V. Traffic Calming
TRAFFIC CALMING

FATALITIES BY SPEED

Percent fatal to Pedestrians

<table>
<thead>
<tr>
<th>Speed</th>
<th>70 kph (40 mph)</th>
<th>50 kph (30 mph)</th>
<th>30 kph (20 mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>100</td>
<td>80</td>
<td>0</td>
</tr>
</tbody>
</table>

There is compelling evidence that speeds inside should not exceed 30 KPH (20 mph)
Safety Benefits of Traffic Calming

Average percent reduction in collisions per measure

<table>
<thead>
<tr>
<th>Measure type</th>
<th>Change in collision frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic circles</td>
<td>-82</td>
</tr>
<tr>
<td>Narrowings</td>
<td>-74</td>
</tr>
<tr>
<td>Multiple</td>
<td>-65</td>
</tr>
<tr>
<td></td>
<td>-57</td>
</tr>
</tbody>
</table>

Source:
Zein, Sany et al.,
Vancouver, BC, 1997
Where Kids are Killed 1986, U.S.

Injury vs Illness

Illness 45%  Injury 55%
Skinnier streets are safer

Street Typology and Injury Crashes

Notes:
* Studied were residential local streets w/ADT < 2500
* Plot shows regression analysis

Source:
Swift and Associates, 1998
Which are safer – wide streets or narrow streets?

Colorado study looked at injury crashes on local streets (<2500 ADT):

- Excluded crashes related to weather or substance abuse
- Factored in street width, tree density, parking density, adjacent land use, curb cuts, street curvature, curb type, sidewalk type, ADT, distance from nearest intersection, sight distance, etc.
- Only street width correlated directly to crash rate.
Narrow lanes reduce speeds
Traffic Calming

Definition

Tools categorized in several general categories:
• Narrowings
  Road
  Lanes
  Pinch Points
• Vertical devices
  Speed Humps
  Raised intersections & crosswalks
• Horizontal Devices
  Chicanes
  Roundabouts
  Traffic circles
Portable speed limit signs
Stop Signs Vs. Traffic Calming

40 mph
30 mph
20 mph
10 mph
0 mph

Stop
Stop
Stop
Stop
Right Design Invites Right Use

Which Street Has Lower Speeds?
One-Way Streets Equal Higher Speeds
One-Way Streets Equal Higher Speeds, and Empty Business Districts
Mini-Circles
Rural Traffic Circle
Median Slow Points
Median Slow Point
Road Narrowing

Chicane
Chicanes
Kids Get Their Street Back
Raised Crosswalk
Raised Crosswalk
Raised intersection
Low Cost Solutions
Creating an Illusion With Paint

Portland, Oregon
Back-in Angle Parking
Road Diets Can Benefit Pedestrians, Bicyclists, Motorists and Adjacent Businesses
Roundabout
Essential pedestrian characteristics

- Slow speed entry
- Slow speed exit
- Splitter island
- Truck apron
- Lots of deflection for slow speeds throughout
- Crosswalk 1 car length back
- Separated sidewalk to direct peds to crosswalks
Roundabout: Pedestrian usage

Pedestrians look for traffic in one direction at a time, in exit & entry lanes
Car entering from signal typically waits 10-60 seconds
Car during off peak enters without delay
Car during peak waits for an opening gap or event

1. Pedestrian crosses street
2. Cars exits
3. Car makes turn
4. Car pulls out
Roundabouts work in Snow Country
Perth, Australia

Florida