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**September 29, 2016**

**DEVELOPMENT & INFRASTRUCTURE SERVICES REPORT  
ENGINEERING SERVICES 2016-40**

**TO:** Committee of the Whole

**SUBJECT:** McCaffrey Road – Traffic Review #2  
File No.: T.08 T.30 McCaffrey

**ORIGIN:** Director, Engineering Services

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**RECOMMENDATIONS**

**THAT Development and Infrastructure Services Report – ES 2015-34 dated September 29, 2016 entitled “McCaffrey Road – Traffic Review #2” be received and the following recommendations be adopted:**

- 1. THAT a 3-way stop sign be installed at the intersection of McCaffrey and Rannie Road;**
- 2. AND THAT Traffic By-law 2011-24 Schedule 3 – Stop Signs, as amended, be further amended by deleting:**  

<b>Rannie Road at McCaffrey Road</b>	<b>1 way</b>	<b>northbound on Rannie Road;</b>
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- 3. AND THAT Traffic By-law 2011-24 Schedule 3 – Stop Signs, as amended, be further amended by adding:**  

<b>Rannie Road at McCaffrey Road</b>	<b>3 way</b>	<b>northbound on Rannie Road</b>
<b>McCaffrey Road at Rannie Road</b>	<b>3-way</b>	<b>eastbound on McCaffrey Road</b>
<b>McCaffery Road at Rannie Road</b>	<b>3-way</b>	<b>westbound on McCaffrey Road;</b>
- 4. AND THAT the necessary By-law be prepared and submitted to Council for their approval.**

**BACKGROUND**

At its regular meeting of June 22, 2015, Town Council adopted the following recommendations:

“i) THAT a report be prepared for an upcoming Committee of the Whole or Council meeting following a site visit by the Ward Councillor and Town Staff that includes alternative traffic mitigation measures including but not limited to chicanes, roundabouts, pedestrians islands, road watch program or crosswalk.”

"ii) AND THAT this report address traffic impacts related to the new developments on the Glenway lands, York Region Annex Building and the Yonge Street VivaNext project."

## **COMMENTS**

Town staff met with residents and the Ward Councillor on May 2, 2016 to observe traffic during the PM peak hour and to recommend options for mitigation, if needed. During the meeting, a number of traffic calming measures were discussed. Town staff implemented some additional signage as an immediate first step in accordance with the Town's Speed Management program.

Discussions revolved around speeds and traffic volumes on McCaffrey Road and Rannie Road. One of the areas discussed was that traffic has been increasing steadily on Rannie Road. Rannie Road is one of two connecting roads between two relatively new subdivisions (Carruthers Avenue is the other). Rannie Road is mostly unassumed. There is only one short section, south of McCaffrey Road, that has been assumed by the Town. McCaffrey Road is a residential collector road and is part of the Town's active transportation route. There are plans to resurface McCaffrey Road at some time in the near future. An aerial map of the area is shown on page 6 of this report.

While on site, two unique observations were made. One was the large number of taxi cabs that were using Rannie Road. The other was how the drivers maneuvered at the intersection. The issue regarding taxi cabs was referred to Licensing, and therefore, Legislative Services was consulted. Staff and the Ward Councillor were advised by Legislative Services that taxi drivers have a legal responsibility to select the route that will provide the lowest cab fare for their riders. Because of the various amenities in the area (Upper Canada Mall, Court House, etc.), Rannie Road proved to be a very popular route to permit the lowest fare charge. It is a public road and therefore, the Town cannot prevent taxis from using that route. When it came to maneuvering at the intersection, most drivers took higher speed westbound left turns onto Rannie Road, which cause their vehicles to either cross into the oncoming lanes on McCaffrey Road or to cut across the northbound lane on Rannie Road. This movement is hazardous and is associated with right-of-way control.

### **All-way Stop Control**

The McCaffrey/Rannie intersection has been the subject of many reviews for all-way stop controls over the past years. The warrant review was undertaken again in 2016. The following table outlines the major and minor warrant percentages. Both warrants must be at 100% for an all-way stop control to be warranted as outlined in the policy.

**TABLE 1: Warrant Calculation Using Measured Traffic Data**

Rannie Road – Year	Warrant 3a Major Volumes	Warrant 3b Minor Volumes
2016	81%	53%
2015	69%	46%
2014	66%	39%
2011	71%	41%
2008	56%	15%



The results shown in Table 1, which are based on 2016 data, clearly indicate that an all-way stop control is not warranted at this time. However, Council had directed staff to consider new development that is occurring in the area when calculating the warrants.

Traffic data relating to current and future known developments is not available, but can be extrapolated based on the Town's knowledge of the developments. Although Council asked staff to consider 3 of the new developments in the area, staff took the liberty of adding a fourth (Landmark Estates) because it was felt that this new subdivision also would contribute to increased traffic. In summary, there are four traffic generators relating to new development that were considered:

1. Glenway Subdivision
2. York Region Annex
3. Landmark Estates Subdivision
4. vivaNext Rapidway on Yonge Street

The warrants that take new development into consideration (as shown in Table 2) were calculated using the following assumptions:

1. Glenway Subdivision: The traffic impact study done for the Glenway subdivision was reviewed to see if the consultant had identified any traffic issues on McCaffrey Road and Rannie Road. The site trip assignments did not show any trips on McCaffrey Road. It was found that the likelihood of some trips coming down Brimson Drive or going towards Mulock Drive was quite high, but the exact number of trips is unknown.
2. York Region Annex: The traffic study for the York Region Annex showed site trips assigned to McCaffrey Road, but the traffic split at Rannie Road was not determined. Some standard assumptions were used to forecast future traffic volumes at the McCaffrey/Rannie Road intersection. It should be noted that the Annex is only the first phase of development, and there will be additional development on the site in the future.
3. Landmark Estates Subdivision: The Landmark Estates Subdivision is just south of the McCaffrey/Rannie Road intersection. Additional homes are being constructed as part of a new phase of the subdivision. Furthermore, Landmark Estates subdivision has a sizeable undeveloped commercial component on Yonge Street that is not part of the traffic analysis. Although new traffic data is not yet available, standard traffic impact study assumptions were used to derive traffic volumes through the McCaffrey/Rannie Road intersection.
4. vivaNext Yonge Street: The volume of traffic that is infiltrating the McCaffrey and Rannie Road area from Yonge Street as a result of the vivaNext construction is difficult to determine in a consistent manner. It is assumed that the 2016 traffic counts capture a representative traffic volume for the review.

Based on the above, the York Annex traffic and the Landmark Estates traffic volumes were added into the warrant calculations to create a best estimate for the near future. Table 2 shows the results.

**TABLE 2: Warrant Calculation Using Traffic Data Estimates Based on New Development**

Rannie Road – Year	Warrant 3a Major Volumes	Warrant 3b Minor Volumes
Future	97%	75%
2016	81%	53%
2015	69%	46%
2014	66%	39%
2011	71%	41%
2008	56%	15%

The results in Table 2 represent a conservative estimate without including the Glenway subdivision site traffic. With the eventual development of the York Region lands (Annex lands) and the commercial component to the Landmark Estates subdivision, it is highly expected that all-way stop controls would be warranted.

It should be noted that the warrant process does not take into account whether the intersection is four-legged or three-legged. As noted in past reviews, it is very difficult for an all-way stop to be warranted at three-legged intersections because of the lack of traffic coming through the “missing leg”. Therefore, warrant 3B is very difficult to achieve in three-legged intersections. The 3B warrant percentage of 53% that was calculated in Table 1 is considered to be quite high, and the future projected warrant of 75% in Table 2 is even higher, causing staff to apply further engineering judgment to come to a more favourable conclusion.

As mentioned previously, staff witnessed vehicles that were maneuvering in a hazardous way through the intersection. This, combined with the projected increased traffic volume would increase risk at the intersection.

Therefore, given the above, information, it is recommended that an all-way stop control be implemented at the McCaffrey/Rannie intersection.

### **PUBLIC CONSULTATION**

Town staff has discussed some of these issues with some local residents and with the Ward Councillor during a site visit and through further communications.

### **BUSINESS PLAN AND STRATEGIC PLAN LINKAGES**

- Well-planned and connected...strategically planning for the future to improve information access and enhance travel to, from and within Newmarket.

### **HUMAN RESOURCE CONSIDERATIONS**

No impact on current staffing levels.

## **IMPACT ON BUDGET**

### Operating Budget (Current and Future)

No impact on the Operating Budget.

### Capital Budget

There is a small impact to the Capital budget (less than \$1,500.00) for the signage and pavement markings.

## **CONTACT**

For more information on this report, please contact Mark Kryzanowski at 905-895-5193 extension 2508, or via e-mail at [mkryzanowski@newmarket.ca](mailto:mkryzanowski@newmarket.ca).

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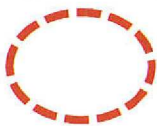
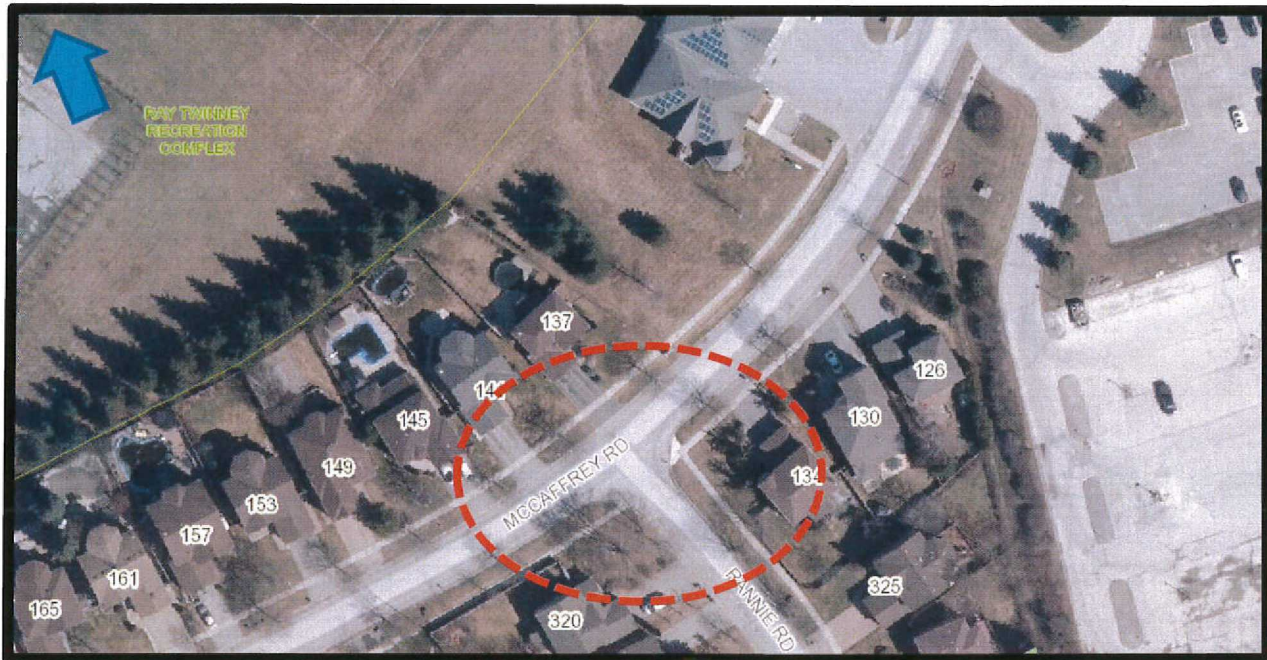
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**MAP 1: Aerial Photo of McCaffrey/Rannie Road Intersection**



McCaffrey/Rannie Intersection