

Region of Waterloo
Transportation Services
Transportation

To: Planning and Works Committee
Meeting Date: June 6, 2023
Report Title: Automated Speed Enforcement – 5-Year Expansion Plan

1. Recommendation

That the Regional Municipality of Waterloo approve the following in order to expand the Automated Speed Enforcement Program to all School Zones within the Region, subject to 2024 budget approval and as outlined in report TSD-TRP-23-009, dated June 6, 2023:

- a) Implement Automated Speed Enforcement at 25 to 30 new School Zones per year starting in 2024 with completion of all 175 schools by the end of 2028;
- b) Direct staff to prepare and submit staffing and budget requirements as part of the 2024 Plan and Budget and as needed in subsequent budget years; and
- c) Direct staff to develop criteria for identifying and prioritizing Community Safety Zones for the purpose of implementing Automated Speed Enforcement near certain schools and at other critical locations around the Region.

2. Purpose / Issue:

At the February 7, 2023 Planning & Works Committee meeting, Council directed staff to “present a roadmap for a rapid implementation plan to expand automated speed enforcement to all School Zones across the Region aligned with upcoming strategic planning, including costing for the infrastructure, addition of cameras, and programming of the camera technology, market capacity to respond, staff resources and budgets and administrative capacity required as well as options for increasing processing capacity.”

This report presents a recommended plan for rapid expansion of the automated speed enforcement (ASE) program. It covers the Transportation-related components of the operations, including equipment and programming, staff resource requirements, and the financial impacts. Additional staff reports will address the administration of the Council-approved Administrative Penalties Program, scheduled to launch in Q2 2024, as well as a separate business case for a Regional processing centre. An infographic showing the relationship between all components of the ASE program is provided in Appendix A.

3. Strategic Plan:

The Automated Speed Enforcement (ASE) program supports 3 objectives within the Region's 2019-2023 Strategic Plan:

- Strategic Objective 2.3: Increase participation in active forms of transportation (cycling and walking);
- Strategic Objective 2.4: Improve road safety for all users/drivers, cyclists, pedestrians, horse and buggies; and
- Strategic Objective 4.1: Improve child and youth wellbeing in Waterloo Region.

4. Report Highlights:

- Given the clear positive impacts of the Automated Speed Enforcement program to-date on the reduction of travel speeds near schools, staff is proposing a rapid expansion to all 175 qualifying schools within the Region of Waterloo.
- Through the addition of 25 to 30 sites per year starting in 2024, all eligible schools would be equipped with ASE by the end of 2028.
- Staff recommends the continued use of semi-fixed locations through 2024 (involving the rotation of cameras between sites) and transitioning to fixed ASE sites starting in 2025 (involving a permanent camera at each site) in order to maximize the effectiveness of the ASE program.
- With sufficient notice, a prospective ASE equipment vendor should be able to meet the Region's demand to implement 25 to 30 new sites per year.
- In order to facilitate the expansion and ongoing (and increasing) administrative work for the ASE program, it is estimated that six new full-time Transportation Engineering employees would be required (in addition to the position approved as part of the 2023 expansion), starting in early 2024.
- Expansion of the ASE program will require additional processing capacity. A business case on a Regional ASE processing centre is currently being developed and is scheduled to be presented to Committee in Q3 2023. Staff resourcing implications will be fully explored as part of the Regional ASE processing centre business case report, and preliminary estimates suggest that approximately 35 new processing centre full time equivalent (FTE) positions would be required by 2029 to handle the volume of infractions anticipated by the proposed ASE program expansion.
- The Administrative Penalties System (APS) program is imperative to support the expansion of ASE and support a higher volume of infractions outside of the current Provincial Offences Court regime. A preliminary estimate of 45 new FTEs would be required to support the new APS by 2029.

- In the first years of expansion and implementation of the program (2024-2028), revenues are expected to cover operating and capital costs.
- Due to the high volume of schools in the Region and the aggressive expansion of the ASE program that will be required to equip all schools over the next 5 years, staff recommends deferring the implementation of ASE to other Community Safety Zones to start beyond 2028.
- In the interim, staff will collaborate with area municipal staff to establish a set of criteria for identifying and prioritizing the use of Community Safety Zones for the purpose of adding ASE in critical locations around the Region, and present recommendations for the strategic use of Community Safety Zones to Council.

5. Background:

The Region has been implementing Automated Speed Enforcement (ASE) since 2021 in School Zones around the Region. The goal of the ASE program is to lower vehicle travel speeds near schools to reduce the risk (and severity) of collisions with the most vulnerable road users, and to provide a comfortable walking, rolling and cycling environment at and near schools.

The introduction of ASE has seen positive results to date, with average travel speeds reducing between 2 km/h and 9 km/h and the number of motorists complying with the posted speed limit increasing by an average of 63% in School Zones that are enforced through ASE.

At present, 16 School Zones within the Region are equipped with ASE. In May 2023, Council endorsed a plan to further expand the existing ASE program to 32 School Zones by the end of 2023. There are a total of 175 qualifying schools within the Region of Waterloo, meaning that 143 schools will remain without ASE at the end of 2023.

To provide some context around the size and scale of the proposed program: the City of Toronto (population: 3 million) currently rotates 75 ASE cameras among all schools within the City.

Site Selection

With 32 sites approved for the end of 2023, the estimated annual ASE expansion starting in 2024 is shown in Table 1.

Table 1: Proposed Annual ASE Program Expansion

Year	2024	2025	2026	2027	2028
Expansion (No. of Sites)	28	30	30	30	25
Total (No. of Sites)	60	90	120	150	175

The future expansion of ASE in School Zones around the Region would follow the Two-

Step Location Selection Methodology approved by Council in TES-TRP-21-16.

Some schools may not be suitable for ASE implementation. The feasibility of ASE at an individual site relies on clear sightlines for the camera equipment to operate, and it may not be possible to implement ASE at sites with horizontal curves, vertical curves, physical obstructions, or insufficient boulevard space. Further, at some schools, the current roadway vehicle speeds may be low enough that there is no benefit to be gained by the deployment of ASE. As part of the site selection process, staff will review data and work with the ASE equipment vendor to confirm the feasibility of implementing ASE at each school.

Vendor Supply Chain

The Region has a vendor agreement with the City of Toronto Joint Processing Centre, allowing for the procurement of ASE equipment until 2024. The vendor has informally indicated its ability to provide the equipment required for 25 to 30 new sites in 2024.

Beyond 2024, the Region will explore procurement options for ASE equipment, potentially extending the current contract for 5 more years. Retaining the current vendor would allow for the delivery of 25-30 sites until 2028, given sufficient notice.

Evolving from Semi-Fixed to Fixed Sites

Currently, the Region's ASE program involves the use of 16 semi-fixed sites, meaning that there are more sites than cameras and a rotation of the cameras is used to effectively enforce the 16 sites. The 2023 expansion has been approved to deploy 16 more semi-fixed sites utilizing a similar camera rotation regime.

As the program expands, staff recommends evolving to the use of fixed sites, starting in 2025. The use of fixed sites would mean that each ASE location is equipped with a camera at all times and the need for rotating the cameras would be eliminated. Through the use of fixed sites, the ASE program would be more manageable to administer as some of the challenges around rotating cameras would be eliminated. Most importantly, the use of fixed sites would improve the effectiveness of the ASE program in the moderating of speed and the associated safety benefits that are realized through the enhanced enforcement in critical areas in the community.

Transitioning to the use of fixed ASE sites will have significant impacts on both processing and penalty administration staffing resources given the dramatic increase in the number of infractions with more camera sites. For 2024, staff recommend that the expansion maintain the semi-fixed model allowing the necessary processing and APS capacity to be managed.

Transportation Engineering Staffing Resources

Since the outset of the ASE program, the deployment, administration, evaluation and reporting has utilized 1 to 2 Full-Time Equivalents (FTE) of Traffic Engineering staff time

on a daily basis. The additional ASE workload on the Traffic Engineering group has created challenges in managing the other key functions within the group's service area since no spare capacity existed and the original ASE program did not include additional staffing resources.

As part of the 2023 expansion approved in TSD-TRP-23-007, one FTE has been approved for dedication to the ASE program. However, the further significant 5-year expansion of this program as outlined in this report would require further increases in staff resources to manage the expansion and ongoing operation of the ASE program. In addition to the approved FTE for 2023, it is estimated that six new FTE's would be needed starting in early 2024 to ensure the successful expansion of the ASE program. The positions would be responsible for (but not limited to) the project management to implement new sites, liaising with area municipality staff, ensuring by-laws are up-to-date, administering contracts with third parties, monitoring operations, arranging for maintenance as needed, data collection and analysis, and responding to resident inquiries.

Additionally, since there are many unknowns around the staffing resource requirements for a large ASE program such as the one recommended within this report, staff would undertake annual reviews of resource requirements in parallel with the ASE program expansion and would make possible additional staffing requests in future budget years.

Processing and Administration Staffing Resources

Based on the proposed program expansion to 175 sites and the use of fixed sites, the number of speeding incidents captured by the ASE cameras would dramatically increase. The full set of options for incident processing are still being developed. Should the Region opt to build and operate its own processing centre, approximately 35 new FTEs would be needed by 2029 to support the processing centre. Additionally, staffing resources would have to gradually increase to approximately 45 new FTEs by 2029 to support the Administrative Penalties program. Projected staffing increases for processing and administration over the course of the ASE expansion are shown in Appendix C.

Subject to Council's approval in principle of the 5-year expansion plan described in this report, staff will develop and provide to Council a more fulsome picture of the full staffing implications for processing and penalty administration in a subsequent report currently planned for Q3 2023.

Community Safety Zones

Under provincial legislation, ASE can be implemented on portions of roadway that are designated as School Zones or as Community Safety Zones. At present, the Region and its local area municipalities have deployed ASE only in School Zones since these have been identified by staff and Council as the most critical locations for moderating

vehicle travel speeds.

Per Council direction, staff are investigating the feasibility of expanding the ASE program to critical Community Safety Zones around the Region. However, it is recommended that Community Safety Zones are deployed in a consistent manner around all municipalities within the Region. Accordingly, Region staff will be working with their area municipality partners to establish a set of criteria for identifying and prioritizing potential Community Safety Zones around the Region. At present, staff are planning to provide an update to Council in the fall of 2023. In the interim, a brief backgrounder with some preliminary information on Community Safety Zones is provided in Appendix B.

6. Communication and Engagement with Area Municipalities and the Public

Area Municipalities:

Regional staff have been working with all 7 area municipalities on the ASE program through the Transportation Coordinating Committee. Staff from the area municipalities are generally supportive of ASE expansion, and have committed to continuing to support the ASE program through their assistance with site selection, and through enacting the by-law changes required to bring ASE online at each applicable site. Area municipal staff will also be engaged in the development of criteria for Community Safety Zones to ensure consistency around the region.

Additionally, Regional staff are active participants in a number of ASE steering committees that include members from several other municipalities around the province. Some of the main functions of the steering committees are to share best practices and ensure that the administration of ASE is undertaken in a fair, consistent, and suitably transparent manner all across the province. Consistency is seen as a vital contributor to the health and sustainability of ASE programs in all municipalities. Through participation in these committees, staff are working to ensure that the administration and expansion of the Region's ASE program is conducted in a consistent manner with other Ontario municipalities.

Public:

With the approval of the 5-year program expansion, staff will develop a communication plan to ensure that the members of the community are aware of the goals and objectives of the program, and to provide progress updates as the expansion rolls out. This communication plan will be critical to ensure that there is transparency around why the ASE program is expanding as proposed.

7. Financial Implications:

The annual financial implications of the proposed ASE expansion are shown in Table 2.

Table 2: Annual Financial Summary of Proposed ASE Expansion Plan

Year	2024	2025	2026	2027	2028
Operating Budget Implications (\$ Millions)					
Operating Costs	\$4.23	\$7.39	\$12.15	\$15.31	\$19.39
Capital Financing (\$ Millions)					
ASE Capital Costs (excludes processing centre)	\$1.49	\$1.75	\$1.92	\$2.11	\$1.92

The capital costs shown in Table 2 include only those associated with the set-up of the ASE equipment at each school site. Additional capital investments, including facilities costs associated with the option of setting up an independent processing centre, will be brought forward in future reports, and through the 2024 budget.

A more robust summary of the financial analysis is provided in Appendix C.

As the program expands and matures from 2024 to 2028 and although average speeds are expected to decrease, the number of infractions is still likely to grow with the program. For the purposes of financial and staffing modelling, staff relied on an assumption of 5,000 tickets per camera based on experience with the existing Regional sites, and experiences from other municipalities around Ontario. Under this assumption, the program is expected to be self-sustaining where revenues would cover all operating costs.

Should revenues exceed operating costs, it will become increasingly important to maintain transparency around and effectively communicate the goals and objectives of the ASE program. Since ASE is operated for the sole purpose of lowering vehicle travel speeds and, in turn, improving road user safety at critical locations around the Region, it would be prudent to ensure that any revenue generated from ASE (over and above all operating and capital costs in a given year) are used to fund road user safety initiatives. Accordingly, staff will consider the establishment of a Road User Safety Reserve into which any “surplus” camera-based enforcement revenue would be deposited for use in mitigating future ASE program revenue risks and costs and/or in other initiatives designed at improving safety for all road users in the Region. The establishment of such a reserve would be similar to the practices of other municipalities in Ontario currently operating camera-based enforcement programs.

8. Conclusion / Next Steps:

Pending Council’s approval of the 5-year expansion plan, staff will bring a report back to Council in Q3 2023 to provide ticket processing options to support the projected ASE program expansion. Based on final direction received from Council regarding the 5-year expansion plan and the processing options, staff will develop more detailed costs for Council’s approval as part of the 2024 budget process. Staff will also continue the development of Community Safety Zone criteria for potential deployment around the

Region and report back to Council in fall of 2023 with recommendations for Community Safety Zone designations.

9. Attachments:

Appendix A: Automated Speed Enforcement Infographic

Appendix B: Preliminary Information on Community Safety Zones

Appendix C: Financial Summary

Prepared By: Darryl Spencer, Manager, Transportation Engineering

Reviewed By: Theresa Mendler, Manager, Strategic Community Planning Initiatives

Steve van De Keere, Director, Transportation

Approved By: Mathieu Goetzke, Commissioner, Transportation Services