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MECHANICAL INSPECTION

13515 St Marys Ln
Houston TX 77079

Inspector
Luis Mireles
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PROPERTY INSPECTION REPORT

Prepared For: Ronald Mays
(Name of Clients)

Concerning: 13515 St Marys Ln, Houston TX 77079
(Address or Other Identification of Inspected Property)

By: Luis Mireles - TREC#22797 07/12/2021 9:00 am
(Name and License Number of Inspector) (Date)

PURPOSE, LIMITATIONS AND INSPECTOR / CLIENT RESPONSIBILITIES

This property inspection report may include an inspection agreement (contract), addenda, and other information related to property conditions. If any item or comment is unclear, you should ask the inspector to clarify the findings. It is important that you carefully read ALL of this information.

This inspection is subject to the rules ("Rules") of the Texas Real Estate Commission ("TREC"), which can be found at www.trec.texas.gov.

The TREC Standards of Practice (Sections 535.227-535.233 of the Rules) are the minimum standards for inspections by TREC-licensed inspectors. An inspection addresses only those components and conditions that are present, visible, and accessible at the time of the inspection. While there may be other parts, components or systems present, only those items specifically noted as being inspected were inspected. The inspector is NOT required to turn on decommissioned equipment, systems, utility services or apply an open flame or light a pilot to operate any appliance. The inspector is NOT required to climb over obstacles, move furnishings or stored items. The inspection report may address issues that are code-based or may refer to a particular code; however, this is NOT a code compliance inspection and does NOT verify compliance with manufacturer's installation instructions. The inspection does NOT imply insurability or warrantability of the structure or its components. Although some safety issues may be addressed in this report, this inspection is NOT a safety/code inspection, and the inspector is NOT required to identify all potential hazards.

In this report, the inspector shall indicate, by checking the appropriate boxes on the form, whether each item was inspected, not inspected, not present or deficient and explain the findings in the corresponding section in the body of the report form. The inspector must check the Deficient (D) box 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 TREC Standards of Practice. General deficiencies include inoperability, material distress, water penetration, damage, deterioration, missing components, and unsuitable installation. Comments may be provided by the inspector whether or not an item is deemed deficient. The inspector is not required to prioritize or emphasize the importance of one deficiency over another.

Some items reported may be considered life-safety upgrades to the property. For more information, refer to Texas Real Estate Consumer Notice Concerning Recognized Hazards or Deficiencies below.

THIS PROPERTY INSPECTION IS NOT A TECHNICALLY EXHAUSTIVE INSPECTION OF THE STRUCTURE, SYSTEMS OR COMPONENTS. This inspection may not reveal all deficiencies. A real estate inspection helps to reduce some of the risk involved in purchasing a home, but it cannot eliminate these risks, nor can the inspection anticipate future events or changes in performance due to changes in use or occupancy. If is recommended that you obtain as much information as is available about this property, including seller's disclosures, previous inspection reports, engineering reports, building/remodeling permits, and reports performed for and by relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should also attempt to determine whether repairs, renovation, remodeling, additions, or other such activities have taken place at this property. It is not the inspector's responsibility to confirm that information obtained from these sources is complete or accurate or that this inspection is consistent with the opinions expressed in previous or future reports.

ITEMS IDENTIFIED IN THE REPORT DO NOT OBLIGATE ANY PARTY TO MAKE REPAIRS OR TAKE OTHER ACTIONS, NOR IS THE PURCHASER REQUIRED TO REQUEST THAT THE SELLER TAKE ANY ACTION. When a deficiency is reported, it is the client's responsibility to obtain further evaluations and/or cost estimates from qualified service professionals. Any such follow-up should take place prior to the expiration of any time limitations such as option periods.

Evaluations by qualified tradesmen may lead to the discovery of additional deficiencies which may involve additional repair costs. Failure to address deficiencies or comments noted in this report may lead to further damage of the structure or systems and add to the original repair costs. The inspector is not required to provide follow-up services to verify that proper repairs have been made.

Property conditions change with time and use. For example, mechanical devices can fail at any time, plumbing gaskets and seals may crack if the appliance or plumbing fixture is not used often, roof leaks can occur at any time regardless of the apparent condition of the roof, and the performance of the structure and the systems may change due to changes in use or occupancy, effects of weather, etc. These changes or repairs made to the structure after the inspection may render information contained herein obsolete or invalid. This report is provided for the specific benefit of the client named above and is based on observations at the time of the inspection. If you did not hire the inspector yourself, reliance on this report may provide incomplete or outdated information. Repairs, professional opinions or additional inspection reports may affect the meaning of the information in this report. It is recommended that you hire a licensed inspector to perform an inspection to meet your specific needs and to provide you with current information concerning this property.

TEXAS REAL ESTATE CONSUMER NOTICE CONCERNING HAZARDS OR DEFICIENCIES

Each year, Texans sustain property damage and are injured by accidents in the home. While some accidents may not be avoidable, many other accidents, injuries, and deaths may be avoided through the identification and repair of certain hazardous conditions. Examples of such hazards include:

- malfunctioning, improperly installed, or missing ground fault circuit protection (GFCI) devices for electrical receptacles in garages, bathrooms, kitchens, and exterior areas;
- malfunctioning arc fault protection (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).

To ensure that consumers are informed of hazards such as these, the Texas Real Estate Commission (TREC) has adopted Standards of Practice requiring licensed inspectors to report these conditions as "Deficient" when performing an inspection for a buyer or seller, if they can be reasonably determined.

These conditions may not have violated building codes or common practices at the time of the construction of the home, or they may have been "grandfathered" because they were present prior to the adoption of codes prohibiting such conditions. While the TREC Standards of Practice do not require inspectors to perform a code compliance inspection, TREC considers the potential for injury or property loss from the hazards addressed in the Standards of Practice to be significant enough to warrant this notice.

Contract forms developed by TREC for use by its real estate license holders also inform the buyer of the right to have the home inspected and can provide an option clause permitting the buyer to terminate the contract within a specified time. Neither the Standards of Practice nor the TREC contract forms require a seller to remedy conditions revealed by an inspection. The decision to correct a hazard or any deficiency identified in an inspection report is left to the parties to the contract for the sale or purchase of the home.

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, led paint, destructive insects or pest, security items, water or air treatment systems, etc. This inspection is limited to those components which were visible and 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, 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 1967.
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 :

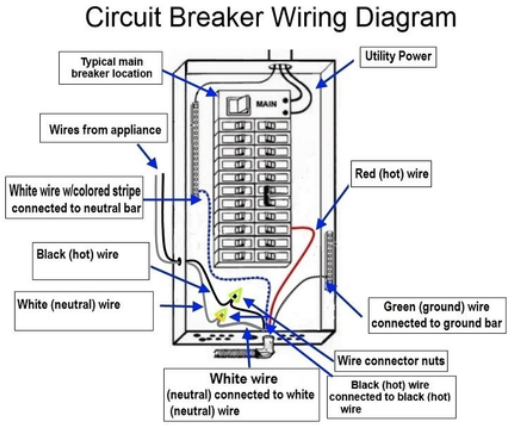
The electrical service is provided by a 120/240 volt, single-phase, 200-ampere overhead service to an electric meter located at the rear side of the garage.

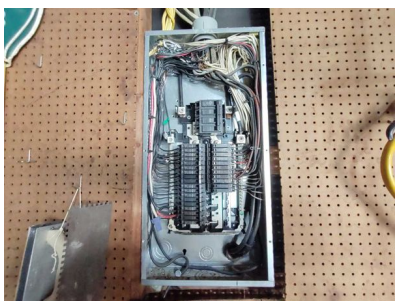
Electrical Wiring Information

Service Wires	Branch Circuit Wires	Grounded or Ungrounded System
Appear to be 2/0 copper	Copper and Aluminum	Grounded and Ungrounded

Breaker Panel Information

Location	Manufacturer	Rating - Amps
Garage	G. E.	200-amps





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.

Wiring - 240-volt aluminum circuits:
The electrical wiring for the property was a combination of copper and aluminum. The 120-volt outlet and lighting circuits were observed to be copper and the 240-volt appliance and large equipment circuits were aluminum. It is pointed out that, while the use of aluminum branch circuit wiring is no longer practiced, aluminum 240-volt circuits are not considered a problematic condition.

1: Breakers - Not Labeled

All of the breakers were not labeled to identify the circuits they were protecting. It is recommended that an electrician be contacted to specifically identify each circuit.

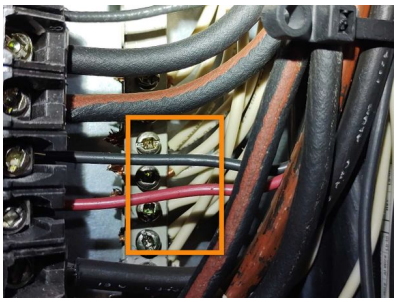
Obtain Cost Estimate

Done

2: Neutral wires double lugged

The neutral wires were improperly double lugged in the grounding buses inside the breaker panel. Each wire should be connected to its own lug.

Obtain Cost Estimate

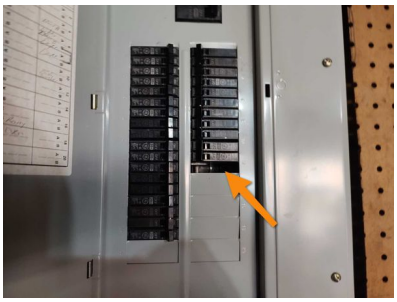


Repaired

3: Cover Plate - Missing knock out clip

The dead front cover plate was missing one or more knock-out clips.

Obtain Cost Estimate

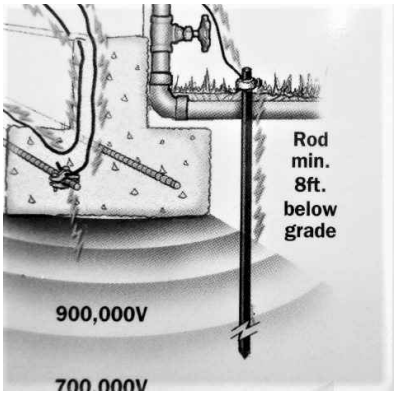


Repaired

4: Ground Rod - Not flush with grading

The ground rod was sticking out of the ground a few inches, and, since ground rods are typically 8 feet long and all 8 feet of the rod are required to be in the ground, it is recommended that the ground rod be pounded down flush with the top of the ground. The clamp on the rod should be an acorn clamp is approved for direct burial in the ground.

Obtain Cost Estimate



Repaired

5: Breakers Oversized - A/C condensing unit

Both units

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

Repaired

6: Breaker Panel - No bushings

A hole in the panel where a circuit wire enters the panel was a missing bushing.

Obtain Cost Estimate

Repaired

7: Service Conductor - Exposed wire

An exposed "hot" wire was observed on the service entrance conductors and needs to be properly taped.

Obtain Cost Estimate

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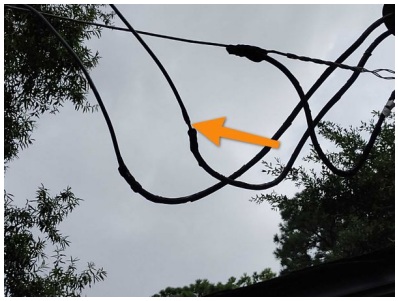
I	NI	NP	D

Repaired by Center Point Energy

☒ ☐ ☐ ☒ **B. Branch Circuits, Connected Devices, and Fixtures**

Comments:
Type of Wiring: Copper and Aluminum - Non-metallic sheathed

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.

1: Cover Plate - Damaged/Missing
Master bedroom, throughout 2nd floor norheast bedroom, garage,
A missing or damaged cover plate was observed.
Obtain Cost Estimate

Repaired

2: GFCIs Not present throughout property
It was observed that all of the required outlet were not equipped with Ground Fault Circuit Interrupt devices as specified by the National Electrical Code. Have an electrician install the devices at the locations specified in the National Electric Code, including at; all of the kitchen counter tops, outlets below the kitchen sink, the bathrooms, all counter tops with sinks, the garages, and the exterior.
Obtain Cost Estimate

Repaired

3: Outlets - Ungrounded at several locations
Throughout 2nd floor northeast bedroom, 2nd floor northeast storage space, front exterior,
Several three prong outlets that were not grounded properly and need to be repaired were observed. It is recommended that an electrician be contacted, and the necessary repairs made to the outlets.
Obtain Cost Estimate

Repaired

4: Outlet - Reversed polarity
Garage
An outlet in which the hot and neutral (black and white) wires were reversed, causing reversed polarity.
Obtain Cost Estimate

Repaired

5: Exterior Outlet - No water tight cover

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I	NI	NP	D

Front exterior,

An exterior outlet that was not protected by a water tight cover plate was observed.

Obtain cost estimate

Repaired

6: Outlet - Missing

Along kitchen countertops, powder room,

A 120-volt outlet was not provided at a currently required location.

Obtain Cost Estimate

Not required by code in 1967 construction. Cost prohibitive

7: Switch - Missing cover plate

2nd Floor northeast bedroom,

The cover plate was missing on the switch.

Obtain Cost Estimate

Repaired

8: Ceiling Fan - Unbalanced

2nd Floor northeast bedroom, 2nd floor southeast bedroom,

The ceiling fan was unbalanced and needs to be adjusted.

Obtain Cost Estimate

Repaired

New ceiling fan installed

9: Ceiling Fan - Noisy

Master bedroom,

The ceiling fan was noisy and needs to be replaced.

Obtain Cost Estimate

Repaired

New ceiling fan installed

10: Conduit Missing

Kitchen sink,

A portion of the electrical wiring was exposed where electrical conduit was not properly or not completely installed.

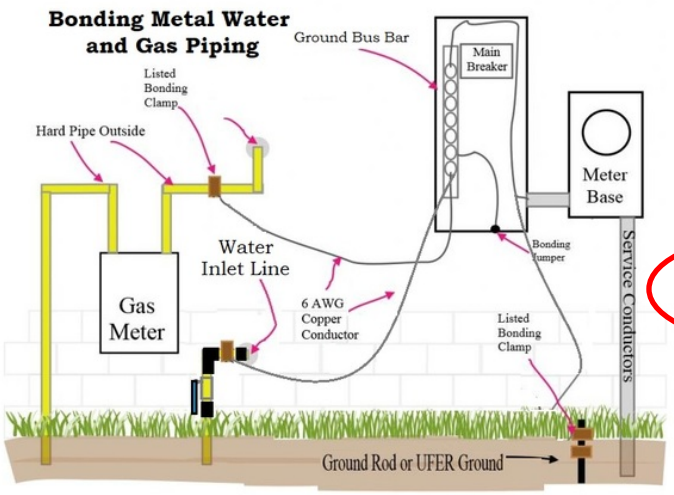
Obtain Cost Estimate

Repaired

11: Gas Piping - Bonding not visible

The location where the gas supply piping was bonded back to the electrical ground system was 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



Repaired

12: 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

7 battery powered individual smoke detectors installed.

13: Carbon Monoxide Detectors - Currect 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

2 individual carbon monoxide detectors installed

14: 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.

Sprinkler system not functional

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I	NI	NP	D

III. HEATING, VENTILATION & AIR CONDITIONING SYSTEMS

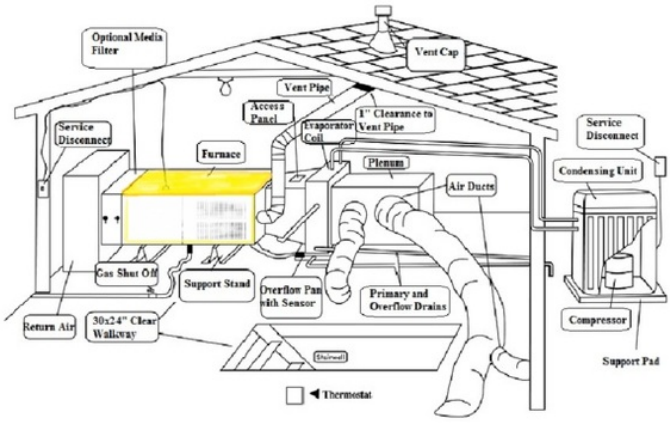
☒ ☐ ☐ ☒ **A. Heating Equipment**

Comments:
Type of System: Forced Air
Energy Sources: natural gas

Gas Furnace Description :

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

ZONE	BRAND	BTU	DATE	LOCATION
House	Carrier	125k	1989	attic



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 and the equipment appeared to be heating the air adequately.

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.

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.

Limited visual inspection:
It is pointed out that our inspection of the air conditioning and heating system(s) is a limited, visual inspection 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 necessarily a cursory inspection, 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), 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.

1: Vent Pipe - Inadequate Clearance

Double wall vent pipes require a minimum of one-inch clearance to any material that is combustible. The vent pipe was located too close to a combustible material, which is a fire hazard.
Obtain Cost Estimate

This was the original configuration from 1967. We cannot justify demolition and construction to change it now.

2: Attic Decking - Inadequate to equipment

The attic did not have adequate service decking to and/or in front of the equipment. The platform decking should be a continuous deck that is a minimum of 30 inches wide, that extends along all sides of the appliance where access is required. In addition, the decking should be free from any obstructions, such as gas lines, electrical wiring, duct work, framing members, etc.
Obtain Cost Estimate
M1305.1.3

This was the original configuration from 1967. We cannot justify demolition and construction to change it now.

3: Heat Exchanger - Limited Life

The furnace is constructed such that the unit must be dismantled in order to view the entire heat exchanger. The unit was not dismantled, and the heat exchanger was not able to be viewed for evidences of a crack. If further investigations are desired, then it is recommended that a service company be contacted to dismantle the unit. Due to the age and/or condition of the furnace, it is recommended that a service company be contacted to dismantle the furnace and view the heat exchanger for cracks.
Obtain Cost Estimate

The heater is inspected periodically before cold weather

4: One air handler for two cooling systems

It was observed that two cooling systems were installed together for only one air handler. This setup is not a conventional setup and further investigation is recommended with an HVAC service company.

Further investigation is recommended

This was the original configuration from 1967. We cannot justify demolition and construction to change it now.

☒ ☐ ☐ ☒ **B. Cooling Equipment**
Comments:

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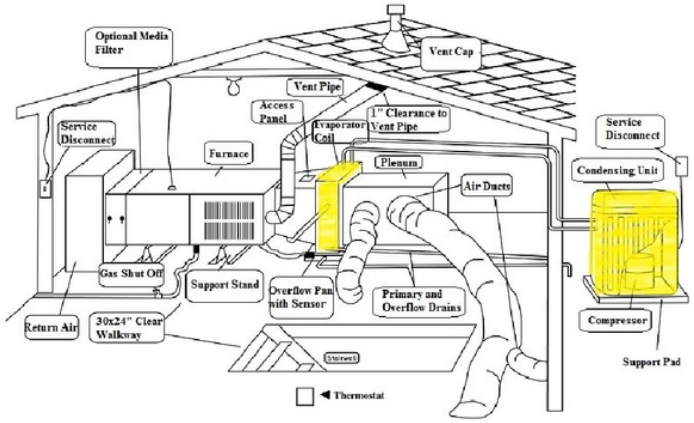
I	NI	NP	D

Type of System: Split system

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
Downstairs	Amer.Stan.	3T/2016	3T/2016	20
Upstairs	Ruud	2T/2007	2T/2008	16



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 were operating.

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.

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 a prudent to have the equipment thoroughly checked by a licensed air conditioning service company and further investigation is recommended.

2nd Floor equipment

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: R22 Refrigerant

Ruud unit

The condensing unit label indicate that the equipment operates with the old R-22 refrigerant, rather than the currently required R410A refrigerant. R-22 is no longer the current standard in the industry and will be more expensive to refill when servicing. It is recommended that a service company be contacted for further investigation.

Further investigation is recommended

Cooling equipment has been replaced or repaired as required. The refrigerant has been maintained without issues

2: Coil - Leaking conditioned air

The air conditioning system was leaking conditioned outside of the system at indoor coil. The coil need to be properly sealed.

Obtain Cost Estimate

Repaired

3: 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

Checked and serviced

4: Overflow Pan - Debris in pan

Insulation and/or debris was observed in the overflow pan. The pan needs to be cleaned out to prevent clogging of the drain line.

Obtain Cost Estimate

Checked and serviced


5: Overflow Pan - Drain not properly sloped

The overflow pan drain was not sloped properly to allow water to flow properly towards the exterior.

Obtain Cost Estimate

Pan has been elevated to assist draining. Pan has been tested and water drained.

6: Primary Drain Line - Terminated outside

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

This is the original condition. The foundation has been monitored and remains within tolerance.

☒ ☐ ☐ ☒ **C. Duct System, Chases, and Vents**

Comments:

Type: flexible and rigid ductwork

Duct Work - Acceptable:

The ductwork appeared to be in good condition at the time of the inspection and air was blowing out of each of the registers. The airflow may need to be adjusted in each room to meet your specific needs.

Return Air - Acceptable :

The return air system in the house had no visible items that were in need of repair and appeared to be performing as intended at the time of the inspection.

Ductwork - Original rigid ducts:

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

I	NI	NP	D

We observed ductwork that appeared to be the original installation ductwork. It is recommended that further investigation be done with the homeowner and/or a service company to determine if the ductwork has been cleaned recently, and if not, then it is recommended that you have the air ducts cleaned and serviced.

Further investigation is recommended

1: Ducts - Crushed/Pinched/Kinked

One or more of the air ducts were crushed/pinched/kinked causing a restriction in the air flow through the system. The ducts need to be adjusted or repaired.

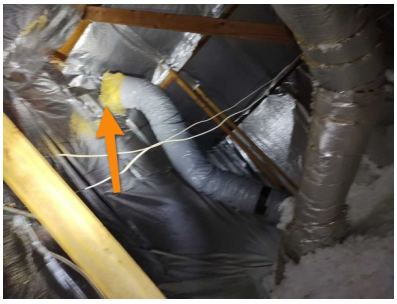
Obtain Cost Estimate

Ductwork has been inspected and repaired as the A/C technicisn recommended.

2: Ducts - Sheating/Insulation damaged

The sheathing and/or insulation around the air ducts is damaged/missing, and the damaged duct work needs to be repaired or replaced.

Obtain Cost Estimate



Ductwork has been inspected and repaired as the A/C technicisn recommended.

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

I	NI	NP	D

IV. PLUMBING SYSTEMS

☒ ☐ ☐ ☒ **A. Plumbing Supply, Distribution Systems, and Fixtures**

Comments:
Location of water meter: front yard
Location of main water supply valve: front exterior
Static water pressure reading: 62 PSI
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.

Shut Off Valve - Exterior location:

The shut-off valve for the main inlet water line was located at the exterior of the house.

Front

Original location from 1967

Static Water Pressure :
The static water pressure to the house at the time of the inspection was measured with a pressure gauge at the hose bibb nearest the shut off valve, and the static pressure was observed to be 62 PSI.

Limited visibility of plumbing lines: At attic -
Visibility of the plumbing lines was very limited at the time of the inspection and some portions of the plumbing that are typically accessible were concealed. If further investigation is desired, it is recommended that a service company be contacted.

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.

Tubs - Functional:
No items requiring repair were visible for the tub at each bathroom. The tubs were partially filled with water and they were observed to be operating adequately at the time of the inspection.

1: 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

Homeowner has acquired the vacuum breakers, they can be installed at anytime.

2: Water Stains/Damage/Microbial Growth

2nd floor southwest bedroom closet

Water damage/stains were observed indicating a current or previous leak. It is pointed out that a microbial growth was observed in the affected area apparently due to an extended period of elevated moisture levels. The source of the condition was not determined, with certainty, 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

Water source not found, cleaned treated and painted. This is possibly from the time right before the repipe.

3: Water Stains/Damage Observed

Living room, upstairs hall closet, 2nd floor hallway,

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. 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

Water source not found, cleaned treated and painted.

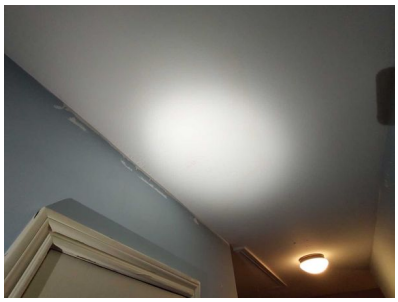
I = Inspected NI = Not Inspected NP = Not Present D = Deficient

I	NI	NP	D







4: Water Pressure Reduced

The water pressure in the house reduced noticeably when more than one plumbing fixture was operated at the same time. Further investigation is recommended with a plumber to determine the reason for the condition and to provide a cost estimate for any needed repairs.

Obtain Cost Estimate

Were not able to duplicate. It is normal for pressure drop as multiple fixtures are opened.

5: Water Meter - Cover damaged/missing

The cover was damaged/missing at the water meter. This is a hazard to foot traffic and needs to be corrected.

Obtain Cost Estimate

Repaired by city

6: Sink Drains Slow

Powder room, master bathroom sinks,

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

Repaired

7: Toilet - Loose on floor

Master bathroom,

The toilet was loose on the floor and needs to be reset and secured to the floor.

Obtain Cost Estimate

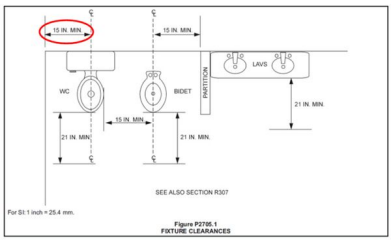
Repaired

8: Toilet - Improper clearance

Master bathroom,

The toilet was located too close to the adjacent tub or cabinet. A properly installed toilet requires a minimum of 15 inches of clearance. Further investigation is recommended with a plumber to determine a solution for the condition and to provide cost estimates for any needed repairs.

Obtain Cost Estimate



This was the original configuration from 1967. We cannot justify demolition and construction to change it now.

9: Toilet - Seat loose or damaged

Powder room, 2nd floor southwest bathroom ,

The toilet seat was loose/damaged on the toilet and needs to be repaired.

Obtain Cost Estimate

Repaired

10: Shower - Caulking needed

Master bathroom,

The shower needs to be caulked.

Obtain Cost Estimate

Repaired

11: Shower/Tub - Caulk valves

Master bathroom, 2nd floor hall bathroom, 2nd floor southwest bathroom,

The tub and/or shower valves and/or faucet needs to be caulked to prevent water from entering the wall cavity behind the valves/faucet.

Obtain Cost Estimate

Repaired

12: Shower - Drains cover missing

Master bathroom,

The shower drain cover was missing and needs to be replaced.

Obtain Cost Estimate

Repaired

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

I	NI	NP	D


13: Shower Pan - Evidence of leak

Master bathroom,

Evidence of a shower pan leak was observed where materials around the base of the shower were stained/damaged. it is recommended that a plumber be contacted for further investigation and to provide a cost estimate for any needed repairs. A shower pan leak test should be performed.

Obtain Cost Estimate

A shower pan leak test was performed with no sign of a leak see Strutton Plumbing






☒ ☐ ☐ ☒ **B. Drains, Wastes, & Vents**

Comments:

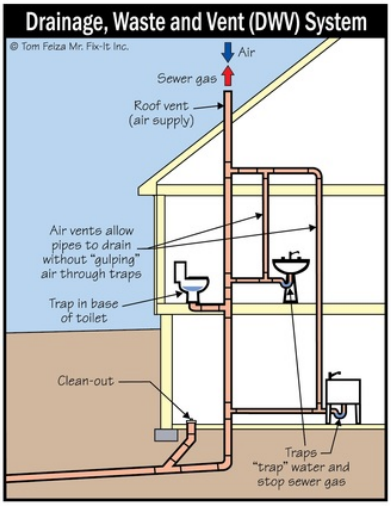
Sewer Piping Material:

Sewer System - Functional:

No items requiring repair were visible for the operation of the drain system at the time of the inspection. 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.

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

I	NI	NP	D



Sewer Clean Out - Not visible:
A clean out for the sewer line was not visible, and it is recommended that you check with the owner for the location. This is needed for access to the sewer line should the line become clogged and need to have a snake run down the line to clean it out.

Sewer Piping - Cast iron suspected:
It appears that some or all of the active sewer piping is the original cast iron piping. Further investigation is recommended with the homeowner to determine if they are aware of any repairs/replacement to the sewer system. Due to the corrosive nature of the cast iron material, it can be anticipated that the cast iron will rust out at some point and will then need to be replaced with PVC sewer piping. It is recommended that a plumber perform an in depth sewer inspection, including a camera test and/or a hydro-static test, to determine the condition of the piping and to determine if any leaks are present.
Further investigation is recommended

1: Vent pipe missing
Kitchen island,
A means of venting sewer gases was not observed at the kitchen island sink.
Obtain Cost Estimate

Plumber advised us that it was not practical. This sink has always drained with no issues.

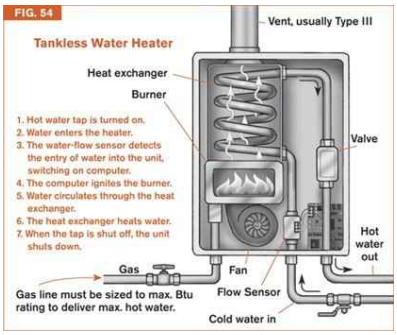
☒ ☐ ☐ ☒ **C. Water Heating Equipment**
Comments:
Energy Source: natural gas
Capacity: 301-gallons per hour

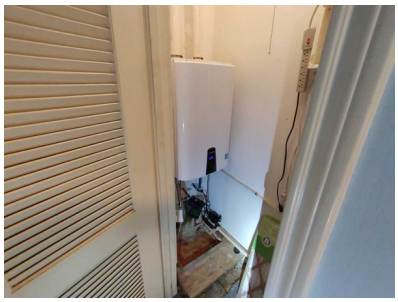
Tankless Water Heater description:

The hot water for the property was provided by one or more tankless water heaters. The water heater is

as followings:

Location	Brand	Capacity	Age	Energy Type
Upstairs hallway	Navien	301-gph	2014	gas

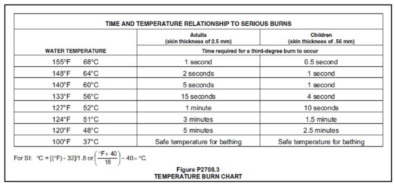




Water Heater Equipment - Functional:
The water heater equipment was functional at the time of the inspection and providing hot water to the applicable plumbing fixtures.

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 at the kitchen sink was 114 degrees.



TIME AND TEMPERATURE RELATIONSHIP TO SERIOUS BURNS

WATER TEMPERATURE	Adults (skin thickness of 2.5 mm)	Children (skin thickness of .56 mm)
	Time required for a third-degree burn to occur	
155°F 68°C	1 second	0.5 second
148°F 64°C	2 seconds	1 second
140°F 60°C	5 seconds	1 second
133°F 56°C	15 seconds	4 second
127°F 52°C	1 minute	10 seconds
124°F 51°C	3 minutes	1.5 minute
120°F 48°C	5 minutes	2.5 minutes
100°F 37°C	Safe temperature for bathing	Safe temperature for bathing

For SI: °C = [(°F) - 32]/1.8 or $\left(\frac{°F - 40}{1.8}\right) - 40 =$ °C.

Figure P2708.3
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.

1: Overflow Pan - Rust

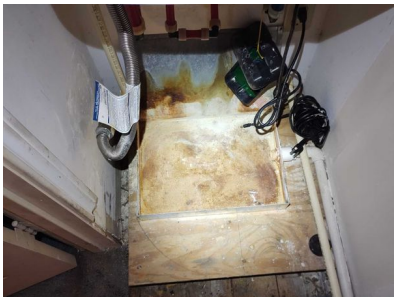
Rust was observed in the overflow pan under the water heater, indicating water was present in the pan at one time. No water was present and no leaks were observed at the time of the inspection. Further investigation is recommended with a plumber to determine the source of the previous moisture.

Further Investigation Recommended

Repaired

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

I	NI	NP	D



☐ ☐ ☒ ☐ **D. Hydro-Massage Therapy Equipment**

Comments:

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

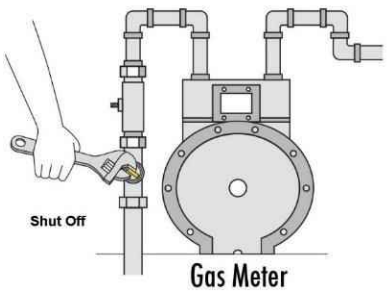
☒ ☐ ☐ ☒ **E. Gas Supply System**

Comments:

Gas Meter Location :

The main gas shut off valve was located at the inlet side of the gas service meter.

Behind garage



Gas System Inspection :

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. 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, it is recommended that a plumber be contacted.

1: Sediment Trap - Missing

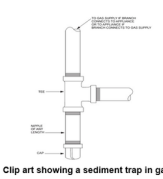
Water heater, furnace,

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

Homeowner's plumber does not recommend


HEI file photo showing sediment trap


Clip art showing a sediment trap in gas line

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I	NI	NP	D

V. APPLIANCES

☒ ☐ ☐ ☐ **A. Dishwashers**

Comments:

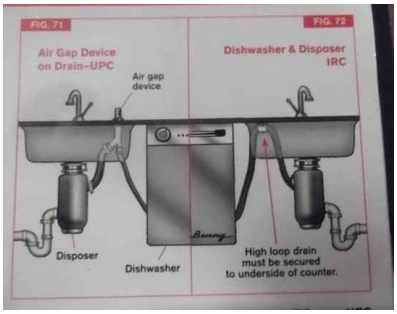
Functional :

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.

Both units

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:

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.

☒ ☐ ☐ ☒ **D. Ranges, Cooktops, and Ovens**

Comments:

Ovens - Left/Right calibrated properly:

Both oven thermostats were checked and were properly calibrated. The thermostats were set at 350 degrees, and the ovens heated to within the allowable ±25 degrees. The ovens were checked with an oven thermometer and found to heat to 335 degrees for the left oven, and 350 degrees for the right oven.

1: Electronic Igniter - burner nonfunctional

The electronic igniter for the front left burner was non-functional and needs to be repaired/replaced.
Obtain Cost Estimate

Gas delivery and igniter cleaned and serviced but it was determined it is not repairable. The cooktop functions as intended except for the igniters.

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

I	NI	NP	D

☒ ☐ ☐ ☐ **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.

1: Exhaust Fan - Nonfunctional

2nd Floor hall bathroom,

The exhaust fan was nonfunctional.

Obtain Cost Estimate

Repaired

2: Exhaust Fan - Not present

2nd Floor Southwest 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

Homeowner has acquired a fan that can be installed at any time.

☐ ☐ ☒ ☐ **G. Garage Door Operators**

Comments:

Not Present :

A garage door opener was not present at the time of the inspection.

☒ ☐ ☐ ☐ **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.

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)

Vent - Check for lint:

It is recommended that the vent be checked periodically for an excess of lint and that it be cleaned if necessary. (Information)

☒ ☐ ☐ ☒ **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

All water and electrical connections are visible. A natural gas source is available

Washer/Dryer Connections - Not visible :

No access was provided behind the washer and dryer and the area was not visible for inspection. Further investigation is recommended. It is also recommended that you check with the owner to determine which dryer connection options are available.

1: Ice Maker - Nonfunctional

It was disclosed to us that the ice maker for the built in refrigerator/freezer 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

Repaired and replaced

2: Ice dispenser clogged

The ice dispenser for the built in refrigerator was clogged at the time of the inspection. It was also disclosed to us that the water dispenser was non-functional.

Obtain cost estimate

Repaired and replaced

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

I	NI	NP	D

VI. OPTIONAL SYSTEMS

☐ ☒ ☐ ☒ **A. Landscape Irrigation (Sprinkler) Systems**

Comments:

1: Sprinkler system non-functional, not checked

A sprinkler system was present, however it was disclosed to us that the sprinkler system has been out of service for a long period of time and the equipment was not operationally checked by this firm. Further investigation is recommended with a service company.

Further investigation is recommended

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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 for Further Investigation, Obtain cost estimate, and/or Contact the builder before your option period expires. It is pointed out that other related and/or underlying conditions may be present, and which may not be apparent without further investigation.

As an additional service, we strongly 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

Strutton Plumbing Service, LLC

P.O. Box 934
Bellaire, TX 77402-0934
Phone: 713-774-9197

Invoice

Date	Invoice #
7/28/2021	32451

Bill To	Job Address
Steve Mays 13515 St. Marys Lane Houston, TX 77079	

Invoices are due upon receipt

Work Order	Terms	Work Date	Crew
78411	Due on receipt	7/28/2021	GHS

Description	Units	Price	Amount
Upstairs master bath tub leaking, tightened overflow cover to gasket.		187.50	187.50

All balances over 30 days will be charged a service fee of 1.5% per month (18% annually).

Total $187.50

This firm operates under the licensure of the
Texas State Board of Plumbing Examiners
P.O. Box 4200 Austin, TX 78765
(512) 936-5200
Michael Daren Strutton
MPL 14967

Payments/Credits	$0.00
Balance Due	$187.50

Strutton Plumbing Service, LLC
P.O. Box 934
Bellaire, TX 77402-0934
Phone: 713-774-9197

Invoice

Date	Invoice #
10/20/2021	32755

Bill To	Job Address
Steve Mays 13515 St. Marys Lane Houston, TX 77079	

Invoices are due upon receipt

Work Order	Terms	Work Date	Crew
78965	Due on receipt	9/21/2021	MM

Description	Units	Price	Amount
Installed owner furnished trim kit to three handle tub valves. Reset tankless and blew out system. Performed a shower pan test in master bathroom shower for approximately three hours.		950.00	950.00

Celebrating 50 years of business, thank you for your support!

All balances over 30 days will be charged a service fee of 1.5% per month (18% annually).

Total $950.00

This firm operates under the licensure of the
Texas State Board of Plumbing Examiners
P.O. Box 4200 Austin, TX 78765
(512) 936-5200
Michael Daren Strutton
MPL 14967

Payments/Credits	$0.00
Balance Due	$950.00

CLEAN TEAM PLUMBING
cleaner faster better

25003 Pitkin Road, #A200
Spring, TX 77386
www.cleanteamplumbing.com

Receipt

April 30, 2015

Ronald Mays
13515 St. Marys Lane
Houston, Texas 77079
Email: rmays383@yahoo.com

Payment received by check in the amount of $16,400.00 for re-piping service and installation of a NPE-240A tankless water heater provided by Clean Team Plumbing.

Thank you for your business!

Bradley K. Mallory MPL-40168

CLEAN TEAM PLUMBING
cleaner faster better

25003 Pitkin Road, #A200
Spring, TX 77386
www.cleanteamplumbing.com

WARRANTY

Date: April 30, 2015

Client Name: Ronald Mays
Service Address: 13515 St. Marys Lane
Houston, Texas 77079
Phone: 832-758-7608
Email: rmays383@yahoo.com

This warranty is for the re-piping of both hot and cold water lines using Uponor Pex piping throughout the home to each existing plumbing fixture located at the above listed address. This re-pipe will consist of 1" mains with ½" and ¾" branch lines and drywall.

This warranty includes a 25-year manufacturer's warranty through Uponor and a 25-year warranty through Clean Team Plumbing on parts and labor.

All water heater installations come complete with an 10-year warranty on parts & labor through Clean Team Plumbing.

Please contact Clean Team Plumbing at 888-694-4543 if you have any questions concerning this warranty.

Thank you for your business!
Bradley K. Mallory-MPL40168