## SP4550000 STRUCTURES FOUNDATIONS (DESIGN BUILD) COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Comments: (5-24-21, Internal)

455-5.1 "Predrill holes for production piles in the same manner and to the same depth test piles were predrilled, unless required otherwise by the GFDEOR, or Engineer or the Plans."

Comment: why does this need to be added. Predrill depths should be part of the driving criteria if it is important to the successful installation of the pile. What if the soil profile differs along the project so that longer predrilled holes are necessary compared to the test piles? What if the contractor choses to use a shorter predrilled depth compared to test piles and the requirements of penetrating hard material is met?

455-16.3 "Ensure concentric spacing for the entire length of the cage. As a minimum, use centering devices consisting of wheels or other approved noncorrosive spacing devices within 3 feet of the bottom, within 6 feet of the top, and intervals not exceeding 10 feet along the cage length. When a casing with an inside diameter (I.D.) larger than the required shaft diameter is used, provide, within the portion of the oversized casing, centering devices specially dimensioned, or a removable template at the top of the casing or other means to ensure the casing and the cage are concentric. Do not use block or wire type spacers. Ensure no permanent metallic elements will be within the concrete cover space. Use a minimum of one spacer per 30 inches of circumference of cage with a minimum of four at each level. Provide spacers at the bottom of the..."

Comment: if the removeable template is located at the top of the casing, what assures everything is centered for the length of the casing? The word "or" eliminates the requirements for centering devices listed separately.

Response: Ok. Change will be made as indicated above in the highlight.

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Comments: (5-25-21, Internal)

In the setting of permanent and test piling, the Contractor may initially predrill holes to a depth up to 10 feet or 20% <u>25%</u> of the pile length whichever is greater, unless otherwise shown in the Plans. Predrill holes for production piles in the same manner and to the same depth test piles were predrilled, unless required otherwise by the Engineer or the Plans.

Response: This was a change requested by Keith Waugh from FTBA On March 8, 2021. He specifically requested to "Revise to allow permanent piling initial predrill to same depth as the test piles.

This would provide relationship of driving data to the test pile installation". He was not asking to go to 25%, just to allow the production piles to have the same predrill depth of the test piles.

We agreed with this request because the driving criteria is based on the test pile conditions. In order not to alter the driving criteria the predrilling should be the same depth and in the same manner as the test piles were driven. Through the years the Department has increased the predrilling depth allowance from 4' to 10 ft and up to 20 % length. We do not find necessary nor prudent going beyond the 20%, which may affect the lateral stability, axial capacity and unnecessarily require longer piles.

After discussing with the CO geotechnical engineers, we will make the following change:

In the setting of permanent and test piling, the Contractor may initially predrill holes to a depth up to 20% of the test pile length unless required otherwise by the Engineer or the Plans. Predrill holes for production piles in the same manner as the test piles.

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## No Name

Comments: (6-15-21, Industry)

Section 455-5.19: Replace "The certification shall not be contingent on any future repair or testing, or any approval by the Engineer" with "The certification shall not be contingent on any of the following future actions: repair, testing or approval by the Engineer." Section 455-51: Replace "The certification shall not be contingent on any future repair or testing, or any approval by the Engineer" with "The certification shall not be contingent on any of the following future actions: repair, testing or approval by the Engineer."

Response: The proposed change is not necessary. The reviewer proposed language states that same as what the revision already indicates. No changes made.

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