Public Works and Infrastructure Committee, at its meeting on November 12, 2015 in considering a staff report titled "Pedestrian Crossing Protection – Victoria Park Avenue at Donside Drive" (PW9.8), requested the General Manager, Transportation Services to report on the need and feasibility of a pedestrian crossover or traffic control signal at the Conroy Avenue intersection, located approximately 150 metres north of Donside Drive.

This staff report outlines the results of this assessment which concludes that based on current peak vehicular and pedestrian volumes, delays and conflicts at the Conroy Avenue intersection neither traffic control signals nor a pedestrian crossover is warranted at this time. However, should pedestrian crossing volumes increase at this location in the future, the warrants for the provision of crossing protection could be reassessed at that time.

This report is submitted to Public Works and Infrastructure Committee as Victoria Park Avenue forms a shared boundary between Toronto East York Community Council and Scarborough Community Council.

RECOMMENDATIONS

Transportation Services recommends that:

1. City Council not approve the installation of traffic control signals at the intersection of Victoria Park Avenue and Conroy Avenue/Donora Drive.

2. City Council not approve the installation of a pedestrian crossover on Victoria Park Avenue between Conroy Avenue and Donora Drive.
Financial Impact
There is no financial impact associated with this report. Should City Council approve the installation of either a pedestrian crossover or traffic control signals at this location the cost would be approximately $35,000.00 and $150,000.00 respectively. Funding is not included in the 2016 Recommended Capital Budget for Transportation Services for either of these traffic control measures at this location.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact statement.

ISSUE BACKGROUND
At its meeting of November 12, 2015, the Public Works and Infrastructure Committee, in considering a staff report titled "Pedestrian Crossing Protection – Victoria Park Avenue at Donside Drive (PW9.8) requested the General Manager, Transportation Services to conduct a traffic study at the intersection of Victoria Park and Conroy Avenues, and to report back to Public Works and Infrastructure Committee on the need and feasibility of a pedestrian crossover or traffic control signals at this alternate location. The committee decision is available at the following link:


As a result of this request and in consultation with the two affected Ward Councillors, this location was studied on Wednesday, December 2, 2015 from 7:00 a.m. to 7:00 p.m. The pedestrian crossover studies covered an area of approximately 100 metres in length: 50 metres either side of the location being considered.

COMMENTS
The following characteristics describe the area in the vicinity of the Victoria Park Avenue and Conroy Avenue/Donora Drive intersection (as shown in the Location Plan in Attachment 1):

- Victoria Park Avenue, from just south of Dawes Road to just north of Crescent Town Road, is a two-lane major arterial roadway. The pavement width is 9.4 metres in the section of Victoria Park Avenue south of Dawes Road to just south of Donside Drive.
- Victoria Park Avenue has a default speed limit of 50 kilometres per hour (km/h), an average operating speed of approximately 67 km/h and a daily traffic volume of approximately 21,200 vehicles per day (vpd).
- Traffic control signals are located at the Victoria Park Avenue and Crescent Town Road intersection located approximately 535 metres south of Conroy Avenue/Donora Drive.
- Traffic control signals are also located at Victoria Park Avenue and Dawes Road intersection located approximately 565 metres north of Conroy Avenue/Donora.
- Sidewalks are located on both sides of Victoria Park Avenue in the vicinity of Conroy Avenue/Donora Drive.
- The land use on the section of Victoria Park Avenue in the vicinity of Conroy Avenue/Donora Drive is primarily single family residential.
Pedestrian Crossing Protection Warrant Studies

Transportation Services staff conducted a Pedestrian Crossing Protection Warrant Study at the intersection of Victoria Park Avenue at Conroy Avenue/Donora Drive. The study provides an assessment of the need for a pedestrian crossover based on crossing pedestrian volumes and delays and are expressed in terms of percent compliance with accepted thresholds. The 100% threshold is approximately 200 pedestrian crossings in an eight-hour period. Using traffic volumes recorded over the peak eight hours of a typical weekday, the following results were obtained:

**Table 1: Pedestrian Crossover Warrant Study and Historical Counts**

<table>
<thead>
<tr>
<th>Pedestrian Crossover Warrant</th>
<th>Compliance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wednesday,</td>
</tr>
<tr>
<td></td>
<td>December 10,</td>
</tr>
<tr>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>Pedestrian Volume (8 hours)</td>
<td>48% (115)</td>
</tr>
<tr>
<td>Pedestrian Delays</td>
<td>48%</td>
</tr>
</tbody>
</table>

As outlined in the above table, the installation of a pedestrian crossover is not justified because both categories must be met 100%. As shown, the 105 pedestrians observed crossing Victoria Park Avenue during the most recent study period on Wednesday, December 2, 2015 from 7:00 a.m. to 7:00 p.m., which covered the busiest AM and PM peak crossing periods during the day, represents only 42% of the accepted warrant. Even during the summer period when pedestrian volumes are likely higher, it is not expected that these warrants would be satisfied.

It is further noted that a Pedestrian Crossover is not advisable due to the operating speed of 67 km/h, which exceeds the provincial standard of 60 km/h maximum for such a device.

In addition, Transportation Service staff conducted a Traffic Control Signal Warrant Study at the intersection of Victoria Park Avenue and Conroy Avenue/Donora Drive, which would include all four legs of this larger intersection. The study provides an assessment of the need for Traffic Control Signals based on vehicle volumes and delays to cross vehicular traffic and pedestrians.
Table 2: Traffic Control Signal Justification Studies

<table>
<thead>
<tr>
<th>Traffic Control Signal Warrant</th>
<th>Compliance Level</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wednesday,</td>
<td>Thursday,</td>
<td>Wednesday,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>December 10, 2008</td>
<td>March 31, 2011</td>
<td>December 2, 2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4-legs)</td>
<td>(3-legs – Conroy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avenue only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Vehicular Volume</td>
<td>21%</td>
<td>8%</td>
<td>32%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delay to Cross Traffic</td>
<td>43%</td>
<td>32%</td>
<td>55%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collision Hazard</td>
<td>13%</td>
<td>0%</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For traffic control signals to be numerically justified, one of the "Minimum Vehicular Volume" or "Delay to Cross Traffic" or "Collision Hazard" warrants must be 100% satisfied or both "Minimum Vehicular Volume" and "Delay to Cross Traffic" must be at least 80% satisfied.

Collision History

The results of a review of the available Toronto Police Service collision records for the five-year period ending December 31, 2014 on Victoria Park Avenue at Conroy Avenue/Donora Drive are summarized below.

Table 3: Collision History

<table>
<thead>
<tr>
<th>Five-Year Collision Information</th>
<th>Number of Reported Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>Collisions Potentially Preventable by the Installation of Traffic Control Signals</td>
<td>1</td>
</tr>
<tr>
<td>Collisions Involving Pedestrian Crossing of Victoria Park Avenue in the vicinity of Conroy avenue/Donora Drive</td>
<td>0</td>
</tr>
</tbody>
</table>

This collision record is not indicative of a safety problem at this location.

On the basis of the foregoing studies and analyses, it is recommended that the Pedestrian Crossing Protection not be installed on Victoria Park Avenue at Conroy Avenue/Donora Drive at this time, but the location can be reassessed after any transit stop consolidation.
Future Conditions

The Toronto Transit Commission is currently considering transit stop consolidation at this location for their Victoria Park Avenue revenue service. Should this consolidation take place, this location could be restudied shortly after any such transit stop consolidation in order to assess pedestrian warrant compliance at that time.

Should traffic control signals be justified in the future due to increases in vehicular or pedestrian volumes, delays or collisions, this location would be an acceptable from a traffic signal spacing and traffic operations perspective.

The Toronto Transit Commission has been consulted regarding this matter and has indicated that they would support Traffic Control Signals at this location as part of a possible transit stop consolidation.

CONTACT
Marko A. Oinonen, B.A.Sc., DPA, P.Eng.
Manager, Traffic Operations, Scarborough District
Tel: 416-396-7148
Fax: 416-396-5641
E-mail: moinone@toronto.ca

SIGNATURE

_______________________________
Stephen Buckley, General Manager
Transportation Services Division

ATTACHMENTS
1. Location Plan (Pedestrian Crossing Protection – Victoria Park Avenue at Conroy Avenue/Donora Drive)