

## **ITEM 17203.3503 M - DRILLING GROUT HOLES**

### **DESCRIPTION**

Drill minimum 65 mm diameter grout holes, at the locations, in the direction, and to the depths or elevations on the plans.

### **MATERIALS**

Not specified.

### **CONSTRUCTION DETAILS**

#### **Submittals**

The Contractor shall submit to the Engineer for approval, a description of the proposed method of drilling the required grout holes, including equipment set-up, drill operation, drill hole size, bit type, and means of equipment and personnel access to the site.

#### **Drilling Grout Holes**

Grout holes shall be drilled with rotary or percussion drilling equipment. Cuttings shall be removed by water flushing when drilling below the groundwater table, and by air or water flushing when drilling above the water table. Flushing of drilled holes in rock or concrete shall continue until there is no further removal of cuttings in the wash-fluid or, in the event of substantial water loss in the hole, for a minimum of 10 minutes. No core recovery will be required.

Where the drilling operation is not performing as specified in the Contract, the drill operation shall be stopped. A revised operation shall be submitted to the Engineer for his approval prior to continuing this work.

The Contractor shall keep detailed drilling logs for each hole drilled. The records shall include the following:

- a. Hole number, and location;
- b. Date, and start and end times of drilling;
- c. The depth at which a loss, if any, of drilling fluids occurs;
- d. Description of cuttings in the return fluid with depth of drilling, or a description of the strata with depth;
- e. Water depth; and
- f. Other data as required by the Engineer.

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### **Drilling Sequence**

Grout hole locations shall be progressed in the order as indicated on the plans, or as directed by the Engineer.

Grout holes shall be kept open until they have been grouted. A grout hole that collapses prior to filling with grout shall be reopened, replaced or abandoned, as ordered by the Engineer.

Holes shall not be drilled or flushed within 9 m of a hole being grouted for eight (8) hours after the completion of grouting.

### **METHOD OF MEASUREMENT**

The quantity to be paid for this item shall be the actual number of meters of accepted grout holes drilled, as shown within pay limits on the plans.

Where a grout hole does not remain open due to collapsing subsurface conditions or adjacent grouting operations, the hole shall not be considered accepted.

### **BASIS OF PAYMENT**

The unit price bid per meter for Drilling Grout Holes shall include the cost of all labor, material and drill tools necessary to satisfactorily complete the work.