PEDESTRIANS AND BICYCLISTS

Install Bicycle Lanes

Bicycle lanes are designated portions of the roadway, marked by pavement striping and signs, that provide space for bicyclists to travel separately from motor vehicles.

Implementation Strategy

How and Where to Apply

- Bicycle lanes can be installed on arterial or collector roads with sufficient width or through road diet conversions.
- They are most effective in urban or suburban areas with moderate to high bicycle activity and crash risk.
- According to **FHWA** guidance, bike lanes should be included during repaving or restriping projects to improve multimodal safety and comfort.

Use in a Safe System Approach

This countermeasure supports Safer Users and Safer Roads by physically or visually separating bicyclists from faster-moving vehicles. Dedicated lanes encourage predictable behavior, increase visibility, and reduce exposure to severe conflicts.

Key Stakeholders

Municipal and regional transportation agencies
Bicycle and pedestrian safety coordinators

Proactive Implementation

Bicycle lanes can be implemented proactively in corridors identified through bicycle crash analysis or multimodal gap studies. They can be part of complete streets policies, Safe Routes to School programs, or bike network expansions. Agencies can target roads with high cyclist volumes or known safety concerns, especially near schools, parks, and transit hubs.

Countermeasure Overview

Objective: Reduce bicycle crashes along roadways

Strategy: Provide safe roadway facilities for parallel travel

Targeted Solution

CONTRIBUTING FACTORS	▪ Lack of dedicated space for bicyclists
TARGET CRASH TYPE	▪ Bicyclist ▪ Crossing-related
ROAD FACILITY TYPE	▪ ALL
AREA TYPE	▪ Urban

Safety Linkage

NCHRP 500 Series
Pedestrian and Bicyclist

AASHTO'S TOWARD ZERO DEATHS
Safer Vulnerable Users

SAFE SYSTEM APPROACH
Safe Road Users

SAFE SYSTEM ROADWAY DESIGN
TIER 1
TIER 2
TIER 3
TIER 4
Tier 2

Install Bicycle Lanes. Source: Bicycle Lanes

Selected Related Countermeasures

- CM1 Buffered or protected bicycle lanes
- CM2 Bicycle boxes at intersections
- CM3 Reduced speed limits on shared roadways

Cost: $ (Moderate)

Service Life: 20 years

Benefit-Cost Ratio: 5.9:1

Safety Benefits

56% Reduce bicycle/vehicle crashes[1]

43% Reduce total crashes on urban four-lane undivided collectors and local roads[2]

[1] CMF ID: 10737
[2] CMF ID: 11555

Resources

- Bicycle Lanes
- FHWA Bicycle-Lane