

Repair of Concrete Bridges, Parking Decks, and Other Transportation Structures

ONE DAY, 7.5 HOURS

Proven repair techniques and materials for repair of bridge decks and superstructures

Program Content:

- **Evaluation of Deterioration—the condition survey; importance of this must be stressed**
- **Repair Materials**
 - Selection of materials
 - Descriptions of when and how to use portland cement concrete and various polymer or polymer-modified concretes
- **Repair Methods**
 - Selection of methods based on condition surveys, what methods will provide the best results
 - Preparation for repairs (removal of deteriorated concrete, cleaning of concrete surfaces, and cleaning and replacement of reinforcement)
 - Column and beam repair
 - Joint repair
- Deck repair
 - Repairs during bridge widening
 - Repairs to overhead surfaces
 - Repair of long-span prestressed beams
 - Crack and fracture repair with epoxy resin injection
 - Examples of methods used on bridges
 - Safety and structural support during repairs
- **Strengthening of Existing Bridges**
- **Protection Methods**
 - Overlays—methods and materials for successfully overlaying bridge decks
 - Sealers and membranes
 - Cathodic protection
- **Maintenance Techniques for Reducing Bridge Deterioration**

Who should attend:

Engineers, repair contractors, material suppliers, maintenance personnel, and public works engineers

Instructors:

Michael M. Sprinkel.

Seminar handouts:

Guide for Making a Condition Survey of Concrete in Service (ACI 201.1R)
 Causes, Evaluation, and Repair of Cracks in Concrete Structures (ACI 224.1R)
 Guide for Maintenance of Concrete Bridge Members (ACI 345.1R)
 Guide for the Use of Polymers in Concrete (ACI 548.1R)
 Course Notes authored by the instructors



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