

UNSIGNALIZED INTERSECTION SAFETY STRATEGIES



Provide an Automated Real-Time System to Inform Drivers of the Suitability of Available Gaps for Making Turning and Crossing Maneuvers

WHERE TO USE

Unsignalized intersections with a high frequency of right-angle collisions due to restricted sight distance.



Photos by: FHWA

DETAILS

The lack of adequate sight distance at unsignalized intersections may reduce the ability of drivers to see an approaching vehicle and/or judge the suitable available gap for making turning and crossing maneuvers. Even where sight distance is adequate, drivers may ignore traffic control devices such as stop or yield signs and may misjudge available gaps in traffic. Thus, intersection crashes may occur because drivers are unable to judge adequately the distance to an approaching vehicle. Automated systems can be used to assist drivers in judging the adequacy of available gaps in traffic for entering the major road from a stop- or yield-controlled approach. Such systems can range from simple pavement loop detectors and flashing lights with a simple control algorithm to more complex real-time, computer-controlled systems.

KEY TO SUCCESS

Eliminate as many sight obstructions as practical or possible before implementing an automated system. Signage on the highway that does not stop should be used to alert motorists of the approaching intersection. The system must be maintained in excellent working condition.



ISSUES

Care must be taken to keep the system operating properly. If the system fails (e.g., light burns out, detector malfunctions), a driver may assume that there is no traffic approaching and proceed with little or no caution.

TIME FRAME ●●○

Time frame for implementation can generally be short to medium if equipment and right-of-way is available.

COSTS ●●○○

Costs are generally low to moderate for a simple automated system but will increase for more complex systems.

EFFECTIVENESS

EXPERIMENTAL: This strategy has been implemented in a few locations, but there are no conclusive results on safety effectiveness to date.

COMPATIBILITY

This strategy can be used in conjunction with most other strategies for improving safety at unsignalized intersections.

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

For more information contact:

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