

Region of Waterloo
Transportation Services
Transportation

To: Planning and Works Committee
Meeting Date: August 15, 2023
Report Title: Cambridge Truck Diversion Study- Final Evaluation

1. Recommendation

That the Regional Municipality of Waterloo take the following actions with respect to the Cambridge Truck Diversion Study - Final Evaluation as set out in report TSD-TRP-23-011 dated August 15, 2023:

- a) Implement the diversion of through trucks from downtown Cambridge by utilising the newly built McQueen Shaver Boulevard;
- b) Amend the Traffic and Parking By-Law 16-023:
 - Add to Schedule 19: No Heavy Trucks, Anytime, on Water Street (Regional Road 24) from Ainslie Street South (Regional Road 24) to Coronation Boulevard/Dundas Street (Regional Road 8) in the City of Cambridge;
 - Add to Schedule 19: No Heavy Trucks, Anytime, on Ainslie Street (Regional Road 24) from Concession Street (Regional Road 97) to Water Street (Regional Road 24) in the City of Cambridge; and
 - Add to Schedule 19: No Heavy Trucks, Anytime, on Myers Road from Water Street (Regional Road 24) to Franklin Boulevard (Regional Road 36) in the City of Cambridge; and
- c) Construct noise attenuation walls along two sections of McQueen Shaver Boulevard, the total of 240 meters, where noise walls are warranted in accordance with the Regional Noise Policy.

2. Purpose / Issue:

To provide background for the proposed diversion of trucks from downtown Cambridge, to describe the required implementation strategy, mitigation measures and associated costs, and to seek Council approval for banning the movement of through trucks along Ainslie Street, Water Street, and Myers Road.

3. Strategic Plan:

The diversion of through trucks from the core of Downtown Cambridge supports the

Region's Strategic Plan Focus Area 2 (Sustainable Transportation), specifically 2.3 Increase participation in active forms of transportation (cycling and walking), and 2.4 Improve road safety for all road users.

The public consultation that was conducted for this project supports Strategic Plan Area 5 (Responsive and Engaging Public Services), especially 5.1 Enhance opportunities for public engagement, input, and involvement in Region of Waterloo initiatives.

4. Report Highlights:

- The need to remove through truck traffic from downtown Cambridge has been documented in numerous plans for more than fifty years.
- With the recently completed McQueen Shaver Boulevard, there is an opportunity to ban the movement of through trucks in downtown Cambridge.
- McQueen Shaver Boulevard provides an effective alternative for through truck movement on Ainslie Street, Water Street, and Myers Road.
- A truck ban on the Main/Concession corridor is not recommended because McQueen Shaver Boulevard is not an effective alternate route.
- Delivery to downtown will be allowed with heavy trucks. To reduce the impacts of delivery in the future, businesses and the truck companies would need to work together to change the delivery methods to smaller trucks.
- With the proposed truck diversion, noise walls would be warranted, based on the Region's Noise Policy, for two sections along McQueen Shaver Boulevard, total length of 240 m. Only two sections are warranted because of the slope of McQueen Shaver Boulevard and the grade of the backyards.
- The construction cost of the 240 m of walls is about \$624K and there is sufficient funding in the 2023 budget. The noise walls would be built in 2024.
- A preliminary noise analysis was done for Franklin Boulevard from Myers Road to Elgin Street. If traffic projections materialise, it is possible that additional noise walls will be required along some sections of Franklin Boulevard. This may cost up to \$7.2M. More analysis is needed and a recommendation may be brought back to Council in the future.

5. Background:

Currently, a large number of trucks are passing through the core of Cambridge travelling to other destinations, without serving the downtown. The movement of trucks in this dense environment hampers the revitalisation of the downtown core. Downtown streets are not a good environment for heavy trucks; frequent truck movements have significant negative impacts on residents and businesses, they create excessive noise and air pollution in a confined urban environment, reduce the safety for pedestrians and cyclists and cause damage to historical buildings.

The plan to build Regional roads around Cambridge to avoid through traffic in the downtown was stated in many Regional and City studies such as the Traffic Planning Report (1965), Transportation Plan Update (1984), Cambridge Area Transportation Study (CATS 1990s), Regional Transportation Master Plan (RTMP 1999), Cambridge Area Route Selection Study (CARSS 2001), Detailed Transportation Network Review (DTNR 2004), and in both Region's and City's official plans.

The 2010 Environmental Assessment of McQueen Shaver Boulevard also refers to the diversion of traffic including trucks from the Hespeler Road/Water Street (Highway 24) corridor to Franklin Boulevard and Dundas Street (Highway 8).

In the fall of 2020, Cambridge City Council requested the Region to investigate the possibility of restricting trucks in the core of Downtown Cambridge on Water Street and Ainslie Street.

The Origin-Destination Study, carried out before the opening of McQueen Shaver Boulevard, showed that approximately 1600 trucks per day traveled through downtown Cambridge. About 1000 trucks (62%) were passing through the downtown to other destinations and approximately 600 trucks (38%) were making local deliveries. Northbound trucks were coming from Highway 24 and heading north to the Highway 401 accesses including; Hespeler Road, Franklin Boulevard, and Towline Road and to the industrial area south of Highway 401 and to Coronation Boulevard. In the southbound direction, trucks were going from Highway 401 accesses, the industrial area south of Highway 401 and Coronation Boulevard to Highway 24. Additional details about the number of trucks on various routes are available in Appendix A.

The plans to divert traffic from downtown Cambridge date back more than half a century, the plans have evolved over time, but the roadway sections that make this diversion feasible were completed only recently; McQueen Shaver Boulevard, from Highway 24 to Franklin Boulevard, opened in October 2021. McQueen Shaver Boulevard and Franklin Boulevard provide a reasonable alternative for about 1000 through trucks that currently travel northbound or southbound along Water Street and Ainslie Street. Both McQueen Shaver Boulevard and Franklin Boulevard were designed and built to accommodate truck traffic safely and efficiently. From the estimated 1000 trucks per day, about 250 have already diverted to McQueen Shaver Boulevard "naturally", without the downtown truck ban. The impact of the proposed downtown ban on the changes in truck volumes along various roads is summarised in Appendix A.

Staff also examined the potential of banning truck movement along the Concession Street/Main Street corridor at the request of City of Cambridge Council (Appendix C). The Concession /Main corridor is a truck route identified in both the Region's and the City of Cambridge's Transportation Master Plans. The Region of Waterloo Truck Route Policy (Appendix B) does not support diverting trucks travelling from/to the west along Cedar to McQueen Shaver Boulevard. Removing the Concession/Main truck route from the network is not considered to be viable because the alternative route, using

McQueen Shaver Boulevard, would be more than four kms longer. This would result in very little compliance and would ultimately be challenging to enforce.

The growth of downtown Cambridge will require the continued operation of trucks for deliveries and pick-ups. Currently there is no limit to the size or weight of these trucks. In order to further reduce the impacts of these deliveries and to reduce the challenges of enforcement, there is a potential for further improvements by limiting the size of trucks doing deliveries. This could be a longer-term initiative and would require cooperation between downtown businesses and the trucking companies serving them.

While the diversion routes provide a good alternative for many northbound and southbound through trucks, it is expected that there will be a learning period for truck drivers. Enforcement will be carried out by Waterloo Regional Police Services (WRPS) pro-actively in the first few weeks of the introduction of the downtown truck ban, and “as required” after that. Enforcement will be challenging, as the police officers will have to stop trucks to find out from the driver whether or not they have a delivery or pick-up in the downtown area.

Noise assessment without the downtown truck ban

The existing noise levels have been identified by the public as a major concern after McQueen Shaver Boulevard was opened in October 2021. The original Environmental Assessment for McQueen Shaver Boulevard, which assumed only voluntary diversion of trucks and not an outright truck ban along Water Street and Ainslie Street, concluded that the warrants for noise wall based on the Region’s Noise Policy, were not achieved. Therefore, noise walls were not included in the McQueen Shaver Boulevard project. Based on public inquiries, the noise assessment was revisited in 2022. The study concluded again, without the downtown truck ban, noise walls are not warranted along McQueen Shaver Boulevard.

The 2022 noise assessment update for Franklin Boulevard (between McQueen Shaver Boulevard and Myers Road) concluded that without the downtown truck ban, noise walls are warranted on both sides of the Franklin Boulevard extension from Carpenter Road south to the City boundary limits and on the west side of the Franklin Boulevard extension from Carpenter Road north to Bloomington Drive. The installation of the noise wall at this section of Franklin Boulevard has already been approved and is scheduled in the Transportation Capital Program and construction will start in September 2023.

Noise assessment with the downtown truck ban

The potential downtown truck ban would increase the number of trucks along McQueen Shaver Boulevard and Franklin Boulevard beyond the numbers used in previous noise studies as part of the project’s original Environmental Assessments. Therefore, a new noise study was conducted in 2023 to address the impacts of the potential downtown

truck ban on the major alternative routes such as McQueen Shaver Boulevard and Franklin Boulevard.

The noise study concluded that the additional trucks would warrant the implementation of noise walls along approximately 240 metres of McQueen Shaver Boulevard at the cost of \$624,000. The two sections with the warranted noise walls along McQueen Shaver Boulevard are at the back of 129 - 157 Langlaw Drive and 407 - 427 Langlaw Drive. The list of all properties backing on to McQueen Shaver Boulevard and the corresponding projected noise levels are shown in Appendix E. The reason only two sections are warranted is because of the slope of McQueen Shaver Boulevard and the grade of the houses' backyards. The two sections that warrant the installation of noise walls are shown graphically in Appendix F.

The provision of a continuous noise wall along the entire 1.5km length for the houses fronting Langlaw Drive, including the sections that are not warranted under the Region's Noise Policy, would cost approximately \$3.9 million.

According to the Regional Noise Policy Section 4.4 "The final decision concerning the funding and installation of a proposed noise barrier will be made by Regional Council in conjunction with the road design approval."

Noise assessments carried out for properties along Franklin Boulevard from Myers Road to Elgin Street indicated that with the proposed truck ban, noise walls would be warranted if traffic projections in future years become realized. The approximate cost of these noise walls could be up to \$7.2 million. Further studies along this section of Myers Road would be required, including field surveys and detailed engineering analysis, to determine costs, the exact wall locations, and wall heights.

All noise assessments were based on projected traffic/truck volumes 10 years in the future, as required in Part B of the Region's Noise Policy. Current traffic/truck volumes are significantly lower than the 10 year projected volumes used in the noise studies. For Franklin Boulevard it will take a number of years before the noise thresholds meet the warrants, assuming traffic volumes increase as forecasted.

6. Communication and Engagement with Area Municipalities and the Public:

Area Municipalities:

Staff from the City of Cambridge are part of the Project Team and are supportive of the through traffic truck ban in the core of Downtown Cambridge.

The Cambridge Downtown Business Improvement Area (BIA) supports the removal of Water Street and Ainslie Street from the truck network.

The City of Cambridge Council passed a motion on January 31, 2023 at a meeting regarding Concession Street. The motion requested the Region, subsequent to the

implementation of the through truck ban in the downtown, review and consider further truck diversion strategies to prevent heavy trucks on Concession Street. The City of Cambridge Council Motion is in Appendix C.

Public:

The public engagement of this project included a project information page, two virtual meetings (one with the Business Improvement Area and one public meeting), and an online survey through the Engage Waterloo platform. 71 people attended the various public meetings and 182 participated in the survey.

The main comments were the following:

The truck ban in the core of the downtown would have positive impacts on the downtown fostering a safer cycling and walking environment, less traffic congestion, and less air and noise pollution in a confined urban environment. It would support a better business environment and there would be less vibration from trucks meaning better protection of adjacent heritage buildings.

The increase in the number of trucks along the diversion routes would have negative impacts on the land use along these routes (noise and air pollution, safety and enforcement issues, delays for the trucks and impact on the economy).

If the truck ban is approved, some measures such as, installing noise walls, planting trees, and improving safety by enforcement, should be considered along McQueen Shaver Boulevard and Franklin Boulevard.

The participant's responses were influenced by where they live or by their interest in the project. 33 % of the participants indicated that banning trucks in the downtown would have positive impacts on the downtown. Most of these participants live, drive, walk, and cycle in the downtown. 41% of the participants indicated that banning the trucks in the downtown would have negative impacts on the alternative routes. Most of these participants live near the alternative routes, or they were truck drivers. A summary of the public input including staff's responses is provided in Appendix D.

Members of the public who have subscribed on the project webpage, the Cambridge BIA, and the Trucking Association were informed about this report on August 8, 2023.

7. Financial Implications:

The Region's approved 2023-2032 Transportation Capital Program includes a budget of \$4,115,000 in 2023 for the McQueen Shaver Boulevard from Water Street to Franklin Boulevard (project # 07192) to be funded from Roads Regional Development Charges Reserve Fund.

Based on most recent estimated costs, there is sufficient budget to accommodate the staff recommendation of warranted noise walls. Final costs will be subject to tender.

Should traffic projections in future years manifest, additional noise walls could become warranted, and staff would update the capital budget through future budget processes at that time.

8. Conclusion / Next Steps:

Assuming Council approves the truck diversion and the associated By-law change, staff, in conjunction with City of Cambridge staff and the BIA, will implement the truck diversion as follows:

- September 2023: Notification to trucking companies;
- 1 October 2023: Installation of the required signage;
- 15 October 2023: Pro-active enforcement by WRPS;
 - For two consecutive weeks WRPS would assign police officers at key locations within the downtown to enforce the truck ban (last two weeks of October 2023 are recommended as police resources would be sufficient and available at that time);
 - WRPS would also observe and enforce the speed limit on McQueen Shaver Boulevard and Franklin Boulevard during these two weeks;
- 1 November 2023: As-needed enforcement by WRPS;
 - After the two continuous weeks of pro-active enforcement, enforcing the truck ban would be on the need and situational basis (i.e. an officer observes a vehicle, or there is a complaint from the public); and
- Noise walls along sections of McQueen Shaver Boulevard will be constructed in 2024 as directed by Council.

9. Attachments:

Appendix A: Cambridge Truck Study Results

Appendix B: Region of Waterloo Heavy Trucks Policy

Appendix C: City of Cambridge Resolution

Appendix D: Downtown Cambridge Truck Diversion Study - Public Engagement Summary

Appendix E: Noise Levels along McQueen Shaver Boulevard

Appendix F: Sections of McQueen Shaver Boulevard with Warranted Noise Walls

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