the homeowner and/or a service company to determine if the ductwork has been cleaned recently. If the air ducts have not been cleaned, it is recommended that the interior of the ducts be checked by a service company.

1: Ducts - No clearance between ducts

We observed that some of the air ducts in the attic were in contact with each other, which can cause condensation to form on the outside of the ductwork. It is recommended that the ducts that are touching be separated. Typically, this is done by inserting a piece of fiberglass batt insulation or duct board between the ducts.

Obtain Cost Estimate



2: Return Air - Not sealed

The chase was not sealed properly and was drawing unconditioned air from the floor and/or wall cavities into the system. Have the chase sealed against air leaks.

Obtain Cost Estimate

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3: Return Air - Minimal size

The return air chase appeared to be minimally sized. Typically, at least one square foot of return air surface space for each ton of air conditioning capacity to allow for proper air circulation through the system. Further investigation with an air conditioning company is recommended, who should provide a cost estimate for repairs.

Obtain Cost Estimate

4: Return Air - Wires inside chase

Wiring was observed to have been run in the return air chase. It is pointed out that wiring can give off poisonous gases when it is burned, and these wires could be hazardous, should they be affected by excess heat. The wiring needs to be encased in conduit, rerouted, or encapsulated into the wall cavity. It is recommended that an electrician be contacted to make the needed repairs.

Obtain Cost Estimate



5: Metal Ducts - Not insulated

We observed Un-insulated metal trunk ductwork in the attic. Some square metal ductwork is equipped with interior insulation and the exterior does not require insulation. We could not verify that the metal ducts were lined with insulation and it is recommended that you contact an HVAC contractor to determine if the metal trunk ducts are acceptable for the application.

Further investigation is recommended.

Obtain Cost Estimate

Recommendation: Contact a qualified professional.

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IV. PLUMBING SYSTEMS

A. Plumbing Supply, Distribution Systems, and Fixtures

Comments:

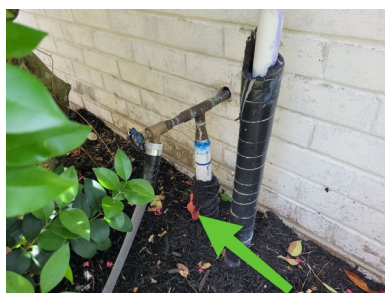
Location of water meter: The curb

Water Supply Material: PEX Observed

A plumbing system typically consists of three major components, including the potable water supply piping; the waste or drain piping; and the plumbing fixtures. The distribution piping brings the water from the public water main or a private well to the individual fixtures throughout the property. The water distribution system is under pressure, usually from 40 psi to 70 psi. The waste or drain piping carries the waste water and products underground to the sewer system or septic tank, and the waste piping is not under pressure, but operates by gravity flow. We typically run water down the drains from the sinks, tubs, showers, and toilets, but this cannot simulate the waste flow characteristics of full occupancy. There may be partial blockage of the underground waste lines from debris, broken pipes, or tree roots that cannot be detected by a visual inspection. If you desire a more in-depth inspection, it is recommended that you contact a qualified plumber.

Main Water Shut Off Valve Location: East side -

The main shut-off valve for the water line service piping is intended to provide a means to disconnect the water service to the structure/property.



Static Water Pressure: 50-55 PSI -

The static water pressure at the property was measured with a water pressure gauge at the hose bibb nearest to the shut off valve at the time of the inspection.



Sinks & Lavatories - Functional:

No items requiring repair were visible at the time of the inspection to the operation of the sinks and/or lavatories. The sinks were filled with water, and were observed to be draining properly, with no leaking piping or slow drains.

Toilets - Functional:

No items requiring repair were visible at the time of the inspection to the operation of the toilets. The toilets were flushing properly, with no leaks visible in the plumbing, the wax seal, or the internal valves.

Tub/Shower - Functional:

No items requiring repair were visible for the tub and/or shower at each bathroom. The tubs were partially filled with water and water was run in the showers, and they were observed to be operating adequately at the

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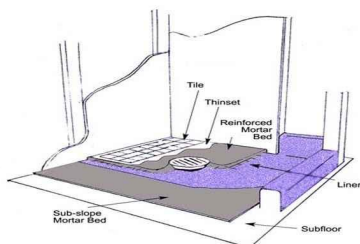
D=Deficient

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time of the inspection.

Shower - No evidence of shower pan leak:

No evidence of a current shower pan leak were visible at the time of the inspection for the shower(s). It is pointed out, our shower inspection is limited to a visual inspection and we did not perform a shower pan leak test. It is recommended that a plumber be contacted to perform a shower pan leak test to determine if any water is leaking past the shower pan.



1: Insulate Inlet Water Line

The main inlet water line needs to be insulated at the house.

Obtain Cost Estimate



2: Vacuum Breaker - Missing

The atmospheric vacuum breaker devices were missing at one or more of the hose bibbs, and it is recommended that they be installed to prevent cross connections, which can allow contaminated water to enter the potable water supply.

Obtain Cost Estimate



3: Water Stains - High moisture detected

Hall Bath at right sink cabinet

Water damage/stains were observed indicating a current or previous leak. The source of the condition was not determined, with certainty, at the time of the inspection. The stains were checked with a moisture meter

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D=Deficient

I NI NP D

and elevated moisture levels (15% or higher) were observed at the time of the inspection. Further investigation is recommended with a contractor to determine the source of the condition and to make any necessary repairs to correct the moisture condition and, if present, any secondary damage.

Obtain Cost Estimate

Recommendation: Contact a qualified professional.



Water stain

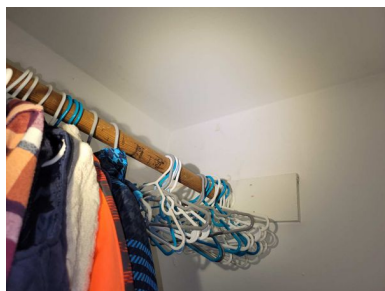
4: Water Stains/Damage Observed

Northeast Bedroom Closet

Water damage/stains were observed indicating a current or previous leak. The source of the condition was not determined, with certainty, at the time of the inspection. The stain was dry when checked with a moisture meter. Further investigation is recommended with a contractor to determine the source of the condition and to make any necessary repairs to correct the moisture condition and, if present, any secondary damage.

Obtain Cost Estimate

Recommendation: Contact a qualified professional.



5: Insulate Exterior Water Piping

Sprinkler system backflow preventer

Exterior water piping that was not properly insulated was observed. It is recommended that the piping be properly insulated.

Obtain Cost Estimate

I=Inspected

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NP=Not Present

D=Deficient

I NI NP D



6: Sink Drain Stopper - Linkage disconnected

Hall Bath at left sink

The linkage was disconnected on the drain stopper, and the stopper was nonfunctional.

Obtain Cost Estimate

7: Sink Drains Slow

Master Bath Vanity Sink

A sink that was draining slower than normal was observed. Have a plumber find the source of the problem and make any necessary repairs.

Obtain Cost Estimate

8: Tub - Mechanical stopper nonfunctional

Hall Bathroom

The mechanical stopper was nonfunctional.

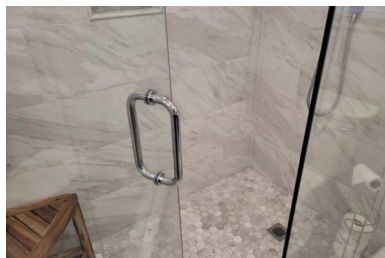
Obtain Cost Estimate

9: Shower/Tub - Door opens inward

Master Bath Shower

The shower door improperly opens inwards rather than outwards. This is a safety concern and should be repaired in an approved manner.

Obtain Cost Estimate



B. Drains, Wastes, and Vents

Sewer Piping Material: Appears to be Cast iron and PVC, Disclosed to be 80 Percent PVC, PVC visible around exterior of house -

Comments:

Sewer System - Functional:

No evidences of a system wide problem were observed when the system was operationally checked by running water through each of the plumbing fixtures during the duration of the inspection. It is noted that most of the drain waste system in the walls, under the floors, and in the ceilings is not visible. If further

I=Inspected

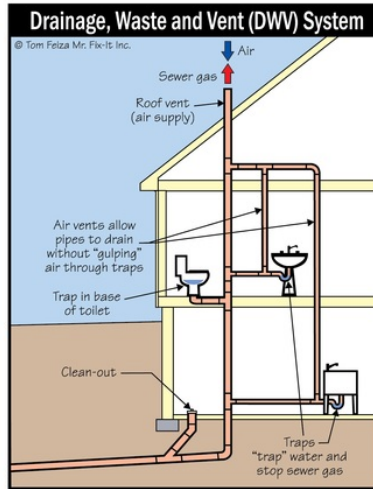
NI=Not Inspected

NP=Not Present

D=Deficient

I NI NP D

investigation is desired, it is recommended that a plumber be contacted to perform an in depth survey with a camera or hydrostatic test.



Sewer Clean Out Present: Rear -

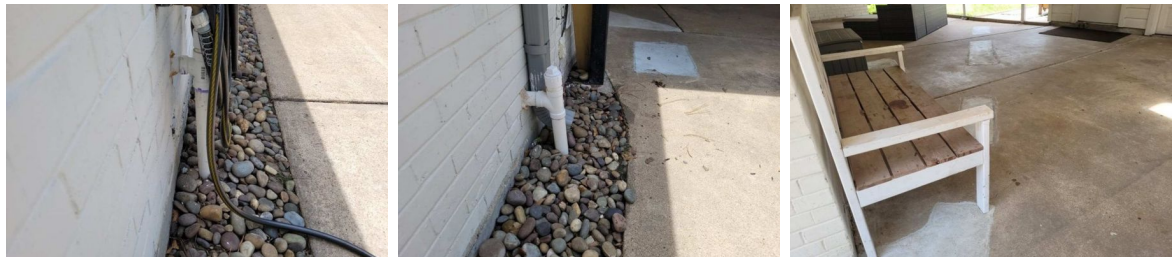
A sewer clean out was present. The clean out is needed in the event of a stoppage in the main sewer drain line, and the clean out is where a sewer snake would be utilized to remove a clog in the sewer line.



Sewer Piping - Evidence of repairs observed: PVC clean out present, PVC drain(s) extended through wall and rerouted, Concrete patched inline with sewer system -

Evidences of sewer line repairs and/or replacement were observed. It is noted that we could not determine the extent of the repairs to the sewer system or if any of the original cast iron piping is still active. Further investigation is recommended with the owner and/or a service company to determine the extent of the repairs and to determine if any further repairs are needed. A sewer inspection with a plumber to verify the extent of the repairs and the condition of the sewer piping and the repairs is recommended. The plumber should also determine if the washing machine drain riser is adequately sized to accommodate a modern washing machine.

Further investigation is recommended



Sewer Piping - Cast iron visible :

I=Inspected NI=Not Inspected NP=Not Present D=Deficient

I NI NP D

Portions of the sewer piping were observed to be the original cast iron piping. Cast iron piping was visible at one or more tub trap areas and/or at the washing machine drain line. Due to the corrosive nature of the cast iron piping, it can be anticipated that the cast iron piping under the ground will rust out at some point and will need to be replaced at that time. It is recommended that a plumber perform a sewer line inspection, including a camera test and/or a hydro-static test, to determine if there are any leaks present. The plumber should also determine if the washing machine drain riser is adequately sized to accommodate a modern washing machine.

Further investigation is recommended

Hall Bath tub trap

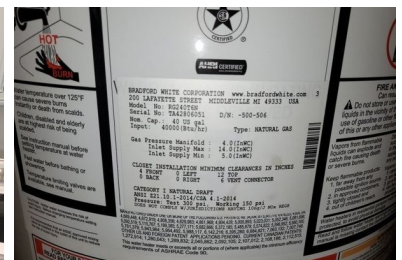
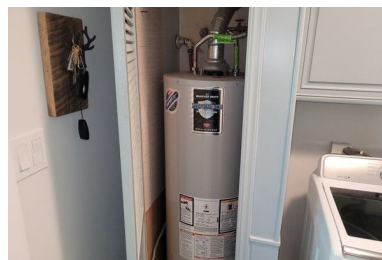
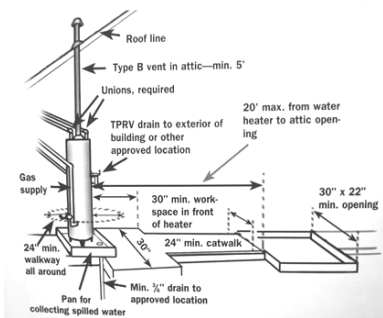


- C. Water Heating Equipment**
*Energy Source: Natural gas -
 Capacity: 40 Gallons*

Gas Water Heater Description:

The hot water for the property was provided by the following natural gas fired gas water heater(s):

<u>Location</u>	<u>Brand</u>	<u>Capacity</u>	<u>Age</u>	<u>Energy Type</u>
Utility Room	Bradford White	40 Gal	2019	Gas



Water Heater Equipment - Functional:

The water heater equipment was functional at the time of the inspection and providing hot water to the applicable plumbing fixtures.

Hot water - Temperature:

The generally recommended maximum temperature setting for a hot water heater, to prevent accidental scalding, is 120-125 degrees. It is recommended that the water heater thermostat be adjusted to and maintained in this temperature range. The temperature of the hot water was measured at the kitchen sink and observed to be 120 degrees at the time of the inspection.

I=Inspected NI=Not Inspected NP=Not Present D=Deficient

I NI NP D

TIME AND TEMPERATURE RELATIONSHIP TO SERIOUS BURNS		
WATER TEMPERATURE	Adults	Children
	(skin thickness of 1.5 mm)	
	Time required for a third-degree burn to occur	
150°F 66°C	1 second	0.5 second
149°F 64°C	2 seconds	1 second
147°F 63°C	5 seconds	1 second
137°F 59°C	10 seconds	4 seconds
127°F 52°C	1 minute	10 seconds
124°F 51°C	2 minutes	1.5 minute
120°F 49°C	5 minutes	2.5 minutes
100°F 37°C	Safe temperature for bathing	Safe temperature for bathing

For 95: °C = (°F) - 32 / 1.8 or (°F) = (°C) × 1.8 + 32
 Figure P278.3 TEMPERATURE BURN CHART



Temp/Pressure Relief Valve - Information:

Temperature/pressure relief valves are not operationally checked by this firm during the inspection. Valves typically do not reseat properly when they are operated, which causes the valves to leak. It is best to replace the temperature/pressure relief valves for water heaters every 2-3 years to prevent them from getting clogged with mineral deposits.

D. Hydro-Massage Therapy Equipment

Comments:

Hydro-Therapy Equipment Not present:

Hydro-therapy equipment was not present at the time of the inspection.

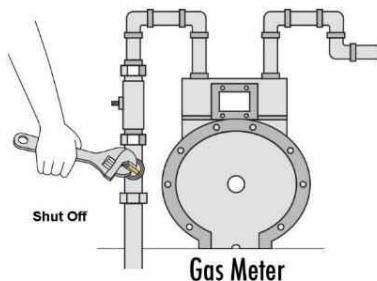
E. Gas Distribution Systems and Gas Appliances

Location of Gas Meter: Rear of house -

Type of gas distribution piping material: Steel piping with flexible appliance connectors

Comments:

A cursory visual inspection was performed on the gas supply piping. The inspection was limited to the gas pipes that were visible and accessible at the time of the inspection, without digging to uncover gas lines. The underground gas line is typically galvanized steel, which can and does rust. However, viewing the underground gas line(s) would require digging, and HEI does not do any digging around the gas lines to determine their condition or the degree of rusting at the underground piping. Also, the use of specialized equipment to detect leaks is not included in the scope of this inspection, nor is determining the gas supply pressure or adequacy. If further investigation is desired to know the condition of the underground gas line(s), it is recommended that a plumber be contacted.



1: Sediment Trap - Missing

Sediment traps were not installed at the gas supply lines for one or more of the gas fired equipment. A sediment trap is intended to catch sediment/moisture/debris in a gas supply line before it can enter into the gas equipment.

Obtain Cost Estimate

Recommendation: Contact a qualified professional.

I=Inspected

NI=Not Inspected

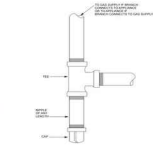
NP=Not Present

D=Deficient

I	NI	NP	D
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HEI file photo showing sediment trap



Clip art showing a sediment trap in gas line



I=Inspected

NI=Not Inspected

NP=Not Present

D=Deficient

I NI NP D

V. APPLIANCES

A. Dishwashers

Comments:

Functional:

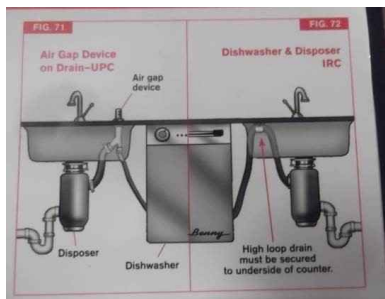
The dishwasher was functioning and responded to the controls. The unit was run through a cycle at the time of the inspection and appeared to be operating properly.



1: No Anti-Siphon

The drain line under the sink was not equipped with an anti-siphon device, nor was it looped up so that the top of the loop is at least six inches above the entrance of the drain line into the disposal. It is recommended at least that the drain line be looped to prevent the water from the garbage disposal from siphoning back into the dishwasher, or an anti-siphon device installed.

Obtain Cost Estimate



2: Loose in Cabinet

The dishwasher was loose in the cabinet and needs to be properly secured.

Obtain Cost Estimate

B. Food Waste Disposers

Comments:

Functional:

The disposal was operating and responded to the controls at the time of the inspection.

1: Electrical Wire - Spliced Outside

The electrical power wires were spliced outside of the disposal. The splice needs to be contained inside the disposal.

Obtain Cost Estimate

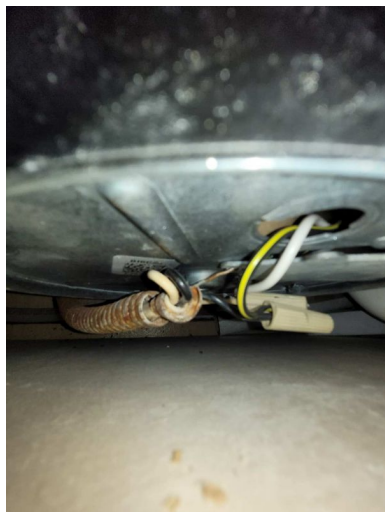
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D=Deficient

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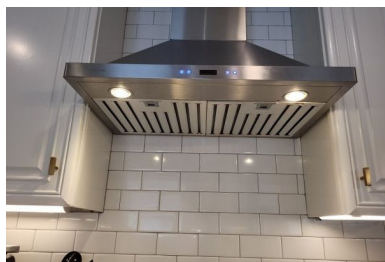


C. Range Hood and Exhaust Systems

Comments:

Range Vent - Functional:

No items requiring repair were visible at the time of the inspection to the operation of the range vent. The vent fan was observed to be venting properly at the time of the inspection.



1: Vent Pipe - not secured to roof jack

The end of the vent pipe in the attic was not secured into the roof jack and was discharging air into the attic. The vent pipe needs to be repositioned into the roof jack to discharge to the outside.

Obtain Cost Estimate



D. Ranges, Cooktops, and Ovens

Comments:

Gas Cooktop - Functional:

I=Inspected

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NP=Not Present

D=Deficient

I NI NP D

The gas cooktop was functioning and responded to the controls when they were operated. All of the burners and controls were operating properly at the time of the inspection.



Gas Oven - Functional:

The gas oven was observed to be functioning and no items in need of repair were visible at the time of the inspection.



Oven - Calibrated properly:

No repair was needed to the calibration of the oven thermostat. The thermostat was set at 350 degrees, and the oven heated to within the allowable ± 25 degrees. The oven was checked with an oven thermometer and found to heat to 330 degrees.



E. Microwave Ovens

Comments:

Functional:

No items requiring repair were visible at the time of the inspection for the heating operation of the microwave. A cup of water was placed in the unit, and the microwave heated the water adequately. It is pointed out that the unit was not checked for microwave leakage.

F. Mechanical Exhaust Vents and Bathroom Heaters

Comments:

Mechanical Vents - Functional:

The mechanical vent fans were functional at the time of the inspection. The bath vent fans responded to the switches and were functional at all the bathrooms.

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D=Deficient

I NI NP D

Vent pipes not visible in attic:

Due to the minimal clearance in the attic the vent pipes for the mechanical equipment were not visible as they entered the attic.

1: Exhaust Fan - Not present

Half Bathroom

An exhaust vent fan was not present. Exhaust vent fans are intended to remove humidity and moisture from the air. Consideration should be given to installing an exhaust vent fan.

Obtain Cost Estimate

G. Garage Door Operators

Comments:

1: Opener - did not auto-reverse, no sensor

The garage door opener did not stop the descent of the door when the door was subjected to a reasonable resisting pressure. This could cause possible personal injury or damage to house, and the opener is in need of adjustment. It is pointed out that the unit was not equipped with the infra-red sensing safety device that automatically reverses the door should the beam be broken, and it is recommended for safety purposes that one be installed.

Obtain Cost Estimate

H. Dryer Exhaust Systems

Comments:

Dryer Vent:

The dryer vent appeared to be properly installed at the time of the inspection. It is pointed out that a portion of the dryer pipe was not visible where it entered the wall/ceiling. Also, dryer vents need to be cleaned periodically for safety reasons and to allow the dryer to operate properly.

I. Other

Comments:

Non Built-in Equipment - Not inspected:

It is pointed out that non built-in refrigerators, wine coolers, small refrigerators, clothes washers, and clothes dryers are not included in the scope of this inspection and were not checked. If further investigation is desired, it is recommended that a service company be contacted.

Further investigation is recommended

Dryer Connection - No Gas - Electric 3 prong :

The 240-volt outlet for the electric dryer connections was observed to be the older style 3-prong outlet rather than the newer 4-prong outlet. You may want to check your clothes dryer to determine if you have the correct power cord for this outlet. A gas connection was not installed.

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I NI NP D

VI. OPTIONAL SYSTEMS

A. Landscape Irrigation (Sprinkler) Systems

Comments:

Sprinkler System: Rainbird, Located at Utility Room -

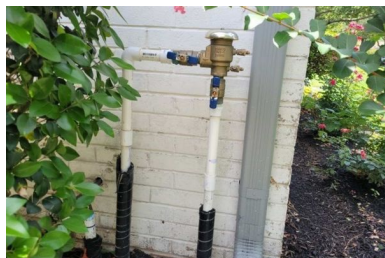
An automatic sprinkler system was installed. The system included a control panel, one or more solenoid valves, underground water lines and with sprinkler heads.



Backflow Prevention Device - present:

A backflow prevention device was present and was equipped with the two water shut off valves on the water supply line to the sprinkler system.

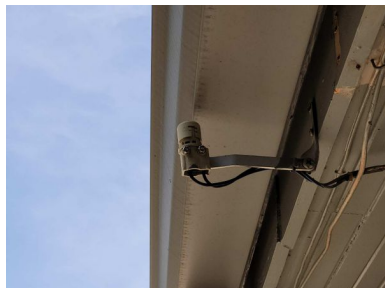
East Side



Rain Sensor: Rain Sensor - Present -

It is currently required for automatic sprinkler systems to be equipped with a rain sensor device that will prevent the sprinkler system from operating during and shortly after a significant rain.

West Side



1: Adjust sprinkler head spray

Zone 1

Spraying front of house -

The sprinkler head spray was in need of adjustment/repair.

Obtain cost estimate

Recommendation: Contact a qualified professional.

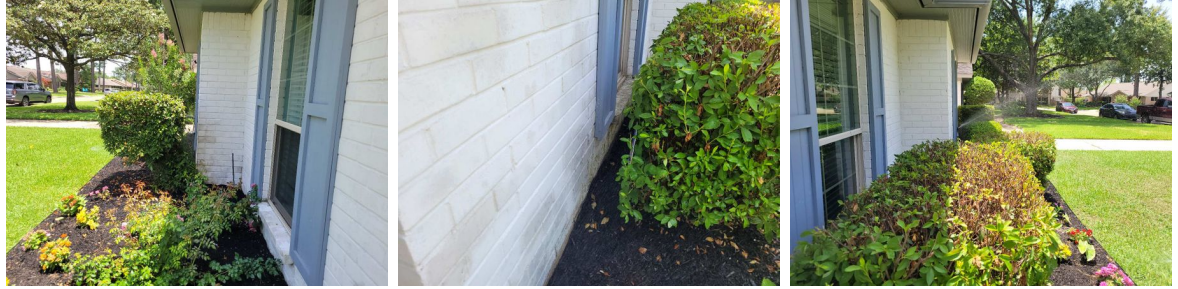
I=Inspected

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I	NI	NP	D
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2: Zones not labeled

The individual zones were not labeled at the sprinkler system control panel.

Obtain cost estimate

Recommendation: Contact a qualified professional.

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D=Deficient

I NI NP D

INFORMATION FROM HEDDERMAN ENGINEERING INC.

Closing Comments :

Opinions and comments stated in this report are based on the apparent performance of the items included within the scope of the inspection, at the time of the inspection. Performance standards are based on the knowledge gained through the experience and professional studies of the inspector. There is no warranty or guarantee, either expressed or implied, regarding the habitability, future performance, life, merchantability, and/or need for repair of any item inspected. It is recommended that a Home Warranty Policy be provided to protect the appliances and mechanical equipment against unforeseen breakdowns during the first year. Check with your agent for details.

Items identified in the report as Deficient and our Recommendations are provided in the above report. Many, but not all, recommendations are highlighted in bold red text. It is our intention, and your responsibility, that you follow up on these deficiencies and recommendations as part of your due diligence by contacting the appropriate service contractor(s) for Further Investigation, Obtain cost estimate, and/or Contact the builder. It is pointed out that other related and/or underlying conditions may be present, and which may not be apparent in our limited, visual inspection without further investigation by qualified service companies. It is emphasized how important it is for you if you intend to rely on our report(s), to continue to gather the in-depth information that will be obtained by further investigation with appropriate service technicians who will use their specialized knowledge of the component(s) and the related building codes along with their specialized diagnostic equipment to give you the TOTAL PICTURE of the condition of the property. Failure on your part to do your due diligence will constitute negligence on your part and will result in an incomplete body of knowledge upon which you base your decisions regarding this property. We recommend that your further investigations be done before the expiration of your option period and before closing on the property.

As an additional service, we recommend using a new tool we have on our website that can quickly turn your inspection report into an easy-to-read estimate of repairs for a nominal fee. These pricing reports from a third party company called Repair Pricer not only make the inspection report easy to understand in terms of dollars and cents, but they are also useful negotiation tools. Just visit the page below on our website and upload your report into Repair Pricer. If you have any questions when you receive your report, you can contact them at info@repairpricer.com
<http://www.heddermanengineering.com/repair-cost-estimates>