



## STAFF REPORT INFORMATION ONLY

### Traffic Control Signals – Bathurst Street and Wellington Street West

<b>Date:</b>	February 23, 2009
<b>To:</b>	Toronto and East York Community Council
<b>From:</b>	Director, Transportation Services Toronto and East York District
<b>Wards:</b>	Trinity-Spadina, Wards 19, 20
<b>Reference Number:</b>	Ts09035te.top.doc

#### SUMMARY

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At its meeting of February 9, 2009, Toronto and East York Community Council deferred consideration of Item TE23-32 regarding installation of mid-block traffic signals on Bathurst Street, north of Niagara Street until its meeting of March 26, 2009 and requested staff to report on the implication of installing traffic control signals at Bathurst Street and Wellington Street West, as opposed to a mid-block location. This report provides that information.

Traffic studies determined the installation of traffic control signals at the intersection of Bathurst Street and Wellington Street West is feasible and can be technically justified. While installation of traffic signals at this intersection will improve crossing safety for pedestrians, it could increase traffic infiltration by way of Wellington Street West in the neighbourhoods, east and west of Bathurst Street.

#### Financial Impact

There are no financial impacts associated with the receipt of this report for information.

#### DECISION HISTORY

On February 9, 2009, Toronto and East York Community Council deferred consideration of Item TE23-32, containing a staff report recommending installation of mid-block traffic control signals on Bathurst Street, north of Niagara Street and requested staff to report at its meeting on March 26, 2009 (Item TE23.32) on the implications of installing traffic control signals at Bathurst Street and Wellington Street West, as opposed to mid-block.

## ISSUE BACKGROUND

Transportation Services was requested by Deputy Mayor Joe Pantalone to investigate and report on the installation of traffic control signal on Bathurst Street, between Wellington Street and Niagara Street, to enhance crossing safety for pedestrians. A staff report (January 16, 2009) recommended the installation of mid-block traffic control signals on Bathurst Street, about 37 metres north of Niagara Street.

## COMMENTS

### Current conditions

Bathurst Street, between King Street West and Front Street West, is a north-south, four-lane major arterial roadway with a pavement width of about 18 metres. It carries a daily, two-way traffic volume of approximately 25,000 vehicles and has a maximum speed limit of 50 km/h. There are streetcar tracks on Bathurst Street that operate in a shared right-of-way with general traffic. Transit service is provided by the “511-Bathurst” streetcar.

Wellington Street West intersects Bathurst Street about 140 metres south of King Street West and about 210 metres north of Front Street West. Wellington Street West is a collector roadway operating one-way westbound with a “Stop” sign at Bathurst Street. Streetcar stops are located at Wellington Street West.

### Investigation

Traffic studies were undertaken in 2000 and again in 2006 during a peak 8-hour period at the intersection of Bathurst Street and Wellington Street to evaluate the need for installing a Pedestrian Crossover (PXO) or traffic control signals at this intersection. Installation of pedestrian crossovers is no longer recommended on major arterial roads due to operational concerns. However, installation of traffic control signals is considered at locations where the numerical warrants for a pedestrian crossover are satisfied provided other operational and local environment concerns also are satisfied.

Pedestrian volume and delay surveys conducted over an 8-hour peak period in 2000 and again in 2006 recorded about 240 and 210 pedestrians crossing Bathurst Street at Wellington Street West, respectively. The volume of pedestrians crossing Bathurst Street at Wellington Street West is generated by TTC streetcar stops located nearside to the intersection on both sides of Bathurst Street. In both pedestrian studies, over 90 percent of the pedestrians crossing at Wellington Street West experienced delays at the curb of more than 10 seconds before being able to start crossing Bathurst Street.

The technical warrants for installing a pedestrian crossover on Bathurst Street at Wellington Street West was satisfied to the following extent:

	<u>2000 study</u>	<u>2006 study</u>
Pedestrian Volume Warrant	100 percent	100 percent
Pedestrian Delay Warrant	99 percent	95 percent

Both of the warrants should be 100 percent satisfied. However, based on day-to-day fluctuation in traffic and new commercial/residential development that has taken place in the area since 2006, staff considers the warrants for a pedestrian crossover satisfied at this intersection.

## Analysis

The intersection of Bathurst Street and Wellington Street West satisfies the installation warrants for traffic control signals, primarily based on investigation of pedestrian crossing demand along the section of Bathurst Street, from Wellington Street West to Niagara Street.

The following chart compares the advantages and disadvantages of installing traffic control signals at the intersection of Bathurst Street and Wellington Street West versus a mid-block location on Bathurst Street, between Wellington Street West and Niagara Street.

Location	Advantages	Disadvantages
Bathurst Street and Wellington Street West  (Intersection TCS)	<ul style="list-style-type: none"> <li>Provides protection for pedestrians crossing Bathurst Street in proximity to existing TTC stops.</li> <li>Provides protection for motorists and cyclists crossing/turning onto Bathurst Street.</li> </ul>	<ul style="list-style-type: none"> <li>Frequent cycling of the traffic signal will delay traffic/transit on Bathurst Street.</li> <li>Will eliminate 2 parking spaces on the east side of Bathurst Street, north of Wellington Street West and 4 (permit parking) spaces on the south side of Wellington Street West, west of Bathurst Street.</li> <li>Spacing between adjacent signals at King Street West is about 140 metres (ideal spacing is about 200 metres).</li> <li>Increase in traffic infiltration on Wellington Street West, east and west of Bathurst Street might occur.</li> </ul>

<p>Bathurst Street, between Wellington Street West and Niagara Street</p> <p>(Mid-block TCS)</p>	<ul style="list-style-type: none"> <li>• Provides protection for pedestrians crossing Bathurst Street.</li> <li>• Will not enhance traffic infiltration of the local neighbourhoods east and west of Bathurst Street.</li> <li>• Less cycling of the traffic signal for pedestrians only minimizes delays to traffic and transit on Bathurst Street.</li> <li>• Spacing between adjacent signals is less than 200 metres but about equal both ways (about 175 metres)</li> </ul>	<ul style="list-style-type: none"> <li>• Does not provide any protection for vehicular traffic entering or crossing Bathurst Street from either Wellington Street West or Niagara Street</li> <li>• Some increase in delay to vehicular traffic on Bathurst Street might occur.</li> <li>• Will eliminate 2 parking spaces on the east side of Bathurst Street, north of Niagara Street.</li> <li>• Relocation of TTC stops from Wellington Street West to the mid-block TCS is advisable</li> <li>• Minor operational conflict with a driveway on the east side of Bathurst Street (public parking lot) might occur.</li> </ul>
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Installing traffic control signals at the intersection of Bathurst Street and Wellington Street West will provide benefits for pedestrians crossing Bathurst Street and vehicular traffic entering Bathurst Street from Wellington Street West. However, the relatively high pedestrian volumes and delays suggest traffic control signals at or near the Bathurst/Wellington intersection will provide greater benefit for pedestrians than for motorists.

Installing traffic control signals at the intersection will result in the loss of more parking spaces and potentially increase cut-through traffic infiltration on Wellington Street West, in the areas east and west of Bathurst Street.

Transportation Services is aware of a letter dated January 15, 2009 sent to Councillor Vaughan by a residents association in the community east of Bathurst Street. The residents association supports installation of traffic control signals at the Bathurst/Wellington intersection. They also suggest reversing the current one-way traffic operations on Niagara Street and on Wellington Street West, west of Bathurst Street. Staff note, if these operational changes were made:

- eastbound/westbound through traffic movement across Bathurst Street could not occur;
- vehicles entering the Bathurst/Wellington intersection would be required to turn onto Bathurst Street, increasing potential conflicts between vehicles and pedestrians.

Since the one-way reversal would impact streets in Ward 19, Deputy Mayor Pantalone has been consulted on this suggestion.

## **CONTACT**

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## **SIGNATURE**

Peter Noehammer, P.Eng.  
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## **LIST OF ATTACHMENTS**

Drawing No 421F-9568, dated February 2009

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