OAKVILLE

REPORT

COMMUNITY SERVICES COMMITTEE

MEETING DATE: DECEMBER 13, 2011

FROM: Department of Engineering and Construction

DATE: November 18, 2011

SUBJECT: **Great Lakes Boulevard Speeding Concerns**

LOCATION: Great Lakes Boulevard
WARD: 1

RECOMMENDATION:

That the report entitled Great Lakes Boulevard Speeding Concerns from the Engineering and Construction department, dated November 18, 2011, be received.

KEY FACTS:

The following are key points for consideration with respect to this report:

- Concerns about speeding from residents on Great Lakes Boulevard south of Rebecca Street have been expressed dating back over several years.
- Passive traffic calming (pavement markings and signage) was introduced in 2009/2010 and physical traffic calming (median islands and a roundabout) was completed in 2010/2011 on Great Lakes Boulevard.
- Fall 2011 speed studies on Great lakes Boulevard revealed some locations have operating speeds above traffic calming warrant thresholds (one direction only) thus qualifying for consideration as physical traffic calming candidates.
- Council requested staff to report on options to address speeding concerns on Great Lakes Boulevard, including physical traffic calming options.
- Great Lakes Boulevard does not have high priority for physical traffic calming under the town's *Traffic Calming Process for Retrofit Situations* since there are number of roads with higher priority, i.e. roads in elementary school zones where passive traffic calming has already been implemented and continue to experience high speeds, and local or collector roads with high speeds which have not yet received any passive traffic calming.
- Following previous traffic calming pilot project efforts along similar types of roadways (Eighth Line and Postmaster Drive) that were ultimately removed, Council adopted a motion that speed cushions should not be considered as a physical traffic calming treatment for arterial and major collector roads.
- This report outlines several options to address the direction by Council.

BACKGROUND:

Great Lakes Boulevard (south of Rebecca Street) is a two-lane, 12.5 metre wide, major collector roadway located in southwest Oakville and is the main N-S roadway servicing the Lakeshore Woods community (refer to site map presented in Appendix A).

Great Lakes Boulevard currently has passive traffic calming measures over its complete length and some physical traffic calming at selected locations which were introduced during the subdivision development stage. The passive traffic calming measures consist of pavement markings and signage which result in narrow driving lanes and separate road space for cycle lanes and on-street parking (one side). The physical traffic calming measures consist of median islands within each of 3 blocks at the south end of Great Lakes Boulevard and a roundabout at the intersection of Great Lakes Boulevard at Nautical Boulevard/Creek Path Avenue.

Local residents have raised concerns regarding speeding to staff and the Halton Regional Police Service (HRPS) over several years. In the early years of the Lakeshore Woods subdivision when portions of the subdivision were still under construction and Great Lakes Boulevard had not been fully completed by the developer, staff performed speed surveys and traffic calming assessments in response to these concerns. These assessments (2007 and 2008) revealed operating speeds (i.e. 85th percentile speeds) above the minimum traffic calming warrant threshold and staff requested the developer of the subdivision to implement traffic calming measures on Great Lakes Boulevard. The developer complied and proposed passive traffic calming treatments in the form of pavement markings and signage over the complete length. These were implemented in 2009/2010. The developer also proposed physical traffic calming in the form of median islands and a roundabout at selected locations. These took several years to implement with the roundabout the last to be completed in 2010.

Following the implementation of these traffic calming treatments, and after further concerns being expressed by residents, comprehensive speed studies were completed by staff in the fall of 2011. The results of these studies are summarized in Table 1.

Table 1: Summary of 2011 Speeds

Location	Average Speed		85th Percentile Operating Speed	
	NB	SB	NB	SB
North of Fox Run Circle	50	55	59	64
North of Raspberry Bush Trail	53	50	62	57
North of Beechtree Crescent (S)	56	50	64	56

The above data reveals that operating speeds were observed to exceed the minimum warrant threshold (of 61 km/h) for traffic calming in at least one direction at each location. As passive traffic calming measures have been already implemented at these locations, the town's *Traffic Calming Process for Retrofit Situations* would identify these locations as candidates for consideration of physical traffic calming. Additionally, residents living along Great Lakes Boulevard have recently requested physical traffic calming measures.

While these locations on Great Lakes Boulevard qualify for consideration of physical traffic calming measures, Great Lakes Boulevard does not have high priority assigned to it per the town's *Traffic Calming Process for Retrofit Situations* as approved by Council. Oakville's traffic calming process identifies that, for roads with operating speeds in excess of traffic calming warrant thresholds, highest priority will be given to roads in elementary school zones. Additionally, there are a number of roads with operating speeds in excess of the traffic calming warrant threshold which have not yet received any form of traffic calming. According to the process, the needs of these roads to receive at least passive traffic calming takes precedence over those of a road which has already received traffic calming (i.e. Great Lakes Boulevard).

A multi-year program to implement traffic calming measures where warranted has been developed in accordance with the aforementioned process and approved funding levels. This program assigns highest priority to elementary school zones which have not yet received physical traffic calming. Thereafter the next highest priority is assigned to those local and collector roads which have high operating speeds but have not yet received any traffic calming measures. These would be eligible for passive traffic calming. Under current funding allocations, it will take several years to implement appropriate traffic calming treatments at these locations. Further physical traffic calming for Great Lakes Boulevard would follow the above locations in program priority sequence.

Notwithstanding the above, at its meeting of October 17, 2011 Town Council approved the following staff direction:

> *That staff be requested to report back within 60 days on options to address speeding concerns on Great Lakes Boulevard south of Rebecca Street, including potential physical traffic calming measures.*

This report has been prepared to address Council's direction.

COMMENT/OPTIONS:

The following is a brief overview of traditional speed mitigation, retrofit traffic calming and vertical deflection traffic calming options.

Traditional Speed Mitigation Options

Traffic Enforcement

Historically, speed mitigation has been achieved through the application of regular police enforcement for speeding and other moving violations. In some cases, extra efforts are undertaken by police wherein concentrated forms of enforcement over short periods of time are provided. Such efforts are often referred to as blitzes. The Halton Regional Police Service (HRPS) has recently provided this type of increased enforcement to Great Lakes Boulevard. Staff has been informed by HRPS that enforcement blitzes occurred on Great Lakes Boulevard on October 15, 2011 and again on October 23, 2011. HRPS plans to continue with enforcement blitzes on Great Lakes Boulevard periodically.

Speed Sentry Radar Program

In the Speed Sentry Radar program, a radar message board is deployed to a fixed post (e.g. an existing sign post) in an area of concern. The device has a radar unit which measures speeds connected to a display that allows drivers to observe their own speeds. The device operates in a stand alone mode without any accompanying staff. The device also records speed data that is reviewed by HRPS and assists them in the allocation of speed enforcement resources.

Staff has been informed that HRPS has deployed Speed Sentry Radar units along Great Lakes Boulevard on several occasions during 2010 and 2011.

Citizens on Phone Patrol (C.O.P.P.) Program

The C.O.P.P. program uses a radar/display similar to the Speed Sentry Radar program which allows drivers to observe their speeds. Unlike the Speed Sentry Radar program, the C.O.P.P. program involves volunteers being deployed to a location of concern and manually recording pertinent information about any vehicle observed to be driving at high speeds. A citizen report is then completed by the volunteer and forwarded to the HRPS. Thereafter a letter is sent by HRPS to the registered owner of the vehicle which reveals details of the incident and asks that motorists respect the traffic laws.

Retrofit Traffic Calming Options

Passive Traffic Calming Measures

Passive traffic calming measures consist of pavement markings and signage which narrow driving lanes and allocate space for cycle lanes and parking. These relatively inexpensive measures are the first option to be implemented along a road that qualifies for traffic calming as outlined in the town's *Traffic Calming Process for Retrofit Situations*. Passive traffic calming measures have been implemented along the entire length of Great Lakes Boulevard south of Rebecca Street at the developer's expense.

Physical Traffic Calming Measures (for Major Collector Roads)

Physical traffic calming measures for major collector roads consist of horizontal deflection to realign the through driving lanes as well as provide a physical narrowing of these lanes. Portions of Great Lakes Boulevard have already received physical traffic calming measures. These measures include median islands on the three southernmost blocks of Great Lakes Boulevard and a roundabout at the intersection of Great Lakes Boulevard and Nautical Boulevard/Creek Path Avenue. These measures were implemented at the subdivision stage by the developer.

Other physical traffic calming options which staff has identified that could be considered in conjunction with existing treatments on Great Lakes Boulevard are as follows:

1. Median Island

   This is a concrete median treatment which acts as an intrusive barrier to shift the alignment of the through lanes and to narrow one side of each through lane rendering it uncomfortable for motorists to travel quickly past the median island. A generic design sketch of this treatment is attached as Appendix B, Figure 1. Staff suggests this treatment would need to be installed at 3 locations along Great Lakes Boulevard. Impacts at driveways will need to be assessed.

2. Median Island and Chicane

   This treatment involves use of two measures; these being the median island plus a chicane (curb extension). This treatment shifts the alignment of the through lanes and it provides a physical barrier on one side of the through lane as does measure 1 above. In addition, the chicane also provides a physical barrier to the other side of the SB through lane which renders it particularly uncomfortable for motorists to travel past it in this direction. A generic design sketch of this treatment is attached as Appendix B, Figure 2. Staff suggests this treatment

would need to be installed at 3 locations along Great Lakes Boulevard. Impacts at driveways will need to be assessed.

3. Mini - Roundabout

   Mini - roundabouts are similar to but much smaller than conventional roundabouts and due to their smaller size can be more readily implemented at traditional intersections. They have a circular island within the centre of the intersection which is fully mountable (having a mountable truck apron on the periphery of this circular island). Each leg of the intersection has a splitter island intended to channel traffic appropriately. The splitter islands may consist of physical medians which are mountable or they may be painted. A generic design sketch of this treatment is attached as Appendix B, Figure 3. Staff suggests this treatment may be suitable as a retrofit for one existing intersection along Great Lakes Boulevard. Impacts to Emergency Services and roads operations maintenance will need to be assessed.

Staff has prepared a summary of the estimated costs of the above physical traffic calming measures on Great Lakes Boulevard as shown in Table 2.

Table 2: Summary of Costs of Potential Physical Traffic Calming Measures

Type of Device	Estimated Cost
Raised Median (3 locations)	$30,000
Raised Median and Chicane (3 locations)	$60,000
Mini - Roundabout (1 location)	$50,000

Vertical Deflection (Speed Cushions) Traffic Calming Option

Speed cushion traffic calming treatments have been used successfully on narrow local and collector roads in elementary school zones throughout Oakville but are not appropriate for wide arterial and major collector roads.

A pilot project was undertaken in 2010 where speed cushions were tested on an arterial road (Eighth Line – 14.5m wide) and a major collector road (Postmaster Drive -12.5m wide). The pilot project determined that speed cushions had significant adverse impacts sufficient that Council requested their prompt removal. A staff report “Eighth Line and Postmaster Drive: Speed Cushion Pilot Project” was presented to Community Services Committee on March 1, 2011 is attached for reference as Appendix C. Council approved the recommendations of the report, which included the following:

That the speed cushion traffic calming treatments as a pilot project for Eighth Line and Postmaster Drive not be re-installed and that speed cushions not be considered as a physical traffic calming treatment for arterial and major collector roads;

Based on the previous experience with the pilot project and as per Council's motion of March 2011, vertical deflection devices (speed cushions) are not appropriate for Great Lakes Boulevard.

Discussion:

Great Lakes Boulevard is not a high priority location to receive physical traffic calming measures as per the town's *Traffic Calming Process for Retrofit Situations*, and would not be typically eligible for funding from the annual traffic calming program budget next year or likely for several years thereafter. Should implementation of physical traffic calming on Great Lakes Boulevard be desired in 2012, funding would need to be referred to Budget Committee for further consideration as a new request, similar to how the Eighth Line and Postmaster Drive was addressed.

A median island is the typical physical traffic calming measure used on Oakville roads that are 12.5 metres in width such as Great Lakes Boulevard. Such treatments have shown reductions in 85th percentile speeds generally in the range of 3 km/h to 5 km/h. The cost of implementing such a treatment at three locations along Great Lakes Boulevard is estimated to be approximately $30,000.

A median island in conjunction with a chicane has not yet been used on Oakville roads. It is expected this treatment could provide additional speed mitigation beyond that of a median island at least on the side of the road with the chicane treatment. The cost of implementing such a treatment at three locations along Great Lakes Boulevard is estimated to be approximately $60,000.

While the town does have several conventional roundabouts and traffic circles in its road network, installing mini-roundabouts on a retrofit basis is a new concept for Oakville - it has not been previously implemented before in the town. Mini-roundabouts create a horizontal deflection in the travel path of vehicles travelling through or turning at the circular intersection. A subject motorist who is approaching a mini-roundabout must slow down prior to entering it. The subject motorist must look for any other vehicles within or approaching the circular intersection from other legs of the intersection. If the subject motorist were to see that there is another vehicle within the mini-roundabout, then the subject motorist must yield the right-of-way to this other vehicle. In so doing, the subject motorist must proceed slowly and cautiously before entering a mini-roundabout. Due to the curvilinear alignment of the

travel lane within a mini-roundabout, all vehicles must travel more slowly while driving through it.

Mini-roundabouts operate in a similar manner as do conventional roundabouts but have the advantage of being at a smaller scale and as such can be more readily retrofitted at existing traditional intersections than can a conventional roundabout. Great Lakes Boulevard is a suitable location for such a device to be implemented on a pilot project basis to assess its merits for potential further application. Should Council wish to implement a mini-roundabout along Great Lakes Boulevard, engineering services would be necessary to ensure acceptable design standards are achieved. The approximate cost of designing and constructing a mini-roundabout at a single location along Great Lakes Boulevard is estimated to be approximately $50,000.

CONSIDERATIONS:

(A) PUBLIC

Area residents who had previously expressed a concern with speeding along Great Lakes Boulevard have been notified about this report.

If Council were to support the implementation of physical traffic calming measures along Great Lakes Boulevard, staff would engage directly affected stakeholders through a public information centre meeting to review design options, address impacts to driveways and to develop a preferred design treatment/location.

(B) FINANCIAL

The town's capital program for traffic calming projects is normally funded at a level of $150,000 annually.

Great Lakes Boulevard is a low priority location to receive physical traffic calming measures as per the town's *Traffic Calming Process for Retrofit Situations*. It would not be eligible for funding from the 2012 traffic calming program budget or for several years thereafter. Should physical traffic calming be desired for implementation prior to meeting traffic calming program priority objectives, funding should be referred to the 2012 Budget Committee for further consideration as a new budget request.

(C) IMPACT ON OTHER DEPARTMENTS & USERS

Emergency services and Roads and Works Operations will need to be consulted with to determine, what, if any, impacts may be evident with the implementation of physical traffic options.

(D) CORPORATE AND/OR DEPARTMENT STRATEGIC GOALS

This report addresses the corporate strategic goal to:

- continuously improve our programs and services

(E) COMMUNITY SUSTAINABILITY

The appropriate operation of a road network is essential in meeting the transportation and property access needs of Oakville's communities and to support the delivery of services and commercial activity – both social and economic pillars for sustainability. Shifting the balance between streets designated to provide a higher order function and other area roadways, has the potential to prove to be an undesirable change in this balance.

APPENDICES:

Appendix A: Site Map
Appendix B: Generic Traffic Calming Designs
Appendix C: Eighth Line and Postmaster Drive: Speed Cushion Pilot Project, February 14, 2011

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