CITY OF WEST KELOWNA
COUNCIL POLICY MANUAL

Approval Date: 2017-JUNE-13

DEPARTMENT:	**Engineering Services**
SUBJECT:	**Traffic Calming Policy (Revised June 6, 2017)**

Policy Statement:

The provision of traffic calming measures (where warranted) supports public safety; risk management objectives of the City; and any other agencies having jurisdiction. Further, appropriately applied traffic calming measures benefit the public as a whole, by reducing traffic speeds and encouraging driver diligence on City roadways.

Purpose:

This policy is intended to provide direction to staff on the administration, planning, design, and implementation of traffic calming in the City. The policy presents a consistent vision for how traffic calming is applied to provide clarity to the community, staff, and Council. It also seeks to limit liability and risk by giving appropriate guidance on the application of traffic calming.

Objectives:

The objectives of this policy are:

1.) To establish standard principles of practice to determine where implementation of traffic calming measures should occur (identify the problem).

2.) To establish what specific standard traffic calming measures (controls) are to be implemented (determine the proper method to resolve the problem).

3.) To establish protocols for responding to individual resident requests for traffic calming measures.

4.) To communicate the value of a consistent and structured approach to implementing traffic calming on a City wide basis.

Policy:

1.) What is Traffic Calming?

Traffic calming is defined by the *Institute of Transportation Engineers* (ITE) as *the combination of mainly physical measures that reduce the negative effects of motor vehicle use; alter driver behaviour and improve conditions for nonmotorized street users.*

Traffic calming is a series of features coordinated to address a known or anticipated neighbourhood issue of speed; short-cutting or safety. Traffic calming features generally fall into five (5) categories:

Obstructions:	*Features that obstruct specific vehicle movements. Obstructions discourage short-cutting, reduce conflicts, and enhance the neighbourhood environment. They are typically applied to intersections, but can be used mid-block.*
Vertical Deflections:	*Features that require a motorist to reduce speed due to varied surface level. Vertical deflections have the primary benefit of reduced vehicle speeds, and can result in decreased volumes, reduced conflicts, and enhanced pedestrian conditions.*
Horizontal Deflections:	*Features that require a motorist to alter their direction or choose an entirely different route. Horizontal deflections can be applied to reduce neighbourhood short-cutting, reduce vehicle speeds, or reduce conflicts.*
Signage:	*Features that regulate traffic movements within a neighbourhood. Signage requires police enforcement and in many cases can be replaced with self-enforcing features.*
Technology:	*Features that utilize newer technologies to communicate a message to motorists, such as driver awareness signs and in-road lighting.*

2.) Why Calm Traffic?

Many existing City roads were constructed with wide travel lanes and clear sightlines. While these wide roads and clear sightlines increase a driver's ability to respond to incidents or conflicts, other unforeseen circumstances may also encourage speeding. This can result in reducing the actual perceived safety of residents and users. Policing of traffic in neighbourhoods has also decreased over the past few decades due to other demands, allowing undesirable driving behavior to continue.

The basic function of a street is to provide varying levels of both movement and access depending on the road classification. Traffic calming is used on roads to retain their intended functions, and is typically installed to achieve one or more of the following objectives:

- Reduce vehicle travel speeds
- Reduce traffic volumes
- Discourage neighbourhood short-cutting
- Minimize conflicts between vehicles and other street users
- Improve the neighbourhood environment

3.) Traffic Calming and the Transportation Network

The City of West Kelowna's Road Network Plan identifies various road classifications from the latest version of the City of West Kelowna's Master Transportation Plan that provide for different anticipated traffic types and volumes within the overall road network. Traffic calming should be planned in consideration of a roads classification, it's purpose and the larger network context. The roadway classifications are:

Expressways are roads that provide for continuous vehicle travel at higher speeds within and beyond the City's boundary. Highway 97 is the only expressway in West Kelowna and is under Ministry of Transportation and Infrastructure's jurisdiction. Only technological traffic calming is applicable on this class of roadway.

Arterial Roads are intended to provide for continuous vehicle travel at higher speeds within the City's boundaries, and are typically controlled-access (connected to local minor/major collector roadways). Technological and signage controls are the only appropriate method of traffic calming for Arterial roads.

Major Collector Roads link local roadways with arterial roads. They provide more access opportunities and more continuous routes. Traffic calming on major collector roads should be limited to technological, signage and horizontal solutions.

Minor Collector Roads are primarily long local residential roads which provide access to at least 50 residential dwellings or have the potential to develop over 50 single family dwellings. These roads function similar to local roadways therefore application of traffic calming measures may include technological, horizontal/vertical deflections, signage, or combinations thereof.

Local Roads are intended to provide local access to adjacent properties (not intended for continuous travel and high speeds). Traffic calming measures are most often applied to local roads, which can incorporate technological, horizontal/vertical deflections, obstructions, signage, or combinations thereof.

4.) Process Principals

The process to develop a traffic calming plan that will utilize the following principals:

Identify the Real Problem. The perceived nature may be different from the real problem and a solution to fix a perceived problem may make the real problem worse.

Quantify the Problem. Collect the appropriate data to confirm the suspected issues, which may include traffic counts, vehicle classification counts, speed studies, license plate surveys, and collision statistics. Refer to thresholds outlined in Table 1.0.

Consider the Surrounding Network First. Determine the source of short-cutting problems (which are often the result of another problem on a higher order street). Implementation of alternative (lower cost) measures to improve operation/function of the connecting road network should be considered in advance of traffic calming on local roads, as these options may eliminate the need for local traffic calming.

Traffic Calm Sites and not Areas Traffic calming must be considered on a local site-by-site basis rather than a neighbourhood approach. This may not avoid shifting an issue from one location to another (by implementing site specific traffic calming without considering the larger area).

Avoid Restricting Access. Diverters, barriers and closures typically restrict access to residences and businesses. Proposed traffic calming solutions should integrate well with the surrounding community needs (i.e. retain access for neighbouring residential, commercial and/or industrial lands).

Accommodate Service Vehicles. Service vehicles have unique maneuvering requirements that must be accommodated when traffic calming is considered. Traffic calming designs should consider day-to-day services, such as transit, garbage collection, snow plowing, street cleaning, and emergency services (police, fire, and ambulance).

Use Self-Enforcing Measures. Some traffic calming measures require police presence to ensure compliance. Motorists recognize this and often fail to abide by the measure, compromising the effectiveness of the traffic calming solution. Self-enforcing measures require motorist compliance and do not need constant enforcement (i.e. consider a traffic circle in place of a 4-way stop sign, speed humps in place of posted speed limits, and diverters in place of limiting turn movements with signs).

Public Education. This policy is intended to educate the community about traffic calming improvements; why traffic calming is used and implemented; how it works and the benefits to the community as a whole.

Monitor and Follow-Up. Traffic calming measures are not universally applicable; it is important to monitor applications to identify the successes and failures of specific initiatives in the City. This must involve data collection (before and after implementation), and constant feedback from the community.

5.) Approaches to Traffic Calming

Applied appropriately, traffic calming can provide solutions for issues related to traffic, safety, and community livability. This policy identifies three (3) scenarios where traffic calming may be applied, as follows:

Concurrent with New Development. Traffic calming may be applied in situations where typical roadway design standards are expected to result in high speeds, short-cutting, or generally unsafe conditions. This approach allows the City to anticipate potential issues before they arise and provides an opportunity to incorporate any required traffic calming measures through the land development planning process.

Response to a Local Resident Request. Traffic calming may be considered in response to a resident along the roadway where a traffic calming request is made. In this policy only those requests related to safety are pursued.

On Minor/Major Collector and Arterial Roads. All traffic calming on minor/major collector and arterial roads will be planned by City staff (in consultation with local road authorities) as these roads function to serve the broader community, rather than only the adjacent land uses. This ensures that these streets continue to function as intended.

6.) Traffic Calming – Higher-Order Roadways (Implementation Procedures)

The application of traffic calming measures on arterials and minor/major collector roadways must be considered carefully since calming traffic may improve conditions in a particular neighbourhood but decrease the roadway's function or service level in other areas. Traffic calming on these higher order roads may be appropriate under the following circumstances:

- To address a location of high collision frequency;
- To improve an area with poor pedestrian conditions;
- To improve modal integration; and
- To improve compatibility with adjacent land uses.

In all instances, consideration of traffic calming initiatives on higher-order roadways should be carried out in direct consultation with the local road authority. It is further anticipated that any such requests for traffic calming on higher-order roadways would be identified with appropriate referral to other affected agencies and authorities.

7.) Traffic Calming – Responding to a Local Resident Request (Implementation Procedures)

In responding to traffic requests the following process applies.

Step 1: Submit Request to City Staff
A resident wanting to submit a request for traffic calming measures to be installed in their neighbourhood should provide a letter stating the location and nature of the concern; submit a petition with signatures from at least 50% of the households on the affected roadway. If a petition or a traffic study has been previously undertaken 5 years prior to the new request; the City will not proceed to Step 2: Assess Conditions.

Step 2: Assess Conditions
Upon receipt of a formal request and the requisite petition, the City will consider the traffic calming request. Staff will review technical information (i.e. ICBC collision data/immediacy of the risk) to determine the priority of the request in relation to other traffic calming initiatives or capital works projects in process.

Step 3: Determine the Required Action
After an assessment of the technical data has been completed there are two courses of action:

i. Locations with collision history should be considered priority and eligible for implementing traffic calming measures (as necessary and in accordance with this policy).

ii. Requests for traffic calming at locations with no collisions recorded should be documented and considered when capital works projects are undertaken.

Step 4: Construction
Traffic calming measures considered for construction will be dependant on Council approved budget for the following year from the time a required action is determined.

8.) Evaluation Criteria Matrix for City Roads/Streets

The following table outlines when traffic calming measures may be warranted.

Table 1.0 – Evaluation Criteria Matrix for City Roads/Streets

Road Classifications and Threshold Limits for Application of Traffic Calming Initiatives Traffic Calming should be considered where any of the following thresholds are exceeded.	
Road Classification	**Threshold Limits**
Local *including school and playground zones **short-cutting trips are those trips which do not have a purpose or destination within the specified area and instead are using local roads to travel through the area	● Traffic Volume: >1000 vehicles per day ● Operating Speed: >10km over the posted speed limit* ● Short Cutting**: >25% of vehicles are not making trips to/from the specified area
Applicable Traffic Calming Measures □ Technological □ Horizontal Deflection □ Vertical Deflection □ Obstruction □ Signage	
Minor Collector	● Traffic Volume: >1000 vehicles per day ● Operating Speed: >10km over the posted speed limit
Applicable Traffic Calming Measures □ Technological □ Horizontal Deflection □ Vertical Deflection □ Signage	
Major Collector	● Traffic Volume: >5000 vehicles per day ● Operating Speed: >10km over the posted speed limit
Applicable Traffic Calming Measures □ Technological □ Horizontal Deflection □ Signage	
Arterial	● Traffic calming initiatives typically assessed at a community planning level (OCP) in consultation with the local road authority
Applicable Traffic Calming Measures □ Technological □ Signage	
Expressway	● Traffic calming initiatives typically assessed at a community planning level (OCP) in consultation with the local road authority
Applicable Traffic Calming Measures □ Technological	

9.) Standard Design Options/Alternatives

Standard design details (schematic diagrams) for each option are referenced in the latest design standards from the Canadian Guide to Neighbourhood Traffic Calming published jointly by theTransportation Association of Canada and the Institute of Transportation Engineers. Additionally, specific local design treatments, (temporary) may be incorporated by the City.

10.) Ongoing Monitoring and Reporting

After the implementation of any traffic calming measures, monitoring and follow up reporting is required. Data should be collected at various intervals after implementation to monitor short, medium and long term changes.

Data should be collected:

1. Immediately after installation.
2. Approximately 6 months after installation.
3. Approximately 1 year after installation.
4. Or 'as needed' after 1 year after installation.

All data should be collected as close as reasonably possible to the pre-implementation locations. The first year of data collection will be summarized and reported back to Council. Ideally this will occur within 18 months of completion of the project.

Driver awareness signs (re-locatable and permanent) should be moved to various locations within the City as identified by Staff or Traffic Studies on an operational basis to ensure ongoing traffic calming involvement within the community as a whole.

This policy is based on supporting technical information from Boulevard Transportation Group (*West Kelowna Traffic Calming Policy, June 10, 2011*).

Previous Revision/s: N/A