## Liverpool Street and Castleton Avenue -

All-Way Stop Control; and Liverpool Street - Speed Limit Amendment

| Date: | September 18, 2009 |
| :--- | :--- |
| To: | Etobicoke York Community Council |
| From: | Director, Transportation Services - Etobicoke York District |
| Wards: | Ward 11-York South-Weston |
| Reference <br> Number: | P:\2009\Cluster B\TRA\EtobicokeYorkleycc090130-tp |

## SUMMARY

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

The purpose of this report is to respond to a request from residents of Liverpool Street to address concerns about speeding on Liverpool Street. Also requested was an all-way stop at the intersection of Castleton Avenue at Liverpool Street.

A staff assessment has determined that the criteria for the installation of an all-way stop control for the intersection of Liverpool Street and Castleton Avenue has not been achieved; however, as the $40 \mathrm{~km} / \mathrm{h}$ Speed Limit Warrant requirements are achieved, a 40 $\mathrm{km} / \mathrm{h}$ speed limit is recommended on Liverpool Street between Castleton Avenue and Runnymede Road.

## RECOMMENDATIONS

## Transportation Services recommends that Community Council approve:

1. Enacting a $40 \mathrm{~km} / \mathrm{h}$ speed limit on Liverpool Street between Castleton Avenue and Runnymede Road.

## Financial Impact

| Type of funding | Source of funds | Amount |
| :---: | :---: | :---: |
| Available within current budget | Transportation Services Division Operating Budget | $\$ 500.00$ |

## ISSUE BACKGROUND

Councillor Frances Nunziata, on behalf of residents of Liverpool Street, requested Transportation Services staff to determine the feasibility of implementing peak period turn prohibitions northbound from Runnymede Road onto Liverpool Street (addressed in a separate report). In addition, residents also requested staff to review the feasibility of implementing an all-way stop control at the intersection of Castleton Avenue and Liverpool Street and to review speeding on Liverpool Street between Castleton Avenue and Runnymede Road. A map of the area is Attachment No. 1.

## COMMENTS

Liverpool Street between Castleton Avenue and Runnymede Road is an 8.45 metre wide two-way local residential road with a posted speed limit of $50 \mathrm{~km} / \mathrm{h}$. There are sidewalks on both sides of Liverpool Street, however, they are not continuous as sections of sidewalk are missing on the north side of Liverpool Street, just east of Castleton Avenue and on the south side of Liverpool Street, just west of Runnymede Road. Parking is prohibited at all times on the north side of the road but is allowed on the south side of the road up to the city wide unposted three hour limit. Two parking lots which accommodate overnight permit parking, 9:00 p.m. to 9:00 a.m. daily, exist at either end of the street. The surrounding area is comprised of mainly single family homes.

Castleton Avenue, between St. Clair Avenue West and Henrietta Street, is an 8.7 metre wide two-way collector road, with a posted speed limit of $40 \mathrm{~km} / \mathrm{h}$. Liverpool Street intersects with Castleton Avenue to form a "T" type intersection to the north of St. Clair Avenue West and west of Runnymede Road. This intersection is currently controlled by a stop sign for westbound traffic on Liverpool Street. The TTC operates bus service via Runnymede Road/Henrietta Street/Castleton Avenue.

## Liverpool Street and Castleton Avenue - All-Way Stop Control

The justification for the installation of an all-way stop control is based on a technical warrant adopted by Toronto City Council based on collision history and traffic volume. Our study results are summarized in Appendix A.

Our review of the Toronto Police Services collision records for the past three years for which we have complete data (January 1, 2006 to December 31, 2008) for Castleton Avenue at Liverpool Street reveals that there have been no reported collisions at this intersection.

Based on the geometrics of the intersection, good sightlines from all approaches and the vehicle usage of the intersection, we have determined that stop signs for northbound and southbound traffic on Castleton Avenue at Liverpool Street are not warranted.

## Liverpool Street - Speed Limit Amendment

Automatic speed and volume studies were conducted on Liverpool Street. These study results reveal that the majority of motorists travel at speeds less than the $50 \mathrm{~km} / \mathrm{h}$ speed limit with an $85^{\text {th }}$ percentile speed of $43 \mathrm{~km} / \mathrm{h}$. The $85^{\text {th }}$ percentile is the speed at or below which the majority of motorists feel comfortable travelling under the existing roadway conditions. The 24 -hour volume was recorded as 906 vehicles.

Toronto Police Service collision records for a three-year period ending December 31, 2007, indicate that there have been no reported collisions on Liverpool Street.

Under the current Council Policy, $40 \mathrm{~km} / \mathrm{h}$ speed limits may be implemented on streets where the Road Width and either Pedestrian or Road and Traffic Environment criteria are met. Liverpool Street satisfies the Road Width and Pedestrian criteria as set in the attached Appendix B, since there are only partial sidewalks on either side of the road. It is prudent to reduce the speed limit to reflect these conditions.

## CONTACT

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## SIGNATURE

John Niedra, P.Eng.
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## ATTACHMENTS:

Attachment 1: Map
Appendix A
Appendix B

## APPENDIX A

## Warrants for All-way "Stop" Sign Control

The justification for the installation of an all-way stop control is based on a technical warrant adopted by Toronto City Council. The analysis of this warrant is based on data compiled from a four-hour traffic study.

Location: Castleton Avenue (major, collector) and Liverpool Street (minor, local)
Date: Wednesday, September 9, 2009

| Four Hour <br> Study Period | Total Approach <br> Vehicle Volume | Vehicles/Pedestrians <br> Crossing Major Road | Unit Volume Split <br> Major/Minor Roads |
| :---: | :---: | :---: | :---: |
| $7: 30-8: 30 \mathrm{am}$ | 220 | 42 | $84 / 16$ |
| 8:30-9:30 am | 195 | 35 | $85 / 15$ |
| $4: 00-5: 00 \mathrm{pm}$ | 245 | 37 | $87 / 13$ |
| $5: 00-6: 00 \mathrm{pm}$ | 255 | 36 | $88 / 12$ |
| Study Period <br> Average | $\mathbf{2 2 9}$ | $\mathbf{3 8}$ | $\mathbf{8 6 / 1 4}$ |
| Warrant Requirements | $\geq 375$ | $\geq 150$ | $\geq 30 / 70$ or $\leq 70 / 30$ |

- To warrant the installation of an all-way stop control, the traffic volume requirements for the "Study Period Average" must be completely satisfied in either of the following two combinations of the above three categories:

1. "Total Approach Vehicle Volume" \& 'Unit Volume Split - Major/Minor Roads"

Or
2. "Vehicle/Pedestrian Volume Crossing Major Road" \& "Unit Volume Split -
Major/Minor Roads"

- "Unit Volume Split": Major Road Volume - Vehicles only.

Minor Road Volume - Vehicles plus pedestrians crossing the
Major Road.

## APPENDIX B

## 40 Km/h Speed Limit Warrant - Liverpool Street

| A. | ROAD WIDTH |  |  |
| :---: | :---: | :---: | :---: |
| 1. | (i) | Pavement width equal to or greater tha percentile speed is equal to or less than 50 | Yes $\square$ No口 |
|  | OR |  |  |
|  | (ii) | Pavement width less than 10.5 metres |  |
|  |  | PAVEMENT WIDTH: 8.45 metres 85 ${ }^{T H}$ PERCENTILE SPEED: $\mathbf{4 3} \mathbf{~ k m} / \mathrm{h}$ |  |


| AND |  |  |
| :---: | :---: | :---: |
| B. PEDESTRIAN ENVIRONMENT |  |  |
| 1. (i) | Elementary or junior high school abuts the road Yes $\square$ No■ | Yes $\square$ No口 |
|  | OR |  |
| (ii) | Parkland abuts the road which is contiguous to and used to gain access to an elementary or junior high school <br> Yes $\square^{-1}$ No |  |
|  | OR |  |
| (iii) | Absence of sidewalk on both sides of the road or a major portion of the road <br> Yes $\square$ No $\square$ |  |


| OR |  |  |
| :---: | :---: | :---: |
| C. RO | ND TRAFFIC ENVIRONMENT |  |
| 1. (i) | Two or more locations where grades are greater than $5 \%$; and/or safe speed on curves is less than $50 \mathrm{~km} / \mathrm{h}$ <br> Yes No $\nabla$ | Yes $\square$ No® |
|  | OR |  |
| (ii) | 2 or more locations where there is lack of sufficient distance to stop safely traveling at $50 \mathrm{~km} / \mathrm{h}$ <br> Yes $\square$ No ${ }^{-}$ |  |
|  | OR |  |
| (iii) | Pattern of collisions where vehicle speed was identified as a factor Local streets -3 or more over 3 years Other streets - 5 or more over 3 years Yes $\quad$ No $\nabla$ |  |

