

ITEM 594.22 10 M – CANOE ACCESS DOCK

DESCRIPTION

This work shall consist of designing and constructing canoe access docks of the type, size, configuration and components at the locations shown on the Plans. This work includes all timber pier framing and pile installation, decking, railing and hardware necessary to complete the canoe access dock structures.

MATERIALS

A. General

Unless an exception is noted below, the materials for this work shall meet the requirements of the following subsections of the Standard Specifications:

Wood Preservative – Water Borne	708-31
Timber and Lumber	712-13
Steel Forgings	715-06
Galvanized Coatings and Repair Methods	719-01

B. Treated Timber

The requirements of Section 594 of the Standard Specifications shall apply.

The treated timber shall conform to the requirements of Subsection 712-14, except that it shall be Southern Yellow Pine Dense Structural Grade 65 in accordance with ASTM D245. The timber shall be S4S square-edged and grade marked.

All timber except decking and hand railing shall be Alkaline Copper Quaternary (ACQ) treated to the following: a retention of 6.4 kg per cubic meter as specified by AWWA Standard # C3 lumber and timber in above-ground, soil and fresh water uses; and a retention of 12.8 kg per cubic meter as specified by AWWA Standard # C2 for Pressure Treated Piles.

C. Composite Plastic Lumber for Decking and Railing

All decking and hand rails shall be recycled plastic lumber of type and dimension specified in the plans. Unless otherwise approved, the Recycled Deck Lumber shall be one of the following:

Trex Wood-Polymer Lumber Products (*Trex Decking*)
Color shall be integral: Woodland Brown
Manufactured by: Trex Company, Inc.
Phone: (800) 289 - 8739
or,

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Boardwalk Composite Decking
Color shall be integral: Tan
Manufactured by: Certainteed Corporation.
Phone: (800) 233 - 8990
or,
Carefree Xteriors Recycled HDPE Decking
Color shall be integral: Weathered Wood
Manufactured by: U.S. Plastic Lumber, Inc.
Phone: (877) 289 - 8775

or equal as approved by the Regional Landscape/Environmental Coordinator.

D. Hardware

All hardware, which shall include but not be limited to bolts, nuts, washers, nails, spikes, and screws, shall conform to ASTM Designation A307, Grade "A", and shall be hot-dipped galvanized steel in the manufacturing process. Galvanizing bath shall be free of ferrous impurities. Galvanizing shall be in accordance with Subsection 719-01 Type II.

CONSTRUCTION DETAILS

A. Fabrication

The Contractor shall provide complete design details of the dock structure. Six copies of the design detail shop drawings and two copies of design calculations shall be provided to the Engineer at least 45 working days prior to fabrication. The shop drawings shall be subject to the approval of the Engineer. All drawings and design calculations shall be stamped by a Professional Engineer licensed and registered to practice in New York State.

Pile design shall be based on a 3.83 kPa live load on the deck. Soil boring information is available for the Contractor's use in designing piles.

B. Treated Timber and Composite Lumber

Treated timber shall be handled and stored with sufficient care to avoid breaking through portions penetrated by treatment, and thereby exposing untreated wood. Tools that would burr, blemish, penetrate or permanently deform the contracted members shall not be used. Rope, rubber slings or fabric slings only shall be used.

All timber composite lumber shall be fabricated and installed as detailed on the drawings or specified by the Engineer.

All field cuts and drill holes through treated timber shall be liberally brushed with preservative in accordance with AWWPA Standard M4. Where timber posts are called for, they shall be set plumb and true. All rough edges, splinters, etc., shall be removed. Any

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surface breaks resulting from storage and handling which do not warrant rejection shall be treated in accordance with AWP4 M4 with the addition that at least three coats of preservative shall be applied.

All cutting, framing and boring of timber and lumber shall be done before treatment whenever practicable. Cutting and boring below high water shall be particularly avoided in material that is to be used in waters infested with marine borers.

All treated timber cut surfaces shall be treated in accordance with AWP4 M4 with the addition that at least three coats of preservative shall be applied.

The Contractor shall accurately cut and frame all timber in such a manner that the joints will have a close, tight fit over the entire contact surfaces. The Contractor shall secure the timbers in their proper alignment. No shimming will be permitted in making joints nor will open joints be accepted. Only full-length timbers shall be used.

Holes for round drift-bolts and dowels shall be bored with a bit 1.5 mm less in diameter than the bolt or dowel to be used. Holes for machine bolts shall be bored with a bit of the same diameter as the bolt. Holes for lag screws shall be bored with a bit no larger than the body of the screw at the base of the thread.

All bolt holes bored subsequent to treatment shall be treated with preservative by means of an approved pressure bolt hole treater. Any unfilled holes, after being treated with preservative shall be plugged with preservative treated plugs. A galvanized steel plate washer shall be used under all bolt heads and nuts that would otherwise come in contact with the wood. The Contractor shall check all bolts by burring the threads after the nuts have been finally tightened. Vertical bolts shall have the nuts on the lower ends.

All nails and screws shall be of the necessary length and shall not protrude from the timber or composite lumber. To prevent mushrooming of decking material over screw or nail heads, after installation all screws or nails shall be tapped down with a hammer to get a counter sunk appearance.

METHOD OF MEASUREMENT

Payment of the Canoe Access Dock Item shall be made on a lump sum basis.

BASIS OF PAYMENT

The lump sum price bid shall include the cost of all design, labor and materials including timber, hardware, and equipment necessary to complete the work in accordance with the Contract Plans, Specifications and as directed by the Engineer.