



# tool kit

## Traffic Calming Techniques in Neighborhoods Along Strategic Regional Thoroughfares

### Purpose

Problems can arise when drivers travel at arterial speeds into adjacent neighborhoods. This issue can become particularly pronounced as development activity increases and drivers look for cut-through routes or ways to make up time lost on major roads even in their own neighborhoods.



The SRTP prioritizes providing safety for all thoroughfare users. Traffic calming provides an important vehicle for creating a safe environment for residents living adjacent to these major roads.

Traffic calming is an effective tool for increasing safety and meeting stakeholder expectations along certain roads. It increases driver attentiveness, thereby making collisions less likely and posing benefits to pedestrians, cyclists, and adjacent land uses. Because traffic calming is usually a result of community concerns, traffic calming techniques are typically applied in urban contexts and neighborhoods.

A comprehensive traffic calming plan for a neighborhood can help ensure that traffic calming measures are marked and spaced appropriately as to ensure their effectiveness. A comprehensive approach is important because isolated approaches often divert the traffic concerns to other nearby roads, simply transferring the problem somewhere else.

### CASE STUDY *Reduced Road Capacity*

#### VICTORIA, BRITISH COLUMBIA

Victoria, B.C. implemented traffic calming on Cook St., an arterial road just outside of its downtown core by making permanent on-street parking of two exterior flex lanes, previously converted from on-street parking to travel lanes during peak hours. Middle lanes were converted to a combination of left turn lanes where required and pedestrian refuge medians. The outcome was reduced speeds and nearly a 50 percent reduction in crashes per year.

#### Speeds (85<sup>th</sup> Percentile)

*Before – 31.9 mph*

*After – 28.9 mph*

#### Volumes

*24,000 AADT*

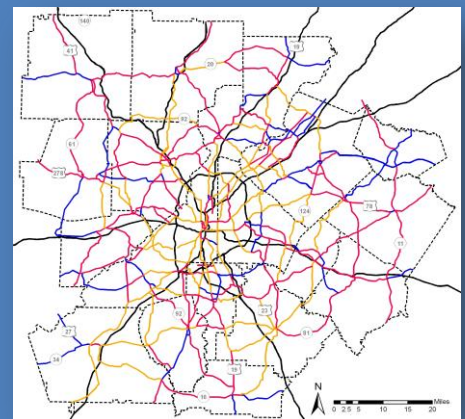
*Unchanged (along with most traffic volumes on parallel arterials)*

#### Crashes

*Before – 36 per year (averaged over the 4 proceeding years)*

*After – 19 crashes per year*

Source: Skene, Michael, "Traffic Calming on Arterial Roadways?"



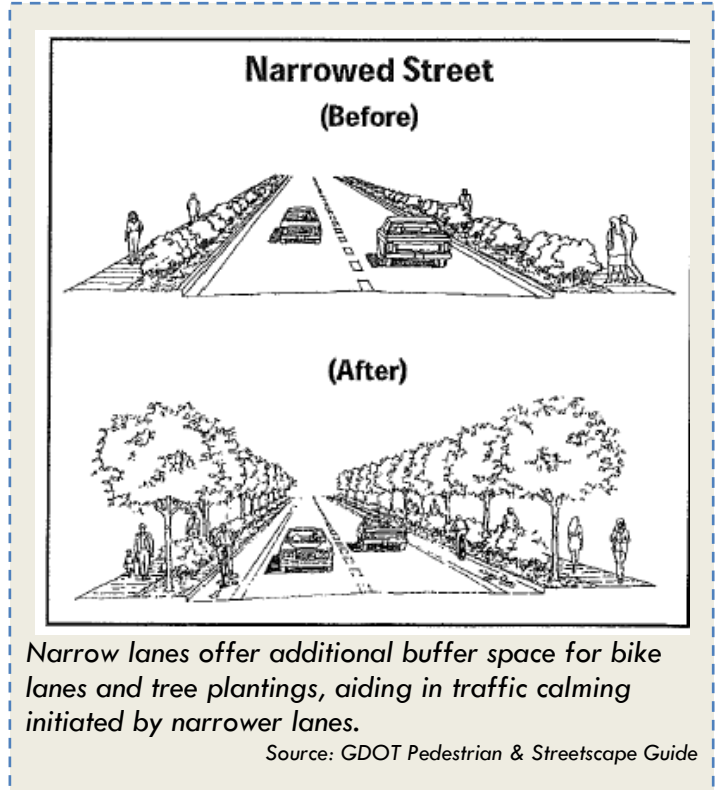
*Strategic Regional Thoroughfare Network*

Communities take different approaches to traffic calming. One approach is to develop specific thresholds (monitor traffic speeds and volumes) to warrant specific traffic calming elements. A second approach is to respond to citizens requests. In this case, neighborhood petitions are often required as part of the procedure for implementing traffic calming measures.

## Traffic Calming Techniques

Traffic calming devices include the following:

- Gateway signage – signage at the entrance to a residential area introduces drivers to the community and cues them to slow down.
- Narrowed streets – narrowing lanes naturally decrease travel speeds of motorists and frees up space for other street elements (such as bike lanes and wider sidewalks), creating a more complete street.
- Medians and refuge islands – separate two directions of traffic typically with a paved or raised middle strip, which also serves as a stopping place for pedestrians when crossing the road.
- Chicanes – curb extensions, landscape islands, or on-street parking that alternate from one side of the street to the other, causing cars to wait for others to pass before moving forward.
- Curb extensions/bulb-outs – traffic calming measure intended to slow the speed of traffic and increase driver awareness; when used in built-up and residential neighborhoods, they can reduce pedestrian crossing width, enhance aesthetics of the street, and buffer on-street parking.



- Diverters and Street Closures – close streets and eliminate cut-through traffic; may pose a barrier to emergency vehicles.
- Raised intersections – often paved with unique materials or painted a different color; psychologically tell drivers that the area is not designed for high speeds.
- Raised crosswalks/speed tables – appropriate for mid-block crossings on local streets.
- Speed feedback signs – combined display of the regulated speed limit and a dynamic “your speed” display based on approaching vehicle.

According to Michael Skene, author of “Traffic Calming on Arterial Roadways?,” traffic calming in the United States has become skewed by its association with livability and environmental stewardship rather than its main purposes of safety/accident reduction and slowing speeds.

Skene categorizes traffic calming techniques as the following:

- Self-enforcing measures – speed humps, coordinated signals
- Self-explanatory measures – urban environment, landscaping, and aesthetics
- Information – signage
- Traffic control – intersections, roundabouts, signals
- Other – Intelligent Transportation Systems (ITS), reader boards, driver awareness

## Traffic Calming to Accommodate Pedestrians

- Reduce crosswalk distances
- Increase sidewalk space
- Shield sidewalks from motor vehicles with parked vehicles, trees, curbs, bicycle lanes

## Traffic Calming to Accommodate Bicyclists

- Install bicycle lanes
- Reduce intersection size - reduces probability of motor vehicle/bicycle conflicts

Although traffic calming typically improves safety, it can also pose the following disadvantages:

- Less safety for motorists who do not head change in operating conditions
- Slower emergency response
- Potential impediments to transit operations or truck operations

## Land Use and Transportation Connection

Traffic calming devices help ensure the viability of land uses within an area, reducing accidents and lowering travel speeds to better meet the posted speed. Regulations for new development and redevelopment of existing neighborhoods can incorporate design elements discussed on the previous page. Local officials can also require that new, non-residential developments adjacent to existing residential areas work with the affected neighborhoods to identify ways to mitigate new potential cut-through traffic caused by the development. Addition of traffic calming techniques and connecting pathways from residential areas to the development are two possible remedies.

## Urban Areas

Urban areas are likely to experience high speeds on streets that have fewer traffic controls (stoplights, stop signs, etc.) Traffic calming measures could provide relief but need to be part of an areawide traffic calming plan so that the speeding problems will not simply move to another nearby street.

### Traffic Calming Device Application



*Median and lane narrowing.*

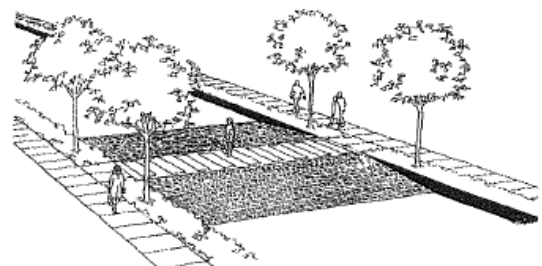


*Curb extension slows down drivers.*



*Change in paving materials signals drivers to slow down, giving pedestrians a chance to safely cross.*

### Raised Crosswalk/Speed Table



Source: GDOT Pedestrian & Streetscape Guide

# ARC STRATEGIC REGIONAL THOROUGHFARE PLAN

## Suburban Areas

Many suburban areas are likely to be designed as to slow traffic. Cul-de-sacs and “dead-end” streets may discourage exceeding speeds. In these areas, monitoring of speeds with feedback signs and retrofitting with curb extensions/bulb-outs are possible remedies for speed reduction. When replacing cul-de-sacs with a grid network, it is important to incorporate traffic calming features to protect neighborhoods from speeding.

## Rural Areas

Speed management is a challenge for rural areas as they quickly transition from rural to “urbanized.” Signage is critical to these areas. One report by FHWA indicates that the most effective treatments for speeding in rural areas are feedback signs, speed tables, median islands using tubular markers, and speed limit markings with red.



*Median with tubular markers to help slow traffic.  
Photo credit: Federal Highway Administration.*

## Resources

S RTP Management and Design Guidelines. ARC.  
*A variety of related design guidelines for strategic regional thoroughfares.*

ContextSensistiveSolutions.org  
*A variety of appropriate design controls for various contexts.*

City of Seattle Traffic Calming Program  
[www.seattle.gov/transportation/ntcp\\_arterial/](http://www.seattle.gov/transportation/ntcp_arterial/)  
*Traffic calming strategies utilized by the City.*

City of Tacoma Traffic Calming Project  
[www.cityoftacoma.org](http://www.cityoftacoma.org)  
*Traffic calming strategies utilized by the City.*

*Traffic Calming Benefits, Costs and Equity Impacts.*  
Victoria Transport Policy Institute.  
*Comprehensive framework for evaluating the benefits and costs of traffic calming programs.*