

Road Diets | A LIVABILITY FACT SHEET

Most drivers base their travel speed on what feels comfortable given the street design. The wider the road, the faster people tend to drive and, the faster the car, the more severe the injuries resulting from a crash.¹

Research suggests that injuries from vehicle crashes rise as the width of a road increases.

To protect both pedestrians and drivers, many communities are putting their roads on “diets” by reducing street widths and vehicle lanes. The gained space is being reallocated toward other ways of getting around — such as walking, bicycling and public transit.

The most common road diet involves converting an undivided four-lane road into three vehicle lanes (one lane in each direction and a center two-way left-turn lane).² The remaining fourth lane space can be used to create such features as bicycle lanes, pedestrian crossing islands, bus stops, sidewalks and on-street parking.³

Road diets work best on streets that have daily traffic

volumes of 8,000 to 20,000 vehicles. When done properly, a road diet improves the performance and efficiency of the street and makes it safer for all users.

For instance, by enabling pedestrians to cross only one lane of traffic at a time — rather than up to four or more lanes — a road diet reduces the risk of crashes and serious injuries. At the same time, motorists experience a shorter delay while waiting at traffic lights and other crossings.⁴

A road diet can help a neighborhood become a more desirable place to live, work and shop, which in turn can be a boost to businesses and property values.

Wider sidewalks lined by trees and dotted with benches, bicycle racks, streetlights and other useful additions help create a lively, attractive streetscape.

Bike lanes, on-street vehicle parking, curb extensions and “parklets” (tiny parks created from former parking spots) can be used to provide a buffer between people who are walking and motor vehicles on the move.

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In addition to making East Boulevard in Charlotte, N.C., more attractive, a road diet reduced travel speeds, bicycle and pedestrian injury rates and the number of rear-end and left-turn collisions. Photo courtesy city of Charlotte

Myth-Busting!

■ “Road diets divert traffic.”

Drivers tend to use primary roads that provide the most direct and efficient route to a destination.

Well-designed road diets do not divert drivers onto other roads. While traffic often drops during construction, it typically returns to normal or increases within six months of completion. Many roads actually experience an increase in vehicle traffic after a successful diet.⁵

■ “Road diets increase congestion.”

On roads used by fewer than 20,000 vehicles per day, road diets have a minimal or positive impact on vehicle capacity. Left-turning vehicles, delivery trucks, police enforcement and stranded vehicles can move into a center lane or bike lane, which eliminates double-parking and reduces crash risks.⁶

■ “Road diets increase crashes.”

Road diets actually reduce rear-end collisions and sideswipe crashes by slowing vehicle speeds by 3 to 5 mph. Road diets decrease by 70 percent the frequency of people driving more than 5 mph over the speed limit.

Data collected on road diets in two very different settings (several small towns in Iowa and a group of larger cities and suburbs in California and Washington state) confirmed that road diets improve safety. The research showed a 47 percent reduction in crashes in the Iowa towns and a 19 percent drop in crashes in the more heavily traveled corridors of California and Washington.⁷

■ “Road diets aren’t good for public transit.”

Transit conflicts can be avoided with planning, such as by incorporating a center lane so motorists can move around stopped buses and adding side pull-out bays for buses.^{8,9}

■ “Road diets are bad for business.”

Road diets increase and enhance business activity by reducing traffic speeds (which helps motorists notice the shops, eateries and businesses they’re driving alongside) and by accommodating pedestrians and bicyclists (who, by the way, tend to spend more money at local businesses than drivers do).¹⁰

Road diets often create more street parking spaces, which is helpful to businesses. In addition, the slower speeds, better sight lines and narrower lanes are safer for both drivers and non-drivers (aka customers), and center-turn lanes provide motorists with an easier and safer way to make right and left turns, including for entering and exiting driveways.¹¹

■ “Road diets are being reversed.”

With thousands of road diets completed nationwide, there are few reports of any being reversed. On the contrary, road diets are proving to be effective, safe and popular. Interest among transportation engineers and planners is booming as handbooks, guidelines and other resources become available.¹²

■ “Road diets slow down emergency responders.”

By not using short speed humps and stop signs, a road diet can accommodate emergency vehicles without increasing response times.¹² Drivers can pull into bicycle lanes to move out of the way, and a center-turn lane can be used by responders needing to pass other vehicles.¹³

■ “People don’t like road diets.”

The Electric Avenue road diet in Lewistown, Pa., was opposed by 95 percent of residents when it was first proposed; after completion, nearly 95 percent of residents are supportive of the changes.¹⁴

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 2. Safe Routes to School National Center (November 2013), “Safe Routes to School Online Guide.” http://guide.saferoutesinfo.org/engineering/tools_to_reduce_crossing_distances_for_pedestrians.cfm#diet
 3. Tan, C.H. Federal Highway Administration, FHWA-HRT-11-006. Vol. 75, No. 2. (September/October 2011), “Going on a Road Diet.” Public Roads, <http://www.fhwa.dot.gov/publications/publicroads/11septoct/05.cfm>
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 7. Highway Safety Information System (August 2010), Evaluation of Lane Reduction “Road Diet” Measures on Crashes, <http://www.fhwa.dot.gov/publications/research/safety/10053/10053.pdf>
 8. Federal Highway Administration, Proven Safety Countermeasures. Retrieved March 4, 2014 from http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_013.pdf
 9. Smith, G. et al. Knoxville Regional Transportation Planning Organization (July 2009), Complete Streets Design Guidelines, http://www.knoxtrans.org/plans/complete_streets/guidelines.pdf
 10. Krag, T. Aalborg University, Denmark, paper (2002), Commerce and Bicycles
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How To Get It Right



This four-lane road in Redondo Beach, Calif., is not pedestrian or bicycle friendly and the road's traffic volumes doesn't justify having four vehicle lanes.



A transformation like the one illustrated here increases safety, parking, pedestrian and bicyclist access and creates a people-friendly sense of place.

When advocating and planning for road diets, try the following:

■ Engage the public

Since road diets are a new concept in many communities, it's important to involve the public as soon as possible during the discussions and planning. Doing so can minimize any anxiety about the unknowns and give residents ownership of the road diet goals.

■ Embrace a public process and build support

Develop an education and awareness campaign prior to implementation, and reach out broadly to community members, elected officials and municipal leaders. Government officials may need to see public support before acting.

Toward that end, advocates can share this fact sheet, talk to neighbors, build community support and then meet with decision makers, the media, experts and others to discuss the benefits of road diets. Agency staff can engage the public by hosting workshops to build public acceptance and understanding.

■ Start with a pilot project

Consider launching a pilot road diet in an area that has light traffic. This will give drivers a chance to get

comfortable with the concept and allow municipal staff to document what works and what doesn't.

■ Target areas that are ripe for reinvestment

Locate a pilot project on a road that carries no more than 15,000 vehicles a day and that ideally serves a downtown neighborhood or historic district with potential for reinvestment and/or economic development.

■ Document the change

Before, during and after the road diet project is built, observe and record what's happening. The information can make it easier to conduct future road diets at higher traffic counts. In addition to traffic flow monitoring, document any increases in walking, bicycling, transit use and retail activity.

■ Utilize clear signage

During and even after completing a road diet project continue to use signage and markings to highlight and explain any features that might be unfamiliar.

■ Design it well

There is no one-size-fits-all design for a road diet. Make sure what you create fits the traffic volume, the road's physical location and the community's shared goals.

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Success Stories

Orlando, Florida: Edgewater Drive

A 1.5-mile section of Edgewater Drive was put on a road diet in 2000, converting four lanes to two.

The results: 34 percent fewer crashes and 68 percent fewer injuries. Speeds decreased by up to 10 percent. Property values increased 8 to 10 percent in residential areas and 1 to 2 percent for commercial areas. Travel times through the corridor sped up by 25 seconds even with an increase in traffic volume. There was a nearly 40 percent increase of on-street parking, and walking and bicycling rates rose by 56 and 48 percent, respectively.

Seattle, Washington: Stone Way North

In 2008, a road diet was completed on a 1.2-mile section of Seattle's Stone Way North. The four-lane roadway carrying 13,000 vehicles per day was turned into a two-lane roadway with a center-turn lane, bicycle lanes and parking on both sides. Speeds on the road decreased, but drivers did not divert to other areas in search of alternate routes.

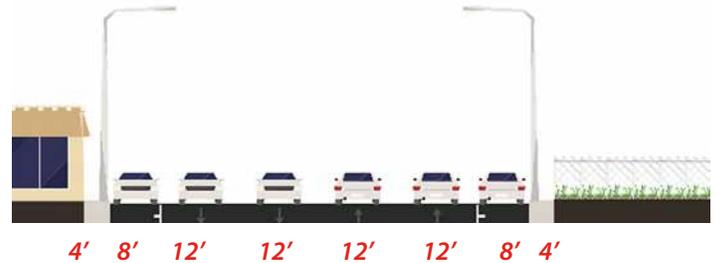
Two years of crash data showed an overall decrease of 14 percent, injury crashes dropped by 33 percent and angle crashes dropped by 56 percent. Bicycle volume increased 35 percent (to almost 15 percent of the peak hour traffic volume), yet the bicycle collision rate showed no increase. Pedestrian collisions decreased 80 percent.

Athens, Georgia: Baxter Street

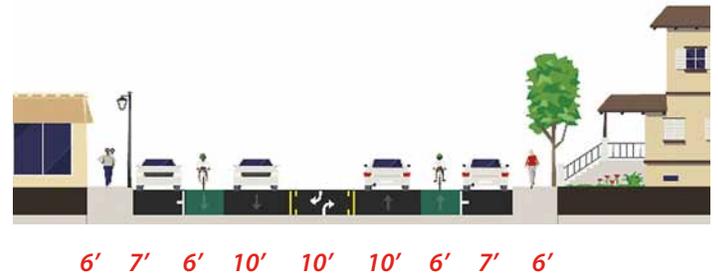
A road diet conversion on an arterial with 20,000 vehicles daily resulted in crashes dropping 53 percent in general and 60 percent at unsignalized locations. Traffic diversion was less than 4 percent, and 47 percent of the road's users perceived the number of lanes and street width as being "just right." (One-third were unsure and 20 percent were unhappy.) Baxter Street was converted from four lanes to two with a center lane and bicycle lanes on both sides.

HOW IT WORKS

The most common type of road diet converts four lanes of traffic into three lanes consisting of two travel lanes and a center left-turn lane. The configuration opens up space for adding such features as bicycle lanes, on-street parking, pedestrian buffers and sidewalks.



BEFORE: This roadway is designed primarily for motor vehicles. Wide, multiple travel lanes encourage faster speeds. The likelihood of drivers making lane changes increases the risk of crashes.



AFTER: A road diet opens up space for bike lanes, wider sidewalks, landscaping and pedestrian-scale lighting, all of which increase a community's ability to attract new development along the roadway. Narrower, single travel lanes encourage moderate and slower speeds that reduce crash risks.

RESOURCES

1. **Los Angeles County Model Design Manual for Living Streets.** (2011) <http://www.modelstreetdesignmanual.com/>
2. **Road Diet Handbook: Setting Trends for Livable Streets.** Available for purchase from Institute for Transportation Engineers, <http://bit.ly/RCo4sw>
3. **"Rightsizing Streets."** Project for Public Spaces, <http://www.pps.org/reference/rightsizing/>
4. **The Safety and Operational Effects of Road Diet Conversion in Minnesota.** http://www.cmfclearinghouse.org/study_detail.cfm?stid=68
5. **Proven Safety Countermeasures.** http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_013.pdf
6. **Evaluation of Lane Reduction "Road Diet" Measures on Crashes.** Highway Safety Information System, <http://www.fhwa.dot.gov/publications/research/safety/10053/10053.pdf>
7. **"Moving Beyond the Automobile."** Streetfilms, road diet video featuring Dan Burden on Vimeo: <http://vimeo.com/21903160>



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