City of Mill Creek
Department of Public Works

Traffic Calming Program Manual

City of Mill Creek

Traffic Calming Program

Revised October 2007

Introduction

Traffic Calming

The Mill Creek Traffic Calming Program is developed to respond in a uniform manner to traffic related issues on streets with Average Daily Traffic (ADT) of less than 8,000 vehicles. It is the intent of the City to review this program and modify the program as necessary to continue to respond to the needs of our neighborhoods.

Traffic conditions on local streets can greatly affect neighborhood livability. When our streets are safe and pleasant, the quality of life is enhanced. When traffic problems are a daily occurrence, our sense of community and personal well-being are threatened. With your help and the City's efforts in education, engineering, and enforcement, we can work together to address traffic problems on local streets.

Citizen involvement is an important part of all traffic calming projects. The people who live and work in the study area have the opportunity to become actively involved in the planning and decision-making process.

What is the Traffic Calming Program?

Mill Creek's Traffic Calming Program is part of the City's commitment to the safety and livability of our neighborhoods, and it incorporates the goals and objectives of the City's Comprehensive Plan. It is a collaborative effort of City staff and local residents to reduce the impacts of traffic on local streets. Through active participation by you and your neighbors, we can identify the problem, plan the approach, implement the solutions, and evaluate the effectiveness. Traffic calming for residential areas is a concept that seeks harmony between automobiles and people.

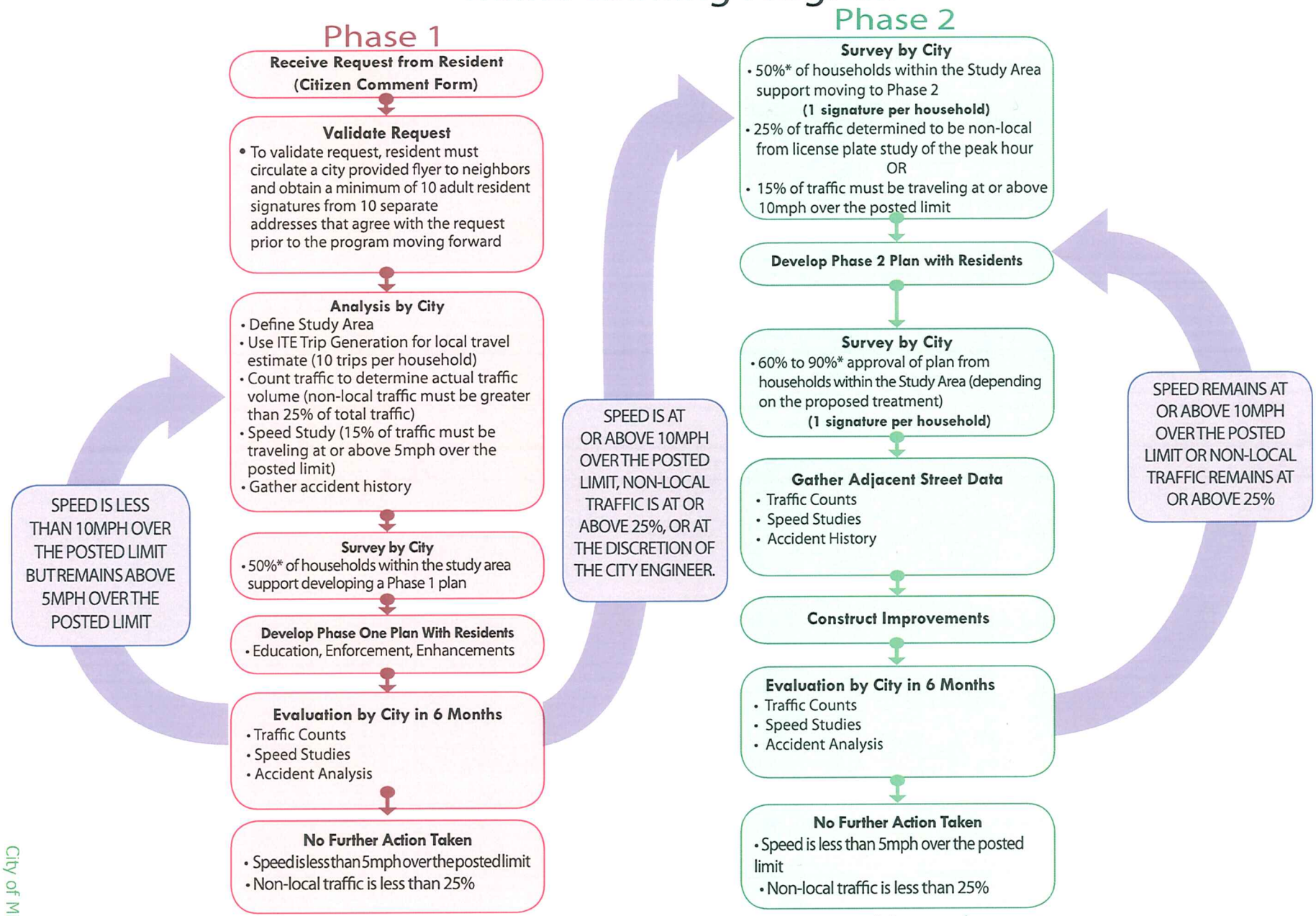
How does the program work?

The program works in two phases. Phase I focuses on passive, less restrictive measures like educational programs, enforcement, pavement markings, and signage. Should the Phase I measures prove ineffective at reducing excessive speeds or traffic volumes within a given time frame, then we generally proceed to Phase II of the program, which includes more restrictive methods.

Limitations

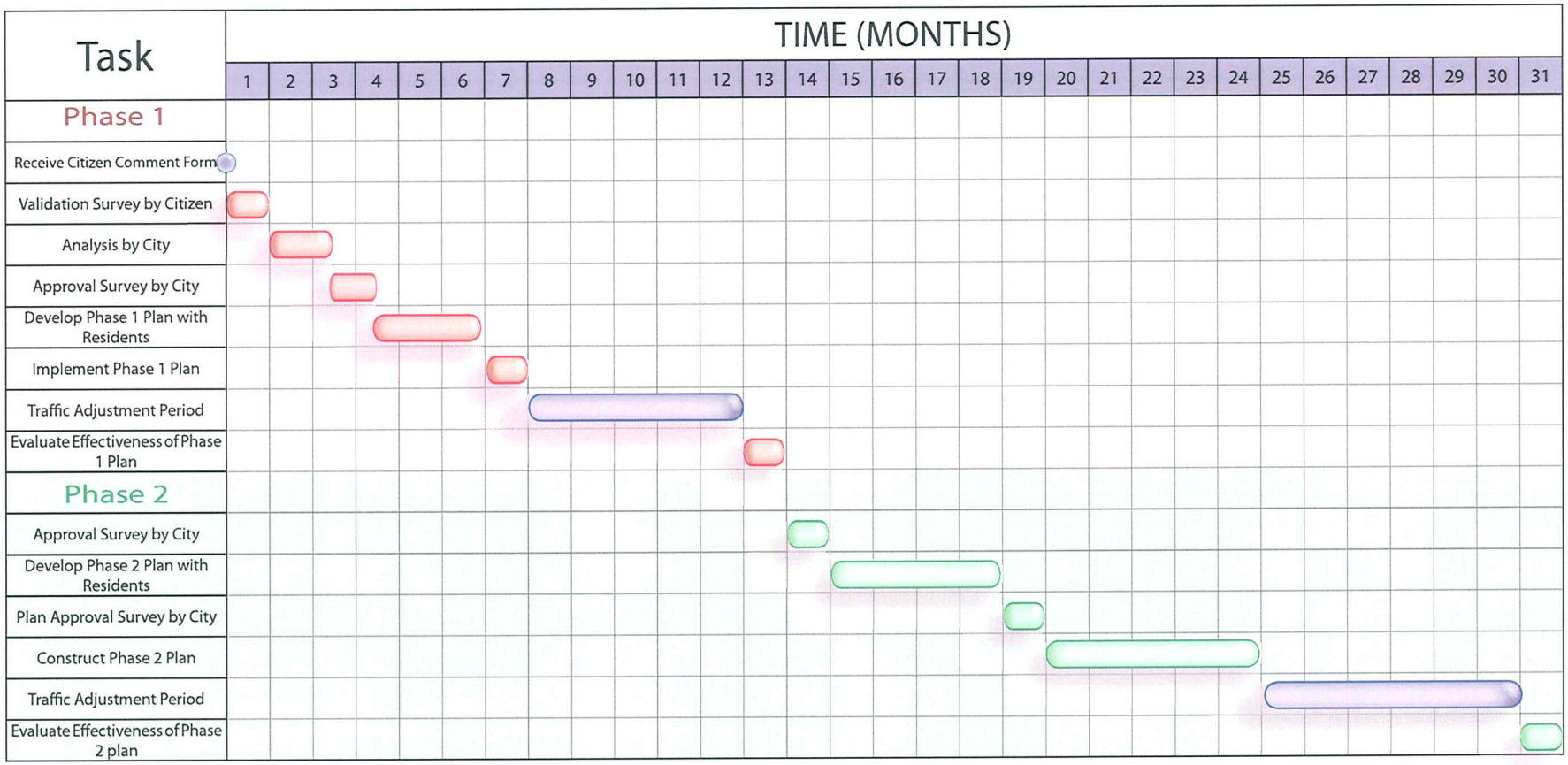
The City's Traffic Calming Program has been adopted in furtherance of the public health, general safety and welfare. It is not intended to create nor to benefit a special class of individuals, nor does it create any third party rights or beneficiaries. Implementation of the program, in whole or in part, is subject to available funding, City resources, and other variables.

Traffic Calming Program



* Approval percentages are based on returned ballots only.

Traffic Calming Program
Typical Implementation Timeline



Phase I

When you or your neighbor turns in a Citizen Comment Form to the City, your residential location begins Phase 1 of the Traffic Calming Program.

You will receive a Validation Flyer from the City that outlines the requested action. A minimum of 10 adult resident signatures from 10 separate addresses showing their support for starting a Traffic Calming Program will be required prior to going forward with the program. However, the City Engineer may waive the petition requirement based on the circumstances of the individual site.

Once the flyer is returned to the City showing neighborhood support, we will define the study area and collect data from speed studies, accident histories, and traffic counts. This information, along with insights and suggestions from area residents help us to determine which of the Phase 1 solutions to recommend to improve safety on your street.

STUDY AREA DEFINITION

The study area will be determined by City Staff and will be influenced by configuration of the street system in the area, travel routes for elementary schools or local parks and potential alternative local street routes where traffic could move to. Factors that will be considered when defining the Study Area will include:

- Location of arterial and collector streets
- Potential parallel local street routes
- School boundaries
- Subareas as defined in the City's Comprehensive Plan
- Location of local parks

To Qualify for a Phase 1 plan, the following criteria must be met:

- EITHER -

15% of the traffic will be travelling at or above 5mph over the posted limit

- OR -

25% of the traffic is determined to be non-local, based on ITE trip generation guidelines

- AND -

50%* of the households within the study area show support for developing a Phase 1 Plan

Resident volunteers will be available to attend meetings to help develop a plan

* Approval Percentages are based on returned ballots only.

Phase I Solutions

Examples of Phase 1 actions include:

Traffic Safety Campaign

An informational letter is prepared by the City and mailed to your neighbors. The letter explains traffic volumes and speed study results in your area. Recommended traffic calming measures, along with information about traffic laws, pedestrian and bicycle safety are included in the letter. The goal is to heighten traffic safety awareness within the neighborhood. Many of the inattentive drivers who cause the traffic problems likely live in the immediate area.

Signage

Posting appropriate traffic control signs is a Phase I solution. Signs may include speed limit, parking, school signs, etc.

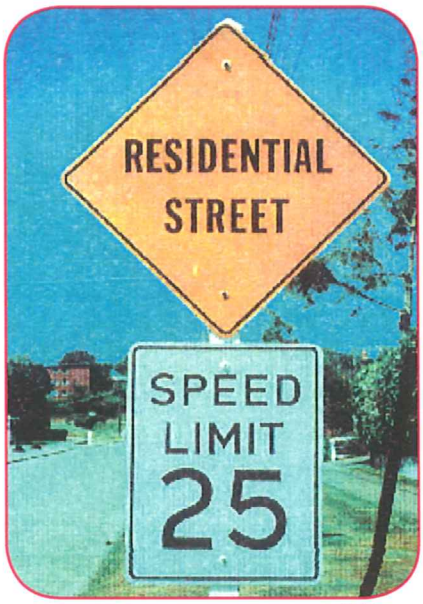
Pavement Markings

Painting legends and other markings on local streets can also be a Phase I solution. Pavement markings can include centerlines, fog lines, identification of school crossings, and speed limits.

Trimming Vegetation

Obscured lines of sight can create hazardous conditions. Sight distance can be improved when brush is trimmed and vegetation is cleared by homeowners or City crews.

Neighborhood Speed Reduction Program



Signs

Pavement Markings

Targeted Police Enforcement

Increased enforcement by the Mill Creek Police Department can be a part of a recommended Phase I solution.

Radar Speed Trailer

A portable trailer equipped with a radar unit detects the speed of passing vehicles and displays it on a digital reader board. This device shows drivers their "actual" speed versus the posted speed limit. This information helps to promote compliance with the posted speed.

Why Stop Signs Are Not Used for Speed Control

One of the most common requests we receive is for the installation of stop signs to slow cars down. It seems like an obvious, inexpensive way to reduce vehicle speeds. However, what seems to be a perfect solution can actually create a less desirable situation.

When stop signs are used as "nuisances" or "speed breakers," there is a high incidence of drivers intentionally violating the stop. When vehicles do stop, the speed reduction is effective only in the immediate area of the stop sign, since a large percentage of motorists then increase their speed to make up for lost time. This results in increased mid-block speeds.

For these reasons, we do not use stop signs as speed control devices. Instead, they are used to improve safety at intersections where traffic volumes or accidents require their installation.

Sign Obscured by Vegetation

Police Radar

Radar Trailer

Phase 2

Lack of progress in meeting the goals of traffic calming in the study area upon completion of the Phase 1 Plan may qualify your street for Phase 2 consideration.

Phase 2 begins approximately 9 -12 months from the implementation of Phase 1 measures. We will again collect data on speed, accidents and volume and compare it to the previously obtained information.

If the Phase 1 goals have not been achieved or are not expected to be effective, the City Engineer may authorize moving directly to the Phase 2 plan even if the threshold critieria have not been met.

Speed Bumps

One of the most common traffic calming requests is for the installation of speed bumps, usually due to lack of knowledge about other options. Speed bumps are strongly discouraged by the City and all emergency response agencies.

Speed bumps are noisy and cause significant delays to police and fire vehicles. Since speed bumps are generally disliked by drivers, they will often shift an existing traffic problem to another neighborhood. There are many other options that can be equally as effective without the negative impacts.

Phase 2

For your street to qualify for a Phase 2 Plan, the following criteria must be met:

- EITHER -

15% of the traffic must be traveling at or above 10mph over the posted limit

OR

25% of the traffic is determined to be non-local traffic, based on a license plate study of the Peak Hour

- AND -

50%* of the households within the study area show support for moving into a Phase 2 Plan

Resident volunteers will be available to attend meetings to help develop a plan

60% to 90%* (depending on the proposed treatment) of the households within the study area must approve the Phase 2 Plan before proceeding to construction

* Approval Percentages are based on returned ballots only.

Possible Phase 2 Solutions

The concept upon which a Phase 2 Plan is developed is based on the use of more active physical treatments to address traffic calming concerns.

Examples of Phase 2 improvements include:

Curb Extensions / Radius Reductions

Curb Extensions are used to narrow the roadway and increase sight distance at selected locations along a street corridor.

Speed Cushions

A raised area of road, approximately 3 inches high and either 12 or 22 feet long with gaps to allow for unimpeded emergency vehicle passage. This treatment is used to slow vehicles by forcing them to decelerate in order to pass over them comfortably.

Speed Tables / Raised Crosswalks

A raised crosswalk or speed table is a raised area of roadway pavement approximately 3 inches in height with a travel length of 22 feet. A 10-foot wide crosswalk is marked on top of the raised pavement to form a Raised Crosswalk.

Traffic Circles / Speed Dots

Traffic Circles are built in the center of intersections or at mid-block locations that slow traffic by forcing it to keep to the right and travel in a counter-clockwise direction in order to continue on their traveling path

Medians

Medians are raised islands that separate the traffic lanes and narrow the travel path, causing the traffic to slow down.

Curb Extension

Speed Cushion

Raised Crosswalk

Traffic Circle

Median

Chicanes

Chicanes are curb extensions that alternate from one side of the street to the other, forming S-shaped curves causing traffic to slow down

Chicane

Entry Treatments

Usually consisting of pavement treatments or medians, Entry Treatments can potentially not only provide substantial enhancement to the community entry point, but also reduce the speed of the traveling motorist.

Entry Treatment

Stationary Radar Signs

Similar to the Radar Speed Trailer, Stationary Radar Signs can be used to draw a driver's attention to their actual speed and the local speed limit. Since many people do not realize how fast they are traveling in residential neighborhoods, these devices are installed to alert motorists of their traveling speed.

Radar Sign

Diverters

Diagonal diverters are barriers placed diagonally across an intersection, blocking through movements and creating two separate, L-shaped streets.

Turn Restrictions / Partial Closures

Partial Closures involve closing down one lane of a two lane roadway along with a "Do Not Enter" sign, in order to reduce cut through traffic.

Partial Closure

Full Closures

Full Closures are exactly that, closing the whole road to prevent all cut through traffic. Sidewalks and bike lanes are kept open. Also, access for emergency vehicles will need to be provided at these locations. This is an extreme measure to be used only when all other measures have failed.

Each of the treatments is unique and specific guidelines have been established for when and where they may be used. Refer to Phase 2 Treatment Descriptions in the Appendix for installation guidelines.

Based on the data collected and the topography of the area, a treatment or combination of treatments may be recommended. Of course, any recommended action will be based on sound engineering and planning principles. Safety remains paramount in the decision-making process, including consideration to emergency response by police, fire, and paramedic crews.

City of Mill Creek
TRAFFIC CALMING PROGRAM
City-Wide Traffic Calming Characteristics Summary

	PHASE 1	PHASE 2
Qualification Requirements	15% of traffic traveling at or above 5 MPH over the posted limit OR 25% of peak hour traffic is non-local AND At least 50% of households are supportive of developing a Phase 1 plan (based on returned ballots, must have 25% min returned)	15% of traffic traveling at or above 10 MPH over the posted limit OR 25% of peak hour traffic is non-local OR If deemed appropriate by the City Engineer AND At least 50% of households supportive of moving into Phase 2, (based on returned ballots)
Treatment Options	• Traffic Safety Campaign • Signage • Pavement Markings • Trimming Brush • Target Police Enforcement • Radar Speed Trailer	• Curb Extensions / Radius Reductions • Speed Cushions • Speed Tables / Raised Crosswalks • Traffic Circles / Speed Dots • Medians • Chicanes • Entry Treatments • Stationary Radar Signs • Diverters • Turn Restrictions / Partial Closures • Full Closures

City of Mill Creek
TRAFFIC CALMING PROGRAM
PROJECT PRIORITIZATION SCORING

(To be used when more than 1 Study Area is under consideration for funding)

CRITERIA	POINTS
Average Daily Traffic (ADT)	
0 - 2000	1
2001 - 4000	2
4001 - 6000	3
6001 - 8000	4
Traffic Speeds (85th Percentile)	
5-7	2
8-10	4
More than 10	6
Non-Local Traffic	
25%-49%	1
50%-74%	2
More than 74%	3
Parks / Schools	
Greater than 6 blocks	1
Between 3 blocks and 6 blocks	2
Within 3 blocks	3
Accident History (Accidents / Year)	
1	3
2	4
3	5
More than 3	7

Tips

How can you make your local streets safer?

As a driver:

DRIVE SLOWER

The maximum legal speed on a local street is 25mph (unless otherwise posted). Driving at a speed of 25mph or less gives you more time to react to the unexpected, such as a child darting out from between parked cars or to a car backing out of the driveway. Unless you are consciously aware of your speed, you may be driving faster than you should.

Remind neighbors to drive 25mph. Make sure that others who use your vehicle drive 25mph. It is important to note that driving at a lower, more responsible speed on local streets has very little effect on the time it will take you to get to your destination.

AVOID USING LOCAL STREETS AS SHORT CUTS

The more we use residential streets as short cuts, the more we disrupt the quality of life in neighborhoods. Neighborhood cut-through traffic increases noise and pollution in residential areas and results in a greater threat to the safety of children.

OBSERVE THE RULES OF THE ROAD

Don't take chances, even on short trips. Statistics show that most accidents occur close to home. In particular, make sure that you and all your passengers always buckle up.

CHANGE YOUR DRIVING PATTERNS ON LOCAL STREETS

Learn to adopt a different attitude! You should expect the unexpected, especially on local streets. Imagine the pain you would be living with were you to have and accident and injure a child or an elderly pedestrian, even if it isn't your fault. Stop for pedestrians. Crosswalks exist at every intersection whether or not they have been painted on the street.

Tips

How can you make your local streets safer?

As a parent:
EDUCATE YOUR CHILDREN

Ensure that your children know and understand the rules of the road. Children are the primary pedestrians on local streets. Children are the most likely victims of careless drivers. Studies have shown that younger children have difficulty making safe judgments about traffic dangers. Do not let your children play in the street. Warn them about darting into the road after pets or toys. Select bright clothing for children who will be near traffic. Teach your children to stop, look both ways, and listen before crossing the street.

Make sure that they know that even though cars are supposed to stop, they may not.

SET A GOOD EXAMPLE

Drive the speed limit. Be a courteous driver. Let children off on the correct side of the road when delivering or picking them up from school. Ensure that your kids are equipped with a safety helmet when riding their bikes.

DON'T RUSH

Do not rush while driving. Be organized and leave a little earlier. In particular, do not rush getting children to and from school. Your urgency may cause them to disregard traffic safety and run headlong into the street.

GET INVOLVED AND DO YOUR PART TO IMPROVE TRAFFIC SAFETY!

We look forward to working with you to make your streets safer!

Appendix

Citizen Comment Form

Circle one: **In Person** **Mail** **Phone** **E-mail** Received By: _____

Nature of Complaint/Suggestion (continue on back if necessary): _____

_____

_____

Location/Address (sketch on back if necessary): _____

Property Owner Name (if known): _____

Person Making Comment: _____

Address: _____

Phone: _____

Would you like a response? ☐ No ☐ Yes *If yes, please circle one* **Written** **Email** **Verbal**

Chapter 42.17 RCW, the Public Disclosure Law states; as a complainant you may indicate a preference for disclosure or non-disclosure of your name to inquiries from the public. If you choose to keep your name confidential, the complainant information will be removed from this form. The other portion will remain public record.

☐ You ***may*** disclose my identity upon public inquiries regarding this complaint.
☐ You **may not** disclose my identity upon public inquiries regarding this complaint without my permission.

It should be understood that if this case is filed in court your name must be disclosed ***if*** you are to be a witness in the case.

For Internal Purposes Only

Date/Time of Investigation: _____ Investigated By: _____

Report: _____

_____

_____

_____

Original form to City Clerk for filing (please copy the City Clerk on all responses to this issue)

CC: _____ _____ _____ _____

15728 Main Street Mill Creek, Washington 98012
Phone 425-745-1891 Fax 425-745-9650
www.cityofmillcreek.com

Validation Flyer

We, the Residents of _____, would like the City of Mill Creek to initiate a Traffic Calming Study in our neighborhood to address the following concerns:

- ◯ Speeding
- ◯ Pedestrian Safety
- ◯ Cut-Through Traffic
- ◯ Parking Issues
- ◯ Other _____

We understand that the Comprehensive Traffic Calming Study involves active participation of our community. The decision making process may require us to set and attend neighborhood meetings and conduct further petition campaigns.

Please sign the attached form and mail it back to:

City of Mill Creek Public Works Department
Attn: Public Works Director
15728 Main Street
Mill Creek, WA 98012
Phone: 425-745-1891
www.cityofmillcreek.com

Note: One signature per household only. Make additional copies of the validation flyer as necessary.

Validation Flyer

NEIGHBORHOOD REQUEST FOR COMPREHENSIVE TRAFFIC CALMING STUDY

Neighborhood/Street _____ Page _ of _____

NO.	NAME	ADDRESS	PHONE	SIGNATURE (one per household)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

Technical Feasability, Constraints, Guidelines, and Factors Affecting Design

The following technical aspects would be considered when a physical treatment is considered:

- It must be determined that the treatment will work for the defined problem
- Impact on parallel streets needs to be considered and addressed
- Stopping sight distance standards need to be evaluated
- Adequate provisions for buses (school, transit) garbage collection, moving vans, construction equipment, pedestrians and bicyclists need to be made
- Ensuring that the treatment will allow adequate drainage
- If curbs and gutters are not present, the design of individual traffic control treatments may need to be modified to restrict drivers from using the shoulders to avoid them
- The proximity to other calmed areas and intersections
- Physical treatments would only be installed on paved roadways with good surface conditions
- Appropriate spacing between treatments
- Roadway grade considerations. Some treatments will not be used on grades exceeding 8%
- Effect of treatment on street sweeping and other maintenance activities
- The cumulative effect of physical treatments on emergency vehicle response times would be considered
- Potential loss of on-street parking
- Increase in concentration of noise and air pollution levels due to the physical treatment
- Sight distance obstructions related to landscaping, fences, roadway alignment, grade, etc.
- Impact on driveway access to adjacent properties

PHASE 2

TREATMENT DESCRIPTIONS

Curb Extensions / Radius Reductions
Speed Cushions
Speed Tables / Raised Crosswalks
Traffic Circles / Speed Dots
Medians
Chicanes
Entry Treatments
Stationary Radar Signs
Diverters
Turn Restrictions / Partial Closures
Full Closures

Curb Extensions/Radius Reduction

PHASE 2

APPLICATION

- At intersections to increase sight distance and narrow roadway
- Mid-block to narrow roadway and shorten pedestrian crossings

QUALIFICATIONS

- 15% of the traffic is traveling at or above 10mph over the posted limit

-OR-

- 25% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

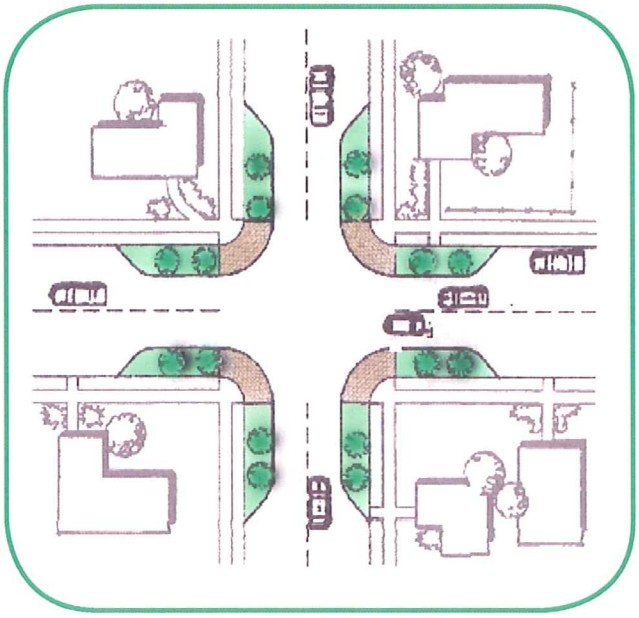
- 60% of the households within the study area approve the use of this treatment based on returned ballots

ADVANTAGES

- Reduces pedestrians' crossing distance
- Narrowed lanes can slow vehicles
- May increase sight distance at intersections

DISADVANTAGES

- May require removal of some on-street parking
- Effective curb extension design may limited marked bicycle lanes



SPECIAL CONSIDERATIONS

- Consideration of marked bicycle lanes and roadway widths
- Landscape Maintenance

COST - Moderate to High

Speed Cushions

PHASE 2

APPLICATION

- In the neighborhood where speed control is desired
- Neighborhood streets where cut-through traffic is to be discouraged

QUALIFICATIONS

- 15% of the traffic is traveling at or above 10mph over the posted limit

-OR-

- 25% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area approve the use of this treatment based on returned ballots

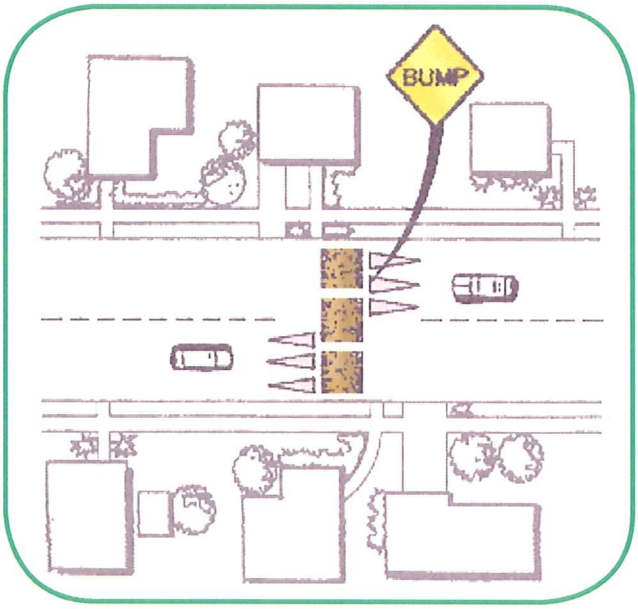
- Traffic volume is less than 2,000 vehicles per day

ADVANTAGES

- Slows traffic - potentially 5-10mph decrease in the vicinity of the speed cushion
- May divert traffic if adjacent arterial street exists
- Self-enforcing

DISADVANTAGES

- May cause diversion of traffic to adjacent neighborhood streets
- Acceleration/deceleration noise adjacent to speed cushion



SPECIAL CONSIDERATIONS

- Adjacent to school zones or neighborhood parks
- Use of 22 foot design on higher volume roadways
- Minimum of two cushions per project site for speed control

COST - Low to Moderate

Speed Tables/Raised Crosswalks

PHASE 2

APPLICATION

- In the neighborhood where speed control is desired
- Neighborhood streets where speed control at pedestrian crossings is desired

QUALIFICATIONS

- 15% of the traffic is traveling at or above 10mph over the posted limit

-OR-

- 25% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area approve the use of this treatment based on returned ballots

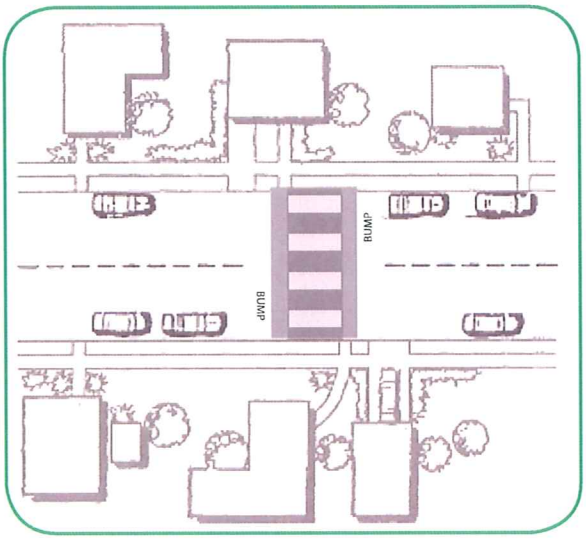
- Traffic volume is less than 2,000 vehicles per day

ADVANTAGES

- Slows traffic - potentially 5-10mph decrease in the vicinity of the raised crosswalk
- Heightens driver awareness to the crosswalk
- May divert traffic if adjacent arterial street exists
- Self-enforcing

DISADVANTAGES

- Emergency response delay between 1 and 8 seconds
- Acceleration/deceleration noise adjacent to raised crosswalk



SPECIAL CONSIDERATIONS

- Adjacent to school zones or neighborhood parks

COST - Moderate

Traffic Circles / Speed Dots

PHASE 2

APPLICATION
- In the neighborhood where speed control is desired
- Neighborhood intersections where right-angle accidents are occurring
- Mid Block Locations (Speed Dots)

QUALIFICATIONS
- 15% of the traffic is traveling at or above 10mph over the posted limit

-OR-

- 25% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area approve the use of this treatment based on returned ballots

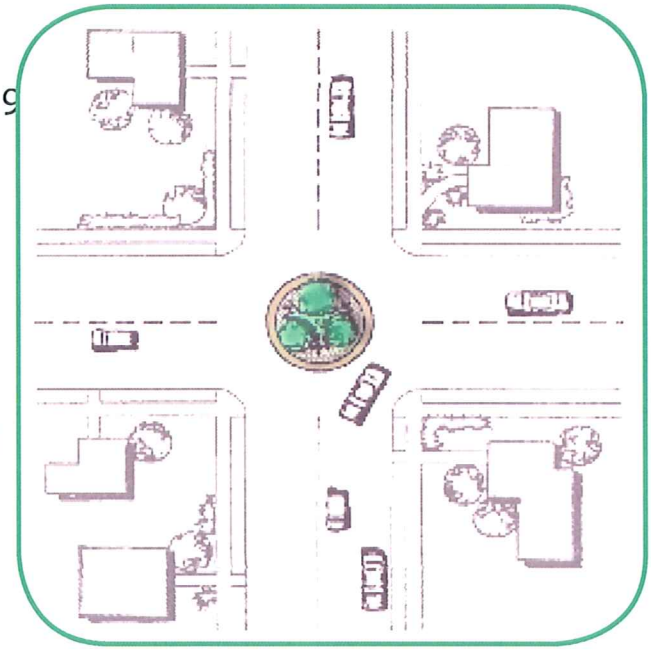
- Traffic volume is less than 2,000 vehicles per day

ADVANTAGES
- Slows traffic with potentially 5-8mph decrease
- May divert traffic if adjacent arterial street exists
- Opportunity for landscaping and beautification

DISADVANTAGES
- Emergency response delay between 1 and 9 seconds
- May cause diversion of traffic to adjacent neighborhood streets
- May require removal of some on-street parking

SPECIAL CONSIDERATIONS
- Adjacent to school zones or neighborhood parks
- Landscape Maintenance

COST - Moderate to High



Medians

PHASE 2

APPLICATION
- In the neighborhood where speed control is desired
- In conjunction with a pedestrian crossing to provide a refuge area

QUALIFICATIONS
- 15% of the traffic is traveling at or above 10mph over the posted limit

-OR-

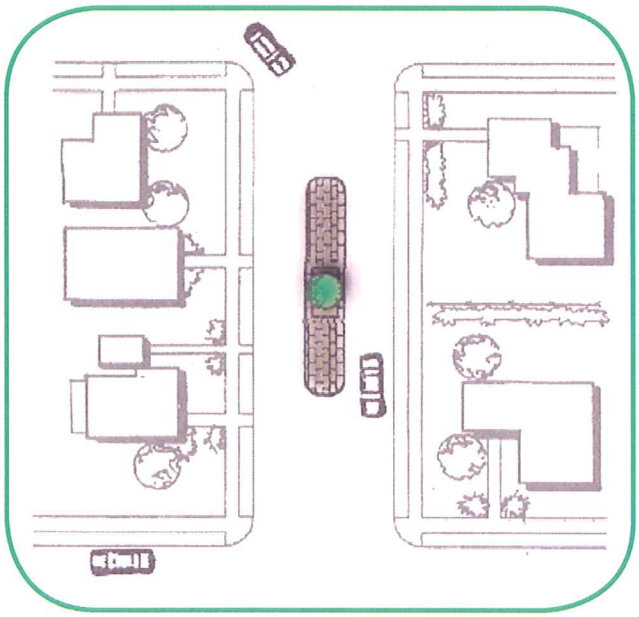
- 25% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area approve the use of this treatment based on returned ballots

ADVANTAGES
- Narrowed lanes can slow vehicles
- Prevents passing
- Opportunity for landscaping and visual enhancement
- Separates opposing traffic

DISADVANTAGES
- May require removal of some on-street parking
- May prohibit or limit driveway access
- May affect emergency response during inclement weather, if installed on a grade



SPECIAL CONSIDERATIONS
- Roadway grades
- Consideration of bicycle lanes and road way width
- Landscape Maintenance

COST - Moderate to High

Chicanes

PHASE 2

APPLICATION
- In the neighborhood where speed control is desired
- Mid-block locations

QUALIFICATIONS
- 15% of the traffic is traveling at or above 10mph over the posted limit

-OR-

- 25% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

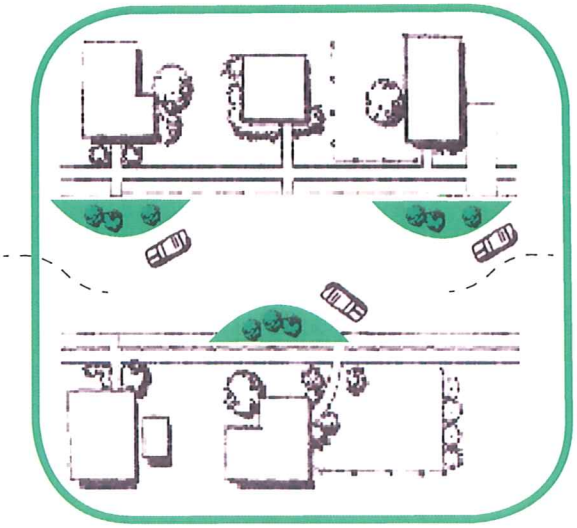
-AND-

- 60% of the households within the study area approve the use of this treatment based on returned ballots

- Traffic volume is less than 2,000 vehicles per day

ADVANTAGES
- Narrowed lanes can slow vehicles
- Prevents passing
- Opportunity for landscaping and visual enhancement

DISADVANTAGES
- May require removal of some on-street parking
- May prohibit or limit driveway access
- May affect emergency response during inclement weather, if installed on a grade



SPECIAL CONSIDERATIONS
- Roadway grades
- Consideration of bicycle lanes and roadway width
- Landscape Maintenance

COST - Moderate to High

Entry Treatments

PHASE 2

APPLICATION

- Placed in the roadway to define the main entrance(s) into a neighborhood

QUALIFICATIONS

- 15% of the traffic is traveling or above 10mph over the posted limit

-OR-

- 25% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area approve the use of this treatment based on returned ballots

ADVANTAGES

- Notifies drivers that they are entering a neighborhood or residential area
- Narrowed lanes can slow vehicles
- Opportunity for landscaping and/or neighborhood signs
- May discourage non-local traffic

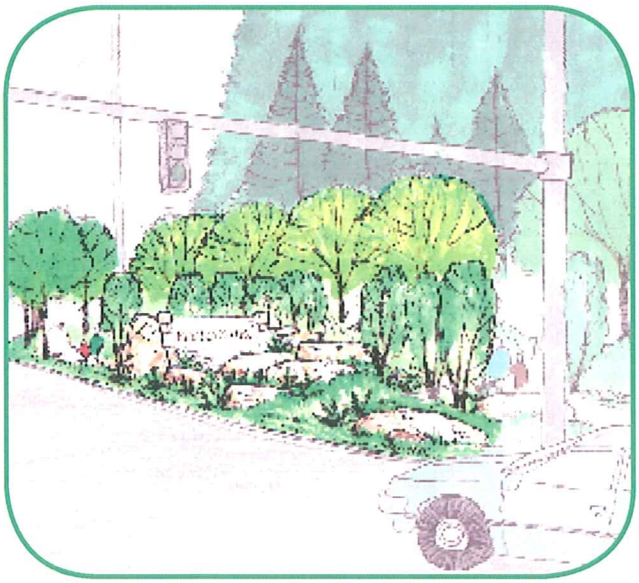
DISADVANTAGES

- May require parking removal near the treatment

SPECIAL CONSIDERATIONS

- Maintenance and upkeep of pavement treatments
- Landscape Maintenance

COST - Moderate to High



Stationary Radar Signs

PHASE 2

APPLICATION

- In the neighborhood where speed control is desired

QUALIFICATIONS

- 15% of the traffic is traveling at or above 10mph over the posted limit

-OR-

- 25% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area approve the use of this treatment based on returned ballots

ADVANTAGES

- Heightens driver awareness to the posted speed limit
- Does not impact emergency response vehicles
- Slows traffic - potentially 1-6mph decrease in the vicinity of the sign
- May be installed on roadways which do not qualify for other devices due to roadway slopes, volumes, or other characteristics

DISADVANTAGES

- Installation sites must be near power source
- Effectiveness may decrease over time

COST - Moderate to High

Diverters

PHASE 2

APPLICATION

- To restrict through movements and force a turn in all directions. Diverters are generally used only in neighborhoods with a gridded street system
- Must be installed on a temporary basis for evaluation before moving to a permanent installation

QUALIFICATIONS

- 75% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area based on returned ballots for both temporary and permanent installation and 90% of the households whose only access is provided by the street proposed for this treatment approve the use of this treatment based on returned ballots for both temporary and permanent installation

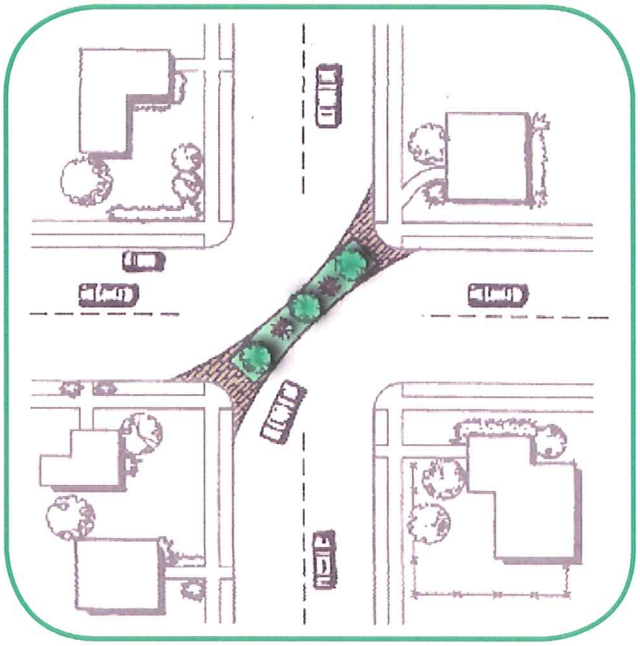
- Traffic volume is less than 2,000 vehicles per day

ADVANTAGES

- Reduces cut-through traffic
- Channels traffic flow, eliminating conflicts at intersections
- Opportunity for landscaping and visual enhancements

DISADVANTAGES

- May redirect traffic onto other local streets
- Increased travel time for local residents
- High installation costs
- May require removal of parking
- Not applicable for emergency response routes



COST - Moderate to High

TurnRestrictions/PartialClosures

PHASE 2

APPLICATION

- To close down either the entrance or exit lane of a street
- Must be installed on a temporary basis for evaluation before moving to a permanent installation

QUALIFICATIONS

- 75% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area based on returned ballots for both temporary and permanent installation and 90% of the households whose only access is provided by the street proposed for this treatment approve the use of this treatment based on returned ballots for both temporary and permanent installation

- Traffic volume is less than 2,000 vehicles per day

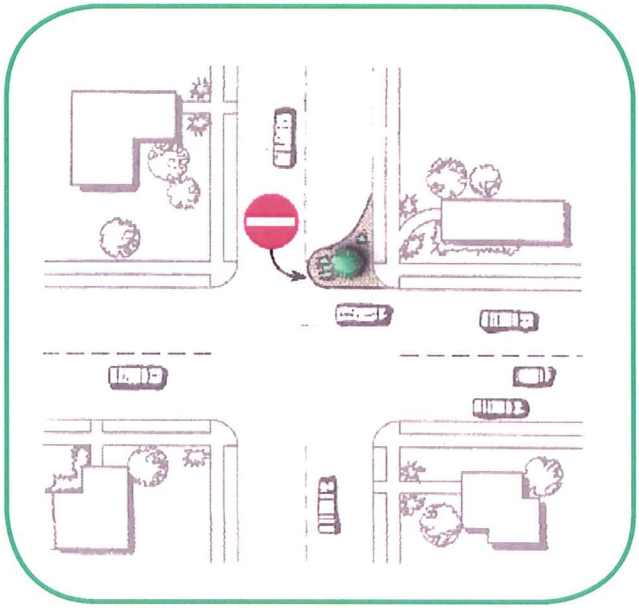
ADVANTAGES

- Reduces cut through traffic
- Pedestrian crossing distance reduced
- Landscaping opportunity

DISADVANTAGES

- May require removal of on-street parking
- May redirect traffic onto other local streets
- May increase trip length for local drivers

COST - Moderate to High



Full Closures

PHASE 2

APPLICATION

- Blocks both lanes of traffic, eliminating all through traffic
- Must be installed on a temporary basis for evaluation before moving to a permanent installation

QUALIFICATIONS

- 75% of the traffic is determined to be non-local traffic based on a license plate study of the peak hour

-AND-

- 60% of the households within the study area based on returned ballots for both temporary and permanent installation and 90% of the households whose only access is provided by the street proposed for this treatment approve the use of this treatment based on returned ballots for both temporary and permanent installation

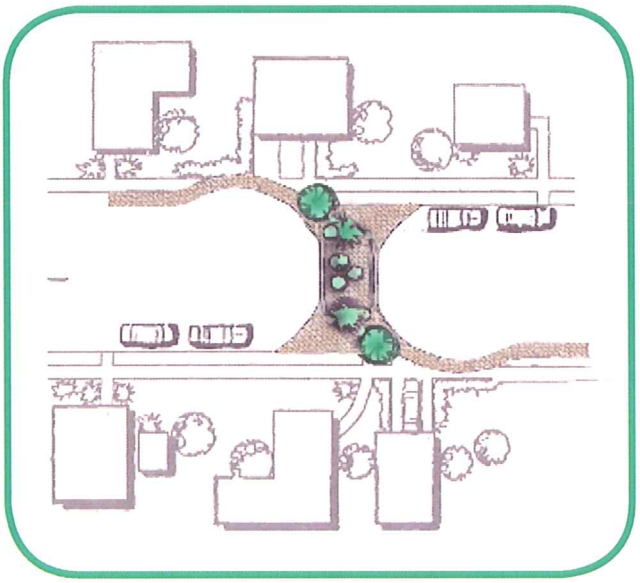
- Traffic volume is less than 2,000 vehicles per day

ADVANTAGES

- Restricts all through traffic
- Effective volume control measure
- Improves aesthetic quality of the street

DISADVANTAGES

- May redirect traffic to other streets
- May increase trip length for local drivers
- May require partial removal of on-street parking
- Not applicable for designated emergency response vehicle routes
- May result in difficult turn around conditions
- High Installation Costs



COST - Moderate to High