HEDDERMAN SERVICES
281-355-9911
office@hedderman.com
https://hedderman.com/

MECHANICAL INSPECTION

11010 Wickersham Ln
Houston TX 77042

Jesus Alvarez & Irma Alvarez
MARCH 4, 2021

Inspector
Alex Lopez
TREC #23307
281-355-9911
office@hedderman.com

PROPERTY INSPECTION REPORT

Prepared For: Jesus Alvarez & Irma Alvarez
(Name of Client)

Concerning: 11010 Wickersham Ln, Houston TX 77042
(Address or Other Identification of Inspected Property)

By: Alex Lopez - TREC #23307 03/04/2021 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 1971.
Orientation - House Facing South:
For the purpose of the inspection, North is considered to be the rear of the house.

II. ELECTRICAL SYSTEMS

☒ ☐ ☐ ☒ **A. Service Entrance and Panels**

Comments:

Electrical System Description :

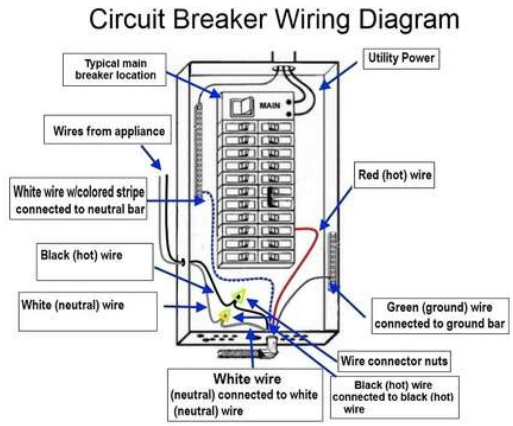
The electrical service is provided by a underground 120/240 volt, single-phase, 150-ampere service to an electric meter located at the north side of the house.

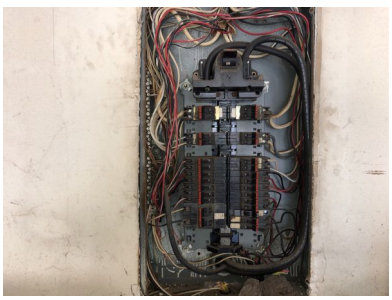
Electrical Wiring Information

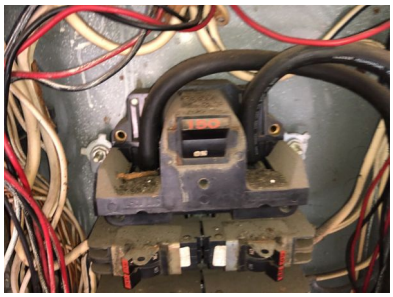
Service Wires	Branch Circuit Wires	Grounded or Ungrounded System
#2/0 Aluminum	Copper	Grounded

Breaker Panel Information

Location	Manufacturer	Rating
Garage	Federal Pacific	Not labeled







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.

1: Manufacturer's data sticker

The manufacturer's data sticker was missing or illegible and we could not determine the rating of the breaker panel. It is recommended that an electrician be contacted to evaluate determine if the panel is adequately rated for this application.

Further investigation is recommended

2: Federal Pacific Breaker Panel

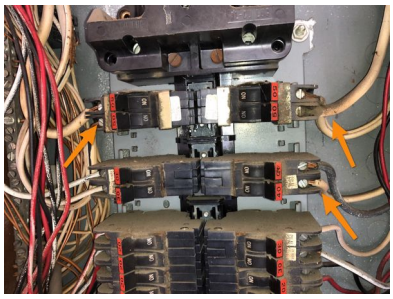
It is a general recommendation that all circuit breakers be tripped off and on at least once a year to ensure that they are still physically able to trip off. Occasionally, the points on a breaker will fuse to the main bus in the panel, preventing the breaker from tripping off, even if there is an overload on the circuit. If this condition occurs, it can be a fire hazard. This is particularly true on Federal Pacific Electric breaker panels, as they are well known in the industry for having this problem. It is recommended that an electrician be contacted to provide a cost estimate to replace the breaker panel, as Federal Pacific has lost their UL Listing, and are no longer manufactured in the USA. It is recommedned that you research Federal Pacific breaker panels online for further documentation regarding these conditions.

Obtain Cost Estimate

3: Power Wire - White insulation

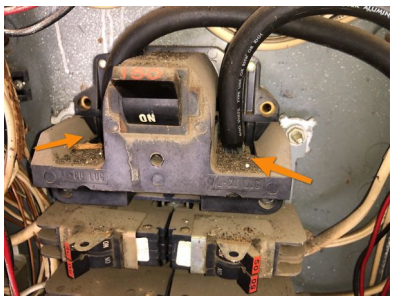
We observed one or more white wires that were used as a power wires, and were connected to a circuit breaker. Typically, the white wires are the grounded/neutral conductors, and if they are used as a power conductor, they must be permanently marked or wrapped with black or red tape to identify them

as a “hot” ungrounded conductor.
Obtain Cost Estimate
E3407.3

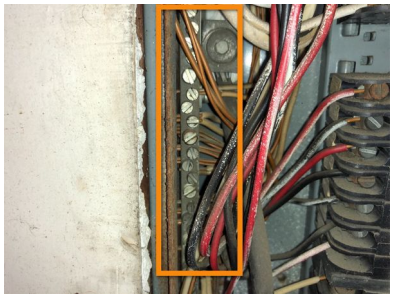


4: Breakers - Not Labeled
All of the breakers were not labeled to identify the circuits they were protecting. It is recommended that an electrician be contacted to specifically identify each circuit.
Obtain Cost Estimate

5: No Antioxidation Solution
The aluminum conductors were not coated with an anti-oxidation solution. This can allow the conductor connections to oxidize, which can be a fire hazard.
Obtain cost estimate



6: 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



☒ ☐ ☐ ☒ **B. Branch Circuits, Connected Devices, and Fixtures**
Comments:
Type of Wiring: Copper - Non-metallic sheathed

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.

1: Conduit damaged/rusted

The electrical conduit was damaged and/or rusted and the wiring inside was exposed. The conduit needs to be repaired.
Obtain Cost Estimate


@ meter

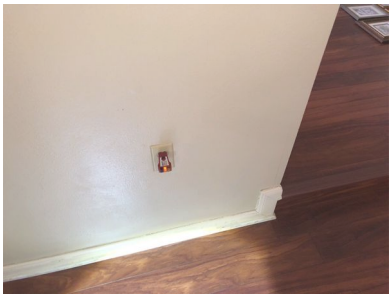
2: GFCIs Not present throughout property

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

3: Outlets - Ungrounded at several locations

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


Garage


Living Room


Kitchen

4: Outlet - Too far from bathroom sink

1st Floor 1/2 Bath

We observed a receptacle outlet that was located more than 36 inches from the outside edge of the lavatory basin in the master bathroom. Following is the section of the International Residential Code and National Electrical Code that relates to the spacing of receptacle outlets at bathroom sinks.
Obtain Cost Estimate

5: Light Fixture - Nonfunctional

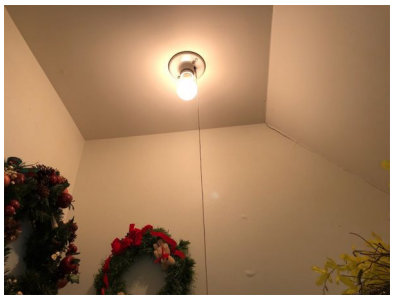
A light fixture that was non-functional when the switch was on was observed. The problem may be a burned out bulb, defective light fixture, or defective switch.
Further investigation is recommended.



2nd Floor Hallway

6: Light Fixture - Closet missing cover

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


Throughout house

7: Light Fixture - Hanging by wires

A light fixture was hanging by its wires.
Obtain Cost Estimate


North exterior


2nd Floor Hallway

8: Conduit Missing

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

@pool equipment

9: Smoke and Carbon Monoxide Detectors

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

10: 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

11: 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

12: 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.

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

I	NI	NP	D

III. HEATING, VENTILATION & AIR CONDITIONING SYSTEMS

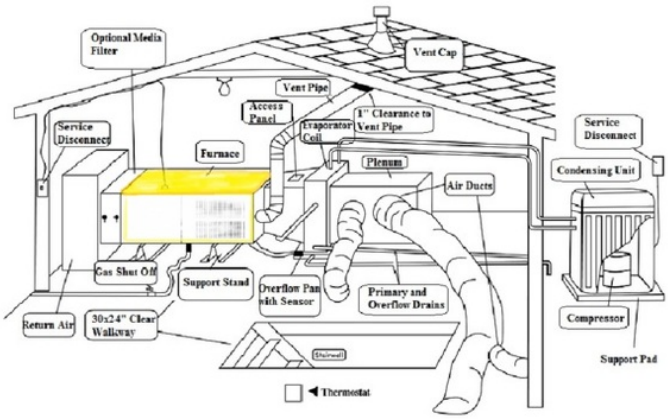
☒ ☐ ☐ ☒ **A. Heating Equipment**

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
1st Floor	Carrier	88K	2013	Attic
2nd Floor	Goodman	70K	2011	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.


2nd Floor


1st Floor unit

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.

2nd Floor 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.

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.

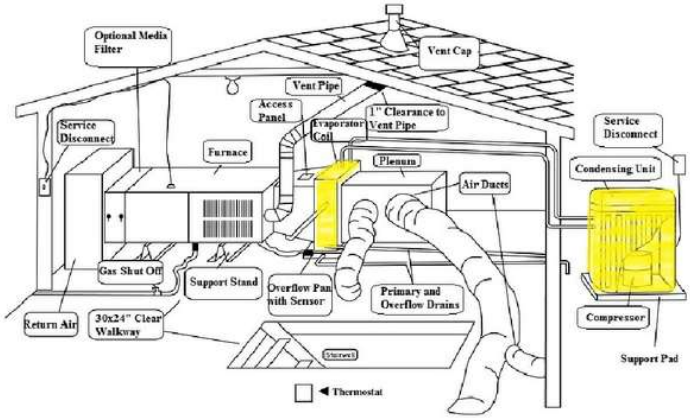
1: Attic Decking - Inadequate to equipment
The attic did not have adequate service decking to and/or in front of the equipment. The platform decking should be a continuous deck that is a minimum of 30 inches wide, that extends along all sides of the appliance where access is required. In addition, the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

☒ ☐ ☐ ☒ **B. Cooling Equipment**
Comments:
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
1st Floor 2nd Floor	Carrier Goodman	4-ton 2013 2.5-ton 2011	4-ton 2013 Not labeled	12 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.

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.

2nd Floor unit

Coil Equipment - Functional:
The coil equipment was operating and was providing a degree of cooling at the time of the inspection.

2nd Floor unit

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: Manufacturer's data sticker
2nd Floor Coil
The manufacturer's data sticker was missing or illegible and we could not determine the size, age, and/or manufacturer of the equipment. Further investigation is recommended with the owner and/or a service company.
Further investigation is recommended

2: Low temperature drop
1st Floor unit
The system had a less than normal temperature differential across the evaporator coils (less than 16 degrees). Have a service company find the source of the problem and provide a cost estimate to make any necessary repairs.
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: 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

I	NI	NP	D

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

Comments:
Type: Flex and Rigid Duct

Media filter Equipment:
Media filter equipment was installed for the HVAC system(s) in the attic. It is pointed out that when a media filter is installed, a filter should not be installed at the return air grill in the living space. Also, media filters need to be replaced periodically.

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

1: Ducts - No clearance between ducts

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

Obtain Cost Estimate

2: Registers - Microbial growth observed

Throughout house

Some of the registers were covered with mildew/debris. It is recommended that a service company be contacted to check the inside a of the duct work to determine if there is a build-up of debris/mold/mildew inside, and make any needed repairs. Further investigation is recommended.

Obtain Cost Estimate




3: Return Air - Wires inside chase

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

Obtain Cost Estimate

4: 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.

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

I	NI	NP	D

Obtain Cost Estimate

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: The street curb
Location of main water supply valve: East exterior
Static water pressure reading: 50 PSI
Water Supply Material: Galvanized Steel

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.

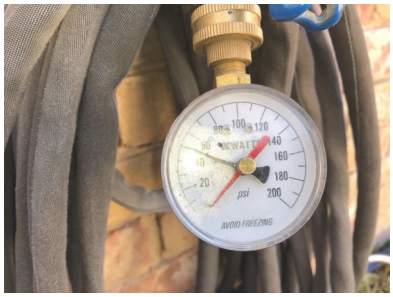
Shut Off Valve - Exterior location:

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

East exterior

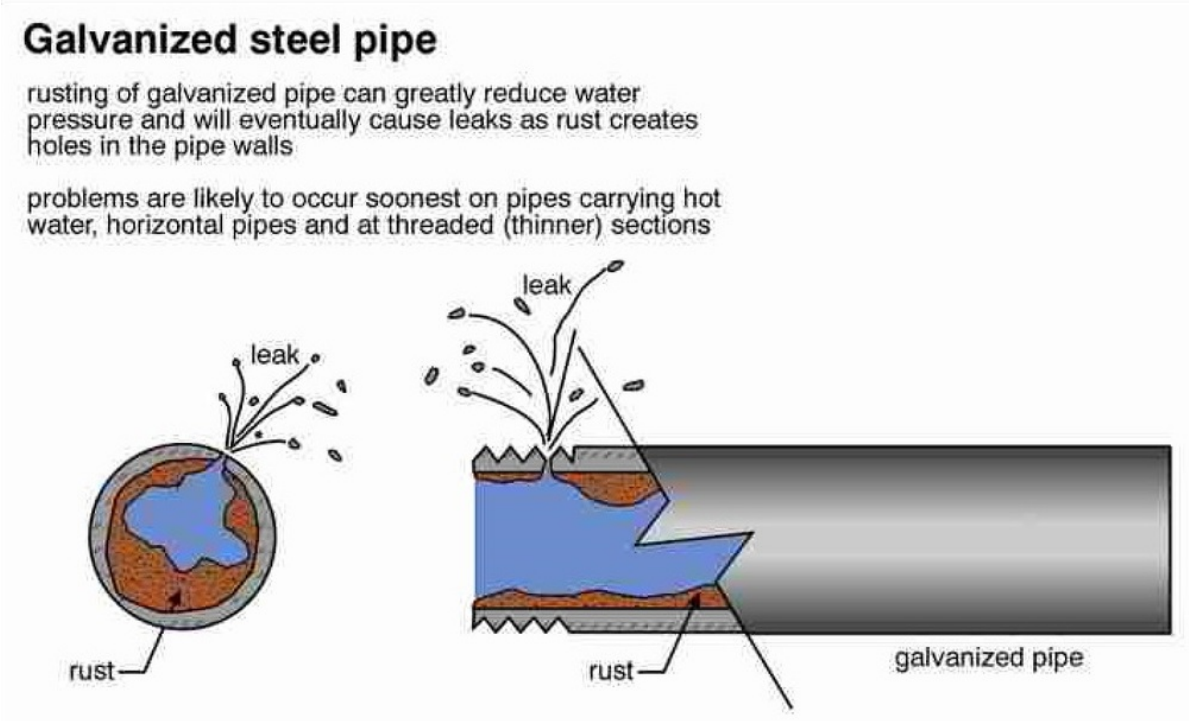
Static Water Pressure :

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 50 psi



Water Supply Piping - Galvanized Steel:

All or portions of the water piping for the property was observed to be the original galvanized piping. It is pointed out that the galvanized piping will deteriorate with time, and will corrode on the inside of the piping, thereby reducing the inside diameter of the pipe, and restricting the flow of the water through the pipe. In addition, the piping will corrode through to the outside of the pipe and will eventually deteriorate to where the pipe will start leaking. It can be anticipated that the galvanized water piping throughout the house will need to be replaced when it is causing reduced water pressure or is corroded enough to start leaking.



1: Water Pressure Low

The water pressure was lower than normal, and the source of the problem was not apparent at the time of the inspection. It is recommended that a service company find the source of the problem and provide a cost estimate for any necessary repairs.

Obtain Cost Estimate

2nd Floor Bathroom Cold Water

1st Floor 1/2 Bath

Master Bath

2: Vacuum Breaker - Missing

All hose bibbs

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

Obtain Cost Estimate

3: Water Stains/Damage Observed

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

Master Bath

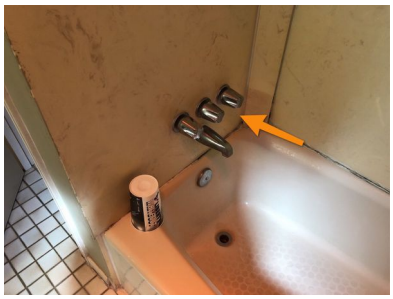
Master Bath

4: Faucet - Drip leaking

2nd Floor Bathroom

A drip leak that needs to be repaired was observed at a faucet.

Obtain Cost Estimate



5: Valve Damaged - Rotates 360

A water valve was observed that does not stop when turned to the "off" position, but rather the valve rotates past the stopping point. The damaged valve/faucet needs to be repaired or replaced.

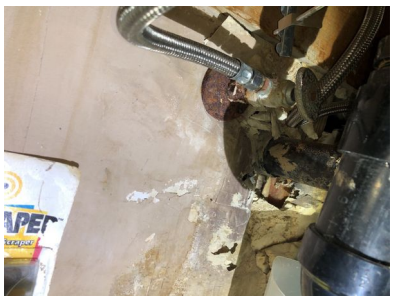
Obtain Cost Estimate

2nd Floor Bathroom

6: Water Supply - Corroded at fixture

The water supply line and/or shut off valve was significantly corroded and should to be replaced.

Obtain Cost Estimate



Master Bath

7: Tub - Caulk needed

The tub needs to be caulked.

Obtain Cost Estimate

8: Tub/Shower - Diverter nonfuctional

The diverter valve was nonfunctional and should be repaired.

Obtain Cost Estimate

Master Bath

I	NI	NP	D

9: Shower/Tub - Shower head leak

The shower head was leaking at the connection and needs to be repaired.

Obtain Cost Estimate

2nd Floor Bathroom

10: Aerator missing

Kitchen sink

An aerator was missing on the faucet.

Obtain Cost Estimate

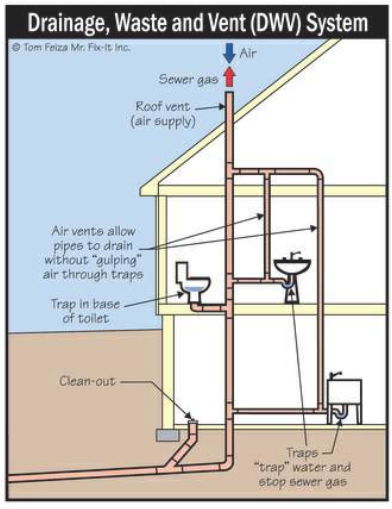
☒ ☐ ☐ ☐ **B. Drains, Wastes, & Vents**

Comments:

Sewer Piping Material: Pvc/ Abs

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.



Sewer Clean Out - Present :

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.

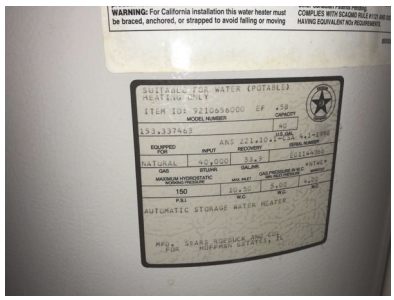
East exterior

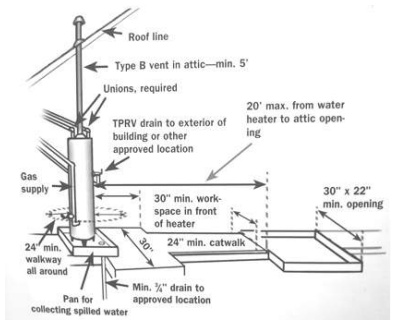
☒ ☐ ☐ ☒ **C. Water Heating Equipment**

Comments:
Energy Source: Natural Gas
Capacity: 40 Gallons

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

Location	Brand	Capacity	Age	Energy Type
Utility	Kenmore	40 Hal	2001	Gas

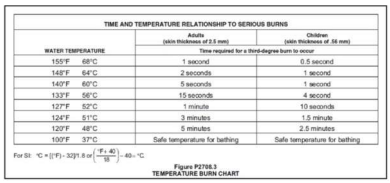




Water Heater Equipment - Functional:
The water heater equipment was functional at the time of the inspection and providing hot water to the applicable plumbing fixtures.

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 138 degrees.



TIME AND TEMPERATURE RELATIONSHIP TO SERIOUS BURNS		
WATER TEMPERATURE	Adults (skin thickness of 2.5 mm) Time required for a third-degree burn to occur	Children (skin thickness of .56 mm) Time required for a third-degree burn to occur
155°F 68°C	1 second	0.5 second
149°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

Water Heater 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. Normal life expectancy for a water heater in the Houston area is approximately 10-12 years.

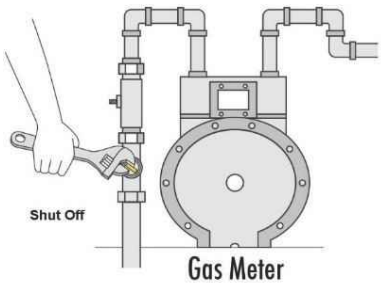
Temp/Pressure Relief Valve - Information :
Temperature/pressure relief valves are not operationally checked by this firm during the inspection. Valves typically do not reseat properly when they are operated, which causes the valves to leak. It is best to replace the temperature/pressure relief valves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

1: Overflow pan missing
The water heater was not equipped with an overflow pan under the water heater. It is recommended that a plumber install a pan and drain line to protect against leaks.
Obtain Cost Estimate

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

☒ ☐ ☐ ☐ **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.



North exterior

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.

V. APPLIANCES

☒ ☐ ☐ ☒ **A. Dishwashers**

Comments:

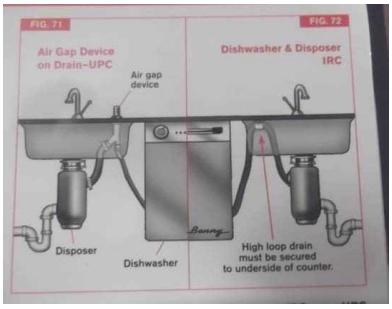
Functional :

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


1: No Anti-Siphon

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

Obtain Cost Estimate

☒ ☐ ☐ ☐ **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.

I	NI	NP	D

The vent fan was observed to be venting properly at the time of the inspection.

1: Grease Filter - dirty

The grease filter was dirty and needs to be cleaned.

Obtain Cost Estimate

☒ ☐ ☐ ☒ **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.

Limited life:

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

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 325 degrees, and the lower oven to 310 degrees.

Obtain Cost Estimate


2: Interior Light - Nonfunctional
The interior light was non-functional. The cause could be a burned out light bulb, a defective switch, or related wiring.
Obtain Cost Estimate

☒ ☐ ☐ ☒ **E. Microwave Ovens**
Comments:
Portable Microwave:

The microwave was a portable unit and was not operationally checked at the time of the inspection.

1: Interior Light - nonfunctional
The interior light was non-functional.
Obtain Cost Estimate

☒ ☐ ☐ ☒ **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- Cover missing
Master Bath
The cover for the exhaust fan was missing.
Locations included:
Obtain Cost Estimate

☒ ☐ ☐ ☐ **G. Garage Door Operators**
Comments:
Funtional - Autoreverse and sensors:

The garage door opener equipment was functional at the time of the inspection and opened/closed when the controls were operated. The auto-reverse mechanism was operational, and the sensitivity setting on the mechanism was adequate. Also, the infrared auto reverse mechanism was functional.

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

I	NI	NP	D

☒ ☐ ☐ ☒ **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)

1: Vent - Cover damaged

The dryer vent cap was damaged and needs to be replaced.

Obtain Cost Estimate

☒ ☐ ☐ ☐ **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

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.

VI. OPTIONAL SYSTEMS

☒ ☐ ☐ ☒ **B. Swimming Pools, Spas, Hot Tubs, and Equipment**

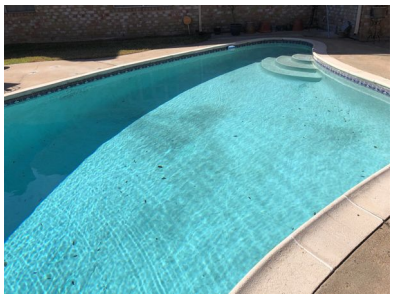
Comments:
Type of Construction: In-ground gunite pool with applied surface finish

Pool Description : Chlorine treated water - no salt-cell, In ground with plaster finish, Equipment at side of house -

The swimming pool was an in-ground gunite type construction.

Pool Surface - limited life:
The surface of the pool was beginning to spall, and the plaster finish has only a limited amount of remaining life. It can be anticipated that the pool will need to be replastered in the next few years.



Pool Filter - Diatomaceous earth:
The pool filter was a diatomaceous earth filter that was functional at the time of the inspection and showed an operating pressure of 22 psi. This is within a normal range of operation, and no repairs are recommended.


Timer - Functional:
The timer was functional.

Door/Window Chimes Recommended:
It is generally recommended that the doors and/or windows that open from the house to the pool area be equipped with audible chimes to help indicate if a child is entering the pool area.

1: Water Tiles - Missing/Damaged

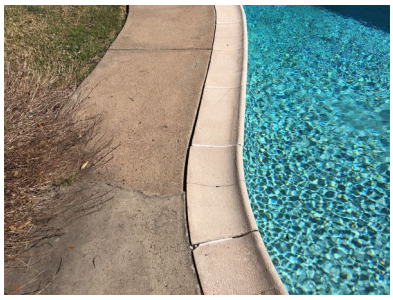
The waterline tiles were cracked or damaged and need to be repaired or replaced.

Obtain Cost Estimate

2: Coping Tiles - Sealant needed

The joint between the concrete deck and the coping tiles needs to be sealed.

Obtain Cost Estimate



3: Gate - Not self closing/latching

The gate to the back yard was not self-closing, self-latching. For safety and liability purposes, it is recommended that the gate hinges be repaired or replaced to allow the gate to self close and securely latch.

Obtain Cost Estimate

4: Leak at Equipment

Evidence of a leak was observed where the pad under the equipment was wet. It is recommended that a service company be contacted for further investigation and to make any needed repairs

Obtain Cost Estimate

5: Casing - Not bonded

The exterior metal casing on the motor was not properly bonded.

Obtain Cost Estimate

6: Fill Line - Nonfunctional

The pool fill line was nonfunctional at the time of the inspection.
Obtain Cost Estimate

7: Light - No GFCI protection

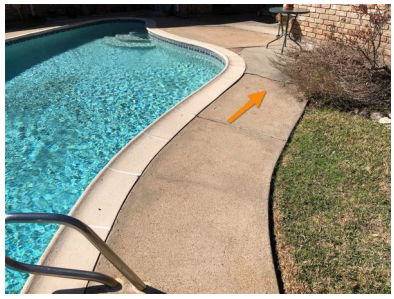
The light was functional at the time of the inspection, however it was not protected by a functioning Ground Fault Circuit Interrupt device. For safety purposes, it is recommended that a pool contractor be contacted to make the needed repairs.
Obtain Cost Estimate

8: Light - Nonfunctional

The light was nonfunctional at the time of the inspection. When the light is repaired, the service company should verify that it is protected by the Ground Fault Circuit Interrupt device.
Obtain Cost Estimate

9: Pool decking lifting/settling

The pool decking has settled and is lifting/sinking in one or more locations around the pool. This condition is a tripping hazard and should be repaired. It is recommended that a contractor be contacted to provide a cost estimate for any needed repairs.
Obtain Cost Estimate



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.** 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