

Our file: 19-1945

June 15, 2021

Corporation of the Town of Tecumseh
917 Lesperance Road
Tecumseh Ontario
N8N 1W9

Attention: Phil Bartnik, P.Eng
Director Public Works and Environmental Services

Riverside Drive Multi-Use Pathway – Preliminary Design Recommendations

During the April 8, 2021 Tecumseh Town Council Meeting, Bezaire Partners (Bezaire) and Dillon Consulting Limited (Dillon) provided a comprehensive presentation and recommendation regarding the proposed multi-use pathway along Riverside Drive from the west town limits to Manning Road. This presentation was the culmination of two previous Public Information Centres (PIC) held in 2017 and 2018 and addressed the various public concerns and comments related to the proposed pathway. The presentation provided new analysis related to comments received at the PIC's which included evaluation of alternative routes and facility types along with a comparison of similar local facilities. Various public concerns were also discussed related to safety and design, accessibility, and environmental and property impacts. The recommendation put forward by Bezaire and Dillon at the conclusion of the Council presentation was to provide a 2.4-3.0m wide asphalt multi-use pathway along the south side of Riverside Drive.

At the conclusion of the April 8th meeting, it was decided by Council that a 30 day comment period commence to allow for further public input on the proposed project. The comment period concluded in May 2021 and comments received were compiled by the Town and provided to Bezaire and Dillon for review. The Town requested that these comments, along with the previous comments from the PIC's and Council meeting be reviewed and a final recommendation letter be provided.

Public comments received during the 30 day comment period were generally similar to those received at the PIC's and during the period leading up to the April 8th Council meeting. **These comments have previously been addressed during the presentation to Council however, for clarity and completeness, the overarching themes have been reiterated below. It should be noted that the proposed pathway is currently in the conceptual/preliminary design stages and the discussions herein may be updated or altered if/when the project enters the detailed design phase.**

Ontario Traffic Manual Book 18 – Cycling Facilities

The Ontario Traffic Manual (OTM) Book 18 –Cycling Facilities has been developed by the Ministry of Transportation in association with the Ontario Traffic Council (OTC) as part of a series of traffic

engineering and control reference manuals intended for use by municipalities. These guidelines are intended to provide and promote a uniform design approach across the province.

The purpose of Book 18 is to provide practical guidance on the planning, design and operation of cycling facilities in Ontario. It applies to on- and off-road facilities within the road right-of-way, however off-road trails through parks, ravines, Hydro corridors or open space are outside of its scope. – OTM Book 18 (2013)

The OTM books are reviewed and updated regularly to align with current best practices provincially, nationally, and internationally. The current version of OTM book 18 was published in 2013. Since this time there have been advances in cycling facility design philosophy and a revised book 18 has been drafted (2020). A member of Dillon staff is currently a member of the OTC and has been provided the Draft OTM Book 18 for review prior to finalization. Dillon and Bezaire have reviewed this draft and noted various updates related to facility selection and design philosophy. The most notable updates include the increased importance of separated facilities, intersection treatments, and “all ages and abilities” design. A greater focus has been placed on providing low-stress facilities which appeal to the largest cycling demographic (interested but concerned) who account for roughly 51-56% of the population, with approximately 28-40% of the population either not able or not interested in cycling. The remaining 9-16% of the population would be classified as “somewhat” or “highly” confident and are more comfortable interacting with moderate to high speed/volume traffic. This has been reflected in the updated facility selection nomograph and heuristics found within the draft 2020 version.

Both the current (2013) and draft (2020) versions of the OTM Book 18 were reviewed in context with the existing Riverside Drive right-of-way environment and traffic information and have been used as a guideline for facility selection outlined herein. It should be noted that the Draft Book 18 has not been formally finalized, however it is understood that the shift in design philosophy noted above, which permeates the update, will remain and has been considered. It is also noted that the OTM books are intended to provide guidelines only and cannot reasonably cover all situations. These guidelines are meant to supplement professional experience and engineering judgement.

Pathway Safety

Safety has been considered throughout the preliminary design process however, it should be noted that any active transportation facility comes with inherent safety risks which cannot be completely eliminated. It is also noted that projects which are completed within existing developed areas (retrofit) present unique challenges with respect to design compared to new Greenfield development areas. Outlined below are the main safety concerns noted through public comments.

Traffic Volume and Speed

The volume of traffic (AADT) within the project area ranges from 8,000 to 12,000 based on the 2019 Tecumseh Road Needs Study. The average and 85th percentile speed are 55km/h and 62km/h respectively based on speed radar statistics (2017-2020) provided by the Town of Tecumseh. The OTM Book 18 (2013) notes that *“separation of cyclists and motor vehicles becomes increasingly important as traffic volumes and operating speeds increase”*. The facility selection criteria found within the OTM Book 18 suggests a separated facility based on the aforementioned traffic speed and volume. This facility type recommendation is relatively consistent between the current and draft OTM Book 18, with the draft version suggesting separated facilities at lower vehicle volume and speed thresholds.

An in-boulevard multi-use pathway is located off-road (within the right-of-way) and will provide an increased physical separation between vehicles and pathway users when compared to an on-road facility. The draft OTM Book 18 (2020) recommends a desired and minimum buffer width between the roadway and pathway which range from 0.6m to 2.5m. This recommendation is not found within the current 2013 OTM and highlights some of the design philosophy updates.

Street and Driveway Crossings

Installation of crossrides, as outlined within OTM Book 18, include pavement markings and signage to provide indication that pedestrians and cyclists have the right of way through local street crossings which are currently stop controlled. Crossrides also provide a designated space where cyclists are permitted to ride across an intersection. A visual representation of a crossride can be found on slide 56 of the April 8th Council meeting presentation. Where in-boulevard facilities cross existing roadways it is recommended to install crossrides to provide clear direction that cyclists/pedestrians have the right-of-way over intersection traffic and can help mitigate conflicts with vehicles. Further details related to the type, location, and width of the crossrides should be determined through detailed design.

Potential conflict points exist at street crossings and driveways. The vast majority of driveway crossings within the project area would be considered low-volume (single residential properties) which may not require additional design treatments. In-boulevard active transportation facilities should be continuous through driveways to provide a visual reminder that pedestrians and cyclists may be present. Conflicts at commercial or high-volume driveways could be mitigated through the use of conflict pavement markings, signage, and appropriate setbacks as outlined within the OTM Book 18. A Review of individual driveways and appropriate treatments should be undertaken during detailed design. It should be noted that at unsignalized driveways, cyclists and pedestrians travelling straight have the right of way over motor vehicles entering or exiting the roadway.

Manning Road Roundabout Crossing

Comments have been received regarding pedestrian/cyclist safety crossing the existing roundabout at Riverside Drive and Manning Road and the increase in pedestrian activity that may follow the installation of the proposed pathway. The Town has indicated that they are currently in the process of designing pedestrian cross-overs (PXO's) for this roundabout as part of the Manning Road Phase 3 project as outlined within OTM Book 15 – Pedestrian Crossing Treatments (2016). Installation of these PXO's should provide pedestrians with a controlled area to safely cross the roundabout legs, as vehicles are required to stop for pedestrians. PXO selection (type) would be based on traffic and pedestrian criteria as outlined within OTM Book 15 and would typically include signage and pavement markings but may include overhead signs and flashing lights.

Sightlines

As discussed during the April 8th Council presentation (slide 55), the existing road geometry is relatively straight with some large horizontal curves (greater than 320m radius) and no perceptible vertical curves. The proposed pathway is intended to be offset from the roadway but located within the Town's right-of-way. Based on a site review along with the preliminary pathway alignment, there do not appear to be sightline obstructions between the existing roadway and the proposed pathway which cannot be addressed through localized pathway alignment adjustment or removal/relocation of existing landscaping within the right-of-way.

Concerns related to sightlines at existing residential driveways have been raised through public comments. Conflicts at these low volume driveways could be considered low frequency and low severity when compared with facilities located on-road due to the low volume and speed of vehicles exiting the properties. In general, the installation of an off-road facility would increase the safety of the users.

A review of sightlines should be completed during detailed design in coordination with the confirmation of legal property boundaries and final pathway alignment. It should also be noted that sightline concerns from private residential properties may exist regardless of the facility type selected.

Property Impacts

Based on the preliminary alignment, the proposed pathway is intended to be located within the existing Riverside Drive right-of-way owned by the Town of Tecumseh, with the exception of perhaps one property located at the Riverside Drive - Lesperance Road intersection. Based on the Town's GIS Mapping, there appears to be an overlap of private property and existing Town infrastructure (sidewalk) which will require further investigation during the detailed design stage.

Existing landscaping features within the Town's right-of-way may need to be removed or relocated as required to accommodate the proposed pathway. Existing legal property boundaries will need to be verified to confirm property impacts, if any, during detailed design. It is noted that the detailed design of the facility would address the alignment with respect to existing obstructions.

Alternate Facility Types

Various alternate facility types were reviewed and discussed during the April 8th, 2021 Council meeting. These facilities included the following:

- Multi-Use Pathway
- Shared Lanes
- Dedicated Bike Lanes (Buffered)
- Cycle Track
- Multi-Use Pathway and Dedicated Bike lanes

Comments on the advantages and disadvantages of the above noted facilities can be found within slides 40-45 of the April 8, 2021 Council presentation.

When choosing a facility type it is important to understand the intended purpose and target (design) user to ensure the facility type aligns with the user needs and the specific context of the site. The proposed pathway is intended to provide a connection between the existing Ganatchio trail to the west and Lakewood Park to the east, "filling the gap" in active transportation facilities. The target user is intended to be individuals and families of all ages and abilities. Based on the draft OTM Book 18 (2020) facility selection heuristics, the recommended facilities for Riverside Drive are cycle track or multi-use pathway.

Installation of a Cycle Track does not align with the existing facilities to the east and west and would require significant roadway, drainage, and intersection improvements along Riverside Drive. A Cycle Track does not provide benefit to pedestrians. Further discussion on the advantages and disadvantages of a cycle track can be found in the Council presentation slides noted above. It should also be noted that a multi-use pathway in this area has been previously recommended through the Town of Tecumseh Parks and Recreation Master Plan (2010), County Wide Active Transportation Master Plan (2016), and the Tecumseh Transportation Master Plan (2017). Each of these studies also included public consultation prior to finalization.

Sidewalk and Bike Lane

On-road cycling facilities such as bike and shared lanes along higher volume and/or speed roadways generally appeal to more experienced and confident cyclists. These "somewhat" to "highly" confident cyclists tend to make up a small percentage of the overall cycling demographic (9-16%), with the majority of cyclists preferring off-road low stress facilities or

routes along less travelled roadways (OTM Book 18 Draft 2020). Based on the above, installation of bike lanes and sidewalk would not meet the needs of the target design user (all ages and abilities) and would not appeal to the majority of casual cyclists.

County Road 2 (Old Tecumseh Road)

Comments have been received referring to the recently installed active transportation facility located along County Road 2 (Old Tecumseh Road) between East Pike Creek Road and County Road 22 in the Town of Lakeshore. This facility generally includes one-way bike lanes adjacent to the roadway (both sides) with a paved pedestrian pathway along the south side of the southern bike lane. Each of these facilities is separated by painted lines from the roadway and each other. It has been suggested that this type of facility would be appropriate within the Riverside Drive project area.

Based on the traffic speed and volumes within the Riverside project area noted above, OTM Book 18 recommends cycling facilities be separated from the roadway. This separation is not achieved through the use of the County Road 2 facility (CR2). In the context of the Riverside environment, the CR2 facility is not consistent with the adjacent facilities (Ganatchio Trail and Lakewood Park Trail) and would require cyclists to cross Riverside Drive (from the north) to reach the Ganatchio Trail/Lakewood Park, or continue and merge with vehicle traffic (shared lane). Based on the information noted above, the CR2 facility is not recommended within the Riverside project area. It should be noted that this is not intended to be a commentary on the existing CR2 facility, rather a review of its applicability within the specific Riverside Drive environment.

Multi-Use Pathway

The inclusion of a multi-use pathway does not restrict the current experienced cyclist from using the roadway, but provides a facility for persons of all ages and abilities. The proposed location of the multi-use pathway could allow for additional dedicated cycling facilities (cycle track, separated bike lane, etc.) to be installed during a future road improvement projects which would appeal to the more confident cyclist. It should be noted that the Town has indicated that the reconstruction of Riverside Drive is not allocated within the 5-year capital works plan and the 2019 Road Needs Study indicates improvements to certain sections of Riverside Drive, based on condition, may be required in 6-10+ years, with full reconstruction likely in the 10+ year range.

Environmental Impacts

Various environmental impacts were considered during the preliminary design of the proposed multi-use pathway, which included flooding risks and tree removal. Existing paved surfaces within the Riverside Drive right-of-way will be removed to accommodate the proposed pathway. The buffer between the roadway and pathway is intended to be restored with a more permeable surface (compared to asphalt) and will help offset some of the increase in paved surface area.

When evaluating the increase in hard surface area in context with the size of the overall drainage boundaries, the impacts of the hard surface increase could be considered negligible.

The alignment of the proposed pathway has flexibility to be adjusted to avoid trees where possible during detailed design. Impacts with respect to root systems of trees would be reviewed during detailed design to minimize the impact of construction on this vegetation. There is potential that some trees within the right-of-way may require removal to accommodate the pathway. It should be noted that several trees along this corridor have undergone severe trimming to avoid the existing overhead power and communications infrastructure.

Conclusion & Final Recommendation

Based on the information noted herein along with the analysis outlined within the previous PIC's, Council meeting presentation, and review of public comments, it is recommended that a 2.4-3.0m wide in-boulevard multi-use pathway be constructed along the south side of Riverside Drive between the western Town limits and Manning Road. This recommendation is intended to provide:

- A cycling and pedestrian facility which should meet the needs of the intended user (all ages and abilities) and promote equity and inclusiveness within the Town's active transportation network.
- Improved pedestrian and cycling connectivity between existing adjacent facilities (Ganatchio Trail and Lakewood Park) without the need to cross Riverside Drive.
- Physical separation between motorists and pedestrians/cyclists increasing safety and security for users.

The recommendation is based on guidelines of the OTM Book 18 in the context of an existing urbanized environment (retrofit) and aligns with previous studies completed within the Town of Tecumseh as outlined herein. It should be noted that the recommendation is based on a preliminary design review and requires additional development, design details, and review through a detailed design process prior to commencing construction. Comments and additional information noted herein are expected to be further investigated and addressed should this recommendation proceed to a detailed design stage.

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Please contact the undersigned if you have any further questions.

Sincerely,

DILLON CONSULTING LIMITED



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BEZAIRE PARTNERS



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