Road Diets
Motorized Traffic and Health:

By Dan Burden, Executive Director
Walkable and Livable Communities Institute
Is this the landscape we want to leave our children?
La Jolla Boulevard, Bird Rock, San Diego, California
(Five to two lane conversion, before).

Four signals and one four-way stop being removed. Back-in Angled parking to be added.

(23,000 ADT)

78 Feet

14 Feet

Speeds above (35-45 mph)

Speeds below (18-22 mph)
Every blizzard proves motorists prefer two lane roads

Indeed they place medians and edge buffers on 4-lane roads when they get to design them (before snow plows arrive). So why not convert to 2-3 lanes, when conditions allow?
Hartford, Connecticut

Speed reductions of 3-7 mph are common.
Benefits

Motorist: Safety 25-40% improvement
Traffic moves with greater uniformity
Compact intersections more efficient
Greater cost savings
Turns are easier
Senior friendly (as motorists)

Others:
Senior friendly (as pedestrians)
Supports transit, walking and bicycling
Emergency response friendly
Increased property values (and tax base)
Community economic development
This: One less travel lane; bike lanes; parallel to back-in diagonal parking on one side; new pavement
1800 vehicles per hour per lane

800 vehicles per hour Per lane

Road Diets
Road Diets — Maintaining Capacity at Intersections

Turn lanes improve capacity at intersections

ROAD CAPACITY (VPH)

Free unobstructed traffic flow

1,900 vehicles per hour per lane

With traffic signal controlled intersections

800 vphpl

Traffic flow depends upon available green time, and be as low as 550 vphpl.

Ten foot travel lanes

Olive Avenue, West Palm Beach, Florida – Former 3-lane, One-Way

10 Feet
Ten foot travel lanes

Olive Avenue, West Palm Beach, Florida – Former 3-lane, One-Way

Ten foot travel lanes
If Cities are to reduce auto-dependence a working alternative should include:

Streets must become “right-sized” for their greater mission.
Columbia Pike Form Based Code
Arlington, Virginia

Existing

Proposed Improvement

Courtesy of: Steve Price, Urban Advantage
Edgewater Drive: Impact of Road Diet

- Crash Rate declined by 34 percent
- Injury Rate declined by 68 percent

Edgewater Drive: Impact of Road Diet

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Before: 375
After: 486

30% Increase

3 crash types can be reduced by going from 4 to 3 lanes: 1 – rear enders
3 crash types can be reduced by going from 4 to 3 lanes: 2 – side swipes
3 crash types can be reduced by going from 4 to 3 lanes: 3 – left turn/broadside
Target Speed
Target Speeds Appropriate to Land Uses

- 30 mph speed zone
- 25 mph speed zone
- 45 mph speed zone
Trees and Behavior

5-15 mph increase in speed

Birmingham, Michigan
Chico, CA
Nord Avenue
Chico, CA
Nord Avenue
Chico, CA
Nord Avenue
Can handle 25,000 vehicles per day
Well designed neighborhoods allow quality distribution of traffic. Good planning allows traffic volumes to stabilize in the “high performance” range. When land use patterns or other auto-dependency become extreme full capacity Avenues are uncomfortable but can maintain quality. Communities should avoid “Biggee Sizing” roads. With higher volumes quality is retained with extra measures.
Roundabouts
Michigan Avenue, Chicago, Illinois
Conflicts At Roundabouts

- 8 Vehicle to vehicle conflicts
- 8 Vehicle to pedestrian conflicts
## Road Diets in Seattle (4 to 3 lanes)

<table>
<thead>
<tr>
<th>Roadway Location</th>
<th>Date Change</th>
<th>ADT Before</th>
<th>ADT After</th>
<th>Collision Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenwood Ave N N 80th St to N 50th</td>
<td>Apr-95</td>
<td>11872</td>
<td>12427</td>
<td>24 to 10 58%</td>
</tr>
<tr>
<td>N 45th Street Wallingford Area</td>
<td>Dec-72</td>
<td>19421</td>
<td>20274</td>
<td>45 to 23 49%</td>
</tr>
<tr>
<td>8th Ave NW Ballard Area</td>
<td>Jan-94</td>
<td>10549</td>
<td>11858</td>
<td>18 to 7 61%</td>
</tr>
<tr>
<td>Martin Luther King Jr W North of I 90</td>
<td>Jan-94</td>
<td>12336</td>
<td>13161</td>
<td>15 to 6 60%</td>
</tr>
<tr>
<td>Dexter Ave N Queen Ann Area</td>
<td>Jun-91</td>
<td>13606</td>
<td>14949</td>
<td>19 to 16 59%</td>
</tr>
<tr>
<td>24th Ave NW NW 85th to NW 65th</td>
<td>Oct-95</td>
<td>9727</td>
<td>9754</td>
<td>14 to 10 28%</td>
</tr>
</tbody>
</table>

Credits

- The photos are from the members of the Walkable and Livable Communities Institute