

## Corner Extension/Bulb-Out

### Description:

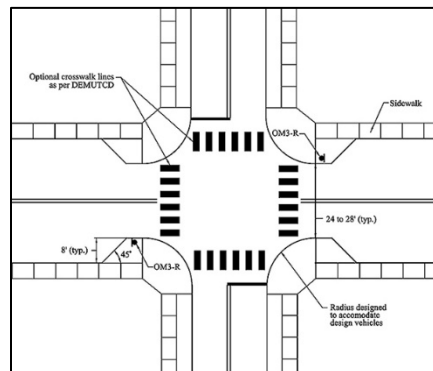
- Horizontal extension of the sidewalk into the street, resulting in a narrower roadway section
- If located at a mid-block location, it is typically called a choker

### Applications:

- When combined with on-street parking, a corner extension can create protected parking bays
- Effective method for narrowing pedestrian crossing distances and increase pedestrian visibility
- Appropriate for arterials, collectors, or local streets
- Can be used on one-way and two-way streets
- Installed only on closed-section roads (i.e. curb and gutter)
- Appropriate for any speed, provided an adequate shy distance is provided between the extension and the travel lane
- Adequate turning radii must be provided to use on bus routes



(Source: James Barrera, Horrocks, New Mexico)



(Source: Delaware DOT)

**ITE/FHWA Traffic Calming EPrimer:** [https://safety.fhwa.dot.gov/speedmgt/traffic\\_calm.cfm](https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm)

### Design/Installation Issues:

- Effects on vehicle speeds are limited due to lack of deflection
- Must check drainage due to possible gutter realignment
- Major utility relocation may be required, especially drainage inlets
- Typical width between 6 and 8 feet
- Typical offset from travel lane at least 1.5 feet
- Should not extend into bicycle lanes

### Potential Impacts:

- Effects on vehicle speeds are limited due to lack of deflection
- Can achieve greater speed reduction if combined with vertical deflection
- Smaller curb radii can slow turning vehicles
- Shorter pedestrian crossing distances can improve pedestrian safety
- More pedestrian waiting areas may become available
- May require some parking removal adjacent to intersections

### Emergency Response Issues:

- Retains sufficient width for ease of emergency-vehicle access
- Shortened curb radii may require large turning vehicles to cross centerlines

### Typical Cost (2017 dollars):

- Cost between \$1,500 and \$20,000, depending on length and width of barriers