

ITEM 10551.04 M - TREATED TIMBER PILES

DESCRIPTION

Under this work the Contractor shall furnish and place timber piles of the type and size and at the locations indicated on the plans, or where ordered by the Engineer.

MATERIALS

Materials for piling shall conform to the requirements shown on the plans and the applicable subsections of Section 700 - Materials.

CONSTRUCTION DETAILS

A. Preparation of Piles.

- 1. Points.** The tips of timber piles shall be sawed square so that, when cut off, the end is perpendicular to the longitudinal axis of the pile or tapered to a point not less than 100 mm in diameter.
- 2. Butts.** The butts of timber piles shall be sawed square.
- 3. Splices.** Timber piles shall not be spliced.

B. Methods of Driving. The driving of piles shall be done with an air/steam, Diesel, or hydraulic hammer. The order of driving will be determined by the Engineer. Equipment utilized for driving timber piles shall conform to the requirements of Section 551-3.01.D with the exception that the minimum rated striking energy of the hammer to be used in driving piles shall be 9.5 KJ per blow, and the maximum rated striking energy shall be 18.3 KJ per blow.

C. Preservative Treatment. The preservative treatment shall be applied to the timber piles as indicated on the plans and shall conform to Section 720-02.

D. Length of Piles. All piles shall be driven to a predetermined depth as shown on the plans.

E. Allowable Variation in Pile Alignment. Piles shall be truly vertical or accurately battered as indicated on the plans. The top of any pile driven its full length into the ground shall not vary from the plan location by more than 100 mm.

F. Defective Piles. All piles forced up by any cause shall be driven down again, as directed by the Engineer.

The following shall be causes for rejection of a pile:

1. Pile location or batter is incorrect.
2. Pile damaged from any cause whatsoever.
3. Pile tip elevation is not within the limits called for on the plans, or specified by the Engineer.
4. Pile is determined by the Engineer to be unserviceable for other reasons related to the furnishing and installing of the pile.

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The Contractor shall remove such rejected piles, or at the option of the Engineer, a second pile may be driven adjacent thereto, if this can be done without impairing the structure.

Timber Piles which are driven so that, when cut off, the tops are below the elevation fixed by the plans or as established by the Engineer, shall be withdrawn and replaced by new and, if necessary, longer piles at the expense of the Contractor.

Piles that are split, splintered or broomed from driving operations are not acceptable. Any pile broken by reason of internal defects (even though the Engineer permitted it to be put in the leads), or by improper driving shall be rejected.

- G. **Cutting Off of Piles.** The tops of all piles shall be cut off at the elevation indicated on the plans or as specified by the Engineer. The cut shall be clean and to a true plane, in accordance with the detail shown on the plans or as required by the D.C.E.S. The sawed surface shall be treated as shown on the plans. All cut off lengths shall become the property of the Contractor and shall be removed by him from the site of work
- H. **Associated Work.** All cavities or voids, left by the extraction of damaged piles or from auger bolts or soil deformations necessary to place piles, shall be backfilled as specified by the Engineer.
- I. **Storage, Handling and Inspection.** The method of storing and handling of piles shall be such as to avoid injury to the piles. Timber piles shall be handled with special care so as to avoid breaking the surface of the piles. They will be first inspected at the wood preservative treating plant and shall be subject to further inspection upon arrival at the job site.

METHOD OF MEASUREMENT

The quantity of piles to be paid for under the work specified will be the number of meters of driven, acceptable piles, measured below the cut off elevation, remaining in the finished structure in accordance with the plans, specifications, and orders of the Engineer.

BASIS OF PAYMENT

The unit price bid per meter for each pile shall include the cost of furnishing all labor, materials and equipment necessary to complete the work as prescribed in these specifications including the following additions:

- A. **Equipment for Driving Timber Piles.** The cost of furnishing all labor, materials, and equipment necessary for transporting, erecting, maintaining, making any ordered equipment replacement, dismantling and removing the entire pile driving equipment shall be included in the unit price bid.

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- B. **Defective Piles.** No payment will be made for piles rejected in accordance with the requirements under Construction Details - Section F, Defective Piles.
- C. **Backfilling.** Payment for backfilling of all cavities left by the extraction of damaged piles or from auger holes or soil deformations necessary to place piles shall be included in the work for the respective pile item.
- D. **Redriving Piles.** The cost driving piles that are forced up by any cause shall be included in the unit price bid for the respective pile item.
- E. **Pile Shoes, etc.** The cost of furnishing and using pile shoes, followers, augers or spuds shall be included in the unit price bid.