



STAFF REPORT ACTION REQUIRED

Traffic Control Signals Study – Victoria Park Avenue and Combermere Drive

Date:	April 24, 2012
To:	Public Works & Infrastructure Committee
From:	Acting General Manager, Transportation Services.
Wards:	Ward 34 - Don Valley East Ward 37- Scarborough Centre
Reference Number:	P:\2012\Cluster B\TRA\Scarborough\pwi1247

SUMMARY

The purpose of this report is to obtain approval for the installation of Traffic Control Signals at the intersection of Victoria Park Avenue and Combermere Drive.

This report is submitted to the Public Works and Infrastructure Committee as the matter is a shared boundary issue between the North York Community Council and the Scarborough Community Council.

Traffic studies reveal that pedestrian crossing protection is warranted in the form of traffic control signals at this location.

RECOMMENDATIONS

The Acting General Manager, Transportation Services recommends that:

1. City Council approve the installation of traffic control signals at the intersection of Victoria Park Avenue and Combermere Drive; and
2. City Council enact a northbound left-turn prohibition from Victoria Park Avenue during the a.m. and p.m. periods (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m), Monday to Friday, as identified in Appendix 1 of this report.

Financial Impact

The estimated financial cost of installing these new traffic control signals would be \$120,000.00. The funding for these signals is available in Transportation Services Division's Capital Works Budget under Project No. CTP712-01.

On an on-going basis, the annual operating cost for the traffic control signals for energy and maintenance would be approximately \$6,000 in current dollars, which is budgeted through Cost Centre TP0252.

ISSUE BACKGROUND

Further to requests from Councillors Denzil Minnan-Wong, Norm Kelly and Michael Thompson, and on behalf of area residents, Transportation Services staff reviewed the feasibility of providing pedestrian crossing protection in the vicinity of the intersection of Victoria Park Avenue and Combermere Drive.

COMMENTS

The following characteristics describe the intersection of Victoria Park Avenue and Combermere Drive:

- Victoria Park Avenue at Combermere Drive is a four-lane, major arterial roadway with a daily traffic volume of approximately 37,728 vehicles per day, (vpd), a posted speed limit of 60 kilometres per hour (km/h) and an operating speed of approximately 65 km/h.
- Combermere Drive has an unposted speed limit of 50 kilometres per hour (km/h) and an estimated traffic volume of 1,250 vehicles per day.
- A retail shopping mall is located on the east side of Victoria Park Avenue. Possible future development within the mall may use the east side of the proposed signalized intersection for access/egress for mall patrons and receivables.
- Combermere Drive intersects Victoria Park Avenue on the west side forming a "T" type intersection while Ivordale Crescent (North Leg), forms a "T" type intersection on the east side of Victoria Park Avenue just to the south.
- The intersection of Victoria Park Avenue, Combermere Drive and Ivordale Crescent (North Leg) forms a near-right offset intersection, where the centre line to centre line offset of Combermere Drive to Ivordale Crescent, (North Leg) is approximately 39 metres. An offset exceeding 20 metres is considered too large to incorporate Ivordale Crescent (North Leg) into the proposed signalized intersection of Victoria Park Avenue and Combermere Drive. Incorporating all four legs of this near right offset intersection into the traffic control signal is not recommended; the potential vehicular/pedestrian conflict points pose safety concerns even with the implementation of a three phase operation. Access/egress for vehicular traffic on Ivordale Crescent, (North Leg), is to be maintained via a Courtesy Stop Bar, Do Not Block Intersection signage and the placement of a vehicle detector on Ivordale Crescent, (North Leg). This vehicle detector will cycle the signal to north/south red allowing Ivordale Crescent, (North Leg), traffic to gain access to Victoria Park Avenue via courtesy gaps. This is a standard practice for this type of intersection.
- Traffic control signals are located 211 metres north at Victoria Park Avenue and Ellesmere Road, and 179 metres south at Victoria Park Avenue and Cassandra Boulevard.

- Sidewalks are located on both sides of Victoria Park Avenue and Combermere Drive. A sidewalk is only located on the south side of Ivordale Crescent.
- A place of worship is located on the southwest corner of Victoria Park Avenue and Combermere Drive.
- A southbound far-side TTC stop is located just south of Combermere Drive on the west side of Victoria Park Avenue, and a northbound near side stop is located just north of Ivordale Crescent, (North Leg), on the east side of Victoria Park Avenue directly opposite the southbound TTC stop.

Pedestrian Crossing Protection studies involve incremental consideration of the warrants for the following traffic control devices:

- Pedestrian Crossover (PXO)
- Traffic Control Signals (TCS)

Pedestrian Crossing Volume

Study Date: Sunday, December 5, 2010

Pedestrian Characteristics	Eight –Hour Pedestrian Crossing Volume: Victoria Park Avenue at Combermere Drive		
	North Side	South Side	Total – Both Sides
Assisted Children*	3	77	80
Youths /Adults	41	790	831
Senior Citizens	4	138 (13 disabled)	142
Total Pedestrian Volume	48	1005	1053

*Assisted children are children crossing the road accompanied by a youth, an adult or a senior.

A Toronto Police Services, paid duty officer assists pedestrians across Victoria Park Avenue during church services at this intersection.

Pedestrian Crossover Warrant Study (PXO)

Study Date: Sunday, December 5, 2010

Pedestrian Crossover Warrant	Compliance Level
	Victoria Park Avenue and Combermere Drive
Pedestrian Volumes	100 %
Pedestrian Delays	100 %

- For a pedestrian crossover to be numerically justified, both the “Pedestrian Volume” and “Pedestrian Delays” warrants must be 100% satisfied.

Environmental Standards for PXO Suitability

Transportation Services staff conducted a detailed review of this location and compared the current operation with the recommended design criteria, or “environmental standards”, for PXO’s. These criteria describe a roadway environment suitable for this type of control, and exposure factors which would make a PXO unsuitable or potentially unsafe.

As outlined in the above table, the pedestrian volumes and delays satisfy the technical requirements to install a pedestrian crossover at the subject intersection. However, a PXO on a major arterial roadway such as Victoria Park Avenue at this location is not a suitable form of pedestrian crossing protection. Of particular importance is the operating speed in excess of 60 km/h and the traffic volumes well in excess of 35,000 vehicles per day. Traffic volumes that are in excess of 35,000 vehicles per day are indicative of a lack of suitable gaps in traffic for the safe operation of a pedestrian crossover.

Accordingly, Traffic Control Signals would provide the only feasible measure of pedestrian crossing protection that is warranted at this location, and are justified since a pedestrian crossover would be unsuitable.

Northbound Peak-Period Left Turn Prohibition

A temporal northbound left turn prohibition is recommended between 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. Monday to Friday to prevent traffic infiltration into the residential neighbourhood served by Combermere Drive, and to maintain traffic capacity on the four lane cross-section of Victoria Park Avenue during peak weekday traffic periods. Without the left turn prohibition during weekday peak hours, northbound left turns currently occurring at the arterial intersection of Victoria Park Avenue and Parkwoods Village Drive might use this intersection as a shortcut.

The TTC has been consulted and concurs with the recommendations of this report, subject to transit stop adjustments through detailed design.

In summary, traffic control signals are justified as the only feasible means to provide warranted pedestrian crossover protection and should be installed at this location.

CONTACT

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

SIGNATURE

Andrew Koropeski, P. Eng.
Acting General Manager, Transportation Services

FJB/MAO:ca

ATTACHMENTS

1. Appendix 1- Enact Turn Prohibitions
2. Appendix 2- Location Plan (Traffic Control Signals Study – Victoria Park Avenue and Combermere Drive)

APPENDIX 1

“Prohibited Turns” Regulations to be Rescinded

(In Column 1) Intersection or Portion of Highway	(In Column 2) Direction	(In Column 3) Turns Prohibited	(In Column 4) Times or Days
Victoria Park Avenue and Combermere Drive	Northbound	Left	7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. Monday to Friday