

ITEM 08490.20 M - ROFILING BY GRINDING AND TEXTURING PORTLAND CEMENT CONCRETE OR BITUMINOUS ASPHALT PAVEMENT WITH CARBIDE CUTTING BITS

DESCRIPTION:

This work shall consist of profiling by grinding and texturing Portland cement concrete or bituminous asphalt pavement with carbide cutting bits at locations indicated in the contract documents and as directed by the Engineer.

MATERIALS:

Equipment:

The cold milling machine shall be self propelled, have carbide cutting bits and two 6.1 m averaging skis - (one on each side). The carbide cutter shall be designed specifically for grinding concrete and/or asphalt to close tolerances. This machine shall be capable of discharging the ground material into adjacent trucks. During and immediately following the grinding operation, a vacuum truck shall be used to remove any remaining slurry and residue, resulting from the grinding, to a site selected and obtained by the contractor and approved by the Engineer.

The length of the carbide cutting teeth in the mandrel shall be uniform in size with a tolerance of ± 1.0 mm.

The height of the tooth holder blocks shall be uniform and not vary the cutting radius of the mandrel by more than ± 1.0 mm.

Disposal of Material:

Material removed during the milling process, including foreign debris within or on the pavement, shall be removed and disposed of to a location selected and obtained by the contractor and approved by the Engineer.

CONSTRUCTION DETAILS:

Grinding Procedures:

- A. The areas to be ground shall be as indicated in the contract documents and as directed by the Engineer. Grinding and texturing shall begin and end at lines perpendicular to the pavement centerline.
- B. Construction operations shall produce a uniform finished surface of required textures. Grinding shall be performed in the direction opposite to the normal traffic flow. The contractor shall schedule this work to progress within a time period that will ensure proper maintenance of traffic. This time period shall be approved by the Engineer before the grinding operations begin.

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- C. The contractor shall use proper dust control measures during the grinding, the discharging of material to the adjacent trucks, and the cleaning of the pavement to minimize dust from the work site.
- D. When only changing intermittent teeth, an existing “sample” carbide tooth is to be removed from the machine and measured to determine the amount of wear and/or gage height. Replacement teeth shall be matched to the existing height of the “sample” tooth \pm 1.0 mm to insure even grinding.
- E. The contractor shall use equipment, that has been approved by the Engineer, to clean the surface prior to allowing the traffic on the ground area.

Final Surface Finish:

- A. Carbide tipped teeth shall be used in the milling machine to produce a pavement surface that is true to grade and cross section. This texture shall consist of a matted surface that will have a transverse pattern of 5 mm center to center of each strike area. The difference between high and low elevations of the matted surface shall not exceed 3 mm.
- B. Pavement or shoulders adjacent to the ground pavement areas shall also be ground when necessary to maintain an adequate cross slope for drainage.

Surface Testing:

- A. After completion of the grinding process, the ground pavement surface shall be tested transversely and longitudinally with a 1.8 m straightedge furnished by the contractor. Testing shall be done both parallel to and normal to the pavement centerline.
- B. All areas showing high spots of more than 3 mm in 1.8 m transversely shall be further ground by the contractor to within the 3 mm tolerance at no additional expense to the State.
- C. Straightedge requirements shall apply across transverse and longitudinal joints and repaired cracks, but not across or outside the ground area.

METHOD OF MEASUREMENT:

Pavement grinding and texturing will be measured as the number of square meters of finished surface regardless of the number of passes required. The quantity of grinding will be determined by multiplying the finished ground width by the total ground length.

BASIS OF PAYMENT:

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The unit price bid shall include the cost of all labor, materials, and equipment necessary to complete the work. Removing and disposing the slurry and residue, and cleaning the pavement, shall be included in the cost of this item.