NCHRP 17-113 COUNTERMEASURES

Reduce Lane Width from 10 Ft to 9 Ft

SPEEDING

Reducing lane widths from 10 feet to 9 feet is a speed management and space reallocation strategy aimed at calming traffic and improving safety for vulnerable road users.

Implementation Strategy

How and Where to Apply

- Use 9-foot lanes on shared streets or woonerfs to reinforce slow-speed environments and prioritize pedestrian and cyclist safety.
- Apply in low-speed urban areas with limited space, reallocating excess lane width for transit stops, trees, or buffers.
- The **FHWA** states "Narrower lanes, down to 9 feet are appropriate in very low-speed environments where multimodal use and pedestrian activity dominate"

Use in a Safe System Approach

This treatment aligns with the Safe System Approach by promoting Safer Speeds and Safer Roads, reducing crash forces to survivable levels and providing better protection for all users, especially those outside vehicles.

Key Stakeholders

City Transportation Departments, State DOTs, MPOs

Proactive Implementation

Introduce 9-foot lanes during street resurfacing or redesigns in residential areas, school zones, and constrained corridors. Coordinate with emergency services for access needs. Use quick-build methods like striping or curb extensions to pilot changes, and apply design guidance from FHWA, NACTO, and local agencies to ensure appropriate application.

Countermeasure Overview

Objective: Ensure that roadway design and traffic control elements support appropriate and safe speeds
Strategy: Use combinations of geometric elements to control speeds (horizontal and vertical curves, cross section), including providing design consistency along an alignment .

Targeted Solution

CONTRIBUTING FACTORS	▪ Unsafe Speed ▪ Aggressive Driving Behaviors
TARGET CRASH TYPE	▪ Speeding
ROAD FACILITY TYPE	▪ All
AREA TYPE	▪ Urban

Safety Linkage

NCHRP 500

Speeding-Related Crashes

AASHTO'S TOWARD ZERO DEATHS

Safer Infrastructure

SAFE SYSTEM APPROACH

Safer Speeds

SAFE SYSTEM ROADWAY DESIGN

TIER 1
TIER 2
TIER 3
TIER 4

Tier 2

Source: State Smart Transportation Initiative

Selected Related Countermeasures

- CM1 Road Diets
- CM2 Curb Extensions
- CM3 Raised Crosswalks

Cost: Low

Service Life: 0 years

Benefit-Cost Ratio: N/A

Safety Benefits

43% Reduce crashes for all types roads [1]

54% Reduce all types of crashes on urban roads [2]

[1] CMF ID: 8177
[2] CMF ID: 8178

Resources

- National Association of City Transportation Officials (NACTO).
- FHWA. Roadway Widths and Lane Configurations on Urban Streets