

**Region of Waterloo**  
**Transportation Services**  
**Transportation**

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**To:** Regional Council  
**Meeting Date:** June 21, 2023  
**Report Title:** Automated Speed Enforcement – 5-Year Expansion Plan –  
Additional Information

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**1. Recommendation**

For Information.

**2. Purpose / Issue:**

At the June 6, 2023 Planning & Works Committee meeting, members of Council requested additional information regarding the Automated Speed Enforcement – 5-Year Expansion Plan (Report TSD-TRP-23-009). There was a request for staff to provide annualized revenue projections and to outline an option that maintains a semi-fixed camera program model. This report addresses those requests for the June 21, 2023 Council meeting.

**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:**

Nil.

**5. Background:**

**Annual Revenue Projections**

As described in Report TSD-TRP-23-009, the recommended plan involves an expansion of 25-30 new Automated Speed Enforcement (ASE) sites per year, with a

transition to the use of fully fixed ASE sites starting in 2025 (i.e. each site equipped with a camera). An updated financial summary table, including revenue projections is provided in Table 1.

**Table 1: Annual Financial Summary of Proposed Fixed ASE Expansion Plan**

Year	2024	2025	2026	2027	2028
<b>Operating Budget Projections (\$ Millions)</b>					
Operating Costs	\$4.23	\$7.39	\$12.15	\$15.31	\$19.39
Revenues	\$6.72	\$16.80	\$24.00	\$31.20	\$38.00
<b>Net (Revenue)</b>	<b>\$(2.49)</b>	<b>\$(9.41)</b>	<b>\$(11.85)</b>	<b>\$(15.89)</b>	<b>\$(18.61)</b>
<b>Capital Investment (\$ Millions)</b>					
Capital Costs	\$1.49	\$1.75	\$1.92	\$2.11	\$1.92

An expanded version of the financial summary is provided in Appendix A. The capital costs shown in Table 1 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.

For the purposes of financial modelling, the operating costs and program revenues are based on an assumption of 5,000 tickets per camera per year. While staff consider these projections to be reasonable based on a review of ASE metrics to date, it should be noted that there are a number of factors that shape the revenue profile and associated risks. As outlined in Report TSD-TRP-23-009, the proposed fixed ASE plan would require growth to 6 new Transportation FTEs, 34 new processing FTEs, and 44 new administration FTEs by the end of the program expansion in 2029.

The primary objective of the ASE program is to lower vehicle travel speeds at critical school locations for the associated road safety benefits to the most vulnerable road users. Program success would mean less motorists are speeding and would lead to a decline in revenues over time. All indications suggest that ASE is an effective tool for managing travel speeds in critical locations.

### **Option to Maintain Semi-Fixed ASE Operations**

As requested by Council, staff have developed an option which maintains the use of semi-fixed ASE sites throughout the full program expansion. By the end of 2028, this option would involve the rotation of 48 cameras between 175 sites. The annual financial summary for the semi-fixed option is provided in Table 2.

**Table 2: Annual Financial Summary of Semi-Fixed ASE Expansion Plan**

Year	2024	2025	2026	2027	2028
<b>Operating Budget Projections (\$ Millions)</b>					
Operating Costs	\$3.57	\$4.25	\$5.31	\$6.27	\$7.23
Revenues	\$3.84	\$5.76	\$7.68	\$9.60	\$11.52
<b>Net (Revenue)</b>	<b>\$(0.27)</b>	<b>\$(1.51)</b>	<b>\$(2.37)</b>	<b>\$(3.33)</b>	<b>\$(4.29)</b>

Year	2024	2025	2026	2027	2028
<b>Capital Investment (\$ Millions)</b>					
Capital Costs	\$1.49	\$1.75	\$1.92	\$2.11	\$1.92

An expanded version of the financial summary is provided in Appendix B. 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.

From Table 2, it is notable that the net operating revenues would be insufficient to fund the capital costs for expanding the program until 2026. For the early years of the program, the Region would be required to fund the capital costs for program expansion through an alternative source (likely a Region capital reserve) and then repay that reserve as revenue increases beyond 2027. As with the proposed fixed ASE expansion plan, the semi-fixed option was based around an assumption of 5,000 tickets per camera per year to estimate operating costs and revenues.

The staffing complement associated with the semi-fixed option, which differs from the fixed option, is as follows:

- **Transportation:** In addition to the 6 new FTEs required for the plan with fixed sites, the semi-fixed plan would require 2 additional new FTEs strictly to facilitate the rotation of the cameras.
- **Processing:** A business case for future ticket processing is scheduled to be brought forward in Q3 2023. However, as an assumption for the financial model above, the Region would need to grow to 11 new FTE by 2028 to process the number of tickets anticipated by the program.
- **Administration:** The semi-fixed option would require 16 new FTEs by 2028 to handle the administration of penalties associated with the ASE program.

For both the fixed and semi-fixed plans, the staffing levels are based on projections from available data at this point. As the plan is implemented over the next few years, the Region will adjust its planned staffing levels as needed in response to actual ticket volumes and revenues.

## **6. Communication and Engagement with Area Municipalities and the Public**

Nil.

## **7. Financial Implications:**

Nil.

## 8. Conclusion / Next Steps:

Considering all aspects of the program, including the financial considerations provided above, some of the main benefits of transitioning to the use of fixed ASE sites are as follows:

1. **Issues with Rotating Cameras:** The current semi-fixed approach which involves rotating cameras has been met with several challenges. These include difficulties in maintaining consistent enforcement due to the logistical issues associated with frequent rotations, signage requirements and camera calibration. Furthermore, transparent communication with the public around the consistency of our enforcement practices is more difficult, complicating our educational efforts around road safety.
2. **Challenges with Penalty Administration:** Another significant issue with the semi-fixed approach has been its impact on the administration of penalties. In a semi-fixed model, drivers have been observed to contest penalties more frequently, on the grounds that on-street information may not have been sufficient for them to understand whether or not a camera was active. This has resulted in a higher administrative burden and detracted from the program's efficiency. Transitioning to a program involving fixed sites would eliminate this issue.
3. **Public Communication:** A shift towards a fixed model could foster a more easily understood program for the public. It would establish consistent enforcement locations, thereby reducing the likelihood of surprises and creating a climate for systematic compliance with speed limits rather than allowing drivers to take a calculated risk of being ticketed.
4. **Financial Sustainability:** While the initial ASE-related capital investments are the same for both models, the fixed model is projected to be more financially sustainable in both the short and long run. The reduced operational complexity, lower administrative burden, and enhanced penalty compliance could result in substantial cost savings over time. The direct costs of camera operations in the fixed model are more than compensated by the indirect costs related to camera rotations and resulting reduced camera operating hours.
5. **Program Effectiveness:** Ultimately, having a camera in each site at all times would be the most efficient way to improve the effectiveness of the program in achieving modulated vehicle speeds in the school zones around the Region.

Comparing both options, staff recommends transitioning to an ASE program with fixed sites starting in 2025 as that model provides the best chance to effectively produce lowered vehicle speeds around schools in the Region of Waterloo, and reduces overhead costs.

**9. Attachments:**

Appendix A: Financial Summary for Proposed Fixed ASE Expansion Plan

Appendix B: Financial Summary for Semi-Fixed ASE Expansion Plan

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