

## **Document 4 – Draft Neighbourhood Traffic Calming (NTC) Study Process**

The purpose of the NTC Study Process (included hereafter) is to address requests for permanent engineering traffic calming solutions on existing streets that cannot benefit from roadway modifications through other City programs (i.e. as stand-alone projects).

# DRAFT Neighbourhood Traffic Calming Study Process

(replaces the 2004 Area Traffic Management Guidelines)

City of Ottawa

Transportation Services

Transportation Planning

Neighbourhood Traffic Calming Program

March 2019

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## Introduction

The Neighbourhood Traffic Calming (NTC) Program focuses on addressing requests for permanent, engineered, traffic calming on existing streets within neighbourhoods. This Program will be reserved for streets that cannot benefit from roadway modifications through other City Programs.

**Traffic calming**<sup>1</sup> attempts to improve conditions for all road users by reducing negative impacts of motor traffic and improve safety and quality of life for all street users. It is implemented on existing streets where integrated speed management has not been achieved, through initial road design, to the desired levels. There are three groups of traffic calming solutions:

- Communication and Enforcement
- Minor Adjustment
- Engineering (localized retrofits)

The City first attempts to resolve concerns through consideration of simple, cost effective solutions (i.e. communication, enforcement, and minor adjustments). However, if these options do not address issues, requests for permanent traffic calming solutions through localized street retrofits can be considered by the City's NTC Program.

This document summarizes how the City addresses these requests and outlines the processes used within the City's NTC Program (formerly known as the Area Traffic Management Program).

## Need for Neighbourhood Traffic Calming (NTC) Study Process

Permanent, traffic calming can be challenging to implement due to competing interests, limited resources, and the need to be smart, fair, and transparent when deploying resources. Given that:

- Transportation Master Plan policies support reducing negative impacts of motor traffic;
- the number of requests to implement traffic calming is significant;
- there are insufficient resources to reconstruct every street to address these concerns;
- not all concerns require a full re-build of a street to address these concerns; and
- there are competing interests that need to be considered (e.g. efficient transit operations vs. desire for slow vehicular speeds);

the NTC Program has developed a process for managing request for permanent engineered traffic calming in a fair and consistent manner. This involves both qualification and citywide prioritization of all requests.

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<sup>1</sup> For the purposes of this document, the term "traffic calming" refers to measures to address excessive through traffic volumes and / or speeds on existing streets.

## Making a Request to Address Community Traffic Calming Concerns

Community traffic calming concerns can be reported by residents, community associations, or Ward Councillors by calling 3-1-1 or email 311@Ottawa.ca. Reported concerns need to be specific, highlighting traffic issues with the operator such that they can forward requests to the appropriate City Department for review. The City will evaluate reported traffic concerns considering context, history of concerns, land use and transportation access, road user and traffic characteristics, collision data, etc. and may conduct site visits and / or collect data to confirm conditions.

Once the context of reported concern(s) has been confirmed, the City will first consider Communication and Minor Adjustment solutions. If appropriate, it will be assessed if the reported concerns qualify for engineering traffic calming solutions through the City's NTC Program. For the reasons listed previously, a request qualification and prioritization process is used and is further described below.

## Neighbourhood Traffic Calming (NTC) Study Process

### Purpose

In general, the foundation of the NTC Study Process is focussed on addressing concerns on streets within neighbourhoods based on a fair, consistent, effective, and efficient methodology. The process prioritizes resources based on addressing the most severe problems first.

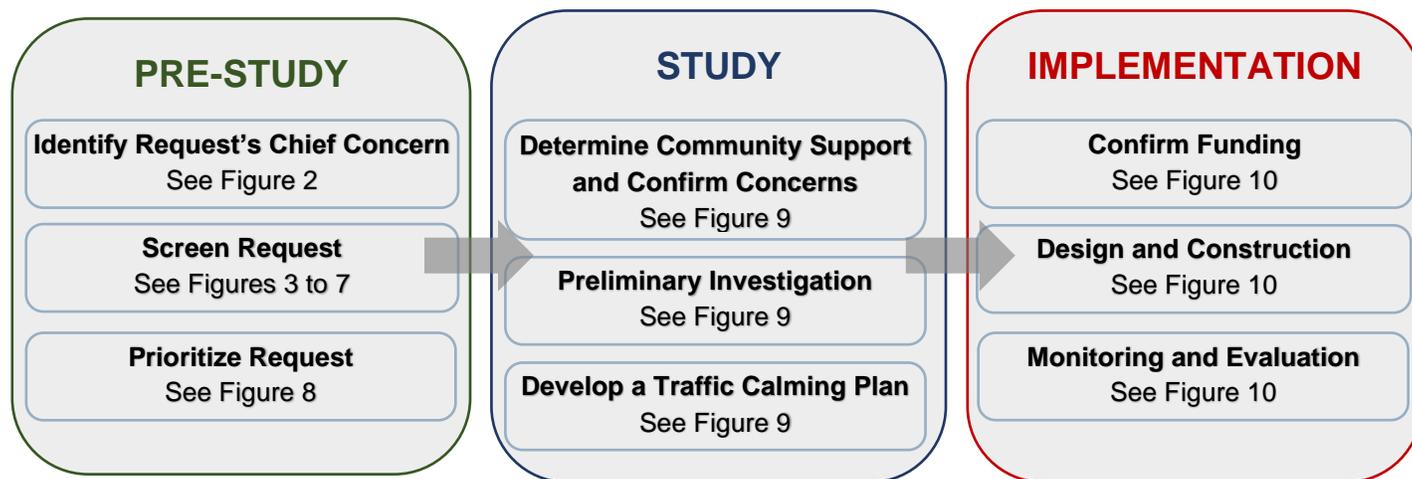
In alignment with the City's road safety and complete streets objectives, the NTC Program will focus resources primarily on addressing concerns related to vehicular speeding. Traffic volume concerns may be addressed, provided vehicular speeding is also evident.

More requests for permanent traffic calming are received than there are adequate resources to address all of them. As such, the City needs to be smart about its investments, balancing policy goals, affordability, and equity objectives to ensure resources are used wisely. A summary of more detailed principles that helped guide the development of the NTC Study Process and ensure it meets higher level objectives, is provided in **Appendix A**.

### Process Summary

There are three phases of the NTC Study Process: Pre-Study, Study, and Implementation. Figure 1 summarizes the generalities of the Process, referencing more specific information on individual aspects. The time a project takes varies greatly depending on resources and levels of public participation. In general, a qualified request that is a top priority may potentially take anywhere from 2.5 to 4 years to complete the whole process (from planning to construction) outlined below as follows:

Figure 1 – NTC Study Process Summary



## Pre-Study Activities

### Request Qualification (Figures 2 to 7)

Requests for permanent engineered traffic calming are screened by the City's Transportation Services Department using the qualification process detailed in Figures 2 through 7. The purpose of qualifying a request is to make sure that the City screens in a manageable list of requests in consideration of available resources within the NTC Program. It is not intended to imply that unqualified requests do not merit traffic calming.

Figure 2 illustrates the qualification process. The resources required to identify traffic calming concerns can vary significantly depending on the nature of these concerns. The NTC Study Process groups simple and more complicated study requirements into two separate buckets:

- **Local Traffic Calming (LTC) Studies** – focus on addressing concerns related to speeding on a specific street
- **Neighbourhood Traffic Management (NTM) Studies** – to address concerns related to vehicular speeding and / or through traffic within a defined study area (beyond a specific street)

The latter (NTM Studies) are more complex and often require significant resources and time to address. The nature of the qualification and prioritization processes for each study type will allow resources to be focused on the simpler and smaller studies, allowing for more requests to be addressed.

For requests where the chief concern is in relation to vehicle speeds on specific streets (LTC study), the sub-process on Figure 3 is followed. When the primary concern is in relation to neighbourhood traffic management (NTM study), the sub-process on Figure 4 is followed. Regardless of the nature of the concern, a technical evaluation will be conducted to help identify the potential severity of the identified concern. Following this evaluation, a context review is undertaken to determine the potential for engineered traffic calming options to address the identified concern. Finally, the NTC Program will consult with the Ward Councillor to solicit support before qualifying the request.

## Prioritization of Qualified Requests (Figure 8)

Qualified requests are then prioritized city-wide to make sure the City is addressing the most severe issues first. Prioritization (i.e. ranking) considers a total score applied to each qualified request, reviewing and assigning points for criteria related to the user environment and street purpose, active transportation facilities provided, traffic behaviour and impact, and equity and reach as detailed in Figure 8 (more information in **Appendix B**).

## Recommended Study Approach (Figure 9)

Once a qualified request is prioritized (i.e. ranked), the top requests on the list are assigned to an NTC Program project manager, as resources permit, to undertake a study as outlined in Figure 9. At this point, the City may consider grouping near-by lower priority requests where appropriate to achieve efficiencies. The project manager would then seek to determine community support for a study, confirm concerns and develop a traffic calming plan. A preliminary investigation would be initiated, involving the review of the context of the subject street(s) and surrounding area and the history in terms of previous traffic inquiries and complaints. It could also include reviewing results of any previous projects to address problems, available road user data, context information, and collect any additional data as required. After this, the project manager would then proceed to develop a traffic calming plan in consultation with both internal and external stakeholders and then seek approval for the recommended roadway modifications. Additional detail regarding study activities is provided in **Appendix C**.

## Implementation Process (Figure 10)

Implementation of approved traffic calming plans through the NTC Program can only proceed once funding is confirmed. The implementation of all approved traffic calming plans within the NTC Program will generally proceed on a 'first in – first out' basis within the available annual Program funding envelopes. In some cases, approved plans may advance sooner or be delayed to coincide with planned road reconstruction schedules to take advantage of cost efficiencies. Implementation will also respect road cut moratorium rules.

Once funding is confirmed, the project is then submitted to the City's Infrastructure Services group to conduct the preliminary and detailed design followed by construction of the plan. Measures will be designed and constructed in accordance with the City's [Traffic Calming Design Guidelines](#), and other relevant national, provincial, and City standards and specifications. The timing of implementation will depend on the complexities of the work, and scheduling considerations. Typically, the preliminary and detailed design activities would be completed within one year, with the construction proceeding the following year during the spring through fall construction season. Some NTC projects may be bundled with other City projects to take advantage of project coordination and cost efficiencies.

Following implementation, the City will determine potential monitoring and evaluation requirements and consider adjustments as necessary. Evaluation and monitoring activities will be undertaken on a case-by-case basis to assess the level of improvement that each individual project has achieved and to produce an evaluation memorandum. The memorandum will also consider any negative secondary impacts. The evaluations may recommend adjustments to the original plan if concerns have not been adequately addressed or if unacceptable secondary impacts have occurred because of the implemented measures. Once the evaluation has been conducted, the project will be considered complete. Any new request in the same area is to be reviewed and submitted in

accordance with the NTC Study Process. Measures will only be reviewed outside this timetable if there is evidence of safety issues associated with their installation.

## **Managing the NTC Study Process**

### **Annual review of Qualified Requests**

Each year, a review of qualified requests is undertaken by the NTC Program for the following reasons:

- to update the priority sequence based on updated context information; and,
- to determine, in consultation with applicable Ward Councillors, if any requests are no longer appropriate to be addressed through the NTC Program.

### **Requests that do not qualify to be addressed through the NTC Program**

The request qualification process is intended to ensure the City focuses resources on addressing concerns on existing streets. The NTC Program is reserved for streets within neighbourhoods that don't benefit from planned road modifications from other programs. It should not be viewed as a "warrant" for traffic calming measures. This means that not all requests will qualify, even if traffic calming could be of benefit to address community concerns.

For requests that do not qualify, there are other options such as potentially including integrated speed and traffic management design as part of integrated road-water-sewer renewal projects. In addition, there may be opportunities through the Temporary Traffic Calming (TTC) Program which could consider use of seasonal or temporary traffic calming measures.

If the above options have been explored but are not available, a request can be re-submitted to the NTC Program 3 years following the original submission, at which time, potential changes in environmental characteristics may yield different results in the request qualification and / or prioritization process.

### **Updating the NTC Study Process**

The efficiency of the administration of the NTC Study Process will be reviewed on a continual basis and as required. All updates to the NTC Study Process will consider stakeholder input and will be approved through Delegated Authority by the General Manager of Transportation Services. Council will be informed of any changes approved through this process.

**Figure 2 – PRE-STUDY: Traffic Calming Request Qualification Process**

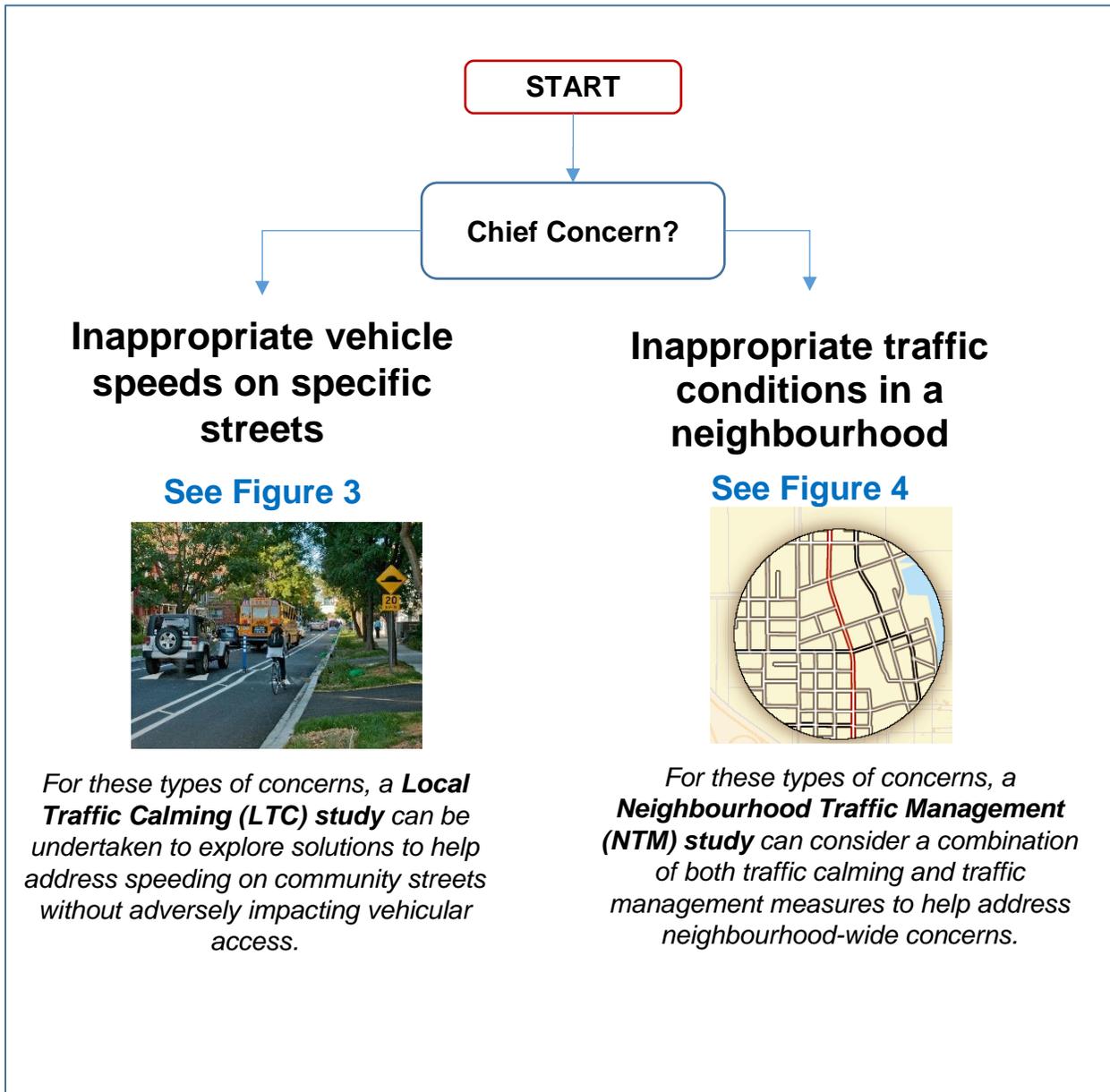
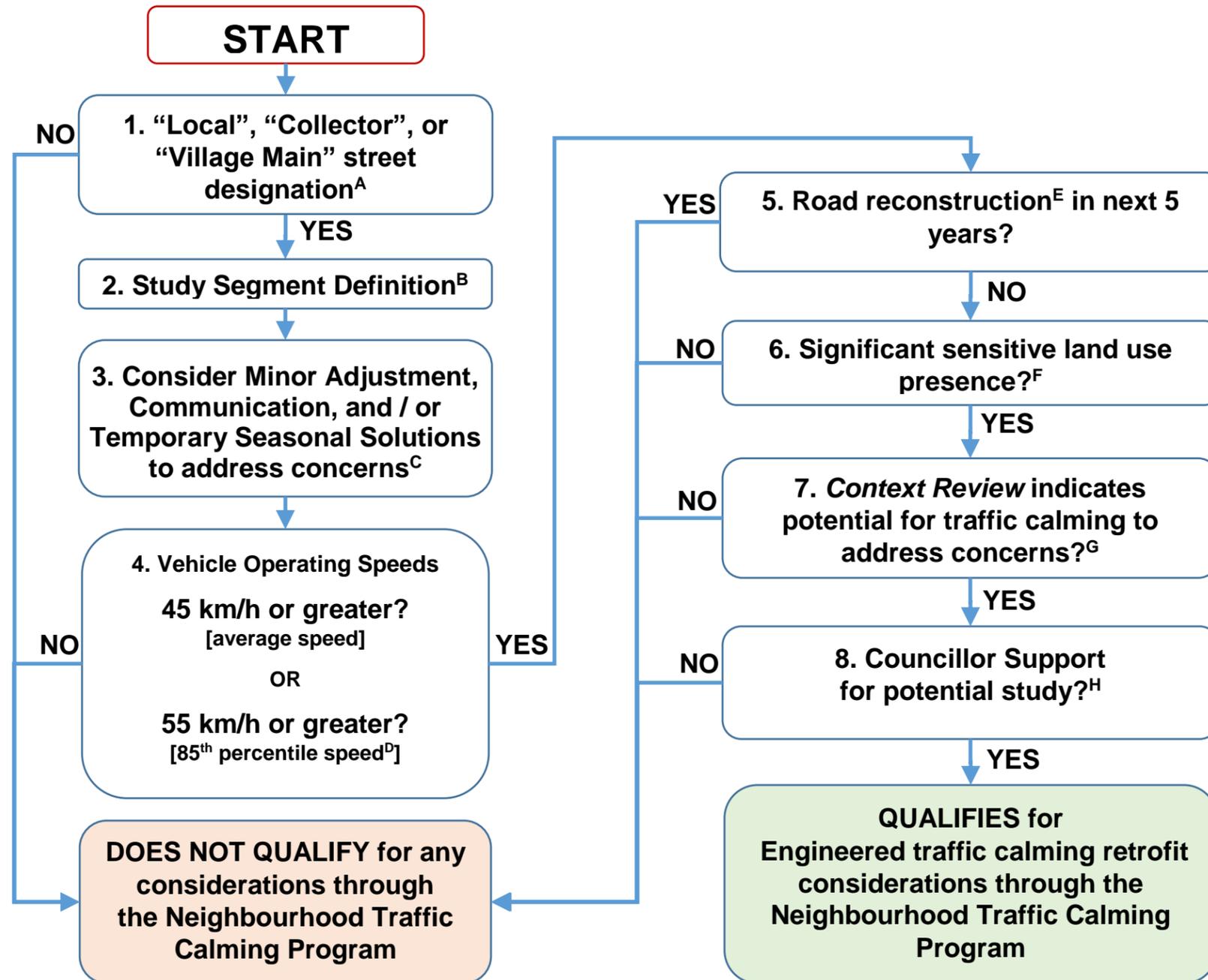


Figure 3 – PRE-STUDY: QUALIFICATION PROCESS (SCREENING) for Local Traffic Calming (LTC) Study requests



**A.** “Local” and “Collector” street designations are per the City’s [Transportation Master Plan](#). For the purpose of the NTC Study Process, a “Village Main” street is defined as any street within a Village boundary that falls within a Design Priority Area per the City’s Official Plan (refer to appropriate layers at [maps.ottawa.ca](#))

**B.** Traffic Services shall define the study segment where permanent engineering solutions will be considered – ideally to be a maximum of 1 km in length.

**C.** City of Ottawa Traffic Services shall provide a summary of any Minor Adjustment, Communication and/or Temporary Seasonal Solutions considered and/or implemented.

**D.** 85<sup>th</sup> percentile speed refers to the speed at which 85% of motorists are driving at or below.

**E.** If integrated road, sewer and water projects or active transportation projects are planned within the next 5 years, traffic calming could be considered as part of the scoping exercise for the reconstruction. [Please note that this does not include road resurfacing projects.]

**F.** For the purposes of this qualification process, “Significant sensitive land use presence” exists where there is at least **two** of the following adjacent to the subject street segment:

- School (within 250m walking distance)
- Park
- Retirement / Older Adult Facility (i.e. long-term care and retirement homes)
- Licenced Child Care Centre
- Community Centre
- 50%, or greater, of adjacent property is occupied by residential lands and a minimum of 10 occupied residential units are present on subject street segment

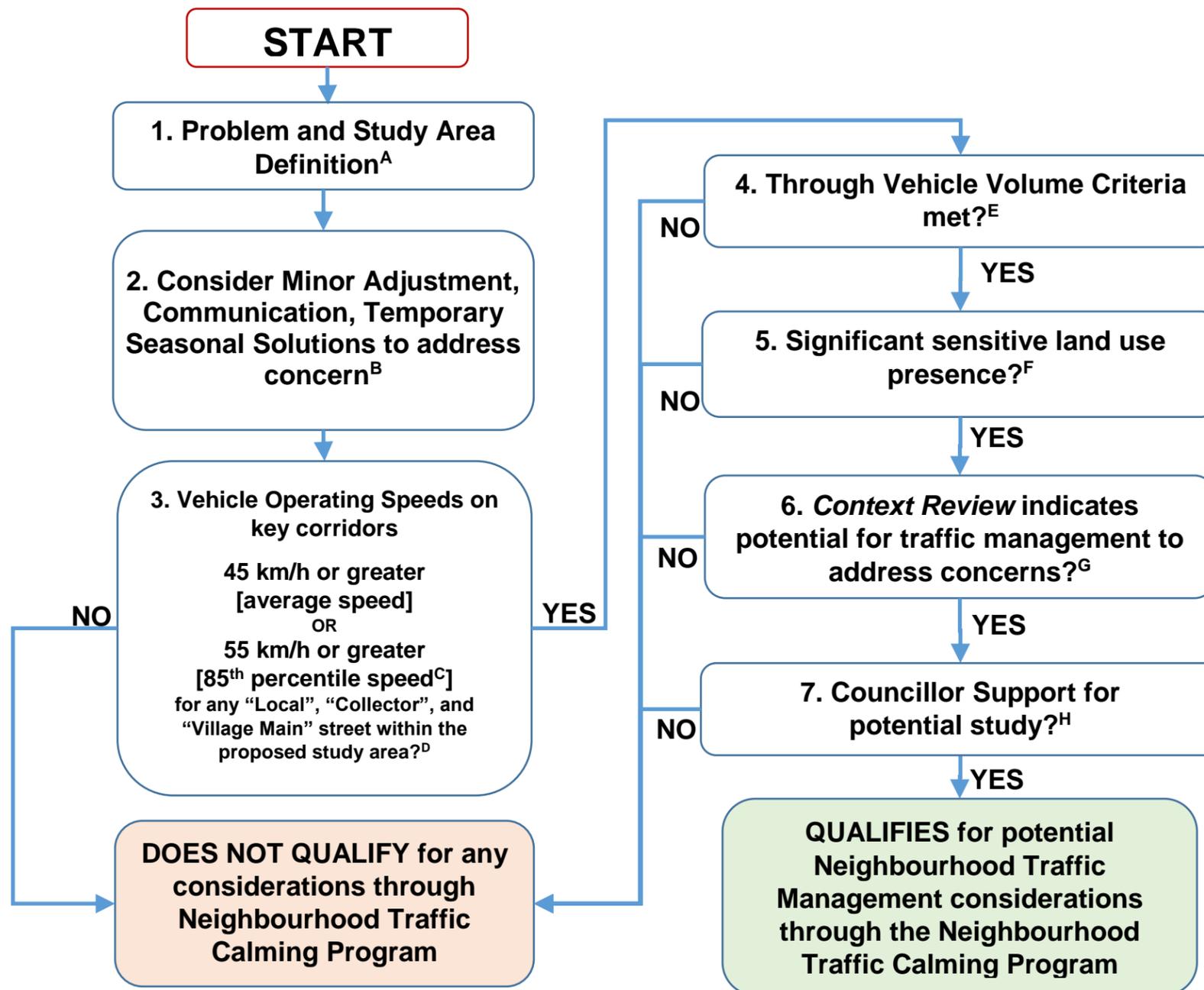
**G.** A “Context Review” will include a technical review by Neighbourhood Traffic Calming Program staff in consultation with Traffic Services Staff that will be documented in a memorandum. This review will include consideration of: review of ownership status of road, results from previous solutions attempted, the nature of the concerns reported, traffic data, existing conditions, Transportation Master Plan and Official Plan policies, results of earlier qualification steps, and the potential for the request to be addressed through the NTC program. The context review may also confirm if the study request is appropriate for an LTC or if potentially an NTM study (Figure 4) may be more appropriate. If the latter, the requestor would be informed of this option. Furthermore, the review could also demonstrate that the NTC Study Process may not be appropriate.

**H.** Neighbourhood Traffic Calming Program to confirm Councillor support.

**\*\*\*THIS IS NOT A WARRANT FOR TRAFFIC CALMING\*\*\***

For staff only: Traffic Services to complete steps 1 – 4.  
Neighbourhood Traffic Calming to complete steps 5 - 8

**Figure 4 – PRE-STUDY: QUALIFICATION PROCESS (SCREENING) for Neighbourhood Traffic Management (NTM) Study requests**



*For staff only: Traffic Services to complete steps 1 – 4. Neighbourhood Traffic Calming to complete steps 5 - 7*

**A.** To define the problem, Traffic Services shall document a draft problem statement, identifying all street segments, the general areas of concern, key corridors, and include key correspondence. Neighbourhood Traffic Calming Program staff shall finalize the submission and formalize a recommended study area per the Neighbourhood Traffic Management (NTM) Study Area Definition Guidance (Figure 5).

**B.** City of Ottawa Traffic Services shall provide a summary of any Minor Adjustment, Communication and/or Temporary Seasonal Solutions considered and/or implemented. This could include a review of measures such as turn restrictions (if there are no obvious impacts to adjacent streets).

**C.** 85<sup>th</sup> percentile speed refers to the speed at which 85% of motorists are driving at or below.

**D.** "Local" and "Collector" street designations are per the City's [Transportation Master Plan](#). For the purpose of the NTC Study Process, a "Village Main" street is defined as any street within a Village boundary that falls within a Design Priority Area per the City's Official Plan (refer to appropriate layers at [maps.ottawa.ca](#))

**E.** To determine if a request meets the through vehicular volume criteria, refer to the instructions in Figure 6.

**F.** For the purposes of this qualification process, "Significant sensitive land use presence" exists where there is at least **two** of the following adjacent to any key corridor street segment in the general study area:

- School (within 250m walking distance)
- Park
- Retirement / Older Adult Facility (long term care and retirement homes)
- Licenced Child Care Centre
- Community Centre
- 50%, or greater, of adjacent property is occupied by residential lands and a minimum of 10 occupied residential units are present on subject street segment

**G.** A "Context Review" will include a technical review and recommendation by Neighbourhood Traffic Calming Program staff that will be documented in a memorandum. This review will include consideration of: review of ownership status of road(s), results from previous solutions attempted, the nature of the concerns reported, traffic data, existing conditions, Transportation Master Plan and Official Plan policies, results of earlier qualification steps, and the potential for the NTC Program to address the request. The context review may also confirm if the study request is appropriate for an NTM or if potentially an LTC study (Figure 3) may be more appropriate. If the latter, the requestor would be informed of this option. Furthermore, the review could also demonstrate that the NTC Study Process may not be appropriate.

**H.** Neighbourhood Traffic Calming Program to confirm Councillor support.

**\*\*\*THIS IS NOT A WARRANT FOR TRAFFIC CALMING\*\*\***

## Figure 5 – PRE-STUDY: Neighbourhood Traffic Management (NTM) Study Area Definition Guidance

### General Study Area

The “General” Study Area shall define the area that captures the key streets and transportation links of concern to area residents. For the purposes of focussing resources on the most problematic areas of concern within a neighbourhood, the study area should be designed considering the following elements:

**1 – Appropriate Boundary Context** – *all study area boundaries must be identified by the following feature types:*

- Geographic Features (e.g. watercourse, escarpment, bog);
- Major Streets (e.g. Arterial and Major Collector streets); and / or
- Key intersections (e.g. signalized intersections that include a major street).

**2 – General Study Area Size** – *The overall size of the study area should not be overly large and should avoid the inclusion of multiple major streets.*

*[The ability for the NTC program to effectively address key concerns becomes compromised when study areas become extensive and / or contain more than one major street.]*

### Key Corridors (for request qualification and prioritization purposes only)

Key corridors are streets in the General Study Area that are considered to be of highest concern relative to others in the defined area. For the purposes of managing data collection and request qualification (screening) resources, key corridors will be selected by Traffic Services (limited to only local, minor collector, or Village Main streets). Prioritization will be based on the one key corridor that has the highest score.

### Figure 6 – PRE-STUDY: Through Vehicular Volume Criteria

**\*\*\*FOR THE PURPOSES OF QUALIFYING NEIGHBOURHOOD TRAFFIC MANAGEMENT STUDY REQUESTS ONLY\*\*\***

Given the City does not have the resources to address every request for neighbourhood traffic management, a qualification process (Figure 4) has been developed to help “screen in” a manageable list of requests. It does not imply that unqualified requests do not merit neighbourhood traffic management considerations.

The qualification process (Figure 4) requires that requests meet a number of “screening” criteria. This includes estimating “non-local vehicular volume” through use of previous studies, traffic modelling, or field measurements of vehicular traffic (i.e. through counts) not originating from or destined to any location within the Study Area. At least one Key Corridor identified as part of the General Study Area must exhibit the following non-local vehicle volume levels (based on their surrounding area context<sup>2</sup>):

<i>Key Corridor Street Designation:</i>	<i>Local</i>	<i>Collector</i>	<i>Village Main</i>
Area Context <sup>1</sup>	Non-Local Vehicle Traffic <sup>2</sup>		
Undeveloped	30% or greater	60% or greater	n/a
Neighbourhood	30% or greater	60% or greater	n/a
Compact	30% or greater	60% or greater	n/a
Mixed	50% or greater	80% or greater	n/a
Hub	50% or greater	80% or greater	n/a

1. To determine an appropriate representative area context, see Area Context Selector from Figure 7.

2. The non-local vehicle traffic thresholds shown have been developed based on a review of industry practices.

## Figure 7 – PRE-STUDY: Area Context Selector

**\*\*\*FOR USE BY THE NEIGHBOURHOOD TRAFFIC CALMING PROGRAM PURPOSES ONLY\*\*\***

### 1 - Undeveloped

Nominal-to-Low density development within general study area.

### 2 - Neighbourhood

Low-to-Medium density developed area with primarily residential land use

### 3 - Compact

Medium-to-High density developed area with primarily residential land use

### 4 - Mixed

Developed area with a mix of land uses

### 5 - Hub

A high density mixed-use area acting as an “urban focal point”



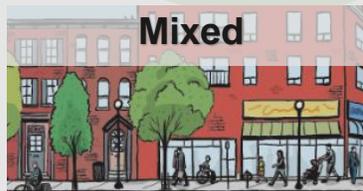
Local Examples: *Viewbank Rd, Lough Dr*  
Collector Examples: *First Line Rd, Willhaven Dr*



Local Examples: *Lismer Cres, Jolliet Ave*  
Collector Examples: *Clearbrook Dr, Navaho Dr*  
Village Main Example: *Donald Munro Dr*



Local Examples: *Sue Holloway Dr, O'Connor St*  
Collector Examples: *Crichton St, Cahill Dr W*



Local Examples: *Johnston Clapp Ln, Colonel Murray St*  
Collector Examples: *Somerset St E, Sunnyside Ave*  
Village Main Examples: *Carp Rd, Manotick Main St*



Local Examples: *Gloucester St, Lisgar St*  
Collector Example: *Gladstone Ave*

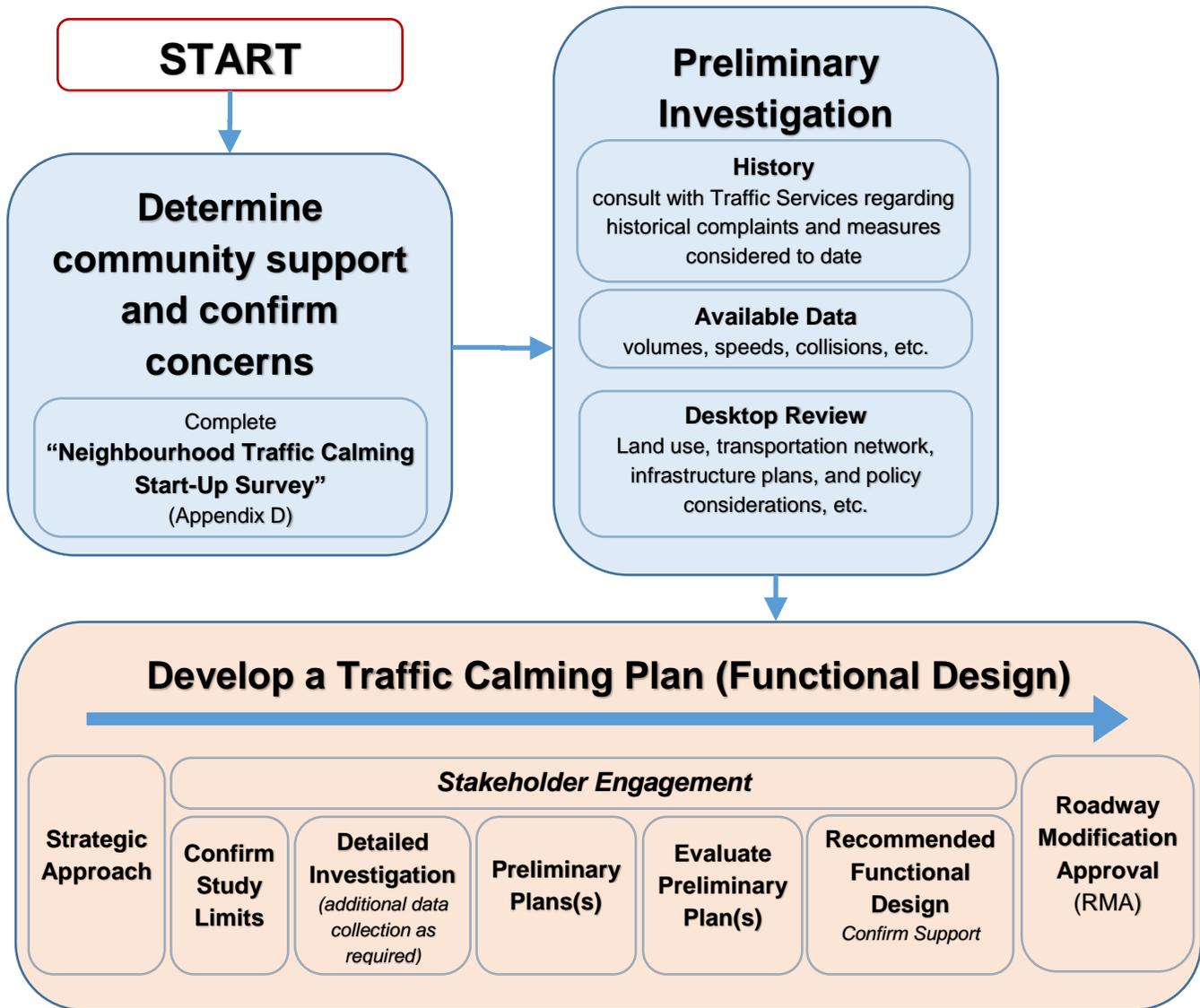
**Figure 8 – PRE-STUDY: Prioritization Methodology for Qualified Requests**

Qualified LTC requests and NTM requests are queued in separate prioritization lists. Queue position is based on a “total point” score. Each qualified request is assigned points based on the following criteria. Points are tallied with requests with higher scores prioritizing higher than those with lower scores. Prioritization of NTM requests will be based on the highest scoring Key Corridor within the identified study area. Detailed scoring Instructions are provided in **Appendix B**.

Criteria (available points)	Sub-Criteria (available points)	Scoring (points)
<b>User Environment and Street Purpose (30)</b>	Street Designation (15)	“Local” streets (15); “Collector” streets (5); “Village Main” streets (7)
	Activity Generators (15)	Schools, parks (10 pts each); Community centres, Long-term care and retirement homes, and Licenced child care centres (5 pts each);
<b>Active Transportation Facilities (30)</b>	Walking (15) <ul style="list-style-type: none"> <li>• Pedestrian facilities (10)</li> <li>• Crossing facilities (5)</li> </ul>	No facilities (10); insufficient facilities <sup>2</sup> (5) Crossing spacing (1 pt for every 50m above 200m)
	Cycling (15)	Existing cycling facility two levels below what is recommended <sup>3</sup> (15) Existing cycling facility one level below what is recommended <sup>3</sup> (5)
<b>Traffic Behaviour and Impact (30)</b>	Vehicle Speeds (20) <ul style="list-style-type: none"> <li>• 85<sup>th</sup> Percentile (10)</li> <li>• 95<sup>th</sup> Percentile (10)</li> </ul>	for every 1 km/h above 50 km/h or posted speed if higher than 50 km/h (1)  for every 1 km/h above 55 km/h [or posted speed + 5km/h if posted speed is higher than 50 km/h] (1)
	Peak Period Volumes (10)	Local Streets (1 pt for every 10 vehicles per hour [vph] above 120 vph) Collector Streets (1 pt for every 25 vph above 300 vph)
	<b>Equity<sup>1</sup> and Reach (10)</b>	Qualified requests with subject streets primarily serving disadvantaged communities will be awarded up to 5 pts based on the Ottawa Neighbourhood Study data for Socioeconomic Status [SES].
	Breadth of Benefit (5)	Hub / Compact areas (5) <sup>4</sup> Neighbourhood / Mixed Use areas (3) <sup>4</sup> Undeveloped areas (1) <sup>4</sup>

1. Equity has been considered in the development of each criteria. However, an additional sub-criterion has been added to consider disadvantaged neighbourhoods
2. Recommended pedestrian facilities should be determined through consideration of the [Ottawa Pedestrian Plan](#)'s policy for pedestrian facilities (Section 4.1).
3. Recommended cycling facilities should be determined through consideration of the [Ottawa Cycling Plan](#)'s Facility Pre-Selection Nomograph (Exhibit 4.7).
4. See Figure 7 to help determine the appropriate area context.

**Figure 9 – STUDY: Recommended Study Approach to Address Qualified Requests (See Appendix C and D)**



**Figure 10 – IMPLEMENTATION process**



## Appendix A NTC Study Process Principles

The principles that helped guide the development of the NTC Study Process are below.

**Define and follow a consistent process** - Equity requires the NTC Study Process to be clear and consistent in application. This does not imply “one size fits all”, but that sound methodology be followed.

**Address most severe problems first** - The City should address concerns in a priority sequence, based on the relative severity of those concerns to others.

**Ensure equity of access to resources** - The City needs to maintain equity among communities, addressing problems on the basis of need over peripheral influences.

**Develop an efficient and effective process** – Conduct request qualification (screening), prioritization, and study of qualified requests in an efficient manner in balance with all other principles included herein.

**Focus resources where value can be achieved** – Ensure NTC Program resources are directed to address concerns where high value can be achieved.

**Do good planning** - The City should consider and evaluate a range of solutions, consulting with affected stakeholders, and document results. The process should be open, thorough, and inclusive.

**Conduct monitoring and evaluation** - The City should monitor and evaluate implemented solutions for their effectiveness and make recommendations for adjustments as necessary.

**Consult stakeholders and recognize diverse interests** – Changes to streets should consider interests of all stakeholders who could potentially be affected. Stakeholders can be vital to help identify problems, possible solutions, and help evaluate options.

**Recognize the diverse role of streets** - City streets are public spaces serving a variety of functions to varying degree. It is important to consider context and the intended balance of functions.

**Improve opportunity for sustainable travel modes** - Measures to reduce motor traffic impacts can enhance safety, comfort, and convenience of non-car travel modes, helping meet TMP objectives.

**Consider a measured approach** - Consider simple solutions before more complex and costly ones.

**Address concerns with consideration of secondary effects** – Changes to a street can influence travel behaviour on other streets as well. It is important to ensure any potential benefits and disadvantages be considered in relation to not just the subject street, but nearby streets as well. The intent should be to address concerns, not simply move them to other streets.

## Appendix B Prioritization Scoring Guidance for Qualified Requests

Qualified requests are placed into one of two queues to await being addressed by the NTC Program:

- *Local Traffic Calming (LTC)* - studies for addressing vehicle speed concerns on specific streets in neighbourhoods; and
- *Neighbourhood Traffic Management (NTM)* - studies for addressing traffic management concerns for broader areas within neighbourhoods.

The sequencing of qualified requests waiting in each queue is based on a total score for each. Higher scores are assigned higher priority than lower scores. A request can be assigned up to 100 points based on equal weighting of the following criteria. For NTM requests, scores should be applied based on the most critical Key Corridor segment identified (per guidance in Figure 5).

### • **User Environment and Street Purpose (30 points)**

- Street Designation (15 points) - Street designations are detailed in the City's [Transportation Master Plan](#).

- "Local" streets are assigned 15 points.
- "Collector" streets are assigned 5 points.
- "Village Main" streets are assigned 7 points and for the purposes of the NTC Study Process are defined as streets within both a [Design Priority Area](#) and a Village boundary<sup>2</sup>.

- Activity Generators (15 points)

- Schools – 10 points per school within 250m walking distance
- Parks – 10 points per park adjacent to a subject street(s)
- Community centres – 5 points per centre adjacent to a subject street(s)
- Older adult facilities<sup>3</sup> – 5 points per facility adjacent to subject street(s)
- Licenced child care centres – 5 points per facility adjacent to subject street(s)

### • **Active Transportation Facilities (30 points)**

- Walking (15 points)

- Pedestrian facilities (10 points) – Subject streets with greater than 30 km/h operating speeds with no parallel pedestrian facility on either side are assigned 10 points. Those with one parallel pedestrian facility are assigned 5 points.

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<sup>2</sup> To view a map of Design Priority Areas and Village boundaries, go to [maps.ottawa.ca](http://maps.ottawa.ca). Under "More Layers", check off "Planning", then "Design Priority Areas" and "Official Plan" under that heading. Furthermore, check off "Village Boundaries" under the "Official Plan" heading.

<sup>3</sup> Includes private retirement homes (obtain appropriate data from Ottawa Neighbourhood Study team) and long term care facilities (see geo Ottawa)

- Crossing facilities (5 points) – Subject streets where the average spacing between formal crossings<sup>4</sup> is greater than 200m, shall be assigned 1 point for every 50m above 200m in average crossing spacing.
- Cycling (15 points) – Based on the City’s cycling *Facility Pre-Selection Nomograph* in the [Ottawa Cycling Plan](#), 3 levels of cycling facilities exist according to a subject street’s operating speeds and volumes: (Level 1 - highest) Segregated facilities, (Level 2) Cycle lanes, and (Level 3 - lowest) Mixed traffic.
  - 15 points are assigned where subject streets (or nearby routes<sup>5</sup>) provide a cycling facility two levels below what is suggested by the nomograph (e.g. a “mixed traffic” street where the “separated facilities” are suggested); and
  - 5 points where the existing facility is one level below (e.g. a “mixed traffic” street where cycle lanes are suggested).<sup>6</sup>
- **Traffic Behaviour and Impact (30 points)**
  - Vehicle Speeds (20 points)
    - 85<sup>th</sup> Percentile (10 points) – For Local, Collector, and Village Main streets: 1 point is given to subject streets for every 1 km/h above an 85<sup>th</sup> percentile 50 km/h operating speed (or posted speed if higher than 50 km/h).
    - 95<sup>th</sup> Percentile (10 points) – For Local, Collector, and Village Main streets, 1 point is given to subject streets for every 1 km/h above an 95<sup>th</sup> percentile 55 km/h operating speed (or posted speed + 5 km/h if posted speed is higher than 50 km/h).
  - Peak Period Vehicle Volumes (10 points) [use AADT adjustment factors as necessary]
    - For Local streets, 1 point is given for every 10 vehicles per hour (vph) above 120 vph.
    - For Collector streets, 1 point is given for every 25 vph above 300 vph.
- **Equity and Reach (10 points)**
  - Supporting Disadvantaged Neighbourhoods (5 points) – Qualified requests with subject streets primarily serving disadvantaged communities will be awarded up to 5 pts based on Socioeconomic Status [SES] rating within the [Ottawa Neighbourhood Study](#)<sup>7</sup>. There are five SES rating levels (1 being the most advantaged)
  - Breadth of Benefit (5 points) – 1 point will be given “Undeveloped” context, 3 points for “Neighbourhood” and “Mixed use” context, and 5 points for “Hub” and “Compact” context<sup>8</sup>.

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<sup>4</sup> Formal crossings include any designated pedestrian crossings and cycling cross-rides at intersections or mid-block (e.g. crosswalks at stop control or signalized intersections and pedestrian cross-overs [PXOs]).

<sup>5</sup> Engineering judgement should be used to determine if nearby cycling facilities constitute satisfactory alternatives.

<sup>6</sup> Where full day volume data is not available, as needed to use City’s Cycling Facility Pre-Selection Nomograph, peak volumes can be used to approximate daily volumes using appropriate expansion factors.

<sup>7</sup> To find Socioeconomic Status data, go to <https://www.neighbourhoodstudy.ca/> → Explore Neighbourhoods → MAPS. Under “Choose Data” drop-down menu, select “Economy and Employment”, then “Socioeconomic Status (SES)”.

<sup>8</sup> To be determined using the Area Context Selector in Figure 7.

## Appendix C Recommended Approach to Address Qualified Requests

The study approach and implementation process outlined below expands on the inclusions in Figures 9 and 10. This includes suggested considerations for both addressing vehicle speed and neighbourhood traffic management concerns.

### **STUDY APPROACH**

#### ***Determine community support and confirm concerns***

- **Initiate a “Neighbourhood Traffic Calming Start-Up Survey” (Appendix D)** – Ultimately, any changes recommended by a traffic calming plan will have community implications. As such, it is important to ensure broad support exists to help determine the direction of the study. Otherwise, there is a risk that low interest could lead to missed opportunities and possibly low support to implement any proposed plan. The purpose of the “Neighbourhood Traffic Calming Start-Up Survey” is to confirm residents’ concerns and support for initiating a study, provide them with information on the process, and manage expectations.

#### ***Preliminary Investigation***

- **History** – The NTC Program project manager will consult with the City’s Traffic Services to gain an understanding of historical inquiries, measures considered to date, and any other relevant information that could provide meaningful insights that could inform the study. It is recommended that key correspondence be documented and filed as necessary, in line with City records management best practices.
- **Available Data** – Available road user volumes, vehicle speed data, and collision history are basic operating data that can be reviewed to help identify potential locations of interest within the study area. This information can provide context with respect to road user volumes at various times of day, the proportions of users using different modes of travel, vehicle turning movements, heavy vehicle traffic, crossing activity levels, etc. As necessary, project managers can consider information provided by community members, street users, and Traffic Services (as per previous steps) to help determine any additional data that may be of important consideration. This could result in seeking further data in relation to signal timing plans for signalized intersections, OC Transpo bus volume and ridership data, school bus routings, etc.
- **Desktop Review** – Project managers will generally review the context of a street in terms of land use and transportation context. This could include reviewing area land use types, identifying special land uses that may be of particular interest to the study, private approaches (e.g. frequencies, grades, etc.), intersection configurations, road design characteristics, active transportation facilities, parking, etc. It may be of value to also seek out information on future plans and policies that may impact the study such as land use planning studies (e.g. Community Design Plans), road safety projects, traffic signal changes, intersection modifications, road renewal, and new development applications.

#### ***Develop Traffic Calming Plan***

Guidance on the development of a Traffic Calming Plan is included in Part 1, Section 2 of the City’s [Traffic Calming Design Guidelines](#). The following summarizes the value of each element included in the Recommended Study Approach (Figure 9) as well as additional guidance that may be specific to projects done through the NTC Program.

- **Strategic Approach** – A strategic approach is intended to help determine the potential scope, timelines, and resources for a project.
- **Stakeholder Engagement** – Engagement activities with technical and public stakeholders is an on-going process throughout the development of a traffic calming plan. The context and format of engagement activities will be sensitive to the context of the subject area and planned in accordance with the City's [Public Engagement Strategy](#).
- **Confirm Study Limits** – While the initial study limits should be identified by this point in the process, considering results from the Neighbourhood Traffic Calming Start-Up survey submission and the preliminary investigation, as well as the strategic approach may prompt some modifications to the study limits. Any changes to the study area should be documented with a rationale as necessary.
- **Detailed Investigation** – The project manager will conduct site visits to gain further understanding of context and collect/request additional data as necessary to help investigate particular issues or concerns. The investigation will also seek to confirm results and identify any changes in context beyond the desktop review.
- **Preliminary Plans** – This involves the project manager developing preliminary functional design plans that seek to achieve project objectives per the Strategic Approach. The preliminary functional design plans will be guided by technical considerations within the City's [Traffic Calming Design Guidelines](#).
- **Evaluate Preliminary Plans** – The project manager will consider input provided by City departments and public stakeholders as well as technical and financial considerations when evaluating the preliminary functional design plans. The intent is to help determine a preferred plan that can be presented to stakeholders for review. This could involve exploring a multitude of options with stakeholders. The final preliminary functional design plan development would be supported by the completion of a high-level cost estimate.
- **Recommended Functional Design** – A recommended functional design would be developed considering stakeholder input on the preferred plans. After the recommended functional design is developed, an updated high-level cost estimate would be produced, the public stakeholders would be consulted on the resulting plan, and the project manager may seek to confirm community consensus in consultation with affected Ward Councillors. The necessity of confirming community consensus would depend on the level of community input throughout the study and intensity of proposed measures. This could include additional consultation with residents.
- **Roadway Modification Approval (RMA)** – The project manager will formalize the recommended functional design through the City's RMA process which requires Councillor concurrence on the plan<sup>9</sup>.

## **IMPLEMENTATION PROCESS**

### ***Design and Implement Plan***

Once a study has been completed (see above), and when sufficient funding is available, the project manager submits the project to the City's Infrastructure Services (via the internal Project Charter process) to undertake the preliminary and detailed design followed by construction of the

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<sup>9</sup> The Delegated Authority by-law indicates that authority to approve roadway modifications (through the RMA process) is delegated to the General Manager of the Transportation Services Department.

recommended plan in accordance with the City's [Traffic Calming Design Guidelines](#), and other relevant national, provincial, and City standards and specifications. Project managers can seek to submit joint Project Charters combining multiple projects to seek efficiencies.

- **Confirm Funding** – The project manager must identify all sources of funding intended to be used to implement the project and highlight them within the Project Charter. Total budget should be sufficient to cover the high-level total project cost estimate produced through the study (including all design, contingencies, etc.). It should be noted that qualified requests addressed through the NTC Program will be funded on a “first-in-first-out” approach within the available annual NTC Program budget envelopes.
- **Preliminary and Detailed Design followed by Construction** – Infrastructure Services will undertake the preliminary and detailed design of the project to complete all requirements in advance of construction. This includes developing a detailed construction cost estimate. Should the construction cost estimate exceed the initial budget, adjustments to the plan may have to be made or the project delayed until sufficient funds can be allocated. Finally, Infrastructure Services would seek bids from contractors to construct the project. Should the cost of the lowest bid exceed available budget, the project will not proceed to be built unless additional funds can be secured.

### ***Monitoring, Evaluation, and Revision***

The City will conduct monitoring and evaluation to determine if a project is meeting objectives as intended once implemented. The context and format of the monitoring and evaluation will be sensitive to the context of each project. In some cases, adjustments may be made if objectives are not being met to an appropriate level or if unacceptable secondary impacts have occurred because of the implemented measures. Post-implementation adjustments would be at the discretion of the NTC Program in consideration of available resources and technical considerations.

### ***Project Completion***

Once the monitoring, evaluation, and revisions (as necessary) have been conducted, the project will be considered complete and reviewed only if a request to do so is submitted in accordance with the NTC Study process<sup>10</sup>.

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<sup>10</sup> Traffic calming measures implemented through the NTC Study Process will only be reviewed following the monitoring, evaluation, and revision phase of projects if there is evidence of safety issues associated with the installation.

## Appendix D Neighbourhood Traffic Calming Start-Up Survey

The NTC Program will prepare and distribute a “Neighbourhood Traffic Calming Start-Up Survey” for residents within the study area to complete. The purpose is to provide information to residents, solicit concerns, and ensure a reasonable level of support exists to help determine if furthering the study is appropriate.

The distribution of the survey will be coordinated by the NTC Program and will include the following elements:

- **Introductory Information** – Residents will be informed that a traffic calming study may be initiated if there is sufficient community support and asked to respond to a series of questions.
- **Questions for residents** – Some basic questions will be posed to residents such as what their key concerns are, locations of interest, and opinions on various traffic calming measures. Submission instructions and contact information will be provided as well. This may include a set deadline for when residents may respond by. Based on responses received, the NTC Program will assess if there is sufficient community support to continue with the study. Requirements for what is determined to be a sufficient support level will vary based on the nature of the request(s) in terms of the potential magnitude of solutions that would be required to address concerns and will be at the discretion of NTC Program in consultation with the Ward Councillor.