Traffic Control Signals Review – Town Centre Court and Borough Drive (Northeast Intersection)

Date: March 25, 2015
To: Scarborough Community Council
From: Director, Transportation Services, Scarborough District
Wards: Ward 38 – Scarborough Centre
Reference Number: P:\2014 \Cluster B\TRA\Scarborough\sc1529.docx
D13-5293924 Town Centre Court – Traffic Control Signals

SUMMARY

This staff report is about a matter for which Scarborough Community Council has delegated authority from City Council to make a final decision.

The purpose of this report is to review the feasibility of installing traffic control signals at Town Centre Court and Borough Drive (northeast intersection).

Based on a review of the intersection operations, staff have concluded that while the installation of traffic control signals is numerically justified at this time, there is no significant collision history, the current All-Way Stop Control appears to be functioning safely, and Traffic Control Signals might cause safety and operational issues due to the resulting queues that will form, especially with the close spacing to McCowan Road. Therefore, staff is not recommending the installation of Traffic Control Signals at this time.

RECOMMENDATIONS

Transportation Services recommends that Scarborough Community Council:

1. Not approve the installation of traffic control signals at the intersection of Town Centre Court and Borough Drive (northeast intersection).
Financial Impact
There is no cost associated with the recommendations in this report. However, should Scarborough Community Council approve such signals, the financial cost of installing Traffic Control Signals would be approximately $160,000.00. The funding for the signals is not currently available in Transportation Services Division's 2015 Capital Works Budget.

ISSUE BACKGROUND
As a result of a request from Councillor Glenn De Baeremaeker, Transportation Services staff reviewed the feasibility of installing Traffic Control Signals at Town Centre Court and Borough Drive (northeast intersection).

COMMENTS
The following characteristics describe the intersection of Town Centre Court at Borough Drive (northeast intersection):

- This intersection is located west of McCowan Road and north of Ellesmere Road;
- This four approach intersection is currently controlled by an All-Way Stop Control;
- Town Centre Court is a two-lane collector road with a regulatory speed limit of 40 km/h;
- Borough Drive is a two-lane collector road with a regulatory speed limit of 50 km/h;
- Sidewalks are located on both sides of Town Centre Court;
- The land uses in this area consist of institutional, public space, commercial, and multi-level residential;
- Existing traffic control signals are located approximately 100 metres east at the intersection of McCowan Road and Town Centre Court; and
- Pending Traffic Control Signals approved by Scarborough Community Council in 2014 are to be installed approximately 140 metres to the west where the east-west section of Town Centre Court bends to form the north-south section.

Traffic Control Signal Warrant Study
Transportation Services staff conducted a Traffic Control Signal Warrant study at the intersection of Town Centre Court and Borough Drive (northeast intersection) on Wednesday, October 29, 2014, using traffic volumes recorded over the peak eight hours of a typical weekday. The following are the results of the study:

<table>
<thead>
<tr>
<th>Traffic Control Signal Warrant</th>
<th>Compliance Level</th>
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</thead>
<tbody>
<tr>
<td>Minimum Vehicular Volume</td>
<td>98%</td>
</tr>
<tr>
<td>Delay To Cross Traffic</td>
<td>85%</td>
</tr>
<tr>
<td>Collision Hazard</td>
<td>13%</td>
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</tbody>
</table>
For traffic control signals to be numerically justified, the following results need to be obtained:

1. One of the “Minimum Vehicular Volume” or “Delay to Cross Traffic” or "Collision Hazard" warrants must be 100% satisfied; or
2. The “Minimum Vehicular Volume” and “Delay to Cross Traffic” warrants must both be at least 80% satisfied.

The traffic volumes and delays satisfy the technical requirements to install traffic control signals at this intersection at this time. However, the Collision Hazard justification is only 13%, so the current All-Way Stop Control appears to be functioning safely.

New Traffic Control Signals might actually cause collisions due to the very close spacing to the signals at McCowan Road (100m), and the pending signals 140 metres west of this location, causing signal timing challenges in coordinating signals, along with queuing in all four directions. This could cause safety and operational problems at this location.

Therefore, notwithstanding the technical warrants being met for traffic volumes and delays, staff does not recommend the installation of Traffic Control Signals at this location.

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SIGNATURE
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ATTACHMENTS

1. Location Plan (Traffic Control Signals – Town Centre Court and Borough Drive (Northeast Intersection)