

ITEM 11594.21 M - REPLACEMENT OF EXISTING TIMBER BULKHEAD CAP

DESCRIPTION

This work shall consist of removing the cap of the existing bulkhead, and installing a new treated timber bulkhead cap at the locations indicated on the plans or as ordered by the Engineer. All removed material shall become the property of the contractor, and shall be removed from the work site and disposed of in a manner satisfactory to the Engineer.

MATERIALS

A. TIMBER

All timber used in the construction of the new bulkhead cap shall be treated timber, Southern Yellow Pine Dense Structural Grade 65 and shall be in conformance with the requirements of Subsection 712-14.

All timber in the bulkhead cap construction shall be impregnated with Grade No. 1 Creosote Oil by the full-cell process and shall comply with the current American Wood Preservative Association Standard No. C18 for "Standard of Pressure Treated Piles and Timbers in Marine Construction." The amount of preservative retained shall not be less than 400kg per cubic meter of timber.

The Engineer reserves the right to inspect all new timber at the manufacturer's plant before shipment. Upon arrival at the site, the timber will be inspected by the Engineer and any timber which do not comply with the specifications will be rejected and shall be removed from the site by the Contractor.

The Contractor shall furnish certification for all timber, providing information on stress grades and creosote treatment, subject to the approval of the Engineer.

B. TIE-RODS, SPLICE PLATE AND BOLTS

Structural steel for the tie-rods and splice plates shall conform to the requirements of ASTM A36M covering shapes, plates and bars of structural quality. Tie-rods shall be completely galvanized conforming to the requirements of Type 1 for Subsection 719-01. The weight of zinc coating per square meter of actual surface shall average not less than 610 grams.

Machine bolts, nuts, washers, lag screws, nails and spikes shall be in accordance with the requirements of ASTM A307 and shall be galvanized conforming to the requirements of Type II for Subsection 719-01. The weight of zinc coating per square meter of actual surface shall average not less than 610 grams.

CONSTRUCTION DETAILS

The Contractor shall excavate the fill behind the east and west bulkhead caps as necessary to remove

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the existing bulkhead caps and install the new timber bulkhead caps. The Contractor should take care during excavation to avoid damaging the steel sheet piling of the existing bulkhead system. If during the Contractor's operations the steel sheet piling is damaged, the sheet piling shall be repaired or replaced by the Contractor at no expense to the State. The damaged steel sheet piling shall be repaired or replaced, as directed by the Engineer, and all work shall be performed in a manner satisfactory to the Engineer.

The excavated material shall be stored neatly in an area approved by the Engineer. Care shall be taken at all times to avoid discharging the material into the waterway.

The Contractor shall remove and dispose of the timber bulkhead cap including all connection bolts and plates from the existing bulkhead system. The Contractor shall install a new timber bulkhead cap in accordance with the details shown on the plans.

Upon completion of the installation of the new bulkhead cap, the Contractor shall backfill the excavated area with the excavated material to its original location and configuration to the satisfaction of the Engineer.

METHOD OF MEASUREMENT:

This work will be measured as the number of meters of bulkhead cap satisfactorily replaced in place. The measurement will be taken along the centerline of the bulkhead cap.

BASIS OF PAYMENT

The unit price bid per meter bulkhead cap removed and replaced shall include the cost of furnishing all labor, materials, equipment necessary and incidental to complete the work described in this Specification, in the Contract Drawings or directed by the Engineer. The work shall include the removal and disposal of the existing bulkhead cap, excavation and backfill, and installing new bulkhead cap as shown on the Plans.

The environmental ground and waterway protection shall be paid for under separate items.