

ITEM 18502.5010 M - FULL DIAMOND GRINDING AND TEXTURING OF CONCRETE PAVEMENT
ITEM 18502.5020 M - PARTIAL DIAMOND GRINDING AND TEXTURING OF CONCRETE PAVEMENT

DESCRIPTION

This work shall consist of diamond grinding and texturing the entire surface (full grinding) or a portion of the surface (partial grinding) of existing Portland cement concrete pavement at the locations indicated on the plans.

MATERIALS (Equipment)

Grinding and texturing shall be done utilizing power driven diamond blades mounted on a self-propelled machine that has been designed for grinding and texturing pavements. The machine shall be equipped with a vacuum system that is capable of removing the slurry residue that results from grinding. With partial grinding, the vacuum system cannot be used to its full potential and remnants of slurry residue remain after grinding. These remnants shall be immediately removed from the pavement and shoulder surfaces by means acceptable to the Engineer. The machine shall be capable of grinding the surface without causing spalls at cracks, joints or other locations. The machine shall also be a shape and dimension that does not encroach on traffic outside the work area.

CONSTRUCTION DETAILS

The Contractor shall arrange the operation such that successive grinding operations will progress within a time period that will insure the proper maintenance of traffic.

Grinding and texturing shall be performed in a longitudinal direction in the areas designated on the plans. Grinding shall begin and end at lines perpendicular to the pavement centerline. Grinding shall be accomplished in a manner that eliminates joint or crack faults while providing positive lateral drainage by maintaining a constant cross slope between grinding passes. Extra depth grinding to eliminate minor depressions in order to provide texturing across the entire width of pavement being ground will not be required. "Space cutting" will be permitted. Space cutting is defined as a wider spacing of saw blades for an initial pass in deep grinding areas followed by a final pass meeting the requirements below. Space cutting will be permitted provided results are satisfactory to the Engineer.

After grinding both sides of joints and/or cracks shall be substantially in the same plane. Misalignment of the planes of the surfaces on adjacent sides of the joint or crack which is in excess of 2 mm, when measured with a 1 m straight edge, shall be reground.

A bevel of the dimensions shown on the plans shall be ground into adjacent lanes to provide an elevation transition from a ground lane to an unground lane.

The diamond blades shall be spaced such that the thin fins of concrete left between the cuts break off during the grinding process. Blade spacing may be varied by the Contractor depending on aggregate

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hardness. Generally, the spacing for soft aggregate will be between 2.0 mm and 2.5 mm while the spacing for hard aggregate will be between 1.6 mm and 2.0 mm. The cut grooves shall be between 2.3 mm and 3.3 mm in width. The blade spacing determined by the Contractor and approved by the Engineer shall result in a texture with the peaks of ridges approximately 1 mm higher than the bottom of the grooves.

The slurry and residue resulting from grinding shall be continuously removed during the grinding operation leaving the pavement in a clean condition. Slurry and residue shall not be permitted to flow across lanes occupied by traffic or into drainage structures.

Full and/or partial ground surfaces shall be tested with a 3 m long straight edge held both parallel and transverse to the pavement centerline. Any surface deviations found to be greater than 3 mm in 3 m shall be reground until this tolerance is achieved. These measurements shall be performed by the Contractor, under the direction of the Engineer, with a 3 m straight edge provided by the Contractor. If steel reinforcing mesh is encountered during pavement grinding, these areas do not have to be ground but will be repaired, under other items in the contract, or according to Section 104-03 Contingencies, Extra Work, Deductions.

DisApproved

METHOD OF MEASUREMENT

Pavement grinding will be measured by the square meter of acceptable finished surface regardless of the number of passes required. The quantity of grinding will be determined by measuring the finished area ground.

BASIS OF PAYMENT

The unit bid price per square meter of pavement grinding shall include the cost of all labor, equipment, materials, supplies, tools, water and incidentals necessary to grind and texture the pavement including removing slurry and residue, cleaning the pavement and shoulders.

Payment will be made under:

Item No.	Item	Pay Unit
8502.5010 M	Full Diamond Grinding and Texturing of Concrete Pavement	Square Meters
8502.5020 M	Partial Diamond Grinding and Texturing of Concrete Pavement	Square Meters

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