

PART 1 - GENERAL

- 1.1 Description of Work .1 This section specifies requirements for the following items:
- .1 Ladders
 - .2 Fenders
- 1.2 Reference Standards .1 American Society for Testing and Materials International (ASTM)
- .1 ASTM A307-14, Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
 - .3 ASTM F3125-18 (or latest edition), Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength.
- .2 Canadian General Standards Board (CGSB)
- .1 CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating.
- .3 Canadian Standards Association (CSA International)
- .1 CSA-G40.20-13/G40.21-13 (of latest edition), General Requirements for Rolled or Welded Structural Quality Steel / Structural Quality Steel.
 - .2 CSA G164-18 (or latest edition), Hot Dipped Galvanizing of Irregularly Shaped Articles.
 - .3 CAN/CSA O56-10 (R2015), Round Wood Piles.
 - .4 CAN/CSA-080 Series 15- Wood Preservation.
 - .5 CSA W59-18, Welded Steel Construction.
- .4 National Lumber Grading Association (NLGA)
- .1 NLGA standard grading rules for Canadian Lumber 1980 edition or most recent edition at time of tendering.
- 1.3 Related Work .1 Refer to other Specification Sections for related information.
- .2 Refer to Section 01 33 00 for Shop Drawing/Submissions requirements.
- 1.4 Submissions .1 Shop Drawings:
- .1 Clearly indicate the following items:

- .1 General arrangements, dimensions, clearance locations and directions of assemblies as installed on structures.
 - .2 Locations, sizes and installation tolerances of anchor bolts, eye bolts and embedded parts.
 - .3 Types of materials used, finishes and core thickness.
 - .4 All other pertinent details and accessories.
- .2 Product Data/Samples:
- .1 Provide product data and manufacturers brochures for the mooring cleats.
- .4 Submissions
- .1 Provide submissions in accordance with Section 01 33 00.

PART 2 - PRODUCTS

- 2.1 Materials
- .1 Timber: to Section 06 05 73 Dimension Timber.
 - .2 Hardware and miscellaneous items must meet the following specifications:
 - .1 Machine bolts, lag bolts, drift bolts, anchor bolts, nuts, washers to ASTM A307.
 - .2 Steel plates and sections to Section 05 50 00 - Metal Fabrications. All steel to be hot dipped galvanized to CSA G-164, unless otherwise noted.
 - .3 Hot dip galvanize bolts, anchor bolts, nuts, washers, pipe sleeves, steel plates, rungs, holdfasts and any other miscellaneous steel to CSA G164 with minimum zinc coating of 600 g/m².

PART 3 - EXECUTION

- 3.1 Fenders
- .1 Fasten fenders to wharf with machine bolts and adhesive anchors, as further detailed on drawings.
 - .2 Bevel top of each fender to 4 horizontal to 1 vertical, and bottom of each is to extend 300 mm below chart datum. Treat tops per Section 06 05 73.
 - .3 Countersink bolts on exterior face of fenders.

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- 3.2 Ladders
- .1 Assemble ladder units and install completed units in locations shown on plan or as indicated by Departmental Representative.
 - .2 Countersink bolts on exterior face of ladder.
 - .3 Apply preservative to areas of unprotected wood exposed during course of work in accordance with Section 06 05 73.
- 3.3 Installation
General
- .1 Boreholes for drift bolts to be 1.5mm smaller in diameter than bolt and for full length of bolt. Boreholes for machine bolts to be same diameter as bolts. Boreholes for lag bolts to be same diameter as shank for unthreaded portion and 0.70 times the shank diameter for the threaded portion. Threaded portion of lag bolts will be installed using a wrench, not by driving.
 - .2 Contain all debris and leachates (films on water surface) within the area of the work by using containment facilities such as floating booms or screens.

END OF SECTION