

Traffic Control Signals - Cosburn Avenue and Cedarvale Avenue

Date: April 24, 2017
To: Toronto and East York Community Council
From: Acting Director, Transportation Services, Toronto and East York District
Wards: Ward 31, Beaches-East York

SUMMARY

As the Toronto Transit Commission (TTC) operates a transit service on Cosburn Avenue, City Council approval of this report is required.

Transportation Services has undertaken an operational review and safety audit of the intersection of Cosburn Avenue and Cedarvale Avenue. The intent of this review was to determine the effectiveness and benefit of retaining the pedestrian crossover (PXO) at this intersection against the need to replace it with traffic control signals to enhance operational safety.

The safety audit revealed that the pedestrian crossover is generally operating safely. Further evaluation has indicated that the justifications for the installation of traffic control signals are not satisfied at the intersection of Cosburn Avenue and Cedarvale Avenue. Therefore, the replacement of the pedestrian crossover with traffic control signals is not recommended.

RECOMMENDATIONS

The Acting Director, Transportation Services, Toronto and East York District, recommends that:

1. City Council deny the removal of the pedestrian crossover coincident with the installation of traffic control signals at the intersection of Cosburn Avenue and Cedarvale Avenue.

FINANCIAL IMPACT

There is no financial impact resulting from the adoption of the recommendation in this report.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

Transportation Services, Toronto and East York District, was requested by Councillor Janet Davis to report on the replacement of the existing pedestrian crossover (PXO) at Cosburn Avenue and Cedarvale Avenue with traffic control signals to address safety concerns for pedestrians crossing this intersection.

Existing Conditions

Cosburn Avenue is a minor arterial roadway which operates two-way traffic. It has a pavement width of about 12.2 metres, a posted speed limit of 40 km/h and a daily, two-way volume of about 7,000 vehicles. It consists of a single lane in each direction for general traffic, as well as east-west bicycle lanes. TTC service in this section of Cosburn Avenue is provided by the '87 Cosburn' bus and there are near-side transit stops located at Cedarvale Avenue.

Cedarvale Avenue is a local roadway which operates two-way traffic. It has a pavement width of about 9.1 metres, a posted speed limit of 30 km/h and a daily two-way volume of about 2,500 vehicles. Cedarvale Avenue is stop controlled at its intersection with Cosburn Avenue. Heavy trucks are prohibited at all times and there is no TTC service provided on Cedarvale Avenue.

A pedestrian crossover (PXO) is located on Cosburn Avenue, east of Cedarvale Avenue. Adjacent traffic control signals are located about 140 metres to the west of Cedarvale Avenue, at the intersection of Cosburn Avenue and Woodbine Avenue.

The intersection of Cosburn Avenue and Cedarvale Avenue is generally surrounded by residential land uses. The East York Memorial Arena (No. 888 Cosburn Avenue) and a park are located on the north-east corner of this intersection. Parkside Elementary School (No. 401 Cedarvale Avenue) is located on the east side of Cedarvale Avenue, about 200 metres north of Cosburn Avenue.

Collision Review

Collision statistics provided by the Toronto Police Service for the three-year period ending December 31, 2016 disclosed that four collisions were reported at the intersection of Cosburn Avenue and Cedarvale Avenue. Further review of these four collisions disclosed that two were considered to be potentially preventable by the installation of traffic control signals. One collision involved a pedestrian, which resulted in a fatality.

Traffic Control Signals

Based on the eight-hour vehicular and pedestrian counts undertaken at this intersection on December 13, 2016 and the collision history, the technical justifications for the installation of traffic control signals are satisfied to the following extent:

Justification 1: Minimum Vehicular Volume -	53 percent;
Justification 2: Delay to Cross Traffic -	53 percent; and
Justification 3: Collision Hazard -	13 percent.

To meet the technical requirements for the installation of traffic control signals, one of the justifications must be 100 percent satisfied, or any two of the three justifications must be at least 80 percent satisfied. Based on the above results, the installation of traffic controls signals is not justified at this intersection.

Pedestrian Crossover Operation

Traffic studies were also undertaken to review the operating characteristics of the PXO. The studies recorded the number and type of pedestrians crossing Cosburn Avenue within the crosswalk during the busiest eight-hour period of a typical weekday. During the December 13, 2016 study there were 191 pedestrians recorded crossing Cosburn Avenue at Cedarvale Avenue. The 191 pedestrians were classified as follows:

Youths and adults:	145 (76 percent);
Assisted children:	28 (15 percent);
Unassisted children:	18 (9 percent).
Senior citizens:	0 (0 percent); and
Disabled:	0 (0 percent).

No pedestrians were recorded crossing Cosburn Avenue outside the crosswalk. In 54% of the crossings, pedestrians used the overhead flashing lights and in 46% of the crossings, pedestrians did not use the overhead flashing lights to cross Cosburn Avenue and Cedarvale Avenue.

Additionally, an audit was carried out to assess any deficiencies in the operational and physical suitability of the PXO compared to the provincially adopted environmental standards to potentially expose factors which can make a PXO unsuitable. The standards and the comparative characteristics at this location are described in more detail in the attached Appendix "A".

Based on the PXO audit, the criteria for the minimum spacing to the adjacent traffic control signals at Woodbine Avenue has not been met. It should be noted that this criterion would also make the installation of traffic control signals unsuitable. However, in the City of Toronto, this requirement has been reduced in downtown areas where there are slower operating speeds. Potential concerns resulting from the proximity of the TTC stops and a private driveway were also noted in the audit, however, these do not negatively impact the existing operation of the PXO.

TTC Comments

Comments on the proposed installation of traffic control signals at the intersection of Cosburn Avenue and Cedarvale Avenue were requested from the TTC. The TTC have stated that many pedestrians using this PXO are likely destined to/from the near-side stops on and that this stop could be consolidated with the closely-spaced stop to the east, at Gledhill Avenue. However, it is unlikely that the existing pedestrians crossing will divert their routes if these stops are consolidated. If the replacement of the PXO with traffic control signals is approved by City Council, the TTC requests that transit signal priority be implemented to mitigate delays to TTC buses on Cosburn Avenue.

Conclusions

Based on the review, the intersection of Cosburn Avenue and Cedarvale Avenue is operating satisfactorily and the installation of traffic control signals is not justified. Accordingly, the installation of traffic control signals to replace the existing pedestrian crossover is not supported. Additionally, the installation of traffic control signals at this intersection would result in the following negative impacts:

- **Loss of Parking:** As many as four parking spaces will be lost on Cedarvale Avenue, north and south of Cosburn Avenue and two on Cosburn Avenue, west of Cedarvale Avenue;
- **Traffic Infiltration:** Non-local traffic volumes on Cedarvale Avenue could increase as it becomes easier for motorists to enter Cosburn Avenue;
- **Delay in Transit Service:** The potential for increase in delays to transit service on Cosburn Avenue, which would be partially mitigated by the introduction of transit priority; and
- **Impacts to Pedestrians:** There may be an increase in delays to pedestrians, who will be required to wait for a "Walk" signal.

Councillor Janet Davis has been advised of the recommendations of this staff report.

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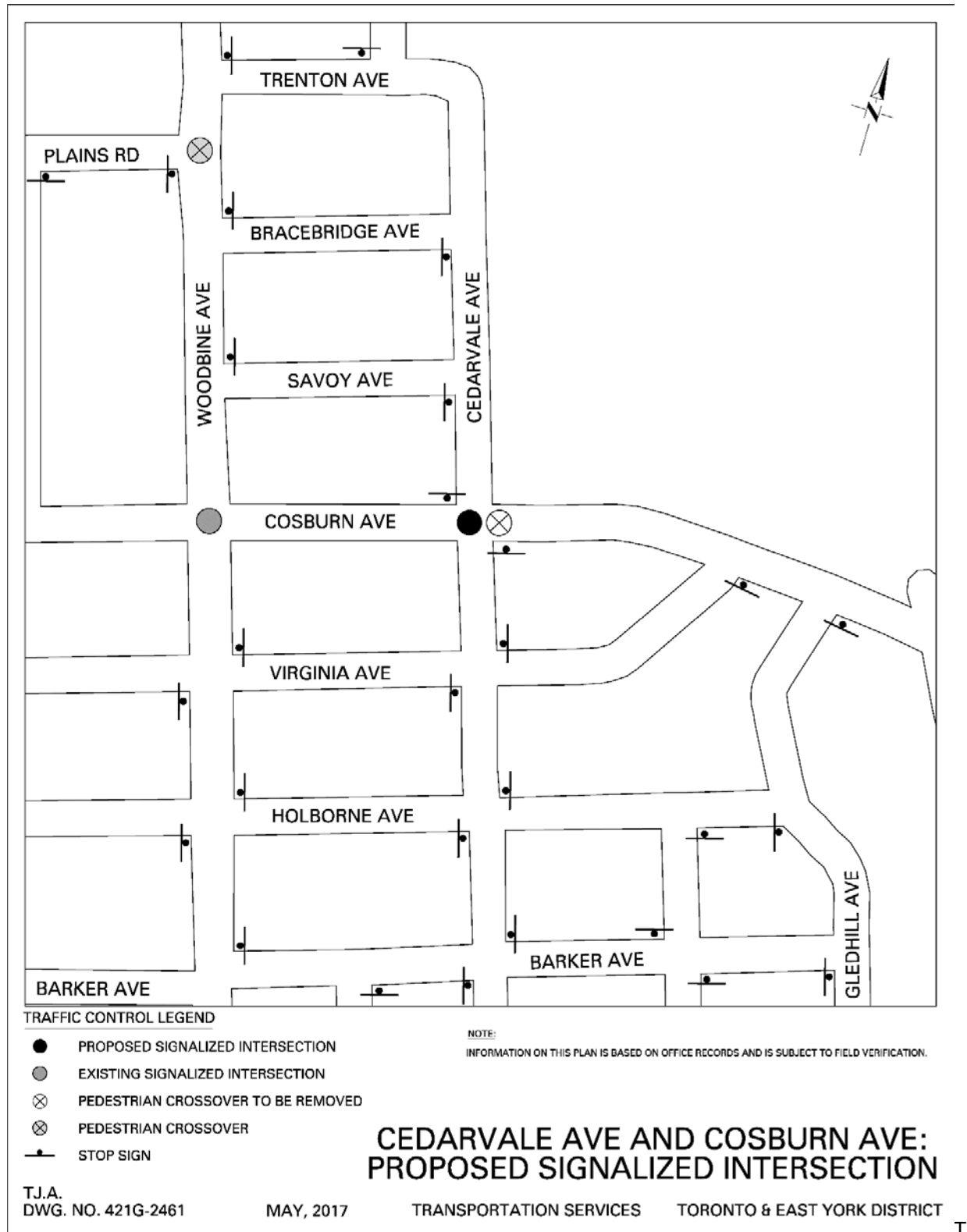
SIGNATURE

Dave Twaddle, C.E.T.
Acting Director, Transportation Services
Toronto and East York District

ATTACHMENTS

1. Drawing No. 421G-2461, dated May 2017
2. Appendix A: PXO Audit

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Appendix 'A'
Cosburn Avenue & Cedarvale Avenue
Audit of pedestrian crossover

Standard	Comment	Standard Met/ Not Met
Speed – Vehicle operating speed less than 60 km/h	The posted speed limit on Cosburn Avenue 40 km/h.	Met
Width – Not more than four lanes wide on a two-way street, or more than three lanes wide on a one-way street	Cosburn Avenue operates with a single lane of traffic in each direction for general traffic, as well as bicycle lanes. It has a pavement width of 12.2 metres.	Met
Volume – Traffic volume less than 35,000 vehicles per day (total of both directions)	Cosburn Avenue carries about 7,000 vehicles/day.	Met
Turns – No significant volume of turning movements which interfere with PXO	There are relatively low volumes of traffic turning across the PXO from Cedarvale Avenue (about 270 over eight hours).	Met
Visibility – No visibility problems exist for either pedestrians or motorists	No visibility obstruction between pedestrians and motorists.	Met
Loading – No loading zones in the immediate vicinity	There are near-side TTC stops for the '87 Cosburn' bus at Cedarvale Avenue.	Not met
Driveways – No driveways or entrances nearby	There are private driveways located on Cosburn Avenue, east and west of Cedarvale Avenue. Also, the entrance to the East York Civic Centre parking lot is located on the east side of Cedarvale Avenue, north of Cosburn Avenue.	Not met
Spacing – Not less than 200 metres to another pedestrian crossover or traffic control signal (TCS)	Woodbine Avenue (TCS) is about 140 metres west of the intersection.	Not met