Unsignalized Intersection Improvement Guide

Install a Right–Turn Lane along the Major Road

An auxiliary lane (or taper) exclusively for the deceleration and storage of right-turning vehicles.

Right-turn lanes can help alleviate rear-end crashes in rural areas such as these, where turns are less expected.

This urban right-turn lane has been installed along a stop-controlled approach.

Targeted Crash Types

- Rear-end (major road)

Problems Addressed

- Poor operational performance
- Excessive intersection conflicts

Conditions Addressed

- Crash history or observed conflicts between right-turning vehicles and following vehicles.
- Significant right-turn volume along major road.

Considerations

- Adding a lane may require additional right-of-way and utility relocation.
- Because the addition of a right-turn lane will increase the crossing distance for pedestrians, consider a refuge island when appropriate.
- Check that the sight triangle remains clear.
- Channelize the right turn for an increased turning radius with the option of creating a free-flowing right turn under yield control, though not recommended for areas with moderate to high pedestrian crossings.

Industry Standard

MUTCD

Section 3B.20 Pavement Word, Symbol, and Arrow Markings

AASHTO Green Book

Section 9.7: Auxiliary Lanes

Other Resources

NCHRP 500 Volume 5: A Guide for Addressing Unsignalized Intersections

Intersection Safety: A Manual for Local Rural Road Owners, FHWA

Safety Effectiveness of Intersection Left- and Right-Turn Lanes, FHWA

Select Examples

Pleasant Ridge Rd. & Highland Grove Rd., Summerfield, NC

Fairbanks Dr. & Clarks Branch Dr., Raleigh, NC

Check for Crash Modification Factor: CMF Crash Modification Factors Clearinghouse