

**503.07 Concrete.** For any portion of the caisson socketed in shale, if the concrete is not placed within four hours of drilling, the Contractor shall drill into the bedrock an additional  $\frac{1}{3}$  of the specified penetration prior to placing the concrete. The reinforcing cage shall extend to the new tip elevation.

Foundation piling shall not be driven nor excavation performed within a radius of 20 feet, nor additional caissons drilled within a clear distance of 3 feet, of concrete that has not attained a compressive strength of at least 1500 psi as determined by the Engineer.

Other construction methods, such as slurry displacement, may be used, if approved. The procedure for step-by-step construction shall be approved prior to beginning the work.

Concrete for each drilled caisson shall be placed in one continuous pour. Concrete may be placed in a dry hole by free-drop from the surface provided that a hopper or other approved device is used to force the concrete to drop straight down without hitting the sides of the hole or any reinforcing steel before striking the bottom. A drilled hole may be considered dry at the time of concrete placement if, without dewatering, the water depth at the bottom of the hole is not in excess of 2 inches.

Where an excavation cannot be practically dewatered for the placement of concrete, the Engineer may authorize a portion of the concrete to be placed under water in accordance with subsection 601.12(f). Concrete placed below water shall be limited to a height sufficient to seal the excavation and to withstand hydrostatic pressure. Immediately following the placement of this sealing concrete, the remaining portion of the hole shall be dewatered and the remainder of the concrete shall be placed. Concrete within the top 5 feet of the caisson shall be vibrated during placement. The layer of water-diluted concrete which has been floated to the top during placement shall be removed to the depth directed by the Engineer and wasted. The removed layer shall not be less than 4 inches thick. Only that concrete which meets specification requirements shall remain as part of the caisson.

Immediately following the concrete placement and the casing removal, the projecting reinforcing steel shall be thoroughly cleaned to remove accumulations of splashed mortar. This work shall be completed before the concrete takes its initial set. Care shall be taken when cleaning the reinforcing steel to prevent damage to or breakage of the concrete-steel bond.

## METHOD OF MEASUREMENT

**503.08** Drilled caisson will be measured by the linear foot from the elevation shown on the plans to the bottom of the hole as drilled.

Each approved splice of the reinforcing cage for additional length of caisson will be measured as  $\frac{1}{2}$  linear foot of additional length of drilled caisson.