NOVEMBER 20, 2002 - Guidelines for the Evaluation and Repair of Residential Foundations

Speaker: Bob Pierry, P.E., of Roger Bullivant of Texas, Inc., Dallas TX.

Mr.Pierry chaired the ASCE subcommittee which developed the recently sanctioned documented entitled, "Guidelines for the Evaluation and Repair of Residential Foundations." This subcommittee was formed by ASCE members 2.5 years ago and met monthly all over Texas. This document took effect on January 1, 2003 and is currently available from ASCE at http://www.texasce.org/. (the site is not Mac-compatible, and you may need to be a member of the Texas Section to access the paper)

PRESENTATION SUMMARY

Mr. Pierry gave a PowerPoint presentation to an audience of about 50. He went through the paper section by section. He started with an expression of his dismay for the disclaimer in the Forward which stated the paper was not to become a standard but should only be a guideline. He said it was ASFE that put that disclaimer in. He also said that the word "failure" never appeared in the document. Rather it addressed whether a foundation was performing properly or not performing properly.

The guide proposes three levels of investigation, A,B and C, which are similar to that proposed by the Texas Board of Professional Engineers in 1998 (now defunct):

- Level A investigations will include document reviews, interviews, site visits and a written report.
- Level B investigations will encompass Level A and add a level distortion survey and appropriate documentation
- Level C investigations will encompass Levels A & B add other testing such as plumbing and geotechnical as well as more detailed documentation such as a distress survey, tree survey and photographs

Mr. Pierry discussed what deflection is excessive as defined in the document. He defined overall deflection = deflection + tilt. He defined deflection as the longest perpendicular line from a deflected shape to the straight line connecting two ends. Overall deflection is the amount recorded by a water level and will be a larger amount if tilt occurs.

The paper says that deflection should be limited to L/360 but qualified it noting that for the engineer to say the deflection was excessive, there must be "sufficient symptoms of deflection" present. The paper is even more non-committal on defining excessive tilt, except where the amount of tilt affects the structural integrity of the superstructure. The paper did however note that a 1 percent slope is usually noticeable, and a 2 percent slope is considered too large by the Americans with Disabilities Act (ADA).

The potential time bomb this paper presents (if adopted as a mandatory requirement by the state PE board or otherwise as a standard) is that many future foundation repair projects will require an engineer of record with site specific drawings, specifications and geotechnical data.

PAST PRESENTATIONS (click here)