

# Agenda

*Presented by Terry McCleary*

### Evaluating Building Sites

- Soil mechanics overview
- Site exploration
- Subsurface exploration
- Laboratory soil testing
- Design soil profile

### Shallow Foundation Design

- Using spread footings
- Using mat foundations
- Using hybrid foundations
- Using slab foundations

### Allowable Settlement and Consolidation

- Determining bearing capacity
- Understanding consolidation and settlement
- Effects of load types and soil types
- Increasing bearing capacity

### Shallow Foundation Construction

- Grading and soil improvement
- Dewatering and drainage
- Excavation and underpinning
- Complying with building codes

### Handling Special Considerations in Foundation Design

- Foundations on stratified soils
- Foundations on reinforced soils
- Foundations on slopes
- Basements as foundations

### Can't Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!

Audio recordings of this seminar are available for purchase starting at \$269. See registration panel for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

## Shallow Foundation Design and Construction

Springfield, MO - Wednesday, November 20, 2019

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## Learning Objectives

### You'll be able to:

**Investigate** site conditions to determine the type of shallow foundation that is appropriate for a proposed structure to assure its longevity and service.

**Distinguish** design characteristics of spread footings, mat foundations, slab foundations and hybrid foundations, and identify appropriate applications for each.

**Discuss** bearing capacity of shallow foundation types.

**Describe** the effects of load types and soil types on settlement and consolidation.

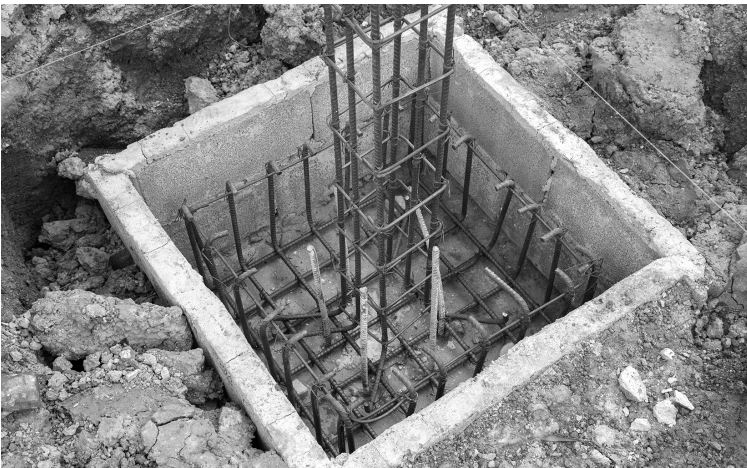
**Explore** the construction process for shallow foundations, including grading, soil improvement, dewatering, excavation and code compliance.

**Discuss** special design considerations for foundations on stratified soils and slopes.



# Shallow Foundation Design and Construction

Springfield, MO - Wednesday, November 20, 2019



**Understand** shallow foundation design

**Examine** and evaluate building sites

**Discuss** allowable settlement and consolidation

**Explore** spread footings, mat foundations and slab-on-grade

**Discuss** the shallow foundation construction process

### Continuing Education Credits

#### Professional Engineers

7.0 PDHs

#### Contractors

Non-Credit Continuing Ed.

#### Architects

7.0 HSW CEUs/CE Hours

7.0 AIA LU|HSW



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# Faculty

**Terry McCleary** *McCleary Engineering*

McCleary Engineering specializes in geotechnical investigations and recommendations for foundation design, retaining walls, slope stability, embankments, pavement design and rehabilitation, subgrade treatments and other engineering services such as drainage studies. McCleary Engineering is Illinois Department of Transportation (IDOT) prequalified in the general geotechnical services, subsurface explorations, structure geotechnical reports and construction inspection categories.

Mr. McCleary has nearly 19 years of construction and geotechnical engineering experience with IDOT. Six years were spent on the front lines of contract administration in construction as a resident engineer on bridge and roadway projects which included construction layout, material inspection and construction practice inspection. For the last 13 years at IDOT, Mr. McCleary was the District #3 geotechnical engineer, working hands-on subsurface investigations, analysis, design, and inspection of geotechnical engineering projects and on the spot problem solving. He has served on numerous statewide committees involving abutment design, piling, aggregate subgrade, subgrade stability, pavement under drains and pavement rehabilitation. He served on a nationwide Federal Highway Administration (FHWA) pooled fund study on deep soil mixing technology. In 2009, Mr. McCleary left IDOT to work full time at his company, McCleary Engineering. Mr. McCleary is a licensed professional engineer in the states of Illinois, Indiana, Iowa, Georgia, Oklahoma and Wisconsin. He is a member of the Deep Foundations Institute, the Pile Driving Contractors Association and the Illinois Association of Highway Engineers.

# Seminar Information

**Courtyard Springfield Airport**  
3527 West Kearney  
Springfield, MO 65803  
(417) 869-6700

**Tuition**  
**\$289** for individual registration  
**\$269** for three or more registrations.

**Included with your registration:** *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 self-study package. You may also send another person to take your place.

## Continuing Education Credit Information

This seminar is open to the public and offers 7.0 PDHs to engineers and 7.0 HSW CEUs/continuing education hours to architects in all states. Educators and courses are not subject to preapproval in Missouri.

This seminar is approved by the American Institute of Architects Continuing Education System for 7.0 LU|HSW (Provider No. J885). Only full attendance is reportable to the AIA/CES. Visit [www.halfmoonseminars.org](http://www.halfmoonseminars.org) for complete AIA/CES information under this course listing.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects.

This course offers a non-credit continuing education opportunity to construction contractors. It has not been approved by any state contractor licensing entity for mandatory continuing education credit.

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

### Special Inspections

- **Introduction to Chapter 17: Special Inspections**  
Thurs., October 10, 2019, 11:00 AM - 12:30 PM CDT
- **Soils and Foundations**  
Thurs., October 10, 2019, 1:00 - 2:30 PM CDT
- **Reinforced Concrete and Structural Steel**  
Fri., October 11, 2019, 11:00 AM - 12:30 PM CDT
- **ACT Ceiling Grid, Epoxy Anchors, and Fire Penetrations**  
Fri., October 11, 2019, 1:00 - 2:30 PM CDT

### Component Tolerance Analysis

- **Introduction to Component Tolerance Analysis**  
Thurs., October 17, 2019, 11:00 AM - 12:00 PM CDT
- **Dimensional Tolerance Analysis**  
Thurs., October 17, 2019, 12:30 - 3:00 PM CDT
- **Application of Dimensional Tolerance Analysis**  
Fri., October 18, 2019, 11:00 AM - 2:15 PM CDT

### National Electrical Code

- **National Electrical Code, Part I**  
Tues., October 22, 2019, 11:00 AM - 3:30 PM CDT
- **National Electrical Code, Part II**  
Wed., October 23, 2019, 11:00 AM - 3:30 PM CDT
- **National Electrical Code, Part III**  
Thurs., October 24, 2019, 11:00 AM - 3:30 PM CDT

### Slope Stability and Landslide Prevention

- **Slope Movement and Mechanisms**  
Thurs., October 24, 2019, 11:00 AM - 1:00 PM CDT
- **Slope Stabilization Methods**  
Thurs., October 24, 2019, 1:30 - 3:00 PM CDT
- **Landslide Hazard and Risk Assessment**  
Fri., October 25, 2019, 11:00 AM - 12:00 PM CDT
- **Slope Stabilization and Landslide Mitigation**  
Fri., October 25, 2019, 12:30 - 2:30 PM CDT

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

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# Registration

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| How to Register                                                                          |              | Registrant Information                                                                                                                                              |
|------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Online:</b><br><a href="http://www.halfmoonseminars.org">www.halfmoonseminars.org</a> |              |                                                                                                                                                                     |
| <b>Phone:</b><br>715-835-5900                                                            |              |                                                                                                                                                                     |
| <b>Fax:</b><br>715-835-6066                                                              | <b>Code:</b> |                                                                                                                                                                     |
| <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.                         |              |                                                                                                                                                                     |
|                                                                                          |              | <b>Name:</b> _____                                                                                                                                                  |
|                                                                                          |              | <b>Company/Firm:</b> _____                                                                                                                                          |
|                                                                                          |              | <b>Address:</b> _____                                                                                                                                               |
|                                                                                          |              | <b>City:</b> _____ <b>State:</b> _____ <b>Zip</b> _____                                                                                                             |
|                                                                                          |              | <b>Occupation:</b> _____                                                                                                                                            |
|                                                                                          |              | <b>Email:</b> _____                                                                                                                                                 |
|                                                                                          |              | <b>Phone:</b> _____                                                                                                                                                 |
|                                                                                          |              | <b>Additional Registrants:</b>                                                                                                                                      |
|                                                                                          |              | <b>Name:</b> _____                                                                                                                                                  |
|                                                                                          |              | <b>Occupation:</b> _____                                                                                                                                            |
|                                                                                          |              | <b>Email:</b> _____                                                                                                                                                 |
|                                                                                          |              | <b>Phone:</b> _____                                                                                                                                                 |
|                                                                                          |              | 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. |
|                                                                                          |              | ( )  I need special accommodations. Please contact me.                                                                                                              |

## Tuition

- ( ) **I will be attending the live seminar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$269.00** each.
- ( ) **I am not attending.** Please send me the self-study package:
- ☐ Downloadable MP3 Audio/PDF Manual for **\$269.00**.
- ☐ CD/Manual Package for **\$289.00**. ☐ USB/Manual Package **\$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*

Credit Card Number: \_\_\_\_\_

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