



HEDDERMAN ENGINEERING, INC.

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

DATE, 2018

TO: CLIENT

REF: CONDITION OF PROPERTY SURVEY

Dear CLIENT :

At your request, a visual survey of the foundation of the house located at ADDRESS was made by INSPECTOR.

Transmitted herewith is the inspection report stating my professional opinion on whether the foundation is performing its intended function, or is 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



Address

INTRODUCTION

PURPOSE

The purpose of the inspection was to view the evidences of differential movement of the foundation, and give our professional opinion on whether or not the foundation was performing its intended function at the time of the inspection, or was in need of repair. It is pointed out that, due to the subjective nature of interpretation of the evidences of foundation movement, it is possible for other professionals to have a differing opinion.

This report is provided for the use of the person to whom this report is addressed, and is in no way intended to be used by a third party, who may have different requirements. It is our purpose to provide information on the condition of the foundation on the day of the inspection, and not to provide discussions or recommendations concerning the future maintenance of the foundation nor 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**. 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 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.

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 any items causing visual obstruction, including, but not limited to, furniture, furnishings, floor or wall coverings, foliage, soil, appliances, insulation, etc., were not moved. Also excluded from the scope of this inspection is any discussion of or condition relating to geological faults and/or subsidence.

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 is beyond the scope of this inspection.

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.

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.

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.

DESCRIPTION OF HOUSE

The house was a two story wood frame dwelling with stucco veneer, 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 house, according to HAR, was built in DATE

FOR THE PURPOSES OF THIS INSPECTION, NORTH WILL BE ASSUMED TO BE FROM THE FRONT OF THE HOUSE TOWARDS THE REAR.

OBSERVATIONS AND CONCLUSIONS

FOUNDATION

Description

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

EVIDENCES OF DIFFERENTIAL MOVEMENT

Levelness

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

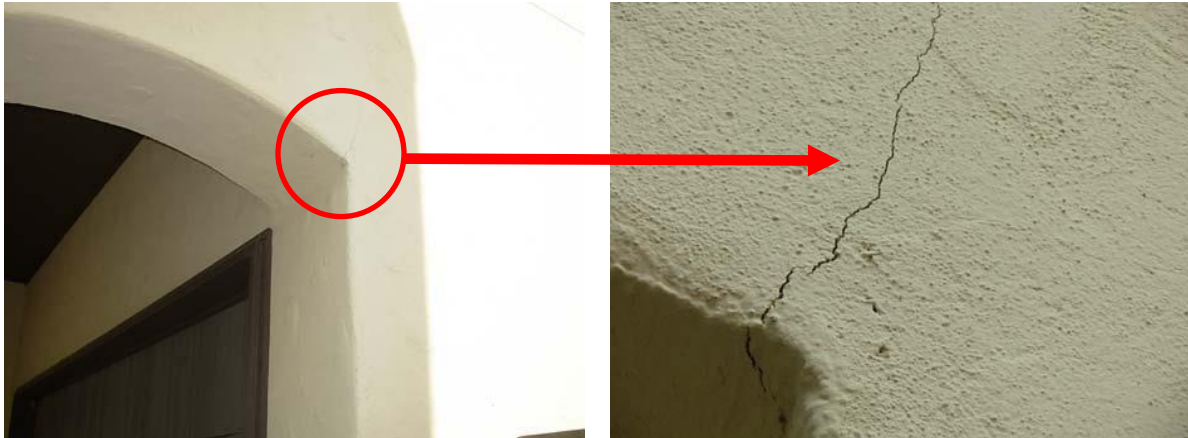
Normally horizontal surfaces, such as floors, door tops, counters, window sills, etc., were observed to be sloping generally from the rear of the house towards a low area at the front wall of the house at the study. The floors were checked with an electronic level, and the difference in elevation between the high point and low point was 1.8 inches on the first floor and 2.2 inches on the second floor.

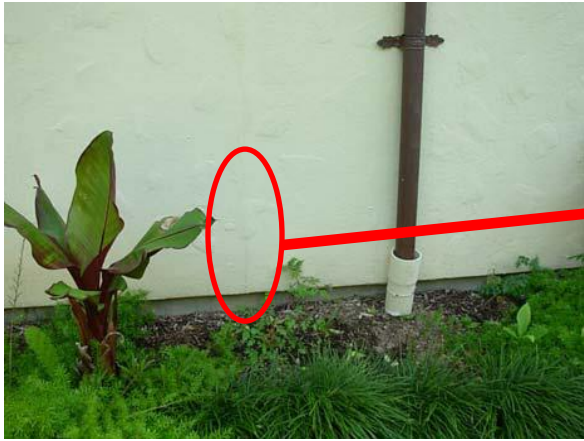
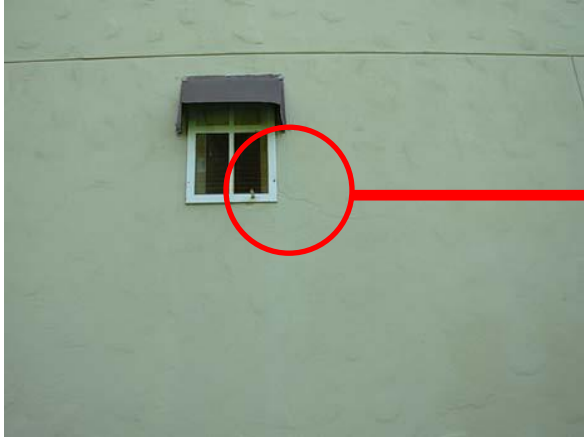
See our field sketch showing the elevation readings at the end of this report. Note that the "R" on the sketch is our randomly chosen starting reference point, where the elevation is 0, and all other elevation readings are taken relative to the reference point, and are measured in inches to the nearest 1/10 inch. Note also that elevation readings taken at the garage area are relatively large numbers relative to the reference point due to the step down into the garage area.

We typically point out that foundations are rarely constructed perfectly level, so most houses 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. (Information)

Veneer Cracks

Cracks and/or patches were observed in the exterior stucco veneer at all four sides of the house, as seen in the photos below. The cracks in the stucco were in accordance with movement of the foundation as seen in the elevation survey at the end of the report.







Sheetrock Cracks

Sheetrock cracks, patches, or compression ridges were observed several locations as seen in the photos below. The location and direction of the cracking is in agreement with the sloping of the floors to indicate settlement of the foundation towards the low area of the house at the front wall of the study. Note that the following is only some, not all, of the cracks observed in the house.









Concrete Cracks

The foundation concrete was observed to be cracked at throughout the downstairs area and the garage, where the concrete was visible.

The corner of the foundation was observed to be chipped. This is condition that is 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 structural integrity of the foundation.



Separations of Materials

Some separations and differential movement of materials due to differential foundation movement were observed, including the following:

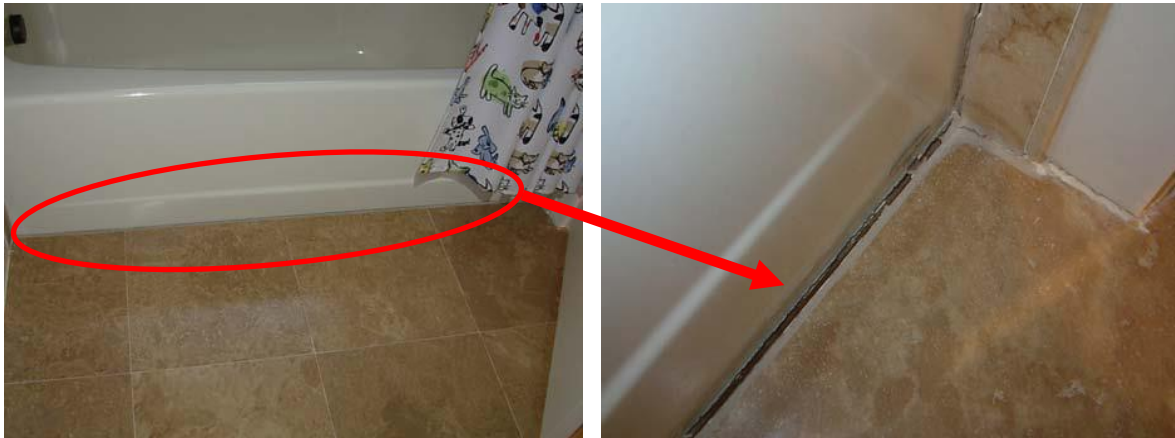
- A separation was visible at the bottom of the door trim at the kitchen pantry and wine room area.



- A door was sticking at the upstairs west center bathroom.



- The floor tiles at the upstairs west center bathroom were separated from the edge of the tub.



Other Observations

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.

Foundation Conclusion

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.

Due to the more than acceptable amount of movement of the foundation of this structure, it is our opinion that releveling of 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.

Obtain Cost Estimate

Perimeter Grading/Drainage

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

The perimeter drainage around the property appeared to generally be adequate. It was

not raining at the time of the inspection and, therefore, it could not be determined with certainty if water would pool at any localized low areas around the property.

UNDERGROUND DRAIN

The underground drainage system at the rear of the house was checked by running water into the drain for approximately 15 minutes, and the system was observed to be draining properly to the street.



CLOSE

Opinions and comments stated in this report are based on the apparent performance of the foundation on the day 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 the foundation.

Sincerely,

A handwritten signature in black ink that reads "Tim Hedderman".

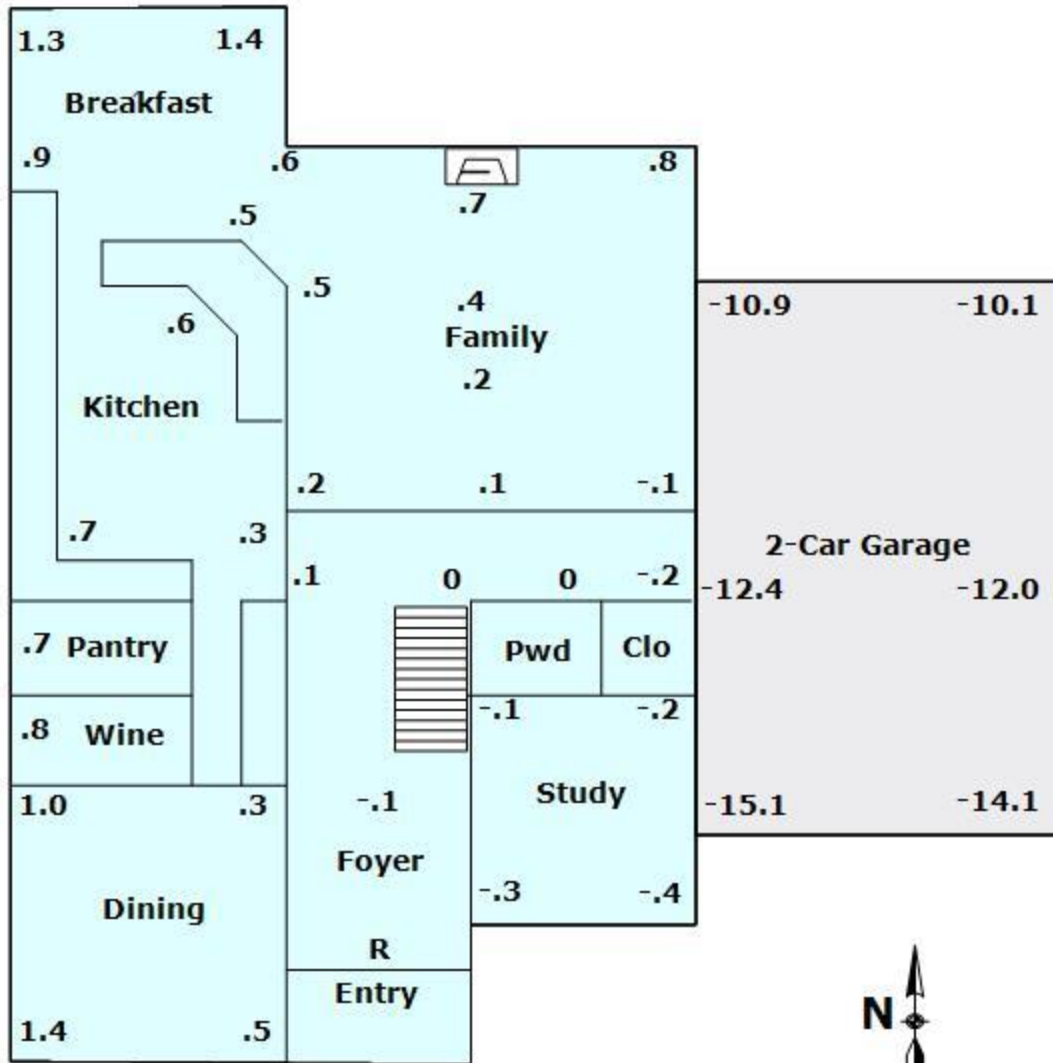
Tim Hedderman
Registered Professional Engineer #51501
Texas Firm Number: 7942



DATE

HEI

CLIENT



**Elevation Readings
ADDRESS**



HEDDERMAN ENGINEERING, INC.

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

RECEIPT

DATE, 2018

TO: CLIENT

REF: Inspection of the house at ADDRESS.

Total cost of inspection: XXXXXX

Total Paid: XXXXXX

Total Due: - 0 -