

# *City of New Rochelle*



## **Residential Traffic Calming Program**

**Administered by:**

**New Rochelle Department of Public Works  
515 North Avenue  
New Rochelle, NY 10801  
914-654-2131  
[www.newrochelleny.com](http://www.newrochelleny.com)**



## City of New Rochelle Residential Traffic Calming Program

### **Purpose of the Program**

The Residential Traffic Calming Program has been established to address certain neighborhood traffic concerns of the residents of New Rochelle. This program was developed based on the experiences of numerous communities throughout the United States as well as documented studies of Traffic Calming Measures by the Institute of Transportation Engineers, the New York State Department of Transportation and other organizations and agencies.

The purpose of this program is to reduce the speed and volume of traffic traveling on residential streets. Although it is realized that each situation is unique, the policies and procedures outlined in this document are to be applied uniformly to ensure that the City's resources are used appropriately.

### **Traffic Calming Measures**

Some of the devices proposed by the City of New Rochelle include (see appendix B for more details on items three through six):

1. Enforcement – For speed control
2. Education – Use of the speed trailer to promote an awareness of speeding.
3. Road Narrowing – can be accomplished by the use of on-street parking, pavement striping or physical construction.
4. Speed Humps – Based on the design requirements of the Institute of Transportation Engineers.
5. Neighborhood Traffic Circles – Already in place in New Rochelle – small circles break up the driver's perception of the through street making the street seem shorter than it actually is.
6. Closure – Elimination of through or one-way traffic as a result of geometric changes.

### **Project Area**

Traffic calming is applied on a *Project Area* basis. In this way, impacts due to traffic diverted from streets being calmed can be determined prior to the implementation of Traffic Calming Measures [TCM(s)].

The Project Area shall include the following:

- The street(s) and intersection(s) where the Traffic Calming Measures TCM(s) are proposed to be installed (*Project Street(s)/Intersection(s)*);
- Those streets that can only be accessed to and from the Project Street(s)/Intersection(s) (*Adjacent Area*); and,
- A *Potentially Impacted Area* which is the area that includes streets where traffic would divert to due to the implementation of proposed TCM(s). City staff working with New Rochelle residents, and/or neighborhood associations would determine the Project Area for each project through the application process.

## **Program Eligibility**

In order for a roadway to be eligible for traffic calming measures it must meet the following criteria:

- It should be a residential street;
- It should not be a collector or arterial road;
- It should not be designated as an Emergency Response Route;
- The land use fronting street is zoned for residential use. If the land fronting street is zoned for residential use but residential structures do not front onto the street and/or do not have driveway access onto the street the roadway is not eligible for TCM(s);
- It must have an average daily traffic volume (sum of all lanes on all approaches) more than 500 vehicles and less than 3,500 vehicles;
- For speed control measures, the 85-percentile speed must be greater than 35 mph;
- Installation of TCM(s) would not divert significant amounts of traffic to other residential streets;
- Installation of TCM(s) does not provide an unreasonable liability or public hazard due to existing roadway conditions that can not be changed;
- City's Police and Fire Departments do not have significant evidence of public safety concerns due to installation of TCM(s); and
- The TCM(s) promote pedestrian, bicycle, mobility and, where public transit exists TCM(s), do not inhibit public transit movement.

The type of Traffic Calming Measures used is based on the following criteria:

- Road user needs (Fire/Emergency Service, Police, Waste and Snow Removal, etc.).
- Roadway conditions (horizontal and vertical curvature, roadway width and roadway surface).
- Adjacent land-uses (Hospital, School/Day Care Facility, Residential, Retail, Industrial, etc.)
- Effectiveness of measures selected.

## **Application Process**

1. Resident, Neighborhood Association or interested party contacts the Department of Public Works to discuss the problem and procedure. An application is obtained from the Department of Public Works (see Appendix A) and submitted outlining the geographic limits of the area to be calmed and clearly stating the extent of the neighborhood traffic concerns. The application form is accompanied by the signatures of 50% of the residents within the proposed study area. The purpose of the petition is to make the area residents aware of the project and establish citizen participation through the design process. It is noted that once the project area has been determined, neighboring streets/intersections which could benefit from traffic calming would be the subject of separate applications.
2. The Department of Public Works will determine if the Project is eligible for traffic calming measures based on the eligibility criteria sited above.

3. The Department will rank the project when compared with other Projects submitted. The project's ranking is determined based on the following criteria (this will require data collection by the Department of Public Works).

- Vehicle Speed on Project Streets;
- Vehicle Volumes on Project Streets/Intersections;
- Number of Mid-block and intersection accidents on Project Streets/Intersections;
- If Schools are located in the vicinity of the Project;
- If Pedestrian Generators are located in the vicinity of the Project;
- If Pedestrian Facilities are located in the vicinity of the Project;
- If Bike Routes are located in the vicinity of the Project; and
- Housing Density.

Table 1 – Project Ranking System, shows the range of points for each criterion. The sum of points acquired for each criterion will determine the priority of the Traffic Calming Project. Applicants filing for traffic calming measures must be submitted by January 1<sup>st</sup> and September 1<sup>st</sup> of each year. The number of projects undertaken per year will be limited by the resources available and the extent of the projects.

TABLE 1 NEIGHBORHOOD PROJECT RANKING SYSTEM		
Criteria	Points	Basis for Point Assignment
Speed	0 to 30	Extent by which 85% speeds exceed posted speed limit; 2 points assigned for every 1 mph.
Volume	0 to 25	Average daily traffic volumes (1 point assigned for every 120 vehicles above the 500 vehicle threshold.)
Accidents	0 to 10	1 point for every accident reported within past 3 years
Elementary or Middle Schools	0 to 10	5 points assigned for each school crossing on the project street.
Pedestrian Generators	0 to 15	5 points assigned for each public facility (such as parks, community centers, and high schools) or commercial use that generates a significant number of pedestrians.
Pedestrian Facility	0 to 10	5 points assigned if there is no continuous sidewalk on one side of the street; 10 points if missing on both sides.
City Bikeway	5	Project supports City transportation goals related to bicycle use.
Housing Density	0 to 10	Low Density (2 points) Medium Density (5 points) High Density (10 points)
Total points Possible	115	

4. Study of appropriate traffic calming measures will be undertaken by the Department of Public Works through the consultation with the project's proponents and other interested parties/departments. Conceptual design and a preliminary estimate of project costs will be submitted to City Council for approval and funding appropriation. The Department of Public Works will determine conceptual designs for the traffic calming measures to be employed.
5. Design will be circulated to the Fire Department, Police Department, the Traffic Advisory Committee and other interested agencies for their review and comment. The project's impact on emergency response will be determined.
6. A public meeting will be held to present the traffic calming measures and obtain public input. As the result of the comments raised at this meeting, the conceptual design will be modified to address the concerns of the residents.
7. Support for the project by those homeowners in the Project Area will be determined by the Department of Public Works or project proponents with assistance of the Neighborhood Association(s). The project will be forwarded to the Mayor and City Council by the City Manager for their approval upon receipt of 85 percent neighborhood approval for the Project.
8. The effectiveness of the installed traffic calming measures will be evaluated after one (1) year of installation.



City of New Rochelle  
Residential Traffic Calming Program

## Appendix A

# Petition and Request for Traffic Calming Measures



**City of New Rochelle  
Residential Traffic Calming Program**

*REQUEST FOR TRAFFIC CALMING MEASURES*

**Please fill out this form in its entirety. The responses you provide will allow the City to allocate the proper resources to review your request and evaluate the area appropriately. Please attach additional sheets or sketches to clarify your point as necessary.**

**Please locate the streets to be included for traffic calming. Also include the limits of the area along those streets.**

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**Please describe the traffic issues that need to be addressed (speeding, traffic volume, etc.) the time of day the issues are most prevalent and who is affected (pedestrians, other drivers, homeowners).**

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**Contact Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Daytime Phone:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**Return this form and completed petition to:**

City of New Rochelle  
Department of Public Works  
515 North Avenue  
New Rochelle, NY 10801







**City of New Rochelle  
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## **Appendix B**

# **Traffic Calming Measures**

The following information has been excerpted from information provided by the Institute of Transportation Engineers, Traffic Calming for Communities. This is for general informational purposes only and does not directly reflect the policy of The City of New Rochelle. The photographs or text in this Appendix may not accurately portray actual constructed measures within the City.

## SPEED HUMPS

### Description:

- rounded raised areas of pavement typically 12 to 14 feet in length
- often placed in a series (typically spaced 300 to 600 feet apart)
- sometimes called road humps or undulations

### Applications:

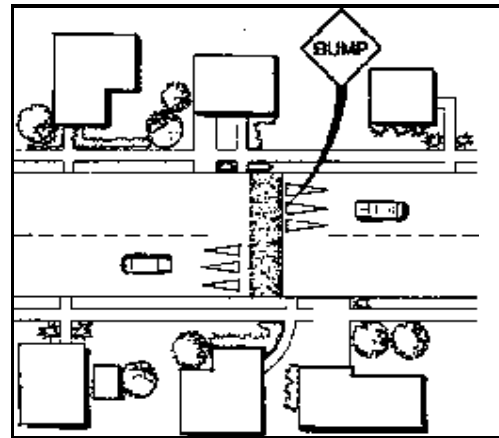
- residential streets
- not typically used on major roads, bus routes, or primary emergency response routes
- midblock placement, not at an intersection
- not on grades greater than 8 percent
- work well with curb extensions



### Design/Installation Issues:

- typically 12 to 14 feet in length; other lengths (10, 22, and 30 feet) reported in practice in U.S.
- speed hump shapes include parabolic, circular, and sinusoidal
- hump heights range between 3 and 4 inches with trend toward 3 - 3 ½ inches maximum

- difficult to construct precisely; may need to specify a construction tolerance (e.g.  $\pm 1/8$  inch) on height
- often have signage (advance warning sign before first hump in series and warning sign or object marker at hump)
- typically have pavement marking (zigzag, shark's tooth, chevron, zebra)
- taper edge near curb to allow gap for drainage
- some have speed advisories
- bicyclists prefer that it not cover or cross a bike lane



#### **Potential Impacts:**

- no effect on non-emergency access
- speeds determined by height and spacing; speeds between humps have been observed to be reduced between 20 and 25 percent on average
- based on a limited sample of sites, typical crossing speeds (85th percentile) of 19 mph have been measured for 3½ inch high, 12 foot humps and of 21 mph for 3 inch high, 14 foot humps; speeds have been observed to rise to 27 mph within 200 feet downstream
- speeds typically increase approximately 0.5 mph midway between humps for each 100 feet of separation
- studies indicate that traffic volumes have been reduced on average by 18 percent depending on alternative routes available
- studies indicate that collisions have been reduced on average by 13 percent on treated streets (not adjusted for traffic diversion)
- most communities limit height to 3-3½ inches, partly because of harsh ride over 4-inch high humps
- possible increase in traffic noise from braking and acceleration of vehicles, particularly buses and trucks

#### **Emergency Response Issues:**

- Concern over jarring of emergency rescue vehicles
- Approximate delay of between 3 and 5 seconds per hump for fire trucks and up to 10 seconds for ambulance with patient

## CLOSURE

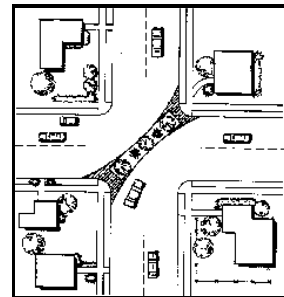


### Applications:

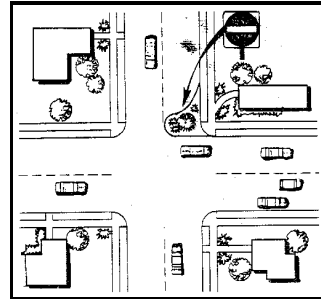
- closures are typically applied only after other measures have failed or been determined to be inappropriate
- for all types of closures, provisions are available to make diverters passable for pedestrians and bicyclists
- often used in sets to make travel through neighborhoods more circuitous - typically staggered internally in a neighborhood, which leaves through movement possible but less attractive than alternative (external) routes
- closures have been used as a crime prevention tool

### Descriptions:

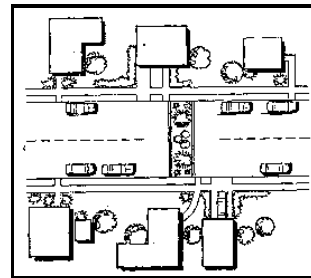
Diagonal diverters are barriers placed diagonally across an intersection, blocking through movement; they are sometimes called full diverters or diagonal road closures



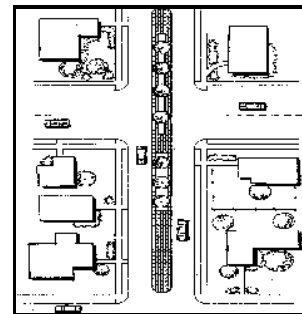
Half closures are barriers that block travel in one direction for a short distance on otherwise two-way streets; they are sometimes called partial closures, entrance barriers, or one-way closures (when two half-closures are placed across from one another at an intersection, the result is a semi-diverter)



Full-street closures are barriers placed across a street to completely close the street to through-traffic, usually leaving only sidewalks open; they are sometimes called cul-de-sacs or dead-ends



Median barriers are raised islands in the centerline of a street and continuing through an intersection that block the left turn movement from all intersection approaches and the through movement at the cross street



#### **Design/Installation Issues:**

- there may be legal issues associated with closing a public street
- can be placed at an intersection or midblock
- barriers may consist of landscaped islands, walls, gates, side-by-side bollards, or any other obstruction that leave an opening smaller than the width of a passenger car

#### **Potential Impacts:**

- concern over effects on emergency response, street network connectivity and capacity, and parallel local streets that carry diverted traffic
- may divert significant traffic volumes
- no significant effect on vehicle speeds beyond the closed block

Emergency Response Issues:

- half closures allow a higher degree of emergency vehicle access than full closures or diagonal diverters
- all three types of closures can be designed to allow emergency vehicle access

## **NEIGHBORHOOD TRAFFIC CIRCLE**

### **Description:**

- raised islands, placed in intersections, around which traffic circulates
- motorists yield to motorists already in the intersection
- require drivers to slow to a speed that allows them to comfortably maneuver around them
- sometimes called intersection islands
- different from roundabouts

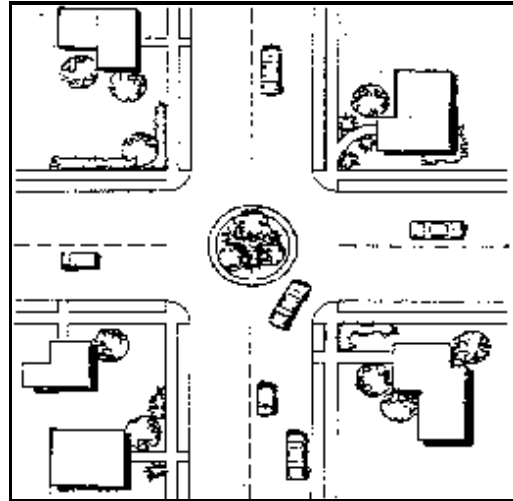
### **Applications:**

- intersections of local or collector streets
- one lane each direction entering intersection
- not typically used at intersections with high volume of large trucks and buses turning left



### **Design/Installation Issues:**

- typically circular in shape, though not always
- usually landscaped in their center islands, though not always
- often controlled by YIELD signs on all approaches, but many different signage approaches have been used
- key design features are the offset distance (distance between projection of street curb and center island), lane width for circling the circle, the circle diameter, and height of mountable outer ring for large vehicles such as school buses and trash trucks



### **Potential Impacts:**

- no effect on access
- reduction in midblock speed of about 10 percent; area of influence tends to be a couple hundred feet upstream and downstream of intersection
- only minimal diversion of traffic
- intersection collisions have been reduced on average by 70 percent and overall collisions by 28 percent
- can result in bicycle/auto conflicts at intersections because of narrowed travel lane

### **Emergency Response Issues:**

- emergency vehicles typically slow to approximately 13 mph; approximate delay of between 5 and 8 seconds per circle for fire trucks
- fire trucks can maneuver around traffic circles at slow speeds provided vehicles are not parked near the circle

### **Other/Special Considerations:**

- large vehicles may need to turn left in front of the circle (which could be unsafe at higher volumes); legislation may be required to legally permit this movement
  - quality of landscaping and its maintenance are key issues
  - landscaping needs to be designed to allow adequate sight distance
  - care must be taken to avoid routing vehicles through unmarked crosswalks on side-street approach
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## CENTER ISLAND NARROWING

### Description:

- raised islands located along the centerline of a street that narrow the travel lanes at that location
- sometimes called midblock medians, median slow points, or median chokers

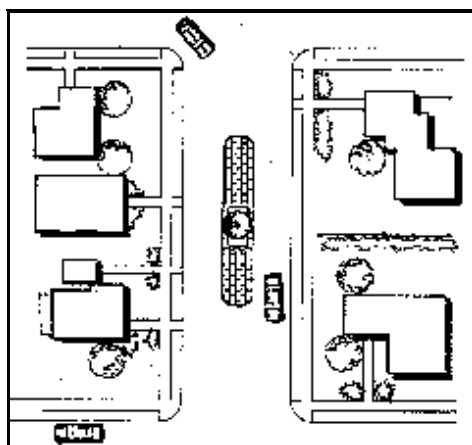
### Applications:

- are often nicely landscaped to provide visual amenity and neighborhood identity
- can help pedestrianize streets by providing a mid-point refuge for pedestrians crossings
- sometimes used on wide streets to narrow travel lanes
- work well when combined with crosswalks



### Potential Impacts:

- may reduce parking and driveway access
- reduces pedestrian crossing width
- may visually enhance the street through landscaping but may also limit visibility of pedestrian crossings
- bicyclists prefer not to have the travel way narrowed into path of motor vehicles
- collision, speed and volume data are not available





**Emergency Response Issues:**

- preferred by fire department/emergency response agencies to most other traffic calming measures