

Town of Aylmer

Report OPNS 09-23



Report Title:	Elk Street Project Design	
Submitted for:	January 11, 2023	
Report Author:	Terry Koning, Associate Director of Infrastructure and Operations	
<input type="checkbox"/>	Receive for Information	<input checked="" type="checkbox"/> Recommendation

Recommendation:

That Report OPNS 09-23 entitled Elk Street Project Design be received for information; and,

That Council endorse the proposed design of Elk Street - John Street South to Talbot Street East, as per the Elk Street Traffic Calming and Cycling Facility Review, Technical Memo, by Paradigm Transportation Solutions.

Background:

The next capital reconstruction project being designed is Elk Street – John Street South to Talbot Street East. At their meeting of January 11, 2023, Council received a progress report on the status of the project. Staff advised that the design consultant for the project, WT Infrastructure, was working with Paradigm Transportation Solutions to complete a detailed traffic analysis and technical memo for the Elk Street design. This was in response to the public feedback and concerns received at the public open house. The purpose of this report is to summarize the findings of the traffic memo and provide recommendations for the proposed Elk Street cross-section and road layout design.

Analysis:

The Elk Street Traffic Calming and Cycling Facility Technical Memo by Paradigm Transportation Solutions is attached to this report. The technical memo provides a detailed summary of the data collected and reviewed as part of the design analysis. The memo includes the assessment of cycling facility alternatives, an assessment of traffic calming options for Elk Street, and recommendations for consideration as part of the project. The following is a summary of the technical memo.

Sidewalks and Cycling Facilities

The Town of Aylmer Official Plan provides clear policy direction that supports the provision of sidewalks, trails, bike lanes and other infrastructure to support Active

Transportation as part of new developments and through municipal infrastructure projects. The objective is to provide a linked network of pedestrian and cyclist infrastructure, as well as direction to consider opportunities to provide pedestrian and cyclist infrastructure as part of municipal projects. These directions and opportunities in the Official Plan are clear and would apply to the proposed reconstruction project for Elk Street. Pedestrian facilities in the boulevard should be provided as a first step in addressing safety concerns related to pedestrian use of roadways and vehicle speeds. As a minimum, pedestrian facilities should be provided on both sides of Elk Street for the entire length.

There is no better way to improve the safety of pedestrians than adding sidewalks along a street that does not have sidewalks. The first traffic calming / safety measure that should be considered for the design is the addition of sidewalks on both sides of Elk Street, specifically where sidewalks are not currently provided. Adding a sidewalk removes conflicts between vehicles and pedestrians walking on the road and improves accessibility for all users. Providing sidewalks on both sides of the road also reduces potential pedestrian crossings, particularly where there is only a sidewalk on one side of the road, causing users to cross the road to access the sidewalk. Sidewalks on both sides would also be consistent with the Town of Aylmer sidewalk policy that places priority on sidewalks with both high pedestrian and motor vehicle volume, as well as on those that would service commercial establishments such as schools (Assumption Catholic and McGregor Public Schools) and for specific roads such as collector roads. Elk Street is designated as a collector road and is specifically scheduled for sidewalks on both sides of the road as per the policy.

The need for a cycling facility on Elk Street was first identified in the Elgin-St Thomas Active Transportation Initiative Final Report. The report was created to promote active transportation, incorporate various transportation alternatives into new design and to encourage the development of healthy communities in Elgin County. There are several cycling network concepts provided in the report that all identify Elk Street for the addition of various types of cycling facilities. The traffic analysis and memo confirm that from a network connectivity perspective, the inclusion of Elk Street as a cycling route provides the ideal east-west connection for the eastern portion of the community. Future cycling route expansion can still be planned for South Street or Fath Avenue to provide continuous east-west connections to the existing route on Caverly Road.

The OTM Book 18 (Cycling Facilities) analysis showed that an on-street bicycle lane without physical separation from motorists is not preferred for Elk Street due to permitted speeds, the profile of potential users and the network function of this segment. A separated facility is better suited to Elk Street and would provide a facility suitable and safe for all ages and abilities, thereby maximizing potential use. After an evaluation of various cycling facilities, a 3.0 m wide boulevard Multi-Use path, separated from vehicle traffic, but allowing use by both pedestrians and cyclists, is recommended for Elk Street. In order to provide consistency for users and motorists alike, the Multi-Use path should be configured to be continuous along the same side of the street for the entire length of Elk Street. After a review

of various cross section design concepts, a Multi-use path along the north side of Elk Street is recommended.

On-Street Parking

During the Public Open House residents expressed concerns about loss of on-street parking due to the proposed on-street bicycle lane design concept that was presented. In addition to parking demand counts, the traffic study included an assessment of driveway conflicts, the parking capacity available in existing driveways, as well as the potential loss of driveway parking due to the implementation of various cross section alternatives, including parking loss due to adding new sidewalks where they do not currently exist. The study concluded that adding a continuous multi-use path to the north side of Elk Street results in the lowest number of parking spaces lost for residents. Moreover, the addition of a parking lane on the south side of the road is consistent with the observed parking demands of the existing roadway.

Traffic Calming

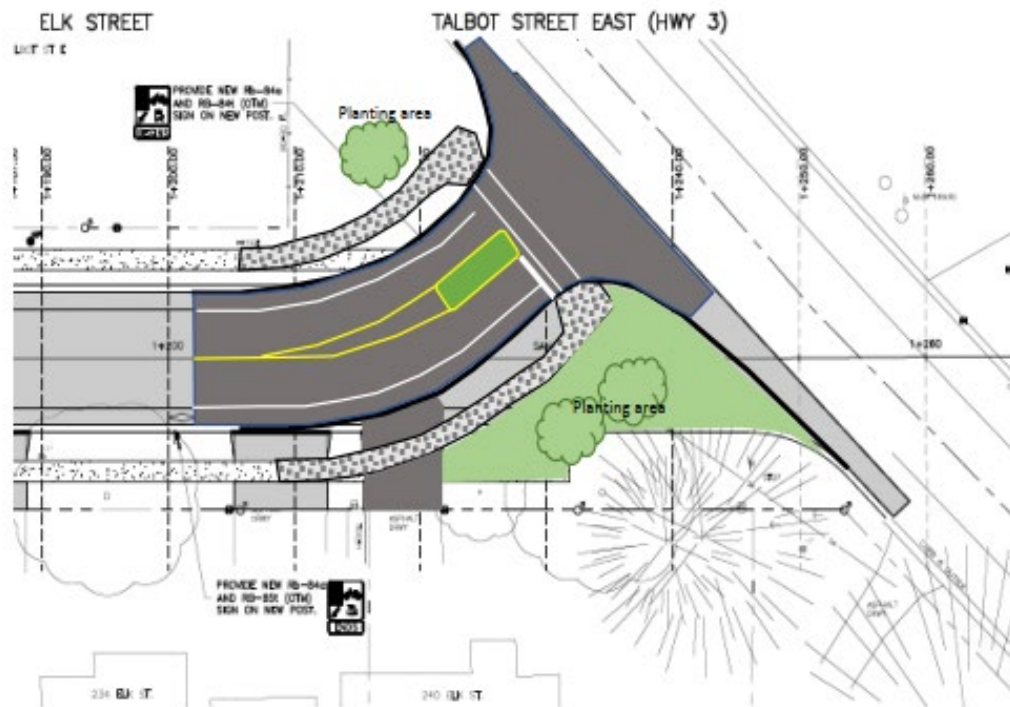
The reconstruction of Elk Street provides an opportunity to incorporate traffic calming design treatments at modest additional cost. There are several traffic calming techniques proposed for incorporation into the project, such as inclusion of curb extensions (bulb outs) at sideroad intersections, introduction of advanced pedestrian crossings, Type D PXO's at Melanie Drive and Queen Street; the use of Enhanced Pavement markings, narrowing the through lanes to encourage lower operating speeds, and the potential addition of a gateway feature.

Gateway Treatment

Consideration should be given to implement a realignment of Elk Street at the Talbot Street East intersection, such that the two roads meet at 90 degrees, or as close to 90 degrees as is feasible (see Figure 1). For maximum impact this should be combined with the recommended gateway treatment at this intersection. This would slow traffic turning onto Elk Street and, if combined with a gateway treatment, could have a significant benefit in term of setting the drivers expectation for a lower speed operating environment.

Implementation of the realignment concept would require coordination with the MTO as the road authority that owns and controls the Talbot Street East (Highway 3) as a "connecting link". Ultimately, the gateway treatment will require final approval from the MTO prior to implementation.

Figure 1 – Proposed Talbot Street Gateway Feature



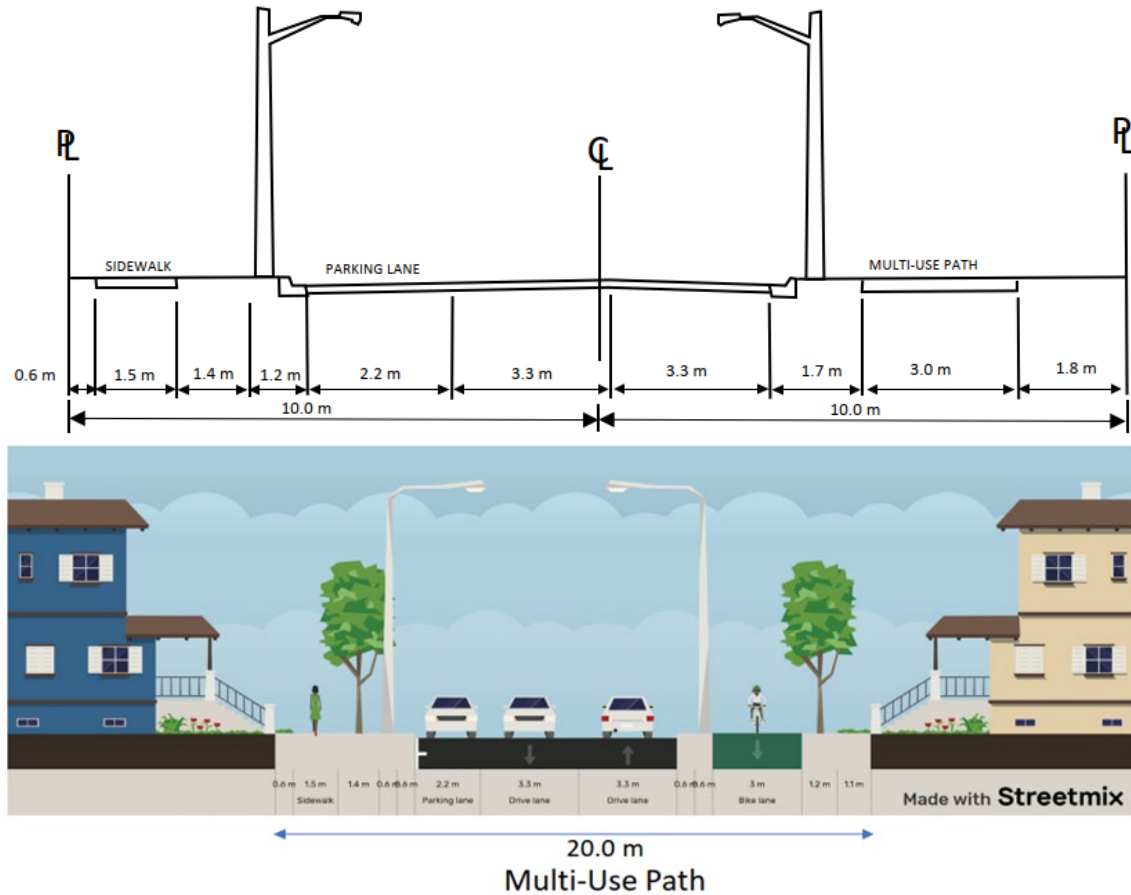
Summary:

As outlined in the traffic memo, the optimal cross-section for Elk Street is a 3.0m multi-use path on the north side, two 3.3m driving lanes, one 2.2m parking lane and a 1.5m sidewalk on the south side of the road (see Figure 2). The proposed cross-section provides the following benefits to both the residents in the area and the community as a whole:

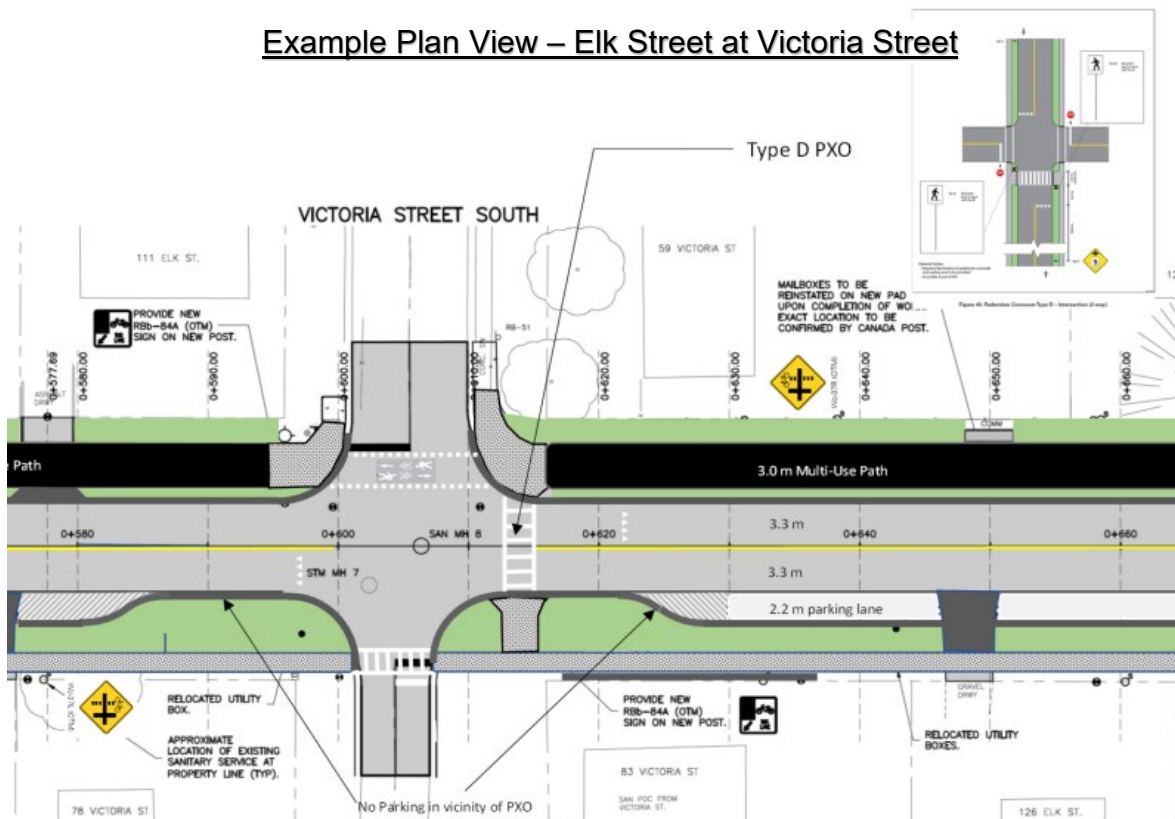
- Consistent with OTM Book 18 best practices at current speeds;
- Ideal for all ages and abilities cycling – multi-use path same side as school;
- Can maintain on street parking on south side with reduced lane widths;
- Opportunity to incorporate traffic calming measures to improve pedestrian crossings and reduce speeds;
- Ideal layout for existing utilities (hydro poles).

Elk Street is in close proximity to schools, community spaces and ongoing development. The reconstruction of Elk Street provides the ideal opportunity to provide active transportation options for all residents for the foreseeable future and to incorporate modern civil engineering design practices.

Figure 2 - Recommended Road Cross-Section



Example Plan View – Elk Street at Victoria Street



Financial Considerations:

The additional costs to implement the traffic calming measures outlined in the technical report are estimated at \$188,600.00. This includes costs associated with the introduction of PXO crossings, additional cost for the proposed multi-use path and potential gateway feature. However, there would be substantial overall capital project savings due to the reduction in pavement width, which will save on required roadworks (excavation, gravel, asphalt, etc.). The total estimated savings for road narrowing is \$793K. Therefore, the revised cross-section design is estimated to reduce the overall project cost by a total of \$604,400.00.

The Elk Street engineering design is anticipated to remain on budget. Staff have no concerns at this time.

Recommendation:

Staff recommend to proceed with the proposed cross-section and road design so the project can be finalized and ready for Tender. The Town will then be well positioned for grant applications to obtain funding required for the project.

Strategic Priorities:

- Pillar One – Dynamic, Inclusive Community
- Pillar Two – Planning for the Future
- Pillar Three – Economic Vitality
- Pillar Four – Environmental Stewardship
- Pillar Five – Public Service Excellence

Submitted by:

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Reviewed by Andy Grozelle, Chief Administrative Officer

Attachments: Elk Street Traffic Calming and Cycling Facility Review,
Technical Memo – Paradigm Transportation Solutions, 2023-03-27