ITEM 15502.9980 M - TRUING STRUCTURAL SLABS

DESCRIPTION: This work shall consist of trueing structural slabs by grinding or by preparing the surface and placing portland cement mortar. Methods of truing shall be performed in accordance with the schedule given in this specification. All removed materials shall be transported from the site and disposed of in a suitable area. All work performed according to the requirements of this specification shall stop at the plane of the top of the topmost mat of reinforcing steel. All concrete removal from between or around the reinforcing steel shall be done under its respective item.

MATERIALS:

A. The materials used for portland cement mortar shall meet the requirements of the following subsections of Section 700:

Portland Cement (Type 2)	701-01
Concrete Sand	703-07
Air-Entrainment Admixtures	711-08
Water	712-01

B. The mortar mix shall be proportioned according to the weights given in the following table. Quantities are given for one-cubic-yard mix and for a batch using one bag of cement.

	Weights (See Notes)	
	Per Cubic Yard	Per Bag of Cement
Cement	958 lbs	94 lbs
Water	375 lbs	36.8 lbs
Concrete Sand	2177 lbs	214 lbs

Notes:
1. Air content, by volume, shall be 10 percent + 2 percent.
2. The weight of sand is based on a specific gravity of 2.60.
3. The weight of water is based on saturated, surface dry concrete sand.
4. The maximum slump shall be 100 mm. The quantity of water in the mix shall be adjusted downward where necessary to meet this criteria.
5. If nonautomated batching is used, the air-entrainment admixture shall be diluted in at least one gallon of the mix water before being added to the mix.

C. Equipment All equipment used for this work shall be subject to approval by the Engineer and shall be subject to the following:

1. Pneumatic hammers heavier than the nominal 11.3 kilogram class shall not be used.
2. Sandblasting equipment shall be capable of removing small chips of partially loosened concrete.
3. High-pressure water equipment shall be capable of producing nozzle pressures of 100 psi minimum.
4. Concrete grinders shall be capable of producing the desired surface finish as described in the Construction Details.

CONSTRUCTION DETAILS:

A. General The completed work shall have no depressions greater than 6 mm measured from a 305 mm long straight-edge placed at any position on the structural slab. The methods used to true the structural slab shall depend upon the distance "d", measured between the existing top of structural slab and the original line and grade of the structural slab, and shall be done in accordance with the following table:

"d"	Trueing Method
0" - 13 mm	Grind high points
13 mm - 51 mm	Place portland cement mortar

B. Grinding Trueing by grinding shall be accomplished by removing the high points with concrete grinders, to provide a smooth surface. Maximum depressions of 6 mm measured from a 305 mm straight-edge placed at any position in the ground area are allowable. The Engineer may approve other means for removing the high points. After grinding, all by-products of the grinding operation shall be removed by vacuum cleaning or by high-pressure water blasting.

C. Surface Preparation before Placing Mortar All areas which are to receive mortar shall be tested by a nominal 11.3 kilogram class pneumatic hammer. The hammer shall be operated at a maximum angle of 45 degrees measured from the surface of the slab. Any concrete which can be dislodged in this manner shall be removed. After concrete is removed in accordance with the above, the edges of the excavation(s) shall be sawcut to a depth of 6 mm. Where mortar is placed, the mortar shall have a minimum depth of 6 mm. After removal of concrete, the excavation(s) shall be sandblasted to remove any partially loosened concrete. No. 40 Boiler Slag Grit or No. 2 Sandblast Sand shall be used for blast cleaning. Debris from the sandblasting operation shall be removed by vacuum cleaning. Between one and two hours before the mortar is placed, the prepared areas shall be washed with a high-pressure water jet. Before placing mortar, the surface shall be damp, but any freestanding water shall be removed. No mortar shall be placed if there is freestanding water on the Structural Slab.

D. Placing and Finishing Mortar The weather limitations of Subsection 502-3.01 shall apply except that the paving material shall be mortar. After placement, the mortar shall be spaded with metal floats to remove trapped air pockets. Particular care should be taken to ensure that thorough consolidation is attained at the edges of excavations. After consolidating the mortar, the surface shall be stuck off at the level of the surrounding concrete. No additional finishing will be required unless it is necessary to correct surface irregularities or is ordered by the Engineer.

E. Curing Mortar Within one hour after placing the mortar, the surface shall be covered with wet burlap-polyethylene sheets. The burlap-polyethylene sheets shall remain in place for a minimum of 24 hours or until additional operations require their removal, whichever is later, except that they may be removed after 5 days in any case. White pigmented curing compounds shall not be allowed.

METHOD OF MEASUREMENT

Measurement will be taken as the number of square meters of structural slab trued.

BASIS F PAYMENT

The unit price bid per square meter shall include the cost of furnishing all labor, materials and equipment necessary to complete the work as shown on the Plans or called for in this Specification.