

317 27th St. San Leon, TX 77539 (281) 339-5565

# STRUCTURAL EVALUATION 1051 Shorewood, Taylor Lake Village, TX 77586 April 18, 2012

The subject property is a 1½-story, wood-framed, brick-veneered house. Date of original construction was 1963. The house stands atop a conventionally reinforced concrete mat foundation that is partially supported by piers at undetermined locations. An outline of the foundation is shown on the attached Foundation Plan.

The property is experiencing structural distress which manifests as a sloping floors, and cracks in the brick veneer. An investigation into the cause of the distress revealed shifts of the foundation. The shifts were caused in turn by problems within the soil beneath the foundation.

The house was built on a site where the soil contains a large proportion of high-plasticity clay. That clay is sensitive to changes in moisture, i.e. it shrinks and hardens when dry, and swells and softens when wet. When such a clay is shut off from air and sunlight for many years, such as occurs when a house is built over it, the soil reacts by changing its moisture content.

#### Conclusions

- 1) The house is being stressed by the movement of soil beneath the foundation. The movement is causing the foundation to sag as much as two inches as shown by the elevation contours on the Foundation Plan, which is causing the previously described structural distress.
- 2) Areas where piers can be determined appear to be stable. It is likely that the areas now sagging have no piers.
- 3) It is not practical in this case to control the shrink/swell action of the soil by means of irrigation tubes or soaker hoses. Any attempt to further moisten the perimeter soils would further saturate the subfoundation soil. The excess moisture may initially provide some relief in the foundation perimeter sags via clay swelling. In time though, the moisture would weaken the clay in those areas to the extent that they would shift even more readily than at present. Overall, the situation would worsen.

# ALLIED FOUNDATION SPECIALISTS, INC.

\*WARRANTY\*

1051 Shorewood Dr.

Allied Foundation Specialists has placed: (9) Nine
Ext. Driven Concrete Piers & (12) Support Pads around the perimeter of
the structure in designated areas located at: 1051 Shorewood Dr.,
Taylor Lake Village, TX 77586.

Allied Foundation Specialists issues an unconditional Life Time Service Agreement effective: <u>August 30, 2012.</u>

This warranty is completely transferable to any and all future owners of this home, provided no major structural changes have been made.

In the event any adjustment is required at a later day, it will be done at no cost to the homeowner where our piers are currently installed.

It is noted that the company is responsible for the foundation alone. No other part of the structure, interior and exterior is covered under this agreement. This includes sheetrock, doors/door frames, flooring of any type, grout mortar on the exterior, etc......

## **Maintenance Tips**

1) The soil around the perimeter of the foundation should be watered once a week throughout the year and two to three times per week in drought conditions.

2) Establish positive drainage so water is not allowed to pond around the slab.

Allied Foundation Specialists, Inc.

4906 Luella Ave.

Deer Park, Texas 77536

281-479-5247-direct

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slab82@alliedfoundation.net

### ALLIED FOUNDATION SPECIALISTS, INC.

\*WARRANTY\*

1051 Shorewood Dr.

Allied Foundation Specialists has placed: (22) <u>Twenty-two</u> Ext. Driven Concrete Piers around the perimeter of the structure located at: 1051 Shorewood Dr., Seabrook, TX 77586.

Allied Foundation Specialists issues an unconditional Life Time Service Agreement effective: <u>July 2, 2006.</u>

This warranty is completely transferable to any and all future owners of this home, provided no major structural changes have been made.

In the event any adjustment is required at a later day, it will be done at no cost to the homeowner where our piers are currently installed.

It is noted that the company is responsible for the foundation alone. No other part of the structure, interior and exterior is covered under this agreement. This includes sheetrock, doors/door frames, flooring of any type, grout mortar on the exterior, etc...........

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