
From: Bruce.Friedman@dot.gov
Sent: Friday, May 28, 2010 6:03 AM
To: Bruce.Friedman@dot.gov
Subject: FW: Table 2C-5

From: Ranck, Fred (FHWA)
Sent: Monday, March 01, 2010 11:30 AM
To: Newman, Kenneth
Cc: Kalla, Hari (FHWA)
Subject: RE: Table 2C-5

Ken:

....the underlying principle governing Advisory Speeds is application of engineering judgment (in the requisite engineering study) by engineers.

The text of Section 2C.08 was never intended to address the weird outliers in the real world of advisory speeds greater than posted speeds; if this were the case, the advisory speed is not needed, pure and simple.

Also, the world of advisory speed determination is no longer your grandfather's oldsmobile as you used to know it; based upon research, the ball bank criteria have increased to 16 - 14 -12 degrees rather than the previous 14-12-10 degree criteria.so many the advisory speed for many horizontal curves will typically increase by 5 to 8 mph and hence not need to be posted with advance warning signs nor advisory speed plaques.

Fred

From: Newman, Kenneth [mailto:newmank@waynetownship.com]
Sent: Monday, March 01, 2010 10:21 AM
To: Ranck, Fred (FHWA)
Cc: Kalla, Hari (FHWA); Wainwright, Scott (FHWA); Friedman, Bruce (FHWA); Wood, Ken (FHWA)
Subject: RE: Table 2C-5

Fred

I certainly understand and agree with your comment. And, I also agree that "established engineering practice" would only provide for a lower advisory speed. I guess I got "caught" in the semantics discussion on the web board.

From: Fred.Ranck@dot.gov [mailto:Fred.Ranck@dot.gov]
Sent: Monday, March 01, 2010 11:12 AM
To: Newman, Kenneth
Cc: Hari.Kalla@dot.gov; Scott.Wainwright@dot.gov; Bruce.Friedman@dot.gov;
Ken.Wood@dot.gov
Subject: RE: Table 2C-5

Dear Ken:

Please reread my previous email.

You are not correct in your statement that an Advisory speed must be posted for a horizontal curve. See Table 2C-5 and apply.

The W13-1 advisory speed plaque must (shall) be applied only where the recommended curve speed (advisory speed) is 10 mph or less than the posted speed limit or 85th percentile speed.

For the situation which you describe, for a 500 foot radius, the recommended curve speed would be 41 mph at 6% superelevation rate per the 2004 AASHTO Policy on Geometric Design; if the superelevation is less than 6%, then the recommended curve speed is less. For a posted speed limit of 30 mph, no advisory speed is recommended (should) until the measured advisory speed by engineering study is 5 mph less than the posted speed limit of 30 mph or 25 mph. further, for an advisory speed of 20 mph which is 10 mph less than the posted speed limit, then posting of the advisory speed is mandatory (shall)(Must). If the 85th percentile speed is greater than the posted speed, say 35mph, then posting of the advisory speed is recommended for a value of 30 mph (matches the posted speed limit) and required (Must) for advisory speed values of 25mph or less.

Fred Ranck

From: Newman, Kenneth [mailto:newmank@waynetownship.com]

Sent: Monday, March 01, 2010 8:44 AM
To: Ranck, Fred (FHWA)
Cc: Kalla, Hari (FHWA); Wainwright, Scott (FHWA); Friedman, Bruce (FHWA); Wood, Ken (FHWA)
Subject: RE: Table 2C-5

Fred

If Advisory Speed must be posted on a horizontal curve, what about the following:

A roadway with a posted speed limit of 30 mph and an 85th percentile of 35. Say this road has a curve with perhaps a 500 foot radius. The "advisory" speed based on ball bank could well be higher than even the 85th percentile, assuming that the run is made to force the indicator.
Your response seems to indicate that the higher speed must be posted as Advisory. This doesn't seem logical. In the past, "Advisory Speed" has always been interpreted (if not strictly defined) as a lower speed that is safe for the given condition.

Also, I reference the ITE Traffic Engineering Handbook, page 638:

Advisory speed zones are the desirable speeds...where design standards or physical conditions restrict safe or comfortable operating speeds to a value below (emphasis added) the posted regulatory speed limit...Posting advisory speeds where there are no geometric constraints generally is ineffective and reduces the effectiveness of the device..."

I believe that a 'strict construction' of the MUTCD wording to require posting Advisory Speeds regardless of whether is is higher is inappropriate.

From: Fred.Ranck@dot.gov [mailto:Fred.Ranck@dot.gov]
Sent: Monday, March 01, 2010 9:32 AM
To: Newman, Kenneth
Cc: Hari.Kalla@dot.gov; Scott.Wainwright@dot.gov; Bruce.Friedman@dot.gov; Ken.Wood@dot.gov
Subject: RE: Table 2C-5

Dear Ken:

Thank you for your interest in the application of advisory speed plaques to standard highway warning signs. My name is Fred Ranck and I am a safety/design engineer with the Federal Highway Administration's Resource Center in Olympia Fields, Illinois, and a member of the FHWA's Manual on Uniform Traffic Control Device's team.

Information regarding the design and application of the W13-1 advisory speed plaque may be found in the 2009 edition of the MUTCD Section 2C.08 which is available on the Federal Highway Administration web site:
<http://mutcd.fhwa.dot.gov> <<http://mutcd.fhwa.dot.gov/>> .

In response to your question of "Please confirm that the Advisory Speed posting requirements apply ONLY to operating speeds that are lower than the posted speed limit or 85th percentile speed, and NOT above.", the answer is that the W13-1p advisory speed plaque is optional as set forth in the first option statement of Section 2C.08. Hence Advisory Speeds may be posted for advisory speeds equal to or greater than the posted speed limit or 85th percentile speed. The MUTCD does not restrict the application in the manner which you set forth. The key aspect is paragraph 06 of the first standard statement of Section 2C.08 which states the following:

06 The advisory speed shall be determined by an engineering study that follows established engineering practices.

Engineering practices as set forth by ITE in the Traffic Control Devices Handbook are for advisory speeds lower than the posted speed limit.

Further, please keep in mind that the application of the Advisory Speed plaque is optional other than for application to horizontal curves where the application is based upon differential speed between the posted or 85th percentile speed and the recommended curve speed (advisory speed); per Table 2C-5, the application of the Advisory Speed Plaque is recommended (should) where the Difference between Speed Limit and Advisory Speed is 5 mph or more and is required (shall) when 10 mph or more.

Just below my contact information is a very brief customer service questionnaire that will take you only a couple of seconds to check off your answers. I'd appreciate it if you could do so and e-mail it back to me at fred.ranck@fhwa.dot.gov ---Thanks!

Fred Ranck

Safety Engineer/MUTCD Team

Resource Center - Olympia Fields, IL

4749 Lincoln Mall Drive, Suite 600

Matteson, IL 60443

Telephone #: 708-283-3545

Fax #: 708-283-3545

E-mail: fred.ranck@fhwa.dot.gov

From: Newman, Kenneth [mailto:newmank@waynetownship.com]
Sent: Monday, March 01, 2010 7:23 AM
To: Ranck, Fred (FHWA)
Subject: Table 2C-5

Fred

I know that this is a silly question, but it has become a "major" issue on the MUTCD discussion group. Please confirm that the Advisory Speed posting requirements apply ONLY to operating speeds that are lower than the posted speed limit or 85th percentile speed, and NOT above.

Kenneth Newman, P.E.

Assistant Township Engineer

475 Valley Road

Wayne Township, New Jersey 07470

Phone: (973) 694-1800 Ext. 3284

Fax: (973) 709-1141

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