

UNSIGNALIZED INTERSECTION SAFETY STRATEGIES



Restrict or Eliminate Turning Maneuvers by Signing

WHERE TO USE

Unsignalized intersections with patterns of crashes related to particular turning maneuvers where it is impractical to reduce that pattern of crashes by improving sight distance or providing a left-turn or shoulder bypass lane.



DETAILS

Safety at some unsignalized intersections can be enhanced by restricting turning maneuvers, particularly left turns, during certain periods of the day (such as peak traffic periods) or by prohibiting particular turning movements altogether. Turn restrictions and prohibitions can be implemented by signing.

KEY TO SUCCESS

Anticipate the destinations of traffic making the affected turning maneuver and ensure the availability of alternatives that can safely accommodate that traffic. It is also important that the turn restriction or prohibition be clearly signed so that motorists become aware of the restriction or prohibition and do not make illegal turns.



ISSUES

A potential pitfall of a turn restriction or prohibition is that suitable alternatives may not be available, resulting in drivers continuing to make illegal turning maneuvers or taking unanticipated alternatives through private property or minor local streets. Another potential pitfall occurs where commercial properties are affected and business owners resist the action because of fears of losing business due to restricted access.

Finally, experience demonstrates that the effectiveness of turn restrictions is maximized when they are accompanied by physical barriers. Where no such barriers exist and police do not regularly enforce the turning restrictions, violations of turn restrictions may be expected and, hence, the safety effectiveness degraded.

TIME FRAME ●○○○

Since turn prohibitions are normally implemented by signing, they can be implemented quickly, often within 3 months or less.

COSTS ●○○○

Since this strategy is implemented through signing, its cost is low.

EFFECTIVENESS

TRIED: Turn restrictions or prohibitions should reduce crashes related to the affected turning maneuver by nearly 100% during the period that the restriction or prohibition is in effect. However, a complete assessment of the effect of a turn restriction or prohibition on safety requires consideration of the alternatives to which the traffic that desires to make the affected turn is diverted, as well as the potential effect of that traffic on the safety performance of that alternative route. The net effect on safety of turn prohibitions and restrictions is highly site specific and difficult to quantify.

One Florida study indicated prohibiting left turns can reduce crashes by up to 45% (and left-turn crashes 90%). A Virginia study concluded that the installation of turn prohibition signs at urban intersections could result in a 62% decrease in crashes.

COMPATIBILITY

This strategy can be used in conjunction with most other strategies for improving safety at unsignalized intersections. It is intended as an alternative to provisions of left-turn lanes or shoulder bypass lanes, so it is not appropriate for use in conjunction with those strategies. A traffic law enforcement program in coordination with the restrictions, especially following their introduction, is also desirable.

SUPPLEMENTAL INFORMATION

Signing in conformance with the *Manual on Uniform Traffic Control Devices* should be provided.

For more details on this and other countermeasures: <http://safety.transportation.org>

For more information contact:

FHWA Office of Safety Design
E71, 1200 New Jersey Avenue SE
Washington, D.C. 20590
(202) 366-9064
<http://safety.fhwa.dot.gov>

FHWA Resource Center - Safety and Design Team
19900 Governor's Drive, Suite 301
Olympia Fields, IL 60461
(708) 283-3545
<http://www.fhwa.dot.gov/resourcecenter>

