



STAFF REPORT

Title: 2025 Operating Budget Amendment - Traffic Calming Measures

Meeting Date: March 11, 2025

Executive Summary:

At the February 18, 2025, Corporate Priorities Committee (CPC) meeting of Council, Administration provided a presentation on traffic calming measures, outlining various options and their effectiveness in addressing speeding concerns. The presentation included data from recent traffic studies and examples of traffic calming measures implemented in other municipalities.

As part of the discussion, the crosswalk on 1 Avenue near the MD Campground was identified as a location where speeding concerns had been raised (Figure 1). The CPC recommended that the Council consider installing a traffic calming measure at this location to enhance pedestrian safety. The proposed installation is similar to measures used in the City of Edmonton and is estimated to cost approximately \$8,000, including procurement and installation.

Background:

Administration has received a request from the Council to consider installation of a speed bump at Tamarack Street on 1 Avenue to address complaints of speeding as vehicle exiting the 30km/h zone heading west on 1 Avenue, tend to speed up. Administration reviewed the matter, analyzed relevant data and provided few recommendations for council's consideration. Council referred the matter to CPC's meeting for review and recommendation as "Community Speed Concerns".

To facilitate CPC's review and recommendation, administration compiled the following information which are discussed briefly;

- 1. An Overview of Traffic Calming Measures (Engineering)**
- 2. Temporary Traffic Calming Measures Adopted by other Cities in Alberta**
 - a. Typical Estimated cost for Temporary Traffic Calming Measures
- 3. Review of Past and Recent Speed Related Studies & Analysis- Cold Lake**
 - a. Red Light Violation Report
 - b. City Of Cold Lake Speed Reduction Survey Report
 - c. Review of Speed Count Data



1. An Overview of Traffic Calming Measures (Engineering)

Various traffic calming measures are used as best practices, and are classified under three broad categorized as;

a. Standard Physical Traffic Calming/ Safety Measures:

Typically used for improving traffic flow. It has a secondary benefit for non-motorist safety. This type of measure includes,

- Signs
- Pavement Marking
- Gateways
- Corner Radius Reduction
- Textured Pavements and/or Rumble Strip
- Streetscaping /Landscaping

b. Additional Physical Traffic Calming Measures:

They work as a self-enforcing physical means which includes,

- Horizontal Deflection
- Vertical Deflection
- Street Width Reduction
- Routing Restriction

Illustration and Photographs of 22 different types of traffic calming measures are shown in the presentation attached for understanding.

c. Non-Physical Traffic Calming Measures:

This type of effort has long been used as part of neighborhood traffic calming programs, and studies suggest should continue to be considered as either supplements to self-enforcing physical means or as precursors to physical measures

- Education and Enforcement

It is to be noted that, despite having various traffic calming measures to choose from, adopting an appropriate measure needs thoughtful consideration and investigation. When selecting a traffic calming measure, consideration should be given to road environment, location, complex geometry, type and classification of roads, users, collision history, poor yielding compliance, cost, and effectiveness, to arrive at implementing appropriate traffic calming and speed reduction measures. A quick guide in identifying appropriateness of a traffic calming measure based on traffic volume and type of road is shown in Table 1.



Table 1. Traffic Calming Measures for Use (Modified and adopted from City of Calgary Traffic Calming Policy)

Measures		Local Street <1,500 vpd	Low-Vol. Collector 1,500-5,000 vpd	Other Collector 5,000-10,000 vpd	Major >10,000 vpd
Vertical Deflection	• Speed hump	✓	✓	x	x
	• Speed table	✓	✓	x	x
	• Speed cushion	✓	✓	x	x
	• Raised crosswalk	✓	✓	x	x
	• Sidewalk extension	✓	x	x	x
	• Textured crosswalk	x	x	x	x
	• Rumble strips	x	x	x	x
	• Raised intersection	x	x	x	x
	• Curb extension	✓	✓	✓	✓
Horizontal Deflection	• Traffic circle	✓	~	x	x
	• Raised median island	✓	✓	✓	✓
	• Corner radius reduction	✓	✓	✓	~
	• Chicane, 1-lane	✓	x	x	x
	• Chicane, 2-lane	x	x	x	x
	• On-street parking	✓	✓	✓	~
Obstruction	• Directional closure	✓	~	x	x
	• Right-in/right-out island	✓	~	x	x
	• Raised median through intersection	✓	✓	x	x
	• Intersection channelization	✓	✓	~	~
	• Diverter	✓	~	x	x
	• Full closure	~	x	x	x
Signage (when used primarily for traffic calming purposes)	• Traffic-calmed neighbourhood	✓	✓	x	x
	• Turn prohibited	~	~	~	~
	• Through traffic prohibited	~	~	~	~
	• One way	~	~	x	x
	• Maximum speed	x	x	x	x
	• Yield	x	x	x	x
	• Stop	x	x	x	x
✓ = Appropriate measures		~ = Use with caution		x = Not recommended	

2. Temporary Traffic Calming Measures Adopted by other Cities in Alberta

Administration also carried out some research to develop an understanding on what type of traffic calming measures are commonly used in neighboring bigger cities in Alberta. It was noted that Edmonton and Calgary use Temporary Traffic Calming Curbs and Speed Humps.

Locations are investigated for speeding, long crossing distances, poor yielding compliance, complex geometry, and collision history. Table 1 is then used to assess appropriateness of traffic calming measures.



3. Review of Past and Recent Speed Related Studies & Analysis- Cold Lake

a. Red Light Violation Report

The redlight violation report which was presented to Council on Oct 18, 2022 included redlight violation statistics for eight intersection along Hwy 28 corridor. A revisit to the findings of the redlight violation statistics suggest, redlight violations are prevalent along Hwy 28 corridor at intersection with Hwy 55, 69 Ave, and Tricity Mall. Despite redlight violation having no direct relationship to speeding, nevertheless it reflects driver's attitude, carelessness, lack of self-awareness, and lack of motivation to traffic safety. It also raises the uncertainty that the drivers who do not care about their own safety or safety of others, would speed bumps be sufficient to discourage them from speeding? Or would they attempt to make up the lost time on speed bump, by speeding up after the speed bump?

b. City of Cold Lake Speed Reduction Survey Report

The Cold Lake Speed Reduction Survey Report was presented to the Council on Sep 13, 2022. The Survey was carried out to gather public opinion on discussion surrounding possible changes to the existing default speed limit on local roads in the City of Cold Lake. Administration revisited this report to develop understanding on public perception on speeding and speed calming measures. It appears relevant to mention public response to the following vital survey questions which reflects both public perception and opinion.

Survey Question	Response (900 Respondents)
i. Do you feel that Cold Lake has a problem with speeding on the roadways?	54% No 46% Yes
ii. Which roadways do you feel have issues with speeding?	40% There is no speeding issue 22% Arterial Rd* 20% Collector Rd* 18% Local Rd*
iii. Which of the following methods do you feel would be appropriate to reduce traffic speed? Select all that apply	45% Increased enforcement 34% Speed calming devices 19% A reduction in posted speed 17% Speed Cameras 19% Others
* Data Normalized	



It appears from response (i and ii) that majority of the respondents do not perceive that there is a speeding issue in the community. Majority of the respondents (45%) believe Increased Enforcement is an appropriate measure to reduce traffic speed. The second preferred option among the respondents is Speed Calming Measures.

c. Review of Speed Count Data

The City collects traffic data from time to time on the basis of speeding complaints received from residents and also for in-house traffic count purposes. In the context of the subject of this report and the relevance to speeding issues, Administration reviewed speed count data for 226 locations and compared 85-percentile speed to posted speed limits against road functional classes across the City. The summary of the results is shown in the table below.

Functional Class	No of Locations	Speed Limit (km/h)	Av. of 85-percentile speed (km/h)
Arterial Rd	63	40	53
		50	62
		60	67
		80	83
Collector Rd	123	30*	39
		30**	46
		50	51
		60	63
Local Rd	40	30*	47
		30***	37
		50	53
* School/Playground Zone			
** Kinosoo Beach			
*** Lakeshore Drive			

The rationale for comparing the 85-percentile speed against posted is that many studies have shown that the 85th percentile speed is a speed at or below which 85-percent of vehicle drive at any given location under good weather and visibility conditions and is considered as the maximum safe and reasonable speed for that location. The 85th percentile speed concept theory is based on the assumptions that; the large majority of drivers are reasonable and prudent; do not want to have a crash and desire to reach their destination in the shortest possible time. The 85-percentile speed is considered the



critical speed and is widely used in transportation studies. An extract of the speed count data used to derive the above table is attached for reference (Attachment).

The review, analysis, and discussion indicate that overall, traffic movement within the City is compliant, with the majority of drivers respecting and obeying traffic rules. However, there are isolated incidents and specific areas that may require attention. Administration believes that implementing a uniform traffic calming measure citywide is neither desirable nor prudent. Instead, concerns or complaints should be assessed on a case-by-case basis, with appropriate measures adopted based on the specific situation and need. These measures may include enforcement, education, engineering controls, or a combination thereof.



Figure 1

At the February 18, 2025, Corporate Priorities Committee of Council (CPC) meeting, Administration presented an overview of various traffic calming measures and related data to support discussions on speeding concerns within the community.

Following the presentation, the CPC recommended that Council approve a budget allocation to install a traffic calming measure at the crosswalk on 1 Avenue near the MD Campground (Figure 1). The proposed measure will be similar to installations used in the City of Edmonton. The estimated cost to procure and install the infrastructure is approximately \$8,000.



Alternatives:

Council may consider following options:

1. Accept the report as information and not proceed with the Corporate Priorities Committee recommendation.
2. Pass a motion to allocate \$8,000 from unrestricted surplus to install traffic calming measure at the crosswalk on 1st Avenue near the Municipal District (MD) Campground.

Recommended Action:

Administration recommends that Council accepts the Corporate Priorities Committee recommendation and pass a motion to allocate \$8,000 from Council Contingency to install traffic calming measures at the crosswalk on 1st Avenue near the Municipal District (MD) Campground.

Budget Implications (Yes or No):

Yes

Submitted by:

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