



COURSE NUMBER

FHWA-NHI-135094

COURSE TITLE

Culvert Hydraulic Analysis and Design Program (HY-8) Web-Based

NHI web-based Training Course 135094, Culvert Hydraulic Analysis and Design Program (HY-8), provides training on the use of the Federal Highway Administration's (FHWA) HY-8 computer program to complete culvert analysis and design calculations commonly performed by Civil Engineers and others involved in roadway design.

This web-based training uses a combination of text, graphics, examples, animations, and workshop problems in its six primary lessons:

HY-8 Overview

Conventional Design Scenarios

Rehabilitative Linings/Common Pitfalls in the Use of HY-8

Special Geometries

Energy Dissipation

Project File Management and Report Generation

Upon completing the course, participants will be able to apply the HY-8 software to analyze and design culverts in many commonly encountered situations.

Note: NHI 135094, Culvert Hydraulic Analysis and Design Program (HY-8) (Web-Based) is a prerequisite for Course 135080, Hydrologic Analysis and Modeling with WMS. Mastery of the concepts covered in this WBT is important to successful completion of Course 135080.

OUTCOMES

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

- List the primary capabilities of HY-8
- Identify inlet and outlet control situations from the culvert summary tables
- List the material types used in culverts
- List the material shapes that may be analyzed within HY-8
- Select a culvert from a list of available culverts that satisfies headwater and outlet velocity criteria by using HY-8.
- Predict the effect of lining material (new or rehabilitated) on headwater
- Identify common pitfalls in using HY-8 in conventional design scenarios
- Identify situations appropriate for application of special culvert geometries
- Identify situations requiring energy dissipation to mitigate scour or high outlet Velocities.
- Select an appropriate energy dissipator by using HY-8.
- Identify the steps to generate customized HY-8 reports.

TARGET AUDIENCE

The target audience is comprised of federal, state, and local hydraulic engineers, highway designers and design consultants who have responsibility for the analysis, design, and review of culverts. Length of service with an organization or status within an organization would not be a factor in that this training could apply to anyone that has a need for hands-on use of HY-8.



TRAINING LEVEL: Basic

FEE: 2020: \$0 Per Person; 2021: N/A

LENGTH: 2 HOURS (CEU: .2 UNITS)

CLASS SIZE: MINIMUM: 0; MAXIMUM: 0

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