

Minutes: Minnesota Committee on Uniform Traffic Control Devices

January 13, 2021 1:00 – 3:00

Microsoft Teams Meeting

Attendance

- Diane Colton, MnDOT
- Joe Gustafson, Washington County
- Tiffany Kautz, MnDOT
- Mike Martinez, HDR
- Tim Plath, City of Eagan
- Scott Poska, Alliant Engineering
- Howard Preston
- Mark Sehr, Rock County
- Tom Sohrweide, SEH
- Scott Thompson, MnDOT
- HunWen Westman, City of St. Paul

Guests

- Rashmi Brewer, MnDOT
- Girma Feyissa, MnDOT
- Ken Johnson, MnDOT
- Jeff Morey, MnDOT
- Michelle Moser, MnDOT

1. Membership Update/Introductions

Who was involved in the last NPA:

- Howard
- Tom
- Joe was involved with reviewing the Minnesota edition.
- Ken was involved in the last NPA as one of the people leading reviews.

2. Corrections/Updates to the Minutes

- Corrected the spelling of Jonathan Krieg's name.
- Name of Driver Feedback signs – the name was approved at the December 2020 meeting. The new NPA calls them Vehicle Speed Feedback signs.

Vote: Change name of Driver Feedback signs to Vehicle Speed Feedback signs

VOTE RESULT: **Passed**

3. Review of Action Items from Previous Meeting

- Regarding removal of Appendix C - Josie ran this by the MnDOT Sign Supervisors at their monthly meeting and there were no concerns.
- Tiffany has not yet reached out to committee members not at previous meeting confirming membership.

4. MN MUTCD Revision Update/Timeline, Revision 9 – Diane Colton

Nothing new

5. Request for Experimentation Update – Tiffany Kautz

No new requests

6. MCUTCD role in NPA review – Tiffany Kautz

FHWA went through the changes with the National committee. Tiffany has notes from the presentation and will share them with the committee. The notes are not complete and do not include all items presented.

Action Item: Tiffany will send notes to the committee.

FHWA working on webinars regarding changes in the NPA – no word on when.

Action Item: Tiffany will let everyone know when dates are available.

MnDOT's current NPA review process:

Tiffany showed list of MnDOT key experts for different parts of the MUTCD NPA proposal. Each person is reviewing and creating groups within MnDOT to review the separate parts. Tiffany is collecting comments by 2/26/2020. The first week in March MnDOT will have a resolution meeting to make decisions on comments leaving one week before close of the docket. MnDOT is encouraging other entities (Cities, Counties, etc.) to submit their own comments to the docket.

The MCUTCD committee will review the new MUCTD line by line after its been published in order to create the Minnesota version.

A. Extension Request for NPA review period

The NPA has a 90-day review period. In the past there has been a 180-day review period. Does the group want to support an extension to the time?

Discussion:

- Other organizations have requested extensions (ITE, NCUTCD, others).
- It's reasonable to ask for 90 days given the number of changes.
- This is our opportunity to influence the National MUTCD, which is the backbone of the MN MUTCD.

Vote: Request MnDOT send a letter requesting a 90-day extension.

VOTE RESULT: **Passed**

Action Item: Tiffany will work on a letter from MnDOT requesting an extension.

Completed: The letter requesting an extension of time has been sent by Brian Sorenson, Minnesota State Traffic Engineer. A copy of the letter can be found [here](#).

B. Review and comment items for the NPA?

There doesn't seem to be enough time to review the entire NPA. In the last MN MUTCD there were approximately 10 Guidance statements that MnDOT asked for leniency on. Should we review these for the NPA?

They included:

1. MnDOT deleted "ampersands"
2. Overhead lane control signs
3. Ramp meter advanced warning signs
4. Striping cycle
5. Crosswalk Blocks – wider than
6. Lane reduction arrows
7. Delineator placement and spacing
8. Single flagger location
9. Height of portable work zone signs
10. Distance between advanced warning signs

Vote: Add comments on the 10 more lenient Guidance statements to the NPA.

VOTE RESULT: **Passed**

Action Item: Tiffany will provide more information on what those are.

C. Other items the committee would like to comment on.

1. County Signs

We are not in conformance with FHWA and MN MUTCD on county signs.

Discussion:

Minnesota has a square white and black sign – the feds and Minnesota have the blue pentagon.

Different counties have different systems/approaches. Counties would like to see white/black signs remain.

Not an MnDOT issue - should MnDOT be commenting on this or should some other group? Do we as a group want to comment on county signs or let counties

VOTE: Add County signs to our list of comments on the NPA.

VOTE RESULT: **Passed**

2. Engineering judgement

- Definition of a "Standard" has change in new NPA – there's no mention of an engineering judgement, just engineering study. Guidance has "engineering judgement".
- A new clause has been added in the new NPA that talks about having "appropriate traffic engineering experience".

VOTE – Add review of engineering judgment criteria to list for committee.

VOTE RESULT: **Passed**

3. Chevrons/Curve warning signs:

The new NPA has some modifications – we should review this. The table appears to have issues - looks like they missed some things. Exceptions for low volume roles has potential for impacts to counties.

Vote – Add the Chevrons/Curve warning signs section to our list for review.

VOTE RESULT: Passed

4. Advance ramp meter signs

If applied strictly, could be pushed on to local streets.

Vote – Add advance ramp meter signs to list for review.

VOTE RESULT: Failed

5. Trapped lane (through lane into turn lane)

This was an ongoing concern with the old MUTCD. One cannot use a right lane ends sign in advance of a lane drop – must use the right lane turns right sign. Couldn't use the diamond sign but the warning sign was worthless – seemed like an oversight – maybe this has been fixed in new NPA?

Action Item: Joe will review the NPA for this item for discussion at the next meeting.

6. Speed Limit signing

Vote – Add Speed Limit Signing to review items.

VOTE Result: Passed

7. Discussion of NPA's proposed changes to Section 2B.21 (currently [Section 2B.13](#)) Speed Limit Sign (attached) – Tiffany Kautz

General Discussion:

- The proposed is a significant change. This opens it up for cities and others to set speed limits based on other parameters.
- Research that pointed to the 85th percentile was done in the 1950s on rural roads. In the 1930s cities could come up with their own limits – using speed traps to increase revenue. This influenced the legislature to assign responsibility to more objectively assign speed limits.
- Uniformity in arriving at speed limit decisions is important. Giving local agencies the ability to establish speed limits on their own creates the potential for inconsistency. A concern is that if it's politically driven it will create a lot of changes in speed limit decisions. Uniformity is critical in arriving at speed limits. Eliminating the 85th percentile is not a good practice.
- The proposed guidance is that a speed distribution of free-flowing vehicles be a consideration - what's being changed is that if you're in an urbanized location the speed limit does not have to be posted at the 85th percentile. It doesn't eliminate 85th percentile.
- The proposed language should be based on known information, not a vague term (such as urbanizing). Preference is to use the 85th percentile speed:
 - If 85th percentile is >40 mph you then the speed should within 5+ mph of 85th percentile.
 - If 85th percentile is equal to or < 40 mph then more flexibility
- Expressway can be hard to pin down.

- Minnesota doesn't have automated enforcement support. There is a concern that this would be yet another reason to be angry at enforcement; privacy concerns, etc. If we don't use the 85th percentile we can't use automated speed enforcement. Politically difficult.
- A graduated approach that could ultimately have universal automated enforcement. This approach was successful in Washington state. Started with school zones. Next tried it in work zones.

Vote:

1. Provide Comment to proposed NPA, Section 2B.21:

- **VOTE:** Line 19 - Remove *or expressway* change to “observed 85th percentile speed is 40 mph or greater”. Lines 20-23 - Remove

VOTE RESULT: **Passed**

- **VOTE:** Leave section as is.

VOTE RESULT: **Failed**

2. #67 in Preamble, Item 1.

VOTE: Support the removal of 85th percentile speed as a consideration in setting speed limits.

VOTE RESULT: **Failed**

3. #67 in Preamble, Item 2.

VOTE: Support the requirement to use an expert system to validate a speed limit.

VOTE RESULT: **Failed - Primary concern is the burden it will place on local entities.**

4. #67 in Preamble, Item 3.

NO VOTE: Comments on likely outcomes if one or more of the other recommendations were not implemented in conjunction with the speed-setting recommendation outlined in the report.

Action Item: If you have more comments please send to Tiffany.

8. Next Meeting

Action Item: The committee agreed to an additional meeting between now and our regular February meeting. Diane will set this up.

9. Round Robin

None.

10. Future agenda items:

Modification to 2D.29 – Tiffany Kautz, Josie Tayse

Add an exception (to 1st Standard, 1st paragraph) for signed township route and (maybe) National Forrest routes.

2I.5.1 Public Water Access Signs – Tiffany Kautz, Josie Tayse

Working with DNR to establish guidelines regarding sign placement. Tiffany and Josie talking with DNR about this section.

and Trail Crossing Signs (R1–6 and R1–9 Series)” to reflect the additional proposed Trail Crossing sign. FHWA also proposes to revise existing Standard P3 through P5 to include the proposed new Trail Crossing sign.

FHWA proposes to clarify in Standard P3 that no more than one in-street sign shall be placed in the roadway, on a lane line for a one-way roadway application, or on a median island. FHWA proposes this change to minimize sign proliferation in the roadway and to prevent potential distraction due to an overuse of signs at a single location. FHWA proposes this change as a conforming edit, which would not change the existing underlying requirement, in response to an apparent misinterpretation of the existing provisions as evidenced by a number of technical inquiries and observations of noncompliant field deployments.

FHWA proposes to change existing Option P7 to a Standard and add a new Standard to require that if used, the In-Street or Overhead Pedestrian or Trail Crossing sign shall be used as a supplement to a Pedestrian Crossing (W11–2) or Trail Crossing (W11–15) warning sign with a diagonal downward-pointing arrow (W16–7P) plaque at the crosswalk location. FHWA proposes this change to ensure that if an in-street or overhead sign is used, that the appropriate non-vehicular warning sign is in place to ensure uniformity in application at crosswalks. FHWA proposes this change as a conforming edit, which does not change the existing underlying requirement, in response to an apparent misinterpretation of the existing provisions as evidenced by a number of technical inquiries and observations of noncompliant field deployments.

FHWA proposes to add an Option allowing In-Street Pedestrian or Trail Crossing signs to be mounted back to back in the median or on the centerline of an undivided roadway. FHWA proposes this option to minimize the number of in-street obstructions at the crossing.

FHWA also proposes to clarify in Standard P8 that the In-Street Pedestrian or Trail Crossing sign and the Overhead Pedestrian Crossing or Trail sign shall not be used at crosswalks on approaches controlled by a traffic control signal, pedestrian hybrid beacon, or an emergency vehicle hybrid beacon. FHWA proposes this clarification to eliminate conflict between the sign that says STOP or YIELD and a green signal indication on a traffic control signal or hybrid beacon. In concert with this change, FHWA

proposes to add an Option statement permitting the use of the In-Street Pedestrian and Overhead Pedestrian and Trail Crossing sign at intersections or midblock pedestrian crossings with flashing beacons, because flashing beacons do not display a green indication, and therefore the use of this sign would not conflict with the signal indication.

Finally, FHWA proposes to reword existing Option P15 to clarify that both the in-street and overhead mountings of signs may be used together at the same crosswalk.

67. In Section 2B.21 (existing 2B.13) Speed Limit Sign (R2–1), FHWA proposes to reorganize and revise material based on the NTSB’s recommendation¹⁸ to review how speed limits are determined. FHWA proposes to move and revise Guidance P10, 12, and 13 and Option P16 to earlier in the section to clarify the factors that should be considered when establishing or reevaluating speed limits within speed zones. FHWA proposes changes to reinforce the stated understanding that other factors, in addition to the 85th-percentile speed, have a role in setting speed limits. FHWA retains reference to 85th-percentile speed as a factor that should be considered, particularly for freeways and expressways, as well as for rural highways, except those in urbanized locations within rural regions. FHWA also retains reference to the setting of speed zones in broad terms, thereby allowing agencies to establish detailed criteria based upon national guidance or based upon research, outside the MUTCD. In addition to providing comment on this proposed change, FHWA also requests comment on the following additional recommendations of the NTSB report: (1) Removal of the 85th-percentile speed as a consideration in setting speed limits regardless of the type of roadway (this recommendation was based in part on the assumption that that the 85th-percentile speed can increase over time as a result of the posted speed limit); and (2) the requirement to use an expert system to validate a speed limit that has been determined through engineering study. Commenters are also requested to address likely outcomes if one or more of the other recommendations in the report, such as increased automated enforcement, were not implemented in conjunction with the speed-setting recommendations outlined in the report.

¹⁸NTSB report “Reducing Speeding-Related Crashes Involving Passenger Vehicles,” can be viewed at the following internet website: <https://www.ntsb.gov/safety/safety-studies/Documents/SS1701.pdf>.

FHWA also proposes to add Support to this section directing users to FHWA’s Engineering Speed Limits web page, which provides information on where to find additional resources on the methods and practices for setting Speed Limits for specific segments of roads as well as tools to assist practitioners, such as USLIMITS2.

FHWA also proposes to change the second sentence of P4 from Standard to Guidance to recommend, rather than require, that additional Speed Limit signs be installed beyond major intersections and at other locations where it is necessary to remind road users of the applicable speed limit. FHWA proposes this change because engineering judgment is involved to determine what constitutes a major intersection.

FHWA also proposes to modify existing paragraph 9 to reference the Reduced Variable Speed Zone (W3–5b) and Truck Speed Zone (W3–5c) signs in conjunction with their addition to Chapter 2C. As part of this change, FHWA also proposes to add an Option for the use of an END VARIABLE SPEED LIMIT (R2–13) sign at the downstream end of a variable speed zone to provide notice to road users of the termination of the zone.

FHWA also proposes, in conjunction with the above, a Standard statement requiring an END TRUCK SPEED LIMIT (R2–14) sign be installed at the downstream end of the zone. This Standard is necessary to ensure that road users receive notice of the termination of a truck speed zone where trucks are allowed to resume the general regulatory speed limit.

In addition, FHWA proposes to revise existing P18 to replace the term “changeable message sign” with “variable speed limit sign” to reflect the sign type more accurately. FHWA also proposes to add a Standard statement requiring the variable speed limit sign legend “SPEED LIMIT” to be a black legend on a white retroreflective background, consistent with the standard legend and background on a Speed Limit sign. FHWA also proposes in this Standard statement to require the variable speed limit legend on a variable speed limit sign to be indicated by white LEDs on an opaque black background. FHWA proposes to add this Standard to clarify the text, as indicated in Official Ruling No. 2(09)–3(I).

Finally, FHWA proposes to delete existing Option P19 and Guidance P20 and add a Support statement referencing Section 2C.14 for provisions for the use of a Vehicle Speed Feedback sign, to group that information in Chapter 2C Warning signs.

SPEED LIMIT SIGNS AND PLAQUES

Section ~~2B.13~~2B.21 Speed Limit Sign (R2-1)

Standard:

Speed zones (other than statutory speed limits e.g. established by Federal or state law) shall only be established on the basis of an engineering study that has been performed in accordance with traffic engineering practices. ~~The engineering study shall include an analysis of the current speed distribution of free-flowing vehicles.~~

Guidance:

Among the factors that should be considered when establishing or reevaluating speed limits within speed zones are the following: **Changed from Option to Guidance and relocated and edited from later in this section**

A. Speed distribution of free-flowing vehicles (such as current 85th percentile; the pace; review of past speed studies)

B. Reported crash experience for at least a 12-month period

C. Road characteristics (such as lane widths; shoulder condition; grade; alignment; median type; sight distance)

D. Road context (such as ~~Roadside~~ roadside development and environment (number of driveways, land use); functional classification; parking practices; pedestrian activity; bicycle activity).

When a speed limit within a speed zone is posted on freeways or expressways, it should be within 5 mph of the 85th-percentile speed of free-flowing traffic vehicles.

Except in urbanized locations within rural regions, when a speed limit within a speed zone is posted on a rural highway, it should be within 5 mph of the 85th-percentile speed of free-flowing traffic vehicles.

State and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review, (such as the addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the configuration of bicycle lanes, changes to road geometrics, changes to road context, changes in traffic control signal coordination, or significant changes in traffic volumes).

Speed studies for signalized intersection approaches should be taken outside the influence area of the traffic control signal, which is generally considered to be approximately 1/2 mile, to avoid obtaining skewed results for the 85th-percentile speed. If the signal spacing is less than 1 mile, the speed study should be at approximately the middle of the segment.

Support:

In addition to the factors in Paragraph 2, there are other available resources for practitioners that can assist when establishing or reevaluating speed limits within speed zones. The FHWA's Engineering Speed Limits (https://safety.fhwa.dot.gov/speedmgt/eng_spd_lmtn/) Web page provides information on resources and tools that can be used to help practitioners set speed limits for specific segments of roads.

Standard:

The Speed Limit (R2-1) sign (~~see Figure 2B-3~~) shall display the limit established by law, ordinance, regulation, or as adopted by the authorized agency based on the engineering study. The speed limits displayed shall be in multiples of 5 mph.

Speed Limit (R2-1) signs, indicating speed limits for which posting is required by law, shall be located at the points of change from one speed limit to another.

At the downstream end of the section to which a speed limit applies, a Speed Limit sign showing the next speed limit shall be installed. ~~Additional Speed Limit signs shall be installed beyond major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable.~~ **Last sentence changed to Guidance**

Speed Limit signs indicating the statutory speed limits shall be installed at entrances to the State and, where appropriate, at jurisdictional boundaries in urban areas.

Guidance:

1 Additional Speed Limit signs should be installed beyond major intersections and at other locations where
2 it is necessary to remind road users of the speed limit that is applicable. **Relocated and changed to**

3 **Guidance**

4 **Support:**

5 In general, the maximum speed limits applicable to rural and urban roads are established:

- 6 A. Statutorily – a maximum speed limit applicable to a particular class of road, such as freeways or city
- 7 streets, that is established by State law; or
- 8 B. As altered speed zones – based on engineering studies.

9 State statutory limits might restrict the maximum speed limit that can be established on a particular road,
10 notwithstanding what an engineering study might indicate.

11 The “Traffic Control Devices Handbook” contains suggested criteria on the spacing of speed limit signs.

12 **Option:**

13 If a jurisdiction has a policy of installing Speed Limit signs in accordance with statutory requirements
14 only on the streets that enter a city, neighborhood, or residential area to indicate the speed limit that is
15 applicable to the entire city, neighborhood, or residential area unless otherwise posted, a CITYWIDE (R2-
16 5aP), NEIGHBORHOOD (R2-5bP), or RESIDENTIAL (R2-5cP) plaque may be mounted above the Speed
17 Limit sign and an UNLESS OTHERWISE POSTED (R2-5P) plaque may be mounted below the Speed Limit
18 sign (see Figure 2B-3).

19 **Guidance:**

20 A Reduced Speed Limit (W3-5 or W3-5a), Variable Speed Zone (W3-5b), or Truck Speed Zone (W3-5c)
21 Ahead (~~W3-5 or W3-5a~~) sign (see Section 2C.3841) should be used to inform road users of a reduced speed
22 zone where the speed limit is being reduced by more than 10 mph, or where engineering judgment indicates
23 the need for advance notice to comply with the posted speed limit ahead.

24 **Option:**

25 If a W3-5b sign is posted to provide notice of a variable speed zone, an END VARIABLE SPEED
26 LIMIT (R2-13) sign (see Figure 2B-3) may be installed at the downstream end of the zone to provide notice to
27 road users of the termination of the speed zone.

28 **Standard:**

29 If a W3-5c sign is posted to provide notice of a truck speed zone, an END TRUCK SPEED LIMIT
30 (R2-14) sign (see Figure 2B-3) shall be installed at the downstream end of the zone to provide notice to
31 road users of the termination of the speed zone.

32 ~~States and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on~~
33 ~~segments of their roadways that have undergone significant changes since the last review, such as the~~
34 ~~addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the~~
35 ~~configuration of bicycle lanes, changes in traffic control signal coordination, or significant changes in traffic~~
36 ~~volumes.~~ **Moved to earlier in this section.**

37 ~~No more than three speed limits should be displayed on any one Speed Limit sign or assembly.~~ **Moved to**
38 **later in this section**

39 ~~When a speed limit within a speed zone is posted, it should be within 5 mph of the 85th percentile speed of~~
40 ~~free-flowing traffic.~~ **Moved to earlier in this section**

41 ~~Speed studies for signalized intersection approaches should be taken outside the influence area of the~~
42 ~~traffic control signal, which is generally considered to be approximately 1/2 mile, to avoid obtaining skewed~~
43 ~~results for the 85th percentile speed.~~ **Moved to earlier in this section**

44 **Support:**

45 ~~Advance warning signs and other traffic control devices to attract the motorist’s attention to a signalized~~
46 ~~intersection are usually more effective than a reduced speed limit zone.~~ **Moved to later in this section**

47 **Guidance:**

48 ~~An advisory speed plaque (see Section 2C.0859) mounted below a warning sign should be used to warn~~
49 ~~road users of an advisory speed for a roadway condition. A Speed Limit sign should not be used for this~~
50 ~~situation.~~

1 Advance traffic control warning signs (see Section 2C.36), advance intersection warning signs (see
2 Section 2C.46), and/or other traffic control devices ~~to attract motorists' attention~~ are appropriate warning
3 ~~prior to a signalized intersection~~ ~~are usually more effective than a reduced speed zone~~. A speed limit should
4 ~~not be used for this purpose~~. **Changed from Support to Guidance and moved and revised from earlier in**
5 **this Section**

6 Option:

7 ~~Other factors that may be considered when establishing or reevaluating speed limits are the following:~~

8 ~~A. Road characteristics, shoulder condition, grade, alignment, and sight distance;~~ **Moved to earlier in**
9 **this section**

10 ~~B. The pace;~~

11 ~~C. Roadside development and environment;~~

12 ~~D. Parking practices and pedestrian activity; and~~

13 ~~E. Reported crash experience for at least a 12-month period.~~

14 Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any
15 nighttime information or minimum speed limit that might apply; and the other to show any special speed
16 limits for trucks and other vehicles.

17 Guidance:

18 ~~No more than three speed limits should be displayed on any one Speed Limit sign or assembly.~~ **Moved**
19 **from earlier in this section**

20 Option:

21 A ~~changeable message sign~~ variable speed limit sign that changes the speed limit for traffic and ambient
22 conditions may be installed provided that the appropriate speed limit is displayed at the proper times and
23 locations in accordance with paragraphs 3, 4, and 6 of this section.

24 Standard:

25 The variable speed limit sign legend "SPEED LIMIT" shall be a black legend on a white
26 retroreflective background.

27 The variable speed limit legend shall be displayed in white LEDs on an opaque black
28 background.

29 Option:

30 ~~A changeable message sign that displays to approaching drivers the speed at which they are traveling~~
31 ~~may be installed in conjunction with a Speed Limit sign.~~

32 Guidance:

33 ~~If a changeable message sign displaying approach speeds is installed, the legend YOUR SPEED XX MPH~~
34 ~~or such similar legend should be displayed. The color of the changeable message legend should be a yellow~~
35 ~~legend on a black background or the reverse of these colors.~~

36 Support:

37 See Section 2C.14 for the provisions for the use of a Vehicle Speed Feedback plaque mounted below a
38 Speed Limit Sign that displays to approaching drivers the speed at which they are traveling.

39 Advisory Speed signs and plaques are discussed in Sections 2C.0859 and 2C.1412. Temporary Traffic
40 Control Zone Speed signs are discussed in Part 6. The WORK ZONE (G20-5aP) plaque intended for
41 installation above a Speed Limit sign is discussed in Section 6F.126G.08. School Speed Limit signs are
42 discussed in Section 7B.1505.

43 **Figure 2B-3. Speed Limit and Photo Enforcement**

44 **Section 2B.142B.22 Truck Vehicle Speed Limit Plaques (R2-2P Series)**

45 Standard:

46 ~~Where a special speed limit applies to trucks or other~~ certain classes of vehicles, the legend-
47 TRUCKS XX (R2-2P) plaque, BUSES XX (R2-2aP) plaque, TRUCKS BUSES XX (R2-2bP) plaque, or
48 VEHICLES OVER X TONS XX (R2-2cP) plaque or such similar legend shall be displayed below the
49 legend-Speed Limit (R2-1)SPEED LIMIT XX on the same sign or on a separate R2-2P plaque (see
50 Figure 2B-3) below the standard legend, except as provided in Paragraph 2 of this Section.

1 Option:

2 The legend of a Vehicle Speed Limit (R2-2P series) plaque may be combined in a single sign and
3 displayed below the SPEED LIMIT XX legend, similar to the Combined Maximum and Minimum Speed
4 Limits (R2-4a) sign (see Section 2B.25).

5 A different vehicle class legend may be substituted on the R2-2P series plaque -for other classes of
6 vehicles not included in Paragraph 1 of this Section.

7 **Section ~~2B.15~~2B.23 Night Speed Limit Plaque (R2-3P)**

8 **Standard:**

9 **Where different speed limits are prescribed for day and night, both limits shall be posted.**

10 *Guidance:*

11 *A Night Speed Limit (R2-3P) plaque (see Figure 2B-3) should be reversed using a white ~~retroreflectorized~~*
12 *~~retroreflective~~ legend and border on a black background.*

13 *Option:*

14 *A Night Speed Limit plaque may be combined with or installed below the standard Speed Limit (R2-1)*
15 *sign.*

16 **Section ~~2B.16~~2B.24 Minimum Speed Limit Plaque (R2-4P) and Combined Maximum and**
17 **Minimum Speed Limits (R2-4a) Sign**

18 **Standard:**

19 **A Minimum Speed Limit (R2-4P) plaque (see Figure 2B-3) shall be displayed only in combination**
20 **with a Speed Limit sign. Where used, the R2-4P plaque shall be mounted below a Speed Limit (R2-1)**
21 **sign.**

22 *Option:*

23 *Where engineering judgment determines that slow speeds on a highway might impede the normal and*
24 *reasonable movement of traffic, the Minimum Speed Limit plaque may be installed below a Speed Limit (R2-*
25 *1) sign to indicate the minimum legal speed. ~~If desired~~In lieu of a sign assembly with the R2-1 sign and R2-*
26 *4P plaque, the Combined Maximum and Minimum Speed Limits (R2-4a) sign may be used~~and the Minimum~~*
27 *~~Speed Limit plaque may be combined on the R2-4a sign (see Figure 2B-3).~~*

28 **Section ~~2B.17~~2B.25 Higher Fines Signs and Plaque (R2-6P, R2-10, and R2-11)**

29 **Standard Guidance:**

30 *If increased fines are imposed for traffic violations within a designated zone of a roadway, a BEGIN*
31 *HIGHER FINES ZONE (R2-10) sign (see Figure 2B-3) or a FINES HIGHER (R2-6P) plaque (~~see Figure 2B-~~*
32 *~~3) shall should be used to provide notice to road users. ~~If used, the FINES HIGHER plaque shall be~~~~*
33 *~~mounted below an applicable regulatory or warning sign in a temporary traffic control zone, a school~~
34 *~~zone, or other applicable designated zone. **Last sentence retained as Standard and moved to later in**~~
35 ***this section*****

36 *If an R2-10 sign or an R2-6P plaque is posted to provide notice of increased fines for traffic violations, an*
37 *END HIGHER FINES ZONE (R2-11) sign (~~see Figure 2B-3) shall should be installed at the downstream end~~*
38 *of the zone to provide notice to road users of the termination of the increased fines zone.*

39 *Guidance:*

40 *~~If used, +~~The BEGIN HIGHER FINES ZONE sign or FINES HIGHER plaque should be located at the*
41 *beginning of the temporary traffic control zone, school zone, or other applicable designated zone and just*
42 *beyond any interchanges, major intersections, or other major traffic generators.*

43 *Agencies should limit the use of the Higher Fines signs and plaque to locations where work is actually*
44 *underway, or to locations where the roadway, shoulder, or other conditions, including the presence of a*
45 *school zone and/or a reduced school speed limit zone, require a speed reduction or extra caution on the part*
46 *of the road user. **This paragraph was moved up from later in the section in order to group all Guidance***
47 ***paragraphs together***

48 **Standard:**

1 **The Higher Fines signs and plaque shall have a black legend and border on a white rectangular**
2 **background. All supplemental plaques mounted below the Higher Fines signs and plaque shall have a**
3 **black legend and border on a white rectangular background.**

4 **If used, the FINES HIGHER plaque shall be mounted below an applicable regulatory or warning**
5 **sign in a temporary traffic control zone, a school zone, or other applicable designated zone. Moved from**
6 **earlier in this section**

7 Option:

8 Alternate legends such as BEGIN (or END) DOUBLE FINES ZONE may also be used for the R2-10 and
9 R2-11 signs.

10 The legend FINES HIGHER on the R2-6P plaque may be replaced by FINES DOUBLE (R2-6aP), \$XX
11 FINE (R2-6bP), or another legend appropriate to the specific regulation (see Figure 2B-3).

12 The following may be mounted below an R2-10 sign or R2-6P plaque:

- 13 A. A supplemental plaque specifying the times that the higher fines are in effect (similar to the S4-1P
14 plaque shown in Figure 7B-1), or
- 15 B. A supplemental plaque WHEN CHILDREN (WORKERS) ARE PRESENT, or
- 16 C. A supplemental plaque WHEN FLASHING (similar to the S4-4P plaque shown in Figure 7B-1) if
17 used in conjunction with a yellow flashing beacon.

18 Support:

19 Section ~~6F-12~~6G.08 contains information regarding other signs and plaques associated with increased
20 fines for traffic violations in temporary traffic control zones. ~~Section 7B-10 contains information regarding~~
21 ~~other signs and plaques associated with increased fines for traffic violations in designated school zones.~~