TORONTO

REPORT FOR ACTION

Traffic Control Signals and Traffic Amendments - Burnhamthorpe Road, between Dundas Street West and Kipling Avenue

Date: February 4, 2021
To: Etobicoke York Community Council
From: Acting Director, Traffic Management, Transportation Services
Wards: Ward 3 – Etobicoke Lakeshore

SUMMARY

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

Staff were requested by Etobicoke York Community Council to consider possible measures to improve safety on Burnhamthorpe Road, between Dundas Street West and Kipling Avenue and conduct traffic studies as soon as possible to expedite recommendations.

In order to properly consider many of the safety improvement measures it is necessary to collect traffic data and apply the Council approved warrants to meet Provincial requirements. With the COVID-19 lockdown in Toronto, collection of new and typical traffic data is not possible at this time.

Once traffic data collection has resumed, staff will proceed to examine the feasibility of reducing Burnhamthorpe Road, between Dundas Street West and Kipling Avenue, or potion thereof, from a four lane cross-section to a three lane cross-section.

At this time, as an eight hour turning movement count was available at the intersection of Burnhamthorpe Road and Burnhamthorpe Park Boulevard/Holloway Road, application of traffic data to the traffic control signal warrant was possible.

Transportation Services is requesting approval to install traffic control signals at this intersection. 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 Burnhamthorpe Road and Burnhamthorpe Park Boulevard/Holloway 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

At the March 12, 2020 Etobicoke York Community Council meeting, the Director, Traffic Management, Transportation Services, was requested to report to the June 9, 2020 meeting of Etobicoke York Community Council on all possible measures to improve safety on Burnhamthorpe Road, between Dundas Street West and Kipling Avenue.

http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.EY14.16

Due to impacts of COVID-19, Transportation Services was not able to report back to the EYCC on June 9, 2020. Traffic studies were suspended effective March 19, 2020, and Traffic Operations staff were reassigned to other priority projects within the City, therefore, a report to the June 9, 2020 Etobicoke York Community Council was not provided.

At the December 4, 2020 Etobicoke York Community Council meeting, Transportation Services staff was requested to report to the March 3, 2021 meeting of Community Council on possible measures to improve safety on Burnhamthorpe Road between Dundas Street West and Kipling Avenue and to conduct traffic studies as soon as possible to expedite potential recommendations..

In addition, Etobicoke York Community Council recommended City Council designate Burnhamthorpe Road, between Dundas Street West and Kipling Avenue as a Community Safety Zone. City Council adopted this item on December 16, 2020.

http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.EY20.13

COMMENTS

Transportation Services staff was requested by Etobicoke York Community Council to report to the March 3, 2021 meeting of the Community Council on possible measures to improve safety on Burnhamthorpe Road between Dundas Street West and Kipling Avenue, such as: reducing the speed limit; installing permanent Watch Your Speed

signage; installing physical barriers such as guardrails; reducing the number of lanes; pedestrian crossing protection; road re-classification; and any additional signage i.e. "hidden driveway" etc.. A summary of the measures considered is set out below, following the description of the existing conditions.

Existing Conditions

Burnhamthorpe Road, between Dundas Street West and Kipling Avenue is characterized by the following conditions:

- It is a four-lane, east-west major arterial roadway
- It operates two-way traffic on a pavement width of approximately 14 metres
- The daily two-way traffic volume is approximately 20,000 vehicles
- The regulatory speed limit is 50 km/h
- Heavy trucks are prohibited between 7:00 p.m. and 7:00 a.m.
- There is TTC service provided by the 50 Burnhamthorpe bus
- There are sidewalks located on both sides of the street
- Guiderail is installed on both sides of the street through the majority of the curved section of road
- Winding Road warning signs with 30 km/h advisory speeds and flashing beacons are present for both directions in advance of the curves in the road
- Designated as a Community Safety Zone (signs to be installed)
- School area signs were recently installed in the area of the recently opened private school, north of Dundas Street West

Holloway Road is characterized by the following conditions:

- It is a two-lane, north-south local roadway
- It operates two-way traffic on a pavement width of approximately 6.5 metres
- The daily two-way traffic volume is approximately 200 to 400 vehicles
- The un-posted regulatory speed limit is 50 km/h near the intersection
- Heavy trucks are prohibited at all times
- There are no sidewalks located on either side of the street

Burnhamthorpe Park Boulevard is characterized by the following conditions:

- It is a two-lane, north-south local roadway
- It operates two-way traffic on a pavement width of approximately 7.0 metres
- The daily two-way traffic volume is approximately 200 to 400 vehicles
- The un-posted regulatory speed limit is 50 km/h
- Heavy trucks are prohibited at all times
- There are no sidewalks located on either side of the street

Burnhamthorpe Park Boulevard/Holloway Road are stop-sign controlled at Burnhamthorpe Road.

The adjacent land use in the area is residential (single and multi-unit dwellings).

The closest adjacent traffic controls are located approximately 500 metres to the southeast at Dundas Street West, in the form of traffic control signals and approximately

415 metres to the northwest at Kipling Avenue, also in the form of traffic control signals. There are eastbound and westbound bus stops on Burnhamthorpe Road at Burnhamthorpe Park Boulevard/Holloway Road.

The section of Burnhamthorpe Road from just north of Dundas Street West to just southeast of Burnhamthorpe Park Boulevard/Holloway Road includes a series of curves with an advisory speed of 30 km/h.

A map of the area is shown on Attachment 1.

Traffic Control Signals

To determine the need for traffic control signals at the intersection of Burnhamthorpe Road and Burnhamthorpe Park Boulevard/Holloway Road, staff rely on the 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, vehicle and pedestrian counts on September 5, 2007 were applied to the warrants at the subject intersection. The results of the counts and collision hazard are summarized in Table 1. The "Collision hazard" criterion is based on the number of collisions potentially preventable by the installation of traffic control signals. Collision statistics provided by the Toronto Police Service (TPS) 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.

Table 1: Warrant Compliance - Burnhamthorpe Road and Burnhamthorpe Park Boulevard/Holloway Road

Justification	**Compliance level**
Minimum vehicular volume	7 percent
Delay to cross traffic (pedestrians and vehicles)	11 percent
Collision hazard	0 percent

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.

Based on the results in Table 1, 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 Burnhamthorpe Road;
- the presence of transit stops in both directions on Burnhamthorpe Road that attract pedestrians to cross the street; and
- the four lane cross-section on Burnhamthorpe Road, 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 Burnhamthorpe Road and Burnhamthorpe Park Boulevard/Holloway Road. This installation may result in increased delays for traffic on Burnhamthorpe Road 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 Burnhamthorpe Road and Burnhamthorpe Park Boulevard/Holloway 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 providing pedestrian crossing protection, TTC will remove two mid-block stops immediately to the northwest in the area of Royalavon Crescent and consolidate service to the new signals.

Staff recommend the installation of traffic control signals based on the environmental criteria, which includes the long spacing between existing pedestrian crossing protections and the presence of transit stops in both directions on Burnhamthorpe Road that attract pedestrian to cross the street.

Speed Limit and Collision Review

Residents of Burnhamthorpe Road have mentioned 17 collisions that they are aware of over the past ten years. One specific area of concern is at the west limit of the curve in the area of the intersection of Burnhamthorpe Park Boulevard (near house number 89) where residents noted four collisions in the last two years. While complete records of these collisions are not currently available as some occurred in 2020, residents have provided staff with photos of the incidents so we are aware of these occurrences.

As part of the speed limit review a radar speed study was conducted on February 5, 2020, on Burnhamthorpe Road, between Burnhamthorpe Park Boulevard/Holloway Road and Burnhamthorpe Crescent, which is approximately 225 metres north of Dundas Street West. The study revealed that the 85th percentile speed (the speed at or below which 85 percent of the motorists feel comfortable travelling given the prevailing traffic and roadway conditions) was 55 km/h.

In addition to the speed study, staff reviewed the collision history, provided by TPS, on Burnhamthorpe Road from, but not including, Dundas Street West and Kipling Avenue for a ten year period, ending December 31, 2019. Records reveal 22 collisions on this section of Burnhamthorpe Road, nine of which are noted as loss of control collisions, the type of collision of most concern to area residents. Complete collision records for 2020 were not available at the time of writing this report.

Application of the currently available study data to the City of Toronto 40 km/h Speed Limit Warrant, reveals that a 40 km/h speed limit is not warranted on Burnhamthorpe Road between Dundas Street West and Holloway Road. Details of the 40 km/h Speed Limit Warrant analysis are included in Attachment 2. Additional speed and volume counts have been ordered, however, collection of data has been impacted by the lockdown and not available at the time of preparing this report.

Road Cross-section

Reducing Burnhamthorpe Road from a four lane cross-section to a three lane cross-section will have an impact on the road capacity. The intention would be to create two though lanes, a left turn lane/centre painted median and urban shoulders/edge lines. This design is intended to create a buffer between the travel lane and the curb/sidewalk, and potentially decrease motorists' speeds in particular through the curved section of road. When impacts to road capacity are anticipated, a traffic impact analysis is needed to determine the Provincial Environmental Assessment requirements. At the time of writing this report, traffic data is not available because of the current lockdown. This possible measure will continue to be reviewed at an appropriate time in the future.
The intention is to remark the road which will provide staff with the opportunity to further examine traffic data to assess feasibility as a permanent road cross-section.
In addition, the collection of updated traffic volume information and any potential changes to the road cross-section will be considered as part of the road classification review. The road is currently classified as a major arterial road, however, if the road is reduced to a three lane cross-section through the remarking of the road, a re-examination of the road classification will be requested.

Guiderails are present through the curved section of the road, where there is appropriate space between the curb and the sidewalk. This review has revealed that the installation of additional guiderail is not possible under the existing conditions without some significant physical amendments to the boulevard or road. The existing sidewalk is not wide enough in most areas and in other areas there is not enough City property to accommodate both an appropriate width sidewalk and a guiderail. One possible exception is the portion of the northeast side of the road southeast of Burnhamthorpe Park Boulevard, an area of concern as there have been a few loss of control collisions at this location. Further consideration of guiderail in this area will require further review and consultation, however, reconstruction of the road to a three lane cross-section may negate further action.

Automated Enforcement

Also requested was consideration of Automated Speed Enforcement on this section of road. The necessary data required to analyze this location for Automated Speed

Enforcement is not available at this time. Once the required data has been collected, this location will be considered for a future Automated Speed Enforcement deployment. In the meantime, continued used of the Watch your Speed program is recommended.

Additional signs

With the recent designation as a Community Safety Zone, this section of Burnhamthorpe Road now becomes a candidate for School Safety Zone treatments, one of which is permanent Watch Your Speed signs. The recently opened school south of Burnhamthorpe Crescent will be a factor in the installation prioritization process, a multi-year endeavour which includes public and private schools. In the meantime, continued use of the mobile Watch Your Speed signs can be requested.

Staff reviewed the area for possible candidate locations for additional warning signs. As part of the review, and with the opening of the aforementioned private school, School Area signs have been posted for both directions on Burnhamthorpe Road.

A number of driveways on the southwest side of the road have reduced visibility because of the curved sections of the road combined with vegetation on private property, when not maintained. As such, staff are recommending the installation of Hidden driveway signs, specifically for eastbound motorists in advance of the curved sections of the road.

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

CONTACT

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SIGNATURE

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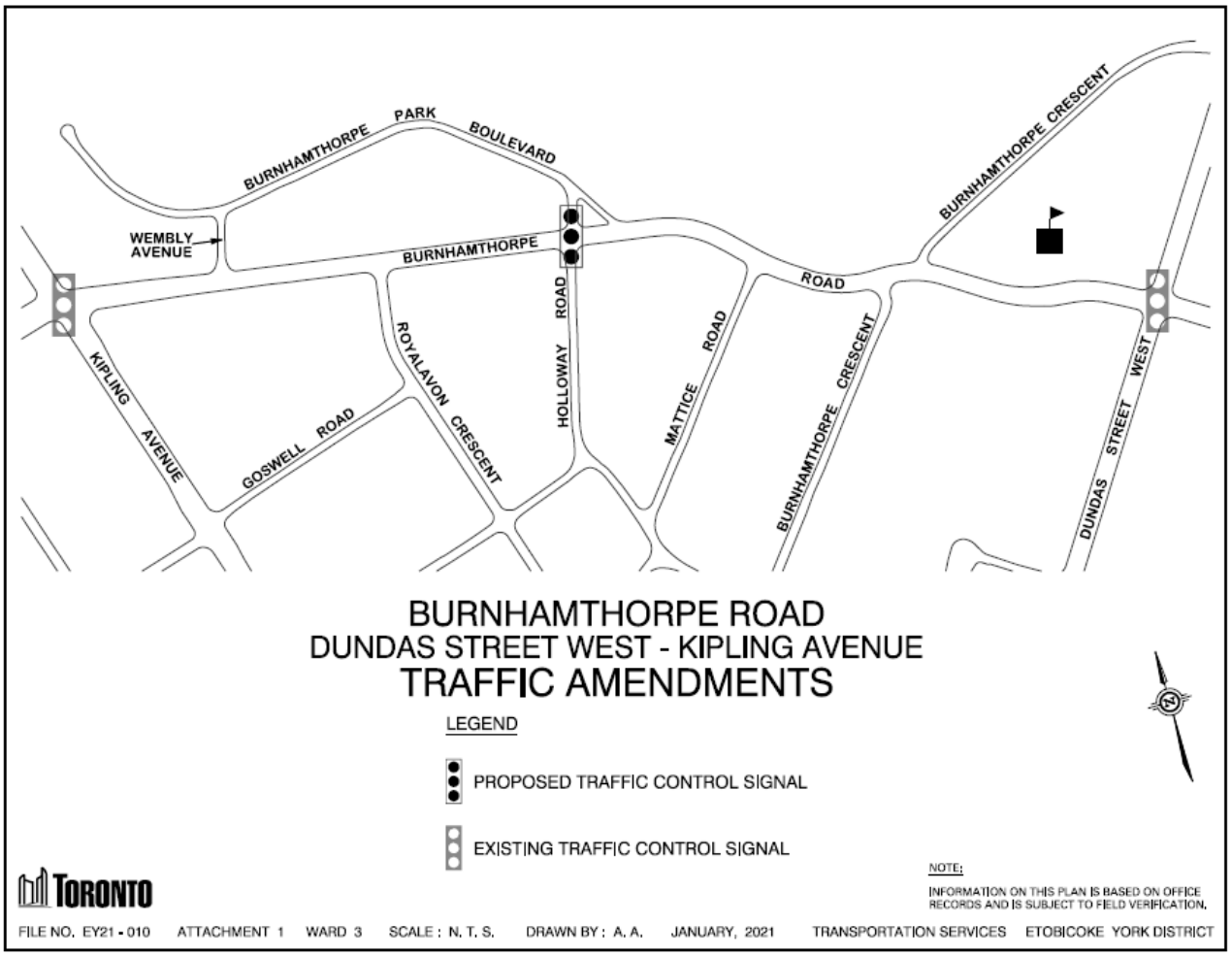
ATTACHMENTS

Attachment 1 - Traffic Control Signals - Burnhamthorpe Road and Burnhamthorpe Park Boulevard/Holloway Road
Attachment 2 - Traffic Amendment - 40 km/h Speed Limit Warrant- Burnhamthorpe Road

Attachment 1 - Traffic Control Signals - Burnhamthorpe Road - Dundas Street West to Kipling Avenue



Attachment 2 - Traffic Amendment - 40 km/h Speed Limit Warrant - Burnhamthorpe Road

A.	ROAD WIDTH		
1.	(i)	Pavement width equal to or greater than 10.5 metres and the 85th percentile speed is equal to or less than 50 km/h	Yes ☐ No☑
OR			
	(ii)	Pavement width less than 10.5 metres	

AND

B.	PEDESTRIAN ENVIRONMENT		
1.	(i)	Elementary or junior high school abuts the road Yes ☑ No ☐	Yes ☑ No ☐
OR			
	(ii)	Parkland abuts the road which is contiguous to and used to gain access to an elementary or junior high school Yes ☐ No ☑	
OR			
	(iii)	Absence of sidewalk on both sides of the road or a major portion of the road Yes ☐ No ☑	

OR

C.	ROAD AND TRAFFIC ENVIRONMENT		
1.	(i)	Two or more locations where grades are greater than 5%; and/or safe speed on curves is less than 50 km/h Yes ☑No ☐	Yes ☑ No☐
OR			
	(ii)	2 or more locations where there is lack of sufficient distance to stop safely traveling at 50 km/h Yes☑ No ☐	
OR			
Pattern of collisions where vehicle speed was identified as a factor Local streets – 3 or more over 3 years Other streets – 5 or more over 3 years Yes ☐No ☑			