Road Diets
(Roadway Reconfiguration)

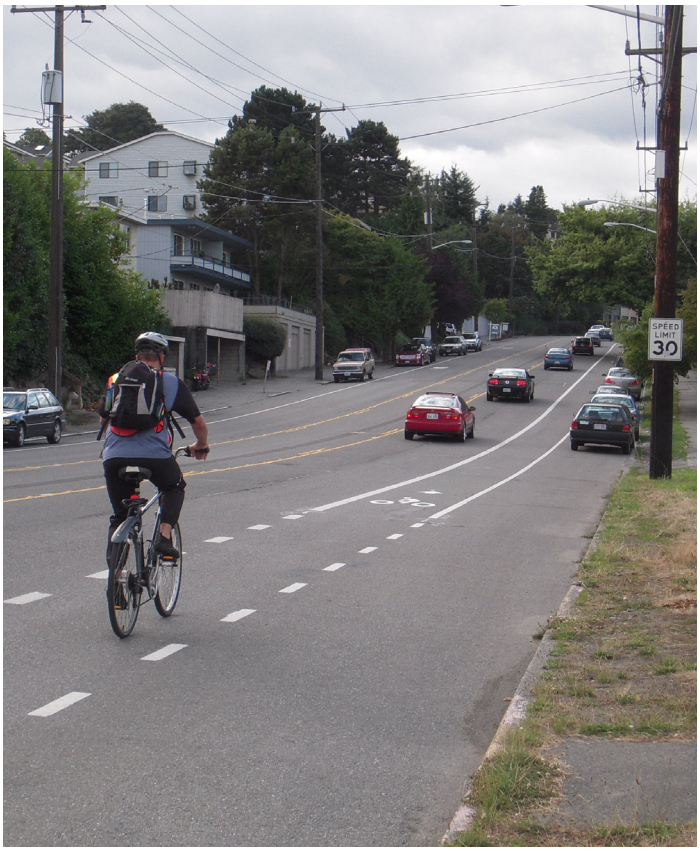
Improved safety and congestion relief on public roadways are high-priority national goals. Innovative reconfigurations such as Road Diets can help achieve these goals for motorists and non-motorists on mixed-use streets by reducing vehicle speeds and freeing space for alternative modes. Road diets can reduce collisions, increase mobility and access, and improve a community's quality of life.

Road Diets are a safety-focused alternative to a four-lane, undivided roadway. The most common type of Road Diet involves converting an existing four-lane, undivided roadway segment that serves both through and turning traffic into a three-lane segment with two through lanes and a center, two-way left-turn lane (TWLTL). The reclaimed space can be allocated for other uses such as bike lanes, pedestrian refuge islands, bus lanes and parking.

On a four-lane undivided road, vehicle speeds can vary between travel lanes, and drivers frequently slow or change lanes due to slower vehicles or vehicles stopped in the left lane waiting to turn left. On three-lane roads with TWLTLs, left-turning vehicles are separated from through vehicles, and the vehicle speed differential is limited by the speed of the lead vehicle in the through lane. This reduces the vehicle-to-vehicle conflicts that contribute to crashes.

A Road Diet applied in Orlando, Florida, converted an existing four-lane undivided roadway segment into a three-lane segment consisting of two through lanes, a center TWLTL, and installed bike lanes. The result was a 34 percent reduction in the total number of crashes, a 30 percent increase in bike volumes, and a 23 percent increase in pedestrian volumes.

A Des Moines, Iowa, Road Diet also provided a benefit to buses: instead of stopping in a through lane and blocking traffic as they had done before



the reconfiguration, the new design accommodated them with a bus turn out. In Pasadena, California, a Road Diet allowed pedestrians to safely cross the road more easily, which provided the unexpected benefit of eliminating the need for a pedestrian traffic signal at the crossing. This resulted in cost savings and eliminated the impact of the signal on traffic flow.

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BENEFITS

- **Safety.** Road Diets can make the roadway environment safer for all users. Studies indicate a 19 to 47 percent reduction in overall crashes when a Road Diet is installed on a previously four-lane undivided facility. For pedestrians, Road Diets result in fewer lanes to cross and provide an opportunity to install refuge islands that slow vehicles in the midblock crossing area, which is where 70 percent of pedestrian fatalities occur.
- **Low Cost.** Road Diets make efficient use of the roadway cross-section. The majority are installed on existing pavement within the right-of-way. When planned in conjunction with reconstruction or simple overlay projects, the safety and operational benefits of Road Diets are achieved essentially for the cost of restriping pavement lanes.
- **Quality of Life.** Road Diets can make shared spaces more livable and contribute to a community-focused, Complete Streets environment. On-street parking and bike lanes can also bring increased foot traffic to business districts.

CURRENT STATE OF THE PRACTICE

Road Diets have been implemented for at least two decades and are steadily increasing in popularity. More than 600 state, regional and local jurisdictions have adopted or have committed to adopting Complete Streets policies, establishing the expectation that all future roadway projects will adhere to the principle that streets should be designed with all users in mind rather than merely providing enough capacity for vehicle throughput.

SUPPORT AND AVAILABLE TOOLS

The Federal Highway Administration (FHWA) Office of Safety added Road Diets to its Proven Safety Countermeasures list in January 2012. FHWA provides guidance on Road Diet application, including effective use of Road Diets without reducing highway capacity and Road Diet-related crash modification factors for use in safety countermeasure benefit-cost analysis.

The FHWA Safety Office is developing a Road Diet Informational Guide that includes safety, operational, and quality of life considerations from research and practice as well as design guidance. It will take readers through the decision-making process to determine if Road Diets are a good fit for certain corridors.

- EDC-3 Road Diets Web page: *http://www.fhwa.dot.gov/everydaycounts/edc-3/reconfiguration.cfm*
- FHWA Office of Safety Proven Safety Countermeasures website: *http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_013.htm*
- The FHWA Summary Report, "Evaluation of Lane Reduction Road Diet Measures on Crashes" (FHWA-HRT-10-053), is available at *http://www.fhwa.dot.gov/publications/research/safety/10053/index.cfm*.

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U.S. Department of Transportation
Federal Highway Administration

Every Day Counts (EDC), a State-based initiative of FHWA's Center for Accelerating Innovation, works with State, local and private sector partners to encourage the adoption of proven technologies and innovations aimed at shortening and enhancing project delivery

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