Course Number
FHWA-NHI-131117

Course Title
Basic Materials for Highway and Structure Construction and Maintenance

This training is provided by the Transportation Curriculum Coordination Council (TCCC) in partnership with NHI to review basic materials for highway and structure construction and maintenance. The training was prepared by State DOT personnel for State DOT personnel. It contains good practices from various agencies. Each State agency/company has its own specifications, which the viewer needs to review and follow. This course is primarily intended for inspectors and technicians.

Although there are a number of materials used in the construction and maintenance process for both highways and structures, this course is focused on the three basic materials. They are Aggregate, Portland Cement Concrete (referred to as PCC), and Hot Mix Asphalt (referred to as HMA).

This training is directed toward entry level technicians, to give them a general view of the basic materials used in construction and maintenance. The course modules will address the procedures used in the production and sampling of aggregates.

Module 1 is called Basic Aggregates and includes quarry inspection, sand operation, stockpiling, and sampling. Module 2 covers Portland Cement, including the production of Portland Cement, the hydration process, as well as other cementing materials used in concrete such as water, admixtures, and aggregates. Module 3 reviews Hot Mix Asphalt, including the asphalt binder and aggregates used in the production.

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

• Identify aggregate production and sampling procedures
• Recognize the ingredients of PCC and the part each plays in concrete production
• Recognize the ingredients of HMA and the part each plays in hot mix asphalt production

Target Audience
This training is designed for Level I and Level II State/local public agency personnel and their industry counterparts involved in the construction, maintenance and testing process for highways and structures. Level I or Entry refers to employees/trainees with little to no experience in the subject area and perform his/her activities under direct supervision. Level II or Intermediate refers to employees that understand and demonstrate skills in one or more areas of the entry level and perform specific tasks under general supervision.

Training Level: Basic

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

Length: 3 HOURS (CEU: 0 UNITS)

Class Size: Minimum: 1; Maximum: 1

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