

All-Way Stop Control - Poplar Road and Coronation Drive (north intersection)

Date: October 16, 2024

To: Scarborough Community Council

From: Director, Traffic Management, Transportation Services

Wards: Ward 24, Scarborough-Guildwood

SUMMARY

This staff report is about a matter that Community Council has delegated authority from City Council to make a final decision.

Transportation Services is requesting approval to install an all-way stop control at the intersection of Poplar Road and Coronation Drive (north intersection), in conjunction with the removal of the existing pedestrian crossover (PXO) on Poplar Road immediately north of Coronation Drive (south intersection).

The proposed all-way stop control will enhance traffic safety at this intersection by clearly defining the right-of-way for all road users.

RECOMMENDATIONS

The Director, Traffic Management, Transportation Services recommends that:

1. Scarborough Community Council authorize all-way compulsory stop control at the intersection of Poplar Road and Coronation Drive (north intersection).
2. Subject to approval of and in conjunction with the installation of all-way stop control at Poplar Road and Coronation Drive (north intersection), Scarborough Community Council authorize removal of the existing pedestrian crossover on Poplar Road immediately north of Coronation Drive (south intersection).

FINANCIAL IMPACT

The estimated costs associated with the proposed amendment is \$3,500.00. Funding is anticipated to be available within the Transportation Services 2025 Operating and Capital Budgets.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

At the request of the Ward Councillor, Transportation Services investigated the feasibility of installing an all-way stop control at the intersections of Poplar Road and Coronation Drive.

Existing Conditions

Poplar Road is characterized by the following conditions:

- It is a two-lane, north-south, collector roadway
- It operates two-way traffic on a pavement width of approximately 8.5 metres
- The daily two-way traffic volume is approximately 2,100 vehicles
- The speed limit is 40 km/h
- Heavy trucks are prohibited at all times
- There is no Toronto Transit Commission (TTC) service provided
- There are sidewalks located on both sides of the street

Coronation Drive, east leg, is characterized by the following conditions:

- It is a two-lane, east-west, collector roadway
- It operates two-way traffic on a pavement width of approximately 8.5 metres
- The daily two-way traffic volume is approximately 3,650 vehicles
- The speed limit is 40 km/h
- Heavy trucks are prohibited at all times
- There is no TTC service provided
- There are sidewalks located on both sides of the street

Coronation Drive, west leg, is characterized by the following conditions:

- It is a two-lane, east-west, local roadway
- It operates two-way traffic on a pavement width of approximately 8.5 metres
- The daily two-way traffic volume is approximately 2,300 vehicles

- The speed limit is 40 km/h. Transportation Services advises that the speed limit is planned to be reduced to 30 km/h on this street by 2026+, consistent with Item 2019.IE6.8 (Vision Zero 2.0 – Road Safety Plan Update)
- Heavy trucks are prohibited at all times
- There is no TTC service provided
- There are sidewalks located on the north side of the street only

These two side-streets intersect to form an off-set intersection with right of way controlled by stop signs for eastbound and westbound traffic on Coronation Street. The east and west legs are offset by approximately 24 metres at Poplar Road. In addition, a pedestrian crossover is located on Poplar Road, within the offset of the east and west legs of Coronation Drive.

Sir Robert L. Borden Business and Technical Institute is located on the west side of Poplar Road, approximately 145 metres north of Coronation Drive (north intersection). Eastview Park, which is connected to Eastview Public School, is located on the south side of Coronation Drive, west of Poplar Road. The remaining area generally consists of single-family, detached residential dwellings.

A map of the area is included in Attachment 1.

Study Results

To determine the effectiveness of the PXO located on Poplar Road immediately north of Coronation Drive (south intersection), a pedestrian crossover observance study was conducted in May 2024. During the study staff observed that the number of pedestrians crossing within the PXO was relatively low with approximately 40 pedestrians during the a.m. and p.m. peak hours of a typical weekday.

Furthermore, studies were also conducted to determine if an all-way stop was appropriate at this location. In order for all-way stop control to be warranted at an intersection, established criteria must be satisfied. The warrants consist of four components, including collision history, total vehicle volume, combined vehicle and pedestrian volumes crossing the major road and the percentage of traffic on the major road.

Collision history provided by the Toronto Police Service for the three-year period ending December 31, 2023, disclosed that zero collisions occurred at these intersections.

Due to the large offset between the east and west intersection legs, an all-way stop controlled intersection incorporating all four legs would be problematic. This installation would result in the following operational concerns:

- motorists entering from the side street may experience confusion over who has the right-of-way within the intersection
- turning motorists will have traveled a significant distance and are traveling perpendicular, and with a greater amount of speed, at the next pedestrian crosswalk

Accordingly, the studies considered Poplar Road and Coronation Drive to be two separate "T" type intersections. The results of the studies conducted on May 1, 2024 and May 7, 2024 at the north and south intersections, respectively, were evaluated against the warrant criteria for all-way stop control as adopted by City Council. The evaluation is summarized in Tables 1 and 2.

Table 1: All-Way Stop Control Study at Poplar Road Coronation Drive (north intersection)

| No. | Warrant Type | Actual | Required | Satisfied (Yes/No) |
|-----|---|----------|----------|--------------------|
| A | Number of Potentially Preventable Collisions (January 1, 2021 to December 31, 2023) | 0 | 9 | No |
| B1 | Average Vehicle Volumes | 477/hour | 375/hour | Yes |
| B2 | Combined Vehicle & Pedestrian Volumes Crossing Major Road (Average) | 190/hour | 150/hour | Yes |
| B3 | Percentage of Traffic on Major Street | 62% | ≤70% | Yes |

Table 2: All-Way Stop Control Study at Poplar Road Coronation Drive (south intersection)

| No. | Warrant Type | Actual | Required | Satisfied (Yes/No) |
|-----|---|----------|----------|--------------------|
| A | Number of Potentially Preventable Collisions (January 1, 2021 to December 31, 2023) | 0 | 9 | No |
| B1 | Average Vehicle Volumes | 435/hour | 375/hour | Yes |
| B2 | Combined Vehicle & Pedestrian Volumes Crossing Major Road (Average) | 165/hour | 150/hour | Yes |
| B3 | Percentage of Traffic on Major Street | 64% | ≤70% | Yes |

In order for the all-way stop control to be technically warranted, either Warrant A must be met or Warrant B1 or B2 combined with Warrant B3 must be achieved. The study results reveal that both the north and south intersections meet the technical criteria for installing all-way stop controls.

However, it would not be practical to install two all-way stop controlled intersections in close proximity. Due to higher average vehicular volumes and greater combined vehicle and pedestrian crossings at the north intersection, it is recommended that all-way stop control be installed at Poplar Road and Coronation Drive (north intersection). At this intersection, there are sidewalks on both sides of Coronation Drive, as opposed to the south intersection, where a sidewalk is only provided on the north side of the street. The new all-way stop controlled intersection will divert pedestrian crossings from the south intersection to the north intersection, although eastbound motorists may experience increased delays.

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

CONTACT

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SIGNATURE

Roger Browne, M.A.Sc., P. Eng.
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ATTACHMENTS

Attachment 1: Map - All-Way Stop Control - Poplar Road and Coronation Drive north intersection

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