



REPORT FOR ACTION

Pedestrian Crossing Protection – Islington Avenue and Orrell Avenue/Finchley Road

Date: November 13, 2020
To: Etobicoke York Community Council
From: Acting Director, Traffic Management, Transportation Services
Wards: Ward 2 – Etobicoke Centre

SUMMARY

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

Transportation Services is requesting approval to install traffic control signals at the intersection of Islington Avenue and Orrell Avenue/Finchley Road. Traffic control signals will provide enhanced safety for vulnerable road users.

RECOMMENDATIONS

The Acting Director, Traffic Management, Transportation Services recommends that:

1. City Council authorize the installation of traffic control signals at the intersection of Islington Avenue and Orrell Avenue/Finchley Road.

FINANCIAL IMPACT

The estimated cost for installing traffic control signals is \$180,000. Funding would be subject to availability and competing priorities within the Transportation Services 2022 Capital Budget.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

Transportation Services staff was requested by the Ward Councillor, on behalf of area residents, to review the need for pedestrian crossing protection on Islington Avenue between Dundas Street West and Rathburn Road. This request is to address the long distance between protected pedestrian crossings on Islington Avenue, which is approximately 1.3 kilometres, and enhance safety for pedestrians and transit users using the TTC bus stops. A map of the area is shown on Attachment 1.

Existing Conditions

Islington Avenue is characterized by the following conditions:

- It is a four-lane, north-south roadway, classified as a major arterial
- It operates two-way traffic on a pavement width of approximately 14 metres
- The daily two-way traffic volume is approximately 27,000 vehicles and the posted regulatory speed limit is 50 km/h
- There is TTC service provided by the Islington Avenue 37A and 37B bus
- There are sidewalks located on both sides of the street

Finchley Road and Orrell Avenue are characterized by the following conditions:

- They are two-lane, east-west roadways, classified as local
- They operate two-way traffic on a pavement width of approximately 7.5 metres
- The daily two-way traffic volume is approximately 200 to 400 vehicles and the posted regulatory speed limit is 40 km/h
- There are no sidewalks located on either street near the intersection
- Stop controls exist on these streets where they intersect with Islington Avenue

The adjacent land use in the area is residential (single and multi-unit dwellings). Chestnut Hills Park is located to the south of the intersection. The closest adjacent traffic controls are located approximately 620 metres to the south at Dundas Street West, in the form of traffic control signals and approximately 640 metres to the north at Rathburn Road, also in the form of traffic control signals. There are northbound and southbound bus stops at the Islington Avenue and Orrell Avenue/Finchley Road intersection, and 200 metres to the south, at the Islington Avenue and Fairway Road T-intersection.

Transportation Services has reviewed the need for either a PXO or traffic control signals at this location to determine if either device should be recommended as an appropriate pedestrian crossing protection.

Pedestrian Crossover (PXO)

To determine the need for a PXO at Islington Avenue and Orrell Avenue/Finchley Road, staff rely on the justification criteria as outlined in the Ontario Traffic Manual (OTM) Book 15. The OTM justification criteria includes two main factors which are the volume of vehicles and pedestrians and pedestrian delay to cross traffic. Based on the traffic volume on Islington Avenue, the warrants require a minimum crossing volume of 200

pedestrians over eight hours. Also, based on the pedestrian crossing volume, at least 130 pedestrians must be delayed more than 10 seconds.

An eight-hour pedestrian volume and delay study was conducted on December 19, 2018, which recorded the total volume and delays of pedestrians crossing at Islington Avenue in the vicinity of Orrell Avenue/Finchley Road, an area approximately 150 metres in length. Seniors, unassisted children and people with disabilities that are observed crossing are given a higher weighting by a factor of two. The adjusted volume of pedestrians observed crossing was 31; of these, 28 experienced a delay greater than 10 seconds. The compliance level of the study results in relation to the warrant criteria is shown in Table 1 below.

Table 1: Pedestrian Crossover Warrant Criteria and Compliance at Islington Avenue and Orrell Avenue/Finchley Road

Location	Total Pedestrian Volume	Pedestrians Delayed >10 Seconds	Warrant Compliance		PXO Warrant? (Yes/No)
			Ped Vol	Ped Delay	
Islington Ave at Orrell Ave and Finchley Rd	31	28	Not Met 12%	Not Met 0%	No

In order to meet the warrant criteria, 100 percent compliance is required in both categories. Based on the results of the study, a PXO is technically not justified as both the pedestrian volume and delays have not met the minimum requirements.

In addition to the technical criteria, consideration of the surrounding area is given and in some cases engineering judgement may be applied to recommend a PXO even if the number of pedestrians do not meet the threshold of the technical warrants. Due to the long distance between protected crossings, Transportation Services undertook an environmental safety audit.

Environmental safety characteristics were evaluated to ensure that the installation of a PXO would be appropriate at this location. Details of the evaluation are included in Attachment 2. Based on the evaluation, a PXO would not be a suitable type of pedestrian crossing protection at this location because of the 85th percentile exceeding 60 km/h on Islington Avenue. Therefore, traffic control signals are considered at this location rather than a PXO.

Traffic Control Signals

To determine the need for traffic control signals at the intersection of Islington Avenue and Orrell Avenue/Finchley Road, staff rely on justification criteria as outlined in the Ontario Traffic Manual (OTM) Book 12. The OTM justification criteria includes factors such as volume of vehicles and pedestrians, delay to cross traffic, and collision history.

In addition to these technical justifications, staff consider an environmental checklist which includes consideration of road width, posted speed limit, operating speeds, adjacent land uses, pedestrian desire lines and demographics, presence of a transit stop, sight lines, and distance between existing crossing opportunities.

As part of the investigation staff conducted vehicle and pedestrian counts on December 19, 2018 at the subject intersection. The results of the counts and collision hazard are summarized in Table 2.

Table 2: Warrant Compliance - Islington Avenue and Orrell Avenue/Finchley Road

Location	Minimum Vehicular Volume	Delay to Cross Traffic	Collision Hazard	TCS Warrant?
Islington Ave at Orrell Ave/ Finchley Rd	27 percent	13 percent	0 percent	No

To meet the justification criteria 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. The "Collision hazard" criteria is based on the number of collisions potentially preventable by the installation of traffic control signals. Collision statistics provided by the Toronto Police Service for the three-year period ending December 31, 2019, disclosed zero collision(s) at the subject intersection that were potentially preventable by the installation of traffic control signals.

Based on the results in Table 2, the installation of traffic control signals is not justified.

In regards to the environmental checklist, staff noted the following environmental factors:

- the long spacing between pedestrian crossing protection on Islington Avenue;
- the presence of transit stops in both directions on Islington Avenue that attract pedestrians to cross the street;
- the pedestrian generators in the immediate area, including residential and community park, that attract vulnerable pedestrians to cross the street; and
- the four lane cross-section on Islington Avenue, as well as the speed and volume of traffic using this street.

In considering the above environmental factors, Transportation Services recommends the installation of traffic control signals at Islington Avenue and Orrell Avenue/Finchley Road as it will provide enhanced safety for all road users. This installation may result in increased delays for traffic on Islington Avenue as north-south traffic will no longer operate free flow.

The TTC has been consulted and advises that the proposed installation of traffic control signals at the intersection of Islington Avenue and Orrell Avenue/Finchley Road will not

impact the location of the existing two TTC bus stops at this intersection. However, given the proposed installation of traffic control signals at this intersection, TTC will remove two midblock stops immediately to the south (Stops #3788 and #3789) in the area of Fairway Road and consolidate service to the new signals. The bus stops being removed should be included in the design as shown on Attachment 1.

The Ward Councillor has been advised of the recommendation in this report.

CONTACT

Ahmed Muse
Engineering Technologist - Etobicoke York District
Tel: 416-394-8414
Fax: 416-394-8942
E-Mail: Ahmed.Muse@Toronto.ca

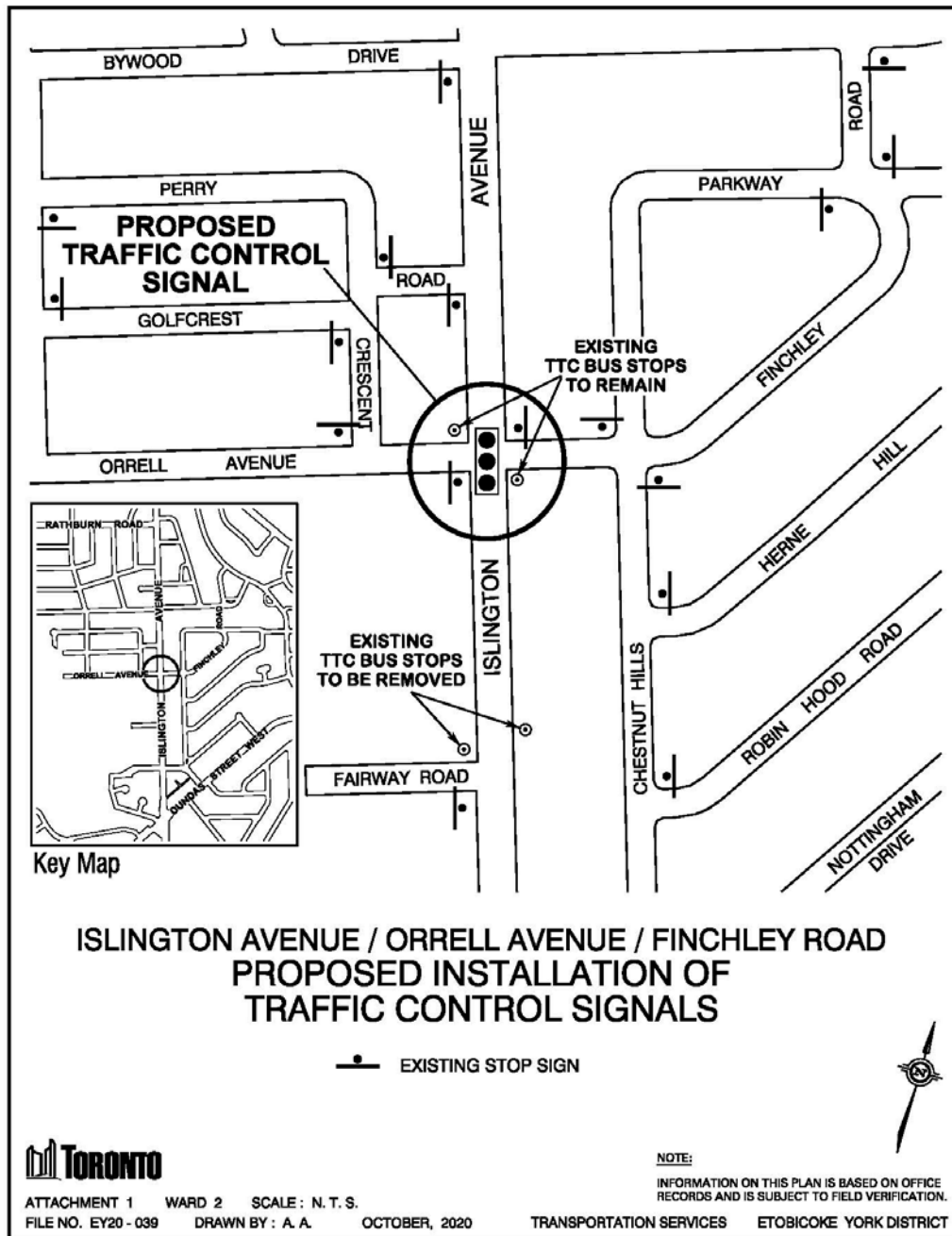
SIGNATURE

Roger Browne, M.A. Sc., P.Eng.
Acting Director, Traffic Management
Transportation Services

ATTACHMENTS

Attachment 1 - Area Map and Proposed Traffic Control Signals Islington Avenue at Orrell Avenue and Finchley Road
Attachment 2 - Environmental Safety Audit - PXO - Islington Avenue and Orrell Avenue/Finchley Road

Attachment 1 - Area Map and Proposed Traffic Control Signals Islington Avenue at Orrell Avenue and Finchley Road



Attachment 2: Environmental Safety Audit - PXO - Islington Avenue and Orrell Avenue/Finchley Road

Standard	Comments	Standard Met/Not Met
Vehicle operating speed less than 60 km/h	The 85th percentile speed limit on Islington Avenue is 68 km/h.	Not Met
Not more than four lanes wide on a two-way street or more than three lanes wide on a one-way street	Islington Avenue operates with two lanes in each direction.	Met
Traffic volume not more than 35,000 vehicles per day	Islington Avenue carries approximately 27,000 vehicles per day.	Met
No significant volume of turning movements	The volume of traffic turning to/from is moderate (approx. 860 vehicles over busiest eight hours)	Met
No visibility problems exist for either pedestrians or motorists	No vertical or horizontal curves.	Met
No loading zones (including TTC) in the immediate area	Northbound and southbound TTC stops are located at the Islington Avenue and Orrell Avenue/Finchley Road intersection and 200 metres to the south at the Islington Avenue and Fairway Road T-intersection.	Not Met
No driveways or entrances nearby	No driveways in the immediate vicinity.	Met
Spacing is not less than 200 metres to another pedestrian crossover or traffic control signal	Traffic control signals located 620 metres to the south at Dundas Street West and 640 metres to the north at Rathburn Road	Met