

Specification Section 455

Subarticle 455-2

ORIGINATION

Date: 6-9-2026

Name: Rodrigo Herrera

Email: Rodrigo.Herrera@dot.state.fl.us

COMMENTARY

To ensure consistency between the conventional and design-build versions of the Specification, to address time requirements for review of construction documents, update the limits on stress levels for cylinder piles, and ensure adequate use of polymer slurry during drilled shaft excavation.

INTERNAL COMMENTS AND RESPONSES

(Please note all comments and responses are verbatim as received. The Specifications Office does not alter typos or grammar.)

BLACK = Comment **BLUE** = Specifications Response **GREEN** = Change Made to Specification

Name: Jon Droge

Date: 6-26-2026

COMMENT: 455-2.8 -5 - test data requirements need to be specified. -10 cross sonic logging results – as required

RESPONSE:

455-2.8 (5): Because the means of deriving skin friction is not limited to the collection of strain readings from within the pile, the current language requires that any other data used in that process also be submitted to the Department. The proposed verbiage is applicable in the sense that it doesn't limit the data to be submitted to the usual strain gauge output.

455-2.8 (10)

CSL results will not be required when CSL tests were not performed. The proposed language covers that scenario adequately.

ACTION TAKEN:

No action required at this time.

Name: Debroah Ihsan

Date: 6-29-2026

COMMENT: Issue 1: Diesel Hammer Overheating During Continuous Pile Driving Field staff consistently report significant overheating of diesel hammers when contractors drive an entire

bent or pile cluster within a single workday. Unlike past practice—where 1 to 3 piles were driven per day—contractors now frequently design large templates enabling 8 or more piles to be driven consecutively to accelerate production and reduce cost. Continuous, full day driving from sunup to sundown causes diesel hammers to reach elevated temperatures, which results in:

- Reduced hammer energy output
- Lower driving efficiency
- Longer drive times
- Increased mechanical wear
- Diminished reliability of driving resistance measurements

Proposed Modification to Specification 455 5.11.1 To mitigate overheating and documentation issues, the following addition is recommended at the end of Paragraph 1 of 455 5.11.1 General:

Proposed Additional Sentence: “During summer months, the maximum number of concrete piles permitted to be driven within any 24 hour period shall be limited to four (4) piles per location.”

Rationale: • Provides adequate cooling intervals for diesel hammers, ensuring consistent energy transfer and reliable driving resistance measurements.

RESPONSE:

The Department’s adoption of 100% dynamic load testing of driven piles ensures that the elements are driven to the required resistance.

ACTION TAKEN:

No action required at this time.

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INDUSTRY COMMENTS AND RESPONSES

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Name: Serafin Sousa

Date: 7-14-2026

COMMENT: Please review the revisions to Subarticles 455-2.2.1 and 455-2.8. The proposed language allows the Engineer to reduce the static load-test maximum-load hold and recovery periods to less than one hour, but it does not establish a minimum duration or identify the technical basis for shortening those periods. Consider retaining the one-hour requirement unless a shorter period is recommended in writing by the Specialty Engineer and accepted by the Engineer. Also, please clarify that the static load-test report must remain signed and sealed, submitted within a defined review period, and accepted before production pile or drilled-shaft construction begins. The revised 455-2.8 language is less explicit than the Design-Build version regarding these requirements. In 455-5.11.1, the provision allowing the DTE, with the Engineer's concurrence, to modify the scour resistance shown in the Plans should also require written concurrence from the GFDEOR or Structures Engineer of Record, since this may modify a foundation-design assumption. Please also verify the revised cylinder-pile stress limits in 455-5.12.2, including the 500 psi tensile limit within 20 feet of a mechanical splice, and clarify whether the 20-foot distance applies on both sides of the splice and which pile types are covered. Finally, the polymer-slurry provisions should be checked for inconsistent table references, test-method designations, missing sand-content criteria at concrete placement, and practical sampling requirements. Several unresolved tracked-change combinations, numbering errors, and grammatical issues should also be corrected before publication.

RESPONSE:

The thorough review is appreciated. A summary of the actions taken is provided below.

ACTION TAKEN:

455-2.2.1 The language was revised for clarity.

455-2.8 “signed and sealed” was added to the last sentence.

455-5.11.1 No changes required in the Specification, however revisions to CPAM 10.1 will be discussed for the next cycle.

455-5.12.2 Stress limits confirmed. No revision required.

455-15.8.4 The language was revised for clarity.

Name: Keith Waugh

Date: 7-16-2026

COMMENT: 455-5.15.2.1 and 455-5.16.5 - Remove time frames for submittal. Intent of the specifications should be to reduce, not add, contract time.

RESPONSE:

455-5.15.2.1: The revision was prompted by projects where production pile lengths were sent to the casting yard prior to receiving an authorized length letter. However, the desired result can be accomplished by clear communication between the Department, the CEI, and Contractor. The time requirement was removed.

455-5.16.5: Time requirement was removed.

ACTION TAKEN:

455-5.15.2.1 Updated text.

455-5.16.5 Updated text.

Name: Heath Noss

Date: 7-16-2026

COMMENT: 455-5.16.5, Deviation from Above Tolerances. Currently there is no set time or duration or even a requirement that S&S redesign plans be submitted ahead of the Foundation Certification Package. Typically, any Specialty Engineer evaluation of out of tolerance pile is submitted with the Foundation Certification Package. It is understood that the currently afforded 1 Day detailed in Specification 455-5.20 is likely not enough time to evaluate potentially complex redesigns, however a submission 5 days ahead of the Foundation Certification Package seems excessive. Please consider reducing to 3 days.

RESPONSE: We appreciate the comment. After reviewing industry comments in general and based on internal discussions, the time frame requirement has been removed.

ACTION TAKEN:

455-5.16.5: Updated text.