



## COURSE NUMBER

FHWA-NHI-130105B



## COURSE TITLE

# Construction Procedures and Specifications for Bonded Repair and Retrofit of Concrete Structures

Construction Procedures and Specifications for Bonded Repair and Retrofit of Concrete Structures using FRP Composites is designed to assist State Department of Transportation (DOT) construction and maintenance operation staff develop knowledge of project requirements of FRP repairs, substrate surface preparation methods, and procedures and steps for installation of FRP systems.

Topics covered in this course include:

Specifications, including scope, definitions, tolerances, and site considerations

Submittal requirements, including working drawings and quality control/quality assurance plans

Storage, handling, and disposal requirements, including shelf life, safety hazards, personnel and work place protection, and clean up

Various aspects of substrate repairs and surface preparation of concrete structures

Use of externally-bonded and near-surface mounted FRP systems for repairs

Procedures and steps for installation of externally bonded FRP systems

Procedures and steps for installation of near-surface mounted FRP systems

Environmental considerations for FRP installation

Identification of defects and appropriate solutions of FRP applications

The success of repairs and retrofit of concrete structures using FRP Composite is dependent on State Department of Transportation (DOT) construction personnel taking an active role in ensuring construction procedures and specifications are adhered to. Hence, knowledge of proper construction procedures and specifications for FRP projects is necessary to control quality of work.

## OUTCOMES

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

- Identify the general project requirements for FRP repair and retrofit of concrete structures.
- Explain the general procedures for FRP repair and retrofit of concrete structures.
- Describe the general installation procedures of FRP systems for repair and retrofit of concrete structures.

## TARGET AUDIENCE

This training is appropriate for persons with minimal or no experience in bonded repair and retrofit of concrete structures using FRP Composites, as well as those experienced with using FRP Composite. The course focuses on construction areas, however, bridge designers as well as field personnel will benefit from the content.

**TRAINING LEVEL:** Basic

**FEE:** 2018: \$50 Per Person; 2019: \$50 Per Person

**LENGTH:** 5 HOURS (CEU: .5 UNITS)

**CLASS SIZE:** MINIMUM: 0; MAXIMUM: 0

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