

4550100 STRUCTURES FOUNDATIONS
INTERNAL/INDUSTRY REVIEW COMMENTS

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Comments: (12-2-16)

1. 455-2.4 currently proposes to show “3. Telltales: When shown in the Contract Documents, install telltales that consist of an unstressed steel rod placed...” Suggest to show “furnish and install” (instead of “install”) to identify that the Contractor will furnish the hardware.

Response: Agree. Change made as suggested. Change will also be made in the DB specification.

2. 455-2.4 currently proposes to show “4. Embedded Strain Gauges: When shown in the Contract Documents, install strain gauges in the test shaft to measure the distribution of the load.” Suggest to show “furnish and install” (instead of “install”) to identify that the Contractor will furnish the hardware.

Response: Agree. Change made as suggested. Change will also be made in the DB specification.

3. 455-5.4.2 currently proposes to show “Replace the pile cushion, if during the driving of any pile, the cushion is either compressed more than one-half the original thickness, begins to burn, or as directed by the Engineer after field performance.” Suggest to show “after satisfactory field performance” instead of “after field performance”.

Response: Disagree. If the Engineer needs to request change of cushion, it is not due to a satisfactory performance.
No change made.

4. 455-5.11.1 is currently proposed to add the following “The Engineer may modify the scour resistance shown in the Plans if the dynamic load test is used to determine the actual soil resistance through the scour zone.” Turnpike had an unpleasant situation many years ago that the scour resistance was reduced based on dynamic testing results of two test piles in a large pile group. After the change, it was found out that sandy soils above the scour elevation densified during subsequent production pile installation. Actual scour resistance of the production piles driven later became higher than anticipated. Just want to bring up the previous experience that there is some risk using this approach and requires caution.

Response: This is not added language. This paragraph was relocated from the current sub-article 455-5.11.2, Wave Equation. The intent of this paragraph has not been to reduce the scour resistance, but modify it if warranted. The geotechnical engineer making this determination should be cautious when dealing with pile groups as you indicate.
No change made

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Comments: (12-9-16)

455-1.4 is revised to read "ensure that freshly placed concrete is not subject to peak particle velocities greater than 1.5 inches per second from vibration sources located within 30 feet (from the nearest edge of freshly placed concrete to the vibration source)..." Our experience is that RAILROAD TRAFFIC within 30 feet of the new concrete can cause vibrations with peak particle velocities in excess of 1.5 inches and over which Contractors have no control. The original language limited this requirement to activities over which Contractors have control.

Response: While vibration sources may be outside of the Contractor's control, the concrete placement is. Therefore, in such a situation it is up to the Contractor to isolate the placement from the source using vibration dampening or isolation methods.

No Change made.
