Agenda

Presented by John C. Lommler, Ph.D., P.E., D.GE

Soil Investigation and Classification
- Properties of soil
- Importance of recognizing soil properties
- Formation of soils
- Types of soils

Soil investigation
- Reference materials and planning site reconnaissance
- Site reconnaissance, geology and visual observations
- Geophysics – shear wave velocity profile
- Drilling, test borings, and CPTu tests (cone penetration tests)
- Test pits
- Appropriate investigational methods – “The Graded Approach”
- Obtaining and reviewing geotechnical reports

Reviewing Hydraulic and Mechanical Properties of Soils
- Soil permeability
- Compressibility of soil – Albuquerque collapsible soils, expansive soils, dispersive soils
- Soil hydraulics - saturation, hydraulic gradient, and conductivity
- Drained and undrained shear strength
- Vertical and lateral earth pressure
- Stress and shear failure in soils

Determining and Increasing Bearing Capacity
- Calculating bearing capacity and settlement
- Bearing capacity of shallow foundations – What is it used for?
- Bearing capacity of piers and piles
- Increasing bearing capacity
  - Draining and compaction
  - Soil improvement

Determining and Increasing Slope Stability
- Natural slopes, and engineered cut and fill slopes
- Reviewing basic concepts of slope stability
- Understanding slope failures
- Impact of surface water and groundwater
- Examining slope stabilization methods
  - Unloading
  - Draining and compaction
  - Reinforcement
  - Soil improvement

Learning Objectives

You’ll be able to:

Identify appropriate soil investigation methods.

Understand key properties of soil, including soil permeability and compressibility.

Determine bearing capacity and know how to increase it through draining and compaction.

Evaluate slope stability and understand slope failures.

Compare slope stabilization methods including reinforcement and improvement.

Continuing Education Credits

Professional Engineers
6.5 PDHs

Architects
6.5 HSW Continuing Ed. Hours
6.5 AIA HSW Learning Units

Landscape Architects
6.5 HSW CPE Hours

Contractors
Non-Credit Continuing Ed.
Additional Learning

Webinar Series
Geothermal Heating and Cooling
- Thermodynamic Basics of Geothermal Systems
  Thurs., Nov. 1, 2018, 11:00 AM - 12:00 PM CDT
- Understanding Earth Loop Systems
  Thurs., Nov. 1, 2018, 12:30 - 2:00 PM CDT
- Choosing and Designing Geothermal Systems
  Fri., Nov. 2, 2018, 11:00 AM - 12:00 PM CDT
- Evaluating and Maintaining Geothermal Systems
  Fri., Nov. 2, 2018, 12:30 - 2:30 PM CDT

Cogenration System Principles and Practice
- Understanding the Benefits of Cogenration
  Thurs., Nov. 8, 2018, 11:00 AM - 12:30 PM CDT
- Laws, Regulations and Building Codes Impacting Cogenration
  Thurs., Nov. 8, 2018, 1:00 PM - 2:30 PM CDT
- Examining Cogenration Technologies
  Fri., Nov. 9, 2018, 11:00 AM - 12:30 PM CDT
- Moving to Cogenration: Analysis, Modeling and Case Studies
  Fri., Nov. 9, 2018, 1:00 - 3:00 PM CDT

Shallow Foundation Design and Construction
- Evaluating Building Sites
  Wed., Nov. 14, 2018, 11:00 AM - 12:30 PM CDT
- Shallow Foundation Design
  Wed., Nov. 14, 2018, 1:00 - 2:30 PM CDT
- Special Considerations in Foundation Design and Construction
  Thurs., Nov. 15, 2018, 11:00 AM - 12:30 PM CDT
- Soil Improvement and Foundation Diagnosis and Repair
  Thurs., Nov. 15, 2018, 1:00 - 2:30 PM CDT

Roadway Design
- Roadway Design
  Thurs., Nov. 29, 2018, 11:00 AM - 12:30 PM CDT
- Roadway Design Process
  Thurs., Nov. 29, 2018, 1:00 - 2:00 PM CDT
- Typical Roadway Sections and Alignment
  Fri., Nov. 30, 2018, 11:00 AM - 1:30 PM CDT
- Intersections, Drainage and Pedestrian-Bicycle Facilities
  Fri., Nov. 30, 2018, 2:00 - 3:30 PM CDT

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Registration
Soil Mechanics, Bearing Capacity and Slope Stabilization
Albuquerque, NM - Tuesday, November 27, 2018

How to Register
Online: www.halfmoonseminars.org
Phone: 715-835-5900
Fax: 715-835-6066
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278

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