

NOVEMBER 2011 MEETING

Wednesday, November 9, 2011 (1.0 PDH)

TECHNICAL PROGRAM

Failures: What Can We Learn?

Speaker: [David W. Fowler, Ph.D., P.E., The University of Texas at Austin](#), 1 University Station Austin, Texas 78712, Tel. No. (512) 475-7348

PRESENTATION SUMMARY

To an audience of about 75 at the HESS Club, Dr. Fowler gave a slide presentation titled, "What Caused It to Fail?" Dr. Fowler started by saying that a failure is defined as a foundation, structure, component, or facility that doesn't perform as intended. A failure does not have to involve a collapse or a catastrophic event. Using this definition, the movement of a foundation great enough to cause distress in finishes or to allow serviceability issues may be defined as a failure.



Additional non-catastrophic failures may be illustrated by examples such as pavements that pond water, masonry walls that crack due to lack of expansion joints, and basement walls that leak.

Dr. Fowler provided several case studies including a very thorough discussion of a runway case involving the client, general contractor, paving subcontractor, and engineer. Ultimately the engineer was found at fault due to inadequate specifications, lack of oversight, poor judgment, and negligence.

Dr. Fowler also discussed pavement failures at length. He provided information about pavement forensics from the manual "Forensic Manual for Portland Cement Concrete Pavements" prepared by Dr. Fowler and Zhanmin Zhang for the TxDOT.

Dr. Fowler presented a number of slides about pavement forensics, failures, and faults from the manual and other sources.

Dr. Fowler stressed the need to understand the specific causes of distress and failure prior to recommending repairs. He also noted that proper repairs made early may provide a long term solution at a relatively low cost. Delays in making repairs may result in very expensive and time consuming repairs later.

Slides were shown to illustrate the principals of each topic.

To download a copy of Dr. Fowler's slides, click [here](#).