

LEGISLATIVE #

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**CITY OF GAINESVILLE
PUBLIC WORKS DEPARTMENT
TRAFFIC CALMING PROGRAM**

INTRODUCTION

The City of Gainesville has been utilizing traffic calming on city-maintained streets since the mid-1980's. Traffic calming means different things to different people. The accepted definition of traffic calming is as follows: "traffic calming is the combination of mainly physical features that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users". Traffic calming is distinguished from other measures such as route modification, traffic control devices such as STOP and SPEED LIMIT signs and streetscaping. These devices require enforcement while traffic-calming devices are intended to be *self-enforcing*. Traffic calming devices rely on the laws of physics rather than human psychology to slow traffic. Items such as street furniture, street trees, etc., complement traffic calming, but do not by themselves compel drivers to slow down.

**LIST OF TRAFFIC CALMING DEVICES APPROVED FOR INSTALLATION ON
CITY-MAINTAINED STREETS**

The following factors determine when a traffic-calming device is appropriate for use:

- Roadway classification (local, collector and arterial)
- Horizontal and vertical roadway alignment
- Sight distance
- Roadway width
- Presence or absence of on-street parking
- Traffic volumes
- Type of adjacent development (residential, business, etc.)
- Emergency vehicle response routes
- Regional Transit System bus routes
- Other factors as applicable.

Many times more than one traffic-calming device could be installed on a street. The goal of the Public Works Department is to install traffic calming devices that produce the following results:

- Achieve maximum vehicle speeds of 25 miles per hour
- Increase safety for bicyclists and pedestrians
- Achieve traffic calming, not traffic diversion (traffic calming can be utilized to address issues associated with cut-through traffic)
- Are compatible with the scale of the road and neighborhood
- Are affordable and easy to construct
- Can be landscaped and/or constructed with low maintenance materials that are attractive.

The Public Works Department utilizes the following traffic calming devices on city-maintained streets:

Speed Hump

Speed humps are rounded, raised areas placed across the roadway. The speed humps used by the City are 12 feet long and 3.5 inches high. Speed humps are used almost exclusively on local roads. The City's Speed Hump Policy contains guidelines and criteria for installation.

Mini Traffic Circle

Mini traffic circles are utilized at four-way intersections in conjunction with all-way stop control. They are used only on local roadways because vehicles are allowed to turn left in front of the mini traffic circle. The curb radius at the intersection is not modified. Mini traffic circles are most effective when used in conjunction with curb and gutter roads. The City landscapes the mini traffic circle provided a sponsor agrees to perform regular maintenance.

Speed Table

Speed tables are flat-topped speed humps often constructed with concrete or textured materials on the flat portion. Speed tables are typically long enough for the wheelbase of a passenger car to rest on the flat section. The speed table used by the City is 22 feet long with a 10 foot flat top. Speed tables can be located mid-block or at intersections. On-street parking is prohibited at the speed table.

Choker

Chokers are curb extensions placed at mid-block locations that achieve speed reductions by reducing the width of the road. The street curb is either extended into the street to create the choker or a narrow (1 to 2 foot) gap is maintained between the choker and the curb for drainage. Chokers are typically 20 feet or longer in length and can be landscaped or constructed with bricks or other hard surface materials. Chokers at intersections are called intersection bulbouts. The intersection of SE 1st Avenue and 1st Street is a good example of an intersection bulbout. Chokers work very well with on-street parking because the choker "shadows" the on-street parking, provided the choker is at least six feet in width. Chokers with on-street parking have been installed on the north side of NE 13th Avenue, 500 block (on the south side of Northeast Park). On-street parking is prohibited at the choker.

Choker with Speed Table

A choker and speed table can be constructed at the same location. The choker is normally the same length as the speed table. The choker provides a convenient location for traffic control signs and it can be landscaped.

Center Island Narrowing

A center island narrowing achieves a reduction in vehicle speeds by constructing an island in the center of the road to reduce the width of the travel lanes. The center island can either be short (20 feet) or long in length. The center islands constructed on NE 8th Avenue just east of Northeast Boulevard is an example of this device. The islands can be landscaped or constructed with bricks or other hard surfaced material. On-street parking is prohibited at and near the center island because the travel lanes are deflected from the center of the road to adjacent to the curb line of the street.

Center Island Narrowing with Speed Table

A center island narrowing and a speed table can be constructed at the same location. The center island is normally longer than the speed table. The center island provides a convenient location for traffic control signs and it can be landscaped.

Roadway Narrowing with Pavement Markings Only

Changing the pavement markings can narrow the roadway. Typically bike lanes and/or parking lanes are added to reduce the width of the travel lanes. Examples of this technique in the City are NW 55th Street between Newberry Road and NW 23rd Avenue and NE 9th Street between NE 3rd Avenue and NE 23rd Avenue.

Chicane

Chicanes are curb extensions that alternate from one side of the street to the other forming 'S' shaped curves. They can facilitate on-street parking that alternates on each side of the street. A major problem with a chicane is if only one vehicle is passing through the chicane, the vehicle can follow a straight line, with little reduction in speed. Chicanes can also be more expensive than other devices due to the amount of curb required. Another major problem with chicanes is to locate a section of roadway that does not have driveways and intersecting streets that will conflict with the chicane.

Lateral Shift

Lateral shifts are curb extensions on straight roads that cause travel lanes to bend one way and then bend back to the original direction of travel. Lateral shifts work best with a center island that prevents motorists from passing straight through the device. Lateral shifts will require 200 to 300 linear feet of roadway with no intersecting streets or driveways. This distance can be difficult to find on most urban streets due to driveways. Lateral shifts also require 300 to 400 linear feet of curbing, which significantly increases the cost of the device.

Traffic Circle

Traffic circles are rotary intersections that require traffic to drive counterclockwise around the circle. They have a circular raised island that is normally landscaped. In order for the design vehicle to negotiate the traffic circle, the outside diameter should be a minimum of 90 feet with 100 feet desired. Traffic circles require significant construction and frequently require purchase of right-of-way. This results in significant costs compared to other traffic calming devices. The rotary intersection on NW 31st Drive east of Westside Park is a good example of a traffic circle. Traffic circles are typically controlled by stop signs and can be either all-way stop or two-way stop controlled.

Modern Roundabout

Modern roundabouts are installed at major intersections instead of traffic signals. Like traffic circles, traffic flows counterclockwise in the roundabout. The features that distinguish roundabouts from traffic circles are yield upon entry, splinter islands on the approaches that separate traffic flows from each other and pedestrians and geometric features to slow traffic. The outside diameter of the roundabout should be a minimum of 90 feet with 100 feet desired. Roundabouts require significant construction and frequently require purchase of right-of-way. This results in significant costs compared to other traffic calming devices.

Combination of Devices

When traffic calming is installed either on a single street or in a neighborhood, more than one type of device is frequently used. In the Duval Neighborhood (NE 10th Avenue, 2300 block), Libby Heights (NW 10th Avenue, 3400 block) and Northwood Pines Subdivision (NW 34th Street, 5500 block), speed humps and mini traffic circles were utilized. The streets in these neighborhoods are all local roads. On NE 8th Avenue (collector road) between Northeast Boulevard and Waldo Road, center islands and a modern roundabout were utilized. The factors described on page 1, the preference of the neighborhood and the cost of the various devices ultimately determine the types of traffic calming devices utilized.

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