

**STATE OF GEORGIA  
COUNTY OF FULTON  
CITY OF SOUTH FULTON**

**ORD. No. 2019-009**

**AN ORDINANCE CREATING A TRAFFIC CALMING POLICY AS APPENDIX H TO  
THE CITY CODE OF ORDINANCES, ENHANCING RESIDENTIAL SAFETY AND  
FOR OTHER LAWFUL PURPOSES.**

**(Sponsored by Councilperson Gumbs)**

**WHEREAS**, the City of South Fulton ("City") is a municipal corporation duly organized and existing under the laws of the State of Georgia;

**WHEREAS**, the duly elected governing authority of the City, is the Mayor and Council thereof ("City Council");

**WHEREAS**, the rapid rate of growth of the Metropolitan Atlanta Area Counties has resulted in a significant increase in the volume of traffic within the City;

**WHEREAS**, motorists passing in and through the City have sought alternative routes through residential areas to avoid traffic congestion and delay;

**WHEREAS**, when cutting through residential neighborhoods, motorists tend to travel at speeds that greatly exceed the posted speed limit, resulting in a proliferation of traffic related problems in City neighborhoods;

**WHEREAS**, the City desires through this Ordinance to help manage and control problems associated with traffic flow, excessive speeding, cut through traffic and pedestrian safety; and

**WHEREAS**, the City Council finds that the creation and implementation of a traffic calming policy for the City is in the best interest of the health, safety, and welfare of, the citizens of the City.

**NOW THEREFORE, THE COUNCIL OF THE CITY OF SOUTH FULTON  
HEREBY ORDAINS** as follows:

**Section 1.** The City hereby adopts the Traffic Calming Policy, attached hereto, as "Appendix H" to the City Code of Ordinances.

\*\*\*\*\*

**Section 2.** It is hereby declared to be the intention of the City Council that: (a) All sections, paragraphs, sentences, clauses and phrases of this Ordinance are or were, upon their enactment, believed by the City Council to be fully valid, enforceable and constitutional.

(b) To the greatest extent allowed by law, each and every section, paragraph, sentence, clause or phrase of this Ordinance is severable from every other section,

paragraph, sentence, clause or phrase of this Ordinance. No section, paragraph, sentence, clause or phrase of this Ordinance is mutually dependent upon any other section, paragraph, sentence, clause or phrase of this Resolution.

(c) In the event that any phrase, clause, sentence, paragraph or section of this Ordinance shall, for any reason whatsoever, be declared invalid, unconstitutional or otherwise unenforceable by the valid judgment or decree of any court of competent jurisdiction, it is the express intent of the City Council that such invalidity, unconstitutionality or unenforceability shall, to the greatest extent allowed by law, not render invalid, unconstitutional or otherwise unenforceable any of the remaining phrases, clauses, sentences, paragraphs or sections of the Ordinance.

**Section 3.** All Ordinance and Resolutions in conflict herewith are hereby expressly repealed.

**Section 4.** The City Attorney, City Clerk and contracted City Codifier are authorized to make non-substantive formatting and renumbering edits to this ordinance for proofing, codification, and supplementation purposes. The final version of all ordinances shall be filed with the clerk.

**Section 5.** The effective date of this Ordinance shall be on the date as set forth under Sec. 3.21 of the City Charter unless provided otherwise by applicable local, state and/or federal law.

THIS ORDINANCE adopted this 14<sup>th</sup> day of May 2019. **CITY OF SOUTH FULTON,  
GEORGIA.**

**"SECOND READING"**

  
\_\_\_\_\_  
WILLIAM "BILL" EDWARDS, MAYOR

ATTEST:

  
\_\_\_\_\_  
S. DIANE WHITE, CITY CLERK



APPROVED AS TO FORM:

  
\_\_\_\_\_  
EMILIA C. WALKER, CITY ATTORNEY

The foregoing **ORDINACE No. 2019-009** was adopted on May 14, 2019 was moved for approval by Councilmember Gumbs. The motion was seconded by Councilmember Rowell, and being put to a vote, the result was as follows:

**“FIRST READING”**

William “Bill” Edwards, Mayor  
Mark Baker, Mayor Pro Tem  
Catherine Foster Rowell  
Carmalitha Lizandra Gumbs  
Helen Zenobia Willis  
Gertrude Naeema Gilyard  
Rosie Jackson  
khalid kamau

AYE	NAY
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# CITY OF SOUTH FULTON



## **TRAFFIC CALMING POLICY**

Appendix H, City of South Fulton Code of Ordinances

Adopted XX/XX/2019

**Introduction:**

The rapid rate of growth in the metropolitan Atlanta counties has resulted in a significant increase in the volume of traffic on area roadways. Motorists are seeking alternative routes to avoid traffic congestion and lengthy delays. Some of these alternatives are cut-through routes on local, residential streets, which can result in increased traffic-related problems within the affected neighborhoods. Additionally, cut through motorists generally travel through residential areas at speeds in excess of the posted speed limit. In recognition, the City of South Fulton Council charged the City Department of Public Works ("Department") with developing this traffic calming policy ("Traffic Calming Policy") to help safeguard its citizens.

The mission of the Traffic Calming Policy is to improve and enhance the quality of life and safety in residential areas by reducing the negative impact of automobile traffic on neighborhood streets. The objective of the program is to develop and implement traffic calming initiatives which provide corrective remedies to traffic problems associated with excessive speeding and cut-through traffic, while increasing overall vehicular and pedestrian safety. The Department of Public Works implements the program utilizing engineering, enforcement, education, and community participation. The Traffic Calming Policy, although developed by the City, is a community driven program. The community will choose the type of traffic calming initiatives that it deems suitable based on the recommendations of the City Department of Public Works. The community may be required to pay for the cost of implementing, maintaining, and removing any device associated with the traffic calming initiatives.

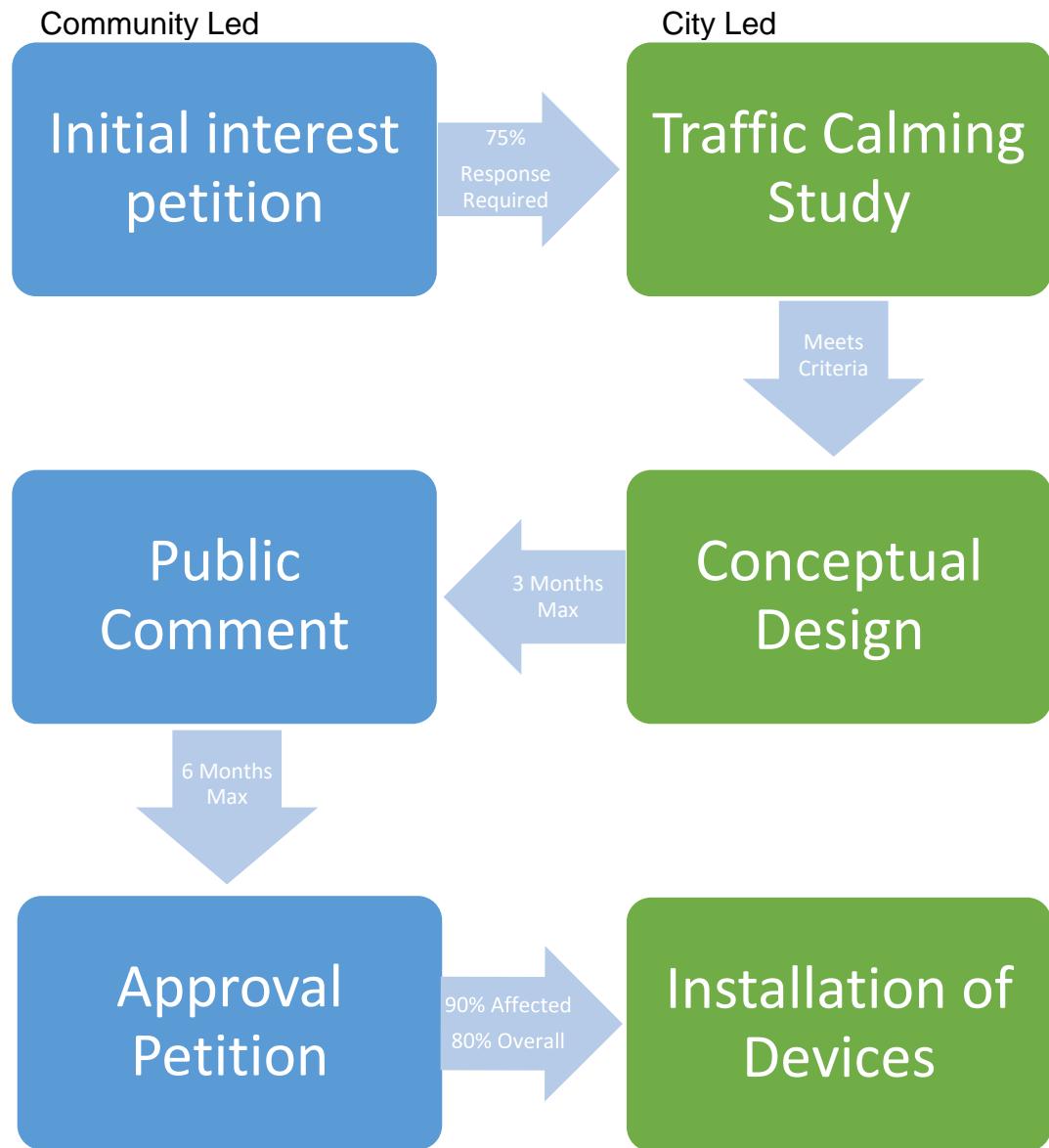
**Need and Purpose:**

The City of South Fulton Traffic Calming Policy establishes policy guides for consistently dealing with traffic related matters and promoting safe and convenient travel in residential neighborhoods. The program outlines policies, processes, and engineering guidelines for implementing traffic calming measures that may be used as possible remedies for traffic related problems in residential neighborhoods. Standardized designs for various devices are included as a part of this program to ensure uniformity and safety.

**Implementation:**

Before any traffic calming measures can be implemented, a traffic study must be undertaken by the Department of Public Works or a qualified consultant. The results of this study will be analyzed, and the Department of Public Works will make the appropriate recommendations. Staff of the Department of Public Works is available to make presentations and discuss their findings and recommendations with neighborhood associations and community groups. Recommendations are based on engineering and design standards publications such as the AASHTO Green Book, the Manual on Uniform Traffic Control Devices (MUTCD), the TRB-Highway Capacity Manual, and other design standards and regulations. Transportation Engineering Staff will use prudence, good judgment, and the community's preferences in recommending traffic calming devices so that the health, safety, and welfare of the community. See below for a chart detailing the steps of the implementation process.

## Traffic Calming Process



## **Sec. 1. - Definitions.**

For purposes of this article, certain terms and words are defined. Where words have not been defined but are defined in a subsequent sub-section of this article, those words shall have the meaning as defined therein. The following words, terms and phrases when used in this article shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

**Affected Area** means a geographic portion of a neighborhood consisting of all property owners whose quality of life as a resident in the neighborhood, and not necessarily as a traveler through the neighborhood, is being directly impacted by the excessive volume or speeding traffic problem being addressed. The affected area will include all lots from which residents must traverse the traffic calming measure. The affected area will also include all lots from which residents may have an alternate route without traffic calming measures but whose lots have driveways that access the residential street for which traffic calming measures are sought.

**Department** means the Public Works Department.

**Eligible Petitioner** means the person whose name is recorded as a property owner in the tax records maintained by the City's GIS department for the address listed on the petition that falls within the affected area.

**GIS** means Geographical Information Systems.

**Initiator** is a real property owner who has requested an initial interest petition form and/or has assumed a primary role in circulating the initial interest petition and the subsequent traffic-calming petition and undertakes to serve as the City's sole contact with respect to the progress of the initial interest petition and any subsequent traffic study and traffic-calming petition.

**ITE** means the Institute of Transportation Engineers.

**MUTCD** means the Manual on Uniform Traffic Control Devices.

**Real Property Owners** means homeowners or other real property owners as indicated in the tax records maintained by the City's GIS department.

**Reference Number** means the number assigned to a completed initial interest petition which meets the City's criteria for a study that will be used to determine the order in which traffic studies will be conducted.

**Renter** means party leasing property in the affected area.

**Residential Street** means a street classified and defined as "residential" in the City's current  
Transportation Master Plan.

**Traffic-Calming Measures** means those methods and processes that the City may use to reduce aggressive driving behavior that impairs the quality of life of its citizens in any neighborhood in which the posted speed limit is no greater than thirty (30) miles per hour.

**Traffic Study** means the process by which data pertinent to the flow, rate of speed and density of traffic, collected over a defined period of time, is measured and analyzed to determine its impact on the safety of citizens within a neighborhood or affected area.

**Sec. 2. - Procedure for requesting a traffic study.**

- A. The City shall require the filing of the initial interest petition on a form promulgated by the Department director or designee.
- B. Any person(s) interested in pursuing the installation of traffic-calming measures on a residential street, upon request to the department, will begin the initial interest petition process for the Department to perform a traffic study. The initial interest petition shall be completed no later than forty- five (45) days after the date the Department issues the initial interest petition. The initial interest petition will allow for persons (Real Property Owners) to sign in favor of requesting a traffic study or to register their opposition to the conduct of a traffic study.
- C. All persons signing an initial interest petition to request that the Department carry out a traffic study shall hereinafter be referred to as applicants. All persons opposed shall hereinafter be referred to as opponents.
- D. All applicants and opponents must be either real property owners or rental occupants.

**Sec. 3. - Initial interest petition.**

- A. The Department will not consider an initial interest petition unless at least Seventy-Five (75%) percent of the real property owners or rental occupants on the residential street are in favor of the traffic study.
- B. The initial interest petition shall include all of the following:
  1. The full name, signature, home address, and daytime telephone number of each person that signed the initial interest petition.
  2. The date upon which each person signed the initial interest petition.
  3. A description of the precise area for which the traffic study is requested by reference to the name of the subdivision or popular name of the neighborhood, or the bridges, streets, roads and where appropriate with house numbers that identify the area where a perceived speeding or excessive volume problem exists.
  4. The name, address and telephone number of an initiator.
- C. Only (1) real property owner or renter for each street address may sign the initial interest petition.

**Sec. 4. - Evaluating the initial interest petition and informing the initiator.**

- A. Upon completion of the initial interest petition, the Department will make a determination as to whether at least Seventy-Five (75%) percent of the real property owners or rental occupants on the residential street are in favor of the traffic study.
- B. After the Department has received the complete initial interest petition, no signature will be withdrawn from an initial interest petition unless the Department is notified in writing within fifteen (15) business days, that there is reasonable proof that fraud or other impropriety occurred regarding the obtaining of the petitioner's signature.
- C. Within thirty (30) business days, the initiator of the initial interest petition will be notified in writing by the Department as to whether the initial interest petition meets the criteria for a traffic study. In the event that the Department decides to conduct a traffic study, the written notification to the initiator will include a reference number assigned to the initial interest petition for the conduct of the study.
- D. In the event that the initiator moves away or is otherwise no longer a point of contact for the Department and a new initiator's name or address has not been provided to the department, the Department shall consider the initial interest petition abandoned and shall cease all work on processing of the initial interest petition and any subsequent traffic study.

***Sec. 5. - Traffic study to comply with national standards.***

- A. National standards promulgated by AASHTO, ITE, and other national standards shall govern the execution of traffic studies and the design and installation of traffic-calming measures.

***Sec. 6. - Priority for the conduct of traffic studies.***

- A. The Department will conduct traffic studies based on the reference number assigned to the completed initial interest petition.
- B. The Department reserves the right to change the order in which a traffic study is conducted where the Department determines that there is an initial interest petition further down the waiting list for an area that may relate to, or be affected by, another traffic study to be conducted on a neighboring street or in a neighboring area.

***Sec. 7. - The affected area and the traffic-calming plan.***

- A. Where a traffic study is warranted it will be conducted at a time to be determined by, and within the sole discretion of, the department.
- B. Upon completion of a traffic study, the Department shall make a determination as to whether the results clearly demonstrate that the installation of traffic-calming measures are warranted based upon at least one of the following criteria:
  1. **Speed standard:** 85th percentile speed is 11 miles per hour or greater than the posted speed limit; or

2. **Through Volume Standard:** The total number of daily trips generated by the affected area exceeds by 25% or more what would be expected based on the applicable trip generation rate(s) published in the current edition of the Trip Generation Report-An ITE Informational Report.

**Sec. 8. - *Notification that traffic-calming measures are not warranted.***

Following the completion of the study, if the Department director or designee determines that no traffic- calming measures are warranted, then the Department director or designee shall notify the initiator of that conclusion in writing.

**Sec. 9. - *Notification to initiator for commencement of traffic-calming conceptual design***

- A. Where traffic-calming measures are warranted the Department shall, within a reasonable time following the completion of the traffic study, not to exceed three (3) months, prepare a traffic- calming conceptual plan and notify the initiator in writing about the traffic-calming conceptual plan.
- B. The traffic-calming conceptual plan must identify the affected area and include a recommendation for a specific traffic-calming measure or a combination of such measures that the Department has determined to provide the most effective solution to the speeding and/or excessive volume problems identified in the traffic study for installation in the affected area, having regard to the pavement width, grades, the physical features of the proposed location for the installation measures and any structures that facilitate drainage. The plan may also include alternative measures that could be installed to provide some relief to the speeding and/or excessive volume problems identified in the traffic study for installation in the affected area, having regard to the pavement width, grades, and the physical features of the proposed location for the installation measures and any structures that facilitate drainage.
- C. Approved measures can be found in the Tool Box section at the end of this policy.
- D. A public comment period, not to exceed six (6) months, shall commence on the date that the letter of notification is sent to the initiator pursuant to subsection (a). During that public comment period, Department staff assigned to work on the traffic-calming conceptual plan shall meet with the initiator(s) and other interested persons for neighborhood input and public comment on the traffic- calming conceptual plan.

**Sec. 10. - *Traffic-calming petition; choice of measures.***

- A. Following the public comment period, the Department director or designee shall provide the initiator with a traffic-calming petition form to be used for recording all of the signatures. The petition must set forth the traffic-calming measures that shall be the subject of the vote and the eligible petitioners will thereby have the opportunity to vote in favor or in opposition to the approved measures. No other measure may be included on the petition.

- B. The initiator will circulate the traffic-calming petition to all eligible petitioners in the affected area.
- C. A traffic-calming petition must be completed within ninety (90) days from the date the traffic- calming petition form was initiated.
- D. The traffic-calming petition shall indicate the full name, signature, home address date, and daytime telephone number for each person signing the selection petition.
- E. The tax records maintained by the City's GIS department shall control in determining whether a signatory to the petition is a real property owner and thus an eligible petitioner.
- F. In order to be eligible for the installation of traffic calming measure the initiator must secure signatures in favor of the installation of traffic-calming measures from eligible petitioners representing 80% of property owners in the neighborhood and 90% of the property owners along the affected road affirm their support for installation of a traffic calming device.
- G. In the event that the petition secures the requisite percentage of signatures in favor of the approved traffic-calming measure or combination of traffic calming measures, the director of the Department shall present a resolution to the City Council at a regularly scheduled meeting and the City Council shall thereafter by said resolution approve the installation of traffic calming measures. Advertising for said meeting must comply with city policy for advertising public announcements.
- H. All installation costs will be funded by a source approved by the City of South Fulton Council (most frequently the Homeowner's Association,) and the City will act as project administrator.
- I. The City will offer advice and assistance with the implementation process as appropriate. City personnel will inspect and approve the construction of all devices to ensure that they meet the design criteria.
- J. Repair and maintenance of all traffic calming devices will be the responsibility of the Homeowners Association unless other arrangements are made with the City.

**Sec. 11. – Removal of Traffic-calming petition;**

- A. In the event the traffic calming becomes unacceptable to the community, a request will be made to the department. The Department director or designee shall provide the initiator with a removal of traffic-calming petition form to be used for recording all of the signatures.
- B. The initiator will circulate the traffic-calming petition to all eligible petitioners in the affected area.

- C. A traffic-calming petition must be completed within ninety (90) days from the date the traffic- calming petition form was initiated.
- D. The traffic-calming petition shall indicate the full name, signature, home address date, and daytime telephone number for each person signing the selection petition.
- E. The tax records maintained by the City's GIS department shall control in determining whether a signatory to the petition is a real property owner and thus an eligible petitioner.
- F. In order to be eligible for the removal of traffic calming measure the initiator must secure signatures in favor of the removal of traffic-calming measures from eligible petitioners representing 90% of properties in the affected area.
- G. In the event that the petition secures the requisite percentage of signatures in favor of the removal of traffic-calming measure or combination of traffic calming measures, the director of the Department shall present a resolution to the City Council at a regularly scheduled meeting and the City Council shall thereafter by said resolution approve the removal of traffic calming measures. Advertising for said meeting must comply with city policy for advertising public announcements.

## *Appendix A*

### **TOOLBOX**

The “toolbox” contains different devices that address neighborhood traffic related concerns such as speeding vehicles, high traffic volumes, cut-through traffic, or collisions at neighborhood intersections. The devices vary in their ability to treat various traffic related concerns. For this reason, Chapter 4, “Toolbox Guidelines,” provides guidance on selecting the most appropriate devices given the type of specific traffic related concern and street being treated.

The “toolbox” of neighborhood traffic management devices can be grouped into three categories:

- Non-Physical devices
- Speed Control
  - Narrowing devices
  - Horizontal devices
  - Vertical devices
- Volume Control devices

For each device in the “toolbox,” the following information relating to each device is provided:

- Description of the measure
- Photograph and/or schematic
- List of advantages and disadvantages
- Data sheet indicating speed, volume, or collision reduction potential
- Estimated costs

Cost approximations are provided for information purposes only. Actual costs depend on many factors, including dimensions of device, construction materials, and actual construction costs.

#### ***NON-PHYSICAL DEVICES***

##### **Description**

Non-physical devices include any measures that do not require physical changes to the roadway. Nonphysical devices are intended to increase drivers’ awareness of surroundings and influence driver behavior without physical obstructions. DPW staff will initially implement non-physical devices to treat traffic related concerns. However, these devices are not self-enforcing and may have limited effectiveness as stand-alone devices. This category includes the following devices:

- Targeted Speed Enforcement
- Speed Radar Trailers
- Speed Feedback Sign

- Centerline/Edgeline Lane Striping
- Optical Speed Bars
- Signage
- Speed Legend
- Centerline Raised Pavement Markers
- High Visibility Crosswalks
- Angled Parking

### **Targeted Speed Enforcement**

City Staff or NTC members can identify locations for temporary targeted enforcement, based on personal observations and survey comments. A request can be submitted to the South Fulton Police Department (JCPD) for the desired enforcement. Because of limited JCPD resources, the duration of the targeted enforcement may be limited. Targeted enforcement may also be used in conjunction with new neighborhood traffic management devices to help drivers become aware of the new restrictions.

Approximate Cost: No direct cost.

#### Advantages

- Inexpensive if used temporarily
- Does not physically slow emergency vehicles or buses
- Quick implementation
- Disadvantages
- Expensive to maintain an increased level of enforcement
- Effectiveness may be temporary

### **Radar Trailer**

A radar trailer is a device that measures each approaching vehicle's speed and displays it next to the legal speed limit in clear view of the driver. They can be easily placed on a street for a limited amount of time then relocated to another street, allowing a single device to be effective in many locations.

Approximate Cost: No direct cost. (Purchase \$6,000 - \$12,000)

#### Advantages

- Portable
- Does not physically slow emergency vehicles or buses
- Quick implementation

#### Disadvantages

- Effectiveness may be temporary
- Drivers may divert to alternate streets due to uncertainty of device implications
- Subject to vandalism

## **Speed Feedback Signs**

Speed feedback signs perform the same functions as radar trailers but are permanent. Real-time speeds are relayed to drivers and flash when speeds exceed the limit. Speed feedback signs are typically mounted on or near speed limit signs.

Approximate Cost: \$1,500 - \$10,000

### Advantages

- Real-time speed feedback
- Does not physically slow emergency vehicles or buses
- Permanent installation

### Disadvantages

- May require power source
- Only effective for one direction of travel
- Long-term effectiveness uncertain
- Subject to vandalism

## **Centerline/Edgeline Lane Striping**

Lane striping can be used to create formal travel lanes, bicycle lanes, parking lanes, or edge lines. As a neighborhood traffic management measure, they are used to narrow the travel lanes for vehicles, thereby inducing drivers to lower their speeds. The past evidence on speed reductions is, however, inconclusive.

Approximate Cost: \$2.00 per linear foot

### Advantages

- Inexpensive
- Can be used to create bicycle lanes or delineate on-street parking
- Does not slow emergency vehicles

### Disadvantages

- Has not been shown to significantly reduce travel speeds
- Requires regular maintenance

## **Optical Speed Bars**

Optical speed bars are a series of pavement markings spaced at decreasing distances. They have typically been used in construction areas to provide drivers with the impression of increased speed. They do not provide long-term speed reduction benefits.

Approximate Cost: \$1.00 per linear foot

### Advantages

- Inexpensive
- Does not physically slow emergency vehicles or buses

#### Disadvantages

- Long-term effects in residential area unknown
- Increases regular maintenance

## **Signage**

Various signs may also be useful in alerting driver of certain conditions. Examples include:

- “Cross Traffic Does Not Stop” Signs
- Truck Restriction Signs

Approximate Cost: \$150 - \$500 per sign

### Advantages

- Inexpensive
- Truck restrictions can reduce through truck traffic
- Does not slow emergency vehicles or buses

### Disadvantages

- Requires regular maintenance
- Speed limit signs are not applicable because they do not necessarily change driver behavior
- If speed limits are set unreasonably low, drivers are more likely to exceed it

## **Speed Legend**

Speed legends are numerals painted on the roadway indicating the current speed limit in miles per hour.

They are usually placed near speed limit signposts. Speed legends can be useful in reinforcing a reduction in speed limit between one segment of a roadway and another segment. They may also be placed at major entry points into a residential area.

Approximate Cost: \$175 per location

### Advantages

- Inexpensive
- Helps reinforce a change in speed limit
- Does not slow emergency vehicles

### Disadvantages

- Has not been shown to significantly reduce travel speeds
- Requires regular maintenance

## **Centerline Raised Pavement Markers**

Raised pavement markers (RPMs) are small bumps lining the centerline or edge line of a roadway. They are often used on curves where vehicles have a tendency to

deviate outside of the proper lane, risking collision. Raised reflectors improve the nighttime visibility of the roadway edges.

Approximate Cost: \$4.50 per marker

#### Advantages

- Inexpensive
- Does not physically slow emergency vehicles or buses
- Can help keep drivers in the appropriate travel lane on curves and under low-visibility conditions

#### Disadvantages

- Noise caused by RPMs
- Requires regular maintenance
- Has not been shown to significantly reduce travel speeds

### **High Visibility Crosswalks**

High-visibility crosswalks use special marking patterns and raised reflectors to increase the visibility of a crosswalk. A “triple-four” marking pattern is created by painting two rows of four-foot wide rectangles, separated by four feet of unpainted space across the roadway. Raised reflectors are placed at the approach edges of these rectangles. The unpainted space along the center of the crosswalk provides an untreated path for wheelchair users and foot traffic, as markings may become slippery in rainy/wet conditions.

Approximate Cost: \$1,600 per location

#### Advantages

- Increased visibility of crosswalk
- Focus crossing pedestrians at a single location

#### Disadvantages

- May give pedestrians a false sense of security, causing them to pay less attention to traffic
- Requires more maintenance than normal crosswalks

### **Angled Parking**

Angled parking reorients on-street parking spaces to a 45-degree angle, increasing the number of parking spaces and reducing the width of the roadway available for travel

lanes. Angled parking is also easier for vehicles to maneuver into and out of than parallel parking.

Consequently, it works well in areas with high parking demand and turnover rates.

Approximate Cost: Dependent on amount of parking

#### Advantages

- Reduces speeds by narrowing the travel lanes
- Increases the number of parking spaces
- Provides for easier parking maneuvers that take less time than parallel parking
- Favored by businesses and multi-family residences

#### Disadvantages

- Precludes the use of bike lanes (unless roadway is wider than 58 feet)
- Ineffective on streets with frequent driveways
- Potential for collisions when backing out

## **SPEED CONTROL – NARROWING DEVICES**

### **Description**

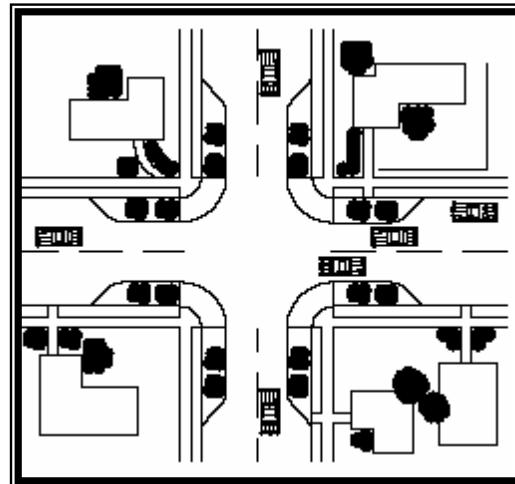
Narrowing devices use raised islands and curb extensions to physically narrow the travel lane for motorists.

The narrowing devices in the toolbox include:

- Neckdown/Bulbout
- Center Island Narrowing
- Two-Lane Choker
- One-Lane Choker

### **Neckdown / Bulbout**

Neckdowns/bulbouts are raised curb extensions that narrow the travel lane at intersections or mid-block locations. Neckdowns/bulbouts “pedestrianize” intersections by shortening the crossing distance and decreasing the curb radii, thus reducing turning vehicle speeds. Both of these effects increase pedestrian comfort and safety at the intersection. The magnitude of speed reduction is dependent on the spacing of neckdowns between points that require drivers to slow. On average, neckdowns achieve a 7 percent reduction in speeds.



Approximate Cost: \$5,000 – \$10,000 per corner

#### Measured Effectiveness

Speed: Reduction in 85th Percentile Speeds between Slow Points -7%

Volume: Reduction in Vehicles per Day -10%

Safety: Reduction in Average Annual Number of Collisions I/D

*Note: I/D = Insufficient Data to predict reduction effect.*

Source: *Traffic Calming: State of the Practice*, 2000.



#### Advantages

- Reduces pedestrian crossing distance and exposure to vehicles
- Through and left-turn movements are easily negotiable by large vehicles
- Creates protected on-street parking bays
- Reduces speeds (especially right-turning vehicles) and traffic volumes

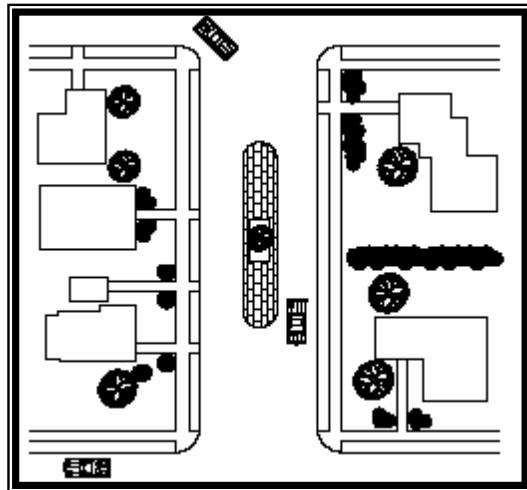
#### Disadvantages

- Effectiveness is limited by the absence of vertical or horizontal deflection
- May slow right-turning emergency vehicles
- Potential loss of on-street parking
- May require bicyclists to briefly merge with vehicular traffic



## Center Island Narrowing

Center island narrowings are raised islands located along the centerline of a street that narrow the travel lanes at that location. Placed at the entrance to a neighborhood, and often combined with textured pavement, they are often called "gateways." Fitted with a gap to allow pedestrians to walk through at a crosswalk, they are often called "pedestrian refuges." They can also be landscaped to increase visual aesthetics. The magnitude of speed reduction is dependent on the spacing of center island narrowings between points that require drivers to slow (see page 55). On average, center island narrowings achieve a 7 percent reduction in speeds.



Approximate Cost: \$5,000 - \$10,000 per location

### Measured Effectiveness

Speed: Reduction in 85th Percentile Speeds between Slow Points -7%

Volume: Reduction in Vehicles per Day - 10%

Safety: Reduction in Average Annual Number of Collisions I/D

*Note: I/D = Insufficient Data to predict reduction effect.*

Source: *Traffic Calming: State of the Practice, 2000.*



### Advantages

- Can increase pedestrian safety
- Aesthetic upgrades can have positive aesthetic value
- Reduces traffic volumes if alternative routes are available

## Disadvantages

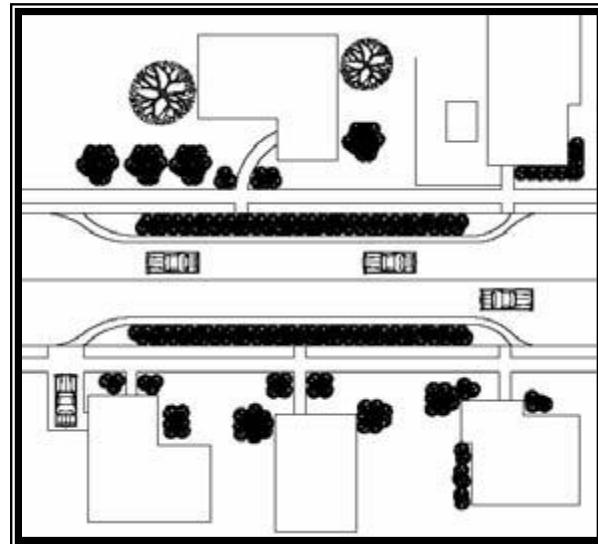
- Effect on vehicle speeds is limited by the absence of any vertical or horizontal deflection
- Potential loss of on-street parking



## Two-lane choker

Chokers are curbing extensions at mid-block that narrow a street. Chokers leave the street cross section with two lanes that are narrower than the normal cross section. The magnitude of speed reduction is dependent on the spacing of two-lane chokers between points that require drivers to slow (see page 55). On average two-lane chokers achieve a 7 percent reduction in speeds.

Approximate Cost: \$7,000 - \$8,000 per location



## Measured Effectiveness

Speed: Reduction in 85th Percentile Speeds between Slow Points -7%

Volume: Reduction in Vehicles per Day -10%

Safety: Reduction in Average Annual Number of Collisions I/D

*Note: I/D = Insufficient Data to predict reduction effect.*

*Source: Traffic Calming: State of the Practice, 2000.*



### Advantages

- Easily negotiable by emergency vehicles and buses
- Can have positive aesthetic value
- Reduces both speeds and volumes

### Disadvantages

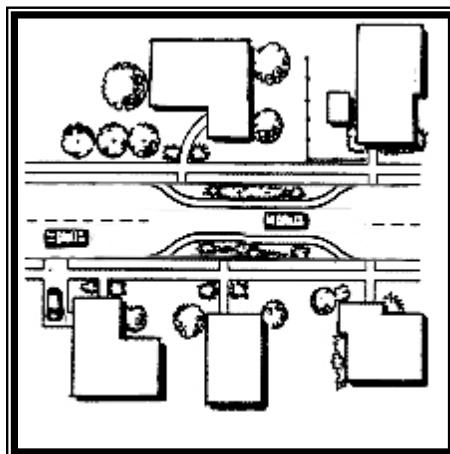
- Effect on vehicle speeds is limited by the absence of any vertical or horizontal deflection
- May require bicyclists to briefly merge with vehicular traffic
- Loss of on-street parking
- Build-up of debris in gutter



### One-lane choker

One-lane chokers narrow the roadway width such that there is only enough width to allow travel in one direction at a time. They operate similarly to one-lane bridges, where cars approaching on one side must wait until all traffic in the other direction has cleared before proceeding. The magnitude of speed reduction is dependent on the spacing of one-lane chokers between points that require drivers to slow (see page 55). On average, one-lane chokers achieve a 14 percent reduction in speeds.

Approximate Cost: \$8,000 - \$9,000 per location



## Measured Effectiveness

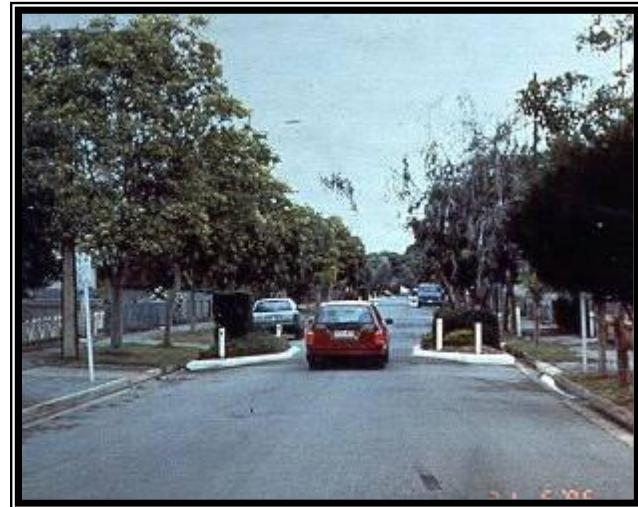
Speed: Reduction in 85th Percentile  
Speeds between Slow Points -14%

Volume: Reduction in Vehicles per Day -  
20%

Safety: Reduction in Average Annual  
Number of Collisions I/D

*Note: I/D = Insufficient Data to predict  
reduction effect.*

*Source: Traffic Calming: State of the  
Practice, 2000.*



## Advantages

- Maintains two-way vehicle access, except at choker
- Very effective in reducing speeds and traffic volumes

## Disadvantages

- Perceived as unsafe because opposing traffic is vying for space in a single lane
- Can be used only on low-volume, low speed roads
- Loss of on-street parking

## **SPEED CONTROL – HORIZONTAL DEVICES**

### Description

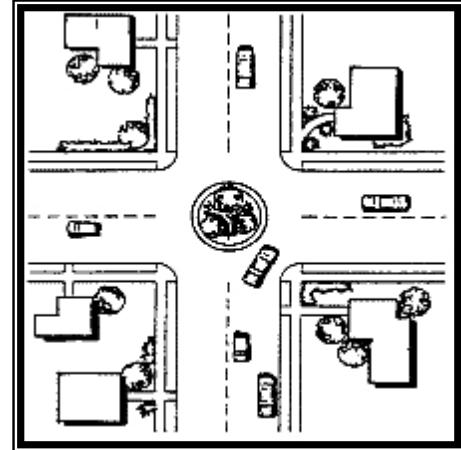
Horizontal deflection devices use raised islands and curb extensions to physically eliminate straight-line paths along roadways and through intersections. The horizontal deflection devices in the toolbox include:

- Traffic Circle
- Roundabout (Single-Lane)
- Chicane
- Lateral Shift
- Realigned Intersection

## Traffic Circle

Traffic circles are raised islands, placed in intersections, around which traffic circulates. Stop signs or yield signs can be used as traffic controls at the approaches of the traffic circle. Circles prevent drivers from speeding through intersections by impeding the straight-through movement and forcing drivers to slow down to yield. Depending upon the size of the intersection and circle, trucks may be permitted to turn left in front of the circle. The magnitude of speed reduction is dependent on the spacing of traffic circles between points that require drivers to slow (see page 55). On average, traffic circles achieve an 11 percent reduction in speeds and a dramatic 71 percent decrease in collisions.

Approximate Cost: \$10,000 - \$25,000 per location



### Measured Effectiveness

Speed Impacts Reduction in 85th Percentile Speeds between Slow Points -11%

Volume Impacts Reduction in Vehicles per Day -5%

Safety Impacts Reduction in Average Annual Number of Collisions -71%

Source: *Traffic Calming: State of the Practice, 2000.*

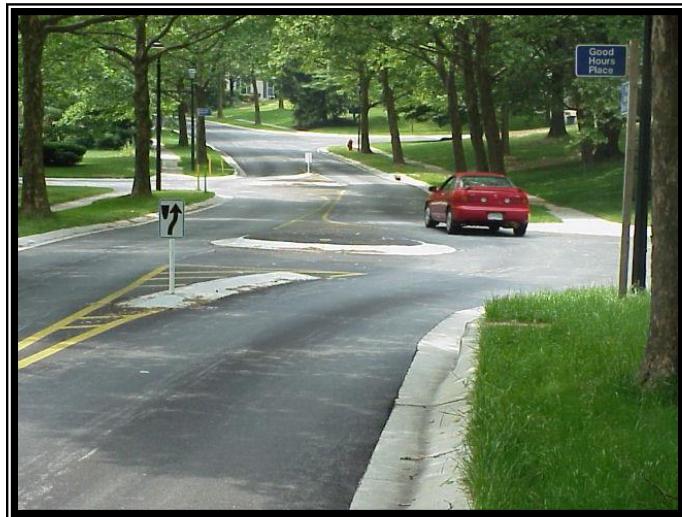
### Advantages



- Very effective in moderating speeds and improving safety
- Can have positive aesthetic value

#### Disadvantages

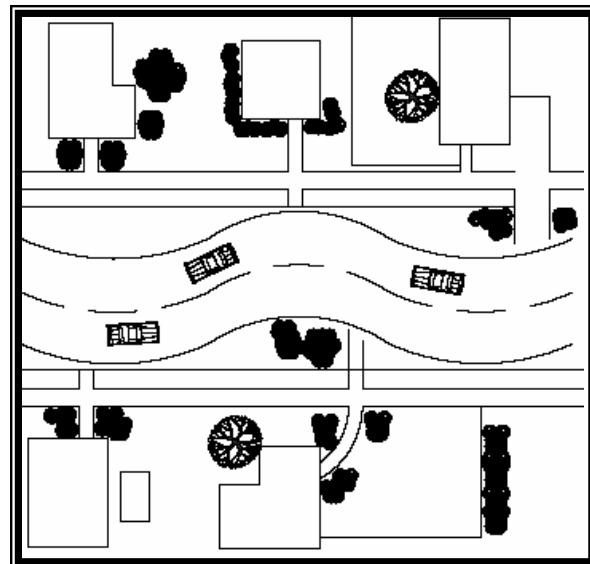
- If not designed properly, difficult for emergency vehicles or large trucks to travel around
- Must be designed so that the circulating traffic does not encroach on crosswalks
- Potential loss of on-street parking



## Chicane

Chicanes are curb extensions that alternate from one side of the street to the other, forming S-shaped curves. Chicanes can also be created by alternating on-street parking between one side of the road and the other. Each parking bay can be created either by restriping the roadway or by installing raised center islands at each end, creating a protected parking area. Chicanes have limited effectiveness in reducing traffic speeds and volumes as compared to other devices. Little data has been collected to predict the reduction in speed, traffic volumes, or collisions, and use of this device may not result in significant decreases. Resources permitting, DPW staff can collect before and after data to determine the effectiveness of chicanes.

Approximate Cost: \$8,000 - \$14,000 per location



### Measured Effectiveness

Speed Impacts Reduction in 85th Percentile Speeds between Slow Points I/D

Volume Impacts Reduction in Vehicles per Day I/D

Safety Impacts Reduction in Average Annual Number of Collisions I/D

Note: I/D = Insufficient data to predict reduction effect.

### Advantages

- Discourages high speeds by forcing horizontal deflection
- Easily negotiable by emergency vehicles and buses

### Disadvantages

- Must be designed carefully to discourage drivers from deviating out of the appropriate lane

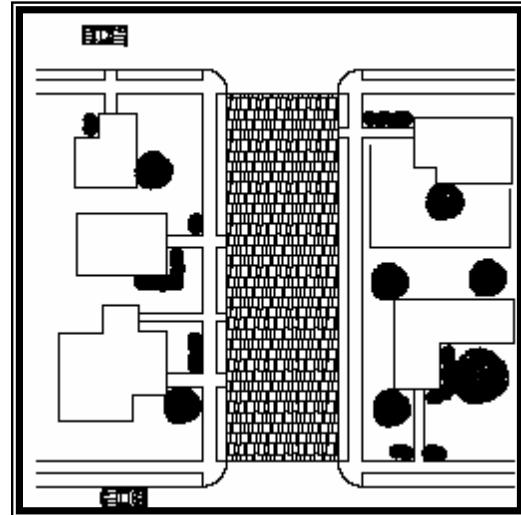


- Curb realignment and landscaping can be costly, especially if there are drainage issues
- Loss of on-street parking



## Textured Pavement

Textured colored pavement includes the use of stamped pavement (asphalt) or alternate paving materials to create an uneven surface for vehicles to traverse. Textured pavement may have limited effectiveness as a standalone device and should be used to supplement other devices such as raised crosswalks or center median islands. Little data has been collected to predict the reduction in speed, traffic volumes, or collisions, and use of this device may not result in significant decreases. Resources permitting, DPW staff can collect before and after data to determine the effectiveness of textured pavement.



Approximate Cost: \$8.00 per square foot

### Measured Effectiveness

Speed: Reduction in 85th Percentile Speeds between Slow Points I/D

Volume: Reduction in Average Daily Traffic I/D

Safety: Reduction in Average Annual Number of Collisions I/D

*Note: I/D = Insufficient Data to predict reduction effect.*

### Advantages

- Can reduce vehicle speeds
- Aesthetic upgrades can have positive value
- Placed at an intersection, it can slow two streets at once



### Disadvantages

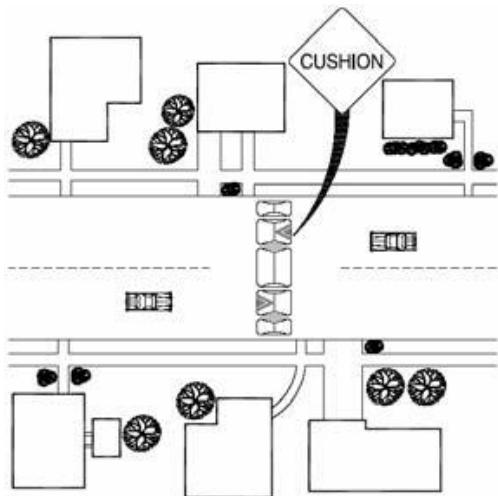
- Expensive, varying by materials used
- Can be uncomfortable for bicyclists or handicapped.
- Textured pavement can increase noise to adjacent properties

## Speed Cushion

Speed cushions are a variation of the speed lump that is constructed from durable recycled rubber. These prefabricated devices consistently have a more uniform shape than asphalt humps. Speed cushions provide wheel gaps for emergency vehicles and buses, and can be arranged to fit any street width. The magnitude of speed reduction is dependent on the spacing of speed cushions between points that require drivers to slow.

On average, speed cushions achieve a 14 percent reduction in speeds.

Approximate Cost: \$4,500 - \$6,000 per location



### Measured Effectiveness

Speed Reduction: Reduction in 85th Percentile Speeds between Slow Points -14%

Volume Reduction: Reduction in Average Daily Traffic

Safety Reduction: Reduction in Average Annual Number of Collisions

Source: City of Portland, Rubber Speed Bump Research, 1995

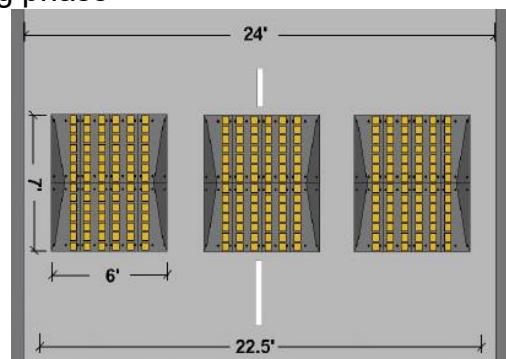


### Advantages

- Provides a more consistent ride than asphalt humps
- Can be used as a temporary device during a testing phase
- Reduces impacts to emergency vehicles due to cut-outs
- Easily accommodates street resurfacing

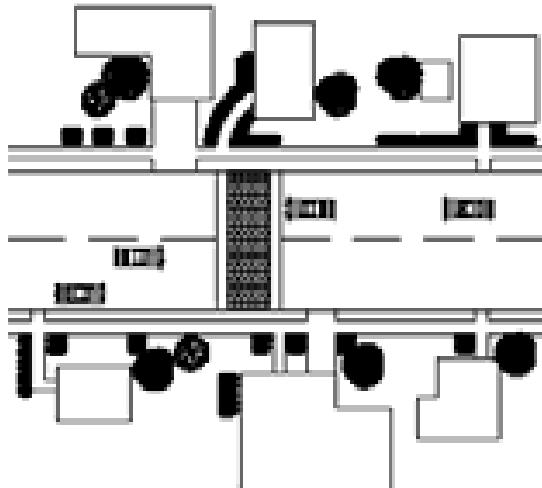
### Disadvantages

- Aesthetics
- Signs may be unwelcomed by adjacent residents
- Increased noise for adjacent residents



## **Speed Cushion**

Speed tables are flat-topped speed humps approximately 22 feet long. They are typically long enough for the entire wheelbase of a passenger car to rest on top. Their long, flat tops, plus ramps that are more gently sloped than speed humps, give speed tables higher design speeds than humps, and, thus, may be more appropriate for streets with higher ambient speeds. Brick or other textured materials improve the appearance of speed tables, draw attention to them, and may enhance safety and speed reduction. The magnitude of speed reduction is dependent on the spacing of speed tables between points that require drivers to slow (see page 55). On average, speed tables achieve an 18 percent reduction in speeds.



On average, speed tables achieve a 18 percent reduction in speeds.

Approximate Cost: \$4,500 - \$6,000 per location

### **Measured Effectiveness**

- Speed Impacts Reduction in 85th Percentile Speeds between Slow Points -18%
- Volume Impacts Reduction in Vehicles per Day -12%
- Safety Impacts Reduction in Average Annual Number of Collisions -45%
- Source: Traffic Calming: State of the Practice, 2000.

### **Advantages**

- Smoother on large vehicles (such as fire trucks) than speed humps
- Effective in reducing speeds, though not to the extent of speed humps



### Disadvantages

- Aesthetics
- Textured materials, if used, can be expensive
- Signs may be unwelcome by adjacent residents
- Increased noise for nearby residents



## MAYOR'S SIGNATURE PAGE

The mayor, within ten (10) business days following receipt of an ordinance, shall return it to the city clerk with or without the mayor's approval or with the mayor's veto. If an ordinance has been approved by the mayor or if it is returned to the city clerk neither approved nor disapproved, it shall become law upon its return to the city clerk. However, if the mayor fails to return an ordinance to the city clerk within ten (10) business days of receipt, it shall become law at 12:00 Midnight on the tenth business day after receipt.

The mayor acknowledges receipt of the noted Item listed below:

**Date of Adoption:** 5/14/2019    **Item Number:** Ord2019-009

**Subject:** Traffic Calming Policy

**Date Received by Mayor:** \_\_\_\_\_ 5/23/2019 \_\_\_\_\_

APPROVED

DISAPPROVED

**Mayor's Signature:** \_\_\_\_\_

A handwritten signature in black ink that reads "William 'Bill' Edwards".

WILLIAM "BILL" EDWARDS

**Date to City Clerk:** \_\_\_\_\_

A handwritten date in black ink that reads "5/29/19".