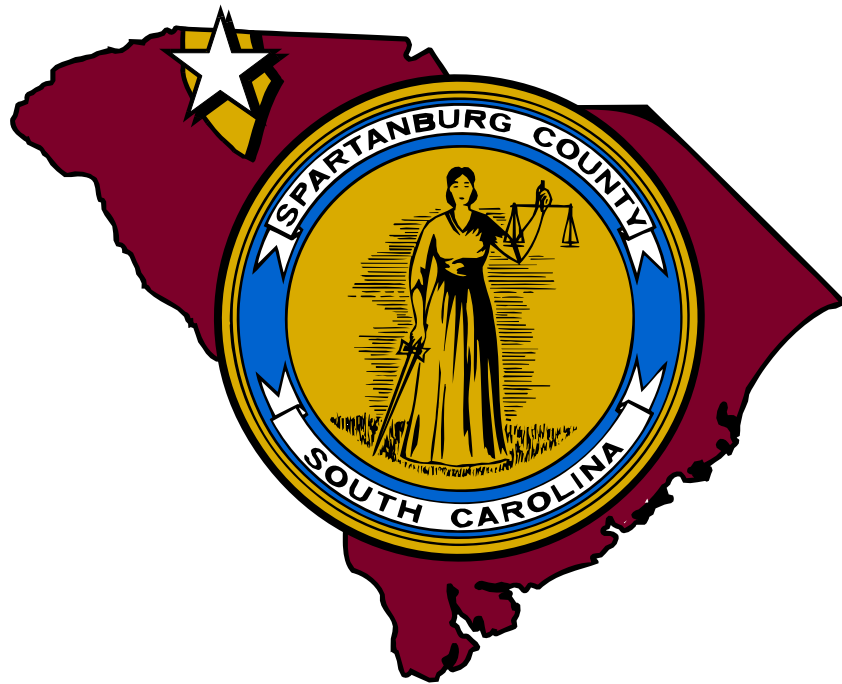


County of Spartanburg South Carolina



Traffic Calming Program

March 2007

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PURPOSE

The potential negative impacts from vehicular traffic on residential roads have been a long-standing public concern. Traffic conditions such as speeds and/or volumes on residential road can greatly affect neighborhood livability by discouraging non-motorized road users and eroding the residential character of the neighborhood roads. When roads are designed to serve vehicles, bicycles, and pedestrians, while maintaining the character of the neighborhood, the quality of life is enhanced. When traffic problems become a daily occurrence, the sense of community and personal well-being are threatened.

The Traffic Calming Program serves as a Spartanburg County commitment to the safety and livability of residential neighborhoods. Under the program, the Department of Planning, the Department of Public Works, and the Sheriff's Office work with residents to identify traffic problems in their neighborhoods and find solutions.

Local residential roads make up the great majority of the publicly maintained road system of Spartanburg County. These roads generally serve local circulation needs - vehicle and pedestrian and provide access to local residences.

The most common problems on local residential roads are high vehicle speeds and excessive volumes of through-traffic. These in turn, can lead to safety concerns for all users of our roads. Our mission is to improve neighborhood safety by working with residents to design and implement solutions that minimize the negative effects of speeding and/or excessive vehicular traffic on "eligible roads".

THE THREE 'E's: Education, Enforcement, and Engineering

Traffic calming projects can involve three kinds of possible efforts: education, enforcement, and/or engineering. **Education** alerts people to ways they can help ease traffic problems, for example, by reducing speed or traveling by bus or bicycle instead of automobile. **Enforcement** enlists the help of the Sheriff's Office to focus enforcement efforts on the affected road(s) and increase community awareness of speeding problems. **Engineering** tools include a variety of traffic calming devices that can reduce speed, decrease volumes, and/or improve safety.

CLASSIFICATIONS

The following are general classifications; however, due to the unique nature of development in Spartanburg County, some roads can be broken down into distinct segments. Some roads can serve as one type of roadway but still take on different characteristics as the road moves through other segments on its path. A written "Statement of Classification" will document the classification of any road to be studied. Beyond the general description below, additional factors that are considered in the County's "Statement of Classification" may include but not be limited to design speed, number of lanes, and residential density.

1. **Arterial Roads** - Serve major centers of activity in urbanized areas and carry a high proportion of the traffic entering and leaving the urban area. Arterial roads generally carry

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more than 18,000 vehicles per day and must be built to South Carolina Department of Transportation standards.

2. **Minor Arterial Roads** - Interconnect and augment the arterial system by distributing travel to geographically smaller areas than arterial roads. Minor arterial roads provide more emphasis on land access and a lower level of travel mobility. These roads handle volumes between 10,000 to 18,000 vehicles per day and must be built to South Carolina Department of Transportation standards.
3. **Major Collector Roads** - Collectors usually connect on both ends with other collectors and/or arterial roads carrying more than 4,000 but less than 10,000 vehicles per day. Collector road systems provide both land access service and traffic circulation with residential neighborhoods. Collector roads penetrate residential neighborhoods, distributing trips to and from arterial roads and their residential destinations. Major collector roads must be built to South Carolina Department of Transportation standards.
4. **Minor Collector Roads**- Minor collector roads generally serve multiple neighborhoods and usually connect on both ends to roads of a higher classification. Minor collectors usually carry between 1,250 to 4,000 vehicles per day and will be designed to 35 mph minimum design speed.
5. **Local Residential Roads** - Local residential roads are usually roads contained within the neighborhood they serve and typically connect only on one end to a road of a higher classification. Some roads can serve as local residential roads in a neighborhood setting and still take on different characteristics as the road moves through other segments on its path. These roads usually carry 750-1,250 vehicles per day and are designed for a 30 mph minimum design speed.
6. **Residential Access Roads** - Residential access roads are residential roads that augment the local residential roads. Residential access roads usually carry 250 to 750 vehicles per day and post a minimum design speed of 25 mph.
7. **Residential Sub-Access Roads** - Residential sub-access roads are cul-de-sacs or low volume roads with less than 250 vehicles per day. A 20 mph minimum design speed is appropriate.
8. **Nonresidential Roads** - 35 mph minimum design speed - A roadway will be in this category if, as determined by the Spartanburg County Department of Planning, the character or intent of the surrounding property is for commercial, service, office, or industrial use.
9. **Affected Road** - A road that the County has received a request for traffic calming assistance and that is determined by County staff to be eligible for assistance.

PROCEDURES

A. Project Initiation

Local residential street projects are initiated when a citizen or neighborhood association asks for help with traffic problems on a residential street(s). If the problem is speeding,

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the Sheriff's Office will be contacted and speeding enforcement will be requested. If after two (2) months, enforcement alone is determined to be ineffective, staff will check the location to determine if the request concerns a local residential street. If so, traffic counts will be taken to determine if the volumes and speed qualify for the Speed Hump Program.

A traffic calming project must begin with a request from a citizen or a neighborhood association. Typically a neighborhood representative is designated as the contact person. The neighborhood representative will fill out an official request form and submit it to County staff. Once the request is received, County staff will check the location to determine whether the request concerns an eligible residential road. If the road meets eligibility requirements, it will be placed on a waiting list, and the neighborhood representative will be notified by letter of the neighborhood's status on the list. Traffic counts will be taken to determine if the volume(s) and speed(s) meet the required criteria of the Speed Hump Program. If the problem is speeding only or the road in question has not been designated as an eligible road by County staff, the neighborhood representative will be notified.

B. Plan Development

If the required criteria are met, staff will determine the location and number of speed humps for the subject road or segment. Some factors that may be considered in determining speed hump locations include but are not limited to: the spacing of intersection(s), the location of hills and curves, drainage, and other improvements within the right-of-way.

A project can be undertaken only if it has the support of at least seventy five percent (75%) of residences affected streets and twenty five (25%) percent of residences living in the defined service area in the neighborhood that must use affected streets. County staff will provide maps attached to petitions showing the approximate location of the proposed speed humps. County staff will also be available as a technical resource to explain the proposed number and location of speed humps.

"Residences" and "service area" defined

For purposes of determining who is eligible to sign a traffic calming petition under the Speed Hump Program, a "residence" means an inhabited existing home within the service area as determined by County staff. "Service area" means all identifiable homes that are located on a road subject to traffic calming device installation and those residents whose homes are located on a road that must travel over the proposed speed humps in order to reach their homes. All eligible requests will require a case-by-case review by County staff or County-employed consultants to determine the service area.

C. Timeframes

In each case where the road is determined to be eligible for speed humps, the neighborhood representative or designee will be issued the necessary petitions and attachments and will be given 120 days to obtain the required signatures. Should the petition effort fail to meet the required signature level, no petition for traffic calming will be reissued to that particular service area for a period of two (2) years from the conclusion of the 120 days

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If a road does not qualify for speed humps after the speed and/or Volume studies are conducted, the residents will be required to wait two (2) years from the date the studies are conducted to re-apply for traffic calming. If the County adjusts speed limits to the affected road or segment, the service area will be required to wait at least 90 days after the new speed limit signs are installed before a new study will be initiated.

D. Alternative Traffic Calming Measures

If a road within a designated service area qualifies for traffic calming, alternative traffic calming measures may be installed if the residents pay the difference in cost between speed humps and the alternative measure(s). The use of decorative speed humps will require the residents to pay the additional costs associated with the special pavement stamping. Brick pavers are not allowed. Should alternative measures be installed, the County will only maintain curbs and regular asphalt, and any additional maintenance such as text red pavement or landscaping will be the responsibility of the neighborhood. The use of alternative traffic calming measures are subject to approval by County staff.

Alternative traffic calming measures include but are not limited to the following:

- Raised intersections
- Raised crosswalks;
- Chokers;
- Neckdowns;
- Traffic circles;
- Chicanes;
- Center islands; or

Any combination of the above measures.

Should additional right-of-way be needed for an alternative traffic calming measure to be installed, it will be the responsibility of the homeowners to obtain such right-of-way. Spartanburg County will not assume any responsibility or incur any cost related to the acquisition of additional right-of-way.

E. Design And Construction/ Implementation

The County designs and constructs traffic calming devices. Speed humps can usually be constructed within six (6) months of approval with the exception of the winter months. If the traffic calming project involves the use of traffic calming devices other than speed humps, then the design and construction process generally will take about one (1) year, but may take longer depending upon the specific device to be installed.

At the time the speed humps are approved, pavement conditions (using the Overall Condition Index (OCI) and visual inspection) will be checked for the eligible road(s). If a road is already in the current County Road Improvement Program, the speed humps will be installed after the paving is completed. No special provisions will be made to accelerate the paving schedule. If minor repairs (e.g. patching) are necessary, County staff reserves the right to delay the installation of speed humps until the necessary repairs to the road surface

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have been completed. The time period for this delay will be determined by the prior schedule of the patching and/or paving crew. If a road is on a future paving list that has not been approved, but is projected to be paved in the next four years, that road may qualify for rubber speed humps. Rubber speed humps could be installed on a "first-come, first-served" basis due to limited availability. The rubber speed humps will serve as a temporary measure only and will be removed when the road has been repaved and permanent speed humps installed.

F. Signage

Speed Hump warning signs will be placed at locations to be determined by county staff. Typically, signs are placed at the beginning and end of an affected road. In the event that there are crossroads intersecting the impacted road, County staff may add additional signs. The speed hump sign will be supplemented with an advisory speed plate and/or a plate describing distance and/or number of speed humps.

G. Project Evaluation

Within one year after the construction of traffic calming devices is complete, the Department of Public Works will evaluate the effects of the project (e.g. traffic speeds and traffic diversion onto other local service roads).

H. Removal Policy

If after two (2) years from the date of installation, residents of the neighborhood decide that they no longer want speed humps, they can request that the speed humps be removed. A County certified petition will be issued and must be approved by 75% of the residents on the affected road and 25% of the residents on roads that must travel over the humps in order to reach their homes. The entire cost of removal must be paid for by the residents. If speed humps are removed from a road, pursuant to this section, that road will not be eligible for new speed humps for a period of five (5) years from the date of removal.

The Speed Hump Program

The Speed Hump Program focuses on the third "E": the Engineering aspect of traffic calming. The Spartanburg County Department of Public Works will only fund those roads that qualify for one of the three methods that meet all the criteria outlined below. Additionally, the following roads or segments are not eligible for the Speed Hump Program:

- Arterial Roads
- Minor Arterial Roads
- Major Collector Roads
- Nonresidential Roads

Residential roads or segments of roads that qualify under the Speed Hump program primarily provide residential access. The low volumes on these roads tend to make constant enforcement difficult, and any traffic calming efforts will generally affect only those from the neighborhood which the roads service.

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If traffic calming devices were recommended by County staff during the construction of a subdivision, but were not installed or implemented by the developer, speed humps will not be funded by the County on the roads within that subdivision. In this case, the residents will be responsible for the entire cost and must follow the process as outlined below.

There are four methods in which a road may be eligible for speed humps or other traffic calming measures under the Speed Hump Program:

- Volume and Speed
- Speed Only
- Special Study
- Impact Threshold Curve

These methods are discussed in detail below.

1. Volume and Speed Method

There are five criteria that a road must meet to qualify under the Volume and Speed Method.

- 1) The 85th percentile speed as measured by County staff or county-employed consultants must be greater than 10 miles per hour over the posted speed limit (the 85th percentile speed is the speed at or below which 85% of drivers are operating their vehicles);
- 2) Volume must equal or exceed 750 vehicles per day;
- 3) The grade of the affected road or segments thereof shall not be greater than 8%;
- 4) The minimum length of road or segment shall not be less than 1000 feet;
- 5) A County certified petition approved by 75% of the residents on the affected road and 25% of the residents living in the defined service area in the neighborhood that must use the affected road must be submitted to the County within the designated time period.

2. Speed Only Method

There are four criteria that a road must meet to qualify under the Speed Only Method:

- 1) The 85th percentile speed as measured by County staff or county-employed consultants must be greater than 10 miles per hour over the posted speed limit (the 85th percentile speed is the speed at or below which 85% of drivers are operating their vehicles);
- 2) The grade of the affected road or segments thereof shall not be greater than 8%;

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- 3) The minimum length of road or segment shall not be less than 1000 feet; and
- 4) A County certified petition approved by 75% of the residents on the affected road and 25% of the residents living in the defined service area in the neighborhood that must use the affected road must be submitted to the County within the designated time period.
- 5) Roads that meet all the criteria outlined in the "Speed Only Method" section will be eligible for installation of speed humps only if the community agrees to fund the cost to install the speed humps.

3. Special Study Method

In some cases, County staff may determine that an entire neighborhood road system should be reviewed as a special study. In rare cases, speed humps may be considered on minor collector roads as a part of a special study. In these special study cases, a public meeting will be held with the neighborhood and the staff recommendation will be taken to County Council for approval.

Within the Special Study Method, a road must meet the criteria and funding for either the Volume and Speed Method or the Speed Only Method.

4. Impact Threshold Curve Method

The impact threshold curve is a measurement used by the County as a guideline only. It is used to determine whether a road has been significantly impacted by the installation of traffic calming devices on adjacent roads. It may be modified by County staff to respond to particular road or neighborhood characteristics. In general, an increase of up to 150 vehicles per day is acceptable on any local service road. The maximum amount of traffic increase on any local service road is 400 vehicles per day.

There are four criteria that a road must meet to qualify under the Impact Threshold Curve Method:

- 1) The total traffic volume on any local service road (the existing volume plus the increased volume resulting from the project) should not exceed 3,000 vehicles per day;
- 2) The grade of the affected road or segments thereof shall not be greater than 8%;
- 3) The minimum length of road or segment shall not be less than 1000 feet; and
- 4) A County certified petition approved by 75% of the residents on the affected road and 25% of the residents living in the defined service area in the neighborhood that must use the affected road must be submitted to the County within the designated time period.