JUNE 20, 2001 - "State of Practice of Geotechnical Engineering Design of Custom Homes in the Houston Area between 1990 and 2001"

Speaker: David Eastwood, P.E.

David Eastwood P.E., President of Geotech Engineering and Testing, Houston, presented his paper entitled "State of Practice of Geotechnical Engineering Design of Custom Homes in the Houston Area between 1990 and 2001". His paper is the result of a study recently compiled to show the standard of practice during the last decade in the local geotechnical industry for the custom residential market in Houston.

David's comparison survey included 17 Houston-area geotechnical firms that had provided investigations and reports on 99 total custom residences. All but three of the reports surveyed showed an effective plasticity index greater than 15%, which is the current level above which ASCE considers soil to be expansive. David compared 19 aspects in the various reports and reported the statistics, averaged over the last decade. Some of the surprising statistics found are summarized as follows:

- 64% did not discuss site conditions
- 40% did not discuss risks of the different foundation concepts
- 74% did not discuss heave potential
- The average pier depth specified was only 9 ft.
- 34% still included recommendations for void boxes below grade beams.
- 86% did not discuss the use of sprinkler systems around the foundation.
- 90% did not discuss the effect of removing a tree.
- 100% did not do suction testing.

David concluded that the above statistics represented problems that require correction. He believed part of the problem is that there is no minimum standard in the industry that local geotechnical engineers are required to follow but he was optimistic that the FPA's recent publication, Recommended Practice for Geotechnical Explorations and Reports and the work in progress by the ASCE Residential Committee may solve this in the near future.

To download a copy of the paper presented by Mr. Eastwood, click here.

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