NCHRP 17-113 COUNTERMEASURES

Decrease Lane Width from 11 Feet to 9 Feet

SPEEDING

Reducing lane widths from 11 feet to 9 feet is a speed management strategy that reallocates road space to support multimodal safety and traffic calming.

Implementation Strategy

How and Where to Apply

- Apply 9-foot lanes on neighborhood streets or school zones where low speeds and high pedestrian activity demand safer conditions.
- Implement through restriping or curb extensions in constrained corridors to reallocate space for sidewalks, bikeways, or landscaping.
- The **NACTO** states "Narrower lanes can reduce speeds, enhance safety for all users, and are acceptable in low-speed environments"

Use in a Safe System Approach

This treatment supports the Safe System Approach by reducing operating speeds and reallocating space toward safer modes of travel. It promotes Safer Speeds and Safer Roads in environments where human error is expected and should be accommodated with lower-severity outcomes.

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 (ARTERIAL, COLLECTOR, LOCAL)	▪ All
AREA TYPE	▪ Urban

Safety Linkage

NCHRP 500	SAFE SYSTEM APPROACH
Speeding-Related Crashes	Safer Speeds
AASHTO'S TOWARD ZERO DEATHS	SAFE SYSTEM ROADWAY DESIGN (TIER 1, TIER 2, TIER 3, TIER 4)
Safer Infrastructure	Tier 2

Source: State Smart Transportation Initiative

Selected Related Countermeasures

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

Cost: Moderate

Service Life: 20 years

Benefit-Cost Ratio: N/A

Safety Benefits

59% Reduce crashes for urban roads [1]

[1] CMF ID: 8173

Resources

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