Message

From: Henderson, Vimy [Vimy_Henderson@golder.com]

Sent: 1/24/2014 10:51:54 AM

To: Uzarowski, Ludomir [Ludomir_Uzarowski@golder.com]

Attachments: RedHill S1.xls; RedHill S2.xls; 2009-06 Ponniah-Tam-Dziedziejko-Dhillon-Brown Early Age Low SMA Friction.pdf

The surface asphalt on the RHVP is Stone Mastic Asphalt (SMA). Immediately following construction of the RHVP, the Ontario Ministry of Transportation performed friction testing in both southbound lanes. The following table summarizes the results of this testing. The complete testing results are attached.

Lane	Average Friction Number	Friction Number Range
Southbound Lane 1	33.9	28.1 to 36.5
Southbound Lane 2	33.8	28.4 to 37.4

In 2009 the Ontario Ministry of Transportation published a paper at the Canadian Technical Asphalt Association Annual Conference titled "Early Age Low Friction Problem of SMA in Ontario". The paper presented results of SMA that had been placed on Highway 401. The Friction Number results following construction ranged from 24.9 to 28.8. The paper is attached.

Vimy Henderson (Ph.D., P.Eng.) | Pavement and Materials Engineer | Golder Associates Ltd. 6925 Century Avenue, Suite #100, Mississauga, Ontario, Canada L5N 7K2

T: +1 (905) 567 4444 | D: +1 (905) 567 6100 Ext. 1466 | F: +1 (905) 567 6561 | C: +1 (519) 661 7332 | E: VHenderson@golder.com | www.golder.com

Work Safe, Home Safe

This email transmission is confidential and may contain proprietary information for the exclusive use of the intended recipient. Any use, distribution or copying of this transmission, other than by the intended recipient, is strictly prohibited. If you are not the intended recipient, please notify the sender and delete all copies. Electronic media is susceptible to unauthorized modification, deterioration, and incompatibility. Accordingly, the electronic media version of any work product may not be relied upon.

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation.

Please consider the environment before printing this email.