

# Agenda

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

## Soil Investigation and Classification

Properties of soil

- Importance of recognizing soil properties
- Formation of soils
- Types of soils

Soil investigation

- Site reconnaissance
- Geology and visual observations
- Drilling and boring
- Test pits
- Establishing appropriate investigational methods
- Obtaining and reviewing geotechnical reports

## Reviewing Hydraulic and Mechanical Properties of Soils

Soil permeability

Compressibility of soil

Soil hydraulics

- Saturation, hydraulic gradient, and conductivity

Drained and undrained shear strength

- Vertical and lateral earth pressure

Stress and failure in soils

## Determining and Increasing Bearing Capacity

Calculating bearing capacity

Bearing capacity of shallow foundations

Bearing capacity of piers and piles

Increasing bearing capacity

- Draining and compaction
- Soil improvement

## Determining and Increasing Slope Stability

Natural and engineered 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

## Soil Mechanics, Bearing Capacity and Slope Stabilization

Corpus Christi, TX - Friday, September 20, 2019

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Halfmoon Education Inc.  
PO Box 278  
Altoona, WI 54720-0278



## Learning Objectives

### You'll be able to:

**Recognize** the properties of soils that impact bearing capacity and slope stability.

**Learn** about methods of soil investigation, including site reconnaissance, boring and test pits.

**Understand** soil hydraulics, and discuss drained and undrained shear strength.

**Get** tips on calculating bearing capacity of soils.

**Review** soil improvement methods.

**Increase** slope stability by unloading, draining and reinforcing.



## Soil Mechanics, Bearing Capacity and Slope Stabilization

Corpus Christi, TX - Friday, September 20, 2019



**Discuss** soil characteristics

**Learn** soil investigation techniques

**Understand** the importance of soil permeability and compressibility

**Talk** about stress and failure in soils

**Increase** bearing capacity of soils

**Examine** slope stabilization techniques

### Continuing Education Credits

#### Professional Engineers

6.5 PDHs

#### Architects &

#### Landscape Architects

6.5 HSW CEPHs/CE Hours

6.5 AIA LU|HSW

6.5 LA CES HSW PDHs

#### Contractors

Non-Credit Continuing Ed.



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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.

**Here’s what past attendees had to say about the program and presenter E. Allen Dunn:**

“I greatly enjoyed attending your seminar.” – *Geotechnical Engineer*

“Thought he did a great job!!” – *Landscape Architect*

“Very good presenter/instructor.” – *Real Estate Development*

# Seminar Information

**Hyatt Place Corpus Christi**  
6773 South Padre Island Drive  
Corpus Christi, TX 78412  
(361) 985-8888

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

## Tuition

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

*Each registration includes a complimentary continental breakfast and printed seminar manual.*

**Receive a reduced tuition rate of \$101** by registering to be our on-site coordinator for the day. For availability and job description, please visit [www.halfmoonseminars.org](http://www.halfmoonseminars.org).

## How to Register

- Visit us online at [www.halfmoonseminars.org](http://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.

## Continuing Education Credit Information

This seminar is open to the public. It offers 6.5 PDHs to professional engineers in all states. Educators and courses are not subject to preapproval in Texas.

This course offers 6.5 HSW CEPHs to Texas architects and landscape architects. The American Institute of Architects has approved this course for 6.5 LU|HSW (Sponsor No. J885), and the Landscape Architecture Continuing Education System has approved it for 6.5 HSW PDHs. Only full attendance can be reported to the AIA/CES and LA/CES. Educators and courses are not subject to preapproval in Texas. Visit [www.halfmoonseminars.org](http://www.halfmoonseminars.org) for complete AIA information under this course listing.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York architects and landscape architects.

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

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.

# Additional Learning

## Webinar Series

### Off-grid Master Class

- **Off-grid Master Class, Part I**  
Thurs., August 1, 2019, 11:00 AM - 2:15 PM CDT
- **Off-grid Master Class, Part II**  
Fri., August 2, 2019, 11:00 AM - 2:15 PM CDT

### Stormwater Infiltration

- **Infiltration and Soil: Water Science**  
Thurs., August 8, 2019, 11:00 AM - 12:30 PM CDT
- **Infiltrating Stormwater and Maximizing Infiltration**  
Thurs., August 8, 2019, 1:00 - 2:30 PM CDT
- **Improving Infiltration with Low Impact Development Techniques**  
Fri., August 9, 2019, 11:00 AM - 12:30 PM CDT

### Structural Design and Ethics

- **Structural Design: Ethical Issues**  
Thurs., August 15, 2019, 11:00 AM - 12:00 PM CDT
- **Structural Design: Gravity Forces**  
Thurs., August 15, 2019, 12:30 - 2:30 PM CDT
- **Structural Design: Lateral Forces**  
Fri., August 16, 2019, 11:00 AM - 12:30 PM CDT
- **Structural Design: Wind, Seismic and Connections**  
Fri., August 16, 2019, 1:00 - 2:30 PM CDT

### Proposal Writing

Wed., August 7, 2019, 11:00 AM - 3:30 PM CDT

### Technical Writing

- **Planning Documents**  
Wed., August 14, 2019, 11:00 AM - 1:00 PM CDT
- **Writing Documents**  
Wednesday, August 14, 2019, 1:30 - 3:30 PM CDT
- **Revising and Editing Documents**  
Thurs., August 15, 2019, 11:00 AM - 1:00 PM CDT
- **Technical Writing Best Practices**  
Thurs., August 15, 2019, 1:30 - 3:30 PM CDT

For more information visit:  
[www.halfmoonseminars.org/webinars/](http://www.halfmoonseminars.org/webinars/)

**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

**Soil Mechanics, Bearing Capacity and Slope Stabilization**  
Corpus Christi, TX - Friday, September 20, 2019

| How to Register                                                                          |  | Registrant Information                                                                                                                                              |
|------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Online:</b><br><a href="http://www.halfmoonseminars.org">www.halfmoonseminars.org</a> |  | Name: _____                                                                                                                                                         |
| <b>Phone:</b><br>715-835-5900                                                            |  | Company/Firm: _____                                                                                                                                                 |
| <b>Fax:</b><br>715-835-6066                                                              |  | Address: _____                                                                                                                                                      |
| <b>Code:</b>                                                                             |  | City: _____ State: _____ Zip _____                                                                                                                                  |
| <b>Mail:</b><br>HalfMoon Education Inc.,<br>PO Box 278, Altoona, WI<br>54720-0278        |  | Occupation: _____                                                                                                                                                   |
| <b>Complete the entire form.</b> Attach duplicates if necessary.                         |  | Email: _____                                                                                                                                                        |
|                                                                                          |  | Phone: _____                                                                                                                                                        |
|                                                                                          |  | <b>Additional Registrants:</b>                                                                                                                                      |
|                                                                                          |  | Name: _____                                                                                                                                                         |
|                                                                                          |  | Occupation: _____                                                                                                                                                   |
|                                                                                          |  | Email: _____                                                                                                                                                        |
|                                                                                          |  | Phone: _____                                                                                                                                                        |
|                                                                                          |  | Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred. |
|                                                                                          |  | ( )  I need special accommodations. Please contact me.                                                                                                              |

## 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**.

(Please allow four weeks from seminar date for delivery)

**Checks:** Make payable to HalfMoon Education Inc.

**Credit Card:** *Mastercard, Visa, American Express, or Discover*

Credit Card Number: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CVV2 Code: \_\_\_\_\_

Cardholder Name: \_\_\_\_\_

Billing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

Email: \_\_\_\_\_