The Corporation of the District of North Vancouver

CORPORATE POLICY MANUAL

Section: Transportation & Public Works
Sub-Section: Transportation Planning
Title: TRAFFIC CALMING

POLICY

The District shall implement Traffic Calming in accordance with the “Traffic Calming Policy”, as set out in the July 2007 report. (Attachment A)

REASON FOR POLICY

The District shall use traffic calming measures as a means to:

- Improve the quality of life of residents
- Incorporate the preferences and requirements of residents
- Create safe and attractive streets
- Promote pedestrian, cycle and transit use

AUTHORITY TO ACT

Delegated to Staff

PROCEDURE

Refer to Attachment A.

<table>
<thead>
<tr>
<th>Approval Date:</th>
<th>August 23, 1999</th>
<th>Approved by:</th>
<th>Regular Council</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Amendment Date:</td>
<td>July 9, 2007</td>
<td>Approved by:</td>
<td>Regular Council</td>
</tr>
<tr>
<td>2. Amendment Date:</td>
<td>January 23, 2012</td>
<td>Approved by:</td>
<td>Regular Council</td>
</tr>
<tr>
<td>3. Amendment Date:</td>
<td></td>
<td>Approved by:</td>
<td></td>
</tr>
</tbody>
</table>
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EXECUTIVE SUMMARY

The District of North Vancouver is committed to maintaining and enhancing neighbourhood liveability, retaining desirable characteristics of each neighbourhood and encouraging community-based solutions and decision making. The District’s mission statement reflects this ideal:

“By 2020, we will be recognised among the most sustainable communities in the world as demonstrated through our environmental stewardship, strong network of neighbourhoods, vibrant economy and community-driven growth and change.”

Consequently, the District employs a public involvement process to develop traffic calming plans for neighbourhoods that may be experiencing negative impacts from motor vehicle traffic. Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorised street users. Traffic calming can be installed as a retrofit improvement to an existing neighbourhood or in newly constructed neighbourhoods as a design feature.

The District has an integrated hierarchy of streets. The streets are classified as arterial, collector, or local roads, and lanes. Sometimes motorists can develop a pattern of using a street in a manner that was not intended, such as using a local road as a through route or travelling at excessive speeds. The purpose of traffic calming is to restore streets to their intended function and correct motorist behaviours to acceptable community norms.

The need for a traffic calming project can be identified either from studies by staff or directives from Council in pursuit of safety and operational objectives of the District. It can also be identified through requests from residents who perceive traffic operations are negatively impacting the quality of life in their neighbourhood.

The traffic calming process involves public participation and group decision making to find solutions to concerns a neighbourhood may have about the negative effects of motor vehicle traffic. The traffic calming process is an orderly process that is comprised of six basic steps. The steps are shown in Figure ES-1.

A public awareness program will accompany each traffic calming project. Adequate notice will be provided to local and through traffic prior to the implementation of any traffic calming project.
Identify a traffic calming project

Identify issues, concerns, problems, and values

Determine the existing characteristics

Develop a traffic calming plan

Implement traffic calming plan

Monitor traffic calming plan

FIGURE ES.1 Traffic Calming Flow Chart
1. Introduction

Commitment to Sustainability and Improving Neighbourhood Liveability

The District of North Vancouver is committed to maintaining and enhancing neighbourhood liveability, retaining desirable characteristics of each neighbourhood and encouraging community-based solutions and decision making. The District’s mission statement reflects this ideal:

“By 2020, we will be recognised among the most sustainable communities in the world as demonstrated through our environmental stewardship, strong network of neighbourhoods, vibrant economy and community-driven growth and change.”

What is Traffic Calming?

Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorised street users. Traffic calming can be installed as a retrofit improvement to an existing neighbourhood or in newly constructed neighbourhoods as a design feature. The goals of traffic calming include:

- Improving the quality of life
- Incorporating the preferences and requirements of residents
- Creating safe streets
- Creating attractive streets
- Promoting pedestrian, cycle, and transit use

Different types of traffic calming measures are appropriate on different types of streets. Some examples of traffic calming measures include:

- Vertical changes in the street (speed humps, raised intersections)
- Lateral changes in the street (chicanes, traffic circles)
- Constrictions (islands, parking)
- Narrow pavement width
- Entrance features (signs, pavement surfaces)
- Route changes (closures, turn restrictions)
How Does Traffic Calming Support the District’s Mission Statement?

The District’s vision for a sustainable future includes the continued development of safe and vibrant neighbourhoods. One of the most important factors in achieving this vision is encouraging appropriate uses for our roadways. The District has an integrated hierarchy of streets, each with a different purpose. Road types in the District include:

- **Arterial Roads** – carry trips of longer duration and through traffic, and also accommodate significant volumes of traffic;
- **Collector Roads** – collect and distribute traffic into and out of a neighbourhood, and provide some property access;
- **Local Roads** – provide access to property; and,
- **Lanes** – provide access to the back of a property.

Sometimes motorists can develop a pattern of using a street in a manner which was not intended, such as using a local road as a through route or traveling at excessive speeds. The purpose of traffic calming is to ensure that streets are used for their intended function and correct motorist behaviour to acceptable community norms. More specific objectives of traffic calming include:

- Discouraging speeding;
- Reducing collision frequency and severity;
- Increasing safety of non-motorised users of the street;
- Reducing the need for police enforcement;
- Enhancing the street environment;
- Increasing access to all modes of transportation; and
- Reducing through motor vehicle traffic.

The Traffic Calming Process

The traffic calming process involves public participation and group decision making to find solutions to concerns a neighbourhood may have about the negative effects of motor vehicle traffic. The District’s traffic calming process is an orderly process that is comprised of six basic steps. The steps are shown in Figure 1.1. These steps will be discussed in greater detail in the remaining chapters of the report.
Identify a traffic calming project

Identify issues, concerns, problems, and values

Determine the existing characteristics

Develop a traffic calming plan

Implement traffic calming plan

Monitor traffic calming plan

FIGURE 1.1 Traffic Calming Flow Chart
2. Programming

Initiating Traffic Calming Projects

The need for a traffic calming project can be identified either from studies by staff or directives from Council in pursuit of safety and operational objectives of the District. It can also be identified through requests from residents who perceive traffic operations are negatively impacting the quality of life in their neighbourhood.

District of North Vancouver Management of Traffic Calming Requests

The District receives numerous requests for traffic calming projects each year. Residents are encouraged to submit their ideas for traffic calming projects using the request form shown in Form A. Once a request is received, it is the responsibility of the District staff to evaluate and rank all of the requests, and to provide advice to Council on priorities for traffic calming project implementation. District staff maintains a ranked list of the projects that have been proposed. These projects are classified into two streams. Larger-scale projects that rank highest are considered for Council funding. Smaller-scale projects may qualify under the Local Improvement process. Local Improvement projects must be approved by the Municipal Engineer and by Council but are funded by the adjacent property owners. This section of the policy outlines the procedures for initiating and evaluating projects of both District-funded and Local Improvement projects.

Is Traffic Calming the Appropriate Solution?

There are a range of solutions to traffic concerns, and not all of them involve traffic calming. Before considering traffic calming as a potential solution, the following questions should be asked:

<p>| Q: Are the prevailing speeds above or below the posted speed limit? |
| A: If the prevailing speeds are at or below the posted speed limit, then traffic calming cannot help you. The intention of traffic calming is to reduce the prevailing speeds down to the posted speed limit. |</p>
<table>
<thead>
<tr>
<th>Q</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the speeding problem in my back lane?</td>
<td>If you are requesting speed humps in your back lane, you and your neighbours can petition for a local improvement and bypass the traffic calming process. Please contact the engineering department for details.</td>
</tr>
<tr>
<td>Would a sidewalk solve our problems?</td>
<td>If you are considering a sidewalk for your street, you and your neighbours can also petition for a local improvement. Please contact the engineering department for details.</td>
</tr>
<tr>
<td>Who is speeding down our street?</td>
<td>If your answer is “my neighbours” then you may all benefit from having a neighbourhood meeting to discuss responsible driving habits, rather than subjecting the neighbourhood to traffic calming measures.</td>
</tr>
<tr>
<td>Is this problem being caused by congestion on a nearby arterial road?</td>
<td>If you or the District feel that the problem on your street would be reduced by improving traffic flow on arterial road, then we will focus our efforts on the arterial road. However, traffic calming may still be appropriate on your street.</td>
</tr>
<tr>
<td>Can our problem be solved with signs and paint?</td>
<td>If you or the District feel that standard signage or road markings could help to solve the problems, District staff can review appropriate short-term improvements and the traffic calming process can be avoided.</td>
</tr>
</tbody>
</table>

If, after reviewing these questions and answers, a member of the public feels that their street is a legitimate candidate for traffic calming measures, they should fill out the survey included in Form A and submit it to the District as their formal application.

**Preliminary Scoring and Verification**

Traffic calming in the District will be considered on Collector and Local Roads. Traffic calming will not be considered on Arterial Roads. The need for traffic calming is evaluated differently for these two road types:

- **Collector roads:** Significant amounts of traffic are diverting off of arterial roads and using the collector road instead, resulting in high speeds, collisions, and difficulties for pedestrians and cyclists.

- **Local roads:** Traffic from outside the neighbourhood is reducing the quality of life for the residents of the street.

For both collector roads and local roads, the first step is to identify the “traffic calming area”. This is the network of adjacent local and collector streets (if any) that would be
affected if traffic calming measures were implemented on the street in question. The District’s Transportation Planning Section will establish the study area that must be studied for each request. The study area will be reviewed to determine if it has been studied before and warrants an updated review. If so, the District will collect traffic volume information within the study area. Different scoring methods are used for the two road types to determine if traffic calming is warranted. The scoring for both types of roads is based on a five-criteria scoring system. The scoring methods are presented in Tables 2.1 and 2.2. Based on the numerical scores, each street is classified as:

- “low” (0-30 points),
- “medium” (31 to 60 points), or
- “high” (61-100 points).

If a study area includes multiple roads, the results will be combined to produce an overall score for the area. This ranking, in addition to the traffic volume and speed information, will be reported to the person who initiated the request.

**FIGURE 2.1 Evaluation Criteria – Collector Roads**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Measurement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed</td>
<td>85th percentile speed for one continuous week during typical traffic conditions.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>20 One point for each km/h over 50 km/h.</td>
<td></td>
</tr>
<tr>
<td>Volume</td>
<td>Average daily traffic volume as measured over a continuous one week period during typical traffic conditions.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>20 One point for every 200 vehicles.</td>
<td></td>
</tr>
<tr>
<td>Collisions</td>
<td>Collision rate and severity of reported collisions in previous three calendar years.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Points assigned based on collision statistics relative to District average.</td>
<td></td>
</tr>
<tr>
<td>Pedestrians</td>
<td>Number of schools and major pedestrian generators in area, and numbers of pedestrians.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Points assigned based on high number of pedestrian generators and pedestrian use.</td>
<td></td>
</tr>
<tr>
<td>Cyclists</td>
<td>Cycle route designation, and number of cyclists.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Points assigned based on cyclist use and location in bicycle network.</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 2.2 Evaluation Criteria – Local Roads**

Document No: 163550
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Measurement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed</td>
<td>85\textsuperscript{th} percentile speed for one continuous week during typical traffic conditions.</td>
<td>20 One point for each km/h over 50 km/h.</td>
</tr>
<tr>
<td>Volume</td>
<td>Percent of short cutting traffic in peak 2 hour period.</td>
<td>20 20 points for 100% short cutting traffic, 0 points for 0%.</td>
</tr>
<tr>
<td>Sidewalks</td>
<td>Proportion of neighbourhood streets with continuous sidewalks on at least one side.</td>
<td>20 20 points for no sidewalk, 10 points for sidewalks on one side.</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>Number of schools, bus stops and major pedestrian generators in area, and numbers of pedestrians.</td>
<td>20 Points assigned based on collision statistics relative to District average.</td>
</tr>
<tr>
<td>Cyclists</td>
<td>Number of designated bicycle routes in the area, and number of cyclists.</td>
<td>20 Points assigned based on high number of pedestrian generators and pedestrian use.</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

**Project Identification**

All historic and new projects are ranked as “High”, “Medium”, or “Low” priority based on their evaluation scores. Generally, funding of traffic calming projects by the District will only be considered for those projects where the existing conditions in the neighbourhood exceed at least one of the minimum operational thresholds shown in Figure 2.3.

**FIGURE 2.3 Operational Thresholds**

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>MINIMUM THRESHOLD CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic infiltration</td>
<td>20 percent or more of all traffic is non-local traffic</td>
</tr>
<tr>
<td>Excessive travel speeds</td>
<td>85\textsuperscript{th} percentile operating speed is 16 km/h over the posted speed limit or greater</td>
</tr>
<tr>
<td>Traffic volume</td>
<td>Area traffic volume is greater than 1,000 vehicles per day</td>
</tr>
</tbody>
</table>

In addition to the evaluation scores, the District will also consider the following subjective information:

- Physical characteristics (road width, alignment, parking, sensitive frontages)
- Noise characteristics (traffic and ambient noise, number of residents affected, setback of houses)
➢ Geographic distribution (that traffic calming needs are being equitably addressed across the District)

➢ Timing (can traffic calming be incorporated into scheduled infrastructure or development projects)

All projects being considered for potential study must be authorised by the Municipal Engineer. The Municipal Engineer bases their decision on the information documented by staff in the form presented in Form B. For all studies authorised by the Municipal Engineer, a survey will be sent to all households and businesses in the study area. The survey will verify if there is sufficient support in the study area for a traffic calming study. At least 50 percent of the surveys must be returned and a majority of the responses must support a traffic calming study for the request to proceed to budget consideration.
3. Financing the Initiative

Funding by the District of North Vancouver

Any requests for District-funded traffic calming studies that are authorised by the Municipal Engineer and are supported through the neighbourhood survey process will be forwarded to Council to consider during the annual budget deliberations. This request will include the multi-year funding implications of studies and construction. However, funding for traffic calming initiatives is constrained by the limits of the District's revenue generation abilities and the competing needs for funding of other services and capital programs.

Funding by the Neighbourhood

Residents of a neighbourhood may elect to fund traffic calming measures as a local area service initiative as outlined in the Local Improvement Cost Sharing Bylaw. These improvements do not have to meet the criteria specified in Table 2.3, but must be approved by the Municipal Engineer. The cost of the traffic calming plan would be amortised over a 10, 15 or 20 year period and added to the property taxes of the properties that front the section of improved street. A local area service requires a two thirds majority approval of the parcels, representing at least 50 percent of the assessed value of land and improvements that would be subject to the local service tax, recommendation from staff and the approval of Council to proceed to implementation. Once approved by Council, traffic calming will be installed on the street in a manner that is at the sole discretion of the Municipal Engineer.

The Municipal Engineer will review requests for Local Improvements and determine which ones are suitable to proceed to the neighbourhood petition stage. Following receipt of the petitions, the Municipal Engineer's recommendations for traffic calming projects funded through the Local area service will be consolidated and forwarded to Council in a single report on an annual basis. Local improvement projects cannot be combined with Council-funded projects.

Other Potential Sources of Funding

The District may require an applicant to install traffic calming devices as a condition of the issuance of a rezoning or land development permit. The purpose of the traffic calming devices must be to address issues identified during the traffic impact review for the proposed development.
4. The Planning Process

Once the Municipal Engineer has authorised a District-funded traffic calming study, the District staff will work with the public and Council to develop traffic calming options for the study area. The process outlined in this section does not explicitly apply to Local Improvement Projects. In Local Improvement Projects, the design and location of the traffic calming measures is at the sole discretion of the Municipal Engineer.

Understanding the Concerns of the Neighbourhood

As they spend the most time in the neighbourhood, residents often have valuable knowledge of traffic problems on their streets. For this reason, it is important for staff to conduct opinion surveys and meet with the residents to gain a full understanding of the issues, concerns and values of the people living in the neighbourhood. From this understanding, staff can derive a list of objectives for developing a traffic calming plan that will meet both District-wide and neighbourhood specific objectives. For very large neighbourhoods, the District may elect to appoint a traffic advisory committee to represent the neighbourhood in a traffic calming study. The committee members would be chosen from those individuals indicating a willingness to serve in this capacity from the responses to a social information survey of the neighbourhood. The area of study can be a single street, if the concerns are related to excessive speeds, or a whole neighbourhood bounded by arterial and collector roads, if the concerns are related to traffic infiltration.

Quantifying Existing Conditions

Obtaining information about the existing conditions in the neighbourhood is important for the preparation and evaluation of traffic calming plans. This information is required for:

- Defining or quantifying the seriousness of the problems;
- Developing a plan of appropriate countermeasures; and,
- Performing “before and after” evaluations of the traffic calming plan.

The type of information collected will vary with the problems and concerns identified by the neighbourhood and the possible remedial measures proposed. This information is usually of three types:

- Operational;
- Social; and,
- Environmental.
A. Operational Data

This data related to the operating characteristics of the neighbourhood traffic. The data set usually includes some or all of the following information:

<table>
<thead>
<tr>
<th>Daily traffic volumes</th>
<th>Origin and destination surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle classifications</td>
<td>Historic crash records</td>
</tr>
<tr>
<td>Peak hour turning movement counts at intersections</td>
<td>Traffic generation from existing or proposed developments</td>
</tr>
<tr>
<td>Travel time and delay surveys</td>
<td>Pedestrian volumes and desire lines</td>
</tr>
<tr>
<td>Parking surveys</td>
<td>Cyclist volumes and desire lines</td>
</tr>
<tr>
<td>Traffic speed surveys</td>
<td>Transit service</td>
</tr>
</tbody>
</table>

B. Social Data

Social information is needed to measure people’s perceptions of the traffic issues, recent changes and impacts of proposed developments or improvements. This information can be obtained by censuses and surveys. However, the extent to which surveys are needed will decrease with increasing levels of public participation as the information would be obtained during the process. Therefore, surveys for social information would likely only be used for processes that utilise an advisory committee made up of representatives from the different areas of very large neighbourhoods. An example of social information that is used for traffic calming studies is the usage patterns of local facilities such as schools, parks, and open spaces.

C. Environmental Data

Environmental data would be obtained to meet a specific identified need for the neighbourhood and may not be required for all traffic calming studies. Environmental data includes:

<table>
<thead>
<tr>
<th>Noise measurements</th>
<th>Air quality measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory of existing features, such as vegetation, trees, structures, and land uses</td>
<td>Road widths, driveways, pedestrian and cyclist facilities.</td>
</tr>
</tbody>
</table>

Developing the Solution Spectrum

District staff in consultation with the residents, the transit authority, and emergency services will formulate alternative traffic calming plans for the neighbourhood. The
traffic calming plans will consider the objectives of the neighbourhood and District, accessibility needs, safety, and environmental standards. The spectrum of solutions should be as diverse as possible, providing high and low cost options and satisfy varying degrees of the neighbourhood and District objectives. Each alternative solution will include a statement of the effectiveness of meeting the objectives, and disbenefits, total project cost, and the impacts to the larger community. All traffic calming measures will comply with the Canadian Guide to Neighbourhood Traffic Calming, by the Transportation Association of Canada and Canadian Institute of Transportation Engineers. Not all traffic calming measures are appropriate on all roads. The measures that the District will and will not consider on local, collector, and emergency routes are presented in Figure 4.1.

**Discerning a Preferred Solution**

District staff will facilitate meetings for the residents to discuss the alternative traffic calming plans. At the meetings, District staff will present the range of solutions, provide the participants with information about each alternative and a relative comparison. The meetings will use group decision making techniques to encourage consensus building towards the selection of a preferred solution or course of action. Support for the preferred solution will be verified by a survey of households and businesses in the study area.

**Council Consideration of Initiative**

Once a neighbourhood has selected a preferred traffic calming plan, staff will submit a report to Council with their recommendations. Council will consider the proposed neighbourhood traffic calming plan and either endorse or reject the plan. Council may reject the plan in one of two ways:

- Either refer the plan back to the process for developing a new option; or
- Reject the plan outright and end the process.

If Council endorses the plan, it will be forwarded to the annual budget deliberations. The multi-year funding plan will be updated and Council will consider funding the plan in relation to other capital funding requests. If Council approves funding, then the plan will be implemented as part of the capital program.
# FIGURE 4.1 Appropriate Traffic Calming Measures

<table>
<thead>
<tr>
<th>MEASURES</th>
<th>Local Street (&lt;1,500 vpd)</th>
<th>Collector Street 1,500 to 5,000 vpd</th>
<th>Collector Street 5,000 to 10,000 vpd</th>
<th>Collector Street &gt; 10,000 vpd</th>
<th>Transit Route</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vertical deflection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed hump</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Speed cushion</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Raised crosswalk</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Sidewalk extension</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Textured crosswalk</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Rumble strips</td>
<td>x</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Raised intersection</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Horizontal deflection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curb extension</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Traffic circle</td>
<td>✓</td>
<td>~</td>
<td>x</td>
<td>x</td>
<td>~</td>
</tr>
<tr>
<td>Raised median island</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Corner radius reduction</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>~</td>
<td>~</td>
</tr>
<tr>
<td>Chicane, 1 lane</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Chicane, 2 lane</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>On-street parking</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>~</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Obstruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directional closure</td>
<td>✓</td>
<td>~</td>
<td>x</td>
<td>x</td>
<td>~</td>
</tr>
<tr>
<td>Right-in/right-out island</td>
<td>✓</td>
<td>~</td>
<td>x</td>
<td>x</td>
<td>~</td>
</tr>
<tr>
<td>Raised median through intersection</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Intersection channelisation</td>
<td>✓</td>
<td>✓</td>
<td>~</td>
<td>~</td>
<td>✓</td>
</tr>
<tr>
<td>Diverter</td>
<td>✓</td>
<td>~</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Full closure</td>
<td>~</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Signage (when used primarily for traffic calming purposes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic calmed neighbourhood</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Turn prohibited</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
</tr>
<tr>
<td>Through traffic prohibited</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
</tr>
<tr>
<td>One way</td>
<td>~</td>
<td>~</td>
<td>x</td>
<td>x</td>
<td>~</td>
</tr>
<tr>
<td>Maximum speed</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Yield</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Stop</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

✓ = Appropriate measure  ~ = Use with caution  x = Not recommended

*Original Source: City of Calgary*
5. Implementation and Performance Monitoring

Public Awareness

A public awareness program will accompany each traffic calming project. Adequate advice to neighbourhood and through traffic will be provided prior to the implementation of any traffic calming project. The program will advise local residents of the details of the installation to minimise surprises or unexpected inconveniences to the neighbourhood.

For neighbourhood residents, the public awareness program will include a map of the neighbourhood showing the location of traffic calming device installations, a schedule of the installations, details of any local access disruptions and contact information for the project.

For through traffic and the larger community, the District will place notices in the local newspaper to raise awareness of the planned improvements and any need to modify travel routes. The notices will include a map showing the locations of improvements and the schedule of installation.

For emergency response services and District operations, the Transportation Department will provide written notice of the planned installations two weeks prior to the installation date. The notices will advise of the need to modify routes and of any special provisions for emergency access.

Installation

Traffic calming projects can be implemented in three ways:

- Trial installation;
- Phased permanent installation; and,
- Complete permanent installation.

A. Trial Installation

Trial or temporary installations are used when there is uncertainty as to the effectiveness or the acceptability of the traffic calming plan to meet the objectives. Trial installations can be used as an aid to discerning a preferred solution and prior to Council’s consideration of the plan. Trial installations will use materials that can be readily removed at the end of the trial period.
**B. Phased Permanent Installation**

A traffic calming plan may use a staged or phased approach to implementation. This approach would typically apply to large neighbourhoods involving the installation of many traffic calming devices. The staging will usually take one of three forms:

- Treat problem locations as a first priority;
- Treat the area from one end to the other in a systematic manner for construction efficiency; or,
- Treat the area from the circumference inwards.

Should a staged implementation be considered worthwhile, District staff will recommend the appropriate form of phased installation. Staged installations will use materials that are permanently installed with appropriate landscaping and streetscape features.

**C. Complete Permanent Installation**

Complete implementation will permanently install all traffic calming devices in the neighbourhood at one time. The benefit of this approach is that the whole neighbourhood is treated at once so that motorists do not have to adapt to a changing road network and it avoids the costs of temporary works. A disadvantage of complete implementation is that the traffic control devices would be expensive to remove should the plan prove to be unsuccessful.

**Evaluating Performance**

District staff will conduct a number of operational, social, and perhaps environmental surveys to evaluate the performance of the traffic calming installations. The post-performance evaluation will include:

- Collection of operating speed data;
- Collection of diversion effect data;
- Collection of through vs. local traffic distribution data;
- Analysis of collision data; and
- Public response surveys.

A report evaluating the performance on the neighbourhood traffic calming installations will be prepared by staff and submitted to Council one year after installation.
6. ROLES AND RESPONSIBILITIES

The Role of the Neighbourhood

The neighbourhood residents and those working or attending school in the neighbourhood will be involved in the problem identification and the decision making processes related to the existing and future management of traffic in their neighbourhood. The key responsibilities of the neighbourhood are to:

- Attend the organised public meetings for traffic calming studies;
- Identify traffic related issues in the neighbourhood;
- Select, from the options presented by staff, traffic calming concepts that address the identified issues; and,
- Choose a preferred traffic calming plan or course of action; and,
- Initiate local improvement initiatives where applicable.

The Role of District Staff

The District staff will prepare an assessment of potential traffic calming projects for presentation to Council prior to the budget deliberations for the coming year. Once Council has approved the budget and authorised selected traffic calming projects to proceed, staff will schedule and conduct the neighbourhood public processes. The key responsibilities of staff are:

- Prepare a preliminary multi-year funding plan based on similar historic traffic calming projects;
- Develop terms of reference for the traffic calming study;
- Develop and manage a public participation process;
- Facilitate the study process;
- Define and quantify the nature and extent of traffic issues through discussions, perception surveys and data collection;
- Provide expertise and advice to generate possible solutions;
- Facilitate a consensus building exercise with the neighbourhood to discern a preferred solution or course of action;
- Communicate the status and outcome of the study process to Council;
- Prepare and conduct a public awareness campaign; and,
- Implement and monitor traffic calming projects.
The Role of the Council

Council will direct the traffic calming program at a strategic level. The responsibilities of Council are:

- Based on an assessment from staff, initiate a traffic calming project by endorsing a multi-year funding plan (if necessary) and approving funding and resource allocations for the first year’s activities in the capital budget.
- Review and consider the preferred traffic calming plan initiatives as chosen by the public and staff.
- In accordance with the multi-year funding plan, forward Council endorsed traffic calming initiatives to the annual budget deliberations for consideration;
- Allocate funding for selected traffic calming initiatives in the annual capital budget;
- Review projects that are requested by property owners and endorsed by the Municipal Engineer as Local Improvements; and,
- Review the performance of implemented traffic calming projects.
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Traffic Calming Request Form

Thank you for your interest in a traffic calming project in your neighbourhood. Please take a moment to fill out this request form, which will help us to respond to your request.  

The first four questions will determine whether other steps need to be taken before completing this request form.

1. Have you read the “District of North Vancouver Traffic Calming Policy”?  
   □ Yes □ No
   If your answer is no, please download a copy of the policy from our website at www.dnv.org or contact the Engineering Department at 604-990-2450 for a copy before proceeding with the rest of this request form.

2. Are you requesting speed humps in your back lane?  
   □ Yes □ No
   If your answer is yes, please contact the Engineering Department at 604-990-2450 for information on the Local Improvement process.

3. Is a sidewalk your preferred solution?  
   □ Yes □ No
   If your answer is yes, please contact the Engineering Department at 604-990-2450 for information on sidewalk construction.

4. Is it your neighbours that you believe are causing speeding or unsafe driving problems on your street?  
   □ Yes □ No
   If the answer is yes, you may wish to consider having a neighbourhood meeting or informal chats with your neighbours about traffic safety prior to considering a traffic calming program.

These next few questions are to gather some information on the issues that concern you.

5. Please list the street names, beginning and end points, and specific locations that you have concerns about.
   e.g. West Queens Road from Mahon Road to Chesterfield Avenue, particularly near the District Hall entrance.

Traffic Calming Request Form (continued)

6. Describe the concern you have that would warrant traffic calming:  
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
7.(a) Does the problem occur during specific times of the day? □ Yes □ No
7.(b) If you answered yes, please indicate the times of day when you have concerns:

8.(a) Does the problem occur during specific days of the week? □ Yes □ No
8.(b) If you answered yes, please indicate the days of the week when you have concerns:

9. What ideas do you have to improve traffic conditions on the street? Please refer to Figure 4 in the Traffic Calming Policy for a list of potential measures.

Thank you for taking the time to complete this request form. If you would like a member of our Transportation staff to contact you regarding your concerns and ideas, please provide us with the following information.

Name:__________________________________________________________
Address:_______________________________________________________
Phone Number:_________________________ Fax Number:__________________
E-Mail Address:__________________________________________________

If you have any questions about this request form or about the District’s traffic calming policies, please feel free to contact the Transportation department at 604-990-2450.

This form may be mailed to:
Transportation Planning Section
District of North Vancouver
355 West Queens Road
North Vancouver BC  V7N 4N5
Or faxed to:
604-987-7185
ATTN: Transportation Planning Section
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Municipal Engineer’s Authorisation for Traffic Calming Study

1. Who/what was the source of this project study request?

2. Describe the study area (attach map).

3. Would this initiative be funded as a local improvement?
   □ Yes □ No

4. If yes, is this initiative appropriate as a local improvement, with no impacts on adjacent streets?
   □ Yes □ No

5. Describe the issue to be addressed through traffic calming.

6. Describe the other solutions that have been/will be considered to address this issue.

7. Describe the results of the preliminary screening analysis for this project.

8. Describe the benefits to the District of a traffic calming project in this location.

9. Describe the priority of this project relative to other traffic calming studies and projects currently being considered/underway in the District.
10. Describe the expected cost of this project and the impact of this project on the District’s long-term capital plan.

__________________________________________________________________________________

11. Describe what measures can be taken if the request for a traffic calming study for this area is rejected.

__________________________________________________________________________________

12. Based on the preliminary review to date, is it recommended that the Municipal Engineer authorise a traffic calming study for this project?  □ Yes  □ No

Submission prepared by:  ____________________________________________________________

Name    Title    Date

__________________________________________________________________________________

I, _____________________________, as Municipal Engineer (or designate) for the District of North Vancouver,

□ authorise
□ do not authorise

a public survey and request for funding for a traffic calming study for the above-described project.

__________________________________________________________

Signature    Date