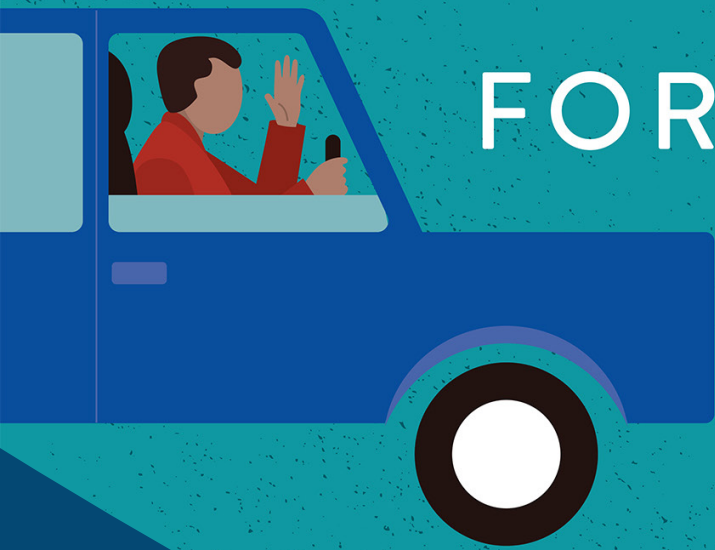


IT STARTS WITH US!

WE SLOW DOWN



FOR EACH
OTHER



**TRAFFIC
CALMING
MEASURES**

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BULB OUTS/ CURB EXTENSIONS

Bulb-outs, also known as curb extensions, are areas where the street curb line is extended out into the street to visually and physically narrow the roadway. This has the effect of reducing speeds on a street, as well as providing a shorter crossing for pedestrians. Bulb-outs are common in downtown areas where there is a lot of pedestrian traffic and on-street parking. These bulb-outs are often areas used for landscaping, benches, or bicycle parking racks.



Applications

Intersections, mid-block crossings, or bus stops.

Potential Impacts

- Narrows crossings for pedestrians
- Provides opportunity for landscaping.
- Improve safety, visibility, reduces turning speeds
- Prevents parking at corners

Typical Costs

\$2,000 to \$20,000, with an average of \$16,000* each, depending on the design and site condition.

Local Examples

- Massachusetts St. @ 6th St., 7th St., 8th St., 9th St., 10th St., and 11th St.
- New Hampshire St. @ 7th St., 8th St., 9th St., and 10th St.



CHICANES

Chicanes are a series of curb extensions and/or pavement markings that alternate from one side of the street to the other forming S-shaped curves used to slow traffic. Chicanes are used at mid-block locations.



Bike Boulevard at 21st and Alabama St.

Applications

- 35 MPH or lower speed limit
- Low volume streets

Potential Impacts

- Slower traffic speeds due to the constant horizontal deflections Allows for landscaping, benches, and bicycle parking
- Has no effect on street access from other streets.
- Street maintenance, sweeping, and plowing operations are more difficult and costlier.
- Can impact parking and driveway access.

Typical Costs

\$5,000 - \$18,000* per chicane, depending on size and material of raised deflection pavement. Additional landscaping maintenance costs should be considered as well.

Local Examples

- Lawrence Bike Boulevard
- 18th & Maine St. is a hybrid chicane when KU opens the access road after sporting events.



18th and Main St

MEDIAN BARRIER/ FORCED TURN ISLAND

Raised median islands along the centerline of a street and continuing through an intersection that block the left-turn movement from all or certain intersection approaches and the through movement from the cross street



Intersection of Crestline Dr and Century Dr

Applications

Collector roadways at intersections with minor roads

Potential Impacts

- Reduced traffic volume through neighborhoods
- Allows pedestrians and bicyclists to pass
- Can serve as pedestrian crossing refuge island.
- Potential impact on emergency response or business access.
- Diverted traffic may create other impacts.

Typical Costs

Cost between \$5,000 and \$20,000*, depending on length and width of barriers

Local Examples

- Naismith & Crescent
- Crestline & Century



Intersection of Naismith Dr and Crescent Rd

MEDIAN ISLANDS/ CHANNELIZERS

Median channelizers are raised median islands located along the centerline of a street which narrows the travel lanes at that location. Narrowing the lanes creates a pinch-point or choking-point which is a feature that often reduces speeds on a street. Median channelizers are not considered pedestrian islands, however, if designed wide enough these islands make great refuge areas for pedestrians to stage when trying to cross a busy street. Median channelizers are placed at mid-block locations.



Barker Ave. North of 16th St.

Applications

Along neighborhood streets/collectors.

Potential Impacts

- Narrows lanes reducing speed of traffic.
- Provides opportunity for landscaping.
- Large buses and trucks may not be able to navigate.
- Makes crossing much easier for pedestrians.

Typical Costs

Cost between \$6,000 and \$24,000*, depending on length and width of island.

Local Examples

- Barker Ave. north of 16th St. ,
- Barker Ave. south of 17th St.,
- Barker Ave. south of 18th St.,
- Barker Ave. north of 20th St.,
- Congressional Dr. north of Congressional Pl.
- Louisiana St., between 19th and 25th St.



Congressional Dr. North of Congressional Pl.

PARTIAL CLOSURE

A partial closure is a physical barrier that blocks vehicle travel in one direction (i.e., creates a one-way street) for a short distance on an otherwise two-way street. It can block either traffic entering the side street (i.e., the traffic calmed street) or exiting the side street, depending on its placement.



Typical Costs

Cost between \$3,000 and \$40,000*, depending on length and width of closure.

Local Examples

- Rhode Island St. south of E 7th St.
- Schwarz Rd. north of W 6th St.

Applications

The most common application of a half closure blocks entry to the local street from the main street and permits local street traffic to enter the main street. It is called an exit-only closure.

Potential Impacts

- Reduced vehicle speeds
- May shift traffic onto other local streets
- Easier pedestrian crossings due to fewer lanes
- Opportunity for bicycle lanes and pedestrian refuge islands



SPEED BUMPS/ SPEED HUMPS

Speed humps are a rounded raised area of pavement (typically 3 to 4 inches high) and are sometimes referred to as speed bumps. Speed humps are often placed in series (typically spaced 300 to 600 feet apart). They are not typically used on major roads, bus routes, or primary emergency response routes. Speed humps are placed at mid-block locations, not at intersections. Speed humps are often accompanied with signage and pavement markings for advanced warning.



Winona Ave. near Massachusetts St.

Applications

Along neighborhood streets/collectors.

Potential Impacts

- Reduces Traffic Speed
- Enhances pedestrian environment/crossings

Typical Costs

Cost between \$4,000 and \$10,000*

Local Examples

- New Hampshire St. north of 18th
- Massachusetts St. south of 23rd
- Winona Ave. between Massachusetts St. & Barker Ave.



Arkansas St. near 8th St

SPEED CUSHIONS

Speed cushions are similar to speed humps or speed tables, however, speed cushions include wheel cutouts to allow large emergency response vehicles to pass unaffected, while reducing passenger car speeds. Like speed humps, speed cushions are a rounded raised area of pavement to deter speeding traffic. Speed cushions are used on bus routes or primary emergency response routes.



800 Block of Maine St.

Applications

- Local and collector roadways
- Mid-block locations
- Often placed in a series

Potential Impacts

- Reduced traffic speeds and crash rates.
- Appropriate on primary emergency response routes and bus routes.

Typical Costs

Cost ranges between \$4,000 and \$10,000*.

Local Examples

- 9th St. east of Holiday Dr.,
- 800 Block of Maine St.
- Trail Rd. east of Terri Ct.,
- Harvard Rd. west of Justin St.



Trail Rd. east of Terri Ct.

SPEED MONITORING TRAILER / FEEDBACK SIGN

Speed monitoring trailers visually display drivers' real-time speeds compared to the speed limit. These devices may be effective in reducing speeds and increasing awareness of local speed limits. These reductions in speed are beneficial especially when workers will be close to an open lane with high speed traffic or when drivers may not readily recognize the need to slow down, such as a curve or lane shift.



Example near Clinton Lake

Applications

Residential areas, construction zones

Potential Impacts

- Reduced traffic speeds with immediate impact
- Trailers are a temporary solution
- Pole mounted signs can be temporary or permanent
- Trailers and signs can also collect traffic volume and speed data with display on or off

Typical Costs

The cost for each unit is approximately \$7,000 to \$18,000*

Local Examples

- Trailers and signs have been used in various locations to increase driver awareness of speed and collect traffic data

SPEED TABLE/ RAISED CROSSWALKS

Speed tables are traffic calming devices that raise the entire wheelbase of a vehicle to reduce its traffic speed. Speed tables are longer than speed humps and flat-topped. If placed at a pedestrian crossing, it is referred to as a raised crosswalk.



E 15th, Burroughs Creek Trail

Applications

Local and collector roadways, typical speed limit of 30 MPH or less

Potential Impacts

- Reduces traffic speed
- Increases visibility of crossing and pedestrians.
- Minimal impact on emergency response.
- Careful design required for drainage.

Typical Costs

Between \$4,500 and \$10,000* for asphalt tables; higher for brickwork, stamped asphalt, concrete ramps, and other enhancements sometimes used at pedestrian crossings.

Local Examples

- 15th St and Burroughs Creek Trail
- 2001 E 19th St.



Raised crosswalk on 19th St

TRAFFIC CIRCLES/ MINI ROUNDABOUTS

Traffic circles and mini-roundabouts use raised islands or other markings in the middle of intersections around which traffic circulates. Motorists yield to pedestrians or vehicles already in the intersection. They are used as a traffic calming measure as they require drivers to slow to a speed that allows them to comfortably maneuver around them. The smaller footprint makes traffic circles and mini-roundabouts ideal for neighborhood streets.



17th Street & Illinois Street Intersection

Applications

Intersection of minor streets

Potential Impacts

- Reduced traffic speeds and serious crashes.
- Provides opportunity for landscaping.
- Large buses and trucks may not be able to navigate.
- May require additional street lighting.
- Emergency vehicles maneuver at slow speeds

Typical Costs

\$15,000, with a range between \$10,000 and \$28,000*

Local Examples

- Harvard Rd. at Robinson Dr. Plymouth Dr., and Moundridge Dr.
- 17th at Illinois St. and Indiana St.



Harvard Road & Robinson Drive Intersection

TEMPORARY INSTALLATIONS

Temporary traffic calming devices provide a low-cost opportunity to evaluate potential traffic calming installations to determine if the proposed devices adequately address concerns without causing negative impacts to the adjacent streets or blocks. Temporary materials like rubber curbs, delineator posts and rubber speed humps can be used to assess the effects of permanent traffic calming devices before committing to the significant cost of permanent construction. Temporary devices will be in place for a maximum of thirty days to provide adequate time for evaluation without excessive maintenance.



Applications

Neighborhood local and collector roadways.

Potential Impacts

- Evaluate the effects of permanent traffic calming without the cost of permanent construction.

Typical Costs

The Neighborhood Traffic Management Program has a supply of temporary devices, but staff time is required for installation and removal.

Local Examples

- Old West Lawrence Traffic Calming Project.

