

## THE ASCE PITTSBURGH SECTION GEO-INSTITUTE CHAPTER PRESENTS

*December 4, 2018 – Dinner Meeting*

### **The Development and Advancement of Ground Improvement**

**Presented By:** Dave Sandstrom - Regional Business Development Manager - Menard Group USA



Since prehistoric times, various materials have been used for the improvement of soil “ground” including the use of straw to improve the quality of adobe bricks and the use of sticks and branches to reinforce mud dikes. Over time, ground improvement has made significant advancements far beyond using sticks, straw, or root mat.

In the past 20 to 25 years the use of ground improvement as an alternate to deep foundations has grown considerably. In 2003, the rigid inclusion industry in the US was almost non-existent and has since grown to roughly \$750 Million. The growth is the result of specialty geotechnical contractors developing new techniques to provide ground improvement solutions to projects rather than relying on conventional deep foundations.

With the advancement of the equipment used to install stone columns and the design and development of grouted rigid inclusions, ground improvement has become recognized as a cost effective and technically feasible method to support a variety of structures. But as the industry has grown, challenges have followed. The re-development of urban areas such as the City of Pittsburgh, brownfield and former industrial sites present challenges with environmental contamination and subsurface obstructions. The rising cost of construction materials also require engineers and contractors to put more effort into economizing projects. Increased competition requires more innovative ideas to reduce costs and secure work.

In this presentation, Dave will discuss the developments made over the past decade that have resulted in the growth of the ground improvement industry. Specifically, development of equipment, engineering practices, and business development will be discussed. Various case studies will be presented that illustrate how the advancements made in the ground improvement technology are being employed in the construction industry.

Dave received his BS and MS in Civil Engineering from the University of Pittsburgh. His focus was in geotechnical engineering and construction management. He has worked in the geotechnical and geo-environmental construction industry for 37 years. He has worked as a project manager and district manager for various companies that include Geo-Con, Inc., Conestoga-Rovers & Associates (CRA), Nicholson Construction, Inc., Remedial Construction, Inc. and is currently working as a regional business development manager for Menard Group USA.

**DATE: Tuesday December 4, 2018**

Place: ESWP  
337 4<sup>th</sup> Ave.,  
Pittsburgh, PA 15222

Time:  
6:00 PM – 7:00PM Socializing and Cash Bar  
7:00 PM – 8:00PM Dinner  
8:00 PM – 9:00PM Presentation

**Reservations received on or before 11/23/18:**

\$25 ASCE Pittsburgh Section Members /  
Government Employee  
\$35 Non-members  
*Free to Students*

**Reservations received from 11/24 - 11/30/18:**

\$35 ASCE Pittsburgh Section Members /  
Government Employee  
\$45 Non-members  
*\$10 to Students*

**PLEASE RSVP** by contacting Dr. Maria Jaime at [mjaime@agesinc.com](mailto:mjaime@agesinc.com) OR by registering online at <http://www.asce-pgh.org/> **Online registration is highly encouraged and payments can be made with credit card.** Only cash or checks will be accepted at the door.