



City of
Peterborough

To: **Members of the Finance Committee**

From: **Cynthia Fletcher**
Commissioner of Infrastructure and Planning Services

Meeting Date: **January 13, 2020**

Subject: **Report IPSTR20-001**
Request for a Crossing Guard - Monaghan Road and Hopkins Avenue

Purpose

A report to recommend a crossing guard be implemented at the intersection of Monaghan Road and Hopkins Avenue.

Recommendation

That Council approve the recommendation outlined in Report IPSTR20-001 dated January 13, 2020, of the Commissioner of Infrastructure and Planning Services, as follows:

That a crossing guard be implemented at the intersection of Monaghan Road and Hopkins Avenue during the morning and afternoon school admission/ dismissal times.

Budget and Financial Implications

Adding a crossing guard at the intersections of Monaghan Road and Hopkins Avenue will cost approximately \$10,000 per year.

Council, at their meeting of June 24, 2019 in considering Report CLSFS19-030, approved the following motion:

- f) Unless new, sustainable funding becomes available from another level of government or outside source, no new services are to be added to the municipal tax base for the 2020 budget.

Funding for this request is recognized as a service level enhancement, the need for which has been demonstrated in this report. Funding has been included in the draft 2020 Operating Budget presented to Council.

Adding school crossing signs, pavement markings, and sidewalk works will cost approximately \$9,500, funds for which are available in the uncommitted balance in the 2019 Capital Budget for Traffic Improvements (Project Reference 5-13.05).

Background

In response to resident concerns, a study to review the need for a crossing guard at the intersection of Monaghan Road and Hopkins Avenue was undertaken. The data collection for this assessment occurred in September of 2019, following the commencement of the new school year.

School Crossing Guard Assessment

The role of a crossing guard is to direct and supervise the movement of persons across a public road by creating necessary gaps in traffic to provide safe passage at a designated school crossing, as defined in the Highway Traffic Act.

In 1992, representatives from the Ontario Traffic Council (OTC) and the Ontario Ministry of Transportation (MTO) collaborated to prepare a report to standardize the implementation of school crossings. This document titled "School Crossing Review 1992" has been used as a guideline by municipalities across the province and laid the foundation for the development of the "OTC School Crossing Guide, 2006" and the recent release of the updated "OTC School Crossing Guard Guide, May 2017".

The goal of this guide is to promote consistency across the province in the application and management of school crossings to improve safety. The guide provides a step-by-step analytical approach to determine if a school crossing guard should be provided at a specific location. The key factors used to assess the need for a crossing guard depend on the proposed location of the crossing. School crossing locations are categorized as listed below:

- At Signalized Intersections,
- At All-Way Stop Controlled Intersections,
- At Minor Street Stop Controlled Intersections,
- At Pedestrian Signals,
- At Pedestrian Crossovers,
- At Mid-block Locations and;
- At Roundabouts

Site Details

Monaghan Road is a two-lane arterial road running from Crawford Drive in the south to Parkhill Road in the north. Hopkins Avenue is a local road running east-west from Park Street in the east to Weller Street in the west. The intersection of Monaghan Road and Hopkins Avenue is a standard four leg intersection with stop signs on Hopkins Avenue. There are sidewalks on both sides of Monaghan Road and on Hopkins Avenue west of the intersection, and both roads have a speed limit of 50 km/h. A sketch of the area is shown in Appendix A – Proposed School Crossing Location.

Students and parents cross at this location on route to Queen Mary Public School, which is located on the west side of Monaghan Road, between Weller Street and Hopkins Avenue. The signalized intersection of Monaghan Road and Weller Street is approximately 130 metres south of Hopkins Avenue, and a crossing guard is provided in the morning, mid day and dismissal times to assist students crossing Monaghan Road and Weller Street. The next closest controlled crossing of Monaghan Road is approximately 210 metres to the north at the signalized intersection with McDonnell Street.

The proposed school crossing on Monaghan Road at Hopkins Avenue is categorized as a Mid-block location. A Mid-block location is defined as a location where students casually cross a main street on their way to and from school where there are no pavement markings and/or no school crossing signs. At this type of location, vehicles have the right-of-way and students must wait for a safe gap in traffic before proceeding to cross the road. The School Crossing Guard Warrant for Mid-block Locations uses the following four key factors in determining the need/justification for a school crossing guard:

- Collision History,
- Student Crossing Volume,
- Gap Study and;
- Other Environmental Conditions potentially affecting safety.

A detailed description and site-specific data is presented in Appendix B – Monaghan Road School Crossing Guard Study Analysis

Crossing Guard Warrant Mid-Block Location

The Crossing Guard Warrant Mid-block Location considers two conditions, Condition A and Condition B.

Table 1 shows the results of the Mid-block Crossing Guard Warrant for the crossing on Monaghan Road at Hopkins Avenue.

Table 1: Crossing Guard Warrant - Mid-block Location

Condition A	15 or more students cross during a crossing period. and;	<input checked="" type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied	If both Condition A criteria are satisfied, a crossing guard is warranted.
	At least 50% of all 5-minute intervals contain 3 or fewer safe gaps during the same crossing period.	<input checked="" type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied	
Condition B	5 to 14 students cross during a crossing period. and;	<input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied	If all three Condition B criteria are satisfied, a crossing guard is warranted.
	At least 50% of all 5-minute intervals contain 3 or fewer safe gaps during the same crossing period. and;	<input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied	
	At least one Environmental Condition was satisfied at the requested crossing location.	<input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied	
If neither Condition A nor Condition B are satisfied, a crossing guard is not warranted.			

A total of 20 students were observed crossing Monaghan Road at Hopkins Avenue during the P.M. school dismissal time. In addition, 100% of all 5-minute intervals contained 3 or fewer safe gaps in traffic for students to cross. These two criteria together meet Condition A of the Crossing Guard Warrant Mid-block Location and, as such, a crossing guard is warranted on Monaghan Road at Hopkins Avenue without the need to further consider Condition B.

Timeline

If the above recommendation is approved, it is estimated that the new crossing guard would be in place by March 2020. This timeline allows for allows for site preparation,

and the hiring of an additional crossing guard. The crossing would be signed and marked on a temporary basis (subject to weather conditions), with construction of new concrete sidewalk ramps scheduled for the spring of 2020.

Summary

The crossing guard review supports the need for a guard at the intersection of Monaghan Road / Hopkins Avenue. The implementation of a guard at this location should reduce student exposure to conflicting vehicle movements and improve pedestrian safety at the intersections.

Submitted by,

Cynthia Fletcher
Commissioner of Infrastructure and Planning Services

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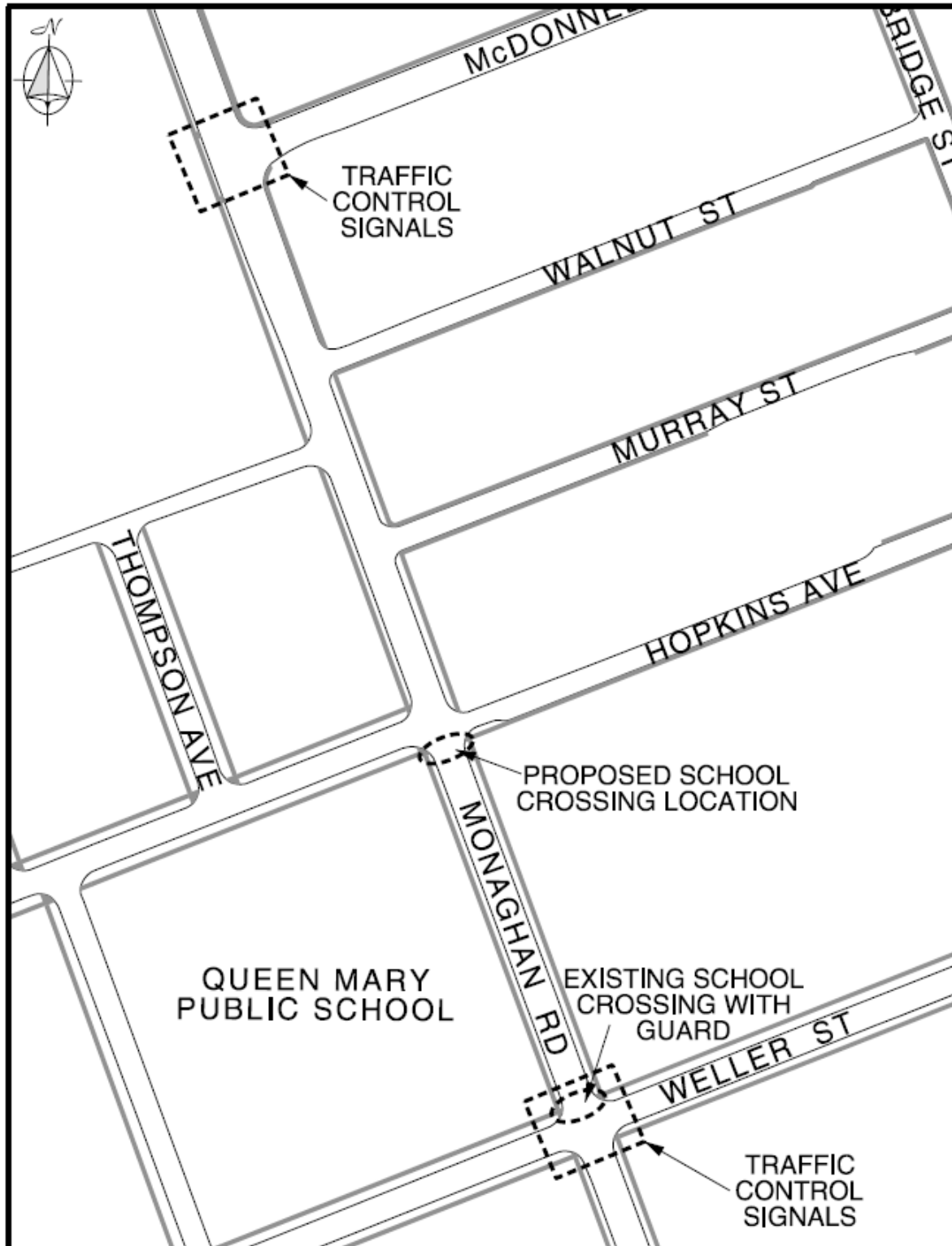
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Attachments:

Appendix A: Proposed School Crossing Location
Appendix B: Monaghan Road School Crossing Guard Study Analysis

Appendix A Proposed School Crossing Location



APPENDIX A
PROPOSED SCHOOL
CROSSING LOCATION

INFRASTRUCTURE &
PLANNING SERVICES
TRAFFIC SECTION
N.T.S. SEPTEMBER 2019

Appendix B

Monaghan Road–School Crossing Guard Study Analysis

The School Crossing Guard Warrant Mid-block Location uses the following four key factors in determining the need/justification for a school crossing guard:

- Collision History,
- Student Crossing Volume,
- Gap Study and;
- Other Environmental Conditions affecting safety.

Collision History

A crossing guard may be approved regardless of the outcome of the gap study or the number of students regularly crossing, if an average of more than two vehicle-pedestrian collisions per year occurred over the last three years and those collisions are susceptible to correction by a crossing guard.

A review of the collision history at Monaghan Road and Hopkins Avenue revealed three reported motor vehicle collision in the past three years and no vehicle-pedestrian interaction was involved. A school crossing guard is not warranted at the intersection of Monaghan Road and Hopkins Avenue based on collision history.

Student Crossing Volume

The student crossing volume is the number of students (JK to grade 6) crossing the road during school admission and dismissal times. The minimum student crossing volume is the minimum number of students required to consider the implementation of a crossing guard. This number is set by the municipality to ensure consistency of application, and allow municipalities to focus their resources at crossings where student utilization is higher. The School Crossing Guard Guide recommends a threshold of 40 students, however; past practice in Peterborough has established a minimum of 15 students at Mid-block locations and 25 students at signalized Intersections. These values were compared with the existing crossing guard locations in Peterborough and were found to be high at crossings where overriding environmental conditions were a safety factor. For consistency, the minimum number of students crossing in Peterborough is set at 15 students under normal conditions and 5 students where environmental conditions are identified as a safety factor.

Gap Study

The crossing guard warrant uses a gap study to determine if there are sufficient safe gaps in traffic to allow the average pedestrian to safely cross the road. The average pedestrian crossing time on Monaghan Road is 20 seconds, based on an average walking speed of 1.0 m/sec plus a 4.0 second reaction time. The number of safe gaps in traffic is counted for each 5-minute interval of the survey period, along with the number

of students crossing the road. The survey time for Monaghan Road and Hopkins Avenue was 35 minutes which represents the school crossing times and is equal to seven 5-minute intervals.

The survey results for the gap study are presented in the **Table 2** below. The survey was conducted during both the A.M. school admission time and P.M. school dismissal time.

Table 2: Gap Study Results

AM		PM	
Percentage of 5-Minute Intervals with 3 or less Safe Gaps	Number of Students Crossing	Percentage of 5-Minute Intervals with 3 or less Safe Gaps	Number of Students Crossing
100%	13	100%	20

The Crossing Guard Warrant Mid-block Locations only requires one of the survey times (A.M. or P.M.) to satisfy the conditions presented in **Table 2**.

Staff noted that during both at the A.M. and P.M study time only two students crossed Monaghan Road independently the rest of the students crossed with an adult.

Environmental Conditions

The crossing guard warrant also considers environmental conditions that may impact pedestrian safety as part of the assessment for a crossing guard. Environmental conditions are separated into three categories: Intersection Geometry, Vehicle and Pedestrian Visibility, and Driver Behavior. Site inspections were conducted at Monaghan Road and Hopkins Avenue concurrently with the A.M and P.M gap studies. The results of the site inspection for the requested crossing at Monaghan Road and Hopkins Avenue are shown below in **Table 3**.

Table 3: Environmental Conditions

Intersection Geometry	Students are crossing 3 or more lanes of traffic, channelized right turn lanes, or a centre turn lane.	<input type="checkbox"/> Satisfied <input checked="" type="checkbox"/> Not Satisfied
Vehicle and Pedestrian Visibility	There are sight line limitations for vehicles or pedestrians (horizontal or vertical road curvature, trees, bus shelters/ bus stops, other) which limits visibility to less than 125 meters.	<input type="checkbox"/> Satisfied <input checked="" type="checkbox"/> Not Satisfied
Driver Behavior	Illegal driver behavior was observed during the site inspection (speeding, rolling stops, illegal u-turns, excessively aggressive driving).	<input type="checkbox"/> Satisfied <input checked="" type="checkbox"/> Not Satisfied

Warrant Evaluation

The Crossing Guard Warrant Mid-block Location considers two conditions, Condition A and Condition B. Condition A requires a minimum of 15 students crossing and 50% or more of all 5-minute intervals surveyed to have 3 or fewer safe gaps. If Condition A criteria are not satisfied, a crossing guard may still be warranted if the Condition B criteria is met. Condition B requires a minimum of 5 students crossing, 50% or more of all 5-minute intervals surveyed to have 3 or less safe gaps and at least one environmental condition satisfied.

The Monaghan Road at Hopkins Avenue location satisfies the minimum warrant for a crossing guard under Condition A. A total of 20 students were observed crossing Monaghan Road during the P.M. school dismissal time. In addition, 100% of all 5-minute intervals contained 3 or fewer safe gaps for students to cross.