

Traffic Control Signals – Mortimer Avenue and Dewhurst Boulevard North

Date: April 5, 2018
To: Toronto and East York Community Council
From: Acting Director, Transportation Services, Toronto and East York District
Wards: Ward 29, Toronto-Danforth

SUMMARY

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

Transportation Services is requesting approval to deny the installed traffic control signals at the intersection of Mortimer Avenue and Dewhurst Boulevard North. The technical justification for the installation of traffic control signals is not satisfied, and therefore is not recommended.

RECOMMENDATIONS

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

1. City Council deny the installation of traffic control signals at the intersection of Mortimer Avenue and Dewhurst Boulevard North.

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 Mary Fragedakis to investigate the feasibility of installing pedestrian crossing protection on Mortimer Avenue at Dewhurst Boulevard to address safety concerns for pedestrians crossing within this segment of Mortimer Avenue. In addition, a petition was received indicating support for pedestrian crossing protection at this intersection.

Existing Conditions

Mortimer Avenue is a minor arterial roadway that operates two-way east/west traffic on a pavement width of 10.7 metres. It consists of one lane for each direction of traffic, has an average daily two-way traffic volume of about 6,500 vehicles, and there is a posted speed limit of 40 km/h. Heavy trucks are prohibited at all times, and Toronto Transit Commission (TTC) service is provided by the "62 Mortimer" bus. Nearside TTC stops are present for both eastbound and westbound transit service at Mortimer Avenue's intersection with Dewhurst Boulevard North.

Dewhurst Boulevard North is a local roadway that operates two-way north/south traffic on a pavement width of about 8.5 metres. It consists of one lane for each direction of traffic, has an average daily two-way traffic volume of about 300 vehicles, and a posted speed limit of 30 km/h. Heavy trucks are prohibited at all times and TTC does not provide service on Dewhurst Boulevard North.

Adjacent pedestrian crossing is provided approximately 147 metres east of Mortimer Avenue and Dewhurst Boulevard North, at the signalized intersection of Mortimer Avenue and Donlands Avenue. Crossing protection is also provided approximately 450 metres west of Mortimer Avenue and Dewhurst Boulevard North, at the signalized intersection of Mortimer Avenue and Pape Avenue. The predominant pedestrian volume generators are Aldwych Park, to the south on Dewhurst Boulevard North, and Chester Elementary School to the north-west of the intersection.

Collision Review

Collision statistics provided by the Toronto Police Services for the three-year period ending December 31, 2017, revealed that one collision occurred on Mortimer Avenue at Dewhurst Boulevard North. Further review of this collision, revealed that it didn't involve a pedestrian and was not considered to have been prevented by the installation of additional traffic control.

Pedestrian Crossover (PXO) Warrant Study

Transportation Services conducted a pedestrian volume and delay study on September 12, 2013 and April 12, 2017, and reviewed the collision records to determine if the installation of a pedestrian crossover is justified on Mortimer Avenue at Dewhurst Boulevard North.

Pedestrian delay and classification studies were undertaken during the busiest eight-hour period of a typical weekday at Mortimer Avenue at Dewhurst Boulevard North.

Table 1 - Pedestrian Crossover Warrant Results

Mortimer Avenue at Dewhurst Boulevard North	Total Pedestrian Volume	Pedestrian Delayed > 10 Seconds	Warrant Compliance		PXO Warrant?
			Pedestrian Volume	Pedestrian Delays	
September 12, 2013	43	9	Not Met	Not Met	Not Met
April 12, 2017	12	3	Not Met	Not Met	Not Met

To meet the technical requirements for the installation of PXO, both technical justifications of pedestrian volume and pedestrian delay must be satisfied. As noted in the table above, a pedestrian crossover is not warranted on Mortimer Avenue at Dewhurst Boulevard North.

A review to assess any deficiencies in the operational and physical suitability of a proposed pedestrian crossover at this location was carried out. By comparing the operational characteristics of the proposed pedestrian crossover to provincially adopted "environmental standards", we determined whether the pedestrian crossover would be operating under acceptable conditions. The standards and the comparative characteristics at this location are described in the attached Appendix "A".

As noted, Mortimer Avenue at Dewhurst Boulevard North did not meet the criteria as there are TTC loading zones, nearby driveways and substandard spacing to adjacent pedestrian crossing protection. Near side TTC stops for eastbound and westbound service are present at Mortimer Avenue's intersection with Dewhurst Boulevard North. Located about 13 metres west of this intersection, on the south side of Mortimer Avenue, is a residential drive. Additionally, adjacent pedestrian crossing is provided approximately 147 metres east of this intersection, at Mortimer Avenue and Donlands Avenue, which is below the 200 metres spacing standard.

In addition to these environmental standards, the installation of pedestrian crossovers are potentially unsuitable on arterial roadways. Instead, staff would consider either full signalization of an intersection or installation of mid-block pedestrian traffic control signals where pedestrian crossing volumes and quantified crossing difficulties justified installation of a controlled crossing measure.

Based on the results of this investigation, the installation of a PXO is not recommended on the basis of the unmet warrants; near side TTC stops; presence of nearby driveway; substandard spacing to adjacent pedestrian crossing protection; and Mortimer Avenue's classification as a minor arterial roadway. As such, the warrants for the installation of traffic control signals were also examined to ensure whether a higher level of traffic control is warranted.

Traffic Control Signals

Transportation Services staff reviewed the intersection of Mortimer Avenue at Dewhurst Boulevard North for the feasibility of installing traffic control signals.

The counts were undertaken on September 12, 2013 and April 12, 2017 during the busiest eight-hour period of the day. Based on the eight-hour vehicular and pedestrian counts, and the collision history, the technical justification of the installation of traffic control signals at Mortimer Avenue and Dewhurst Boulevard North were satisfied to the following extent:

Justification/ Count Year	2013	2017
Justification 1: Minimum Vehicular Volume	Not Met (6%)	Not Met (14%)
Justification 2: Delay to Cross Traffic	Not Met (12%)	Not Met (14%)
Justification 3: Collision History	Not Met (20%)	Not Met (0%)

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 warrants must be at least 80 percent satisfied. Based on the above results, the installation of traffic control signals is not technically justified on Mortimer Avenue at Dewhurst Boulevard North.

Summary

Transportation Services does not support the installation of pedestrian crossing protection at the intersection of Mortimer Avenue and Dewhurst Boulevard North based on the above noted information. Furthermore, the installation of traffic control signals at this intersection would result in the following negative impacts:

- Loss of Parking:
 - Three on-street parking spaces will need to be removed along the north-curb on Mortimer Avenue at Dewhurst Boulevard North.
 - Two on-street parking spaces will need to be removed from each side of Dewhurst Boulevard North, both north and south of Mortimer Avenue, totaling eight spaces.
 - The permit parking area, which this intersection falls into, 8F, is currently approaching capacity, measured to be between 90% to 99% of capacity.
- Potential for an increase in delays to pedestrians, who will be required to wait for a "Walk" signal, rather than crossing with gaps in traffic;
- The potential for increase in delays to transit service on Mortimer Avenue; and
- Non-local traffic volumes on Dewhurst Boulevard North could increase as it becomes easier for motorist to enter/cross Mortimer Avenue.

Councillor Mary Fragedakis has been advised of the recommendations of this report.

CONTACT

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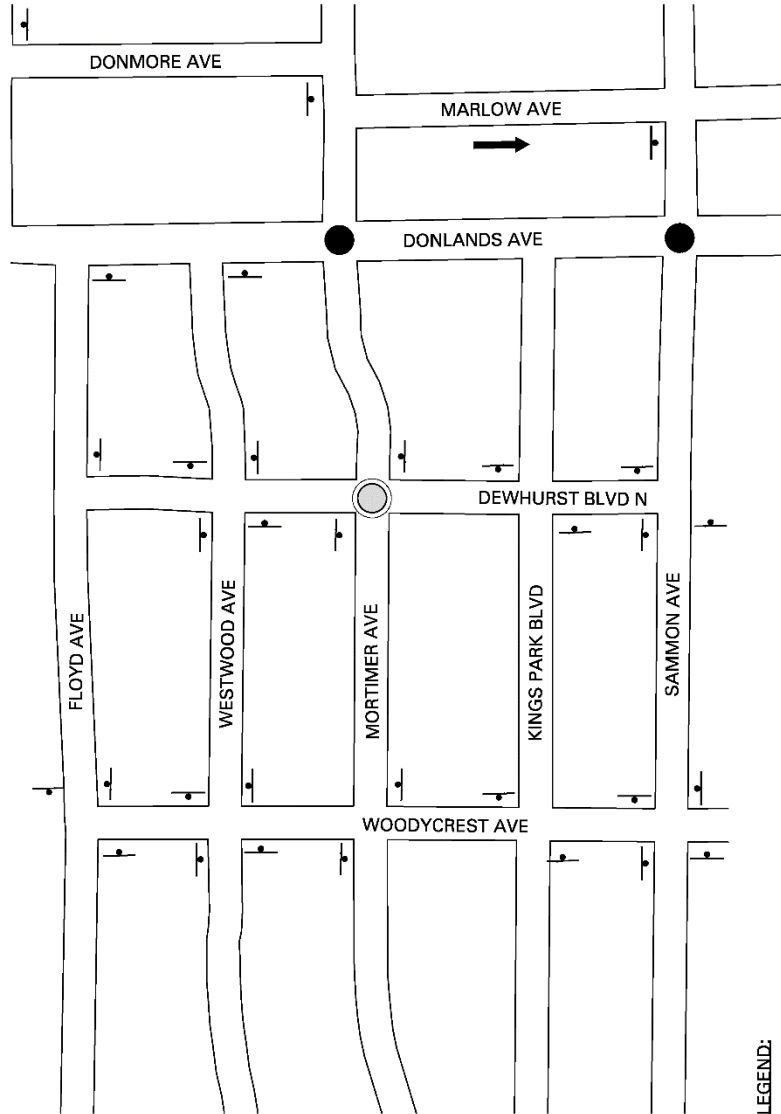
SIGNATURE

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

ATTACHMENTS

1. Drawing No. 421G-2957, dated April 2018
2. Appendix A - Audit of Pedestrian Crossover (Mortimer Avenue and Dewhurst Boulevard North)

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LEGEND:

- PROPOSED STUDY AREA INTERSECTION
- ➔ ONE WAY STREET
- ⊥ STOP SIGN
- SIGNALIZED INTERSECTION

NOTE:
INFORMATION ON THIS PLAN IS BASED
ON OFFICE RECORDS AND IS SUBJECT
TO FIELD VERIFICATION.
ALL DIMENSIONS ARE APPROXIMATE.



MORTIMER AVE AND DEWHURST BLVD N: PROPOSED PEDESTRIAN CROSSOVER STUDY AREA

DWG. NO. 421G-2957

M.S.

APRIL, 2018

TRANSPORTATION SERVICES

TORONTO & EAST YORK DISTRICT

Appendix 'A'

Mortimer Avenue & Dewhurst Boulevard North

Audit of potential pedestrian crossover

Standard	Comment	Standard Met/ Not Met
Speed – Vehicle operating speed less than 60 km/h	The posted speed limit on Mortimer 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	Mortimer Avenue operates with one lanes of traffic in each direction and total width of 10.7 metres.	Met
Volume – Traffic volume less than 35,000 vehicles per day (total of both directions)	Mortimer Avenue carries about 6,500 vehicles/day.	Met
Turns – No significant volume of turning movements which interfere with PXO	Low turning movement counts across the proposed PXO from Dewhurst Boulevard North (about 65 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 both of the eastbound and westbound 62 "Mortimer" bus.	Not Met
Driveways – No driveways or entrances nearby	There is a driveway at the southwest corner of intersection.	Not Met
Spacing – Not less than 200 metres to another pedestrian crossover or traffic control signal (TCS)	Adjacent pedestrian crossing protection is located about 147 metres east of this intersection, at Mortimer Avenue and Donlands Avenue (traffic control signals), and about 450 metres west of this intersection, at Mortimer Avenue and Pape Avenue (traffic control signals).	Not Met