



DEVELOPMENT & INFRASTRUCTURE SERVICES – ENGINEERING SERVICES
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November 13, 2013

**DEVELOPMENT & INFRASTRUCTURE SERVICES REPORT
ENGINEERING SERVICES 2013-52**

TO: Committee of the Whole

SUBJECT: Queen/Parkview (east leg) – All-way Stop Review
File No.: T08 T.30 Queen

ORIGIN: Director, Engineering Services

RECOMMENDATIONS

THAT Development and Infrastructure Services Report – ES2013-52, dated November 13, 2013 regarding Queen/Parkview (east leg) – All-way Stop Review, be received and the following recommendation(s) be adopted:

- 1. THAT the existing stop control at the Queen Street and Parkview Crescent (east leg) remain as existing due to not meeting the warrants outlined in the Transportation Management Policy as approved by Town Council, and also due to safety concerns noted in Community Services Report – ES2013-52, based on the Ministry of Transportation requirements.**

BACKGROUND

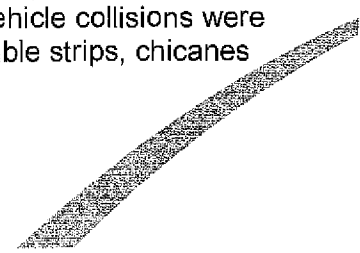
The following is a brief history of this issue.

1999:

At the regular meeting on Tuesday September 7, 1999, Town Council dealt with recommendations from Operations Report 99-66 which was addressing the request for additional stop signs on Queen Street between Parkside Drive and Lorne Avenue. At that time, no additional stop signs were warranted; however, additional warning signs were added.

2005:

In a review in 2005 initiated by the Traffic Safety Advisory Committee (TSAC), a memorandum was prepared with options to address speeding and safety concerns. In particular, with the improvement to the collision database at that time, it was noted that a significant number of single motor vehicle collisions were occurring due to speed and road conditions. This review examined speed humps, rumble strips, chicanes and all-way stops. The following were the recommendations from the 2005 report:



1. Actively work with York Region to improve safety and to reduce congestion on Davis Drive by attempting to reduce traffic infiltrating volumes on Queen Street.
2. Install a yellow centre median in the road sections in an attempt to reduce speeds and monitor results as to their effectiveness.
3. Maintain a Radar Speed Board presence on Queen Street.
4. Investigate the possibility of reducing the road width through reconstruction or creating a low centre raised median.
5. Investigate the feasibility of applying micro surfacing to the road section.
6. Install a sidewalk on the south side of Queen Street.

Recommendations #1, #2, #3 and #6 have been acted upon. Recommendation #1 forms part of the current vivaNext work. Recommendation #2 has been implemented and expanded upon. The work completed as per Recommendations #2 and #3 has been instrumental in the collision reduction and speed management on Queen Street. Recommendation #4 was considered and is discussed further in this report. Recommendation #5 is still being reviewed for effectiveness. However, the reduction in motor vehicle collisions seen since the implementation of Recommendations 2 and 3 did not prompt immediate action on this item.

2011:

Further action was taken in 2011 as a result of a Transportation Workshop. Staff reviewed the signage along this section of Queen Street as well as the warrants for the possibility of adding flashing amber beacons. Upon the completion of the review, some of the warning signs were adjusted, but a flashing amber beacon was not warranted and did not meet the criteria outlined in the Ontario Traffic Manuals (OTM).

June 2012:

At its regular meeting of June 11, 2012, Town Council adopted recommendations in Community Services Report ES 2012-42. The report was drafted to respond to a petition requesting speed humps for Queen Street. The Council resolution was to widen and lengthen the centre median, install cross-hatching within the median and provide edge lines along the Parkview Crescent intersection (east leg). As well, some vegetation was trimmed back at the intersection to provide better east-west visibility.

September 2012

At its regular meeting of Monday September 24, 2012, Town Council adopted recommendations from Community Services Report ES 2012-60 regarding parking restrictions. The parking restrictions were along the east and west leg of Parkview Crescent to ensure that cars would not be parked near the intersection, thereby blocking sight lines.

September 2013

At its regular meeting of September 9, 2013, Town Council adopted a motion by the Ward 5 Councillor that stated:

“THAT the matter of a three-way stop sign immediately included at the east intersection of Parkview Crescent and Queen Street be referred to staff for a report.”

The report being provided at this time has been researched and produced to address that September 2013 resolution.

COMMENTS

1. WARRANTS:

As per the Town's Council-approved Transportation Management Policy, standard intersection counts were taken at both the east and west leg of Parkview Crescent and Queen Street. These counts were 5 hours in duration (7:00am to 9:00am, and 3:00pm to 6:00pm). The intersection counts were conducted about 2 weeks apart to ensure that the review was not undertaken during a potential 'low' volume day and also to take into consideration the fluctuating nature of traffic on Queen Street due to the vivaNext construction on Davis Drive.

The All-Way Stop warrants consist of three (3) parts. The first part does not apply, since the warrant deals with future signalization of the intersection. In this case, traffic signals are not planned for this intersection.

The second warrant examines the number of recorded vehicle collisions in, or adjacent to, the intersection over the last twelve (12) months. Records indicate that no vehicle collisions occurred at either intersection.

The third warrant is divided into two parts and examines traffic and pedestrian volumes. The first part of this warrant examines all the vehicles approaching the intersection on an hourly basis. The minimum traffic and pedestrian volume required is an "average hour vehicle/pedestrian volume" of 500.

The second part of this third warrant examines traffic and pedestrian volumes on an hourly basis along the minor street (Parkview Crescent in this case). The minimum traffic and pedestrian volume required is an "average-hour vehicle/pedestrian volume" of 200.

Both warrants need to be met at 100% or greater to warrant an all-way stop control. The results of the all-way stop warrant analysis indicate that the all-approach warrant is at 93%, and the minor street warrant is at 7% for the Queen/Parkview east leg. The results of the all-way stop warrant analysis indicate that the all-approach warrant is at 85%, and the minor street warrant is at 6% for the Queen/Parkview west leg. Therefore, neither intersection meets the warrants required for an all-way stop control.

If Council were to consider installing the signs based on the fact that one of the percentages given above (93%) appears to be close to the warrant, it is important to note once again that **BOTH WARRANTS NEED TO BE MET AT 100%** or greater according to the specifications. The fact that the minor street warrant is as low as 6 percent indicates that the warrant is far from being met by a significant amount.

2. SAFETY

There are safety issues that need to be considered. More specifically, in its Ontario Traffic Manuals (OTM), the Ministry of Transportation of Ontario outlines additional information and consideration for all-way stop controls. In OTM Book 5 (Regulatory Signs), the Ministry outlines situations in which some inappropriate uses of all-way stop controls are to be avoided. When considering the Queen / Parkview intersection, OTM Book 5 discourages the use of all-way stop controls for the following purposes or conditions:

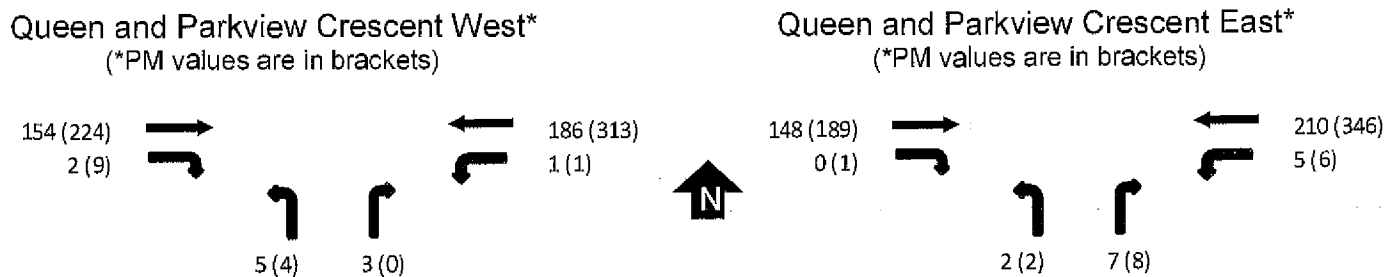
- As a speed control device;
- Where traffic would be required to stop on grades;
- As a means of deterring the movement of through traffic in a residential area.

The centre median that was installed on Queen Street was to slow traffic and to reduce motor vehicle collisions. Based on the information in OTM Book 5, the introduction of an all-way stop control at this

intersection might create the potential for increased rear-end collisions, particularly in the eastbound direction where vehicles are travelling downhill.

All-way stop controls are intended to govern the right-of-way at an intersection. The very low vehicle counts (less than 10 vehicles in the peak hours) from both legs of Parkview Crescent would not create an effective or safe intersection control. The following "Turning Movement Diagram" shows the AM and PM peak hour traffic volumes and turning movements for both intersections.

TURNING MOVEMENT DIAGRAM



The peak hour volumes are very low entering and exiting Parkview Crescent at either intersection.

3. OTHER METHODS

Town staff met with a representative of the Ward 5 Traffic Safety Committee on September 20, 2013 regarding the all-way stop and other potential mitigation measures that may be effective instead of an all-way stop. Staff has reviewed several mitigation measures other than an all-way stop which included:

- Speed humps, both standard and rubberized (removable)
- One-way street (Parkview Crescent)
- "Right-In / Right-Out Only" restriction
- Expansion of the centre median including impressed concrete/raised median
- Additional radar speed signage
- Crosswalks

As noted in previous reports, speed humps of any type would not be placed on a minor collector road. Furthermore, placing speed humps on a stretch of road such as Queen Street near the Parkview intersection would create a safety hazard due to the hill and curved section of road. Any sort of vertical deflection (like a speed hump) or horizontal deflection (like a chicane) would not be advised because of the grades and curves on Queen Street.

Creating a one-way on Parkview Crescent would be overly onerous on the residents and the street. However, restricting left turning movements (or any movement) out of Parkview Crescent east could be considered by enacting a by-law and posting proper signage. This would prohibit the movements that are perceived as unsafe. Such a "right-in/right-out only" restriction would require the support of the Parkview Community, and the restriction would need to be reviewed for safe operational and emergency services. Based on the low number of left turns at the East intersection shown in the "Turning Movement Diagram" above, it would appear that the Parkview Community already exercises this option to a degree.

Expansion of the centre median or raising the median would be something to consider if Haskett Park is improved on the north side of Queen Street and becomes a connection to the development areas of the Secondary Plan.

Additional radar signage is currently being exercised through the streets that have been identified as having additional traffic due to the vivaNext construction. Queen Street has been identified as one of those streets.

The Town and York Region do not endorse crosswalks, as these have been found to be dangerous since they give pedestrians a false sense of safety when crossing busy streets.

Given the above, the Town has provided a balanced approach to safety at the intersection. No additional measures are warranted at this time.

PUBLIC CONSULTATION

Representatives of the Ward 5 Traffic Safety Committee were consulted to discuss additional mitigation measures prior to the production of the report.

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 to current staffing levels.

IMPACT ON BUDGET

Operating Budget (Current and Future)

No impact to the Operating Budget.

Capital Budget

No impact to the Capital Budget.


CONTACT

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