

Four to Five Lane Conversion



A Road Diet reconfigures a 4-lane road into 5 lanes, freeing space for bike lanes, transit stops, or pedestrian features to improve safety and accessibility.

Implementation Strategy

How and Where to Apply

- Road Diets are suitable for urban or suburban corridors with moderate traffic volumes (typically under 20,000 AADT), high crash rates, or multimodal needs like biking and walking.
- Reconfigure lane markings to transform four undivided lanes into two through lanes and a center left-turn lane, reallocating excess space for bike lanes, sidewalks, or on-street parking.
- Not recommended on lower-volume or multimodal urban corridors, as adding a fifth lane can increase crashes and reduce safety for pedestrians and cyclists.

Use in a Safe System Approach

This treatment supports the SSA by promoting safer speeds and minimizing the severity of sideswipe crashes. It aligns with "Safer People" by addressing risky lane-change behavior in urban high-speed corridors.

Key Stakeholders

State DOTs, MPOs, urban planners, active road users, engineering consultants.

Proactive Implementation

Proactive implementation of Road Diets involves identifying corridors with moderate traffic volumes, crash patterns, and unmet multimodal needs before severe issues arise. Agencies should conduct traffic studies and public outreach to assess feasibility and community support. Implementing a Road Diet early can improve safety, calm traffic, and create space for bikes, pedestrians, and transit users.

Countermeasure Overview

Objective: Keep vehicles from encroaching into opposite lane.

Strategy: Provide center two-way left-turn lanes for four- and two-lane roads.

Selected Related Countermeasures

- CM1 Curb extensions (bulb-outs)
- CM2 Raised medians with pedestrian refuges
- CM3 Lane narrowing with bike lanes

Cost: \$\$\$ (Moderate to High)

Service Life: 20 years

Targeted Solution



CONTRIBUTING FACTORS

- Limited passing opportunities



TARGET CRASH TYPE

- Sideswipe



ROAD FACILITY TYPE

- Principal Arterial
- Freeways
- Expressways



AREA TYPE

- Urban

Safety Linkage



NCHRP 500 Series

Signalized Intersection



AASHTO'S TOWARD ZERO DEATHS

Safer Infrastructure



SAFE SYSTEM APPROACH

Safe Speeds

SAFE SYSTEM ROADWAY DESIGN

TIER 1
TIER 2
TIER 3
TIER 4

Tier 1

Four to Five Lane Conversion. Source: [Google Earth](#).

65%

Reduces crashes and severity for all types on urban and suburban roads ([CMF ID: 10296](#))

58%

Reduces crashes and severity for all types on urban and suburban roads ([CMF ID: 10293](#))



Resources

- [FHWA Road Diet](#)

