## Message

From: Uzarowski, Ludomir [Ludomir Uzarowski@golder.com]

Sent: 1/24/2014 11:44:37 AM

To: Moore, Gary [/O=GOVT/OU=EMAIL/CN=RECIPIENTS/CN=GMOORE]

CC: Henderson, Vimy [Vimy\_Henderson@golder.com]

Subject: Friction numbers on RHVP

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

## Hi Gary,

The surface asphalt on the RHVP is Stone Mastic Asphalt (SMA). Immediately following construction of the RHVP in 2007, 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 2013, the Friction Numbers were measured on the RHVP in both directions by Tradewind Scientific using a Grip Tester. The average FN numbers were as follows:

SB Right Lane 35 SB Left Lane 34 NB Right Lane 36 NB Left Lane 39

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 were below anticipated value of 30 and ranged from 24.9 to 28.8. The paper is attached.

Regards, Ludomir

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