

## CONSTRUCTION SPECIFICATION

### MI-174. TIMBER FABRICATION AND INSTALLATION

#### 1. SCOPE

The work shall consist of the construction of timber structures and timber portions of composite structures.

#### 2. MATERIALS

Structural timber and lumber shall conform to the requirements shown on the drawings. Unless otherwise specified on the drawings, timber and lumber shall be treated with:

- 1) Chromated copper arsenate (CCA) with a minimum net retention of 0.6 pounds per cubic foot for placement in contact with concrete or for building poles and and 0.4 pounds per cubic foot for other uses.
- 2) Alkaline Copper Quat (ACQ-C) ) with a minimum net retention of 0.6 pounds per cubic foot for placement in contact with concrete or for building poles and and 0.4 pounds per cubic foot for other uses.

Hardware for CCA treated wood, except cast iron and stainless steel, shall be galvanized or cadmium plated. Hardware for ACQ except cast iron and stainless steel, shall be hot dipped galvanized. Unless otherwise specified, structural steel shapes, plates and rods shall not be galvanized. Driftbolts, dowels and screws shall be either wrought iron or medium steel. Nuts, washers and bolts on a single structure shall all be of the same material and have the same coatings.

#### 3. WORKMANSHIP

All framing shall be true and exact. Timber and lumber shall be accurately cut and assembled to a close fit and shall have even bearing over the entire contact surfaces. No open or shimmed joints will be accepted. Nails and spikes shall be driven with just sufficient force to set the heads flush with the surface of the wood. Deep hammer marks in wood surfaces shall be considered evidence of poor workmanship and sufficient cause for rejection of the work.

Holes for round driftpins and dowels shall be bored with a bit 1/16 inch (1.5 mm) smaller in diameter than that of the driftpin or dowel to be used. The diameter of holes for square driftpins or dowels shall be equal to one side of the driftpin or dowel. Holes for machine bolts and rods shall be bored with a bit of the same diameter as that of the bolt. Holes for lag screws shall be bored with a bit not larger than the body of the screw at the base of the thread.

Washers shall be used in contact with all bolt heads and nuts that would otherwise be in contact with wood. Where public access is anticipated, all nuts shall be checked or burred after final tightening to effectively prevent removal.

Surfacing, cutting and boring of timber and lumber shall be kept to the practical minimum where cutting of treated timber and lumber is required. All cuts and abrasions shall be carefully trimmed and coated with not less than three brush coats of a commercially available wood preservative or sealer.

All recesses and holes cut or bored in treated timber and lumber shall be swabbed with not less than three coats of a commercially available wood preservative or sealer. After field treatment any unfilled holes shall be plugged with tightly fitting wooden plugs treated with a commercially available wood preservative or sealer.

4. HANDLING AND STORING MATERIALS

All timber and lumber stored at the site of the work shall be neatly stacked on supports above the ground surface and protected from the weather by suitable covering. Timber and lumber shall be close-stacked. The ground underneath and in the vicinity of all stacks shall be cleared of weeds and rubbish. The use of cant hooks, peavies or other pointed tools, except end hooks, will not be permitted in the handling of structural timber or lumber. Timber and lumber shall be handled with rope slings or other methods that will prevent the breaking or bruising of outer fibers, or penetration of the surface in any manner.