

## **Speed Limit Study – Twyn Rivers Drive**

<b>Date:</b>	May 28, 2012
<b>To:</b>	Scarborough Community Council
<b>From:</b>	Director, Transportation Services, Scarborough District
<b>Wards:</b>	Ward 42 – Scarborough Rouge River Ward 44 – Scarborough East
<b>Reference Number:</b>	P:\2012 \Cluster B\TRA\Scarborough\sc1257 D12-4614952 Twyn Rivers speed reduction

### **SUMMARY**

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This staff report is about a matter for which the Community Council has delegated authority from City Council to make a final decision.

This staff report concerns the feasibility of installing a 40 km/h speed zone on Twyn Rivers Drive from Sheppard Avenue East to the City of Toronto limit at the City of Pickering. Along Twyn Rivers Drive, a 40 kilometre per hour (km/h) speed limit is technically justified and is recommended along the easterly section from just west of the Rouge River to the City of Toronto limit.

### **RECOMMENDATIONS**

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**Transportation Services recommends that Scarborough Community Council:**

1. Approve a 40 km/h speed limit regulation along the east section of Twyn Rivers Drive, as identified in the Appendix 1 of this report.
2. Pass or amend the appropriate by-law(s) accordingly.

## **Financial Impact**

The financial cost of installing the speed regulation signage is approximately \$4,000.00. Funding for the signs is available in the Transportation Services 2012 Operating Budget, within Cost Centre TP0397.

## **ISSUE BACKGROUND**

As a result of a request from the Rouge Park, Traffic Operations staff reviewed this location to determine whether a reduction of the speed limit from 50 km/h to 40 km/h is justified on Twyn Rivers Drive.

The results of our study indicate that the technical warrants for the installation of a 40 km/h speed limit are met and therefore are recommended along the east portion of Twyn Rivers Drive, from the Rouge River to the City of Toronto easterly limit. This warrant review included an assessment of the Pedestrian Environment, the Road and Traffic Environment, and an analysis of Collision Records for the last three year period. Currently Twyn Rivers Drive is posted 50 km/h in the City of Toronto; however; it is posted 40 km/h in the City of Pickering east of the City limit.

## **COMMENTS**

Key characteristics describing Twyn Rivers Drive within the City of Toronto include:

- Twyn Rivers Drive is located northeast of Sheppard Avenue East and east of Meadowvale Road within the Rouge Neighbourhood.
- The City of Toronto portion of Twyn Rivers Drive is approximately 1.6 kilometre long and is located within Rouge Park.
- Twyn Rivers Drive is a two-lane collector roadway with a width of approximately 8.0 metres. It is currently regulated by a posted 50 km/h speed limit.
- There with are large hills at both ends of the Toronto section of Twyn Rivers Drive. The westerly hill is particularly steep with an approximate maximum 11% vertical grade and also has a horizontal curve/bend in the road. The easterly road portion is not as steep with an approximate 9% vertical grade and no major horizontal curves/bends.
- In the area of the westerly hill we do not recommend a 40 km/h speed limit since it could cause some vehicles to gain insufficient momentum to climb the hill.
- Land uses on the Toronto portion of Twyn Rivers Drive consist of one residential property near Sheppard Avenue East and parkland.
- The daily traffic volume on this road is approximately 5,000 vehicles per day (vpd).
- There are no sidewalks on Twyn Rivers Drive.
- The results of 24 hour vehicle speed studies confirmed that the 85<sup>th</sup> percentile speed of traffic on Twyn Rivers Drive was 55 km/h west of the Rouge River and 71 km/h just west of the City of Pickering. The 85<sup>th</sup> percentile speed is the speed at or below which the vast majority of motorists are travelling.

## **40 Km/h Speed Limit Warrant**

In order for a 40 km/h speed limit to be warranted, various traffic conditions must be assessed. The two main 40 km/h warrant categories are Pedestrian Environment conditions (roadway width, elementary or junior high school, absence of sidewalks) and Road and Traffic Environment (collision patterns, safe stopping distance, roadway grades and roadway curvatures).

A 40 km/h speed limit may be implemented on streets where either the Pedestrian Environment Category or the Road and Traffic Environment Category of the warrant are met. In the case of Twyn Rivers Drive both the Pedestrian Environment Category and the Road and Traffic Environment Category portion of the 40 km/h warrant were met.

The Pedestrian Environment portion of the 40 km/h speed limit warrant is met since there are no sidewalks along Twyn Rivers Drive.

The Road and Traffic Environment portion of the 40 km/h speed limit warrant is met since there are two steep hills where the road grades are greater than 5%. In addition, there are two locations where safe speeds on curves are less than 50 km/h. Both curves are posted with 20 km/h curve warning signs and speed tabs.

Over the past three years, 2009-2011, there have been five reported vehicular collisions where excess speed was identified as being a contributing factor.

In the area of the westerly hill on Twyn Rivers Drive, near Sheppard Avenue East, we do not recommend a 40 km/h speed limit; some vehicles could potentially experience difficulty gaining enough momentum to ascend this steep hill; however, the 40 km/h limit is feasible on the easterly hill.

The proposed 40 km/h speed limit would start approximately 84 metres west of the Bailey bridge over the Rouge River and continue to the City of Toronto east limit.

Our investigation has indicated that the warrant for the installation of a 40 km/h speed zone on Twyn Rivers Drive is satisfied and we recommend the installation along the portion between the Rouge River and the City of Pickering limit. The recommended 40 km/h speed limit will be consistent with the existing 40 km/h speed limit along the City of Pickering portion of Twyn Rivers Drive. In addition, the proposed 40 km/h speed limit can potentially improve pedestrian safety particularly in the areas where the hiking trails cross the roadway.

## **CONTACT**

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## **SIGNATURE**

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## **ATTACHMENTS**

1. Appendix 1 – By-law Amendment (enact)
2. Location Plan (Speed Limit Study – Twyn Rivers Drive)

Appendix 1

Regulation to be Enacted  
“Maximum Rate of Speed – 40 Kilometres Per Hour”

(In Column 1) Highway	(In Column 2) From	To
Twyn Rivers Drive	A point 478 metres east of Sheppard Avenue East	East limit of the City of Toronto