

ITEM 17551.9920 M - PILASTERS TO LEDGEROCK

DESCRIPTION

Furnish the materials and install concrete filled pilasters to ledgerrock at the locations shown on the plans or where ordered by the Engineer. Use temporary steel casings seated on the ledgerrock. Install pilasters having dimensions as shown on the plans or as approved by the DCES.

MATERIALS

A. Temporary Casing

Provide temporary steel casing with an inside diameter as indicated on the plans or as approved by the DCES and capable of withstanding all installation stresses.

B. Concrete

Provide concrete to place in pilaster foundations conforming to the requirements of Section 501, Portland Cement Concrete-General, Class G. Place the concrete in accordance with the applicable requirements of Section 555 or as specified by the Engineer.

CONSTRUCTION DETAILS

A. General

Provide equipment and procedures to satisfactorily install the pilaster foundations through overburden material to ledgerrock.

Submit a construction procedure for installing the pilasters to the DCES for evaluation and approval prior to commencement of work. The DCES will render a decision within 15 working days, measured from the receipt of all pertinent information.

B. Location and Elevation

Install all pilaster foundations to ledgerrock at the locations shown on the plans or where ordered by the Engineer.

C. Construction Tolerance

Do not vary the center of the pilaster from the plan location by more than 75 mm. Do not vary the pilaster from the vertical or the specified batter by more than 20 mm per meter, measured from the top of the casing. The actual inside diameter of each temporary steel casing will not be less than the diameter shown on the plans.

D. Drilling and Excavation

Progress and seat the temporary steel casing on ledgerrock and excavate the pilaster to top of ledgerrock. Progress the temporary steel casings by rotary drilling methods through in-situ soils and all buried obstacles and debris, whether indicated on the plans or not. Do not permit driving, blasting or jetting. Progress the casing in a manner that

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does not cause disturbance or settlement to the surrounding ground surface or adjacent structures. If any disturbance occurs, halt operations and modify equipment and/or procedures so that no further disturbance occurs. Repair any damage at no additional cost to the State.

Excavate the bottom of the pilaster to the ledgerrock surface. Clean the bottom of the excavation to the satisfaction of the Engineer. Remove excavated material from the site or use in a manner acceptable to the Engineer.

E. Concrete Placement

Reinspect the bottom of the excavation immediately prior to placing concrete in the casing to verify that it is free of all loose material. Remove all loose material observed in the bottom of the excavation to the satisfaction of the Engineer prior to concrete placement. The Engineer may require the casing to be dewatered to facilitate the inspection.

Handle and place Portland Cement concrete conforming to the requirements of Section 555-3.04 and 3.05, Structural Concrete, except place concrete by the tremie method or as approved by the Engineer.

F. Coring Pilasters

Core a minimum of two pilasters per substructure to verify the quality of the concrete throughout the length of the shaft and to determine that there is continuous contact between the concrete and the ledgerrock. Fill all core holes with an approved non-shrink grout meeting the requirements of Item 701.05. If the Engineer determines that the concrete quality does not meet the specifications or continuous contact between the concrete and ledgerrock does not exist, make the necessary repairs based upon the determination of the DCES. Repair the pilasters at no additional cost to the State.

METHOD OF MEASUREMENT

The number of linear meters of pilasters furnished, installed and accepted. Make the measurement along the center of the pilaster below the cutoff elevation indicated on the plans. Take the measurement prior to the filling of the pilaster.

BASIS OF PAYMENT

Include in the unit price bid the cost of furnishing all labor, material and equipment necessary to complete the work including all required drilling, temporary casing, concrete coring and grouting of the core holes.