

ITEM 04502.8032 M - FULL DIAMOND GRINDING OF PCC PAVEMENT
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SLURRY REMOVAL

DESCRIPTION

Diamond grind the entire portland cement concrete (PCC) pavement surface where indicated on the plans or where directed by the Engineer.

EQUIPMENT

1. **Diamond Grinding.** Use equipment specifically designed for production diamond grinding of PCC pavement, such as the Target 3800 or Target 3804, or equal as approved by the Director, Materials Bureau. The equipment must use gang mounted diamond saw blades on a multi-blade arbor such that a 900 mm, minimum, grinding pass width is achieved. The equipment must also have a vacuum system capable of removing slurry from the pavement surface.
2. **Profilograph.** Use an automated California-type profilograph meeting the written requirements of the Materials Bureau. The profilograph must be capable of producing and analyzing a profile trace in accordance with those instructions. Provide the means to transport the profilograph as required by the Engineer. Alternate equipment is subject to the approval of the Director, Materials Bureau.

CONSTRUCTION

Prior to beginning any work on the pavement and after diamond grinding, produce a profilograph trace in accordance with the written procedures of the Materials Bureau. Provide traffic control and survey stationing for referencing measurements. The initial profilograph trace shall be obtained for only one (1) wheel path obtained per lane where diamond grinding will be performed. The final profilograph trace shall be obtained for both (2) wheel paths per lane where diamond grinding has been performed. The Engineer will analyze the profile trace of each wheel path and determine the profile index (PI) of the initial and final pavement surface. A wheel path is defined as a longitudinal line parallel to the centerline of pavement located approximately 900 mm inside all lane edges. The Engineer will report the PI in 160 m increments. The Contractor shall provide the Engineer the initial profilograph trace within 5 days of completing the profilograph of the pavement surface.

Begin and end diamond grinding at lines normal to the pavement centerline. Grind the pavement longitudinally in either direction. The finished surface must be at least 95% diamond ground. After grinding, the PCC pavement across a joint or crack must be in the same plane when measured with a 1.0 m (minimum) straightedge. Provide surface drainage by maintaining a constant cross slope on the finished surface and by blending adjacent passes.

If required in the contract documents, continuously remove the slurry from the pavement using the vacuum system on the grinding equipment. Transfer the slurry into equipment capable of transporting it from the job site without spills. Slurry disposal is the Contractor's responsibility. Do not allow the slurry into occupied travel lanes or drainage structures.

METHOD OF MEASUREMENT

Square meters of diamond ground surface regardless of the number of passes required. No deductions will be made for isolated low areas, provided 95% of the surface is diamond ground.

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BASIS OF PAYMENT

In the unit bid price, include the cost of all labor, equipment, materials, supplies, water, and incidental supplies necessary to grind the pavement, remove the slurry (if required), and profilograph the initial and final pavement surface.

Payment will be made for each 160 m segment. The Engineer may include segments less than 160 m long with adjacent 160 m segments. The unit bid price for each segment will be adjusted in accordance with the Payment Adjustment Table below based on the PI's determined by the Engineer.

PAYMENT ADJUSTMENT TABLE

Profile Index (mm/km)	Adjustment (% of Bid Price)
0.0 - 15.9	110
16.0 - 31.9	107
32.0 - 47.9	104
48.0 - 63.9	102
64.0 - 79.9	101
80.0 - 95.9	100
96.0 +	See note (1)

If an isolated dip is too low to grind in the Engineer's opinion, the Engineer may remove it from PI determination, provided 95% of the pavement surface has been ground. The Engineer may begin or terminate a payment interval at an isolated low area to facilitate PI determination.

Note 1: Re-grind and re-profilograph as ordered by the Engineer until a profile index of between 80.0 - 95.6 mm/km or less is obtained. No payment will be made for producing a re-profilograph trace or for grinding or re-grinding until a profilograph index of between 80.0 - 95.6 mm/km or lower is obtained.