

Agenda

Presented by David Harmanos

Complying with Codes and Standards for Shallow Foundations

- West Virginia statewide building code and residential code requirements
- Structural requirements and requirements for concrete and steel reinforcement

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

Basements as Foundations

- Construction of footings, floor and walls
- Drainage considerations
- Walk-outs

Handling Special Considerations in Foundation Design

- Foundations on stratified soils
- Foundations on expansive soils
- Foundations on reinforced soils
- Foundations on slopes

Diagnosing and Repairing Foundation Problems

- Causes of foundation damage in West Virginia
- Repair techniques
- Underpinning
- Piers, piles
- Ground improvement
- Soil tiebacks

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West Virginia Shallow Foundation Design, Construction & Repair
Live, Interactive Webinar - Friday, February 11, 2022

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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.

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.



HalfMoon Education Live Webinars

West Virginia Shallow Foundation Design, Construction & Repair

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Comply with building code requirements for shallow foundations

Examine and **evaluate** building sites

Discuss allowable settlement and consolidation

Consider spread footings and mat and slab foundations

Discuss the shallow foundation construction process

Continuing Education Credits

Professional Engineers
7.0 PDHs

International Code Council
.7 CEUs (Sitework)

Architects
7.0 HSW CE Hours
7.0 AIA LU | HSW

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Faculty

David Harmanos *Branch Manager at Hillis-Carnes Engineering Associates, Inc.*
Mr. Harmanos is a professional engineer with extensive experience in subsurface exploration, soil testing, infiltration testing, geosynthetics, and seismic and advanced analysis. His expertise includes commercial, industrial and institutional foundation design; retaining wall and steep slope design; sinkhole remediation; landfill design; site work; forensic engineering; LEED consulting; and construction quality control/assurance (CQA/QC).Mr. Harmanos is a graduate of Drexel University where he received both his BS and MS degrees in Civil Engineering (Geosynthetics and Geotechnical). Hillis-Carnes performs geotechnical engineering consulting and laboratory testing services. Its construction services include evaluation of bearing materials, inspection of pile driving, slope inclinometer installation and monitoring, and retaining wall construction observation.

Webinar Information

Log into Webinar 8:00 - 8:30 am EST	Break 12:15 - 1:15 pm EST
Morning Session 8:30 am - 12:15 pm EST	Afternoon Session 1:15 - 5:00 pm EST

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Additional Learning

- Designing for Accessibility under ADA Standards and 2021 IBC**
- Tues, Jan 11, 2022 | 8:30 am - 4:30 pm CST
- Technical Writing Workshop for Design Professionals**
- Wed, Jan 12, 2022 | 8:30 am - 5:00 pm CST
- IRC Significant Changes – Chapters 1-10**
- Thurs, Jan 13, 2022 | 11:00 am - 3:30 pm CST
- Focus on New Developments in Solar PV Technology**
- Fri, Jan 14, 2022 | 1:00 - 3:00 pm CST
- How to Read a Geotechnical Report**
- Fri, Jan 14, 2022 | 11:00 am - 2:15 pm CST
- Handling Ethical Issues in Construction**
- Tues, Jan 18, 2022 | 3:00 - 5:00 pm CST
- How to Design Accessible Parking**
- Wed, Jan 19, 2022 | 11:00 am - 1:00 pm CST
- Timber Frame Design and Construction**
- Wed, Jan 19, 2022 | 9:00 am - 4:30 pm CST
- Construction Cost Estimating**
- Thurs, Jan 20, 2022 | 8:30 am 4:30 pm CST
- IRC Significant Changes – Chapters 11-44**
- Thurs, Jan 20, 2022 | 11:00 am - 3:30 pm CST
- Current Issues in Landscape Architecture for the Eastern US**
- Fri, Jan 21, 2022 | 7:30 am - 4:00 pm CST
- Erosion and Sediment Control**
- Tues, Jan 25, 2022 | 8:30 am - 5:00 pm CST
- Air-Source Heat Pumps, Mini-Splits, and Heat Pump Water Heaters**
- Wed, Jan 26, 2022 | 12:00 - 3:30 pm CST
- Thurs, Jan 27, 2022 | 12:00 - 3:30 pm CST
- For more information and other online learning opportunities visit:
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Continuing Education Credit Information
This webinar is open to the public and offers 7.0 PDHs to professional engineers and 7.0 HSW continuing education hours to architects in West Virginia.

Engineers and architects seeking continuing education credit in other states will be able to claim the hours earned at this webinar, in most cases. Refer to specific state rules to determine eligibility.

The American Institute of Architects Continuing Education System has approved this course for 7.0 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .7 CEUs in the specialty area of Sitework (Preferred Provider No. 1232).

Completion certificates will be awarded to participants who complete this event, respond to prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

Registration

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