Design Advisory

DA 2008-03
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From Mark Van Port Fleet, Engineer of Design

Stopping Sight Distance for Design Exceptions

The FHWA has indicated that K value and Sightline Offset (SLO) are no longer accepted as the lone determining factor for compliance with vertical and horizontal stopping sight distance, respectively. As noted in the June 2008 update of Chapter 3 of the Road Design Manual, the geometric element of stopping sight distance is measured in feet in the AASHTO Green Book. There have been situations where the K value conflicts with calculated dimensions and results in meeting design speeds that are not representative of actual conditions. Consequently, it is required that both vertical and horizontal stopping sight distance be calculated and recorded on Design Exceptions in feet. In order to provide consistency, this is also required for non-NHS projects or NHS projects that have MDOT oversight/approval. The latest Design Exception form (FC26) dated June 2008 has been modified to reflect this change by deleting (K) and (sightline offset) under the Stopping Sight Distance (SSD) check boxes.

As noted in the revised Chapter 3, formulas for horizontal and vertical stopping sight distance have been revised to facilitate calculations for stopping sight distance in feet. Note that the sightline radius is measured from the center of the curve's inside-most traveled lane for each direction.

With horizontal curves, survey data/field review should obtain sightline offsets to calculate the existing SSDs and verify whether obstructions occur within the ROW. If the sightline extends beyond the ROW, the appropriate ROW needs to be acquired. In either case, the sightline offset is used to determine whether the required SSD can be met or a Design Exception can be justified.

Since revisions to the Design Exception form may occur without an advisory being issued, designers are reminded to use the latest form version on our web site when submitting Design Exceptions.

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