

ITEM 10594.14 M - TIMBER HARBORWALK RETAINING STRUCTURE

DESCRIPTION:

This work shall consist of constructing a timber retaining structure adjacent to a timber harborwalk in accordance with the contract plans and specifications, and at locations shown in the contract plans or as directed by the engineer. Work under this item shall include the installation of treated dimension timber members, and other miscellaneous treated dimension timber such as spacers between the retaining structure and adjacent harborwalk piles.

The work under this item shall also include furnishing and installing all hardware including, machine bolts, lag screws, nails, spikes and other incidental metals necessary for a completed structure.

MATERIALS:

A. Treated Timber

All timber used in the retaining structure shall be Douglas Fir, No. 2 and shall be in conformance with the requirements of Subsection 712-14. All timber shall be treated with Chromated Copper Arsenate to a retention of no less than 40 kg per cubic meter as specified by the current American Preservers Association Standard No. C18 for "Standard of Pressure Treated Piles and Timbers in Marine Construction".

Required sizes of timber shall be as shown on the contract plans.

The engineer reserves the right to inspect all new timbers at the manufacturer's plant before shipment. Upon arrival at the site, the timber will be inspected by the engineer and any timber that does 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 preservative treatment, subject to the approval of the engineer.

Unless otherwise specified, all dimension timber shall be cut square and surfaced on four sides and shall not be smaller in any dimension affected by the surfacing than shown on the contract plans.

B. Hardware

Machine bolts, drift pins, dowels, nuts, washers, lag screws, nails and spikes shall be in accordance with the requirements of ASTM 307 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.

The contractor shall submit certifications on all materials to be used in this item.

CONSTRUCTION DETAILS:

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A. General

1. The proposed retaining shall be constructed where shown on the contract plans. The retaining structure shall be connected to timber harborwalk piles installed under a separate item as shown on the contract plans.
2. The requirements of Subsection 594-3 for treated timber shall apply except as modified herein.
3. Shop drawings shall be submitted for review and approval by the engineer. Shop drawings shall include large scale plans, elevations, sections and details noting dimensions, materials, anchoring means and methods, rough hardware and other details to clearly describe the work to be provided.
4. Erect timber members true to line, levels and dimensions required, squared, aligned, plumbed and securely fastened in place. Install to a tolerance of 3 mm in 2400 mm for plumb and level and with a 1.5 mm maximum offset in flush adjoining surfaces and 3 mm maximum offsets in revealed adjoining surfaces. Provide temporary bracing as required to maintain lines and levels until permanent supporting members are in place.
5. Shim as required and approved by the engineer using concealed shims. If shimming is required for installation of hardware, use metal or fiber shims. Cardboard shims will not be permitted.
6. Do all cutting, fitting, drilling and tapping of other work as required to secure in place and to perform the work included herein.
7. Cutting: Avoid extra cutting after fabrication. Where treated members must be cut during erection, apply a heavy brush coat of the same treatment complying with America Wood Preservers Association Standard M4.
8. Handle and temporarily support members to prevent visible surface damage.
9. Repair damaged surfaces and finishes after completing erection. Replace damaged members, as directed by the engineer, where damage is beyond satisfactory repair.

METHOD OF MEASUREMENT:

The quantity of Timber Harborwalk Retaining Structure to be paid shall be the number of square meters obtained by multiplying the vertical length of retaining structure measured between the upper and lower payment lines shown on the plans by the horizontal length of the retaining structure shown on the plans or approved by the engineer. The horizontal length shall be measured along the center of the top face of the retaining structure.

BASIS OF PAYMENT:

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The unit price bid per square meter of timber harborwalk retaining structure shall include the cost of furnishing all labor, materials and equipment to complete the work described in this specification, in the contract plans or directed by the engineer. The work shall include: installation of treated dimension timber members, and other miscellaneous dimension timber such as spacers between the retaining structure and adjacent harborwalk piles. The retaining structure shall be connected to timber harborwalk piles installed under a separate item as shown on the contract plans.

The work under this item shall also include furnishing and installing all hardware including, machine bolts, lag screws, nails, spikes and other incidental metals necessary for a completed structure.