

PART 1 - GENERAL

- 1.1 Related Work .1 Refer to other Specification Sections for related information.
- 1.2 Reference Standards .1 CAN/CSA-080 Series 15 (or latest edition)- Wood Preservation.
- .2 Copper naphthenate containing 2% copper for Brush or Spray Treatment for Field Cuts.
- .3 NLGA standard grading rules for Canadian Lumber 1980 edition (or latest edition at time of tendering).
- .4 ASTM A123/A123M-17, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- .5 ASTM A307-14 (or latest edition), Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
- .6 ASTM B111/B111M-16 (or latest edition), Standard Specification for Copper and Copper-Alloy Seamless Condenser Tubes and Ferrule Stock
- .7 CSA 086.1-14 (or latest edition), Engineering Design in Wood.
- 1.3 Submissions .1 At least two weeks prior to finalizing timber order, submit drawings, clearly indicating installation details. Show splice locations, splice details, fastening arrangements.
- .2 Submit methodology for field treatment.

PART 2 - PRODUCTS

- 2.1 Materials .1 Softwood Timber: Graded and stamped to National Lumber Grading Authority (NLGA) No. 1 Structural. Eastern Hemlock, Western Hemlock or Douglas Fir Species, only, will be used.
- .1 All wall sheathing material to be tongue and groove and planed two side to uniform thickness prior to preservative treatment.
- .2 Timber Treatment:
- .1 Preservative treatment to CAN/CSA-080 Series for Usage Category or exterior application in contact with ground. Where assay retentions are not indicated, they

are to be taken as 1.5 times the indicated gauge retention.

- .3 Miscellaneous Hardware must meet the following specifications:
 - .1 Machine bolts, lag bolts, drift bolts, anchor bolts, nuts, round plate washers: to ASTM A307.
 - .2 Spikes: to CSA B111.
 - .3 Hot dip galvanized hardware, bolts, nuts, washers and spikes to ASTM A123M, with minimum zinc coating of 600 g/m².
 - .4 All hardware will be galvanized unless otherwise shown on plans. Bolts and threaded rod are not to be cut after galvanizing.

PART 3 - EXECUTION

- 3.1 General
 - .1 Supply and install dimension timbers to details shown on drawings or as specified. Treated timber to be supplied in pre-cut lengths to suit.
 - .2 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.
 - .3 All countersunk holes to be recessed 25 mm and shall receive two coats of Copper naphthenate, allowing sufficient time between applications to permit total absorption. The cost of supply and application of Copper naphthenate will not be measured for payment but will be considered incidental to the work.
- 3.2 Handling Timber
 - .1 Timber will be protected during handling, shipping, offloading and field handling, by use of suitable equipment and procedures. Use rope or fabric strap slings on site for moving bundles or individual timbers, rather than metal grabs, chains or cables.
 - .2 Tops of vertical untreated timber to be field treated with minimum two liberal coats of Copper naphthenate.
- 3.3 Handling Treated Timber
 - .1 Handle treated material to avoid damage causing alteration in original treatment.

- .2 Treat in field, spike holes, boreholes, plugged holes, cuts and any damage to treated material, using Copper naphthenate, as specified herein, regardless of plant treatment type.
 - .3 Provide methodology pertaining to treating and application. Apply to dry surfaces, wherever possible.
 - .4 Treat boreholes, using a pressurized container with an extension rod, to produce a fine spray in the holes with one application. Alternately a cylindrical brush may be used.
 - .5 Treat field cuts and any abrasions with minimum of two liberal applications, using either spray or brush.
 - .6 Environmental Concern: Ensure no spillage or excess application of field preservative. Provide workmen with sufficient training and protective gear to properly and safely handle the treated materials and to apply field treatment, so as to prevent undue hazard to themselves, others, or the environment.
- 3.4 Sheathing Plank
- .1 Install wall 50mm thick wall sheathing planks in controlled random pattern.
 - .2 Attach sheathing to each post with 125 mm galvanized spikes. Use two spike per timber per support.
 - .3 Predrill holes to receive spikes.
 - .4 Joints: splice only over centre line of post. Splices shall be staggered 2400 c/c at posts; do not splice adjacent courses of sheathing on the same post. Minimum length of timbers: 4800 mm.
 - .5 Prior to placing sheathing planks, cover abutting face of supporting timber posts with 1.14 mm (0.045 inches) thick non-reinforced EPDM membrane conforming with ASTM D4637M. This membrane is for the purpose of shedding water and is to be 50 mm wider on each side than the member covered. For example use 250 mm wide sheet for a 150 mm wide member. Cost is incidental to work.

END OF SECTION