

Agenda

Presented by Ibraheem Shunnar

Soil Mechanics Basics

Properties of soils	Effective stress
Formation of soils	Shear strength
Types of soils	Soil compressibility
Classification	Lateral earth pressure (at rest, active and passive)
Mechanical properties	

Soil Investigation

Site reconnaissance
Geology and visual observations
Drilling and boring
Test pits

Soil Laboratory Testing

Dry density and moisture content
Atterberg limits
Grain size distribution
Unconfined compressive strength
Tri-axial compression test
Maximum dry density
Consolidation test

Bearing Capacity and Settlement

Shallow foundations
Deep foundation
Soil improvement

Geotechnical Reports Preparation and Review

Subsurface Investigation

- Field investigation
- Laboratory testing program

Subsurface conditions

- Subsurface soil conditions
- Groundwater condition

Analysis and Recommendations

- Allowable bearing capacity – foundations and slab on grade
- Site preparation and fill placement
- Pavement
- Lateral Earth pressure
- Groundwater controls
- Site seismic classification
- Soil resistivity and corrosivity

Review of geotechnical reports

Soil Characteristics and Geotechnical Report
Toledo, OH - Wednesday, September 26, 2018

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Learning Objectives

You'll be able to:

Understand how soils are formed and classified, and you'll review their mechanical properties.

Learn how on-site soil investigations are conducted, including drilling, boring and test pits.

Examine laboratory testing procedures to determine dry density and compressive strength.

Determine the bearing capacity of soil, and learn about techniques for soil improvement.

Explore geotechnical reports, including analysis and recommendations for site preparation and groundwater controls.



Soil Characteristics and Geotechnical Report

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Review soil types and mechanical properties

Learn about on-site soil investigation techniques

Discuss soil laboratory testing

Analyze bearing capacity and settlement for shallow and deep foundations

Use geotechnical reports to review and improve subsurface conditions

Continuing Education Credits

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6.5 CPD Hours/PDHs

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Non-Credit Continuing Ed.

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6.5 AIA HSW Learning Units



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Faculty

Ibraheem Shunnar - *The Mannik & Smith Group*

Mr. Shunnar is the director of engineering at The Mannik & Smith Group and has more than 20 years of experience in geotechnical engineering with expertise in specialty foundations, ground improvement, slope stability, instrumentation and waste management. He has a master’s degree in Geotechnical Engineering from the University of Michigan and is a registered professional engineer. Mr. Shunnar is the author of many articles and papers on geotechnical engineering. He was the project manager for the Fairlane Green redevelopment project, winner of the 2008 National Phoenix Award. He is also the recipient of the distinguished achievement award from the University of Michigan.

Seminar Information

Radisson Hotel at The University Toledo Medical Center 3100 Glendale Avenue Toledo, OH 43614 (419) 381-6800	Registration 8:00 - 8:30 am Morning Session 8:30 am - 12:15 pm	Lunch (On your own) 12:15 - 1:15 pm Afternoon Session 1:15 - 4:30 pm
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Tuition

\$279 for individual registration

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Additional Learning

Webinar Series

Technical Writing

- **Technical Writing Basics**
Thurs., Aug. 9, 2018, 12:00 PM - 2:00 PM CDT
- **Planning Documents**
Thurs., Aug. 9, 2018, 2:30 - 4:30 PM CDT
- **Writing Documents**
Fri., Aug. 10, 2018, 12:00 PM - 2:00 PM CDT
- **Revising and Editing Documents**
Fri., Aug. 10, 2018, 2:30 - 4:30 PM CDT

Foundation Damage and Repair

- **Structure Loads, Soil Mechanics, Bearing Capacity and Geo-Environmental Hazards**
Wed., Aug. 15, 2018, 11:00 AM - 12:30 PM CDT
- **Foundation-Wall Design and Construction**
Wed., Aug. 15, 2018, 1:00 - 2:30 PM CDT
- **Assessment of Foundation-Slab Damage & Repair Alternatives**
Thurs., Aug. 16, 2018, 11:00 AM - 12:30 PM CDT
- **Assessment of Foundation-Retaining Wall Damage & Repair Alternatives**
Thurs., Aug. 16, 2018, 1:00 - 2:30 PM CDT

Retaining Structures

- **Earth Pressures and Surcharges**
Thurs., Aug. 23, 2018, 11:00 AM - 12:30 PM CDT
- **Cantilever & Apparent Earth Pressures**
Thurs., Aug. 23, 2018, 1:00 - 2:30 PM CDT
- **Apparent Earth Pressures**
Fri., Aug. 24, 2018, 11:00 AM - 12:30 PM CDT

For more information and other online learning opportunities visit:
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Continuing Education Credit Information

This live lecture presentation is open to the public and offers 6.5 CPD hours/PDHs to professional engineers and 6.5 HSW continuing education hours to architects in all states, except Florida architects. Educators and courses are not subject to preapproval in Ohio.

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.

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This seminar offers a non-credit continuing education opportunity to 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.

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

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How to Register

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Tuition

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