

## **Traffic Control Signals - Lawrence Avenue East and Valia Road/Private Driveway**

**Date:** November 20, 2024

**To:** Scarborough Community Council

**From:** Director, Traffic Management, Transportation Services

**Wards:** Ward 25, Scarborough-Rouge Park

### **SUMMARY**

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

Transportation Services is requesting approval to install traffic control signals at the intersection of Lawrence Avenue East and Valia Road/private driveway. The traffic control signals will provide enhanced safety for all road users and is justified based on the assessment undertaken.

### **RECOMMENDATIONS**

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The Director, Traffic Management, Transportation Services recommends that:

1. City Council authorize the installation of traffic control signals at the intersection of Lawrence Avenue East and Valia Road/Private Driveway.

### **FINANCIAL IMPACT**

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The estimated cost for installing traffic control signals at the intersection of Lawrence Avenue East and Valia Road/private driveway is \$250,000.00. Funding would be subject to availability and competing priorities within the Transportation Services 2025 Capital Budget.

## **DECISION HISTORY**

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This report addresses a new initiative.

## **COMMENTS**

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Transportation Services was requested by the Ward Councillor to investigate the feasibility of installing pedestrian crossing protection on Lawrence Avenue East, between Manse Road and Bennett Road.

### **Existing Conditions**

Lawrence Avenue East, between Manse Road and Bennett Road, is characterized by the following conditions:

- It is a four-lane, east-west, minor arterial roadway and is approximately 850 metres in length
- It operates two-way traffic on a pavement width of approximately 15 metres
- The daily two-way traffic volume is approximately 12,000 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is TTC service provided in this section by the 54A Lawrence East, 86D Scarborough, 54 Lawrence East and 954 Lawrence East buses
- There are sidewalks located on both sides of the street

This section of Lawrence Avenue East does not currently provide any controlled crossings. The following six stop controlled, local streets intersect Lawrence Avenue East (listed west to east):

- Asterfield Drive: a "T" type intersection, located approximately 190 metres east of Manse Road
- Valia Road/private driveway: a "T" type intersection, opposite a private driveway, located approximately 150 metres east of Asterfield Drive
- Fern Meadow Road: a "T" type intersection, located approximately 45 metres east of Valia Road/private driveway
- Megan Avenue: a "T" type intersection, located approximately 95 metres east of Fern Meadow Road
- Flerimac Road/Morning Dew Road: a four-leg intersection, located approximately 140 metres east of Megan Avenue
- Minnacote Avenue: a "T" type intersection, located approximately 140 metres east of Flerimac Road/Morning Dew Road and approximately 75 metres west of Bennett Road

Transportation Services staff undertook a preliminary review of these intersections for the installation of traffic control signals. The intersection on Lawrence Avenue East at Asterfield Drive was deemed to lack pedestrian generators and was not considered further. Minnacote Avenue was deemed too close to adjacent protected traffic control signals. The four intersections that were investigated for pedestrian crossing protection have been described in more detail as follows (listed west to east):

Valia 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 8.5 metres
- The daily two-way traffic volume is approximately 600 vehicles
- The speed limit is 50 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 both sides of the street
- A private driveway is located opposite, on the north side of Lawrence Avenue East

Fern Meadow 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 9 metres
- The daily two-way traffic volume is approximately 130 vehicles
- The speed limit is 50 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 west side of the street

Megan Avenue 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 8.5 metres
- The daily two-way traffic volume is approximately 1,500 vehicles
- The speed limit is 40 km/h. A concurrent report is being brought before Scarborough Community Council, recommending the installation of speed humps, which will result in a speed limit of 30 km/h
- Heavy trucks are prohibited at all times
- There is no TTC service provided
- There are no sidewalks on this street

Flerimac Road and Morning Dew Road are characterized by the following conditions:

- They are two-lane, north-south, local roadways
- They operate two-way traffic on a pavement width of approximately 8.5 metres
- The daily two-way traffic volume is approximately 1,150 vehicles
- The speed limits are 50 km/h. Transportation Services advises that the speed limitw are 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 both sides of Morning Dew Road and on the east side of Flerimac Road

The adjacent land use in this area is single-family residential dwellings, The Lakeside Church and Scarborough Seventh-Day Adventist Church are located on the northwest corner of Lawrence Avenue East and Valia Road/private driveway and a commercial plaza is located on the south side of Lawrence Avenue East at Minnacote Avenue.

A map of the area is included in Attachment 1.

### **Traffic Control Signals**

As noted, the intersections on Lawrence Avenue East at Valia Road/private driveway, Fern Meadow Road, Megan Avenue and Morning Dew Road/Flerimac Road were reviewed for traffic control signals. 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, staff conducted vehicle and pedestrian counts on September 29, 2022, at the intersection of Lawrence Avenue East and Valia Road/private driveway, on January 24, 2024, at the intersection of Lawrence Avenue East and Fern Meadow Road, on June 15, 2023, at the intersection of Lawrence Avenue East and Megan Avenue and on October 17, 2023, at the intersection of Lawrence Avenue East and Flerimac Road/Morning Dew Road. 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 history provided by the Toronto Police Service for the three-year period ending December 31, 2023, were reviewed for collisions that were potentially preventable by installation of traffic control signals. The review disclosed that there were no collisions on Lawrence Avenue East, at Valia Road/Private Driveway, at Fern Meadow Road, at Megan Avenue and at Flerimac Road/Morning Dew Road that were potentially preventable by the installation of traffic control signals. No collisions involved a pedestrian or cyclist.

Table 1: Warrant Criteria and Compliance

| Location                       | Warrant Compliance       |                        |                  | TCS Warrant? |
|--------------------------------|--------------------------|------------------------|------------------|--------------|
|                                | Minimum Vehicular Volume | Delay to Cross Traffic | Collision Hazard |              |
| Valia Road/private driveway    | 20%                      | 42%                    | 0%               | No           |
| Fern Meadow Road               | 3%                       | 9%                     | 0%               | No           |
| Megan Avenue                   | 42%                      | 47%                    | 0%               | No           |
| Flerimac Road/Morning Dew Road | 58%                      | 76%                    | 0%               | No           |

To meet the 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 1, the numerical warrants for the installation of traffic control signals are not satisfied at any of the subject intersections at this time.

As noted in the warrant results, traffic volumes were higher in the eastern portion of the study area but the pedestrian crossing volumes were relatively consistent over the study area.

Notwithstanding the numeric warrants not being met, in view of the safety and connectivity concerns in this section of Lawrence Avenue East, as well as the long spacing between existing traffic control signals (~850 metres), Transportation Services further considered the installation of traffic signals on Lawrence Avenue East and Valia Road/private driveway for the following reasons:

- Valia Road/private driveway is centrally located and more ideal location in terms of geometric design compared to the other subject intersections, it is approximately 500 metres to the east and 340 metres to the west between pedestrian crossing protection on Lawrence Avenue East.
- The pedestrian generators in the immediate area, including places of worship on the north side of the intersection, the TTC bus stops on the southwest and northeast corners of the intersection, the park to the north and adjacent and residential dwellings, will attract vulnerable pedestrians to cross the street.
- This will benefit vulnerable road users on both sides, requiring to cross the four-lane cross-section on Lawrence Avenue East, and will help consolidate the existing uncontrolled crossings into a single controlled location.

In considering the above reasons, Transportation Services recommends the installation of traffic control signals at Lawrence Avenue East and Valia Road/private driveway as it will provide enhanced safety for all road users.

The TTC has been consulted and concurs with these findings. The TTC recommends relocating the existing westbound stop at Fern Meadow Road to to the new proposed traffic control signals at Lawrence Avenue East and Valia Road/private driveway. Additionally, TTC also recommends consolidating the eastbound stop at Megan Avenue with the stop at Valia Road. The distance between these two stops is approximately 125 metres. Removing the stop at Megan Avenue and maintaining the stop at Valia Road will provide a centralized protected pedestrian crossing as well as a more reliable service through efficient stop spacing, meeting TTC service standards, and optimally placed TTC stop locations to support both the current needs of customers in this area.

As noted, there is a church driveway on the north side of Lawrence Avenue East, opposite Valia Road, that will need to be incorporated into the proposed traffic control signals. Currently this driveway is signed as an entrance; the exit driveway is located approximately 30 metres to the west. Further discussions will be undertaken with the property owner to ensure the signals take into account their access requirements. If necessary, supplemental turn restrictions at these accesses may need additional Council approvals.

### **Other Considerations**

It should be noted that the installation of traffic control signals will have the following additional impacts:

- There will be an increase in delays for motorists on Lawrence Avenue East as a result of the traffic control signal installation
- There is potential for an increase in delays to transit service on Lawrence Avenue East as east-west traffic will no longer operate as free-flow
- Potential increase in cut-through traffic on Valia Drive

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

## **CONTACT**

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## **SIGNATURE**

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

## **ATTACHMENTS**

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Attachment 1: Map - Traffic Control Signals - Lawrence Avenue East and Valia Road

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