

Agenda

Presented by E. Allen Dunn, III, P.E.

Science of Soils and Structures

- Typical loads on shallow foundations
 - Vertical loads
 - Lateral loads
- Typical loads on below-grade walls/earth-retaining structures
 - Vertical loads
 - Earth-pressure loads
 - Hydrostatic loads
- Soil mechanics and effects on shallow foundations
 - Soil properties
 - Bearing capacity
 - Settlement/consolidation
 - Expansive soil
 - Frost action

Foundation Design and Construction

- Design and construction of shallow foundations
 - Footings
 - Mats
 - Slabs-on-grade
- Design and construction of below-grade walls/earth-retaining structures
 - Below-grade walls
 - Earth-retaining structures

Evaluating Foundation Distress

- Developing a methodology for forensic investigation
- Typical tools for investigating shallow foundation distress
 - Desktop studies
 - Geotechnical investigation
 - Geophysical investigation
 - Visual condition surveys
 - Elevation surveys
 - Plumbing surveys
 - Nondestructive testing
- Common failure modes
 - Ultimate failure
 - Serviceability failure
- Common failure causes
 - Expansive soil movements
 - Settlement
 - Overloading
 - Design/construction issues

Evaluating Mitigation/Repair Methods

- Techniques for mitigating foundation distress
- Techniques for repairing foundation distress/damage
- Considerations when selecting appropriate mitigation/repair techniques

**Foundation Design, Distress, and Repair:
Science, Materials, and Techniques**
Houston, TX - Friday, July 12, 2019



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Learning Objectives

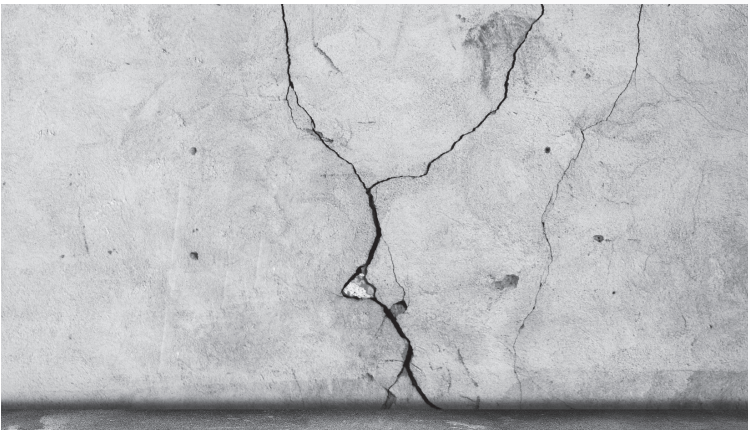
You'll be able to:

- Explore** typical loads on shallow foundations, below-grade walls and earth-retaining structures.
- Understand** the effects of soil properties on bearing capacity and soil settlement.
- Discuss** the design of shallow and slab foundations.
- Review** typical tools for investigating shallow foundation distress, including geotechnical investigation, elevation surveys and nondestructive testing.
- Explore** common causes of foundation failure, including expansive soils, settlement and overloading.
- Evaluate** foundation damage mitigation techniques and repair methods.



Foundation Design, Distress, and Repair: Science, Materials, and Techniques

Houston, TX - Friday, July 12, 2019



Understand the science of structures and soils

Discuss typical loads on shallow foundations, walls, and slabs

Examine foundation features, materials and functionality

Evaluate foundation/slab damage caused by settlement, overloading and expansive soils

Evaluate damage mitigation and repair techniques

Continuing Education Credits

Professional Engineers
6.5 PDHs

Contractors
Non-Credit Continuing Ed.

Architects
6.5 HSW CEPHs/CE Hours
6.5 AIA HSW Learning Units



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Faculty

E. Allen Dunn, III, P.E. *Lead Foundation Engineer, M&S Engineering LLC*

Mr. Dunn is a licensed professional engineer with over 20 years of civil engineering and related experience specializing in geotechnical engineering, pavement engineering, forensic and structural engineering, construction materials engineering and testing, and electrical transmission engineering. He is licensed in multiple states and his experience includes projects throughout the contiguous United States. Mr. Dunn has worked for commercial, governmental, military, and private clients. He earned a B.S. degree in Civil Engineering from Texas A&M University, an M.S. degree in Civil Engineering and an M.B.A. degree from the University of Texas at San Antonio. Mr. Dunn earned his Ph.D. in Leadership Studies from Our Lady of the Lake University.

Seminar Information

Marriott West Loop - By the Galleria 1750 West Loop South Houston, TX 77027 (713) 960-0111	Registration 8:00 - 8:30 am Morning Session 8:30 - 11:45 am	Lunch (On your own) 11:45 am - 12:45 pm Afternoon Session 12:45 - 4:30 pm
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Tuition

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

Included with your registration:
Complimentary continental breakfast and printed seminar manual.

How to Register

- Visit us online at 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.

Additional Learning

Webinar Series

Distributed Battery Webinar

- **The Distributed Battery Webinar, Part I**
Wed., June 12, 2019, 11:00 AM - 2:15 PM CDT
- **The Distributed Battery Webinar, Part II**
Thurs., June 13, 2019, 11:00 AM - 2:15 PM CDT

Water Conservation

- **Evaluating the Owner’s Commitment to Water Conservation and Applicable Codes and Standards**
Thurs., June 13, 2019, 11:00 AM - 12:30 PM CDT
- **Assessing the Building Site**
Thurs., June 13, 2019, 1:00 - 2:00 PM CDT
- **Conserving and Reducing Water Use**
Fri., June 14, 2019, 11:00 AM - 1:00 PM CDT
- **Onsite Water Recycling and Minimizing Water Use**
Fri., June 14, 2019, 1:30 - 3:30 PM CDT

International Existing Building Codes

- **Working with the International Existing Building Code**
Thurs., June 20, 2019, 11:00 AM - 12:30 PM CDT
- **Chapters 3, 4 & 6**
Thurs., June 20, 2019, 1:00 - 3:00 PM CDT
- **Chapters 7-10: Alterations and Occupancy**
Fri., June 21, 2019, 11:00 AM - 1:00 PM CDT
- **Chapters 11, 12 and 14: Additions and Historic Buildings**
Fri., June 21, 2019, 1:30 - 3:00 PM CDT

Retaining Structures

- **Earth Pressures and Surcharges**
Wed., June 26, 2019, 11:00 AM - 12:30 PM CDT
- **Cantilever & Apparent Earth Pressures**
Wednesday, June 26, 2019, 1:00 - 2:30 PM CDT
- **Apparent Earth Pressures**
Thurs., June 27, 2019, 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 seminar is open to the public and offers 6.5 PDHs to professional engineers and 6.5 HSW CEPHs/continuing education hours to architects in all states. Educators and courses are not subject to pre-approval in Texas.

The American Institute of Architects has approved this event for 6.5 HSW Learning Units (Sponsor No. J885). Only full attendance can be reported 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. 24GP00000700), North Carolina, and North Dakota.

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

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 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.

Registration

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Houston, TX - Friday, July 12, 2019

How to Register	
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Complete the entire form. Attach duplicates if necessary.	
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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 . (S&H included. Please allow five weeks from seminar date for delivery)	
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