

**COURSE NUMBER**

FHWA-NHI-132022

COURSE TITLE**Driven Pile Foundations - Construction Monitoring**

This course provides information on current methods of driven pile technology with emphasis on data interpretation and decisionmaking issues common to driven pile installation and monitoring. The course covers the following areas: specifications, contracting issues, pile installation, monitoring, and inspection. Application and interpretation of the wave equation and dynamic and static pile-load-testing methods are highlighted with an emphasis on the practical issues related to pile monitoring and acceptance on typical construction projects. Construction material includes pile capacity verification by formula; wave equation; dynamic test or static test; performance and interpretation of compression, tension, and lateral load test; new load testing devices; the Osterberg Cell and Statnamic; operation and inspection of pile hammers, including new hydraulic hammers; and troubleshooting of pile hammer operation and pile installation problems. (Refer to course FHWA-NHI-132021 Driven Pile Foundations - Design and Construction for additional background information.) The goal of this course is to transfer the necessary knowledge and skills to plan driven pile foundation projects and to implement QA/QC procedures during construction.

OUTCOMES

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

- Discuss the appropriate pile type in a given soil profile based on the advantages and disadvantages of common driven pile types
- Explain the importance and appropriate methods of pile installation inspection
- Identify pile hammer types, their operational characteristics, and key pile hammer and pile hammer accessory inspection issues
- Define key components of driven pile specifications
- Identify the project influence and significance of pile drivability, pile refusal, and minimum and estimated pile toe elevations
- Use dynamic formulas, wave equation analyses, dynamic pile testing and static load testing correctly and effectively
- Identify pile toe accessories, pile splicing methods, and pile installation aids applicable to the pile type and subsurface conditions

TARGET AUDIENCE

The target audience for this course includes geotechnical specialists, bridge engineers, construction engineers, consultant review specialists, and advanced-level technicians involved in and responsible for specifying and monitoring construction of driven pile foundations. Basic knowledge of subsurface investigation methods is desirable.

TRAINING LEVEL: Intermediate

FEE: 2013: \$640 Per Person; 2014: N/A

LENGTH: 2 DAYS (CEU: 1.2 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 35

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