

**COURSE NUMBER**

FHWA-NHI-134075

**COURSE TITLE****Hardened Concrete Properties - Durability - WEB-BASED**

This training is provided by the Transportation Curriculum Coordination Council (TCCC) in partnership with NHI to review integrated materials and construction practices for concrete pavement. The training was developed by the National Concrete Pavement Technology Center at Iowa State University. This training is recommended for the Transportation Curriculum Coordination Council levels II - IV. This course is primarily intended for inspectors and technicians.

Durability as a property of hardened concrete is essential for long-lasting pavements. This workshop discusses factors that contribute to durable concrete and covers permeability, frost resistance, sulfate resistance, alkali silica attack, and a brief look at abrasion resistance.

This module is part of a curriculum from the "Integrated Materials and Construction Practices for Concrete Pavement" manual developed through the National Concrete Pavement Technology Center at Iowa State University. The other Web-based training modules include:

FHWA-NHI-134084 TCCC Fundamentals of Materials Used for Concrete Pavements

FHWA-NHI-134085 TCCC Incompatibility in Concrete Pavement Systems

FHWA-NHI-134087 TCCC Mix Design Principles

FHWA-NHI-134095 TCCC Early Age Cracking

FHWA-NHI-134096 TCCC Basics of Cement Hydration

FHWA-NHI-134097 TCCC Fresh Concrete Properties

FHWA-NHI-134098 TCCC Construction of Concrete Pavements

FHWA-NHI-134100 TCCC QCQA for Concrete Pavements

FHWA-NHI-134101 TCCC Design of Pavement

FHWA-NHI-134102 TCCC Troubleshooting for Concrete Pavements

**OUTCOMES**

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

- Recognize factors contribute to durable concrete
- Explain the importance of permeability, alkali-silica reaction, abrasion resistance and, in certain regions in the country, frost resistance and sulfate resistance of hardened concrete
- Identify tests that can be performed to determine the variables affecting the durability of hardened concrete

**TARGET AUDIENCE**

This training is designed for FHWA, State, and local agencies and their industry counterparts involved in the process to assure that concrete meets all the requirements for durability. It is applicable to anyone desiring a better understanding of the factors of durability.

**TRAINING LEVEL:** Basic

**FEE:** 2016: \$25 Per Person; 2017: \$25 Per Person

**LENGTH:** 1 HOURS (CEU: 0 UNITS)

**CLASS SIZE:** MINIMUM: 1; MAXIMUM: 1

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