

Speed Hump Policy

1. GENERAL

The purpose of this policy is to provide guidelines for the application of speed humps. A "speed hump" is a gradual rise and fall of pavement surface across the width of the roadway. Two common designs of speed humps include 1) circular humps - 12 feet long with a maximum height of three or four inches and 2) flat-topped humps - 22 feet long having a 10-foot long and three to four-inch plateau with six-foot long circular arc approaches. A speed hump differs from a "speed bump", which is more abrupt, having a height of three to four inches over a length of one to three feet. Due to gentle vehicle rocking, speed humps cause some drivers discomfort and result in most vehicles slowing down at humps and between properly spaced successive humps.

Research has shown that speed humps are effective in safely reducing speeds along a roadway. There is, however, a potential for traffic diversion onto neighboring streets as a result of motorists avoiding the speed hump street.

In order for speed hump installation to be effective, their provisions should be in accordance with established transportation engineering criteria and documented facts. As is the case with all traffic control devices, proper installation will encourage compliance and safe driving practices. This policy provides criteria and procedures for installation of safe and effective speed humps.

The city reserves the right to change any or all of the criteria and procedures in these guidelines if deemed necessary.

2. ELIGIBILITY REQUIREMENTS

All of the following criteria shall be satisfied for a street to be considered eligible for speed hump installation.

A. PETITION

1. A petition from the residents and business owners documenting that at least two-thirds of all households and businesses adjacent to the project street support the installation of speed humps.
2. A verification statement from the contact person confirming that the signatures on the speed hump petition are valid and represent at least two-thirds of the households/businesses adjacent to the project street (refer to attached verification statements).
3. A statement from the neighborhood association endorsing speed hump installation on the project street. In the absence of a neighborhood association, the petition area may be extended to include nearby streets that may see an increase in traffic as a result of this project. Staff will determine the petition area.

B. OPERATIONAL AND GEOMETRIC CHARACTERISTICS OF THE STREET

1. The street shall provide access (via driveway or on-street parking) to abutting residential and/or commercial properties (residential local or collector streets). Residential properties include multiple dwellings such as apartment complexes.
2. The street shall not have more than one traffic lane in each direction.
3. The street shall have a regulatory speed limit of 30 mph or less as determined in accordance with State Law.
4. The 85th percentile speed on the street section must be at least 35 mph or 5 mph over the regulatory speed limit.
5. The speed humps should not be located on a horizontal curve, on vertical curves where visibility of the hump is restricted, or on the approaches to these curves.
6. The street should have curb and gutter. Considerations may be given to streets without curb and gutter. In such cases, special care should be used to accommodate drainage and prevent vehicle run-arounds.
7. The street must be approved by the emergency services departments for installation of speed humps.
8. The street must have a 24-hour traffic volume of at least 800 vehicles.

3. PROJECT PRIORITIZATION

Speed hump projects are prioritized on a city-wide basis. This ensures proper allocation of the City's resources. The projects will be ranked according to the criteria developed by the staff.

4. COST RESPONSIBILITY

The city has a designated fund for traffic calming including speed humps; however, the cost for speed hump installation (including humps, signs, pavement markings and if necessary, special features) may be shared between the City and the residents according to the cost share criteria.

The residents' cost share is that percentage of the total cost that is not the City's responsibility. One or more resident(s) may pay this share or it may come from other private sources. City funded participation will proceed in descending order from the top of the priority list until all funds are allocated. Residents may be able to expedite approved hump installation by voluntarily paying the full installation cost. Alternate sources of funding may be available in certain circumstances.

5. SPEED HUMP LOCATION

A speed hump shall not be located in front of a property if the occupant objects to its placement or, in the case of multiple dwellings, if a majority of the households on the property object to its placement. Fulfillment of this requirement is the responsibility of the applicant(s).

6. DESIGN, CONSTRUCTION AND MAINTENANCE

The Public Works Department shall prepare design standards and installation procedures for speed humps and related features such as signs and pavement markings. The Department will administer construction of speed humps. The Department will maintain the speed humps and all related features.

7. SPEED HUMP REMOVAL AND ALTERATION

The process for speed hump alteration or removal requested by the residents is the same as the process for installation, except that there will be no City participation in the cost incurred. A petition approved by the neighborhood association, documenting that at least two-thirds of all households and businesses adjacent to the speed hump street are in favor of speed hump removal, will be required.

Speed Hump Installation Procedure

The following items describe the procedure to be followed for speed hump installation. A list of the speed hump installation process is presented.

1. PROJECT REQUEST

Individual residents or neighborhood associations can initiate requests for speed hump installation. A request must be made to:

City of New Braunfels
Transportation and Traffic Advisory Board
550 Landa Street
New Braunfels, Texas 78130

2. PRELIMINARY REVIEW

- A. After a request for speed humps has been received, City staff will conduct an initial investigation and collect data to determine the street's eligibility in regards to the operational and geometric characteristics. This eligibility process includes approval from the emergency services departments.

- B. If the operational and geometric requirements for eligibility are not met, the street will not be considered for speed humps and the requestor(s) will be notified.

- C. If after the initial study it is determined that the street qualifies for speed hump installation, a petition packet consisting of the speed hump petition, a verification statement for the contact person, and an endorsement statement for the neighborhood association, if applicable, will be provided to the requestor(s). The project requestor(s) will be responsible for circulating the petition in the petition area.
- D. Signatures representing two-thirds of all the households and businesses within the petition area must be in favor of speed hump installation for the study to proceed further. Multi-family dwellings with more than four units will be counted as one household, with the property owner or manager representing the household.
- E. The cut-off date for receiving requests for speed hump projects to be undertaken during a particular fiscal year will be February 1 of the preceding fiscal year, the cut-off date for receiving the approved petition, verification statement, and endorsement statement will be May 1st of the preceding fiscal year.
- F. If the approved petition, completed verification statement, and endorsement statement from the neighborhood association (if applicable) is received by the specified date, the street will be placed on the list of streets eligible for speed hump installation. A priority ranking will be assigned to the street according to the project prioritization criteria.

3. FUNDING

- A. Funding is approved by City Council allowing for a specific amount of money to be allocated to speed hump installation. City funding will proceed in descending order from the top of the priority list (detailed below). Cost sharing criteria may be used to determine the residents' share of the installation cost.
- B. City staff will submit a statement to the requestor(s) of each approved project indicating the estimated total speed hump installation cost, City's cost share (if any), residents' cost share (if any), and the project's ranking on the priority list. If the project does not receive high enough priority to receive City funding and the budgeted speed hump City funds have been exhausted, residents have the option to voluntarily pay for the full installation cost.

4. SPEED HUMP INSTALLATION

Upon receipt of residents' share (if any) and allotment of City's share (if any), speed humps will be installed as scheduling permits. The construction of humps and the placement of signs and marking will conform to the current design standards as established by the City Street Department.

Project Prioritization Criteria

Speed hump projects will be ranked according to the criteria established in this section. Projects will be assigned points on the basis of existing speeds and volumes, average number of speed related accidents reported to the New Braunfels Police Department and presence of schools and/or other special pedestrian generators in the area. The project accumulating the greatest number of points will be considered to have the highest priority. Among projects with the same rank, higher priority will be given to the one with the earliest application date.

1. ACCIDENT CRITERIA

All accidents considered for point assignment must be speed-related accidents within the NBPD database and on the project street, either at intersections or at mid-block locations.

Total number of reported accidents over a period of 3 consecutive years	Points assigned
3	1
4-6	2
7-9	3
10-12	4
13 or more	5

2. SPEED CRITERIA

The speed criteria considers the difference between the 85th percentile speed during the entire 24-hour period and the regulatory speed limit (85th percentile speed is the speed at or below which 85 percent of the drivers are traveling).

Speed difference between 85 th percentile speed and regulatory speed limit (MPH)	Points assigned
5-7	4
8-10	6
Greater than 10	8

3. TRAFFIC VOLUME CRITERIA

Traffic volumes (two-way) during the peak hour are considered.

Hourly volume (veh/hour)	Points assigned
<50	0
50-225	1
226-300	2
301-375	3
376-450	4
Greater than 450	5

4. TYPE OF NEIGHBORHOOD CRITERIA

Points will be assigned to the project if there are schools and/or special pedestrian generators (such as parks, elderly housing, community center, and shopping areas).

- 1. Schools within a ½ mile radius of the project street. 1 point
- 2. Special pedestrian generators within a 1,000 foot radius of the project street. 1 point
- 3. Absence of sidewalks on the project street. 1 point

Cost Sharing Criteria

The cost of speed hump installation may be shared between the City and the residents according to the following criteria if numerous speed hump requests are received within a fiscal year. Points considered for cost share are based on points assigned for priority ranking.

Points from priority ranking	City's Cost Share
Greater than 9	100%
8-9	75%
6-7	50%
5	25%
4	0%

Design Standards

1. DIMENSION AND CROSS-SECTION

Two types of speed hump designs, circular or flat-topped, may be considered. The circular speed hump will be 12 feet long and have the cross section of a segment of a circle with a maximum height of 3.5 inches at the center. The flat-topped speed hump will be approximately 22 feet long consisting of a 10-foot long plateau with 6-foot long circular arc approaches on either side. This flat-topped speed hump will be 3.5 inches in height.

On streets with barrier curbs, humps should extend fully across the road from curb joint to curb joint. A 12-inch minimum taper may be considered for drainage. For humps installed on non-curbed roadways special treatment such as delineator posts should be considered to prevent vehicle run-arounds.

2. SPACING AND LOCATION

Speed humps will usually be placed between 200 feet and 600 feet apart. Other spacing may be used based upon engineering judgment. The following guidelines will be considered when determining speed hump spacing.

1. On single short blocks (300 ft. to 500 ft.) a signal hump positioned near midpoint is usually sufficient.
2. On single blocks of moderate length (500 ft. to 1000 ft.) a two-hump configuration is usually adequate.
3. On very long blocks (1000 ft. to 1600 ft) three or more humps may be necessary.
4. On lengthy continuous street segments of for humps provided over a series of blocks, interior humps may be placed 400 ft. to 600 ft. apart.

The following points should be considered when locating speed humps.

1. A speed hump should not be located in front of a driveway or within an intersection. Speed humps should not be located within 250 ft. of a traffic signal or within 50 feet of an intersection.
2. Speed humps should not be located over, or contain manholes, or be located adjacent to fire hydrants.
3. For humps located near drainage inlets the hump should be placed just downstream of the inlet. If this is not feasible, special treatment should be considered for drainage.
4. If possible, humps should be located on property lines rather than directly in front of a residence.
5. The advantage of existing or planned street lighting should be taken into consideration when determining hump location.

3. TRAFFIC CONTROL

Traffic control consisting of signs and markings should be provided to advise roadway users of the presence of a speed hump and to guide their subsequent action. Traffic signs and pavement markings should conform to Manual of Uniform Traffic Control and Devices Standards (MUTCD).