

**COURSE NUMBER**

FHWA-NHI-132070

**COURSE TITLE****Drilled Shaft Foundation Inspection**

Drilled Shaft Foundation Inspection is a stand-alone course developed to provide a basis for local, regional, or national qualification of drilled shaft foundation inspectors. The goal of this course is to provide inspectors with practical knowledge and standard industry practices for the inspection of drilled shaft foundation construction. A 2-hour qualification exam is administered on the third day of the course.

The course follows recommended FHWA specifications and practices for drilled shaft construction but may be modified to follow local agency specifications and practices.

**NOTE TO PARTICIPANT:** All participants should be advised by the local coordinator/session host that they are encouraged to complete NHI 132070B Drilled Shaft Inspector Tutorial (WBT). All participants should also be advised to bring a calculator that performs basic math, in particular works with negative numbers, a built in Pi function, and square root functions.

**NOTE TO HOST:** This course requires participation of a host agency technical representative. The objective of the host agency technical representative is to communicate the state's or region's current practices and experience to the course participants. The technical representative is asked to provide the instructor with a complete set of applicable state DOT construction specifications, standard plates, standard details, set of typical plans including boring sheets, a technical special provision, inspection guidelines and state standard Drilled Shaft Inspection Reporting and Recording forms. Also, the host agency is asked to provide seven duplicate sets of local soil and rock samples, one rock core, one set of rock cuttings, a full set of slurry testing equipment, a variety of spacers and standoffs used locally, and thirty sets of typical plans.

**OUTCOMES**

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

- Identify and understand the role and duties of the inspector
- Recognize key inspection elements of the contract documents
- Identify proper communication and coordination with the engineer and contractor
- Interpret and verify contractor compliance with items in the drilled shaft installation plan
- Recognize and identify drilled shaft construction equipment and tools
- Perform visual field verification of soil/rock material for comparison to supplied soil boring data/logs
- Calculate percent recovery and rock quality designation (RQD)
- Recognize and identify the various types of drilled shaft construction
- Perform inspection of drilled shaft excavations for compliance with plans, construction tolerances, and cleanliness
- Verify reinforcing cage construction compliance including side spacers and cross-hole sonic logging (CSL) tubes
- Determine concrete volumes for theoretical shafts and develop concrete curves
- Identify shaft "concreting" irregularities
- Perform calculations for volume, area, circumference, and elevation
- Locate, explain, and apply applicable FHWA, AASHTO, and State DOT specifications relating to compliance

**TARGET AUDIENCE**

The target audience for this course includes agency and consultant personnel who inspect foundations or major structures. In addition, project management and construction engineers in charge of drilled shaft construction inspection are encouraged to attend. This course is designed to be most beneficial to foundation inspectors who are responsible for inspecting drilled shafts during construction.

**TRAINING LEVEL:** Intermediate

**FEE:** 2021: \$400 Per Person; 2022: N/A

**LENGTH:** 2.5 DAYS (CEU: 1.5 UNITS)

**CLASS SIZE:** MINIMUM: 20; MAXIMUM: 35

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