RICHLAND COUNTY
DEPARTMENT OF PUBLIC WORKS
400 Powell Road
Columbia, SC 29203

Traffic Calming Policy

Updated: June 27, 2024

References:
Manual on Uniform Traffic Control Devices (MUTCD)
Institute of Transportation Engineers - Traffic Calming
SCDOT Traffic-Calming Guidelines 2019

Enclosures:
Traffic Calming Options
Petition Form

Section 1- Purpose:

To establish criteria and considerations that will allow Richland County to install traffic calming devices on County- and state-maintained streets, in order to mitigate or reduce the negative impact of speeding through residential areas.

Section 2- Definitions:

Arterial Highways - Roads that carry longer distance traffic between important activity and population centers.

Functional Classification - Refers to the different types or classes of highways that comprise a complete road system.

Impacted Area - Area that is generally a neighborhood area, but can be the same as a petition area, as determined by the Richland County Department of Public Works (DPW) for County-maintained streets and in cooperation with the South Carolina Department of Transportation (SCDOT) for state-maintained streets.

Local Residential - A street in a residential area used primarily for access to abutting properties and for feeding traffic to collector streets.

Mean Speed - The average individual vehicle's speed passing a point on a roadway or lane in miles per hour (mph).

Minor Collector - Road that links the local system with arterial highways.

Petition Area - Area bounded by surrounding collector or arterial roads, as determined by DPW for County-maintained streets and in cooperation with the SCDOT for state-maintained streets.

Section 3- Background:

A. General

Effective traffic calming measures can safely reduce vehicle speeds on streets when installed in accordance with standard provisions. For traffic calming devices to be effective, they must be located specifically in accordance with well defined traffic engineering criteria for the sole purpose of mitigating documented speeding situations.

The traffic calming standards in this document identify criteria used to determine the viability of traffic calming installations. Also outlined in Section 4- Procedures, is the mandatory level of neighborhood support needed to approve installations and cost responsibilities associated with the installation of the traffic calming devices.

The Department of Public Works (DPW) will be responsible for implementing the traffic calming policy on all public streets within Richland County, to include County- and state-maintained streets, and excluding areas within the City of Columbia.

In addition, any municipalities within Richland County that currently have an intergovernmental agreement with Richland County Public Works will be responsible for the equal sharing of legal liability for the installation of traffic calming devices on all streets.

B. Criteria for Traffic Calming Installation

Traffic calming devices shall be considered for installation only when a location meets all of the following criteria:

1. The traffic calming devices shall be located on a paved street with a functional classification designation of "local residential" or "minor collector";

2. The street shall not have more than one moving lane in each direction and shall be at least 1,000 feet in length;

3. Annual average daily traffic volume on the street shall be more than 500 vehicles but less than 4,000 vehicles;

4. The street must have a speed limit of 30 miles per hour (mph) or less on a County road and 25 mph or less on a state road;

5. In both directions, the mean speed on the street shall be at least 5 mph over the posted speed limit; and/or the 85th percentile speed must be 10 mph over the posted speed limit;

6. The street shall not be a route that is heavily used because of close proximity to emergency vehicle facilities;

7. Primary accesses to commercial or industrial sites are not eligible;

8. Any street selected for the installation of a speed humps as a traffic calming device shall not be resurfaced within five years of speed hump installation.

Section 4- Procedures:

A. Request for Traffic Calming Devices

The procedure to request installation of traffic calming devices in Richland County shall be as follows:

1. The installation of traffic calming devices shall be considered only upon written request of a resident living on the subject street of the request. If an organized homeowner's association (HOA) or neighborhood association exists, they must concur with the request. Requests can be submitted to the Ombudsman's Office through the One-Call Response Center or sent to the following address:

Richland County Department of Public Works (DPW)
Engineering Division
400 Powell Road
Columbia, SC 29203

2. The written formal request shall assign a point of contact (POC) to represent the HOA or subject street. The POC must be willing to serve as a contact person with whom DPW can work with throughout the traffic calming request process. Other duties for the POC are described within this document.

3. Upon receiving the request, DPW will perform a review of the subject street to determine if meets the readily avaiable criteria for consideration of a traffic calming device.

B. Neighborhood Support Documentation

Once a request has been determined to be eligible for consideration of a traffic calming device, the support of the neighborhood and the impacted areas must be documented as described below:

1. A petition area will be defined by DPW for County-maintained streets and will be defined by the County in conjunction with SCDOT for state-maintained streets.

2. After a petition area is determined, DPW will discuss the area with the POC. In addition, DPW will supply the POC a map of the petition area and petition forms for use.

3. The POC will be responsible for obtaining at least 75 percent of the total occupied households or businesses within the designated petition area.

4. If the minimum 75 percent concurrence within the petition area is not met, a request for an exception can be made to the County Engineer. Community support is viewed as essential to this process. Only in special circumstances will an exception be granted on a County-owned road. SCDOT will allow exceptions on state roads only as approved by County Council.

5. If the minimum 75 percent concurrence within the petition area is met and submitted within the time frame above, the request will be placed on a list to receive a traffic study analysis.

C. Traffic Study

1. DPW will perform all necessary vehicle counts and speed evaluations. If a traffic study meets criteria to have a traffic calming device installed (see section B(3) Criteria) then DPW will contact County Maintenance, the Sheriff's Department, and Emergency Management for input on the request.

2. Based on a review of all data and consideration of input from other departments, final determination will be made by the responsible agency:
    a. DPW will determine the eligibility of County-maintained roads. A written, formal response will be sent to the POC. The response will report the findings of the review and whether the subject street meets all criteria for traffic calming device installation.

    b. If the street is maintained by the state, DPW will forward all data collected to the District Traffic Engineer for the S.C. Department of Transportation (SCDOT) for their concurrence and an encroachment permit.

3. Subject streets found to be ineligible for traffic-calming device installation may request a new traffic study after a two-year waiting period.

Meeting eligibility requirements does not guarantee approval of a traffic-calming project or measure.

- Traffic-calming measures are not eligible if they compromise roadway safety, based on limited sight distance, severe grades, or other engineering judgment.

- Traffic-calming measures are not eligible if the petition requiring 75 percent support or County Council approval cannot be obtained. Residential support of the project is necessary for a successful program.

- Some solutions might be acceptable for one portion of the impacted area but not acceptable for another portion.

D. Location of Traffic Calming Devices

DPW staff, under the direct supervision of the County Engineer, will determine the final location of all traffic-calming devices in accordance with these standards, and in accordance with safe engineering principles based on, but not limited to, the following guidelines:

1. The traffic-calming device shall not be located within 200 feet of a stop sign or an intersection on the selected street;

2. The traffic-calming device shall not be located within a horizontal curve with a radius of 300 feet or less;

3. The traffic-calming device shall not be installed in a vertical curve with inadequate stopping sight distance and/or with a grade of 8 percent or more;

4. Drainage on the street shall not be compromised by installation of the traffic calming device;

5. Safety on the roadway shall not be compromised by installation of the traffic calming device.

E. Traffic Calming Device Removal

In order for traffic calming devices to be removed, the following criteria must be applied:

1. The traffic calming devices considered for removal must be in place for at least two years.

2. If one traffic calming device is requested for removal on a street with multiple traffic calming devices, the DPW will review all locations to determine whether additional

traffic calming devices must be included in the removal process. Removing one traffic calming device in a series could have an adverse impact on traffic speeds on that street.

3. In order for removal to occur, a formal written request must be sent to the Director of Public Works. A POC must be assigned in this request. If a neighborhood association or HOA exists, they must concur with the removal request.

4. A petition must be obtained from the original designated petition area. DPW will give this information to the POC.

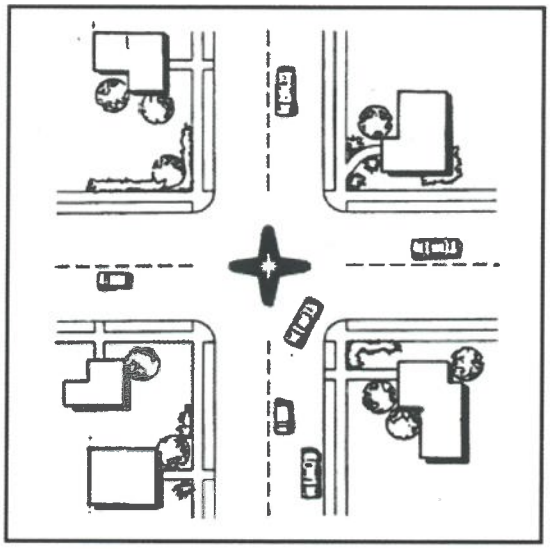
5. The POC will be responsible for obtaining support of at least 75 percent of the total occupied households or businesses within the designated petition area.

6. If a request fails to meet the 75 percent minimum, the request to remove the traffic-calming devices will be denied.

7. If a request meets the 75 percent minimum, DPW will remove the requested and/or designated traffic calming devices at the expense of the requesting neighborhood/community, HOA or by the residents along the subject street. Costs associated with the removal of traffic-calming devices will not be incurred by Richland County.

8. DPW will determine a cost for an internal crew to remove the device based on current labor and equipment rates, as well as fuel cost. If necessary, a contractor currently under contract or three quotes can be solicited to remove the traffic calming devices. This cost will be submitted to the POC. Once Richland County receives a check from the POC, work to remove the speed humps will start.

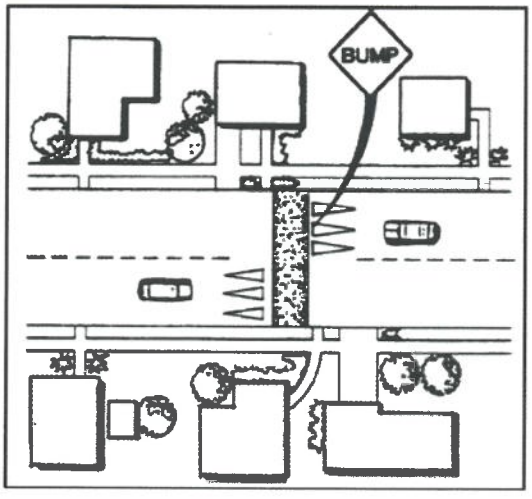
STAR DIVERTER



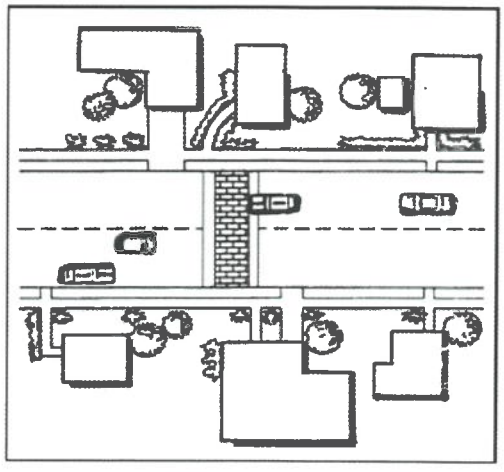
The **star diverter** is a raised island permitting only right turns at an intersection, similar to a forced turn island. They are often compared to the traffic circle (see *Speed Control Measures*), but are more restrictive. Star diverters are the least common installations among volume control measures.

Phase II - Speed Control Measures are primarily used to address speeding problems by changing vertical alignment, changing horizontal alignment, or narrowing the roadway. Their intent is to slow traffic in an area.

SPEED HUMPS
(road humps, undulations)



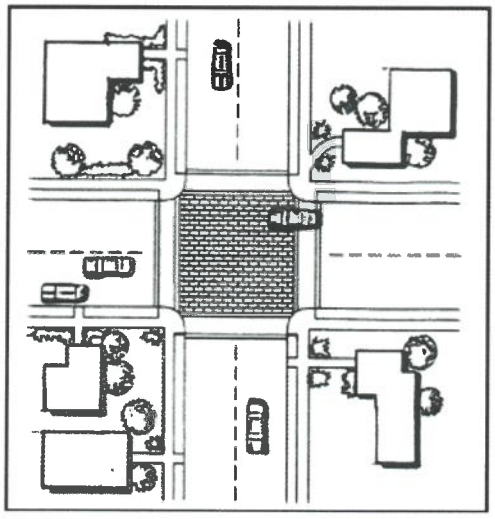
SPEED TABLES
(trapezoidal humps, speed platform)



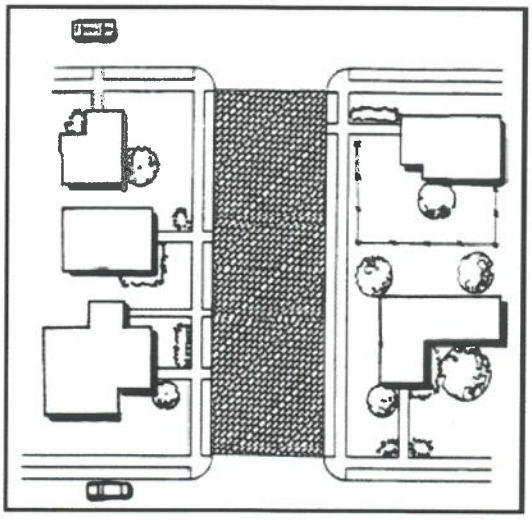
Speed humps are rounded raised areas placed across the road. ITE recommends that a speed hump be 12 feet long (in the direction of travel), 3 to 4 inches high, parabolic in shape, and have a design speed of 15 to 20

mph. Other humps have also been used successfully, including 22-foot long humps and humps with rounded, sinusoidal, and circular profiles. They have been rated well for low cost and effectiveness in reducing vehicle speed and negatively for appearance and legal liability. To alleviate controversy from emergency services, the "split" or "offset" speed humps were created. Split humps extend from curb to centerline on one side of the street and then, separated by a gap, continue on the other side allowing fire trucks to weave around them.
Speed tables are essentially flat-topped speed humps often constructed with brick or other textured materials on the flat section. The textured surface provides a visual cue to the driver that the road is changing who must
street and then, separated by a gap, continue on the other side allowing fire trucks to weave around them.

RAISED INTERSECTIONS
(raised junctions, intersection humps, plateaus)



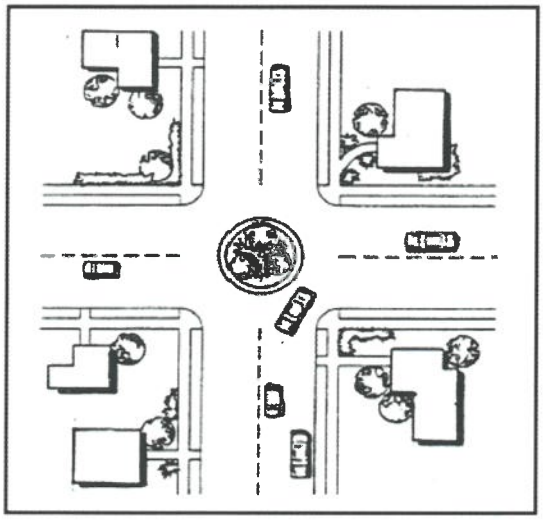
TEXTURED PAVEMENTS



Raised intersections are speed tables covering entire intersections, with ramps on all approaches using brick or other textured materials on the flat section. The textured surface provides a visual cue to the driver to slow down. These intersections rise to sidewalk level, or slightly below to provide a "lip" for the visually impaired. They make entire intersections into pedestrian territory.

The cost for installation of raised crosswalks and raised sidewalks will range per square foot.
Textured pavements are roadway surfaces paved with brick, concrete pavers, stamped asphalt, or other surface materials that produce constant small changes in vertical alignment. These surfaces also provide a visual cue that the road is changing and the driver must adapt by slowing. Textured pavements aim to mimic the effect of old cobblestone and brick streets on travel speeds. However, they can present difficulties to pedestrians and bicycles, particularly in wet conditions.
Textured pavement can be installed for a cost ranging per city block (500 feet), depending upon the texture type selected.

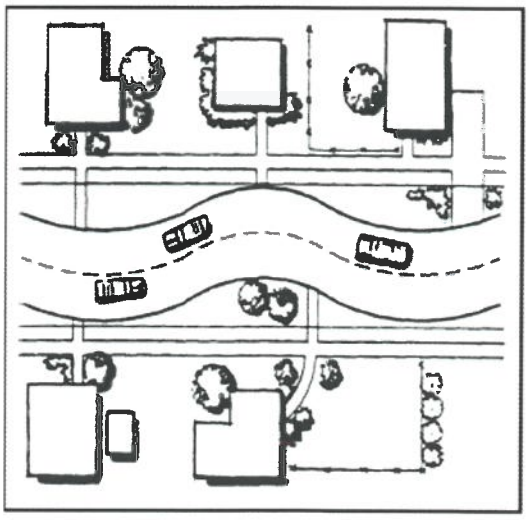
NEIGHBORHOOD TRAFFIC CIRCLES
(intersection islands)



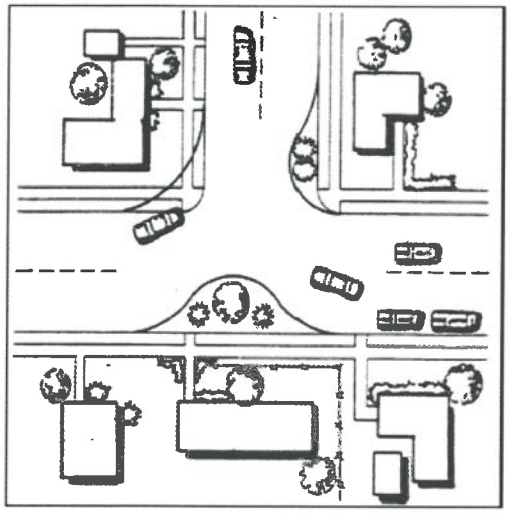
Traffic circles are raised islands, placed in intersections, around which traffic circulates. They are typically controlled by YIELD signs on all approaches. Traffic circles impede the through movement and force drivers to slow down to yield. Traffic circles are not as controversial as speed humps, but also raise concerns such as the inability of large vehicles to turn at small-radius curves. This impact to truck movements has led some jurisdictions allow the left movement through the circle.
Traffic circles can be designed and installed for costs vary depending upon the type and dimensions of the circle. This cost could also increase significantly if street reconstruction is required to expand the traffic circle geometrics to roundabout proportions – for higher volume applications.

CHICANES
(deviations, serpentines, reversing curves, twists)

Chicanes utilize a series of curb extensions alternating from one side of the street to the other and form S-shaped curves. They are less common than traffic circles, partly because of the high costs of curb realignments and potential relocation of drainage structures. Improperly designed chicanes may still permit speeding by drivers cutting straight paths across the centerline.
Typically, Chicanes may require total street reconstruction over several blocks to realize the desired effects. The cost of this reconstruction can vary depending on the desired aesthetic treatment.



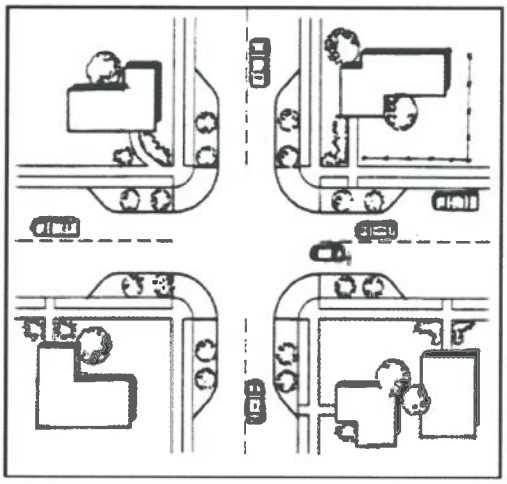
REALIGNED INTERSECTIONS
(modified intersections)



Realigned intersections involve changes to the road alignment that convert T-intersections with straight approaches into curving streets that meet at right angles. A former through movement along the top of the T becomes a turning movement.

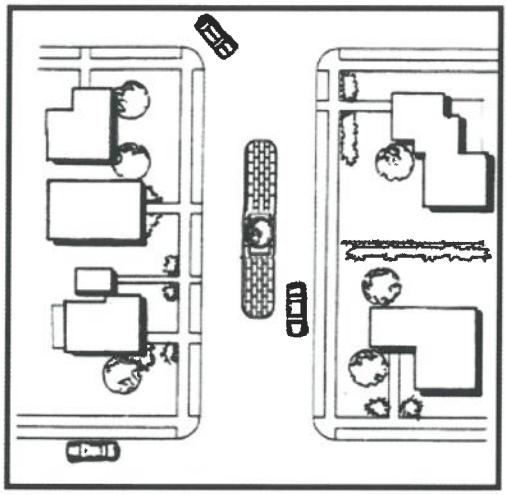
The cost for this alternative can be extremely high. In most cases, significant roadway reconstruction and drainage adjustments are required. In addition, this alternative can also require additional right—of-way acquisition, and can create substantial impacts to adjacent properties

NECKDOWNS
(nubs, bulbouts, knuckles, intersection narrowings, corner bulges, safe crosses)



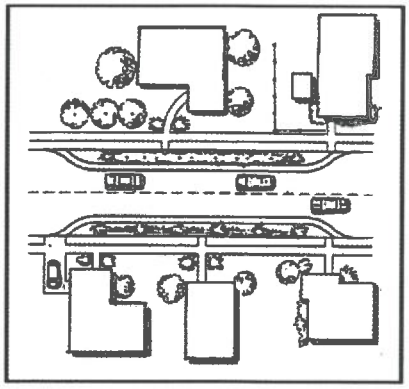
Neckdowns utilize curb extensions at intersections to reduce roadway width thereby shortening pedestrian crossing distance and enhancing pedestrian visibility. Neckdowns are the most common type of street narrowing. Issues to consider with neckdowns include drainage structure relocation, parking or truck movements, landscaping, and location of bus stops.

CENTER ISLAND NARROWINGS
(midblock medians, median slowpoints, median chokers)



Center island narrowings are raised islands installed along the centerline of a street to narrow the travel lanes at that location. They are often landscaped to provide a visual amenity and neighborhood identity. When used as short interruptions to an otherwise open street cross-section, they can result in slowed average traffic speeds. Center island narrowing can be installed for costs similar to median barriers, as discussed in the preceding section.

CHOKERS
(pinch points, midblock narrowings, midblock yield points, constrictions)



Chokers utilize curb extensions at midblock to narrow a street by widening the sidewalk or planting strip. Chokers can leave the street cross-section with two narrow lanes or just one lane. If the roadway is narrowed down to one lane, the lane may be parallel to the alignment (*parallel choker*) or angled to the alignment (*angled choker*). Chokers will typically result in a net reduction of on-street parking space. Construction of Chokers is very similar in scope as installation of traffic diverters and neckdowns. In these cases, the redesign must include provisions for curb and gutter, adjustment/installation of catch basins, and landscaping appurtenances.

Speed Reduction Note:
It is generally agreed that changes in horizontal alignment (e.g., Chicanes) or vertical alignment (e.g., Speed Humps) will typically result in the most effective means to physically control speed. Alternatively, neckdowns, island narrowing, and chokers are installed to reduce speed by reducing the available lane widths to drivers. Research indicates that speed reduction through narrowing of lanes may result in only minor impacts on average travel speeds, and will usually have little or no effect on maximum speeds. Combining lane narrowing (10' or less) with other treatments which psychologically impact driver perception (e.g., foliated trees near the roadway, minimum building setbacks, etc.) will usually (but not always) result in a net slowing effect.