

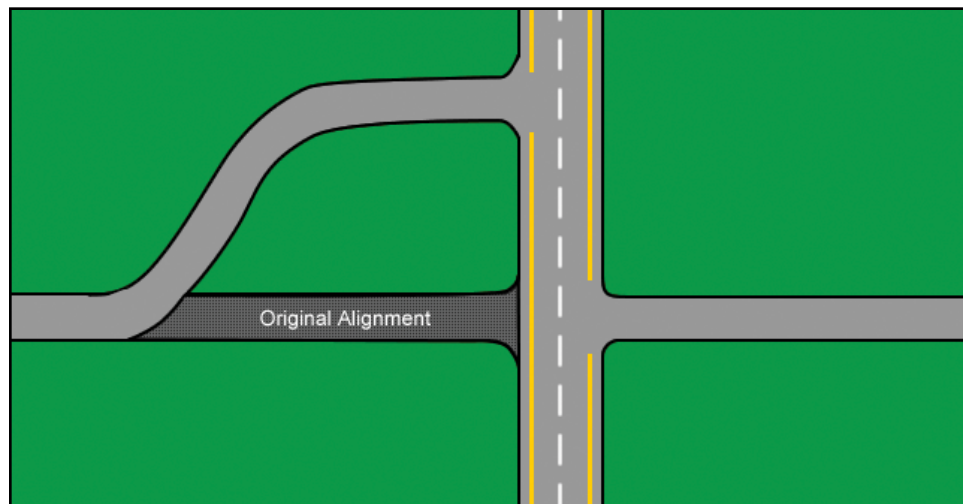
# UNSIGNALIZED INTERSECTION SAFETY STRATEGIES



## Convert Four-Legged Intersections to Two T-Intersections

### WHERE TO USE

Unsignalized four-legged intersections with very low through volumes on the cross street.



### DETAILS

For some unsignalized four-legged intersections with very low through volumes on the cross street, the best method of improving safety may be to convert the intersection to two T-intersections. This conversion to two T-intersections can be accomplished by separating the two cross-street approaches an appreciable distance along the major road, thus creating two separate T-intersections that operate independently of one another.

### KEY TO SUCCESS

Depends upon the through volume of the cross street. If through volumes are high, the intersection may be safer if left as a conventional four-legged intersection. Converting it to two T-intersections would only create excessive turning movements at each of the T-intersections.

### ISSUES

A potential difficulty with this strategy is the spacing between the two T-intersections. If the two intersections are not spaced far enough apart, two problems can occur. First, there may not be enough storage length for the left-turning vehicles between the two intersections. Second, the operations of the two intersections may interfere with one another.

Another difficulty may occur in providing safe access to the properties adjacent to the existing four-legged intersection.



### TIME FRAME ●●○

This strategy requires an implementation time of 1 to 4 years. At least 1 year is necessary to work out the details of intersection approach relocation and to communicate the plan to affected business owners and residents. Where relocation requires right-of-way acquisition and/or demolition of existing structures, an extensive project development process up to 4 years in duration may be required.

### COSTS ●●●●

Converting a conventional four-legged intersection to two T-intersections involves the realignment of at least one intersection approach. The cost of this type of construction project is usually high. Furthermore, additional right-of-way will generally need to be acquired.

### EFFECTIVENESS

**TRIED:** In one study conducted, offset intersections had crash rates that were approximately 43% of the crash rate at comparable four-legged intersections. Thus, it is expected that this strategy would reduce the crash experience of targeted four-legged intersections.

Research completed in the U.K. indicates that total crashes may be reduced by 25-33% when the ratio of major street to minor street traffic is <85% / >15%. However, when the ratio is >85% / <15%, crashes tend to increase.

### COMPATIBILITY

The conversion of a conventional four-legged intersection to two T-intersections may be used in conjunction with most other strategies for improving safety. In many cases, the relocation of an intersection approach may be done to make those other strategies feasible.

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

#### For more information contact:

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