



March 21, 2025

Daniel Mercer
Division Leader - Community Planning
Municipality of Lakeshore

RE: Response Memorandum to Oriole Park Subdivision Increased Cul-De-Sac Length Greater than Lakeshore's Development Standards

Dear Daniel,

This memo has been prepared in response to the delegation request received from Dillon Consulting Limited, on behalf of Cooper Estates Ltd., dated February 25, 2025 (attached) related to the proposed cul-de-sac length for the Oriole Park Subdivision. This delegation seeks Council support to exceed the maximum allowable cul-de-sac length that is outlined in the Lakeshore Development Manual and is based on industry best practices.

This delegation is following the denial of the request at the pre-consultation stage by the Engineering Division to allow a cul-de-sac length of 318 metres.

The original Lakeshore Development Manual was created in 1999 which indicated a maximum cul-de-sac length of 100 meters. The manual was updated in 2009 and recommended an increase the maximum cul-de-sac to 150 metres. The latest revision was completed in 2017, solidifying the approach related to the maximum allowable cul-de-sac length of 150 metres. More recent approvals have been provided for cul-de-sac lengths up to 200 metres for permanent cul-de-sacs (also could be recommended for this project) but support to allow approvals over this length are problematic.

Based on the delegation request we have completed a detailed review of other Municipalities in the Windsor-Essex Region related to allowable maximum cul-de-sac lengths.

The maximum allowable cul-de-sac lengths in Windsor-Essex regions have been summarized below:

Municipality/Town	Maximum Temporary Cul-de-sac length (metre)	Maximum Permanent Cul-de-sac length (metre)	Reference
Lakeshore	250	150	Cul-de-sacs and other single access roadways may be permitted when they are 150 metres or less in length measuring from the intersecting right-of-way to the end of the cul-de-sac or the farthest extent of the single access road. For staged development temporary dead-end roads shall have a maximum length of 250 metres.
Essex	250	150	Cul-de-sacs shall be permitted when they are 150 m in length or less in length measuring from the intersecting right-of-way.



LaSalle	Not Applicable	300	The use of cul-de-sacs is discouraged within the Town and, wherever possible, crescents and modified grid systems should be used when designing and constructing new roads to promote and facilitate walking within neighborhoods and the efficiency of the public transit system. Where cul-de-sacs are required to be used within new developments, they should be designed in such a manner as to not exceed 300 metres in length.
Windsor	180	230/ 25 Dwelling Units	Refer Standard Specification for length of cul-de-sac of City of Windsor AS-228 & AS-545 A for 20 metres ROW, AS-545 B for 15 metres ROW.
Amherstburg	Not Applicable	225	It is the policy of the Town to minimize the use of cul-de-sac by utilizing through street and crescents within the road system. Temporary situations will be permitted with the approval of the Manager of Public Services. i) The maximum length of permanent cul-de-sac shall be 225 metres to the start of the bulb. If the length is exceeded, secondary emergency access is to be provided. This shall include 'P' loops.
Tecumseh	Not Applicable	150	The use of cul-de-sacs is discouraged within the Town and, wherever possible, a modified grid system should be used when designing and constructing new roads in order to promote and facilitate walking within neighborhoods and the efficiency of the public transit system. Where cul-de-sacs are required to be used within new developments because of unique design constraints, they should be designed in such a manner as not to exceed 150 metres in length.
Kingsville	250	150	All dead-end streets shall have turn-arounds and shall meet the requirements of the OPSD. Temporary dead-ends shall not exceed 250 metres in length measured to the end of the cul-de-sac.
Leamington	Not Applicable	150	The use of cul-de-sacs is discouraged within the Town and, wherever possible, a modified grid system should be used when designing and constructing new roads to promote and facilitate walking within neighborhoods and efficiency of the public transit system. Where cul-de-sacs are required to be used within new developments because of unique design constraints, they should be designed in such a manner as not to exceed 150 metres in length.

Moreover, the Essex-Windsor Regional Transportation Master Plan dated October 2005 section 5.1.2 Access Management, subsection Subdivision Road Network (found on Page 71) recommends a suggested maximum



cul-de-sac length of 225 metres and/or 25 dwelling units, stating the importance of keeping traffic volumes and speeds low on local residential streets.

As outlined in the table above, many Municipalities in Windsor-Essex adhere to similar maximum cul-de-sac lengths and further discourage the use of cul-de-sacs where it can be avoided.

Amherstburg has identified that they are proposing to reduce their current 225 metres to 150 metres, and this has been included in their updated draft manual.

Further, most Ontario municipalities follow similar principles when setting the maximum length for cul-de-sacs or dead-end streets. The maximum length is typically between 150 metres and 200 metres.

Cul de sac lengths are recommended to be limited in length based on the following:

- **Diminished Ability to Provide Emergency Services:** A longer cul-de-sac could diminish the ability to provide emergency services (ambulance, fire, police) and increase response time in instances where road blockages occur (e.g., accidents, fallen trees, flooding). These delays could pose serious safety risks. This is extremely important in this case considering the proximity of the development to the Belle River and the development being along the established flood plain.
- **Increase Speed and Traffic Congestion at Intersection:** Longer cul-de-sacs encourage faster driving, increasing the risk of accidents, particularly with higher density housing. Longer cul-de-sacs without a limitation on the number of dwelling units (which now include Additional Dwelling Units (ADU's)) can contribute to traffic congestion at intersections. Shorter cul-de-sacs assist with keeping vehicle volumes down and speeds slower, minimizing the impact of fast-moving traffic in a confined area. This is important because higher speeds on narrow streets can lead to more severe accidents.
- **Service looping and reliability:**
 - **Watermain:** Longer dead-end watermains pose health risks due to stagnant water losing chlorine residual. They also reduce fire protection capacity, particularly during peak water usage. Looping watermains is preferred practice and minimizing dead-end watermains to ensure adequate circulation; and
 - **Sanitary Sewer and Utilities:** Longer dead-end sanitary sewers and utility lines increase the impact of utility disruptions, affecting a larger number of residents in the event of blockages or strikes.

Service looping allows for the majority of services to be back fed including water, hydro, etc.

It should be noted that in cases where exemptions are made for maximum cul-de-sac lengths, that alternative emergency access (i.e. driveway or pathway) be provided to satisfy emergency and servicing requirements. It does not appear that this is a viable option in this case and was not presented as a consideration.



The developer is proposing a cul-de-sac that is 318 metres long and consists of 36 dwelling units, including semi-detached homes which increases the population density within the cul-de-sac. The length and population of the proposed cul-de-sac significantly exceeds the standards of virtually all municipalities in Windsor-Essex and is double the allowable cul-de-sac length identified in Lakeshore's Development Manual.

Due to the above various factors, the length of the proposed cul-de-sac should be reduced to meet Lakeshore's Development Standards however, based on recent approvals, it is recommended that the proposed permanent cul-de-sac does not exceed 200 metres in length, specifically without establishment of an alternative emergency access.

Consideration could be given to allowing a temporary cul-de-sac length (with a maximum of 250 metres) if the Developer wishes to continue to pursue the connection through the adjacent lands, and an agreement could be established, however this was not presented as a consideration as part of the request.

Allowing a significant increase to the maximum cul-de-sac length places the Municipality at risk. Some of these risks have been included below:

- This approval will set precedent on recent and future requests, which will allow other developers to come forward with similar requests to extend cul-de-sac lengths, which have been recently denied (anything over 200 metres);
- Exposure to potential litigation from historic denials as well as a specific recent case whereby the denial of a cul-de-sac length of 250 metres (with a proposed an emergency access) necessitated a redesign be completed to decrease to 200 metres;
- Administration to-date has been recommending that current cul-de-sacs that were established prior to set standards (i.e. Major Street) be connected to municipal roads and this approach may be compromised if standards/industry best practices are not adhered to ;
- Failure to consistently apply Lakeshore's Development Manual and industry best practices and design standards places risk on all established design standards. Council approval in excess of 200 metres will likely increase the number of public presentations to Council to request departure from standards set by Administration and adopted by Council compromising decision making and delegated authority; and
- If the temporary cul-de-sac maximum is allowed (250 metres), and the future connection of the roadway is not successfully undertaken by the Developer, this may become a liability of the Municipality in the future to obtain these lands and complete the recommended road connection.

The above items should be considered in the review of an exemption to the maximum cul-de-sac length as requested.

Regards,



Krystal Kalbol, P. Eng,
Corporate Leader - Operations