

# Intelligence MEMOS



From: Jonathan Hall  
To: The Hon. Steven Del Duca, Minister of Transportation  
Date: September 15, 2016  
Re: **HOT LANES CAN HELP EVERYONE**

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This week's opening of high-occupancy toll (HOT) lanes on the QEW is a welcome first step towards fighting congestion in the GTA. However, we could do better. The province should quickly move towards a network of HOT lanes across the GTA. Doing so would likely require converting existing general-purpose lanes into HOT lanes; a move some worry would leave many drivers worse off. However, when implemented appropriately, converting general-purpose lanes to HOT lanes can make life better for everyone.

HOT lanes help everyone because they increase total highway capacity. HOT lanes can move more vehicles than a general-purpose lane because when too many cars are jostling over too little road space, they create frictions which reduce highway capacity by 10 to 25 percent. A time-varying toll can keep the HOT lanes flowing smoothly, and moving more vehicles than the adjacent free lanes. By increasing capacity in the HOT lanes, fewer vehicles need to use the free lanes, making traffic in those lanes a little bit better. This allows HOT lanes to help even those drivers who never use them.

HOT lanes help everyone because they provide a reliable option for days we are in a hurry. Remember the last time you raced out the door, with just enough time to make it to your destination, and how your heart sunk when you saw the line of glowing red brake lights on the highway. All of us have days when we are in a hurry, perhaps we are headed downtown for a job interview or racing home to pick up a sick child from school. In the Toronto of today, we are almost certain to get stuck in traffic, but if we add HOT lanes we can pay a few dollars to arrive on-time when it really matters. Studies of HOT lanes in California, Minnesota, and Washington have found that a majority of those using the lanes only do so occasionally, presumably when they are in a hurry.

HOT lanes help those riding busses by reducing their travel time and increasing their reliability, as we saw with the PanAm HOV lanes. This will encourage more people to ride the GO bus, further improving congestion for those still driving.

HOT lanes help those carpooling, perhaps even more than HOV lanes. HOT lanes provide insurance to those who carpool, if your carpooling buddy cancels last minute you can still make it to work on-time.

Two ingredients are necessary for the HOT lanes to work effectively:

First, the toll should vary with traffic conditions, charging the lowest price needed to keep the HOT lanes flowing smoothly.

Second, carpooling should be defined as three or more individuals in the vehicle. This will allow the HOT lanes to avoid the congestion that frequently occurs on our existing HOV lanes. As carpools of just two can split the toll among themselves, they effectively get to pay half price.

Adding HOT lanes can help all of us, we should welcome and hurry their introduction to the GTA.

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