



HEDDERMAN SERVICES

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MECHANICAL INSPECTION

1301 Milford St
Houston, TX 77006



Inspector

Alex Lopez

TREC #23307

281-355-9911

office@hedderman.com



PROPERTY INSPECTION REPORT FORM

KRAUSE MANAGEMENT TRUST c/o Greg Krause <i>Name of Client</i>	03/07/2022 9:00 am <i>Date of Inspection</i>
1301 Milford St, Houston, TX 77006 <i>Address of Inspected Property</i>	
Alex Lopez <i>Name of Inspector</i>	TREC #23307 <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, 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 2000.

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, 350 -ampere service to an electric meter located at the south side of the house.

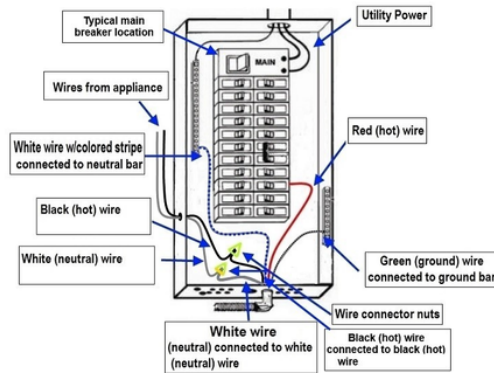
Electrical Wiring Information

<u>Service Wires</u>	<u>Branch Circuit Wires</u>	<u>Grounded or Ungrounded System</u>
#1/0 Copper X2	Copper	Grounded

Breaker Panel Information

<u>Location</u>	<u>Manufacturer</u>	<u>Rating - Amps</u>
South	Ge	225
South	Ge	225
South	Ge	225
Garage	Ge	200
Garage	Ge	200
Garage	Ge	200

Circuit Breaker Wiring Diagram



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I NI NP D



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.

1: Power Wire - White insulation

We observed one or more white wires that were used as a power wires, and were connected to a circuit breaker. Typically, the white wires are the grounded/neutral conductors, and if they are used as a power conductor, they must be permanently marked or wrapped with black or red tape to identify them as a “hot” ungrounded conductor.

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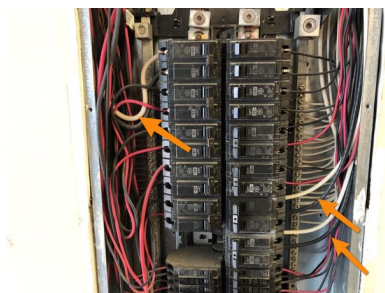
NP=Not Present

D=Deficient

I NI NP D

Obtain Cost Estimate

E3407.3

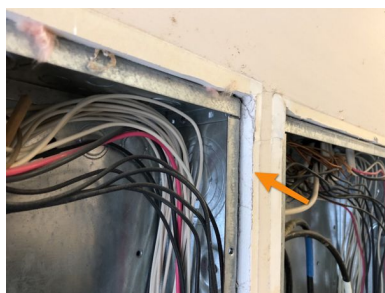


2: Breaker Panel - Not flush with wall

The breaker panel was not flush with the finished surface of the wall as required but was recessed into the wall. Further investigation with an electrician concerning this condition is recommended.

Obtain Cost Estimate

312.3 NEC



3: Breakers Oversized - A/C condensing unit

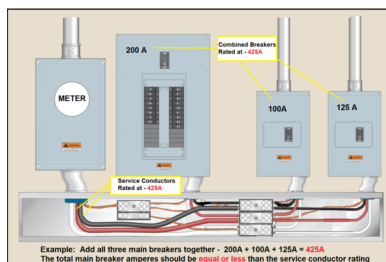
The circuit breakers for air conditioning condensing unit was rated higher than the maximum size allowed by the manufacturer of the condensing unit. The breakers should be replaced by the size listed on the manufacturer's nameplates located on the condensing unit.

Obtain Cost Estimate

4: Main Breakers - Combined oversized

The electrical system consisted of more than one main breaker panels. The combined total rating of the main breakers (400-amperes) inside the panels can possibly draw more amperage than the allowable capacity of the service entrance conductors from the meter (350-amperes). It is recommended that the system be checked by an electrician, who should make any necessary repairs.

Obtain Cost Estimate



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I NI NP D

B. Branch Circuits, Connected Devices, and Fixtures

*Type of Wiring: Copper -
Comments:*

GFCI Outlet - Functional : Kitchen counter tops, Kitchen sink area, Kitchen Island, All bathrooms, Exterior North, Exterior east -

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.

GFCIs - Functional:

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/resetting properly at any point and should be tested periodically and replaced when necessary.

Locations included: kitchen, bathrooms, exterior of the house, garage

Limited visibility of electrical wiring : At attic -

Visibility of the electrical wiring was very limited at the time of the inspection and some portions of the wiring that are typically accessible were concealed. If further investigation is desired, it is recommended that a service company be contacted.

Outlets - Some inaccessible:

Some of the receptacle outlets in the home were inaccessible and could not be reached for inspection due to furniture, heavy storage items, personal effects, or conditions outside the control of the inspector.

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.

Accent Lights - Sensors/Timers:

Accent lights were observed to be installed around the house. It is pointed out that the accent lights were not checked at the time of the inspection as they were connected to sensors/timers , and do not turn on until after dark.

Further investigation is recommended

1: GFCI - Missing at outlet

Exterior west -

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: Junction box damaged/rusted

An electrical junction box was damaged and/or rusted and the wiring inside was exposed. The damaged components need to be repaired.

Obtain cost estimate

Recommendation: Contact a qualified professional.

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I	NI	NP	D
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East exterior

3: Outlet - Nonfunctional

An outlet was observed that was nonfunctional at the time of the inspection. The reason for the condition was not determined with certainty. Have an electrician find the source of the problem, and make any necessary repairs.

Obtain Cost Estimate



Garage

4: Light Fixture - Nonfunctional

A light fixture that was non-functional when the switch was on was observed. The problem may be a burned out bulb, defective light fixture, or defective switch.

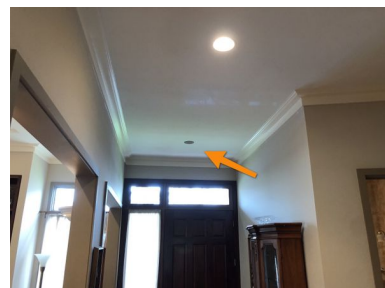
Further investigation is recommended



Garage



West



North entry

5: Doorbell - Missing

The doorbell equipment or button was missing.

Obtain Cost Estimate

6: Smoke and Carbon Monoxide Detectors

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D=Deficient

I	NI	NP	D
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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.

7: 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

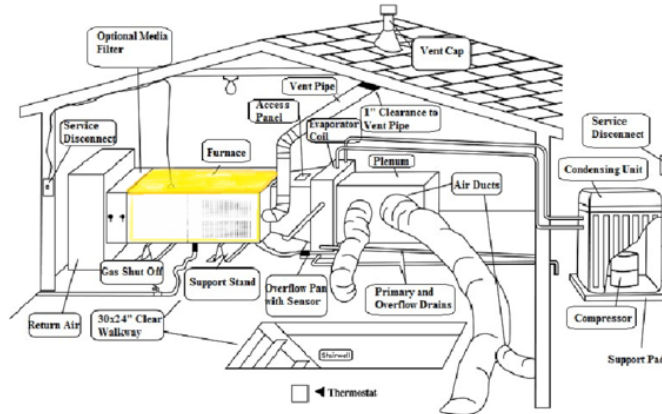
Energy Sources: Natural Gas and Electric

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 and Electric Heating Equipment:

The heating for the property was provided by a combination of natural gas furnace(s) and electric air handler(s). The heating equipment for the property was as follows:

<u>ZONE</u>	<u>BRAND</u>	<u>BTU/ELECTRIC</u>	<u>DATE</u>	<u>LOCATION</u>
North	Carrier	46K	2000	Attic
Downstairs	Carrier	115K	2000	Attic
South	Carrier	Electric	2015	Attic
Upstairs North				Attic



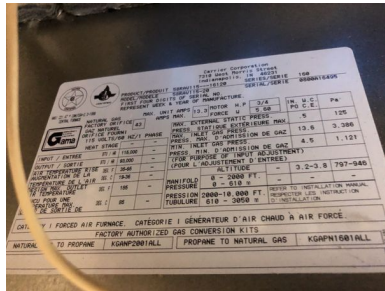
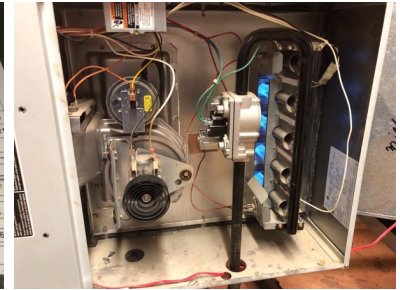
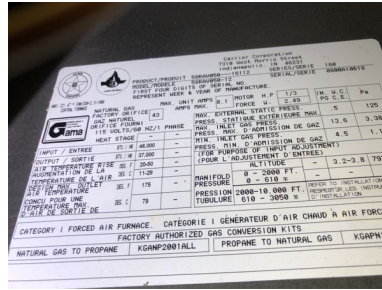
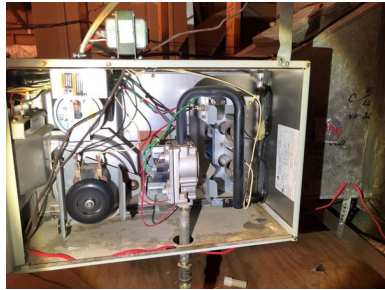
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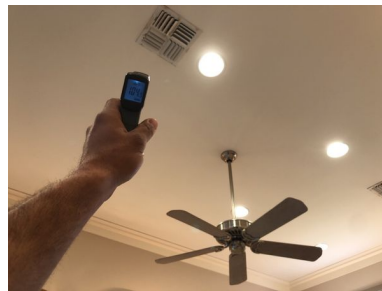


Heating Equipment - Functional:

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.



North



1st Floor South



2nd Floor South

Limited life:

Due to the age and/or condition of the equipment, it is our opinion that the equipment has only a limited amount of remaining life.

North and Downstairs South unit

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.

1: Vent pipe needs repair

Inadequate clearance -

The vent pipe was not installed properly and is in need of repair. It is pointed out that an improperly installed vent pipe is a safety hazard.

Obtain cost estimate

Recommendation: Contact a qualified professional.

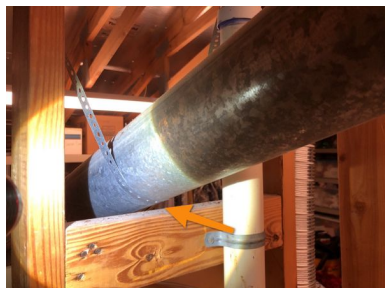
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I NI NP D



North

2: Furnace - Improperly hanging by straps

The furnace was hanging by straps, rather than being properly supported from the underside of the furnace. This can be a hazardous condition, should any of the straps break. It is recommended that a service company be contacted to provide positive support under the furnace.

Obtain Cost Estimate



All units

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
Upstairs South	Carrier	2-ton 2007	2-ton 2013	25
Downstairs	Carrier	5-ton 2017	5-ton 2013	22

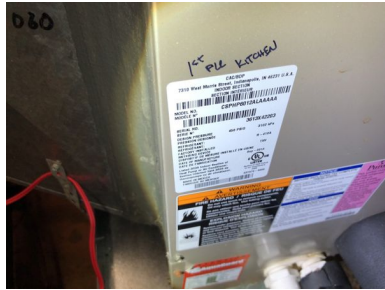
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Condensing Unit Equipment - Functional:

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.

Condensing Unit Equipment - Limited Life:

Due to the age and/or condition of the equipment, it is our opinion that the equipment has only a limited amount of life remaining. It would be prudent to have the equipment thoroughly checked by a licensed air conditioning service company and further investigation is recommended.

Upstairs South

Coil Equipment - Functional:

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

Primary Drain - Terminated properly:

The primary condensate drain line was properly terminated into the P-trap at a plumbing fixture drain at the interior of the property.



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: High temperature drop

North and 2nd Floor South

The system had a greater than normal temperature differential across the evaporator coils (more than 22 degrees). Normally, we see a temperature drop of 16-20 degrees. Have the unit checked by a service company, and any necessary repairs made.

Obtain Cost Estimate

2: A/C Equipment - Possibly oversized

I=Inspected

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I NI NP D

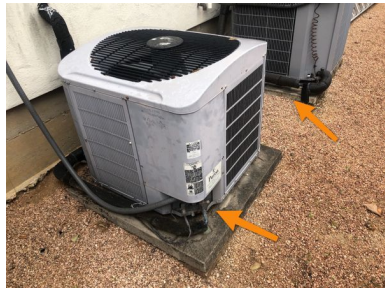
The total tonnage of the cooling equipment was -tons. As a ballpark method of estimation, approximately one ton of air conditioning can cool approximately 500-600 square feet of living area. By this standard, 10-tons of air conditioning can cool approximately 5,000 to 6,000 square feet of living area. It is pointed out that a house that has an oversized air conditioning system cannot be expected to properly remove the humidity from the air. Further investigation is recommended by an air conditioning service company to determine if the existing equipment is sized properly to adequately and efficiently cool this house.

Obtain Cost Estimate

3: Insulation partially missing at refrigerant line

The insulation for the low pressure refrigerant line is partially missing and needs to be replaced to prevent condensation from dripping from the line and to promote proper refrigeration cycling.

Obtain Cost Estimate



4: Overflow Pan - Rust

Rust was observed in the overflow pan under the coil, apparently due to water backing up at the primary drain line and overflowing into the pan. No water was observed in the overflow pan at the time of the inspection, however since the equipment was only operated for a short time during the inspection, It is recommended that the primary drain line and the coil be checked by an air conditioning service company.

Obtain Cost Estimate



North



1st Floor South



2nd Floor South

5: Microbial growth on equipment in attic

Microbial growth was observed on the outside of the air handler and/or evaporator coil casing. This condition can be indicative of a moisture/condensation problem, possibly due to air leaks at the equipment and/or a lack of adequate attic ventilation, or possibly some other problem. Further investigation is recommended with a service company to determine the cause of the microbial growth and to determine if the growth is present inside the equipment and/or air ducts. It is recommended that you obtain a cost estimate for any needed repairs.

Further investigation is recommended

Recommendation: Contact a qualified professional.

AC was serviced; the company found no issues and says the unit is working properly. The equipment was cleaned.

I=Inspected

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NP=Not Present

D=Deficient

I NI NP D



North

C. Duct Systems, Chases, and Vents

Type of ducts: Rigid ducts -

Comments:

UV Light Filter - Operational:

An ultraviolet light filter system was installed in the ductwork at the time of the inspection at one or more of the HVAC systems. The light was on and the system appeared to be functional at the time of the inspection. It is noted that the bulb will need to be replaced periodically.



1: Microbial growth on equipment/ductwork

Microbial growth was observed on the outside of the equipment and/or ductwork. This condition is indicative of a moisture/condensation problem, possibly due to air leaks at the equipment and/or a lack of adequate attic ventilation. Further investigation is recommended with a service company to determine the source of the growth and to determine if the growth is present inside the equipment and/or air ducts. It is recommended that you obtain a cost estimate for any needed repairs.

Further investigation is recommended

Recommendation: Contact a qualified professional.



2: Ducts - Not supported properly

I=Inspected

NI=Not Inspected

NP=Not Present

D=Deficient

I NI NP D

The ducts support straps were observed to be damaged . The ducts should be supported in accordance with the manufacturer’s installation instructions, which typically includes hanging the ducts from the rafters supported by 1 ½ inch straps spaced approximately every four feet. Have a service company make the necessary repairs.

Obtain Cost Estimate



North

3: Register - Water stains

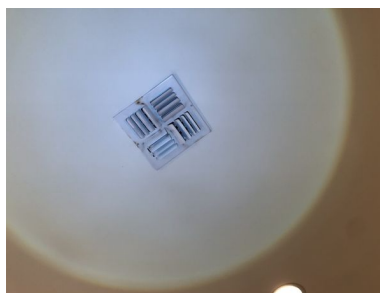
Water stains were observed below the air register on the wall indicating excessive sweating/condensation. Further investigation is recommended.

Obtain Cost Estimate

Recommendation: Contact a qualified professional.



Master Bath Closet



Master Bath



Master Bedroom



Living Room

4: Thermostatically controlled damper system -non fuctional

Thermostatically controlled damper system was not operating properly and did not switch through the zones . Recommended further evaluation with a qualified professional to determine the source of the problem and the necessary repairs.

Recommendation: Contact a qualified professional.

I=Inspected

NI=Not Inspected

NP=Not Present

D=Deficient

I NI NP D



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IV. PLUMBING SYSTEMS

A. Plumbing Supply, Distribution Systems, and Fixtures

Comments:

Location of water meter: The street curb
Location of main water supply valve: East exterior
Static water pressure reading: 57 PSI
Water Supply Material: Copper

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.



East

Static Water Pressure: 55-60 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.



Shower - Built-in Seat:

It has been our experience that plumbers do not always extend the shower pan material from the bottom of the shower, up over the shower seat area. This condition can allow water to migrate through the shower seat tiles into the wall cavity. It could not be determined if the shower seat(s) was properly wrapped with shower pan material at the time of the inspection. It is recommended that you keep the shower(s) well caulked and a sealer be applied to the seat to help prevent water penetration through the seat. If further investigation is desired, it is recommended that a service contractor be contacted.

I=Inspected

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I	NI	NP	D
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1: Hose Bibb - Leaking at valve stem

A leak was observed at a hose bibb around the valve stem.

Obtain Cost Estimate

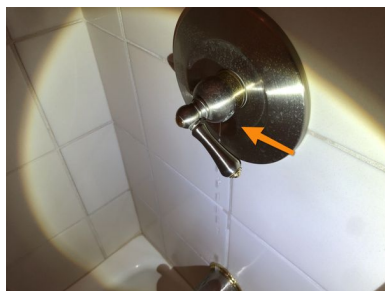


Throughout exterior

2: Faucet - Leak around valve stem

The water valve was leaking around the valve stem at a faucet.

Obtain Cost Estimate



2nd Floor North West Bathroom

3: Tub/Shower - Water leaks past diverter

Both 2nd Floor Bathrooms

The diverter valve was leaking water past the valve when the valve was turned to the shower.

Obtain Cost Estimate

4: Diverter Valve - Nonfunctional

The diverter valve was not switching the water flow from one mode to another and the diverter valve needs to be repaired.

Obtain cost estimate

Recommendation: Contact a qualified professional.

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Master Bath

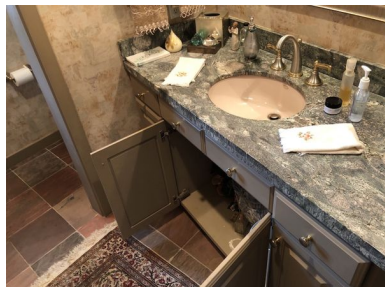
This tub has been replaced during remodel

5: Swivel difficult to turn

The swivel was difficult to turn on the faucet.

Obtain Cost Estimate

Recommendation: Contact a qualified professional.



B. Drains, Wastes, and Vents

Sewer Piping Material: PVC -

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

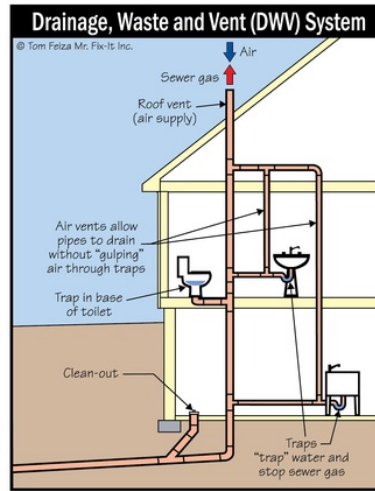
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Sewer Clean Out Present: Behind garage -

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.



C. Water Heating Equipment

Comments:

Energy Source: Natural Gas

Capacity: 75 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>
Attic	BradfordW	75 Gal	2012	Gas

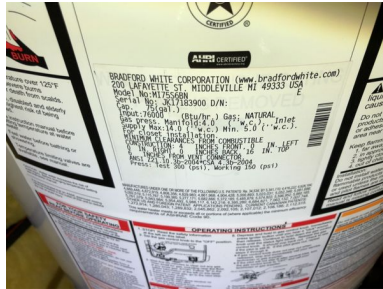
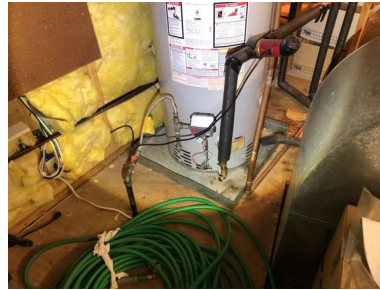
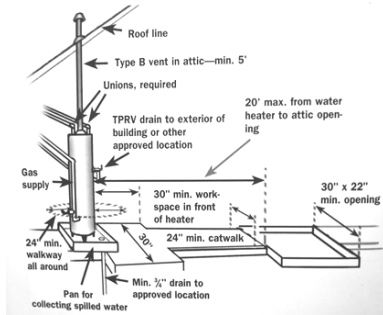
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Water Heater Equipment - Functional:

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.

WATER TEMPERATURE	TIME AND TEMPERATURE RELATIONSHIP TO SERIOUS BURNS	
	Adults (skin thickness of 2.0 mm)	Children (skin thickness of .66 mm)
150°F 65°C	1 second	0.5 second
140°F 60°C	2 seconds	1 second
130°F 55°C	5 seconds	1 second
120°F 50°C	10 seconds	4 seconds
110°F 45°C	1 minute	10 seconds
100°F 40°C	3 minutes	1.5 minute
90°F 35°C	5 minutes	2.5 minutes
100°F 37°C	Safe temperature for bathing	Safe temperature for bathing

For 90 °C = (1°F) - 32(1.8) or (°F - 32) ÷ 1.8 = °C
 Figure P2103.3
 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 reseal 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.

Hot Water Recirculation Pump Present:

A recirculation pump was installed at the piping by the water heater. A recirculation pump keeps hot water circulating through the piping to make hot water more readily available at the plumbing fixtures. The pump was functional at the time of the inspection with no visible signs of needed repairs.

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1: Vent pipe needs repair

Support straps missing -

The vent pipe was not installed properly and is need of repair. It is pointed out that an improperly installed vent pipe is a safety hazard.

Obtain cost estimate

Recommendation: Contact a qualified professional.



2: Fittings - Corroded

The piping at the top of the water heater was severely corroded at the fittings and is in need of repair.

Obtain Cost Estimate



D. Hydro-Massage Therapy Equipment **This is no longer present in the home.**

Comments:

Whirlpool tub - Functional: Pump operational, GFCI present and functional -

The whirlpool tub was operated and appeared to be functioning properly at the time of the inspection.

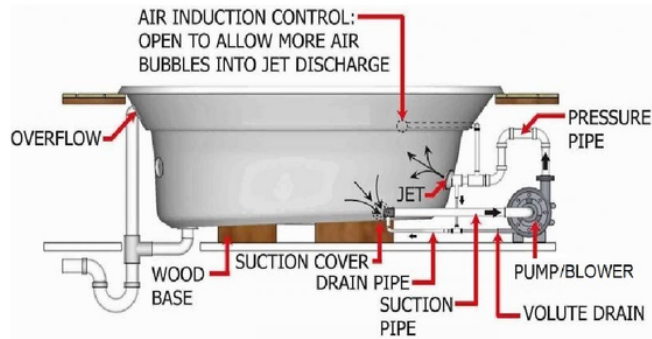
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Tub removed



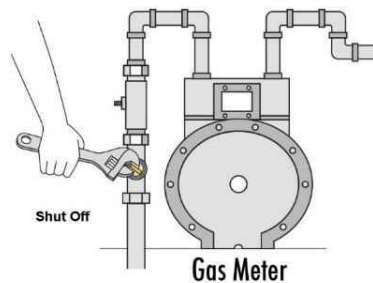
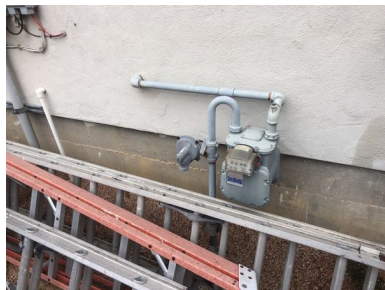
E. Gas Distribution Systems and Gas Appliances

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: CSST - Bonding not visible

Corrugated stainless steel tubing (CSST) was installed at the gas distribution piping system. The CSST piping did not appear to be electrically bonded properly on one or both ends of the piping. CSST piping is required to be electrically bonded to help prevent the piping from incurring damage, possibly leading to a fire, should an electrical arc or lightning strike occur. It is recommended that a plumber be contacted for

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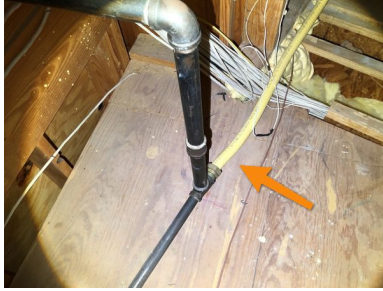
NP=Not Present

D=Deficient

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further investigation and to provide a cost estimate for any needed repairs.

Obtain Cost Estimate



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V. APPLIANCES

A. Dishwashers

Comments:

Functional:

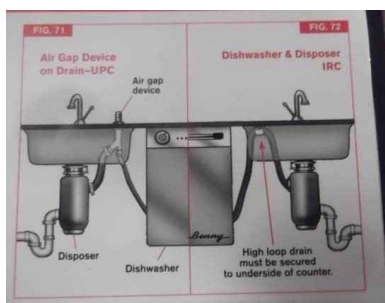
The dishwasher was functioning and responded to the controls. The unit was run through a cycle at the time of the inspection and appeared to be operating properly.



Dishwasher has been replaced in the remodel.

Drain Line Loop Present:

The drain line under the sink was looped up so that the top of the loop was higher than the point where the drain line connected to the disposal. This will help to prevent garbage from running down the drain line into the dishwasher.



B. Food Waste Disposers

Comments:

Functional:

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



C. Range Hood and Exhaust Systems

Comments:

I=Inspected

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D=Deficient

I NI NP D

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.



New range hood in the remodel.

D. Ranges, Cooktops, and Ovens

Comments:

Electric Cooktop - Functional:

The electric cooktop was functional at the time of the inspection and responded to the controls. All of the elements and controls were operational at the time of the inspection.



This was replaced with a gas stove top in the remodel.

1: Ovens - One improperly calibrated

Both oven thermostats were checked, and one was properly calibrated, and the other was not properly calibrated. The thermostats were set at 350 degrees, and the upper lower oven did not heat to within the allowable ± 25 degrees. The ovens were checked with an oven thermometer, and the upper oven was found to heat to 350 degrees, and the lower oven to 300 degrees.

Obtain Cost Estimate



E. Microwave Ovens

Comments:

New microwave in the remodel.

I=Inspected

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NP=Not Present

D=Deficient

I NI NP D

Portable Microwave:

A built-in microwave was not present. A portable microwave was present, however the equipment was not operationally checked at the time of the inspection.

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.

G. Garage Door Operators

Comments:

1: Opener - did not auto-reverse

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 equipped with the infra-red sensing safety device, and the device was operational at the time of the inspection.

Obtain Cost Estimate

2: Sensors too high

The infrared device was located too high on the garage door, and should be located no more than six inches above the floor. It is recommended that the device be lowered.

Obtain Cost Estimate



H. Dryer Exhaust Systems

Comments:

Dryer vent - Dryer present:

The vent was connected to the dryer but was not tested. It is recommended that the vent be checked for an excess of lint and that it be cleaned if necessary. (Information)

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Washer/dryer no longer present.

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 Connections- Electric 4 prong and Gas:

The 240-volt outlet for the electric dryer connections was observed to be the newer style 4-prong outlet rather than the older 3-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 installed. It is pointed out that the gas valve was not operationally checked.

Refrigerator - Functional:

No items requiring repair were visible at the time of the inspection for the built-in refrigerator and freezer sections. The refrigerator and freezer sections were observed to be cooling adequately at the time of the inspection. It is noted that the unit was not dismantled and the interior components were not checked.



Hot Water Dispenser - Functional:

No items requiring repair were visible at the time of the inspection for the operation of the hot water dispenser. The equipment was functional at the time of the inspection.



Ice maker has been repaired.

1: Ice Maker - Nonfunctional

I=Inspected

NI=Not Inspected

NP=Not Present

D=Deficient

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The ice maker was nonfunctional at the time of the inspection. Have a service company find the source of the problem and make any necessary repairs.

Obtain Cost Estimate



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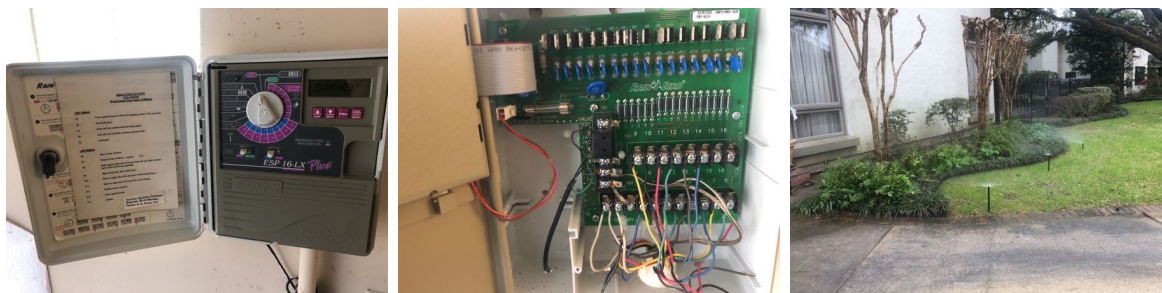
VI. OPTIONAL SYSTEMS

A. Landscape Irrigation (Sprinkler) Systems

Comments:

Sprinkler System: Hunter, Located inside garage, 14 zones -

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.



Irrigation has been repaired.

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.



1: Adjust sprinkler head spray

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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2: Sprinkler head leaning

Zone 8 -

A sprinkler head was significantly leaning and needs to be adjusted.

Obtain cost estimate

Recommendation: Contact a qualified professional.



3: Zone nonfunctional

Zone 14 -

One or more sprinkler zones was nonfunctional and no heads responded to the controls. Further investigation is recommended with a service company.

Obtain cost estimate

Recommendation: Contact a qualified professional.

D. Elevator and Equipment

Elevator - Functional:

The elevator was examined in a cursory manner at the time of the inspection. The unit was observed in operation, and it responded to the controls to move from floor to floor. The lifting equipment was observed in the attic, and it appeared to be operating properly. It is pointed out that our observations are only cursory, and if you desire a comprehensive check of the equipment, then it is recommended that you contact an elevator service company. It is generally recommended that elevators be service once a year.

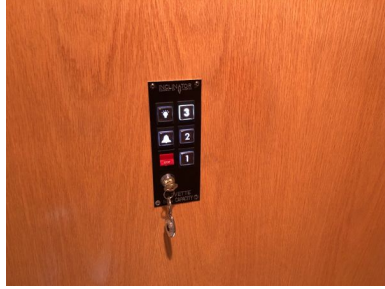
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I=Inspected

NI=Not Inspected

NP=Not Present

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>