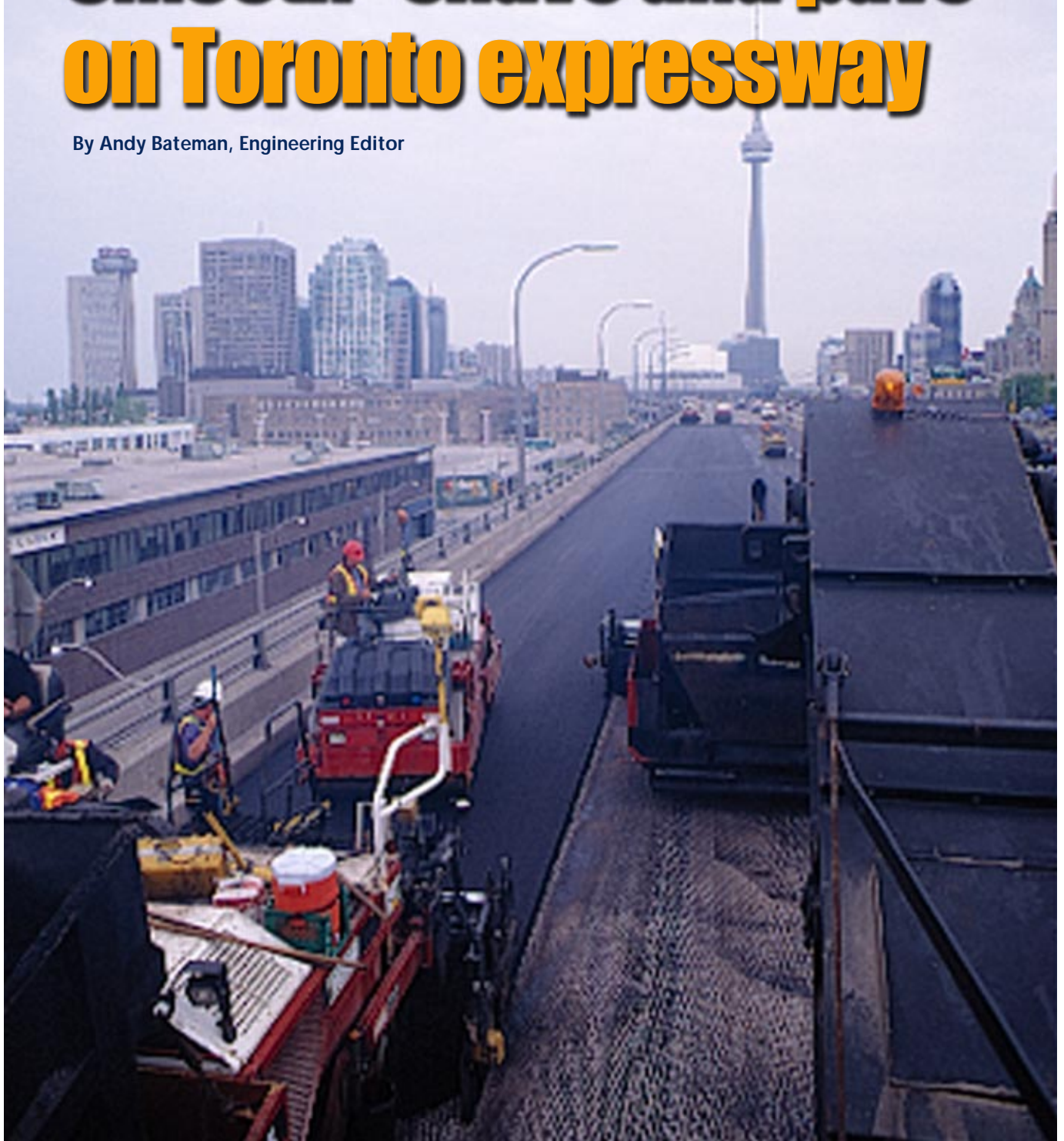


# Smooth "shave and pave" on Toronto expressway

By Andy Bateman, Engineering Editor



*Good project planning and equipment utilization produced a smooth mat in record time on a recent resurfacing contract on Toronto's Gardiner Expressway.*



Gazzola's paving crew achieved a laydown rate of an average laydown rate of 280 tonnes-h on this high profile job with a Roadtec SB 2500 Shuttle Buggy and two Caterpillar AP 1055B pavers.

Triggered by severe surface deterioration, the job involved the replacement of surface asphalt on a section of the Gardiner Expressway's eastbound lanes between the York/Bay exit ramp and a point east of the Jarvis Street on ramp. Quantities included 23 000 m<sup>2</sup> of milling and the paving of some 2800 tonnes of HL1 high stability hot mix asphalt.

Adrian Van Niekerk of paving contractor Gazzola Paving Ltd. explains the background to the job. "This expressway has been assumed by the City of Toronto from the province in the downloading of services to the municipalities. It has a budgeted reconstruction cost of \$70 million in the next ten years to bring it up to a proper state of repair and we believe this project is a good candidate for a perpetual asphalt pavement similar to the Don Valley Parkway."

Gazzola's Don Jollimore adds that the resurfacing job was completed over two nights of a June weekend to minimise traffic disruption. Milling began at 1:00 am on Saturday morning and was completed by 7:00 am Saturday morning, some 2 hours ahead of schedule. Paving began at 6:00 am Saturday morning and was

completed by 11am, well ahead of the stipulated highway reopening time of 12:00 noon. This high speed performance was repeated the following night, thanks to Gazzola's experienced crews plus five milling machines, two pavers, five compactors and a number of support units that had been marshalled for the job.

The three mainline milling machines, all Wirtgen units, included Gazzola's own 2100DC as well as 2100DC and 2200CR

rental units. (The model numbers of this manufacturer denote the milling width of each machine in millimetres).

Jollimore reports that this collective milling power delivered an average production rate of 1900 m<sup>2</sup> per hour at a depth of 50 mm. Smaller milling machines used for edge and trim work included Wirtgen W500 and Ingersoll Rand MW 250C units with cutting widths of 500 mm.

Gazzola's paving train included a



A Dynapac CC 422 tandem-drum unit making a breakdown pass on the Gardiner Expressway job.

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Roadtec SB 2500 Shuttle Buggy, feeding two matched Caterpillar AP-1055B pavers each fitted with 10–20B extendable screeds and Topcon grade controls. This high performance trio achieved an average laydown rate of 280 tonnes/h. Mat compaction behind each paver was completed by a dual steel drum unit in the breakdown position making two passes, a pneumatic secondary compactor making three passes and a shared finishing roller making one pass. The compaction fleet included Dynapac CC422 and CC42 dual steel drum units, Dynapac CP21 and Sakai TS 150 pneumatic units as well as a Dressta 710 finishing roller.

Overall, Jollimore was pleased the result. “Everything went well, right through the supply chain. On site, the milling setup delivered high productivity while the paving train of shuttle buggy, echelon pavers and three stage compaction made sure we produced a smooth tight mat for the owner.”

Gazzola Paving Ltd. is based in Etobicoke, Ont.

**Right: Wirtgen W500, one of two milling machines used for edge and trim work.**

## Gardiner Expressway Resurfacing – Eastbound Lanes HL1 High Stability Mix Design Mix quantity - 2800 tonnes

Raw Materials	Source
Coarse Aggregate - 48%	Aecon Construction and Materials
Washed Screenings - 40%	CBM Aggregates
Asphalt Sand - 12%	Dufferin Aggregates
Asphalt Cement PGAC 58-28 - 5.1%	McAsphalt Industries

