How to Construct Durable Partial-Depth Repairs in Concrete Pavements

This course provides a comprehensive guide for performing partial-depth repairs—from planning for, preparing, and evaluating the patch through testing and quality assurance after construction is complete. Partial-depth repairs are defined as the removal and replacement of small areas of deteriorated (or spalled) concrete pavement. Partial-depth repairs are an alternative to full-depth repairs in areas where slab deterioration is located primarily in the upper one-third to upper one-half of the slab and the existing load transfer devices (if any) are still functional.

This important preservation technique can slow or eliminate the spread of spalling distresses that tend to occur under repeated thermal stresses, freezing and thawing, and traffic loading. The information in this course covers all of the considerations for partial-depth repairs including patch materials and construction techniques to produce patches that are cost-effective and can last 10 to 15 years or longer.

You will discover detailed, how-to instruction that covers the full scope of tasks involved in successfully completing a full-depth repair project. The instructional methods in this Web-based training include short, focused, and task-based lessons, visual aids, and assignments that are directly applicable to work in the field.

OUTCOMES

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

• Explain what a partial-depth repair is, and why it is used
• Identify the types of distresses that partial-depth repair can and cannot address
• Describe the three types of partial-depth repairs used to replace deteriorated concrete
• Describe proper project review and material checks for a preservation job involving partial-depth repair
• Explain worker safety, health, and personal protective device considerations for partial-depth repair projects
• Describe the criteria for selecting repair locations and boundaries
• Explain what to do if you think the boundaries are marked incorrectly
• Describe the methods for removing deteriorated concrete in preparation for a partial-depth repair
• Identify which methods are appropriate for the different types of partial-depth repairs
• Describe how to prepare the existing slab for repair material
• Identify the materials used in a partial-depth repair
• List the factors that influence repair mixture selection
• Identify when compression relief is necessary for a partial-depth repair project
• Describe how to reestablish a joint or crack by installing joint or crack compression relief material or by sawing
• List the four major steps for properly placing the patching material
• Explain the process for completing the patch
• Explain the difference between quality control and acceptance, including who is responsible
• Describe the tests that may be used for acceptance and opening to traffic

TARGET AUDIENCE

This course provides support and instruction for individuals involved in construction projects using concrete pavement preservation techniques. This training is ideal for construction foremen, workers, technicians, agency inspectors, construction managers, and engineers.
TRAINING LEVEL: Basic

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

LENGTH: 2.5 HOURS (CEU: 0 UNITS)

CLASS SIZE: MINIMUM: 0; MAXIMUM: 0

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