

AUGUST 2013 MEETING

Wednesday, August 14, 2013 (1.5 PDH)

TECHNICAL PROGRAM

Alternative Foundation Methods for Expansive Soils

Speaker: [Philip S. Coppola, Assoc. AIA, CCI, CHI](#) with [Alternative Construction Techniques, LLC](#) Tel: 480-922-4858

Philip is a consultant and expert witness providing litigation support to lawyers and their clients. He has been in the construction and design industries since 1978 and is currently the president of Philip S. Coppola & Associates, LLC. and the managing member of Alternative Construction Techniques, LLC. Philip has worked in the field for over 35 years (five years in design) constructing commercial, educational, industrial, and residential projects ranging up to \$650,000,000. For the last 16 years Philip has applied his field experience in an expert capacity. He has testified as an expert on expansive soils cases (among others) in arbitration, Superior Court, ROC hearings and has served as an arbitrator on numerous occasions for the American Arbitration Association. Philip has also been appointed as the project neutral for several projects including the Tempe Town Lake in Tempe, Arizona.

Philip has provided seminars on various topics in Virginia, Maryland, Washington DC, Georgia, California, Nevada, Hawaii, and Arizona. He has also lectured at Virginia Tech University, Blacksburg, Virginia and was adjunct faculty at Houston Community College in Houston, Texas and Tyler Community College in Richmond, Virginia.

PRESENTATION SUMMARY

To an audience of 70 attendees, Mr. Coppola presented information about products and methods currently in use or with patents pending by Alternative Construction Techniques, LLC (ACT). Currently, in an effort to deal with expansive soils, many builders are constructing their homes using post-tensioned slabs. The primary topic presented was a Moisture Barrier Wall (MBW) System.

The MBW system utilizes a deep perimeter grade beam to reduce potential foundation movement of residential structures in expansive soils. According to Mr. Coppola the method virtually eliminates the distress caused by the swelling of soils in the foundation's zone of influence. The methods designed by ACT will perform equally as well in compressible soils. According to Mr. Coppola, this approach has benefits but does not solve all the problems. Mr. Coppola suggests that ACT's methods provide greater benefits, and are typically less expensive than post-tensioned slabs. Mr. Coppola noted that ACT's methods combine the knowledge of several experienced individuals, including geotechnical and structural engineers, and repair concepts that have been used for decades. According to Mr. Coppola, their product provides the stability needed to control movement caused by expansive soils.

A number of the claims presented by Mr. Coppola are:

- The deep perimeter grade beam acts as a moisture barrier and inhibits moisture changes from affecting soils
- Virtually eliminates distress caused by expansive soils
- Less expensive than post tensioned slabs
- Five different methods of installing deep barrier walls were presented with no engineering design required for methods I, III, and V
- No special skills to install
- May reduce litigation & costs
- May reduce insurance costs
- Eliminates remedial repairs caused by movement from expansive soil
- Positive publicity
- Reduces ROC complaints