

# Memo



**Date:** February 22, 2010

**File:** 5460-04

**To:** City Manager

**From:** Darryl Astofooroff, Transportation Services Manager

**Subject:** Traffic Calming and Rumble Strips

Report Prepared by: Laurens Campbell, Engineering Traffic Technician

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## **Recommendation:**

THAT Council receive for information the report from the Transportation Services Manager, dated February 22, 2009.

## **Background:**

This report has been prepared in response to a Council resolution from the December 17, 2009 budget deliberation meeting, directing staff to report back to Council on the different techniques used for traffic calming, with emphasis on the possible use of rumble strips.

Kelowna's Neighbourhood Traffic Management Policy (Council Policy #300) has been in place since 2001. Policy 300 states that staff will consider traffic calming in order to address a wide range of traffic and pedestrian related issues, on a neighbourhood-wide basis.

To date, we have implemented traffic calming on almost twenty residential streets, primarily using speed humps and corner bulges / curb extensions. On arterial and major collector roads we have constructed five roundabouts. Various methods are used for traffic calming such as speed humps, raised intersections and crosswalks, corner bulges / curb extensions, chicanes and partial road closures.

Recently we have seen an increase in requests to calm on arterial and major collector roads; however, Policy 300 does not permit traffic calming on arterial or major collector roads and we agree with that strategy. Studies have shown that an effective arterial/major collector road system is the biggest deterrent to shortcutting traffic through residential neighbourhoods. Therefore, traffic calming on these higher functioning roads would simply encourage traffic to shortcut through residential areas and that would be counterproductive.

In response to the public concerns, we have researched techniques that have proven successful in other municipalities for slowing traffic on major roadways. As a result of that research, we have recently acquired five solar powered speed display boards.

A handwritten signature in blue ink, appearing to be a stylized 'V' or similar mark.

These have been deployed on Clifton Rd., Clement Ave. McCurdy Rd. E. and Springfield Road and are portable enough to be moved to other locations as the need arises.

We hope to begin installing red 50km/h 'speed boxes' (see pictures 1 and 2 below) on various hillside roads where we receive numerous complaints about speeding traffic. These roads are either too steep for more restrictive measures and/or they are arterial or major collector roadways, bus routes, truck routes, etc. We have identified this as a concern within new hillside developments and hope to resolve many of these potential problems at the subdivision stage.

Council asked that our report specifically address rumble strips. There are two different types of rumble strips available and several different applications for the devices (see photo attachment).

1. The most common type used in British Columbia is the roadside rumble strip (see picture 3 below). These can be found on many highways throughout the province. They are comprised of a milled depression in the road, placed next to the edge line and sometimes the centre line. The primary purpose of these devices is to prevent drivers from crossing the centerline or the edge line. They are used in rural areas where fatigued or inattentive drivers lead to a history or high risk of run-off-road or cross-centerline head-on collisions. Roadside rumble strips are not supported by the cycling community as they usually occupy that area of the road that is used for cycling and are difficult and dangerous for cyclists to cross. The depressions fill with snow/ice in the winter and require additional maintenance as they fill with winter sand and the depressions are not easily swept in the spring.
2. The other type of rumble strip is the transverse rumble strip as illustrated by picture 4 below. These are comprised of bands of material or grooves cut into the pavement, or raised above the pavement, perpendicular to the direction of traffic. They are typically used to warn drivers of an imminent and unusual change in the driving environment that requires greater driver awareness, such as approaches to rural stop controlled intersections, tight curves, roundabouts, work zones, toll booths, etc. These are particularly beneficial in fog-prone areas or areas where visibility of the approaching condition may be frequently compromised. Transverse rumble strips are not recommended in urban environments because, by design, they emit a significant audible and tactile signal to drivers. This is very disruptive to residents. Transverse rumble strips can be destroyed by snow plowing operations.

While both types of rumble strips have their benefits, we have been unable to find examples where either of these devices has been used successfully as a traffic calming device within neighbourhoods.

**Internal Circulation:**

Fred Wollin - Traffic Operations Supervisor  
Jerry Behl - Manager, Transportation and Mobility

**Existing Policy:** Council Policy 300 - Neighbourhood Traffic Management

**Considerations not applicable to this report:**


Legal/Statutory Authority:  
Legal/statutory Procedural Requirements:  
Financial/Budgetary Considerations:  
Personnel Implications:  
Technical Requirements:  
External Agency/Public Comments:  
Communications Considerations:  
Alternate Recommendation:

Submitted by:



Darryl Astofooroff, Transportation Services Manager

Approved for inclusion:



Joe Creron, Director, Civic Operations







Picture No. 1 Speed box example



Picture No. 2 Speed Box - South Ridge Dr



Picture No. 3 Rumble Strips



Picture No. 4 Transverse Rumble Strips