

ITEM 17551.0302 M - PREDRILLING HOLES FOR PILES - CASING REQUIRED

DESCRIPTION:

The work shall consist of drilling, boring, or augering holes and backfilling for piles at the locations and to the depths indicated on the contract plans or as ordered, in writing, by the Engineer.

All pile holes shall be cased, unless an alternate procedure has been approved by the Engineer.

MATERIALS:

Casing may be of any material sufficiently rigid to keep the pile hole from collapsing. It is the Contractor's responsibility to choose a material that will prevent collapse.

Backfill shall be as indicated on the Contract Plans.

CONSTRUCTION DETAILS:

Holes shall be drilled, bored, or augered through the in situ soils, rock, boulders, buried obstacles, debris, footings and concrete slabs whether indicated on the plans or not. If it is specified to predrill into rock and the rock elevation varies in the field by more than 0.6 m from that shown on the plans, the Deputy Chief Engineer Structures shall be contacted to determine if the pile tip elevation should be revised. The Geotechnical Engineering Bureau shall be contacted for highway concrete retaining walls. It is the Contractor's responsibility to provide equipment capable of penetrating to the required elevation. No jetting will be permitted without the written permission of the Engineer.

Holes shall be of the diameter shown on the plans. If no diameter is shown, then the following diameters shall be provided by the Contractor:

Displacement piles. 150 mm greater than the nominal diameter of the pile.

Steel H-piles. 150 mm greater than the maximum diagonal axis measurement of the pile in question.

Holes shall be progressed without noticeable subsidence of the surrounding ground surface. Should noticeable subsidence occur, in the Engineer's opinion, work shall be stopped and the Regional Geotechnical Engineer shall be consulted. Upon consultation with the Regional Geotechnical Engineer, the Contractor shall propose a scheme to be approved by the Engineer for progressing the work without subsidence.

The casing shall be advanced no more than 1.5 m ahead of the bottom of excavation.

Holes shall be cleaned out to the elevation required by the contract documents, or to the elevation established by the Engineer.

Immediately after each pile has been installed to the required tip elevation, the void between the pile and the sleeve shall be backfilled with material as shown on the Contract Plans. Unless otherwise specified in the contract documents, the Engineer may require backfill placement after initial pile placement, but prior to pile driving, where driving is required to reach final tip elevation if, in his opinion, the procedure is required to reduce vibration.

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The Contractor may extract the casings after pile installation has been completed. If the casing is extracted prior to pile driving where driving is required to reach final tip elevation, backfilling shall be done simultaneously with extraction. All extracted casings shall remain the property of the Contractor.

If the Contractor chooses to leave the casing in place, the cut-off elevation shall be subject to the approval of the Engineer.

METHOD OF MEASUREMENT:

The work will be measured as the number of linear meters of hole progressed. Measurement will be taken along the centerline of the hole. No payment shall be made for any length of hole progressed below the elevation shown on the plans unless ordered, in writing, by the Engineer.

BASIS OF PAYMENT:

The unit price bid per linear meter shall include the cost of all labor, materials and equipment necessary to satisfactorily complete the work including backfill.