

Origination Form

Specifications

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Date:	2025-06-02T15:24:46Z	Associated Specs:	Section 105 - Contractor Quality Control General Requirements.

Summary:

Developed a new Section 105-8.13.4 Senior Geotechnical Technician for Pile Foundations, which works in tandem with updates made to Section 455 regarding remote monitoring of pile driving operations, and defined Embedded Data Collector (EDC) in Section 105-8.13.3

Justification:

The update was implemented to list the requirements for the Senior Geotechnical Technician for Pile Foundations.

Do the changes affect other types of specifications?

Neither

List Specifications Affected:

Other Affected Documents/Offices	Contacted	Yes/No
Other Standard Plans		No
Florida Design Manual		No
Structures Manual		No
Basis of Estimates Manual		No
Approved Product List		No
Construction Office		No
Maintenance Office		No
Materials Manual		No

Are changes in line with promoting and making progress on improving safety, enhancing mobility, inspiring innovation, and fostering talent; explain how?

The proposed update is intended to clarify the requirements for the Senior Geotechnical Technician for Pile Foundations, to ensure an adequate degree of competency.

What financial impact does the change have; project costs, pay item structure, or consultant fees?

The update should not have any significant cost impact.

What impact does the change have on production or construction schedules?

None.

How does this change improve efficiency or quality?

The update ensures the technician involved in remote monitoring of driven piles, has a certain degree of proficiency on the subject matter.

Which FDOT offices does the change impact?

Construction.

What is the impact to districts with this change?

None.

Does the change shift risk and to who?

No change.

Provide summary and resolution of any outstanding comments from the districts or industry.

Comments and Responses are available on the Track the Status of Revisions hyperlink located on the Specifications landing page: <https://www.fdot.gov/programmanagement/Specs.shtm>

What is the communication plan?

Through the established specification revision process (e.g., Internal and Industry Review)

What is the schedule for implementation?

The Standard Specifications eBook and Workbook are effective July 1st every year.

CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS (REV 6-2-25)

SUBARTICLE 105-8.13 is deleted and the following substituted:

105-8.13 Geotechnical Foundation Services Personnel For Driven Pile Foundations:

105-8.13.1 General: Provide qualified and trained personnel to perform foundation testing, inspection of the construction activities and oversight of the foundation construction operations. Ensure the personnel provided meet the registration and qualification requirements specified herein and these requirements are maintained throughout the duration of the design and construction of the project elements where these personnel are required to work.

Submit qualification statements for the dynamic testing, load testing and non-destructive testing personnel to be used on the project for acceptance by the Engineer. The Department will review these qualification statements, provide comments, or request additional information within 10 working days, excluding weekends and Department observed holidays. Do not begin Construction until the qualifications of supervisory personnel have been accepted by the Engineer. Acceptance of the personnel does not relieve the Contractor of the responsibility for obtaining the required results in the completed work.

105-8.13.2 Dynamic Testing Engineer (DTE): Provide a Dynamic Testing Engineer in responsible charge of the performance of the dynamic load testing of driven piles, evaluation, signal matching and analysis of the dynamic load test data, recommending production pile lengths (when these are to be determined based on test pile information) and developing the driving criteria. The DTE must be an employee of a firm pre-qualified for Type of Work 9.4.1 in accordance with the Rules of the Department of Transportation, Chapter 14-75. Production pile lengths shall be recommended, and the driving criteria shall be developed by the same engineering firm, and under the same DTE analyzing the dynamic pile testing data. The DTE must be a Professional Engineer registered in the state of Florida with responsible charge experience of geotechnical foundation construction engineering and dynamic testing of driven piles for a period of not less than three years including at least three Department bridge projects. This “responsible charge” experience shall include verifiable experience using the test methods that will be utilized on the project. The DTE must have a rank of Intermediate or higher in the PDCA/PDI Dynamic Measurement and Analysis Proficiency Test or equivalent qualification approved by the Engineer.

105-8.13.3 Dynamic Testing Operator (DTO): Provide a Dynamic Testing Operator (DTO) to perform the dynamic load testing of instrumented piles and test piles in the field. The DTO must have a rank of Intermediate or higher in the PDCA/PDI Dynamic Measurement and Analysis Proficiency Test. When the Embedded Data Collector (EDC) system EDCs are is used to monitor piles and/or test piles, EDC monitoring shall be performed by an operator who has passed EDC Monitoring Certification as evidenced by a Smart Structures valid Certification Card and ID. The DTO must have experience in geotechnical foundation construction and dynamic testing of driven piles for a period of not less than two years including at least three Department bridge projects. The experience may have been obtained while working under the supervision of another qualified operator. The DTO shall work under the supervision of the DTE.

105-8.13.4 Senior Geotechnical Technician for Pile Foundations: When remote monitoring, a Senior Geotechnical Technician that is knowledgeable in pile installation

and dynamic load tests may be provided in lieu of a DTO or DTE to assist in monitoring the installation of dynamically load tested piles. The Senior Geotechnical Technician will be responsible for the following, but not limited to, setting up equipment, support in the installation of required gauges, setting up remote access to equipment for the DTO or DTE, operating equipment during dynamic load testing data collection, and any other activities required for data acquisition and transmission. The Senior Geotechnical Technician cannot work independently of the DTO or DTE to collect dynamic load testing data.

The Senior Geotechnical Technician must have a rank of Basic or higher in the PDCA/PDI Dynamic Measurement and Analysis Proficiency Test. When EDCs are used, the Senior Geotechnical Technician shall have the EDC Monitoring Certification as evidenced by a Smart Structures valid Certification Card and ID. The Senior Geotechnical Technician shall be a CTQP qualified Pile Driving Inspector and shall have experience in driven pile construction and inspection for a period of not less than one (1) year. Additionally, work experience in dynamic testing shall be obtained on at least three Department bridges working under the direct supervision of an on-site DTO or DTE.

105-8.13.4~~5~~ **Pile Driving Inspectors:** Provide qualified pile driving inspectors, working under the supervision of the DTE, to monitor and record the construction of driven pile foundations. Pile driving inspectors must possess a valid CTQP Pile Driving Inspector qualification.

105-8.13.5~~6~~ **Supervisory Personnel - Pile Driving:** Use pile driving superintendents or foremen in responsible charge of pile driving operations, with experience in installing driven piles of similar the type, size and depth proposed for the project and for a period of not less than two years.