

# Agenda

*Presented by James “Jay” A. McKelvey, III, D.GE, F.ASCE*

**Soil Mechanics Review, OSHA Requirements and Slope Stability**

Soil mechanics review  
OSHA requirements for excavations  
Safe vs. stable excavations  
Slope stability for excavations

**Shoring Options and Earth Pressure Theories and Influences**

Shoring options  
Earth pressure theories  
Influence of surcharges  
Influence of overlying slopes and seepage

**Vertical Excavation Design**

Modes of failure  
ASD and LRFD design methodologies  
Cantilever wall analysis  
Influence of movement  
Lateral earth pressures for braced walls  
Braced walls  
Anchored walls  
Cofferdams  
Basal heave  
Horizontal deformation  
Vertical deformation  
Structural design

**Case Histories**

Open cuts  
Vertical shoring  
Cofferdams  
Tie backs

**Deep Excavations**

Harrisburg, PA - Monday, October 15, 2018



Halfmoon Education Inc.  
PO Box 278  
Altoona, WI 54720-0278

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## Learning Objectives

**You'll be able to:**

- Review** OSHA requirements for excavations and maintain safe excavation conditions.
- Understand** earth pressure theories and explore shoring options.
- Discuss** ASD and LRFD design methodologies.
- Explore** applications for braced walls, anchored walls, and cofferdams.
- Consider** the possibility of vertical or horizontal deformation and discuss excavation case histories.



# Deep Excavations

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- |                                                                                                |                                                                             |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>Review</b> soil mechanics and earth pressure theory                                         | <b>Review</b> ASD and LRFD design methodologies                             |
| <b>Explore</b> OSHA requirements for excavations, and get tips on maintaining safe excavations | <b>Discuss</b> applications for braced walls, anchored walls and cofferdams |
| <b>Explore</b> shoring options                                                                 | <b>Learn</b> from deep excavation case studies                              |

**Continuing Education Credits**

- |                                                                                 |                                                 |
|---------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Professional Engineers</b><br>6.5 PDHs                                       | <b>Contractors</b><br>Non-Credit Continuing Ed. |
| <b>Architects</b><br>6.5 HSW Continuing Ed. Hours<br>6.5 AIA HSW Learning Units |                                                 |





**James “Jay” A. McKelvey, III, D.GE, F.ASCE** *Director-Geotechnical Design Division at Earth Engineering Inc.*  
Mr. McKelvey is the director of the Geotechnical Design Division at Earth Engineering Inc. He is a registered professional engineer (P.E.) in California, Delaware, Maryland, New Jersey, Pennsylvania, and Virginia. Mr. McKelvey is also a diplomate (D.GE) of the Academy of Geo-Professionals and a fellow of the American Society of Civil Engineers (F.ASCE).

Mr. McKelvey has extensive experience in geotechnical engineering including site assessment and field investigations; deep and shallow foundation design for buildings, bridges and other structures; retaining wall design; embankment stability; mechanically- stabilized soil structure; and subsurface hydrology.

He also has significant experience in heavy construction claim mitigation and in litigation support pertaining to impacted heavy construction projects. Mr. McKelvey has also handled construction support and construction quality assurance projects.

# Seminar Information

**Red Lion Harrisburg Hershey**  
4751 Lindle Road  
Harrisburg, PA 17111  
(717) 939-7841

Registration  
8:00 - 8:30 am  
Morning Session  
8:30 - 11:45 am  
Lunch (on your own)  
11:45 am - 12:45 pm  
Afternoon Session  
12:45 - 4:30 pm

## Tuition

**\$279** for individual registration  
**\$259** for three or more registrations.

*Each registration includes a complimentary continental breakfast and printed seminar manual.*

**Receive a reduced tuition rate of \$101** by registering to be our on-site coordinator for the day. For availability and job description, please visit [www.halfmoonseminars.org](http://www.halfmoonseminars.org).

## How to Register

- Visit us online at [www.halfmoonseminars.org](http://www.halfmoonseminars.org)
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

**Cancellations:** Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the CD/manual package. You may also send another person to take your place.

His environmental engineering experience includes technical contributions to the remediation of many Superfund sites and over 50 landfill design projects.

Mr. McKelvey has published over 25 technical papers in journals, conference proceedings and trade magazines. He is the treasurer for the Delaware Valley Geo-Institute (DVGI), serves on the GeoInstitute committees for Earth Structures and Geosynthetics, and is a voting member in ASTM committees Soil and Rock (D18), and Geosynthetics (D35).

## Here’s what past attendees had to say about the program and about presenter James McKelvey:

“Speaker did a good job of keeping it interesting.”  
— Civil Engineer

“Very enthusiastic and very useful and informative.”  
— Construction Representative

“Great presentation.” – CAD Operator

“Good and entertaining speaker.” -- Engineer

## Continuing Education Credit Information

This seminar is open to the public and offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to architects in all states, except Florida architects. Educators and courses for Pennsylvania engineers are not subject to pre-approval.

This seminar is approved by the American Institute of Architects for 6.5 HSW Learning Units (Sponsor No. J885). Only full attendance can be reported to the AIA/CES.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota. HalfMoon Education is deemed an approved architect continuing education sponsor in New York.

This program offers a non-credit continuing education opportunity to construction contractors. It has not been submitted to any state contractor licensing entity for continuing education approval.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

# Additional Learning

## Webinar Series

### Community Solar and Rooftop Solar

- **Community Solar**  
Wed., Sept. 5, 2018, 11:00 AM - 2:15 PM CDT
- **Design Your Solar Roof**  
Thurs., Sept. 6, 2018, 11:00 AM - 2:15 PM CDT

### Seismic Design and Construction

- **Seismology and Building Codes**  
Wed., Sept. 12, 2018, 11:00 AM - 3:30 PM CDT
- **Seismic Design of Building Structures**  
Thurs., Sept. 13, 2018, 11:00 AM - 3:30 PM CDT

### Small Wind Energy Systems

- **Small Wind Energy System Components**  
Thurs., Sept. 20, 2018, 11:00 AM - 1:00 PM CDT
- **Small Wind Energy Siting and Sizing**  
Fri., Sept. 21, 2018, 11:00 AM - 1:00 PM CDT

### International Green Construction Code

- **Introduction to the International Green Construction Code (IgCC)**  
Thurs., Sept. 20, 2018, 11:00 AM - 12:30 PM CDT
- **Chapters 4-5: Site Development and Material Use**  
Thurs., Sept. 20, 2018, 1:00 - 2:30 PM CDT
- **Chapters 6-9: Energy, Water, Environmental Quality and Building Commissioning**  
Fri., Sept. 21, 2018, 11:00 AM - 12:30 PM CDT
- **Chapters 10-11: Existing Buildings**  
Fri., Sept. 21, 2018, 1:00 - 2:30 PM CDT

### Slope Stabilization and Landslide Prevention

- **Analyzing the Stability of Slopes**  
Tues., Sept. 25, 2018, 11:00 AM - 2:15 PM CDT
- **Slope Stabilization Methods**  
Thurs., Sept. 27, 2018, 11:00 AM - 2:15 PM CDT

For more information visit:  
[www.halfmoonseminars.org/webinars/](http://www.halfmoonseminars.org/webinars/)

## Can’t Attend? Order the CD/Manual Package:

An audio recording of this seminar is available for \$289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

# Registration

## Deep Excavations

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| How to Register                                                                          |                                                                                                                                                                        | Registrant Information                                                                                                                          |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Online:</b><br><a href="http://www.halfmoonseminars.org">www.halfmoonseminars.org</a> |                                                                                                                                                                        | Name: _____<br>Company/Firm: _____<br>Address: _____<br>City: _____ State: _____ Zip _____<br>Occupation: _____<br>Email: _____<br>Phone: _____ |
| <b>Phone:</b><br>715-835-5900                                                            | <b>Additional Registrants:</b><br>Name: _____<br>Occupation: _____<br>Email: _____<br>Phone: _____<br>Name: _____<br>Occupation: _____<br>Email: _____<br>Phone: _____ |                                                                                                                                                 |
| <b>Fax:</b><br>715-835-6066                                                              | Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.    |                                                                                                                                                 |
| <b>Mail:</b><br>HalfMoon Education Inc.,<br>PO Box 278, Altoona, WI<br>54720-0278        |                                                                                                                                                                        |                                                                                                                                                 |
| <b>Complete the entire form.</b> Attach duplicates if necessary.                         |                                                                                                                                                                        |                                                                                                                                                 |

( ) I need special accommodations. Please contact me.

## Tuition

( ) **I will be attending the live seminar.** Single Registrant - **\$279.00**. Three or more registrants from the same company registering at the same time - **\$259.00** each.

( ) **I am not attending.** Please send me the CD manual package for **\$289.00**. (S&H included. Please allow five weeks from seminar date for delivery)

**Checks:** Make payable to HalfMoon Education Inc.

**Credit Card:** *Mastercard, Visa, American Express, or Discover*

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