Agenda

Presented by Joseph S. Cooke, PE

Science of Structures and Soils
Typical loads on shallow foundations
- Gravity loads
- Lateral loads
Typical loads on walls
- Gravity loads
- Soil loads
Typical loads on slabs
Soil mechanics and effects on structures
- Soil properties
- Bearing capacity
- Soil settlement
- Effects of water, frost and freeze/thaw cycle

Foundation Features, Materials and Functionality
Design and construction of shallow foundations
- Continuous wall footings, column footings
Design and construction of slab foundations
Design and construction of basements and retaining walls
Design and construction of specialty features: walk- downs, partially-exposed foundations

Evaluating and Repairing Foundation/Slab Damage
Inspecting, monitoring and assessing damage
- Settlement
- Frost heave
- Expansive soils
- Shrinkage
- Subsurface erosion
- Subsidence
- Cracking
- Utility failures
Repairing foundations and slabs
- Piers, piles
- Soil tiebacks
- Underpinning
- Ground improvement

Evaluating and Repairing Wall Damage
Inspecting, monitoring and assessing damage
- Settlement
- Frost loading
- Expansive soils
- Shrinkage
- Poor drainage
- Utility failures
Repairing wall damage
- Piers, piles
- Soil tiebacks
- Carbon fibers
- Crack repair
- Solder beams
- Crac repair
- Secant-tangent walls
- Underpinning
- Reconstruction

Learning Objectives

You'll be able to:
Explore typical loads on shallow foundations.
Understand soil properties, bearing capacity, and soil settlement.
Discuss the design of shallow and slab foundations.
Identify the damaging effects of water, frost and the freeze/thaw cycle.
Evaluate different types of foundation damage caused by expansive soils, settlement and heaving.
Conduct foundation repairs.
Explore repair techniques, including piers, piles, soil tiebacks, underpinning and ground improvement.

Foundation Damage and Repair:
Science, Materials and Techniques
Nashville, TN - Thursday, April 30, 2020

Understand the science of structures and soils
Discuss typical loads on shallow foundations, walls, and slabs
Examine foundation features, materials and functionality

Continuing Education Credits
Architects
6.5 HSW PDHs
6.5 AIA LU|HSW
Professional Engineers
6.5 HSW PDHs
International Code Council
.65 CEUs (Building)

Tennessee Code Inspectors
Applied/Pending
Building Code Inspectors
Contractors
Non-Credit CE

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Additional Learning

Construction Cost Estimating
- Introduction to Cost Estimating
  Thurs., March 19, 2020, 11:00 AM - 12:30 PM CDT
- Assessing the Impact of Sea Level Rise, Changing Temperature and Changing Weather Patterns
  Thurs., March 19, 2020, 1:00 - 3:00 PM CDT
- Cost Estimate Organization and Examples
  Fri., March 20, 2020, 11:00 AM - 1:00 PM CDT
- Adapting Sites, Outdoor Spaces, New Construction and Existing Buildings to Withstand Extreme Weather Events
  Fri., March 20, 2020, 1:30 - 3:00 PM CDT

For more information and other online learning opportunities visit:
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Introduction to HEC-HMS
- Introduction to Cost Estimating
  Thurs., March 26, 2020, 11:00 AM - 12:30 PM CDT
- HEC-HMS Application User Interface
  Thurs., March 26, 2020, 1:00 - 3:00 PM CDT
- Model Output and Troubleshooting
  Fri., March 27, 2020, 11:00 AM - 12:30 PM CDT
- Large Watershed Model and Other Applications
  Fri., March 27, 2020, 1:00 - 3:00 PM CDT

Distributed Batteries for Solar PV Systems
- Distributed Batteries for Solar PV Systems, Part I
  Thurs., April 2, 2020, 11:00 AM - 1:15 PM CDT
- Distributed Batteries for Solar PV Systems, Part II
  Friday, April 3, 2020, 11:00 AM - 2:15 PM CDT

Continuing Education Credit Information

This seminar is open to the public and offers 6.5 HSW PDHs/continuing education hours to architects and engineers in all states. Educators and courses are not subject to preapproval in Tennessee.

This seminar is approved by the American Institute of Architects Continuing Education System for 6.5 LSUs (AIA Sponsor: J887). Visit www.halfmoonevents.org for complete AIA/CES course information under this seminar listing. Only full attendance is reportable to the AIA/CES.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24G/00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects.

The International Code Council has approved this event for 0.65 CEUs in the specialty area of Building (Preferred Provider No. 1232).

HalfMoon Education has applied to the Tennessee Department of Commerce and Insurance, Science, Materials and Techniques Division of Fire Protection for course approval for Building Code Inspectors, which is pending.

HalfMoon Education has applied to the Tennessee Department of Commerce and Insurance, Building (Preferred Provider No. 1232). The International Code Council has approved this event for 0.6 CEUs in the specialty area of Construction and Existing Buildings to Adapting Sites, Outdoor Spaces, New Cost Estimate Organization and Examples.

For more information and other online learning opportunities visit:
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Registration
Foundation Damage and Repair: Science, Materials and Techniques
Nashville, TN - Thursday, April 30, 2020

How to Register
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