

Pedestrian Crossing Protection - Guildwood Parkway and Rowatson Road

Date: May 2, 2023

To: Scarborough Community Council

From: Director, Traffic Management, Transportation Services

Wards: Ward 24, Scarborough-Guildwood

SUMMARY

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

Transportation Services has reviewed the need for pedestrian crossing protection along Guildwood Parkway, between Prince Philip Boulevard and Rowatson Road. Based on the assessment undertaken, Transportation Services recommends the installation of traffic control signals at Guildwood Parkway and Rowatson Road. The proposed traffic control signals will provide enhanced safety for vulnerable road users and crossing pedestrians.

RECOMMENDATIONS

The Director, Traffic Management, Transportation Services recommends that:

1. City Council authorize the installation of traffic control signals at the intersection of Guildwood Parkway and Rowatson Road/Private Access.

FINANCIAL IMPACT

The estimated cost of installing traffic control signals at Guildwood Parkway and Rowatson Road is approximately \$250,000.00. Funding would be subject to availability and competing priorities.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

On behalf of local residents, the Ward Councillor requested Transportation Services to review the need for pedestrian crossing protection along Guildwood Parkway, between Prince Philip Boulevard and Rowatson Road, to address concerns for pedestrians crossing the wide road cross-section to access a number of area generators, including a seniors' facility.

Existing Conditions

Guildwood Parkway is characterized by the following conditions:

- The subject segment is a two-lane east-west minor arterial roadway
- It operates two-way traffic on a pavement width of approximately 20.8 metres
- The roadway width is divided between two eastbound lanes, two westbound lanes and a center median about 7.5 metres
- The daily two-way traffic volume is about 8,500 vehicles.
- The speed limit is 40 km/h
- Heavy trucks are prohibited at all times
- There are sidewalks located on both sides of the street
- TTC service is provided by the 116 Morningside Bus, with transit stops located at Prince Philip Boulevard and at Rowatson Road
- The segment of Guildwood Parkway, between Rowatson Road and a point 200 metres east of Chancery Lane, is designated as a community safety zone
- The area surrounding 60 Guildwood Parkway is also signed as a senior safety zone

Prince Philip Boulevard is characterized by the following conditions:

- The subject segment is a north-south collector roadway
- It operates two-way traffic on pavement width of approximately 8.5 metres
- The daily two-way traffic volume is about 1,400 vehicles
- The speed limit is 40 km/h
- Heavy trucks are prohibited at all times
- There are sidewalks located on both sides of the street
- TTC service does not operate on Prince Philip Boulevard
- Prince Philip Boulevard intersects with the south side of Guildwood Parkway, while the north side approach is a driveway access for the assisted living center (60 Guildwood Parkway)
- Prince Philip Boulevard is stop controlled at Guildwood Parkway and the north side driveway is uncontrolled

Rowatson Road is characterized by the following conditions:

- The subject segment is a two-lane north-south local roadway
- It operates two-way traffic on pavement width of about 8.5 metres
- The daily two-way traffic volume is about 1,200 vehicles
- The speed limit will be reduced to 30 km/h from 40 km/h in the future, as per SC32.11 - Vision Zero Road Safety Plan Speed Limit Reductions to 30 kilometres per hour on Local Roads and Public Lanes - Scarborough Area (Ward 20 and Ward 24)
- Heavy trucks are prohibited at all times
- There are sidewalks located on both sides of the street
- TTC service does not operate on Rowatson Road
- Rowatson Road intersects the north side of Guildwood Parkway, while the south side approach is an access for Guildwood Village Shopping Centre. Both of side street approaches are stop controlled

The surrounding land use is characterized as primarily residential and retail. On the north side of Guildwood Parkway, there is an assisted living facility (Extendicare Guildwood), condominiums and single family residential homes. On the south side of Guildwood Parkway, there is the Guildwood Village Shopping Centre, an apartment complex and single family residential homes further south.

The closest crossing protection to this segment is located approximately 150 metres to the east of Rowatson Avenue and Guildwood Parkway at Livingston Road and Guildwood Parkway, in the form of traffic control signals

A map of the area is included in Attachment 2.

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 form of pedestrian crossing protection.

Pedestrian Crossover (PXO)

To determine the need for a PXO along the segment of Guildwood Parkway, pedestrian data for the intersections of Guildwood Parkway at Prince Philip Boulevard and Guildwood Parkway at Rowatson Road was analysed against the justification criteria as outlined in the Ontario Traffic Manual (OTM) Book 12. The OTM justification criteria includes two main factors: the volume of vehicles and pedestrians; and pedestrian delay to cross traffic. Based on the traffic volume on Guildwood Parkway, the warrants require a minimum of 276 pedestrians crossing over eight hours. Also, based on the pedestrian crossing volume, at least 88 pedestrians must be delayed more than 10 seconds.

Eight-hour pedestrian volume and delay studies were conducted on Guildwood Parkway at Prince Philip Boulevard on May 1, 2018 and at Rowatson Road on October 20, 2022. The studies recorded the total volume and delays of pedestrians crossing at Guildwood Parkway at these two intersections. Although the former study is several years old, it is consistent with adjacent studies and is still deemed representative.

Seniors, unassisted children and people with disabilities that are observed crossing are given a higher weighting by a factor of two. At Prince Philip Boulevard, the adjusted volume of pedestrians observed crossing was 55; of these, 16 experienced a delay greater than 10 seconds. At Rowatson Road, the adjusted volume of pedestrians observed crossing was 141; of these, 53 experienced a delay greater than 10 seconds.

The compliance level of the study results in relation to the warrant criteria at the two intersections is shown in Table 1 below.

Table 1: Pedestrian Crossover Warrant Criteria and Compliance at Guildwood Parkway at Prince Philip Boulevard and at Rowatson Road

Justification	Prince Philip Boulevard Compliance	Rowatson Road Compliance
Pedestrian Volume	20%	51%
Pedestrian Delay	18%	60%

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 not technically justified at either intersection as both the pedestrian volume and delays have not met the minimum requirements.

Collision statistics provided by the Toronto Police Service for the three-year period ending February 28, 2023 disclosed three collisions at Guildwood Parkway at Prince Philip Boulevard. Further review of these collisions noted that none could have been prevented by the installation of pedestrian crossing protection.

Collision statistics provided by the Toronto Police Service for the three-year period ending February 28, 2023 disclosed zero collision at the area of Guildwood Parkway at Rowatson Road that involved crossing pedestrians.

Environmental safety characteristics were also evaluated to determine if a PXO would be appropriate at either of these locations. Details of the evaluation are included in Attachment 1. Based on the evaluation, a PXO may not be a suitable type of pedestrian crossing protection on Guildwood Parkway for the following reasons:

- The wide crossing distances
- Significant volumes of turning traffic from the Guildwood Village Shopping Centre and Rowatson Road
- Visibility concerns from the horizontal curve east of the intersection
- The presence of TTC stops on both sides of Guildwood Parkway
- The residential driveway approximately 30 metres east of the intersection with Rowatson Road, on the north side of Guildwood Parkway

Traffic Control Signals

Traffic Operation also examined whether Guildwood Parkway at Prince Philip Boulevard and Guildwood Parkway at Rowatson Road would meet technical warrant criteria for traffic control signals. To determine the need for traffic control signals at these intersections, 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.

Staff conducted vehicle and pedestrian counts at Guildwood Parkway at Prince Philip Boulevard on November 23, 2022 and at Rowatson Road on October 20, 2022. The results of the counts and collision hazard at the two intersections are summarized in Table 2.

Table 2: Warrant Compliance - Guildwood Parkway at Prince Philip Boulevard and at Rowatson Road

Justification	Prince Philip Boulevard Compliance level	Rowatson Road Compliance level
Minimum vehicular volume	52%	49%
Delay to cross traffic (pedestrians and vehicles)	61%	60%
Collision hazard	0%	0%

To meet the technical justification criteria for the installation of traffic control signals, one of the justifications must be 100 percent satisfied or both the minimum vehicular volume and delay to cross traffic justifications must be at least 80 percent satisfied. Based on the results in Table 2, the installation of traffic control signals is not technically justified at either intersection.

The "Collision hazard" criterion is based on the number of collisions potentially preventable by the installation of traffic control signals. Collision history provided by the Toronto Police Service for the three-year period ending February 28, 2023 disclosed zero collisions at either of the subject intersections that were potentially preventable by the installation of traffic control signals.

Contextual Considerations and Environmental Audit

In addition to the technical criteria, consideration of the surrounding area is given and in some cases engineering judgement may be applied to recommend pedestrian crossing protection in spite of the number of pedestrians not meeting the threshold of the technical warrants. Notwithstanding the numeric warrant not being fully being met, Transportation Services considers that pedestrian crossing protection would be appropriate within the subject segment of Guildwood Parkway due to the following factors and pedestrian generators:

- Vulnerable pedestrians generation from the assisted living facility at 60 Guildwood Parkway (Extendicare Guildwood)
- The area is designated as both Community Safety Zone and Senior Safety Zone
- The TTC bus stops on both sides of Guildwood Parkway
- Pedestrian desire lines for the neighbourhood to the north (included the condominiums on Kingston Road) towards Guildwood Village Shopping Centre

In view of the surrounding context predominately impacting east side of the subject segment, Traffic Operations supports the installation of pedestrian crossing protection at Guildwood Parkway and Rowatson Road. Although the vehicular volumes are relatively similar at Prince Philip Boulevard and Rowatson Road, there are significantly more pedestrians crossing Guildwood Parkway at the latter intersection. As noted, there are also concerns on this section of Guildwood Parkway that could make a PXO potentially unsuitable or unsafe.

Accordingly, traffic control signals are recommended at the intersection of Guildwood Parkway and Rowatson Road rather than a PXO.

The TTC has been advised of the study results and recommendations but has not yet provided comments.

Other Considerations

It should also be noted that the installation of traffic control signals at Guildwood Parkway at Rowatson Road will result in the following impacts:

- There will be a loss of approximately one parking space on Rowatson Road.
- There is potential for increase in delays to transit service on Guildwood Parkway.
- There is a potential for an increase in non-local traffic on Rowatson Road.
- Modifications will be required to the centre median on Guildwood Parkway to facilitate the north-south pedestrian crossings.

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

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SIGNATURE

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ATTACHMENTS

Attachment 1: Environmental Safety Audit - PXO - Guildwood Parkway
Attachment 2: Map - Traffic Control Signals - Guildwood Parkway and Rowatson Road

Attachment 1: Environmental Safety Audit - PXO – Guildwood Parkway

Standard	Comments	Standard Met/Not Met
Vehicle operating speed less than 60 km/h	The posted speed limit on Guildwood Parkway is 40 km/h	Met
Not more than four lanes wide on a two-way street or more than three lanes wide on a one-way street	Guildwood Pkwy operates with two lanes in each direction plus a 7.5 metre wide median	Not met
Traffic volume not more than 35,000 vehicles per day	Guildwood Parkway carries approximately 8,500 vehicles per day	Met
No significant volume of turning movements	The volume of traffic turning to/from Guildwood Parkway is significant from the plaza opposite Rowatson Road (approx. 625 vehicles over busiest eight hours)	Not met
No visibility problems exist for either pedestrians or motorists	Guildwood Parkway has a notable horizontal curves east of the intersection with Prince Philip Boulevard	Not met
No loading zones (including TTC) in the immediate area	There are existing TTC stops on both sides of Guildwood Parkway	Not met
No driveways or entrances nearby	There is a residential driveways approx. 30 m east of the intersection of Rowatson Road	Not met
Spacing is not less than 200 metres to another pedestrian crossover or traffic control signal	Guildwood Parkway has adjacent traffic control signals at its intersection with Livingston Road	Not met

Attachment 2: Map - Traffic Control Signals - Guildwood Parkway and Rowatson Road

