

**ITEM 615.6851 11 - HAND WINCH ASSEMBLY FOR BOAT DOCK AND
GANGWAY REMOVAL**

DESCRIPTION

This work shall consist of furnishing and installing a hand winch assembly (including support post and foundation), to be utilized for boat dock and gangway removal in accordance with the contract documents and as directed by the Engineer.

MATERIALS

A. Footings

Concrete footings shall be cast-in-place concrete meeting the requirements of Class HP footing concrete Section 555, Structural Concrete. Reinforcing shall be epoxy coated, meeting the requirements of Section 556, Reinforcing Steel for Concrete Structures.

B. Support Post

Steel support posts shall meet the requirements of ASTM A572M Grade 50 and shall conform to Section 715-01, Structural Steel. Support post shall be shop painted the color specified in the contract plans and according to the requirements of Section 708-01, Structural Steel Paints Class 1.

C. Winch

The winch shall be a double reduction spur gear hand winch with a minimum capacity of 45 KN. The winch shall be marine duty type with automatic brake. The drum shall be wrapped with 100 m of 12 mm diameter wire rope. The wire rope shall meet the requirements of ASTM A-603. The handle length shall be adjustable. Steel gears shall have covers for protection. Hardware for attachment shall be stainless steel.

CONSTRUCTION DETAILS

The contractor shall furnish for approval by the Engineer catalogue cut sheets, instruction sheets, and any other information requested by the Engineer prior to ordering the material.

The posts for hand winch supports shall be set in concrete footings, as shown on the plans. All posts shall be set plumb and true to line and grade. Any post and sleeve not set true to line and grade shall be removed and replaced at the Contractor's expense. Bending posts to make them plumb will not be permitted.

Excavation and backfill shall be performed in accordance with the requirements of Section 206, Trench, Culvert and Structural Excavation.

METHOD OF MEASUREMENT

This work will be measured as the number of HAND WINCH ASSEMBLY FOR BOAT DOCK AND GANGWAY REMOVAL satisfactorily furnished and installed.

BASIS OF PAYMENT.

The unit price bid shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work.