



HEDDERMAN SERVICES

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STRUCTURAL INSPECTION

4920 Laurel Street
Bellaire Tx 77401

Austin Stuckert & Michael Smaglick

JULY 13, 2021



Inspector

Javier Almodovar

Engineer

281-355-9911

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1: COVER LETTER

Information



HEDDERMAN ENGINEERING, INC.

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07/13/2021

TO: Austin Stuckert & Michael Smaglick

REF: CONDITION OF PROPERTY SURVEY

Dear Austin Stuckert & Michael Smaglick:

At your request, a visual survey of the house located at 4920 Laurel Street , Bellaire Tx 77401 was performed by Javier Almodovar. Transmitted herewith is the inspection report stating our professional opinions on whether the items of construction included in the survey are functional on the day of the inspection, or are in need of repair.

The scope of our inspection and other important information, particularly in the area of dispute resolution should a question arise, is contained in our Service Agreement, which has been included at the end of this report.

Thank you for asking HEDDERMAN ENGINEERING, INC. to perform this important inspection work for you. If you have any questions after reviewing this report, please feel free to call me at my office.

At your service,

HEDDERMAN ENGINEERING, INC.

Tim Hedderman, President

2: PURPOSE/SCOPE

Information

INTRODUCTION

The purpose and scope of the inspection are detailed below, as well as in the executed Service Agreement at the end of this report. Also included are the limitations of the inspection.

PURPOSE

The purpose of the inspection was to view the components of the house included in the inspection and to give our opinions on whether or not these specific items were functioning at the time of the inspection, or were in need of repair. Although this report may include observations of some building code violations, total compliance with structural, mechanical, plumbing, electrical codes, specifications, and/or legal requirements is specifically excluded. This also applies to all non-code making bodies, including but not limited to, the Brick Institute of America and the Texas Lathing and Plastering Contractors Association and their respective recommendations of building construction details. We do not perform "code" inspections, and since building codes change every few years, our inspections are not done with the intention of bringing every item in the house 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 if they are in need of repair. This is particularly applicable to Home Warranty policies, where the standards of the Home Warranty service company may differ than the scope of 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 Home Warranty company of your choice for a more in-depth analysis of what may be required to meet their standards should a claim be made against their policy. It has been our experience that Home Warranty companies may require the equipment to be in total compliance with current code (even if it was installed before the current code was adopted) to be covered under their policy, and if so, it is recommended that you contact the appropriate service companies for a code compliance certification inspection. This report is provided solely for the use of the person to whom this report is addressed, and is in no way intended or authorized to be used by a third party, who may have different requirements, and to whom we have not contracted to perform the inspection. If a third party chooses to use this inspection report, they do so without HEDDERMAN ENGINEERING, INC. permission or authorization, and they do so at their own risk. It is our purpose to provide information on the condition of the house on the day of the inspection. It is not our purpose to provide discussions or recommendations concerning the future maintenance of any part of the house, or to verify the adequacy and/or design of any component of the house. It is pointed out that other engineers/inspectors may have contrasting opinions to those given in this report. Items that we find that in our opinion are in need of repair will typically include the recommendation to Obtain a Cost Estimate from qualified contractors. The scope and cost of the actual repairs can vary significantly from company to company, and it is your responsibility to see that the scope of work needed and actual cost of repairs is confirmed by contacting one or more qualified service companies before your option period ends or before closing on the property. This report may also contain informational items which are included as a courtesy to help you become more aware of the condition of the house. In the performance of this inspection, HEDDERMAN ENGINEERING, INC. has acted as an engineering consultant subject to the standards of the State Board for Professional Engineers.

SCOPE

The scope of the inspection included limited, visual observations at the interior and exterior of the structure. Only those items readily visible and accessible at the time of the inspection were viewed and are included in this report. Due to COVID 19 restrictions, our inspectors are sometimes required to wear masks indoors. This restricts the inspector from using his full set of senses that are needed during the inspection process by inhibiting the inspector from possibly detecting odors that may be indicative of a problem, including but not limited to, mold, musty odors, natural or LP gas odors, pet odors, urine or fecal odors, etc. Any items causing visual obstruction, including, but not limited to furniture, furnishings, floor or wall coverings, pictures, foliage, registers and grills on HVAC ductwork, soil, appliances, insulation, etc., were not moved. The basis of our opinions will be the apparent performance of that portion of the house readily visible at the time of the inspection. Disassembly or removal of any portion of the structure, mechanical equipment, plumbing equipment, or electrical equipment is beyond the scope of this inspection. There is no warranty or guarantee, either expressed or implied, regarding the habitability, future performance, life, insurability, merchantability, workmanship, and/or need for repair of any item inspected. The components of the house included in scope of the inspection, if present and applicable, include:

Structural: Foundation, primary load-carrying framing members, roof surface, water penetration, and miscellaneous items related to the house.

Mechanical: Air conditioning and heating systems, water heaters, built-in kitchen appliances, and garage door openers.

Plumbing: Water and gas supply lines, sinks, toilets, tubs, showers, visible drain lines inside the house, and vents.

Electrical: Service entrance conductors, electric meter, distribution panel, visible wiring, light fixtures, switches, and receptacle outlets.

Sprinkler: Control panel, solenoid valves, backflow prevention device(s), piping, and sprayer heads.

Items specifically excluded from our inspection include:

Tainted and Corrosive sheetrock (Chinese Sheetrock).

All pests, wood destroying insects, conducive conditions, ants, or rodents.

All equipment related to mosquito control.

All items related to major geological conditions such as faults or subsidence.

All underground piping, including water, sewer, and gas piping.

Water softening and water treatment systems.

Identifying products that have been recalled.

Pressure testing of gas system.

All low voltage lighting systems and/or photocells.

All low voltage data systems such as telephone, cable TV or data lines.

All fire detection, carbon monoxide, smoke alarms and/or security alarm systems.

All environmental hazards, or any toxic/hazardous materials including, but not limited to: radon gas, lead, formaldehyde, electromagnetic, any and all items related to asbestos.

A backup generator and transfer switch panel.

Any electrical load analysis on the electrical system to determine adequacy of the service or any branch circuit.

If you desire information or inspections concerning the items listed above, or any other items, then it is recommended that you contact the appropriate service companies. Also excluded from the scope of the inspection are any and all items related to mold and/or all microbial substances. Due to the current limitations of coverage on most homes by the insurance industry in Texas, where damages due to mold and/or other microbial substances may not be covered, we routinely recommend that you have a mold inspection by a qualified professional before you close on the house. Built-in appliances and mechanical equipment were operated in at least one, but not all, of their operating modes, where possible. If you desire for every operating mode of each piece of equipment to be operationally checked, then it is recommended that you contact a service company. Equipment and materials that are not visible, including structural components, underground plumbing and gas lines, and all other items not normally available for ready viewing, are excluded from the scope of this inspection. If you desire an inspection on the underground plumbing pipes or a hydrostatic test to determine if the plumbing pipes are leaking under the house, then it is recommended that you contact a plumber. No electrical circuit or load analysis will be performed on the electrical system. We make no representation regarding the condition of this house other than as contained in this written report. Any verbal discussions concerning this house that were made at the time of the inspection, and not contained in this written report, are not to be relied upon. Although the structural portion of this inspection was made by an engineer, it cannot be considered to be a formal engineering study since no calculations, structural analysis, or physical material testing were performed. If engineering drawings/specifications have been made available during this inspection and, if they have been viewed, it is pointed out that all such viewing is strictly cursory, and in no way should our cursory examination be construed as providing engineering judgments concerning the adequacy or acceptability of the drawings/specifications. It is pointed out that it is possible for latent defects to exist in the structure and its related equipment, underground piping, and systems that are not visible at the time of the inspection, and may not be able to be viewed during a limited visual inspection. This is particularly applicable in items relating to water, such as roof leaks, water penetration conditions, etc., where the condition may exist, but not be visible at the time of the inspection (e.g. where it has not rained for a period of time, allowing materials time to dry out). HEDDERMAN ENGINEERING, INC. does not claim or warrant that the observations listed in this report represent every condition that may exist. In using the information supplied by this inspection, one must recognize the limitations of a limited, visual inspection conducted at a single point in time, and accept the inherent risk involved. It is recommended that you obtain as much history as is available concerning this house. This historical information may include copies of any seller's disclosures, previous inspection or engineering reports, building drawings and/or specifications, bids to perform repair work on the house, knowledge of any drainage problems, receipts from repair work that has been performed, reports performed for or by relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should attempt to determine whether repairs, renovation, remodeling, additions or other such activities have taken place at this house.

3: SITE CONDITIONS

Information

Occupancy

Occupied

In Attendance

Buyer, Buyers Agent, Sellers
Agent Representative, Termite
Inspector

Weather

Dry, Clear, Temperature - 80-90
degrees

Age of Home - HAR

According to HAR, the house was
built in 1989.

North-Rear

For the purpose of the inspection and report, NORTH will be assumed to be from the front of the house towards the rear.

Note when reviewing the report

It is pointed out that when reviewing the report, the reader should be aware that photos and comments regarding specific issues are a **REPRESENTATIVE SAMPLE** of what we observed at the time of the inspection, and are not necessarily an exhaustive list of all instances of that item on the property.

4: FOUNDATION

Information

Description: FOUNDATION OBSERVATIONS AND CONCLUSIONS:

The following items were inspected, with our Observations and Conclusions noted.

Description: Concrete Rebar slab

The foundation was a concrete slab on grade, and appeared to be reinforced with steel reinforcing rods (rebar).

Differential Movement: Reference point

See our field sketch below showing the elevation readings for this structure. Note that the "R" on the sketch is our randomly chosen starting reference point, where the elevation is 0, and all other elevation readings are taken relative to the reference point, and are measured in inches to the nearest 1/10 inch. Height adjustments were made for variations in the height or thickness of the various floor coverings. If there is a step up or a step down into an area such as a garage, sunken room, balcony/patio area, or raised rooms, the elevation readings will have larger numbers due to the amount of the step.

We typically point out that foundations are rarely constructed perfectly level, so most properties have some unlevelness (typically $\frac{3}{4}$ to 1-1/2 inches) built into the foundation as part of original construction. We have no knowledge as to how much unlevelness was built into this house foundation during original construction.

Note that it is not HEI's purpose to exhaustively document each and every evidence that may be related to foundation movement, but rather to document a representative sample and/or the most significant evidences of movement upon which we base our opinion on the condition of the foundation.

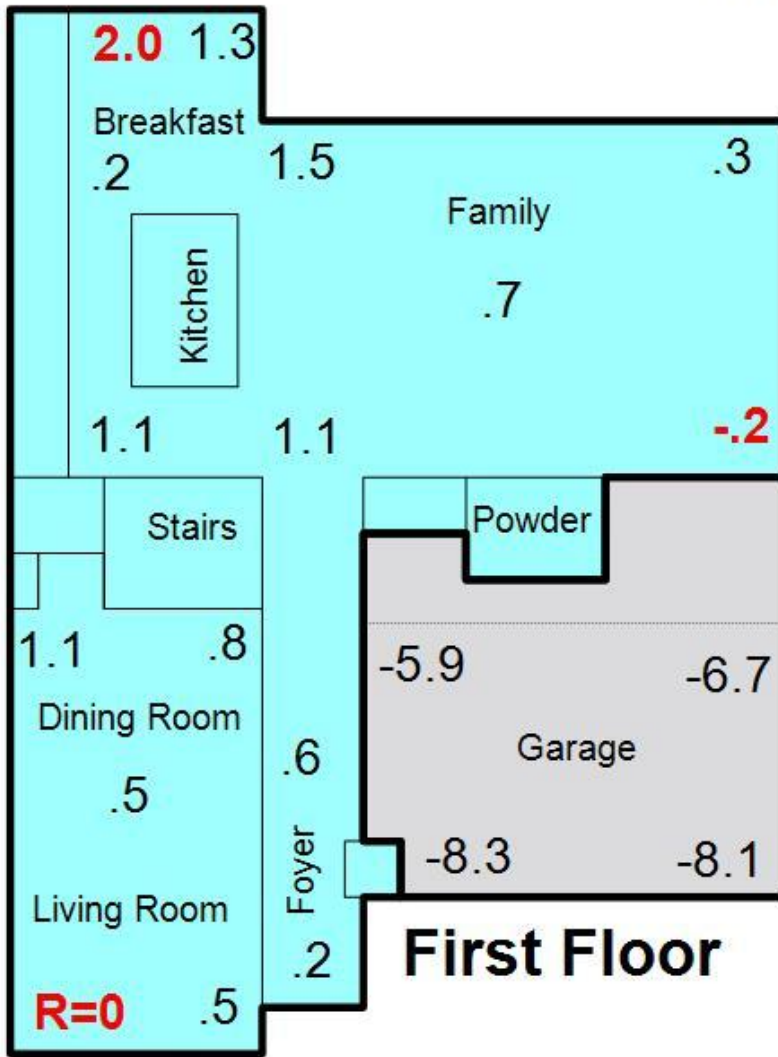
Differential Movement: Levelness - Some Sloping

The floors were checked with an electronic level, and were observed to be sloping towards the east side of the house. The difference in elevation between the high point and low point was 2.2 inches on the first floor; and 2.3 inch on the second floor. The first floor high point was located at the breakfast area, and the low point was located at the family room. The unlevelness takes place over a horizontal distance of approximately 30-40 feet.

7.13.21

HEI

Stuckert
Smaglick



First Floor



Elevation Readings
4920 Laurel Street



Differential Movement: Concrete Cracks - Garage

Cracking of the foundation concrete exists in virtually all foundations. It is pointed out that cracking is a normal property of concrete and other brittle materials, and Hedderman Engineering, Inc. assumes no responsibility should cracks be found that are not mentioned in this report. Some cracking was observed in this concrete foundation, including at the garage floor.



Differential Movement: Corner Chipped

Some of the corners of the foundation were observed to be chipped. This condition is typically caused by differences in thermal expansion between the brick veneer and the concrete foundation. Also, this condition can be caused by a lack of reinforcement in the corner of the foundation during original construction. In our opinion, this condition does not affect the overall structural integrity of the foundation, nor is it an indication of foundation movement.



Differential Movement: Slab not Visible - Patio

It is pointed out that a portion of the foundation concrete could not be viewed due to the concrete patio that adjoined the foundation.



Separation of Materials: Sticking doors

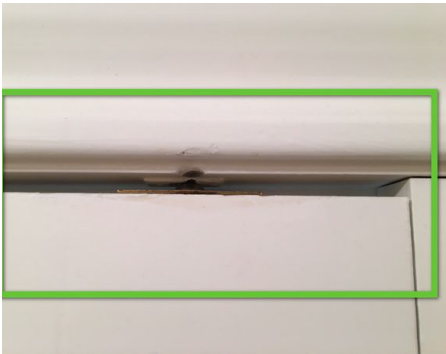
Master closet

Doors that were sticking due to movement of the house were observed at the time of the inspection.

Separation of Materials: Door triangles at top

Master closet, and the master bathroom.

Door frames that were out of square, leaving a triangular separation between the door and the door frame at the top of the door were observed where a separation was visible at the top of the door.



FOUNDATION CONCLUSIONS: Moderate Movement

Most of the structures previously inspected by this firm have experienced some degree of differential foundation movement, and this structure was no exception. After careful examination, it is our opinion that the evidences of movement observed do not indicate excessive or unusual foundation settlement. However, the foundation showed evidences of some differential movement.

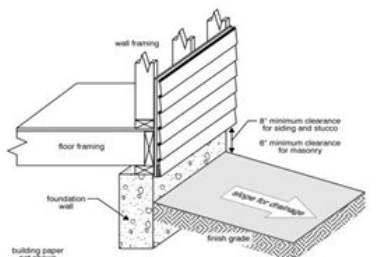
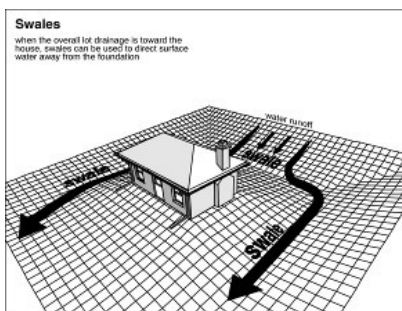
After careful examination, it is our opinion that the overall degree of the existing foundation movement for this structure is moderate, and is acceptable for a house of this age and type construction. The foundation is, in our opinion, functional and is not in need of releveling.

As a routine recommendation, it is recommended that the evidences of differential movement be monitored in the future to determine if the condition is stabilized, or if the foundation is continuing to settle. It is pointed out for your information that, due to the nature of the soils in this area, it is reasonable to expect that some movement of the foundation will happen in the future. It is also recommended that the soil around the foundation be kept moist by a regular watering program as the condition of the soil indicates.

Perimeter Grading/Drainage: FLOOD PLAIN

100 Year Floor Plain

This inspection does not include determining if the property is in the 100 year flood plain. For further information regarding the elevation of this lot, check with your survey and/or a land surveyor.



Perimeter Grading/Drainage: Appeared Adequate

The perimeter drainage around the property appeared to generally be adequate. It could not be determined with certainty if water would pool at any localized low areas around the property. Further investigation with the homeowner is recommended to determine if there are any drainage problems or water that ponds on the property after a rain.

R401.3

Recommendations/repair

4.4.1 Other Observations

FOUNDATION - SPALLED

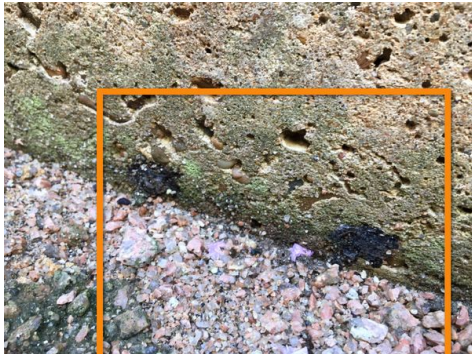
FRONT OF THE HOUSE, AND THE WEST SIDE OF THE HOUSE.

The face of the foundation concrete was spalled, and the reinforcing steel used in the construction of the foundation was observed to be exposed. The rust should be removed from the rebar, and the rebar grouted to prevent further deterioration.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



5: ROOF

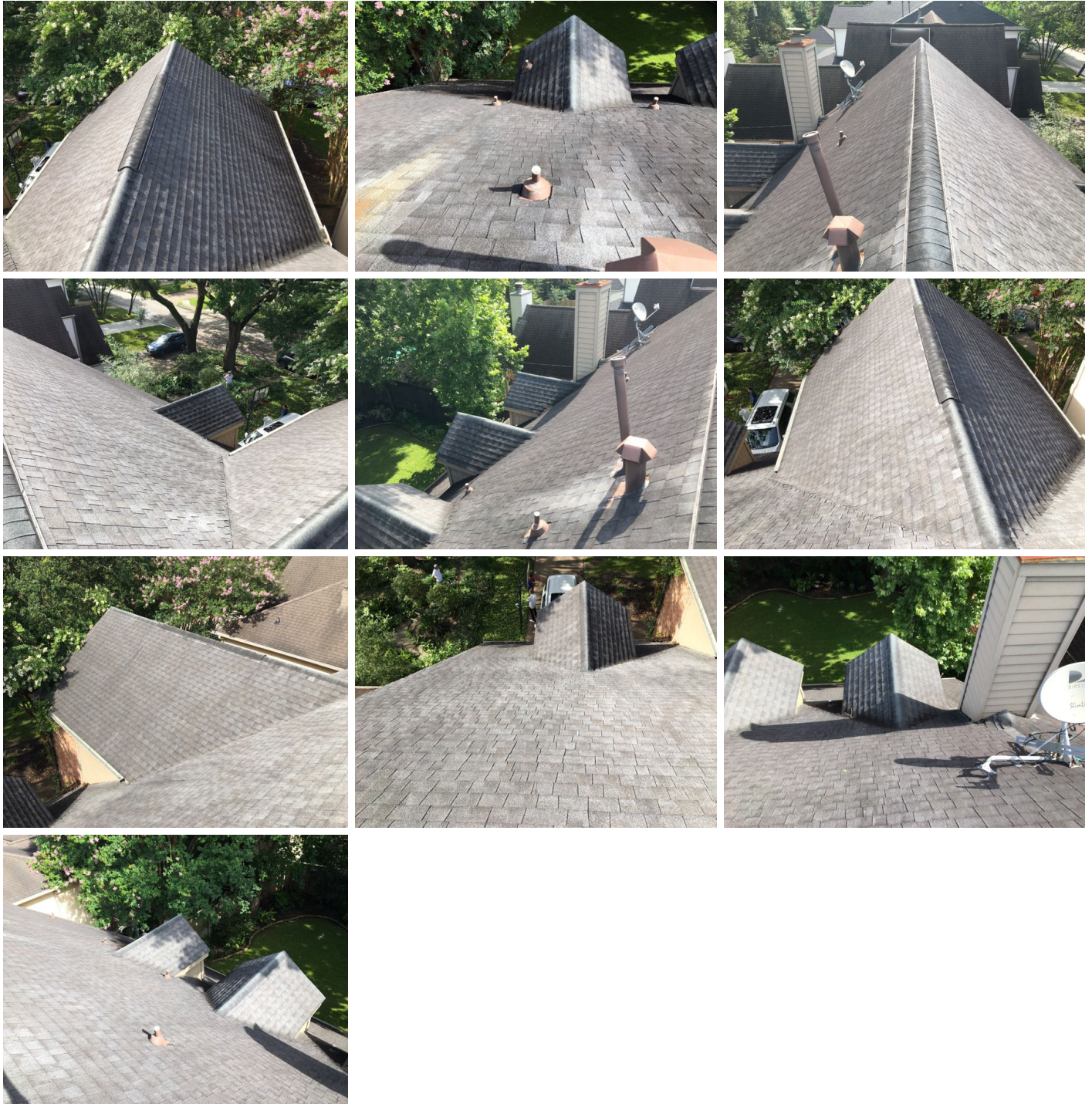
Information

Roof Descriptions: ROOF OBSERVATIONS AND CONCLUSIONS

The following items were inspected, with our Observations and Conclusions noted.

Roof Descriptions: Composition Shingles

The pitched roof surface was constructed of composition shingles. The life expectancy of a composition shingle roof has been observed to vary from 15 to 20 years, with most requiring replacement at about 17-20 years.



Roof Descriptions: Roof Decking - Description

OSB, Spacer Clips Present

The roof decking was observed from the attic space to be as described above.

Age of Roof: 11-13 Years

The sellers disclosure statement was not available at the time of the inspection, and the age of the roof was unknown to the inspector at the time of the inspection. The roof appeared to the inspector to be approximately 11-13 years.

Roof viewed from: Surface

The roof was viewed from the surface of the roof at the time of the inspection.

Ventilation: Continuous ridge/Soffit vents

The ventilation for the attic included continuous ridge vents at the top of the roof and continuous soffit vents.

Wear and Deterioration: Composition - Some

Discolored, Nail Heads not Sealed, Rusted Roof Jack

The composition roof surface was showing evidences of some deterioration of the roof surface as described above and shown below.



Limitations

Roof viewed from

LIMITATIONS OF ROOF INSPECTION

It is pointed out that our roof inspection is limited to viewing the surface of the roof from only those areas determined by the inspector to safely accessible at the time and conditions of the inspection. If the height of the roof, steepness of the pitch, or surface conditions due to wear or weather are such that the inspector determines that he cannot safely access some or all of the roof, then we will use a drone if possible (subject to weather limitations and/or No Fly Zones) to take photos of the surface of the roof. The roof will also be viewed from the underside of the roof, from the readily accessible attic access decking. For areas of the attic/roof that are not readily accessible from the safety of secure access decking, the inspector is not required to walk off the decking across the attic framing members to access all portions of the attic. Therefore, it is pointed out that there may be deficient roof conditions present in the attic that are not visible on the day of the inspection due to the limitations imposed on the inspector. This emphasizes the need and responsibility of the client to do further investigations with a roofing contractor to determine all deficiencies with the roof before any option period ends.

Recommendations/repair

5.5.1 Roof Details

DETERIORATED SEALANTS

We observed sealants that were cracked/separated/missing and repair is needed.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



5.5.2 Roof Details

ROOF: MISCELLANEOUS

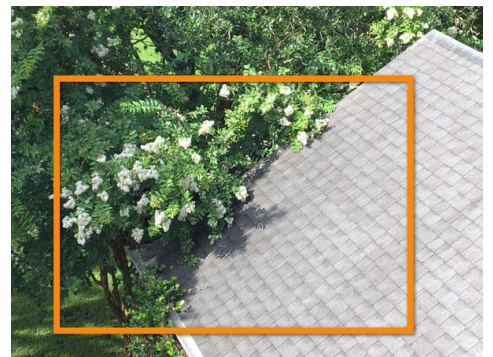
Tree limbs on Roof

We observed some miscellaneous items related to the surface of the roof, including the items listed above. Have a roofing contractor provide a cost estimate to make any needed repairs.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



5.5.3 Roof Details

FLASHING/COUNTER FLASHING

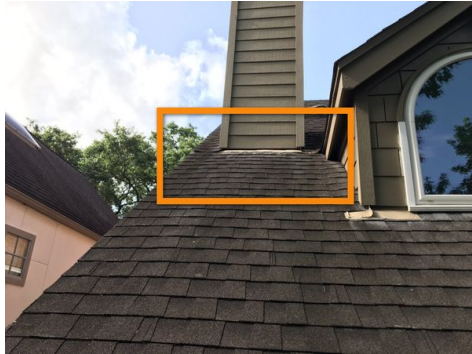
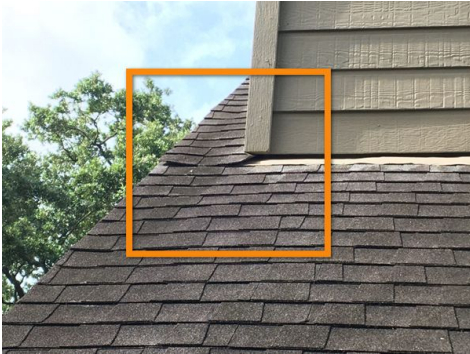
Flashing not secure at roof jack, Flashing not secure at the chimney

We observed one or more conditions with the roof flashing as pointed out above. Have a roofing contractor provide a cost estimate to make all needed repairs

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



5.5.4 Roof Details

METAL VENT PIPES

Storm Collar Sealant Deteriorated

We observed metal vent pipe(s) that were in need of repair, including the conditions listed above.

Locations include: Water Heater Vent Pipe

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



5.5.5 Roof Details

LOOSE ANTENNA

A loose antenna was observed over the roof and the antenna needs to be secured or removed.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



5.6.1 Roof Leaks

ATTIC ROOF DECKING AND/OR FRAMING MEMBERS

After observing the interior of the structure, evidences of roof leaks were visible in the attic, where the roof decking and/or roof framing members were water stained. It is recommended that a roofing contractor be contacted to find the source of the leaks, and to make any needed repairs.

Obtain Cost Estimate

Recommendation

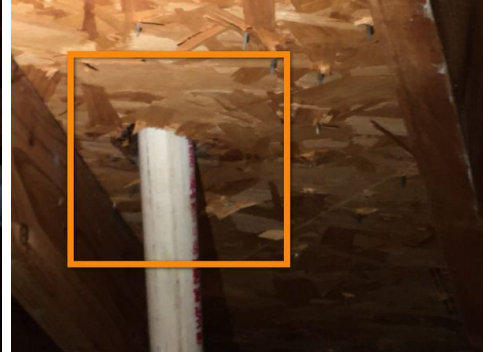
Contact a qualified professional.



Furnace flue pipe at the west side of the attic



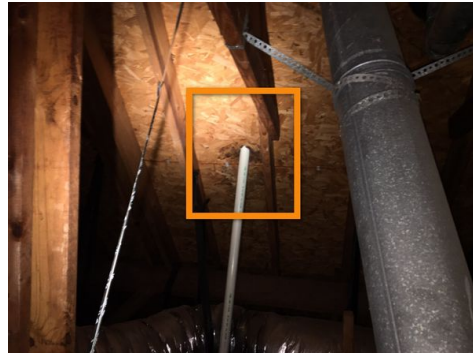
Furnace flue pipe at the west side of the attic



Over the master bathroom



Over the master bathroom



Sewer vent pipe at the center of the attic



Sewer vent pipe at the center of the attic



Southeast area of the attic



Southeast area of the attic

5.7.1 ROOF CONCLUSION

SERVICEABLE CONDITION - SOME REPAIRS NEEDED

The roof appears to be in generally serviceable condition at this time with some repairs needed for the item(s) shown under Recommendations/Repair. Have a roofing contractor provide a cost estimate to make all necessary repairs to bring the roof into a completely serviceable condition.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.

6: STRUCTURAL FRAMING

Information

Framing Description: OBSERVATIONS AND CONCLUSIONS

The following items were inspected, with our Observations and Conclusions noted.

Framing Description: Two story house wood frame

The house was observed to be a two story wood frame structure that includes the standard major framing components, including wall framing and ceiling joists, and roof framing.



Attic Framing: Viewed from attic access walkway

The attic space was viewed only from the areas determined by the inspector to be safely accessible from the access walkway.

Attic Framing: Roof Framing Less than Current Standards - Functional

The roof framing in the attic was observed to be less than the current construction standards for roof framing. Typical differences between older structures and current code requirements can include purlins that are not the same size as the rafters; the vertical bracing for the purlins being spaced more than four feet apart; ridge beams not sized large enough for the miter cuts on the rafters, etc. However, the framing was adequate when the house/garage was constructed, and has performed satisfactorily these many years. Houses/garages that are built to previous code requirements are grandfathered, and are not required by the building code to be updated every time the code is revised.

Recommendations/repair

6.4.1 Rafters

SPLIT RAFTER

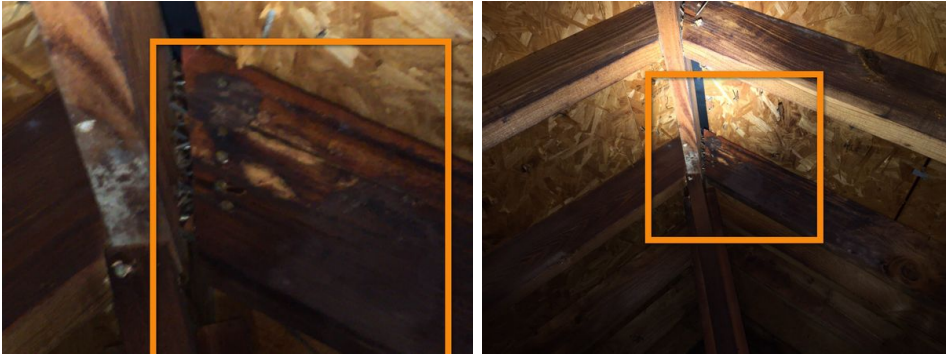
CENTER OF THE ATTIC

One or more rafters in the attic were observed to be split, and need to be repaired.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



6.4.2 Rafters

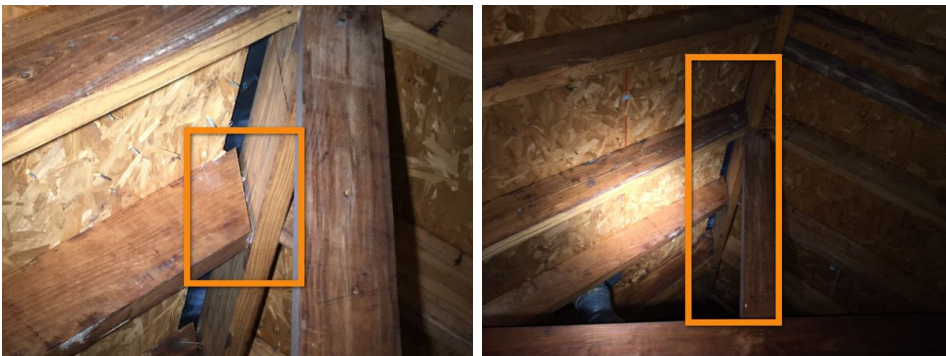
RAFTER NOT FLUSH ON RIDGE BEAM

We observed rafters that were separated at the top of the rafter, where the rafter meets the top ridge beam. Rafters should be flush against the ridge beam, and it is recommended that 3 foot make-up pieces be "sistered" onto the rafters, so that the make-up pieces are flush against the ridge. This will allow the rafters to bear against the ridge beam for the entire length of the miter cut on the rafter.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



6.19.1 STRUCTURAL FRAMING CONCLUSION

REPAIRS NEEDED

The primary load carrying members of the structural framing that were accessible and viewed at the time of the inspection were generally functional with the exception of the item(s) listed above as in need of repair. Have a contractor confirm the scope of repairs needed, along with a cost estimate for all repairs.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.

7: WATER PENETRATION

Information

Water Penetration: OBSERVATIONS AND CONCLUSIONS

The following items were inspected, with our Observations and Conclusions noted.

Recommendations/repair

7.1.1 Water Penetration

MOISTURE METER - HIGH READING

GARAGE PATIO DOOR

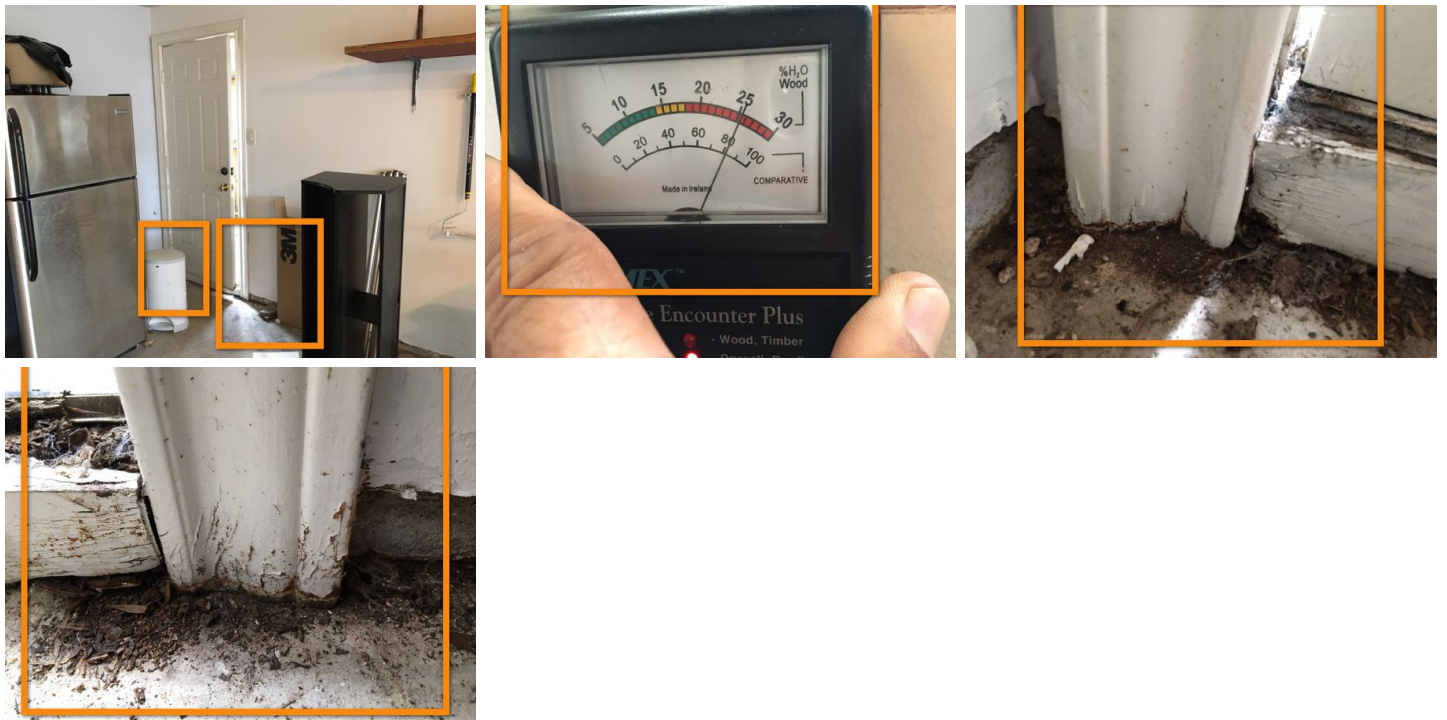
Evidences of water penetration to the interior of the structure were observed, including the following conditions and locations shown below. Further investigation is recommended with service companies to determine the source(s) of the water penetration along with any secondary damages, and also to provide a cost estimate for any needed repairs.

Our moisture meter showed a higher than normal reading near the bottom of the door. Also, water stains and water damage were observed at the bottom of the door trims.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



7.1.2 Water Penetration

MOISTURE METER - HIGH READING

BREAKFAST AREA, MASTER BEDROOM, MASTER BATHROOM, AND THE EAST BEDROOM.

Evidences of water penetration to the interior of the structure were observed, including the following conditions and locations shown below. Further investigation is recommended with service companies to determine the source(s) of the water penetration along with any secondary damages, and also to provide a cost estimate for any needed repairs.

Our moisture meter showed a higher than normal reading below and around some of the windows.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



7.1.3 Water Penetration

VULNERABILITY TO WATER PENETRATION

Sealants deteriorated/missing, Window sealants, HVAC Lines, Light Fixtures, Hose Bibb, Gas Line, Electrical Wiring, Vent Caps, Piping, Finish nail heads on the window trims.

A substantial vulnerability to water penetration was observed at penetrations/openings through the exterior building envelope, and it is recommended that all penetrations/openings be sealed against water penetration. Typical examples on a structure may include light fixtures, air conditioning refrigerant lines, water piping, gas piping, vent caps, windows, doors, expansion joints, etc. Below is a representative sample of locations and/or photographs showing some, but not necessarily all, locations where there is a vulnerability to water penetration. Have a contractor provide a cost estimate to seal all vulnerable areas on the exterior building envelope against water penetration and/or open up any clogged weepholes in the veneer.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.





8: FIREPLACE/CHIMNEY

Information

FIREPLACE OBSERVATIONS AND CONCLUSIONS

The following items were inspected, with our Observations and Conclusions noted.

Metal Fireplace: Location

Family Room



Metal Fireplace: Chimney flue not visible for entire flue

It should be noted that the inside of the chimney flue is not visible due to the construction of the chimney, and was not inspected. The chimney flue extends from just above the fireplace opening inside the house to the top of the chimney. If this a concern to you, we recommend that a fireplace service company be contacted.

Obtain Cost Estimate

Metal Fireplace: Log lighter functional

The gas log lighter was operationally checked, and was functional at the time of the inspection.

Metal Fireplace: Damper Functional

The damper was operationally checked at the time of the inspection, and opened and closed properly, with no repairs needed to the operation of the damper.

Recommendations/repair

8.1.1 Metal Fireplace

METAL CAP RUSTED

The metal cap on top of the chimney was rusted, and needs to be cleaned and properly sealed to prevent further deterioration.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



9: ATTIC

Information

OBSERVATIONS AND CONCLUSIONS

The following items were inspected, with our Observations and Conclusions noted.

Ladder: 375 pound capacity

The access ladder was observed to be rated at 375 pound capacity.



Viewed from attic decking

The attic was entered and was viewed from the access decking provided in the attic. It is pointed out that the inspector is not required to access areas of the attic without the safety of adequate walkway decking.

Insulation: R30 Batt

The insulation in the attic was average by today's standards. The normal amount of insulation for attics in this area is an R38 energy rating. This attic had approximately 9-10 inches of fiberglass batt insulation in the ceiling, which was marked as being an R30. It is pointed out that the insulation requirements according to the latest standard for new houses in this area is an R38 energy rating.



Limitations

Attic Viewed From

ATTIC NOT ALL ACCESSIBLE

The entire attic space was not accessible from the decking provided, and if remote areas were viewed at all, it would be from the safety of the access decking. Note that it is our policy to not walk off the access decking nor climb over equipment to walk across framing members due to safety hazards and the potential for damaging equipment/ductwork and/or slipping off the framing members and falling through the ceiling. It is pointed out that there may be deficiencies in the attic and/or for the roof that were not viewed at the time of the inspection due to a lack of access walkway decking.

Recommendations/repair

9.2.1 Service decking/platform decking

INADEQUATE WALKWAY DECKING

The attic did not have adequate service decking to all the equipment in the attic. The service decking should be a continuous deck that is a minimum of 24 inches wide, that extends from the attic access opening to all equipment in the attic. In addition, the decking should be free from any obstructions, such as gas lines, electrical wiring, ductwork, framing members, etc.

Obtain Cost Estimate



Recommendation
Contact a qualified professional.

9.4.1 Insulation

INSULATION MISSING - BETWEEN JOISTS

The insulation in the attic was missing from between some of the joists. Have a service company provide a cost estimate for repairs.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



9.4.2 Insulation

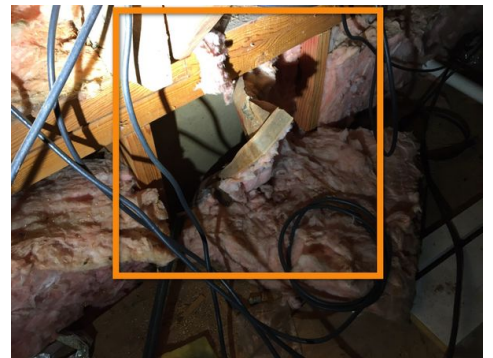
INSULATION LOOSE/MISSING - WALLS

The insulation in the attic was loose/missing at some of the vertical walls, and needs to be repaired.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



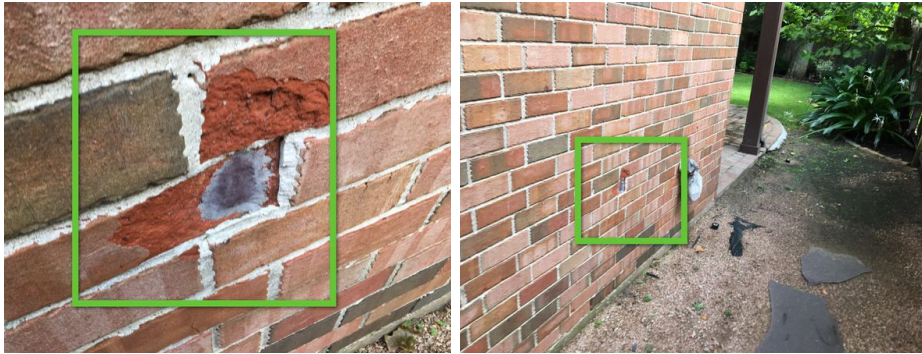
10: EXTERIOR CLADDING

Information

Brick/Stone Veneer: Eroded Brick - Monitor

North east side of the house

Some of the bricks were eroded slightly at various locations of the house. The degree of the erosion was not such that the bricks need to be repaired. The condition needs to be monitored in the future, and repairs made if the condition worsens.



Recommendations/repair

10.4.1 Fiber Cement Siding

IN CONTACT WITH ROOF

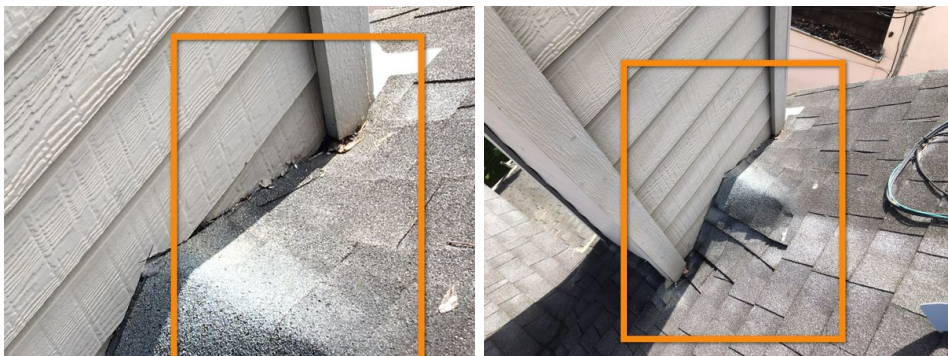
CHIMNEY

The fiber cement siding at the upstairs area was not installed in accordance with the manufacturers recommendations. The siding did not have a one inch gap between the siding and the shingles on the roof, which can possibly allow water to affect the bottom edge of the siding. Further investigation with a contractor is recommended concerning this condition.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



10.4.2 Fiber Cement Siding

DAMAGED AT BOTTOM

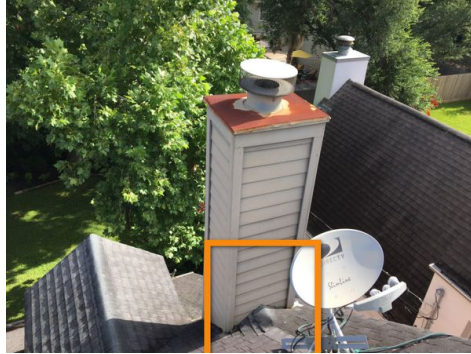
CHIMNEY

The siding was observed to be damaged at the bottom of the wall and needs to be repaired.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



11: EXTERIOR ITEMS

Information

OBSERVATIONS AND CONCLUSIONS

The following items were inspected, with our Observations and Conclusions noted.

Flatwork Concrete/Patios/Walkways: Cracks Driveway

Cracks and some separations were observed in the driveway concrete. In our opinion, the driveway is still in serviceable condition at this time.



Gutters and Downspouts: DS Connected to Drain

The downspouts were connected to an underground drainage system, which was not checked for performance and/or adequacy.

Gutters and Downspouts: Gutters and Downspouts - OK with some repairs needed

They gutters and downspouts were generally OK with some repairs needed as noted below.

Gutters and Downspouts: Gutter Screens OK

The gutters were observed to have screens to prevent debris buildup.

Gates and Fences: Gates and Fences - Some Repairs

The gates and fences were in generally good condition at the time of the inspection with some repairs observed to be needed as shown below under Recommendations/Repairs.

Recommendations/repair

11.2.1 Gutters and Downspouts

DEBRIS

The gutters were observed to have debris in them under the screens and are in need of cleaning.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



11.3.1 Gates and Fences

WOOD FENCE

Leaning, Starting to rot

The wood fence was in need of some repairs.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



11.4.1 Wood Rot

WOOD ROT

GARAGE PATIO DOOR

Door trim, Door frame

Wood rot was observed and needs to be replaced. Have a contractor provide a cost estimate to determine the entire scope of the wood rot, and provide a cost estimate to replace all rotted wood in the house.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



11.9.1 Miscellaneous Exteriors

FOLIAGE TOUCHING HOUSE

Trees limbs and/or bush foliage were touching the house and the limbs need to be trimmed.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.

11.9.2 Miscellaneous Exteriors

RUST STAIN

A rust stain was observed over the brick wall and a window at the west side of the house. It is recommended to clean the brick wall and the window.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



12: INTERIOR ITEMS

Information

OBSERVATIONS AND CONCLUSIONS

The following items were inspected, with our Observations and Conclusions noted.

Doors: Keyed deadbolts

We observed exterior doors that were equipped with keyed deadbolts, rather than thumbed deadbolts. In case of emergency, you would have to find a key to unlock the door, which could be hazardous. It is recommended that the keyed deadbolts be replaced with thumbed deadbolts. It is pointed out for informational purposes that current code requirements prohibit the use of keyed deadbolts.

R311.4.4

Smoke alarms: Installed at some locations

Smoke alarms were observed to be installed at some of the required locations in the house as set forth in the 2012 International Residential Code. The current code gives the Locations required, the Power Source, and the Interconnectivity requirements.

R314.3 Location.

Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

R314.4 Power source.

Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

R314.5 Interconnection.

Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Limitations

Smoke alarms

SMOKE ALARMS NOT OPERATIONALLY CHECKED

We could not determine if the smoke alarms are connected to a security alarm system as is common practice, therefore, to avoid possibly triggering a security alarm we did not operationally check each device, nor did we check the interconnectivity of the alarms. For safety purposes, it is recommended that smoke detectors and carbon monoxide detectors be replaced every ten years.

Recommendations/repair

12.3.1 Floor coverings

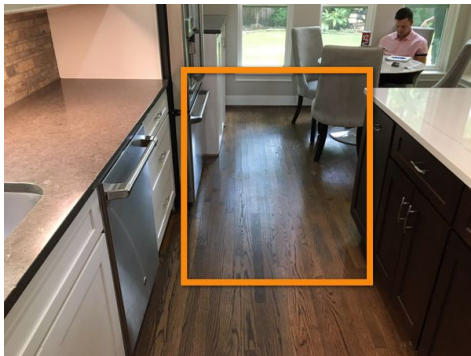
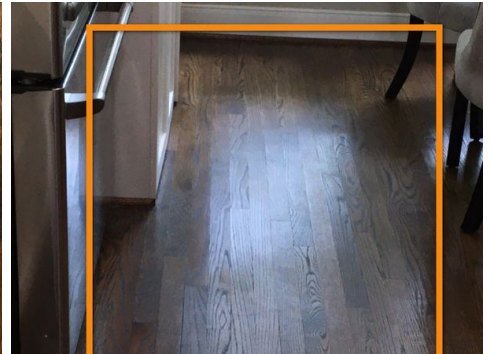
WOOD FLOOR WASHBOARD

The wood floor was observed to be buckled, with the edges of the boards curling upwards into a “washboard” effect. This condition is typically caused by moisture entering the wood and causing the boards to swell in size, causing peaking of the edges as they are pressed together. High moisture readings were observed on the moisture meter when the wood floor was checked. Further investigation with a wood floor specialist and/or a service company is recommended to determine the source of the moisture, and to make any needed repairs.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



12.4.1 Sheetrock

DAMAGED

GARAGE

The sheetrock was damaged and needs to be repaired.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



12.4.2 Sheetrock

DAMAGED BY DOORKNOB

GARAGE

The sheetrock was damaged from the doorknob, and needs to be repaired behind the door.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.

12.4.3 Sheetrock

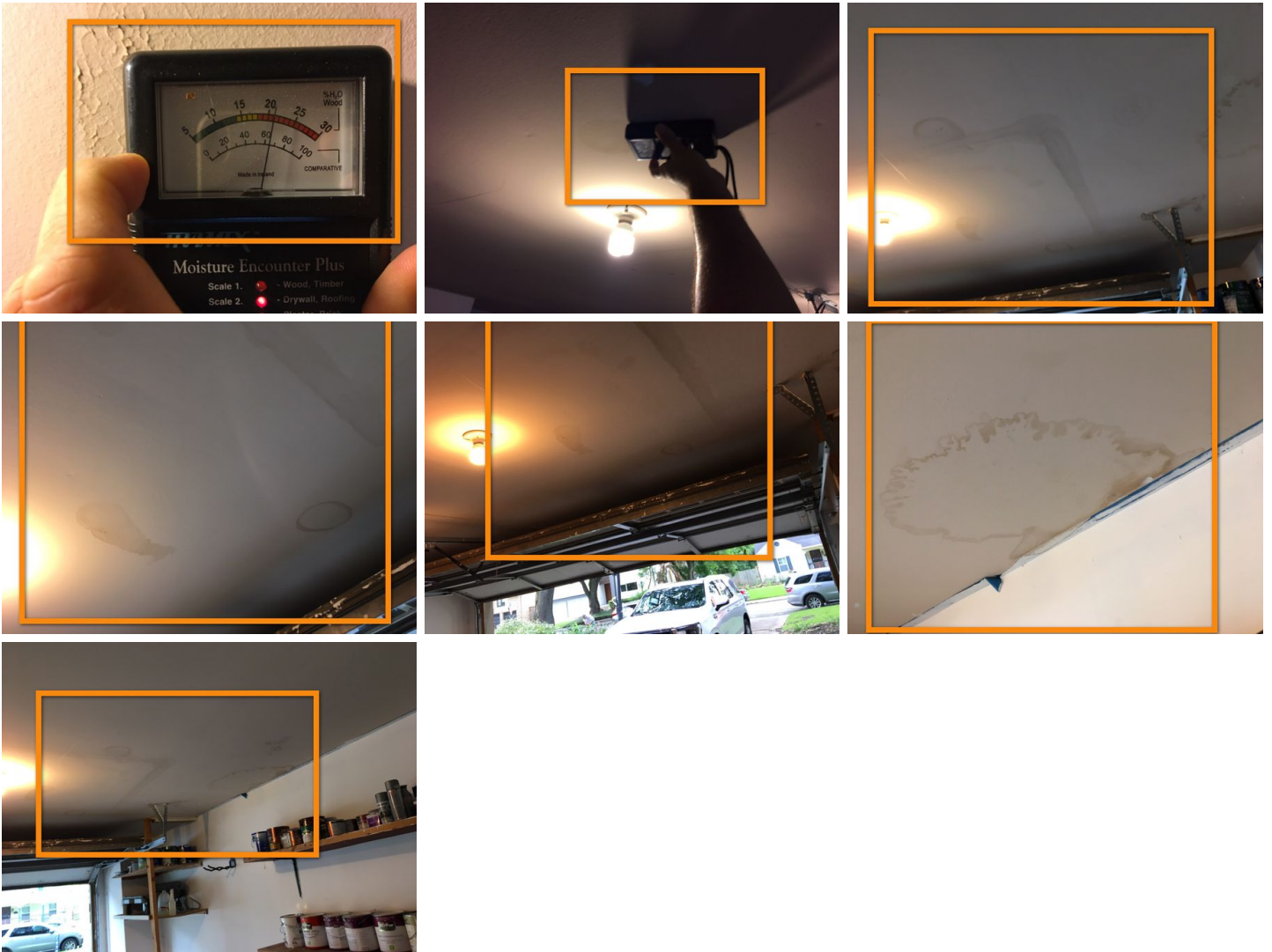
WATER STAINS - SOURCE UNKNOWN-ACTIVE

Water stains were observed. The source of the water stains could not be determined at the time of the inspection, but possible sources include roof leaks, plumbing leaks in the bathroom located above the stained areas, or possibly some other source. Have a service company determine the source of the water stains, and provide a cost estimate for any necessary repairs. We checked the stain with a moisture meter, and the stain had a higher than normal reading, indicating that it is active.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



12.6.1 Carbon monoxide detector

MISSING

The house does not meet the current code concerning carbon monoxide alarms which can be a safety issue. If bringing the house up to current code standards is desired, the section below from the 2012 International Residential Code is the current requirements for carbon monoxide alarms in a home.

Obtain Cost Estimate

R315.1 Carbon monoxide alarms.

For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

Recommendation

Contact a qualified professional.

12.7.1 Stairs/Handrails/Guardrails

HANDRAIL NOT TERMINATED INTO WALL

The handrails for the stairway were not constructed according to the current building code standards, which is expected given the age of the house. Therefore, the ends of the handrails do not terminate into the wall, which could allow loose clothing or a purse or bag to catch on the open end, causing tripping and/or falling down the stairs.

311.7.8.2

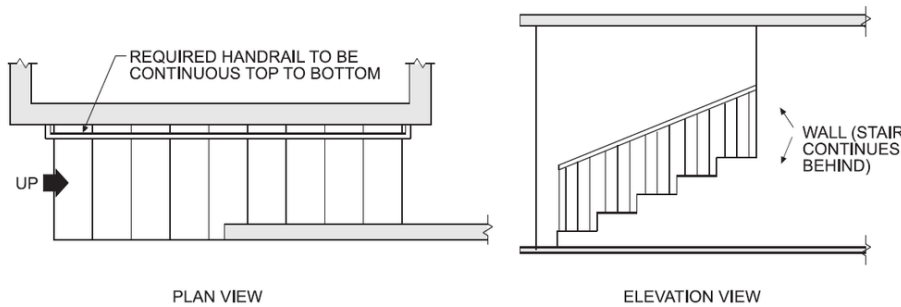
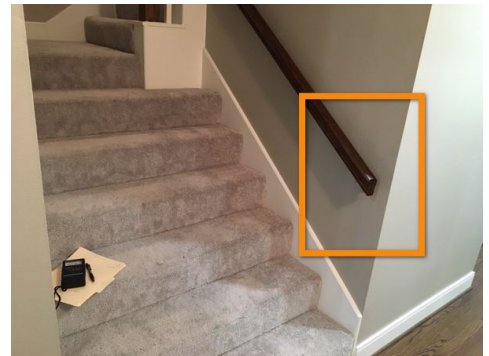


Figure R311.7.8.2
HANDRAILS

Recommendation

Contact a qualified professional.

12.7.2 Stairs/Handrails/Guardrails

HANDRAIL BALUSTERS > 4"

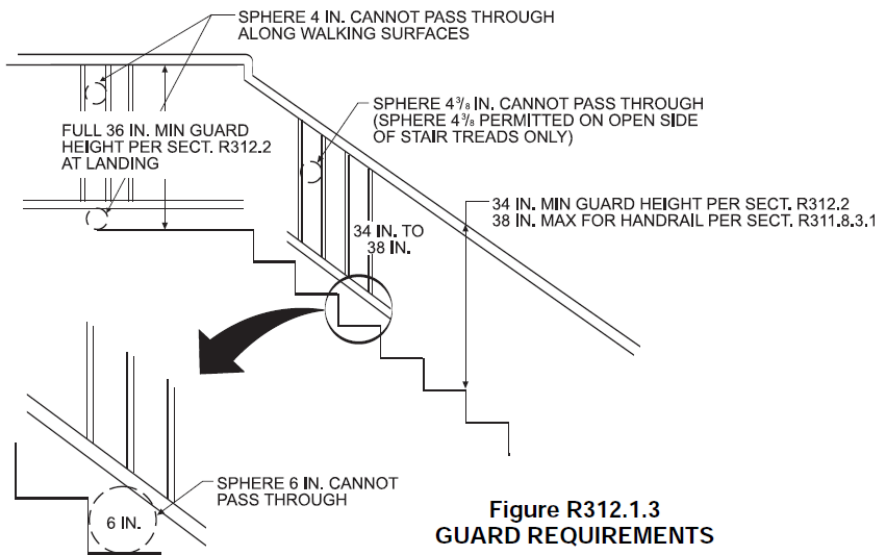
The handrail was not constructed according to the current building code standards (obviously, given the age of the house). Therefore, the width between the balusters is greater than four inches. If this condition is of a concern to you, then further investigation with a contractor is recommended.

Obtain Cost Estimate



Recommendation

Contact a qualified professional.



12.9.1 Miscellaneous interiors

BATHROOM TILES CRACKED

Bathroom tiles were cracked and it is recommended they be replaced.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



12.9.2 Miscellaneous interiors

SEAL SEPARATIONS

MASTER BATHROOM

We observed separations in between the tiles that need to be sealed. Have a contractor provide a cost estimate for repairs at the above locations.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



12.9.3 Miscellaneous interiors

GARAGE WINDOW

The west window of the garage door was loose and the pane was short. It is recommended to repair the window.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



12.9.4 Miscellaneous interiors

HIGH MOISTURE

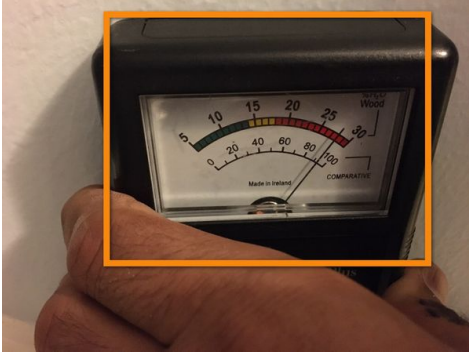
SECOND-FLOOR HALLWAY BATHROOM

High moisture was obtained near the toilet water supply. Further investigation and repairs are recommended.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



12.9.5 Miscellaneous interiors

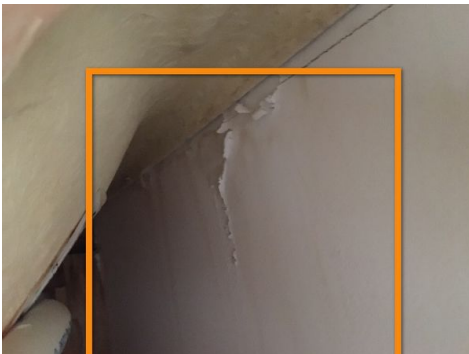
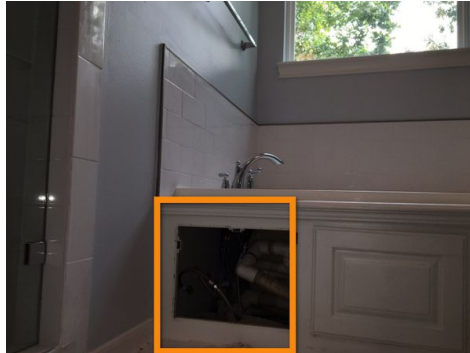
WATER STAINS

Water stains were observed under the master tub. The stains appeared to be related to leaking water around the tub tiles. Further investigation and repairs are recommended.

Obtain Cost Estimate

Recommendation

Contact a qualified professional.



13: CLOSE

Information

CLOSE

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 suggested that it would be a prudent thing to purchase a Home Warranty Policy to protect the appliances and equipment against unforeseen breakdowns during the first year and for preexisting conditions. It is recommended that you research the various options available and protect yourself with a policy. Check with your agent for details and please read our comments concerning Home Warranty policies on page 2 of this report.

Items identified as being deficient and in need of repair along with 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** and to **Obtain a cost estimate**. It is pointed out that other related and/or underlying conditions may be present, and which may not be apparent without further investigation.

We also recommend that you review the Service Agreement at the end of this report regarding any complaint concerning the inspection services provided pursuant to the service agreement, As agreed to, Client must notify HEI in writing of such complaint within ten (10) business days of the date of Client's actual discovery and thereafter allow a prompt reinspection of the item relating to the claimed condition. Client further agrees that client and he/she/it's agents, employees or independent contractors **will make no alterations, repairs or replacements to the item complained about prior to a reinspection by HEI as agreed above.**

As an additional service, we recommend using a new tool we have on our website that can quickly turn your inspection report into an easy-to-read estimate of repairs for a nominal fee. These pricing reports from a third party company called **RepairPricer** 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 **RepairPricer**. 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>

Thank you again for asking HEDDERMAN ENGINEERING, INC. to perform this inspection for you. If you have any questions after reviewing this report, please feel free to call the office. It is emphasized that the executed Service Agreement contract, which has been included at the end of this report, contains a provision under "Dispute Resolution" for you to contact HEI to resolve any disputes.

At your service,

Tim Hedderman

Texas Licensed Professional Engineer #51501

Texas Firm Number: 7942



14: RECEIPT PAGE

Information



HEDDERMAN ENGINEERING, INC.

www.heddermanengineering.com Office 281-355-9911 Fax 281-355-9903 office@heddermanengineering.com

07/13/2021

TO: Austin Stuckert & Michael Smaglick

REF: Inspection of the property at 4920 Laurel Street , Bellaire Tx 77401.

Total cost of inspection: \$750.00

Total Paid: \$750.00

Total Due: - 0 -

15: SERVICE AGREEMENT

Information

For your records, following is the Service Agreement that you executed for this inspection.

HEDDERMAN ENGINEERING, INC.

Office: 281-355-9911 Fax: 281-355-9903

office@heddermanengineering.com www.heddermanengineering.com

Real Estate Inspection Service Agreement

NOTICE: THIS AGREEMENT IS INTENDED TO BE A LEGALLY BINDING CONTRACT - PLEASE READ IT CAREFULLY

NAME OF CLIENT(S): Austin Stuckert & Michael Smaglick

DATE OF INSPECTION: 07/13/2021

PROPERTY ADDRESS: 4920 Laurel Street , Bellaire Tx 77401

Purpose of inspection

The purpose of the inspection is to view selected accessible components and/or systems, and to inform you, our client, of our observations and professional opinions from a NON-INVASIVE VISUAL SURVEY on whether or not those selected components and/or systems appear to be functioning on the day of the inspection, or appear to be in need of repair. Although this report may include observations of some building code violations, total compliance with structural, mechanical, plumbing, electrical codes, specifications, and/or legal requirements is specifically excluded. HEI does not perform Code inspections. Since building codes change every few years, our inspections are not done with the intention of bringing every item in the house into compliance with current code requirements. Rather, the standard of our inspections is a **PERFORMANCE STANDARD** to determine if the items inspected in the opinion of HEI appear to be functioning at the time of the inspection, or appear to be in need of repair. It is pointed out that other engineers/inspectors may have different opinions to those given in this report. It is also not our purpose to verify the adequacy and/or design of any component of the house, including the proper sizing and compatibility of HVAC, Electrical, and/or Plumbing components.

It is also not within the purpose and/or scope of this report to determine the insurability, habitability, merchantability, future performance, suitability of use, economic life span, or deferred maintenance issues, and/or issues unnamed in this report. This report is not an insurance policy, neither is it an express or implied warranty or guarantee as to future life and/or continued performance of the items inspected. Our inspection and report are intended to express HEI's perceived impression of the apparent performance of the inspected components and systems viewed on the date of the inspection. HEI's intent is to reduce your risk associated with this transaction, however we cannot eliminate all risk, nor assume your risk. Any items pointed out as in need of repair or further investigation should be evaluated by a qualified repair specialist or service company who should provide estimated repair costs **PRIOR TO CLOSING ON THE PROPERTY**. By accepting this agreement, the Client understands that the services provided by HEI are the types of services described in the Professional Services Exemption of the Texas Deceptive Trade Practices-Consumer Protection Act ("DTPA") and agrees that no cause of action exists under the DTPA related to the services provided.

It is recommended that you obtain as much history as is available concerning this property. This historical information may include copies of any seller's disclosures, previous inspection or engineering reports, building drawings and/or specifications, bids to perform repair work on the property, receipts from repair work that has been performed, reports performed for or by relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should attempt to determine whether repairs, renovations, remodeling, additions or other such activities have taken place at this property.

Scope of inspection

The scope of the inspection includes limited, visual observations at the interior and exterior of the structure, the attic (if applicable) as viewed only from the areas determined by the inspector to be safely accessible, the underside of the house (if applicable) as viewed only from the crawlspace areas determined by the inspector to be safely accessible, and the roof as viewed from the ground and/or only from the locations on the roof **if the roof is determined by the inspector to be safely accessible**. Only those items **readily** accessible and visible at the time of the inspection will be viewed and included in this report. Any items causing visual obstruction, including, but not limited to, furniture, furnishings, floor or wall coverings, registers and grills on HVAC ductwork,, foliage, soil, appliances, stored items, insulation, etc., will not be moved or removed. Only those electrical outlets that are readily accessible will be operationally checked. Disassembly or removal of any portion of the structure, mechanical equipment, plumbing equipment, or electrical equipment is beyond the scope of this inspection.

The components of the property included, if applicable, in the scope of the inspection:

Structural:

Foundation, elevation survey including sketch of house and level readings, primary load-carrying framing members, roof surface, water penetration, grading and drainage, fireplace/chimney, and miscellaneous items related to the house.

Mechanical:

Air conditioning and heating systems, water heater, built-in appliances, and garage door opener.

Plumbing:

Water and gas supply lines that are visible, sinks, toilets, tubs, showers, visible drain lines, and vents.

Electrical:

Service entrance conductors, electric meter, distribution panel, visible wiring, light fixtures, switches, and accessible receptacle outlets.

Lawn Sprinkler:

Control panel, solenoid valves, backflow prevention device, visible piping, and sprayer heads.

Pool:

Basin, deck, waterline tiles, pumps, filters, piping, heater, timer, and electrical.

The following items, even if present in the subject property, are not inspected and do not constitute any part of the inspection services to be performed hereunder unless a specific notation is made on this report stating its condition:

Tainted and Corrosive drywall (Chinese Drywall), Clock Timers, Landscape Lighting, Sump Pumps, Wood Destroying Insects/Pests, Antennas, Environmental Hazards, Laundry Equipment, Water Filters, Geological faults/subsidence, Automatic Oven Cleaners, Fire Sprinklers System, Mold/Microbial, Water Wells, Mosquito Misting Systems, Buried/Concealed Plumbing, Fire/Smoke Alarm Systems, Septic Systems, Indoor Air Quality, Asbestos, Low Voltage and data Systems, Lights on Photo-cell/timers, Carbon Monoxide Alarms, and Water Softeners/Water Treatment systems/Reverse Osmosis systems with all related piping.

Reinspections:

HEI typically does not perform reinspections on the property. However, if we agree to return to the property, it is with the understanding that we are not certifying the adequacy of any repair work that has been done, and there will be an additional fee charged. This is also true for conditions that are beyond the control of the inspector and hinder the inspector during the inspection, such as inclement weather, lack of adequate access to attics, crawlspaces, or other areas, utilities that are off, non-functional equipment, etc. If a return trip to the house is requested to finish items that were not able to completed at the time of the originally scheduled inspection, then an additional fee will be charged.

Limitations of Inspection

A visual inspection method will generally produce a competent first impression assessment of the apparent performance of the structural, mechanical, plumbing, and electrical components, provided repairs have not been performed which would cover distress patterns normally produced by problems. Because the inspection procedure is visual only, and is not intended to be diagnostic and/or technically exhaustive, an inherent residual risk remains that undiscovered problems exist and/or future problems will develop.

This report is provided solely for the use of the person to whom this report is addressed, and is in no way intended or authorized to be used by a third party, who may have different requirements, and to whom we have not contracted with to perform an inspection. If a third party chooses to use this inspection report, they do so without HEI's permission or authorization, and they do so at their own risk.

Dispute Resolution

In the event of a complaint concerning the inspection services provided pursuant to this agreement, Client must notify HEI in writing of such complaint within ten (10) business days of the date of Client's actual discovery and thereafter allow a prompt re-inspection of the item relating to the claimed condition. Client further agrees that client and he/she/it's agents, employees or independent contractors **will make no alterations, repairs or replacements to the item complained about prior to a reinspection by HEI as agreed above**. You agree that failure to comply with

this procedure shall result in your express release of all claims Client may have against HEI, known and unknown, related to the item complained about and any related alleged act or omission by HEI.

LIMITATION OF LIABILITY: In any event the inspector fails to fulfill the obligations under this agreement, CLIENTS EXCLUSIVE REMEDY AT LAW OR IN EQUITY AGAINST INSPECTOR IS LIMITED TO A MAXIMUM RECOVERY OF DAMAGES EQUAL TO THE INSPECTION FEE PAID HEREIN. CLIENT VOLUNTARILY AGREES TO WAIVE THEIR RIGHTS UNDER THE DECEPTIVE TRADE PRACTICES-CONSUMER PROTECTION ACT, SECTION 17.41 ET SEQ. BUSINESS & COMMERCE CODE. This limitation of liability applies to anyone, including client, who is damaged or has to pay expenses of any kind, including attorney fees and costs. Client assumes the risk of losses greater than the refund of the fee paid herein. Client acknowledges that this limitation of liability is reasonable in view of the relatively small fee that inspector charges for making the inspections when compared with the potential of exposure that inspector might otherwise incur in the absence of such limitation of liability, and that a much higher fee would be charged if the inspector were subject to greater liability.

Statute of Limitations

The parties agree that no claim, demand, or action, whether sounding in contract or in tort, may be brought to recover damages against HEI, or its officers, agents, or employees MORE THAN TWO YEARS AND ONE DAY AFTER THE DATE OF THE INSPECTION OR THE DATE ANY PURPORTED CAUSE OF ACTION ARISING OUT OF THE INSPECTION ACCRUES. TIME IS EXPRESSLY OF THE ESSENCE HEREIN. Client understands that this time period may be shorter than otherwise provided by law.

Acceptance of Report

By signing I confirm that I have read, understood, and agree to the above pre-inspection service agreement, and that I agree to be bound by these terms and conditions. In the absence of Client signing this service agreement prior to or at the time of the inspection, then acceptance of the report and/or payment for the inspection shall constitute agreement with all of the terms of this agreement. The report to be prepared by HEI shall be considered the final and exclusive findings of HEI regarding the inspection of the property which is the subject of this agreement. Client shall not rely on any oral statements made by HEI or its representatives prior to issuance of the printed report.

NOTE: IF THE INSPECTION IS CANCELLED LESS THAN ONE FULL BUSINESS DAY BEFORE THE SCHEDULED TIME, INCLUDING SATURDAYS, SUNDAYS, AND/OR HOLIDAYS, THE CLIENT WILL BE CHARGED ½ OF THE ORIGINAL INSPECTION FEE AND AGREES TO PAY SUCH PENALTY FEE. IF THE INSPECTION IS CANCELLED LESS THAN ONE HOUR BEFORE THE SCHEDULED TIME OF THE INSPECTION, THE CLIENT WILL BE CHARGED THE FULL INSPECTION FEE.



I HAVE READ AND ACCEPT THIS AGREEMENT