



HEDDERMAN ENGINEERING, INC.

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2007

TO: Mr.

REF: CONDITION OF PROPERTY SURVEY

Dear Mr. :

At your request, a visual survey of the structure, mechanical equipment, plumbing equipment, and electrical equipment of the house located at XXXXXX, Houston, Texas, was made by Mr. Tim Hedderman and Mr. Mark Curzan.

Transmitted herewith is the inspection report stating our professional opinions on whether the items of construction included in the survey are performing their intended function, or are in need of repair.

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.

Sincerely,

HEDDERMAN ENGINEERING, INC.
Tim Hedderman, President



INTRODUCTION

PURPOSE

The purpose of the inspection was to view the structural, mechanical, plumbing, and electrical components of the house, and 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. 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 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 that our stated performance standard for judging whether a piece of equipment is functional or in need of repair. It 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.

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 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 property on the day of the inspection, and not to provide discussions or recommendations concerning the future maintenance of any part of the property, 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.

As a courtesy, we may provide some "ballpark" repair estimates for items that should be repaired. These estimates are only approximate and, therefore, should in no way be relied upon as a bid for the actual performance of the work. Also, since we are not a party to the contract governing the sale of this property, these "ballpark" estimates should not be relied upon as the only source of cost information for repairs. The scope and cost of the actual repairs can vary significantly from the estimates, and it is your responsibility to see that the scope of work needed and actual cost of repairs is confirmed by one or more qualified service companies before closing on the property. This report may also contain items listed as "Information" which are listed as a courtesy to help you become more aware of the condition of the property.

In the performance of this inspection, HEDDERMAN ENGINEERING, INC. has acted as an engineering consultant subject to the standards of the State Board of Registration for Professional Engineers. We are not affiliated with the Texas Real Estate Commission, and are not subject to, or limited by, their standards of practice for their licensed inspectors.

SCOPE

The scope of the inspection included limited, visual observations at the interior and exterior of the structure, the attic as viewed only from the areas determined by the inspector to be safely accessible, and the roof as viewed from the ground. Only those items readily visible and accessible at the time of the inspection were viewed and are included in this report. Any items causing visual obstruction, including, but not limited to, furniture, furnishings, floor or wall coverings, foliage, soil, appliances, insulation, etc., were not moved. Only those electrical outlets that were readily accessible were operationally checked.

The basis of our opinions will be the apparent performance of that portion of the property 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 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 heater, built-in kitchen appliances, and garage door opener.
- Plumbing: Water and gas supply lines, sinks, toilets, tubs, showers, drain lines, 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.
- Pool: The pool components included the basin, the deck, pumps, filters, piping, heater, and electrical.
- Security: If the house is equipped with an alarm system, the alarm system may be checked by a representative from Brinks Home Security. It is pointed out for your information that Brinks typically pays inspection companies a small processing fee for promotional purposes. Brinks will typically contact you at a later date at the phone numbers you have provided, with promotional offer about their services.

Items specifically excluded from our inspection include:

- All pests, wood destroying insects, ants, or rodents.
- 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.
- Pressure testing of gas system.
- 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.
- 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 was performed on the electrical system.

We make no representation regarding the condition of this property other than as contained in this written report. Any verbal discussions concerning this property 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. 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, and accept the inherent risk involved.

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, renovation, remodeling, additions or other such activities have taken place at this property.

DESCRIPTION OF HOUSE

The house was a 2/3 bedroom, 2-1/2 bath, three story wood frame dwelling with brick veneer and vinyl siding, a composition shingle roof, and was supported on a monolithic slab on grade concrete foundation. The house had a two car attached garage. The house was occupied at the time of the inspection, and the age of the house is estimated to be approximately 20-21 years.

FOR THE PURPOSES OF THIS INSPECTION, NORTH WILL BE ASSUMED TO BE FROM THE LEFT SIDE OF THE HOUSE TOWARDS THE RIGHT, WHEN FACING THE HOUSE FROM THE FRONT.

STRUCTURAL

FOUNDATION

Observations

It was disclosed that the foundation of this house has been repaired previously, apparently in 1990 with piers installed at the south side of the house at the fireplace area. It is pointed out that HEDDERMAN ENGINEERING, INC. cannot and does not take any responsibility for the adequacy and/or future performance of the repair work. Any opinions given in this report concerning the levelness of the house are for the day of the inspection only, and are not a warranty against future foundation movement of the house. It is recommended that you obtain all available information and warranties from the homeowner relating to the foundation repair.

Evidences and consequences of differential movement of the foundation observed during the inspection include:

- * Normally horizontal surfaces, such as floors, door tops, counters, window sills, etc., were observed to be sloping generally from a high point just inside the door of the master bedroom, towards the front, rear, and south sides. The floors were checked with an electronic level, and the difference in elevation between the high point and

low point was 3.9 inches. The lowest point was located at the rear corner of the master bedroom, and the floor in the master bedroom had a noticeable unlevelness when walked upon. See our field sketch with the elevation readings at the end of this report.

We typically point out that foundations are rarely constructed perfectly level, so most houses have some unlevelness built into the foundation as part of original construction. We have no knowledge as to how much unlevelness was built into this house foundation. (Information)

- * Cracks in the exterior brick veneer were minimal in number and degree.
- * Sheetrock cracks, patches, or compression ridges were observed at the living room.
- * The foundation concrete was observed to be cracked at the garage floor.
- * Some separations and differential movement of materials due to differential foundation movement were observed at:
 - Window frames were separated from the exterior brick veneer at the south side of the house, and the separations have been sealed.
 - Doors that would not latch due to misalignment of the striker plate and the locking mechanism were observed at the half 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 at the half bathroom, where a separation of approximately $\frac{3}{4}$ - 1 inch was visible at the top of the door.



Other observations made during the course of the inspection related to the foundation include:

- * Trees and/or foliage were observed in the vicinity of the house, which can contribute significantly to differential movement of the house foundation. Care should be taken to prevent the trees and foliage from removing an excessive amount of water from near the foundation of the house. Consideration should also be given to cutting the tree roots that extend under the foundation, and installing a root barrier to prevent any further moisture from being removed from under the interior of the house. (Information)

Conclusions

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 degree of the foundation movement is more than what is acceptable. The most significant movement was located at the south side of the house, and also towards the west side, at the common wall between the unit and the adjacent unit.

Due to the more than acceptable amount of movement of the foundation of this structure, it is our opinion that repair to the foundation is needed at this time. It is recommended that at least three foundation repair contractors be contacted in order that they may make their own assessment of the scope and cost of the work needed to bring this foundation back to an acceptable degree of levelness.

Perimeter Grading/Drainage

The flower bed and/or perimeter grading was too high at some areas, and was graded near or above the top of the foundation. It is recommended that the beds/soil be regraded as needed to prevent water penetration into the house, and to allow for proper drainage. Obtain Cost Estimate.

STRUCTURAL FRAMING

Description

The house was observed to be a wood frame structure that includes standard major framing components, including wall studs, ceiling joists, floor joists, and roof rafters with purlins and strut supports.

Observations

The subflooring in the living room was squeaking when walking on the carpet. The subflooring needs to be resecured. Obtain Cost Estimate.

No deficiencies were observed in the primary load carrying members of the structural framing that were accessible and viewed at the time of the inspection, including the roof framing, load bearing walls, ceilings, and floors. The unlevelness in the upstairs floor is simply a reflection of what is happening to the foundation on the first floor.

Conclusions

The primary load carrying members of the structural framing that were viewed were performing their intended function at the time of the inspection, and were not in need of repair.

ROOF

Life expectancy

The roof surface was constructed of composition shingles. The life expectancy of a composition shingle roof has been observed to vary from 10 to 20 years, with most requiring replacement at about 15 years. We understand from the owners disclosure that the roof was replaced in January, 2005.

Observations

After observing the interior of the structure, evidences of current roof leaks were not visible. The absence of evidences of roof leaks does not guarantee that roof leaks were not present; rather, that no evidences of leaking were visible at the time of the inspection. Some stains were visible on the ceiling at the living room near the fireplace, but the stains appeared to be related to previous roof leaks. It is recommended that you check with the owner concerning the stains. It appears that the stains are located below a restricted valley at the chimney, where the roof narrows down, and can hold leaves and other debris. If debris is allowed to build up, it can allow a "dam" effect, causing a roof leak. Care must be taken to keep the valley clean. Also, you may want to consider having a cricked built to route water around the chimney.



Conclusions

The roof is in serviceable condition at this time, and is performing its intended function with no repairs indicated to the roof surface.

WATER PENETRATION

Evidences of water penetration to the interior of the structure were observed at the following location(s):

1. The exterior doors at the master bedroom, where the carpet and carpet tack strips were water stained, and the baseboard molding were water stained. (See photo below) The source of the water penetration appeared to be



A vulnerability of water penetration was observed at some locations, and it is recommended that the locations be sealed against water penetration. Locations included:

- The vent caps at the south side of the house.
- Piping penetration(s), where the penetrations need to be sealed to prevent water penetration, including at the hose bibs.

MISCELLANEOUS ITEMS

Windows

Windows that would not stay open were observed at the living room and the dining room. Obtain Cost Estimate.

Wood Rot

Wood rot was observed at several locations around the house, including at the garage door trim; the front door trim and threshold; the exterior doors at the master bedroom, the living room, and third floor; the window trim at the front of the house at the master bedroom; and the wood trim at the front of the house at the second floor window boxes. It is pointed out that additional damage could be present under the rotted materials, that will not be visible until the outer rotted materials are removed. Have a service company determine the entire scope of wood rot throughout the house, and provide a cost estimate to replace all rotted wood. (see photos below)



Stairways

The handrails for the stairway were not constructed according to the current building code standard, which can be hazardous for someone using the stairs. It is recommended that you consider having an approved handrail installed. Obtain Cost Estimate. (see photo below)



CLOSE

All cost estimates for repairs are provided only as a courtesy. They are only approximate and, therefore, should not in any way be relied upon as a bid for the actual performance of the work. The estimated scope and cost of each repair can vary significantly, and it is your responsibility to see that our estimated repair costs are confirmed by one or more qualified service companies before closing on the property. Should you choose to not secure firm bids from service companies, then you use our "ballpark" estimates at your own risk.

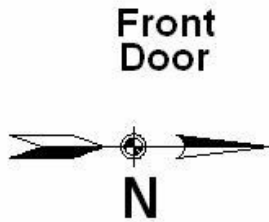
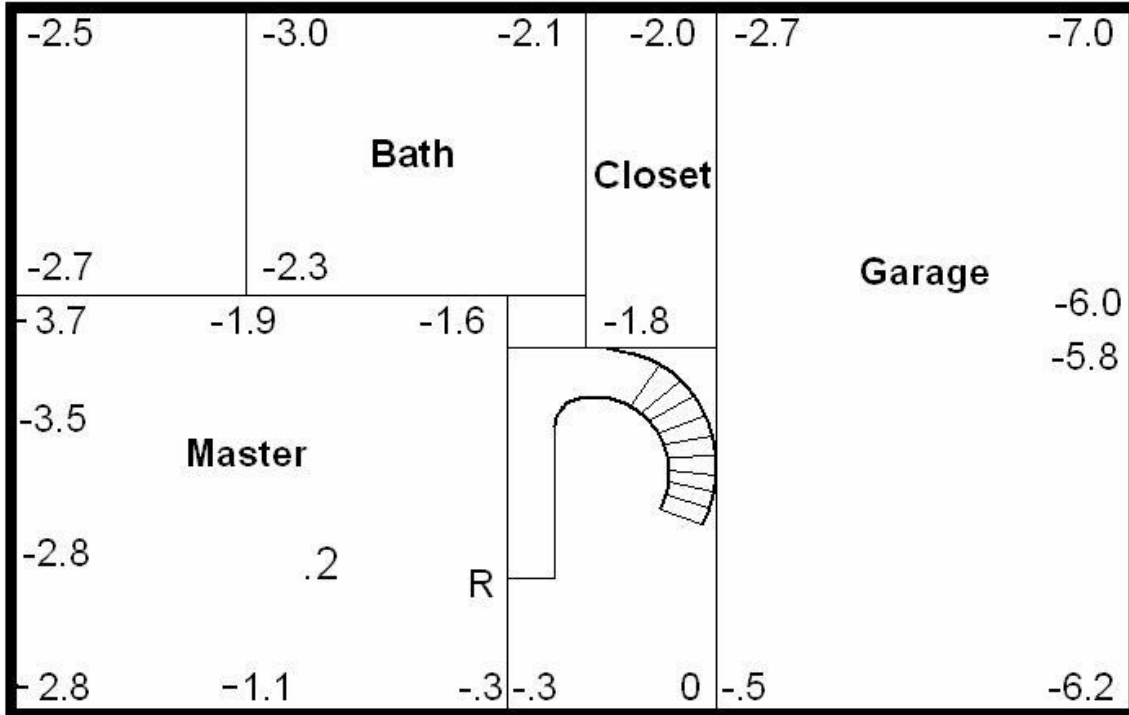
Opinions and comments stated in this report are based on the apparent performance of the items included within the scope of the inspection, at the time of the inspection. Performance standards are based on the knowledge gained through the experience and professional studies of the inspector. There is 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.

At your service,

Tim Hedderman
Registered Professional Engineer

11-09-05

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ELEVATION READINGS