

SPECIFICATIONS FOR DRIVING TREATED TIMBER PILES1010. 1. DESCRIPTION

The work will consist of hauling, locating, aligning, handling and driving treated timber piles, cutting off piles at the required elevations and treating cut surfaces with timber preservative.

1010. 3. SUPPLY OF MATERIALS

3.1 Material to be supplied by the Minister at the sources of supply specified in the Special Provisions:

Treated Timber Piling
Timber Preservative

3.2 Material to be supplied by the Contractor

Metal bands not less than 19 mm wide and 1.0 mm thick.

1010. 5. PILE DRIVING EQUIPMENT

Pile driving equipment to be used by the Contractor shall be of such capacity that the required penetration shall be obtained without damage being done to the pile.

If the Contractor can demonstrate conclusively that special methods, other than providing a higher capacity hammer, are necessary to advance the pile to the required penetration, such supplementary methods will be subject to the Engineer's approval and will be paid for on an Extra Work basis.

Pile driver leads shall be used to support the piles while they are being driven. Leads shall be of sufficient length to be firmly supported on the ground. The use of hanging or swinging leads will not be allowed unless they can be held in a fixed position during the driving operations. Batter piles shall be driven with inclined leads.

The Contractor shall furnish the Engineer with the manufacturer's specifications and catalogue for all mechanical hammers used, showing the data necessary for computing the bearing value of piles driven.

Gravity or drop hammers shall be weighed in the presence of the Engineer, or a certificate of mass shall be furnished to the Engineer. Hammers so weighed shall have the exact mass marked on them. Gravity hammers shall weigh at least 1 t, but in no case shall the mass of the hammer be less than the combined mass of the pile and pile cap.

The heads of all piles shall be protected from brooming or splitting by means of a pile cap of a design approved by the Engineer.

1010. 7. CONSTRUCTION METHODS

7.1 Handling and Storage of Piling

The handling and storing of treated timber piles shall be done in a careful manner to avoid damaging the piles. Special care shall be taken to prevent breaking of the treated surfaces.

1010. 7. CONSTRUCTION METHODS (Cont'd)

7.1 Handling and Storage of Piling (Cont'd)

If piles are damaged due to the Contractor's handling operations, the Contractor shall, at his own expense, replace all damaged piles with treated timber piles meeting the Department's specifications.

7.2 Banding, Location and Alignment of Piles

Piles shall be driven in the positions shown on the plans or as directed by the Engineer. Piles shall be driven vertically unless shown otherwise on the plans. Batter piles shall be driven to the batter specified and shall not be jacked or pulled into their final positions.

The Contractor shall band the tips and butts of the piles prior to driving. The banding shall be done by means of a banding tool designed for curved surfaces. A minimum of 2 tightly fastened bands will be required at both the tip and the butt of each pile.

Additional banding may be required by the Engineer in the field.

The Contractor shall cut 150 mm off the top of each pile prior to driving of the piles.

7.3 Driving Timber Piles

Piles shall be driven to the depths indicated on the plans unless otherwise authorized by the Engineer in writing. If piles are split, broomed, or broken through the Contractor's negligence or carelessness in pile driving operations all damaged piles shall be replaced by the Contractor with treated timber piles meeting the Department's specifications.

If during the driving of the piles there is an indication of splitting, the Contractor shall band the piles in the area of splitting before any further driving is resumed.

The Contractor shall drive the piles in the sequence specified by the Engineer in order to minimize pile upheaval. If upheaval does occur, the Contractor shall re-drive the lifted piles to the required elevations. The Contractor shall excavate material which has boiled up during pile driving operations.

Pre-boring will not be allowed unless it is approved in writing by the Engineer in the field.

7.4 Cut-off Piles

The piles shall be cut off at the elevations shown on the plans or as marked on the piles by the Engineer. In cutting off piles, the saw shall rest on straight edges firmly attached to both sides of the bent so that the tops of the piles shall afford an even true bearing for the caps after the cutoffs have been made. Cut surfaces of treated piles shall be given one coat of timber preservative.

If the cap does not have full bearing on all the piles, the Contractor shall, at his own expense, supply and place steel plate shims to provide full bearing between the cap and all the piles. Every steel shim shall be secured to the pile by a 150 mm nail.

The Contractor shall store at the site, all lengths of piling cutoff before and after driving and shall produce such lengths of piling for measurement by the Engineer. After measurement the pile cut off will become the property of the Contractor and shall be removed by him from and out of sight of the right-of-way.

1010. 7. CONSTRUCTION METHODS (Cont'd)

7.5 Log Borings

Foundation data shown on the plans is primarily for design purposes and the Department does not guarantee that the information is free from errors or discrepancies. Soil information available in the Bridge Engineer's Office may be perused upon request.

1010. 9. METHOD OF MEASUREMENT

Treated timber piles will be measured on a lineal metre basis. The length to be paid for will be the total number of lineal metres of piling shown on the plans, or authorized by the Engineer, less 50% of the total number of lineal metres of piling cut off after driving. Cutoffs will be measured by the Engineer in the presence of the Contractor.

1010. 11. BASIS OF PAYMENT

Driving treated timber piles will be paid for at the Contract Unit Price per lineal metre for "Driving Treated Timber Piles" measured as specified herein, which price will be payment in full for performing all operations herein described and all other items incidental to the work included in this Specification. If additional banding is required by the Engineer in the field it shall be paid for on the basis of extra work.