

Keys to Safer Intersections and Reduced Liability

There are several very important factors to be considered when improving intersection safety:

- Prevailing Speed
- Average Daily Traffic
- Visibility at the Intersection
- The Geometry and General Conditions Before and After the Intersection
- Guidance from the MUTCD and AASHTO
- Engineering Judgment
- Previous Accidents



Local Technical
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The decision to place a sign is that of the governing body. All the above factors should be considered when making that decision. When the decision has been made to use a sign, the MUTCD can give proper guidance as to what sign is used and how it should be placed.

In Section 2B.04 of the MUTCD, Stop and Yield signs can be used where normal right-of-way rules do not apply. If neither direction is always required to stop, a yield sign may be used to assign right-of-way different than the normal “yield to the right” rule.

On most Montana county roads a four-way stop is not warranted. Warrants to apply a four-way stop are shown in Section 2B.07 in the manual and include five or more crashes per year and volumes of over 300 vehicle per hour for an eight-hour period.

The use of Warning signs should be limited. According to the MUTCD Section 2A.04, Regulatory and Warning signs should be used conservatively because these signs, if used in excess tend to lose their effectiveness. Section 5, the Low volume road section (< 400 AADT) 5A.03 suggests that engineering judgment should be used to determine if a warning sign is to be used.

The AASHTO Geometric Design of Very Low Volume Local Roads helps us understand “Clear Sight Triangles” at intersections. Page 41 explains that if the visibility at prevailing speed doesn’t allow a driver to stop to avoid a collision, something needs to be adjusted (obstacles removed or signing). Prevailing speeds at the intersection are roughly half the allowed speeds. Attentive drivers reduce speeds at intersections and look for conflict. Once stopping distance at this speed is obtained the clear triangles can be drawn.

The standard of care here in Montana is to not sign rural intersections unless you observe problems associated with several of the factors first listed on this sheet. If it is felt there exists a significant risk at an intersection, a sign like Stop (R1-1) Yield (R1-2) or Intersection (W2-1) may be considered.

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