

ITEM 11580.30 M - REMOVAL OF CONCRETE SUPPORTED STRUCTURAL CONCRETE SLAB (WITHOUT SHEAR CONNECTORS)

DESCRIPTION

The work shall consist of removal of concrete supported structural concrete slabs (without shear connectors) as indicated on the plans or as ordered by the Engineer. All removed material shall become the property of the Contractor and shall be removed from the work site. All work shall be done where indicated on the contract plans or where ordered by the Engineer.

All materials, carried by the supporting concrete members, shall be removed unless the plans specifically indicate removal under another item or that the material is to remain in place.

CONSTRUCTION DETAILS

General

The requirements of subsection 202-3 shall apply.

Care shall be exercised in removing concrete so as not to damage material designated to remain in place. Reinforcement designated to remain in place shall be cleaned in a manner satisfactory to the Engineer.

All existing concrete surfaces that will receive fresh concrete will require cleaning after the concrete removal has been performed. The surfaces shall be thoroughly sandblast cleaned, or abraded by other mechanical means satisfactory to the Engineer. After cleaning, the surface shall be air-blown or vacuum cleaned on all horizontal surfaces.

Where a hammer size limitation is specified on the plans or in the specifications, the Engineer-In-Charge may order the Contractor to use a lighter hammer than that specified, if, in his opinion, the hammer being used is destroying concrete that should remain. A hammer heavier than that specified may be used if written permission is secured from the Deputy Chief Engineer (Structures).

Removal Process

The existing structural concrete slab shall be removed in accordance with the following three step removal process.

1. Cut the slab into sections so that the portions lying outside the supporting wall can be removed as pieces.
2. Saw cut the deck horizontally at the deck-beam interface.
3. Remove the remaining portion of the slab using lightweight jack hammers (as specified).

Removal of Structural Concrete

Chipping hammers shall weigh no more than 20 kg with the bit and muffler removed. The hammer shall deliver no more than 1600 blows per minute. The Contractor shall provide the Engineer information from the hammer manufacturer that these requirements are not exceeded. The air pressure used to power the hammer shall not exceed 0.75 MPa measured at the air compressor. An air pressure gauge in proper working condition shall be provided. Only sharp chisel point bits shall be used. All bits determined by

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the Engineer to be dull shall be sharpened or replaced. If the Engineer determines that the Contractor's operations are resulting in damage to concrete that is to remain, the Contractor shall make immediate corrections. These corrections shall include the use of a lighter chipping hammer if so ordered by the Engineer.

Care of Concrete Members to Remain

Care shall be taken to insure that the structural concrete members which are to remain are not damaged due to the Contractor's operations. Should a structural concrete member be damaged due to the Contractor's operations, the Engineer shall be the sole judge as to whether or not the structural concrete member may be in need of repair. Should the Engineer decide that repair may be in order, notification shall be made to the D.C.E.S. who shall make the final determination. The D.C.E.S. determination will be one of the following:

1. No repair is necessary.
2. Repair is necessary. In this case, the D.C.E.S. shall determine the method(s) of repair. The Contractor shall perform all repair work in strict accordance with the D.C.E.S. instructions.
3. Replacement of the structural concrete member is necessary. In this case, the D.C.E.S. shall determine the material(s) and method(s) of repair. The Contractor shall perform the replacement work in strict accordance with the D.C.E.S. instructions.

The D.C.E.S. will make every effort to render the necessary determinations without appreciable delay. However, all expenses caused by any delay attributable to the time required for the D.C.E.S. to render those determinations, shall be borne by the Contractor.

Any required repair, or replacement of structural concrete members performed under the terms of this subsection, shall be done at the expense of the Contractor.

METHOD OF MEASUREMENT

The work will be measured as the number of square meters of structural concrete slab removed and disposed of. Measurement will be taken in the field without any deductions for openings unless otherwise indicated on the plans.

BASIS OF PAYMENT

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