Course Number

FHWA-NHI-132033

Course Title

Soil Slope and Embankment Design and Construction

This course covers important aspects associated with the design and construction of soil slopes and embankments. It is intended to provide transportation earthwork professionals with knowledge to recognize potential problems with soil slope/embankment stability and deformation in transportation projects. Participants will develop the skills necessary to design and evaluate soil slopes and embankments and learn about the implications for construction and inspections. The course embraces both design and construction.

Participants will receive a comprehensive reference manual, used by practicing highway and geotechnical engineers covering investigation, design, construction, and mitigation of soil slopes and embankments. The participant workbook contains copies of visual aids and student exercises that closely follow the PowerPoint slide presentations. The participant exercises promote interaction in the classroom and illustrate the basic principles and analyses.

Outcomes

Upon completion of the course, participants will be able to:

- Recognize potential failure modes or deformation types for soil slopes and embankments
- Identify the potential failure modes for soil slopes and the type of analysis required to evaluate stability of the slope
- Determine the stability of a slope using slope stability charts
- Recognize the major design consideration for embankments constructed using earth fill, rock fill, and lightweight fill
- List the steps necessary for designing an embankment over compressible foundation soil
- List the common causes/triggering mechanisms for landslides/slope instabilities
- List appropriate stabilization methods

Target Audience

The target audience is bridge, geotechnical, or transportation engineers with 0 to 20 years of experience and responsible for the design, analysis, and construction maintenance or remediation of soil slopes and embankments on surface transportation facilities.

Training Level: Intermediate

Fee: 2013: $700 Per Person; 2014: N/A

Length: 2.5 DAYS (CEU: 1.5 UNITS)

Class Size: MINIMUM: 20; MAXIMUM: 30

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