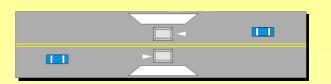
# **Speed Cushions**







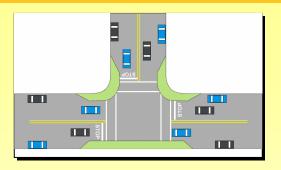
A speed cushion is a variation on a standard speed hump. However, these devices do not span the entire width of the roadway but taper off at the edges. The width of the raised portion is sufficient to ensure that cars have to pass over some of the hump but may allow buses and emergency vehicles to pass over with less impact.

# **PROS**

- 1. Potential to reduce traffic speed.
- 2. Reduces traffic volumes.
- 3. Can be used to reduce cut-through traffic.
- 4. Self-enforcing.
- 5. Minimal impact to on-street parking.
- 6. Minimum maintenance.
- 7. OK for emergency vehicles.

- 1. Care needed if placed on transit routes.
- 2. May transfer problems elsewhere.
- 3. Not aesthetically pleasing.
- 4. May cause vehicles to encroach into bicycle lanes.

# **Curb Extensions - Bulges**







"Curb Extensions" are most often used at pedestrian crossings – both at intersections and midblock, where the extension of the curb into the roadway narrows the distance between curbs and improves the pedestrian environment.

## **PROS**

- 1. Creates more pedestrian friendly intersection.
- 2. Reduces pedestrian crossing distances.
- 3. Reduces speeds at location if travel lanes reduced sufficiently.
- 4. Widely used traffic calming measure.

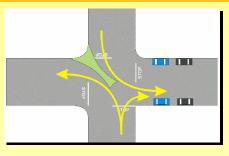
# CONS

- 1. Can be expensive if landscaped.
- 2. May affect buses or larger vehicles if intersection radii are tightened.
- 3. Require maintenance.
- 4. Tend to collect or trap trash.
- 5. Interfere with established drainage patterns.
- 6. Place pedestrians close to travel way.

## Note:

Adding stop signs requires warrants to be satisfied

#### **Semi- Diverters / Half Closures**







Semi-diverters are extensions from the curb or islands – usually extending from a corner of an intersection that block one directional lane of the street. They are used to prevent drivers from making certain turn movements at an intersection.

Semi-diverters affect all drivers, including local residents.

## **PROS**

- 1. Reduces traffic volume.
- 2. Maintains access for residents.
- 3. Reduces cut-through traffic.
- 4. Reduces crossing distance for pedestrians.
- 5. Landscaping possible
- 6. OK for emergency vehicles.
- 7. Can provide 2-way access for bicycles.

- 1. May divert traffic to parallel streets.
- 2. May increase trip length for some residents.
- 3. 1-2 curbside parking spaces lost.
- 4. Maintenance needs if landscaped

# **Center Island Narrowing**







Raised islands are installed along the center of the street to effectively narrow the travel lanes in each direction. They can be landscaped to improve the aesthetics of the location and can have a built in pedestrian refuge when placed in conjunction with a mid-block crosswalk.

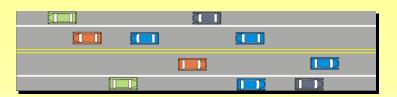
Parking may need to be removed along the affected roadway section. Bicycle users may feel more vulnerable on narrower lanes

#### **PROS**

- 1. Results in reduction in speeds
- 2. Enhances pedestrian environment.
- 3. Helps safety when used on curved roads by reducing speed.
- 4. Can be evaluated on temporary basis first.
- 5. Can be landscaped.
- 6. Can be a "Gateway" feature.

- 1. May result in loss of on-street parking.
- 2. Moderately expensive measure if landscaped.
- 3. Center islands may be hit at night unless well marked.
- 4. Reduced lane widths not favored by bicycle users.

# **Parking Lanes**





Striped parking lanes added to the roadway top reduce the effective width of the traveled way. This helps to reduce traffic speeds.

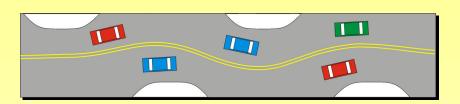
# **PROS**

- 1. Low cost measure.
- 2. Effective speed reduction technique.
- 3. Can be used on sloped roadways.
- 4. No loss of parking

#### CONS

1. Requires at least 40 foot roadway.

#### **Chicanes**





Chicanes are curb extensions or islands that alternate from one side of the street to the other, forming S-shaped curves.

Most effective with equivalent volumes on both approaches. Typically consist of a series of at least three curb extensions. Can use on-street parking to create chicane.

#### **PROS**

- 1. Volume and speed reduction possible.
- 2. Self-enforcing.
- 3. Provides opportunity for roadway beautification.
- 4. Can be landscaped.
- 5. Can be a "Gateway" feature.

- 1. Must be designed to avoid encroachment over center line.
- 2. Can affect street sweeping.
- 3. Parking can be affected.
- 4. Driveway access can be affected.
- 5. Potential Pedestrian/Bike/Car conflicts.
- 6. Potential for head-on collision.

# **Speed Tables**



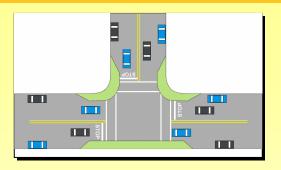
These are basically flat-topped speed humps. If marked for pedestrian crosswalks they become Raised Crosswalks.

#### **PROS**

- 1. Reduces traffic speed to 25-30 mph.
- 2. Less impact than speed humps.
- 3. Preferred by many emergency response agencies.
- 4. Often used in place of speed humps.
- 5. Relatively low cost measure.

- 1. May impact emergency vehicles.
- 2. Care needed if placed on transit routes.
- 3. Not aesthetically pleasing though paving the top is an option.
- 4. Avoid use on curved roads.
- 5. Noise may increase.
- 6. Care needed with drainage.
- 7. Avoid placing near driveway.
- 8. Need detectable ADA warnings.

# **Curb Extensions - Bulges**







"Curb Extensions" are most often used at pedestrian crossings – both at intersections and mid-block. The extension of the curb into the roadway narrows the distance between curbs and improves the pedestrian environment.

# **PROS**

- 1. Creates more pedestrian friendly intersection.
- 2. Reduces pedestrian crossing distances.
- 3. Reduces speeds at location if travel lanes reduced sufficiently.
- 4. Widely used traffic calming measure.

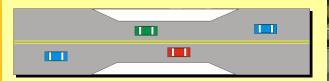
# CONS

- 1. Can be expensive if landscaped.
- 2. May affect buses or larger vehicles if intersection radii are tightened.
- 3. Require maintenance.
- 4. Tend to collect or trap trash.
- 5. Interfere with established drainage patterns.
- 6. Place pedestrians close to travel way.

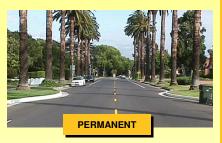
## Note:

Adding stop signs requires warrants to be satisfied

#### **Mid-Block Chokers / Slow Points**







Mid-block chokers are curb extensions located between intersections. They can leave the cross section with two narrow lanes or with a single lane.

#### **PROS**

- 1. Creates more pedestrian friendly intersection.
- 2. Reduces pedestrian crossing distances.
- 3. Reduces speeds at location if travel lanes reduced sufficiently.
- 4. Widely used traffic calming measure.

- 1. Can be expensive if landscaped.
- 2. May affect buses or larger vehicles if intersection radii are tightened.
- 3. Require maintenance.
- 4. Tend to collect or trap trash.
- 5. Interfere with established drainage patterns.
- 6. Place pedestrians close to travel way.