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3 August 2023

Harms Real Estate  
2116 12<sup>th</sup> Street  
Port Neches, Texas

## **REFERENCE: FOUNDATION INSPECTION**

Dear Sir or Madam:

Proceeding upon your request, I made a visual inspection of the site. Following in this report are my findings, discussion, conclusions, recommendations, and maintenance considerations where applicable.

### **SCOPE OF INSPECTION**

To perform a level A type visual inspection of the site's foundation outlined by the ASCE foundation guidelines for residential foundations, list my findings, provide discussion, draw conclusions, and make recommendations for repairs (if needed).

### **SITE DESCRIPTION**

The residence is a one-story wood framed structure with exterior siding. The residence has a beam and pier type foundation system. The residence is approximately fifty (50) years old.

### **FINDINGS**

The following are structural and non-structural items I observed during my inspection. It is my opinion that these items may contribute to, indicate existing, and/or lead to future foundation related problems. The residence has been remodeled on the interior.

1. The floor was observed to have minor high and low spots.
2. Most of the doors were working properly.
3. No soft spots were observed in the residence.
4. The supporting piers were observed to be in good condition from where viewed.

### **DISCUSSION**

Residences with beam and pier foundation systems generally experience movement on a regular basis. Each pier is independent of another and moves accordingly. Leveling and shimming from time to time is often utilized in adjusting the foundation system to offset the differential movement between the piers. How often this happens is unpredictable, but signs such as sticking doors, diagonal sheetrock cracks, and floors that are not level are good indicators that it might be time.

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During the year, seasonal changes occur. Southeast Texas is home to a particular type of soil that is greatly affected by moisture content. This soil's volume shrinks during dry conditions and swells during wet conditions. This soil's volume change generates pressures that will move the foundation with it. The exposure of the foundation, location of trees and their type, and other unseen variables such as plumbing leaks will greatly contribute to the rate that the soil dries and changes in volume due to excess water. These differences in shrinking and swelling around and under the foundation create differential movement that will flex the foundation.

### **CONCLUSIONS**

Based upon the visual inspection and indicators listed above, it can be concluded that the foundation has experienced very minimal differential soil movement in the past, well below tolerances for homes of this age. Since no signs of continuing movement exist, it is my opinion that leveling and shimming of the floors is not required.

### **RECOMMENDATIONS**

The sill beam that is not located on the adjacent pier should be re-installed.

Maintenance of the foundation is a sensible method of minimizing foundation movement due to shrinking and swelling soils. According to the best information available, these maintenance considerations will aid in controlling the soil's moisture content and minimizing differential movement. However, these suggestions do not guarantee or provide a warranty against future foundation-related problems.

### **MAINTENANCE CONSIDERATIONS**

By following these suggestions as well as using good sense it is possible to maintain a foundation for extended use.

- ◆ Good and uniform drainage around the foundation should be supplied. This will aid in controlling the rate the soil dries. However, do not let the soil completely dry out. The soil should remain moist just below the surface. Uniform drying limits differential movement therefore limiting foundation flexure. Protect standing water at any location around the foundation.
- ◆ Do not plant trees too close to the perimeter of the foundation, especially ones that will grow large. Oak trees especially should not be planted close to foundations. Generally, the roots will extend out as far as the limbs. If trees are too close to the foundation, their roots will grow under and sometimes through the foundation. The roots will pull moisture from beneath the foundation, changing the soil's volume and creating differential movement. Trees have been known to destroy foundations. Root barriers are available to aid in protecting the foundation. If an existing tree is already too close, its removal would greatly increase the chances against future foundation related problems.

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- ◆ Exposure also plays a role in foundation related problems. There are many variables that can contribute to non-uniform drying and ultimately differential movement. A few variables that one can be aware of are shading from trees, direct sunlight, patio paving, driveways, landscaping, and downspouts.

### LIMITATIONS

This report and opinions made cover existing conditions as observed during a site visit. No responsibility is taken for unseen defects. This report is not a guarantee or warranty of the foundation, its design, or soil conditions. No person outside this office had any influence on opinions expressed during this report and our maximum liability is limited to the fee paid. Contact our office if these limitations are not acceptable.

I appreciate the opportunity to be of service to you. If any questions arise, please do not hesitate to contact me.

Sincerely,

Ted B. Harp Jr., P.E., RPLS



✓  
8/3/23