Course Number

FHWA-NHI-130092

Course Title

Load and Resistance Factor Rating of Highway Bridges

This course provides novice and experienced bridge engineers with the fundamental knowledge necessary to apply the most recent AASHTO LRFR Specifications to bridge ratings. This course introduces participants to applications of LRFR specifications that can be used to enhance bridge safety and to identify and discuss the steps to ensure successful transition to this new state-of-the art methodology.

Load Rating of Concrete and Steel Superstructure Bridges will provide participants with in-depth training in evaluating reinforced and prestressed concrete bridges and steel bridges using LRFR methodology. This course will illustrate the use of the current AASHTO evaluation specifications and state-of-the art evaluation methods with step-by-step examples.

Outcomes

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

- Describe the purpose of performing a load rating
- Identify the benefits of LRFR methodology
- Demonstrate the LRFR process and the general load rating equations
- Explain legal loads and their use in load rating
- Determine distribution factors for load rating
- Describe various state load rating programs
- State the LRFR limit states
- Select evaluation factors for load rating
- Describe the process for load posting and importance of load posting
- Describe the procedure for checking overload permits
- Demonstrate the application of LRFR requirements by completing load rating exercises
- Identify material deteriorations that affect load resistance of bridge components
- Calculate the flexural and shear resistance of a prestressed concrete girder for load rating
- Apply the load rating procedures for concrete slab bridges
- Describe the load rating of concrete culverts and substructures
- Calculate the flexural and shear resistance of a steel I-girder bridge for load rating
- Evaluate fatigue for load rating a steel girder bridge
- Describe the load rating of gusset plates and connections
- Describe the load rating of timber structures

Target Audience

The target audience for this course includes State DOT bridge and structures engineers and practitioners responsible for load rating of highway bridges. This includes engineers at all levels, including designers, consultants, reviewers, maintenance and management engineers, and load raters.Pre-training competencies: Individuals attending this course should have a minimum BSCE degree. They should also have a working knowledge of the current MBE and AASHTO LRFD and should have relevant experience using these specifications on at least one load rating project.

Training Level: Basic

Fee: 2022: $1300 Per Person; 2023: N/A

Length: 4 DAYS (CEU: 2.4 UNITS)

Class Size: MINIMUM: 20; MAXIMUM: 40

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov