

Attachment 9 - New Traffic Control Signals - Ellesmere Complete Street (Ward 25)

In March 2025, City Council authorized installation of the Ellesmere Complete Street project, which included installation of cycle tracks, multi-use trails, safety and accessibility improvements, and other design elements. An overview of the project area is included as Figure 9-1.

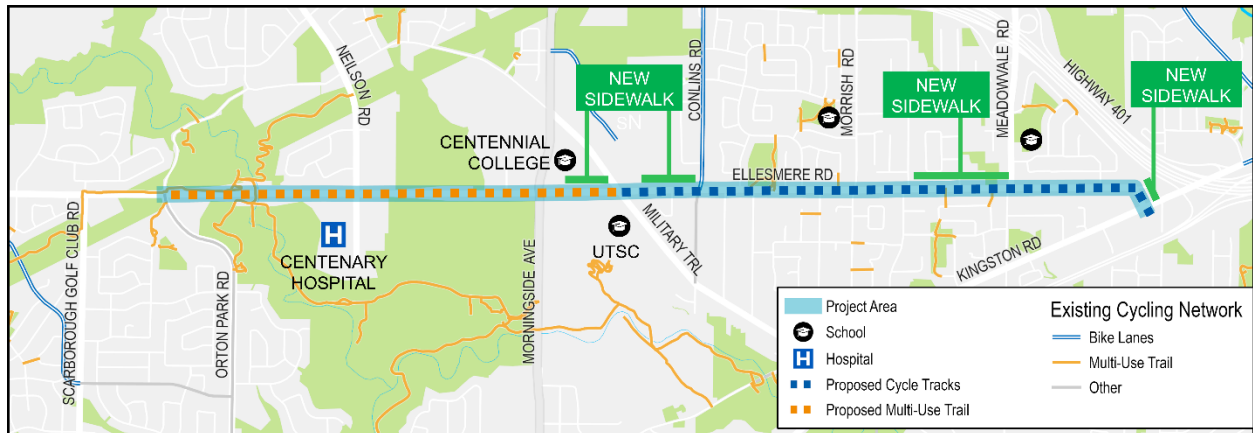


Figure 9-1: Ellesmere Complete Street Project Area

To improve safety for all road users and enhance pedestrian crossing protection, two (2) new traffic control signals and one (1) new Pedestrian Crossover (PXO) are recommended for installation.

Traffic Control Signal Justification - Ellesmere Road and a point 67 metres east of Bobmar Road

Existing Conditions

Ellesmere Road is characterized by the following conditions:

- It is a four-lane (4-lane), east-west, minor arterial roadway
- It operates two-way traffic on a pavement width of approximately 15.2 metres
- The daily two-way traffic volume is approximately 4,800 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is TTC service provided by the 95 York Mills bus route
- There are sidewalks located on both sides of the street

Eastbound and westbound traffic along Ellesmere Road is free flow. There is no connecting side street at Ellesmere Road and a point 67 metres east of Bobmar Road.

Staff also reviewed the collision history at this location. Collision statistics provided by the Toronto Police Service for the three-year period ending April 27, 2026, disclosed no collisions at the area of Ellesmere Road and a point 67 metres east of Bobmar Road that involved crossing pedestrians.

The adjacent land use in this area is mainly residential, consisting of detached residential dwellings. Additionally, the Highland Creek Community Park is located on the north side of the subject location.

The closest adjacent traffic controls are located approximately 348 metres to the west at Conlins Road and approximately 454 metres to the east at Morrish Road.

In accordance with the Council-adopted Pedestrian Crossing Protection Device Justification Policy, Transportation Services has reviewed the need for a pedestrian crossing protection device (a PXO or traffic control signal).

As part of the Ellesmere Complete Street project, a pedestrian crossing protection device was evaluated for the segment of Ellesmere Road between Conlins Road and Morrish Road. This assessment considered three (3) potential locations: Calthorpe Avenue, a point east of Bobmar Road, and Calverly Trail. Based on feedback from the public and internal stakeholders, Bobmar Road was identified as the preferred location. This preference was due to its central position between Conlins Road and Morrish Road, the presence of TTC bus stops, and the established pedestrian desire line to Highland Creek Community Park.

Pedestrian Crossing Protection Device Justification

To determine the need for a new pedestrian crossing protection device at Ellesmere Road and a point 67 metres east of Bobmar Road, staff rely on the justification criteria as outlined in the Pedestrian Crossing Protection Device Justification Policy. The justification criteria includes two (2) main factors: the volume of vehicles and pedestrians; and pedestrian delay to cross traffic measured over an eight-hour (8-hour) period with the highest recorded number of pedestrians. Staff may also consider four- and two-hour (4- and 2-hour) analysis periods. For a new crossing to be technically justified, the Pedestrian Volume and Delay justification must be fulfilled for one (1) of the three (3) time periods. In addition to the technical justification, staff review additional considerations such as the collision experience and distance to the nearest controlled crossing opportunity.

An eight-hour (8-hour) pedestrian volume and delay study was not available for Ellesmere Road at a point 67 metres east of Bobmar Road. However, a study was conducted at Ellesmere Road and Calthorpe Avenue, located approximately 60 metres west of Bobmar Road. Given the close proximity of the two (2) locations and their similar site conditions — including TTC transit stops, pedestrian and cycling desire lines, and extended spacing between pedestrian crossing protection devices — the data from the Calthorpe Avenue study was considered representative.

The eight-hour (8-hour) pedestrian volume and delay study was conducted on October 9, 2024, which recorded the total volume and delays of pedestrians crossing at Ellesmere Road and Calthorpe Avenue. Seniors, unassisted children, and people with disabilities that are observed crossing are given a higher weighting by a factor of two (2). Table 9-1 shows the results of the pedestrian volume and delay study.

Table 9-1: Pedestrian Volume and Delay at Ellesmere Road and Calthorpe Avenue

Time Period	Criteria	Minimum Required	Recorded Volume	Justification Met? (Yes/No)
8 Hours (7:30 to 9:30 AM, 10:00 AM to 12:00 PM, 1:00 to 3:00 PM, 4:00 to 6:00 PM)	Net Volume of Total Pedestrians	192	31	No
	Net Volume of Delayed Pedestrians	N/A	18	
4 Hours (1:00 to 2:00 PM, 2:00 to 3:00 PM, 3:00 to 4:00 PM, 4:00 to 5:00 PM)	Net Volume of Total Pedestrians	129	23	No
	Net Volume of Delayed Pedestrians	N/A	15	
2 Hours (1:00 to 2:00 PM, 4:00 to 5:00 PM)	Net Volume of Total Pedestrians	84	12	No
	Net Volume of Delayed Pedestrians	N/A	9	
Net 8-Hour Vehicular Volume on Street Being Crossed				4,570

Based on the results of the pedestrian volume and delay study, a new pedestrian crossing protection device is not technically justified.

In addition to the technical criteria, consideration of the collision history and distance to nearest controlled crossing opportunity is given for locations with a pronounced desire to cross based on the adjacent land use and transportation facilities. Based on these considerations, a pedestrian crossing protection device may be recommended even though the numerical justification of Pedestrian Volume and Delay is not met.

Contextual Consideration / Environmental Audit at Ellesmere Road and a Point 67 metres East of Bobmar Road

Notwithstanding the numeric warrants not being met, in view of the potential safety and connectivity concerns in the subject section of Ellesmere Road, Transportation Services further considered the installation of traffic control signals at Ellesmere Road and a point 67 metres east of Bobmar Road, based on the following environmental factors:

- The long spacing between pedestrian crossing protection on Ellesmere Road. The closest adjacent traffic control crossing is located approximately 348 metres to the west at Conlins Road and approximately 454 metres to the east at Morrish Road.
- The four-lane (4-lane) cross-section on Ellesmere Road, as well as the speed and volume of traffic using this street.

- Pedestrian desire lines across Ellesmere Road, including pathways to the Highland Creek Community Park, that attract vulnerable pedestrians to cross the street.
- The presence of transit stops in both directions on Ellesmere Road that attract pedestrians to cross the street.
- Based on TTC staff's current intentions to consolidate the Calthorpe Avenue and Calverly Trail / Watson Street transit stops and maintain the stops at Bobmar Road.
- Proposed uni-directional cycle tracks to be installed on Ellesmere Road as part of the Ellesmere Complete Street project.

In considering the above environmental factors, Transportation Services recommends the installation of a new pedestrian crossing protection device at Ellesmere Road and a point 67 metres east of Bobmar Road as it will provide enhanced safety for all road users.

Based on the number of lanes to cross, vehicular traffic volume, and posted speed limit, the minimum acceptable level of traffic control at Ellesmere Road and a point 67 metres east of Bobmar Road is a traffic control signal. As such, Transportation Services recommends that a traffic control signal be installed on Ellesmere Road at a point 67 metres east of Bobmar Road. Because there are no side streets at this location, a Mid-Block Pedestrian Signal (MPS) will be installed.

The minimum acceptable level of control was evaluated to determine if a PXO would be appropriate at this location. While there are considerations for posted speed limit and annual average daily traffic, a PXO is not a suitable type of pedestrian crossing protection when there are four (4) lanes to cross, regardless of the motor vehicle traffic volumes and speeds.

Consultation with TTC

The TTC has been consulted and concurs with these findings. The TTC also recommends consolidating the bus stops at Calthorpe Avenue and Calverly Trail / Watson Street to those at Bobmar Avenue. Relocating these stops will improve customer safety by providing them with a protected pedestrian crossing, 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 and future development in this area.

Other Considerations

It should also be noted that the installation of a traffic control signal may result in the potential for an increase in delays to transit service on Ellesmere Road. However, the signal will only be actuated by crossing pedestrians or people cycling.

Traffic Control Signal Justification - Ellesmere Road and Zaph Avenue

Existing Conditions

Ellesmere Road is characterized by the following conditions:

- It is a four-lane (4-lane), east-west, minor arterial roadway

- It operates two-way traffic on a pavement width of approximately 16.4 metres
- The daily two-way traffic volume is approximately 3,960 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is TTC service provided by the 95 York Mills bus route
- There are sidewalks located on one side of the street

Zaph Avenue is characterized by the following conditions:

- It is a two-lane (2-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 217 vehicles
- The speed limit is 50 km/h
- Heavy trucks are prohibited at all times
- There no TTC service provided
- There are no sidewalks on either side of the street

Zaph Avenue intersects with Ellesmere Road to form a “T” type intersection, with right-of-way controlled by a stop sign for southbound traffic on Zaph Avenue, while Ellesmere Road is uncontrolled.

Staff also reviewed the collision history at this location. Collision statistics provided by the Toronto Police Service for the three-year (3-year) period ending April 27, 2026, disclosed no collisions at the area of Ellesmere Road and Zaph Avenue that involved crossing pedestrians.

The adjacent land use in this area is residential, with some institutional zoning present northeast of the study location in the form of Meadowvale Public School and Toronto Fire Station 214. There are existing TTC transit stops at this location served by the 95 York Mills bus route.

The closest adjacent traffic control signals are located approximately 265 metres to the east at Meadowvale Road and approximately 544 metres to the west at Morrish Road.

In accordance with the Council-adopted Pedestrian Crossing Protection Device Justification Policy, Transportation Services has reviewed the need for a pedestrian crossing protection device (a PXO or traffic control signal).

Traffic Control Signal Evaluation

To determine the need for a new pedestrian crossing protection device at Ellesmere Road and Zaph Avenue, staff rely on the justification criteria as outlined in the Pedestrian Crossing Protection Device Justification Policy. The justification criteria includes two (2) main factors: the volume of vehicles and pedestrians; and pedestrian delay to cross traffic measured over an eight-hour (8-hour) period with the highest recorded number of pedestrians. Staff may also consider four- and two-hour (4- and 2-hour) analysis periods. For a new crossing to be technically justified, the Pedestrian Volume and Delay justification must be fulfilled for one (1) of the three (3) time periods.

In addition to the technical justification, staff review additional considerations such as the collision history and distance to the nearest controlled crossing opportunity.

An eight-hour (8-hour) pedestrian volume and delay study was conducted on June 28, 2023, which recorded the total volume and delays of pedestrians crossing at Ellesmere Road and Zaph Avenue. Seniors, unassisted children, and people with disabilities that are observed crossing are given a higher weighting by a factor of two (2). Table 9-2 shows the results of the pedestrian volume and delay study.

Table 9-2: Pedestrian Volume and Delay at Ellesmere Road and Zaph Avenue

Time Period	Criteria	Minimum Required	Recorded Volume	Justification Met? (Yes/No)
8 Hours (7:30 to 9:30 AM, 10:00 AM to 12:00 PM, 1:00 to 3:00 PM, 4:00 to 6:00 PM)	Net Volume of Total Pedestrians	212	17	No
	Net Volume of Delayed Pedestrians	N/A	4	
4 Hours (7:30 to 8:30 AM, 11:00 AM to 12:00 PM, 1:45 to 2:45 PM, 4:00 to 5:00 PM)	Net Volume of Total Pedestrians	142	9	No
	Net Volume of Delayed Pedestrians	N/A	2	
2 Hours (7:30 to 8:30 AM, 1:45 to 2:45 PM)	Net Volume of Total Pedestrians	73	5	No
	Net Volume of Delayed Pedestrians	N/A	2	
Net 8-Hour Vehicular Volume on Street Being Crossed				3,960

Based on the results of the pedestrian volume and delay study, a new pedestrian crossing protection device is not technically justified.

In addition to the technical criteria, consideration of the collision history and distance to nearest controlled crossing opportunity is given for locations with a pronounced desire to cross based on the adjacent land use and transportation facilities. Based on these considerations, a pedestrian crossing protection device may be recommended even though the numerical justification of Pedestrian Volume and Delay is not met.

Contextual Consideration / Environmental Audit at Ellesmere Road and Zaph Avenue
Notwithstanding the numeric warrants not being met, in view of the potential safety and connectivity concerns in the subject section of Ellesmere Road, Transportation Services

further considered the installation of traffic control signals at Ellesmere Road and Zaph Avenue, based on the following environmental factors:

- The long spacing between pedestrian crossing protection on Ellesmere Road. The closest adjacent traffic control crossing is located approximately 265 metres to the east at Meadowvale Road and approximately 544 metres to the west at Morrish Road.
- The four-lane (4-lane) cross-section on Ellesmere Road, as well as the speed and volume of traffic using this street.
- Pedestrian desire lines across Ellesmere Road, including pathways to the adjacent neighbourhood, that attract vulnerable pedestrians to cross the street. New sidewalks will be installed on Zaph Avenue, north of Ellesmere Road as part of planned roadway resurfacing on Zaph Avenue.
- The presence of transit stops in both directions on Ellesmere Road that attract pedestrians to cross the street.
- Based on TTC staff's current intentions to consolidate the Deep Dene Drive / Scarborough Avenue transit stops and maintain the stops at Zaph Avenue.
- Proposed uni-directional cycle tracks and new sidewalks to be installed on Ellesmere Road as part of the Ellesmere Complete Street project.

In considering the above environmental factors, Transportation Services recommends the installation of a new pedestrian crossing protection device at Ellesmere Road and Zaph Avenue as it will provide enhanced safety for all road users.

Based on the number of lanes to cross, vehicular traffic volume and posted speed limit, the minimum acceptable level of control at Ellesmere Road and Zaph Avenue is a traffic control signal.

Because the primary purpose of the recommended traffic control signal is to provide pedestrian crossing protection, an Intersection Pedestrian Signal (IPS) will be installed at Ellesmere Road and Zaph Avenue. Due to low side-street traffic volumes on Zaph Avenue and driveway and utility conflicts, a signalized crossing can only be provided on one (1) side of the IPS, and a pedestrian crossing prohibition is necessary to coincide with installation.

Consultation with TTC

The TTC has been consulted and concurs with these findings. The TTC also recommends consolidating the bus stops at Deep Dene Drive / Scarborough Avenue to those at Zaph Avenue. Relocating these stops will improve customer safety by providing them with a protected pedestrian crossing, 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 and future development in this area.

Other Considerations

It should also be noted that the installation of a traffic control signal may result in the following impacts:

- There is potential for increase in delays to transit service on Ellesmere Road. However, the signal will only be actuated by crossing pedestrians or people cycling.
- There is potential for impacts (injury and/or removal) to approximately three (3) trees to due to shifting transit stops to meet required clearances to the crossing.

There will be no impact to parking on Ellesmere Road associated with the installation of traffic control signals at this intersection.

Pedestrian Crossover Justification - Ellesmere Road and Muirbank Boulevard

Existing Conditions

Ellesmere Road is characterized by the following conditions:

- It is a two-lane (2-lane), east-west, minor arterial roadway
- It operates two-way traffic on a pavement width of approximately 13 metres
- The daily two-way traffic volume is approximately 1,865 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is TTC service provided by the 95 York Mills bus route
- There are sidewalks located on both sides of the street

Muirbank Boulevard intersects with Ellesmere Road to form a “T” type intersection, with right-of-way controlled by a stop sign for southbound traffic on Muirbank Boulevard, while Ellesmere Road is uncontrolled.

Muirbank Boulevard is characterized by the following conditions:

- It is a two-lane (2-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 unavailable
- 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

Staff also reviewed the collision history at this location. Collision statistics provided by the Toronto Police Service for the three-year (3-year) period ending April 27, 2026, disclosed no collisions at the area of Ellesmere Road and Muirbank Boulevard that involved crossing pedestrians.

The adjacent land use is residential, consisting of detached residential dwellings. Some institutional zoning present northwest of the study location in the form of Meadowvale Public School and Toronto Fire Station 214, as well as commercial zoning southeast of the study location. There are existing TTC transit stops at this location served by the 95 York Mills bus route.

The closest adjacent traffic control is located approximately 290 metres to the east at Kingston Road in the form of a traffic control signal.

In accordance with the Council-adopted Pedestrian Crossing Protection Device Justification Policy, Transportation Services has reviewed the need for a pedestrian crossing protection device (a PXO or traffic control signal).

Pedestrian Crossing Protection Device Justification

To determine the need for a new pedestrian crossing protection device at Ellesmere Road and Muirbank Boulevard, staff rely on the justification criteria as outlined in the Pedestrian Crossing Protection Device Justification Policy. The justification criteria includes two (2) main factors: the volume of vehicles and pedestrians; and pedestrian delay to cross traffic measured over an eight-hour (8-hour) period with the highest recorded number of pedestrians. Staff may also consider four- and two-hour (4- and 2-hour) analysis periods. For a new crossing to be technically justified, the Pedestrian Volume and Delay justification must be fulfilled for one (1) of the three (3) time periods. In addition to the technical justification, staff review additional considerations such as the collision history and distance to the nearest controlled crossing opportunity.

An eight-hour (8-hour) pedestrian volume and delay study was conducted on October 9, 2024, which recorded the total volume and delays of pedestrians crossing at Ellesmere Road and Muirbank Boulevard. Seniors, unassisted children, and people with disabilities that are observed crossing are given a higher weighting by a factor of two (2). Table 9-3 shows the results of the pedestrian volume and delay study.

Table 9-3: Pedestrian Volume and Delay at Ellesmere Road and Muirbank Boulevard

Time Period	Criteria	Minimum Required	Recorded Volume	Justification Met? (Yes/No)
8 Hours (7:30 to 9:30 AM, 10:00 AM to 12:00 PM, 1:00 to 3:00 PM, 4:00 to 6:00 PM)	Net Volume of Total Pedestrians	457	69	No
	Net Volume of Delayed Pedestrians	N/A	6	
4 Hours (7:30 to 8:30 AM, 1:15 to 2:15 PM, 4:00 to 5:00 PM, 5:00 to 6:00 PM)	Net Volume of Total Pedestrians	305	53	No
	Net Volume of Delayed Pedestrians	N/A	6	
2 Hours (7:30 to 8:30 AM, 5:00 to 6:00 PM)	Net Volume of Total Pedestrians	203	32	No
	Net Volume of Delayed Pedestrians	N/A	5	

Time Period	Criteria	Minimum Required	Recorded Volume	Justification Met? (Yes/No)
Net 8-Hour Vehicular Volume on Street Being Crossed				1,865

Based on the results of the pedestrian volume and delay study, a new pedestrian crossing protection device is not technically justified.

In addition to the technical criteria, consideration of the collision history and distance to nearest controlled crossing opportunity is given for locations with a pronounced desire to cross based on the adjacent land use and transportation facilities. Based on these considerations, a pedestrian crossing protection device may be recommended even though the numerical justification of Pedestrian Volume and Delay is not met.

An existing unmarked, uncontrolled crossing is provided at Ellesmere Road and Muirbank Boulevard, and existing pedestrian volume and delay are not high enough to meet the technical justification. Since the closest adjacent controlled crossing is approximately 290 metres away, the presence of TTC bus stops, and future uni-directional bikeways along Ellesmere Road, Transportation Services is recommending the installation of a new pedestrian crossing protection device at Ellesmere Road and Muirbank Boulevard. Additionally, with the improvements proposed as part of the Ellesmere Complete Street project, pedestrian volumes are expected to increase, and a pedestrian crossing protection device is recommended to enhance crossing safety.

Based on the number of lanes to cross, vehicular traffic volume, and posted speed limit, the minimum acceptable level of traffic control at Ellesmere Road and Muirbank Boulevard is a Pedestrian Crossover (PXO). As such, Transportation Services recommends that a PXO be installed at Ellesmere Road and Muirbank Boulevard.

Consultation with TTC

The TTC has been consulted and concurs with these findings. A protected pedestrian crossing aligns with TTC service standards and is expected to support a projected increase in ridership by improving safety and accessibility for transit users in the area.

Other Considerations

It should also be noted that the installation of a PXO may result in the following impacts:

- There is potential for increase in delays to transit service on Ellesmere Road due to actuation of the PXO warning lights by crossing pedestrians.
- There is potential for impacts (injury and/or removal) to approximately two (2) trees due to shifting transit stops to meet required clearances to the crossing.

There will be no impact to parking on Ellesmere Road associated with the installation of a PXO at this intersection.