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TECHNICAL COMMITTEE: Regulatory & Warning Signs
TOPIC: Part 7 – FHWA NPA 01/02/2008
STATUS/DATE OF ACTION Task Force Approved 06/02/2008
TECH COMM DRAFTS: 01/10/2008, 04/22/2008, 06/02/2008
TECH COMM APPROVAL: 01/10/2008, 06/19/2008
TRANSMITTED TO SPONSORS:
COUNCIL APPROVAL: Of Text: 01/11/2008 and 06/21/2008
Of Table & Figures: 06/21/2008
ORIGIN OF REQUEST: National Committee review of NPA
MUTCD SECTIONS: Part 7, Figures 7A-1, 7B-1 thru 7B-5
and Table 7B-1 (Table and Figures in separate file)

SUMMARY: The FHWA published a Notice of Rulemaking in the Federal Register on January 2, 2008, covering the MUTCD Revisions for the 2009 Manual. The RWSTC reviewed the proposed Part 7 of the NPA, exclusive of Chapter 7C Markings and Figure 7C-1 and recommended the changes noted herein. The National Committee Council approved text changes on January 11, 2008 and on June 21, 2008 it approved several additional text changes recommended by the School Area Task Force and by the Bicycles Technical Committee. On June 21, 2008, the National Committee also approved the Part 7 table and figures as approved by the RWSTC.

NPA showing FHWA’s proposed revisions to the 2003 MUTCD

- Deletions:** ~~Red double strikethrough~~
- Insertions:** Blue underline
- Comments:** **Green highlight**

Proposed National Committee changes and comments

- Approved by Council on 01/11/2008:** **Red Highlighted in Turquoise**
- Approved by Council on 06/21/2008:** **Red Highlighted in Yellow**
- Deletions:** ~~Single Strikethrough~~ **Insertions:** Underlined
- Rationale and Comments:** **Bold Black Highlighted in Yellow**

1 Chapter 7A GENERAL

2 Section 7A.01 Need for Standards

3 Support:

4 ~~It is important to stress that~~ Regardless of the school location, the best way to achieve ~~reasonably safe~~
5 ~~and~~ effective traffic control ~~in a manner that is intended to minimize the occurrences of crashes~~ is through
6 the uniform application of realistic policies, practices, and standards developed through engineering
7 judgment or studies.

8 **Reason: Unnecessary wording. Minimizing crashes is not necessarily the intent of all decisions**
9 **regarding the use of traffic controls.**

10 Pedestrian safety depends upon public understanding of accepted methods for efficient traffic control.
11 This principle is especially important in the control of pedestrians, bicycles, and other vehicles in the
12 vicinity of schools. Neither pedestrians on their way to or from school nor other road users can be
13 expected to move safely in school areas unless they understand both the need for traffic controls and how
14 these controls function for their benefit.

15 Procedures and devices that are not uniform might cause confusion among pedestrians and other road
16 users, prompt wrong decisions, and contribute to crashes. To achieve uniformity of traffic control in
17 school areas, comparable traffic situations need to be treated in a consistent manner. Each traffic control
18 device and control method described in Part 7 fulfills a specific function related to specific traffic
19 conditions.

20 A uniform approach to school area traffic controls assures the use of similar controls for similar
21 situations, ~~(which promotes~~ appropriate and uniform behavior on the part of motorists, pedestrians, and
22 bicyclists~~).~~

23 A school traffic control plan permits the orderly review of school area traffic control needs, and the
24 coordination of school/pedestrian safety education and engineering ~~activities solutions measures~~.
25 Engineering measures solutions alone might not result in will often not prompt the intended change in
26 student and road user behavior.

27 **Reason: Improved language – actions might not always be solutions to a problem, but could be**
28 **prompts for a behavior change.**

29 Guidance:

30 A school route plan for each school serving elementary to high school students should be prepared in
31 order to develop uniformity in the use of school area traffic controls and to serve as the basis for a school
32 traffic control plan for each school.

33 The school route plan, developed in a systematic manner by the school, law enforcement, and traffic
34 officials responsible for school pedestrian safety, should consist of a map (see Figure 7A-1) showing
35 streets, the school, existing traffic controls, established school walk routes, and established school
36 crossings.

37 The type(s) of school area traffic control devices used, either warning or regulatory, should be related
38 to the volume and speed of vehicular traffic, street width, and the number and age of the students using
39 the crossing.

40 School area traffic control devices should be included in a school traffic control plan.

41 Support:

42 Reduced speed limit signs for school areas and crossings are included in this Manual solely for the
43 purpose of standardizing signing for these zones and not as an endorsement of mandatory reduced speed
44 zones.

45 Section 7A.02 School Routes and Established School Crossings

46 Support:

1 To establish a safer route to and from school for schoolchildren, the application of ~~The~~ planning
2 criterion for school walk routes might make it necessary for children to walk an indirect route to an
3 established school crossing located where there is existing traffic control and to avoid the use of a direct
4 crossing where there is no existing traffic control.

5 Guidance:

6 School walk routes should be planned to take advantage of existing traffic controls.

7 The following factors should be considered when determining the feasibility of requiring children to
8 walk a longer distance to a crossing with existing traffic control:

9 A. The availability of adequate sidewalks or off-roadway sidewalk areas other pedestrian walkways
10 to and from the location with existing control,

11 **Reason: Replacing ambiguous term with one that is more commonly used.**

12 B. The number of students using the crossing,

13 C. The age levels of the students using the crossing, and

14 D. The total extra walking distance.

15 **Section 7A.03 School Crossing Control Criteria**

16 Support:

17 ~~Alternate~~ The frequency of gaps ~~and blockades are inherent~~ in the traffic stream that are sufficient for
18 student crossing ~~and are~~ is different at each crossing location. ~~For safety, students need to wait for a gap~~
19 ~~in traffic that is of sufficient duration to permit reasonably safe crossing.~~ When the delay between the
20 occurrences of adequate gaps becomes excessive, students might become impatient and endanger
21 themselves by attempting to cross the street during an inadequate gap. In these instances, the creation of
22 sufficient gaps needs to be considered to accommodate the crossing demand.

23 A recommended method for determining the frequency and adequacy of gaps in the traffic stream is
24 given in the ~~Institute of Transportation Engineers' publication, "School Trip Safety Program Guidelines"~~
25 "Traffic Control Devices Handbook" (see Section 1A.11).

26 **Section 7A.04 Scope**

27 Standard:

28 Part 7 sets forth basic principles and prescribes standards that shall be followed in the design,
29 application, installation, and maintenance of all traffic control devices (including signs, signals, and
30 markings) and other controls (including adult crossing guards, student patrols, and grade-
31 separated crossings) required for the special pedestrian conditions in school areas.

32 **Option:**

33 ~~In roadway signs for school traffic control areas may be used consistent with the requirements of~~
34 ~~Sections 2B.12, 7B.08, and 7B.09.~~ **relocated to Section 7B.03**

35 Support:

36 The introduction to this Manual contains information regarding the meaning of the headings
37 Standard, Guidance, Option, and Support, and the use of the words "shall," "should," and "may."
38 relocated from Section 7A.10.

39 **Reason: Deleting unneeded material that is not specific to this part.**

40 Sections 1A.01 and 1A.08 contain information regarding unauthorized devices and messages.
41 Sections 1A.02 and 1A.07 contain information regarding the application of standards. Section 1A.05
42 contains information regarding the maintenance of traffic control devices. Section 1A.08 contains
43 information regarding placement authority for traffic control devices. Section 1A.09 contains information
44 regarding engineering studies. **relocated from Sections 7A.05 through 7A.09**

45 ~~Requirements~~ Provisions **edited to improve consistency** discussed in Chapter 2A and Section 2B.06
46 are applicable in school areas.

1 [Part 3 contains provisions regarding pavement markings that are applicable in school areas.](#)
2 [Part 4 contains provisions regarding highway traffic signals that are applicable in school areas. The](#)
3 [School Crossing signal warrant is described in Section 4C.06.](#)

4 **Reason: Added missing verb.**

5 ~~**Section 7A.05 Application of Standards**~~

6 ~~Support:~~

7 ~~Sections 1A.02 and 1A.07 contain information regarding the application of standards.~~

8 ~~**Section 7A.06 Engineering Study Required**~~

9 ~~Support:~~

10 ~~Section 1A.09 contains information regarding engineering studies.~~

11 ~~**Section 7A.07 Maintenance of Traffic Control Devices**~~

12 ~~Support:~~

13 ~~Section 1A.05 contains information regarding the maintenance of traffic control devices.~~

14 ~~**Section 7A.08 Placement Authority**~~

15 ~~Support:~~

16 ~~Section 1A.08 contains information regarding placement authority for traffic control devices.~~

17 ~~**Section 7A.09 Unauthorized Devices and Messages**~~

18 ~~Support:~~

19 ~~Sections 1A.01 and 1A.08 contain information regarding unauthorized devices and messages.~~

20 ~~**Section 7A.10 Meaning of Standard, Guidance, Option, and Support**~~

21 ~~Support:~~

22 ~~The introduction to this Manual contains information regarding the meaning of the headings~~
23 ~~Standard, Guidance, Option, and Support, and the use of the words shall, should, and may. Sections~~
24 ~~7A.05 through 7A.10 relocated to Section 7A.04~~

25 ~~**Section 7A.05 Grade-Separated School Crossings this Section was added to take the place**~~
26 ~~**of Chapter 7F**~~

27 ~~Support:~~

28 ~~Grade-separated crossings (overpasses over the highway or underpasses under the highway) are~~
29 ~~sometimes used to physically separate the crossing of school pedestrian traffic and vehicular flow.~~
30 ~~Experience has shown that overpasses are more satisfactory than underpasses for school pedestrian~~
31 ~~crossings, as overpasses are easier to maintain and supervise.~~

32 ~~If using the grade-separated crossing will be less convenient to school pedestrians than making an at~~
33 ~~grade crossing, barriers or supervision are sometimes provided to assure a satisfactory level of use of the~~
34 ~~grade-separated crossing.~~

35 ~~The published policies of the American Association of State Highway and Transportation Officials,~~
36 ~~such as "A Policy on Geometric Design of Highways and Streets" (see Section 1A.11), contain guidelines~~
37 ~~for the design of grade-separated crossings.~~

38 **Reason: Material not appropriate for the MUTCD because it does not address traffic control**
39 **devices.**

1 CHAPTER 7B. SIGNS

2 Section 7B.01 Size of School Signs

3 Standard:

4 Except as noted in Section 2A.11, the sizes of signs and plaques to be used on conventional
5 roadways in school areas shall be as shown in Table 7B-1.

6 The sizes in the Conventional Road sign-size column shall be used ~~on public roads, streets, and~~
7 ~~highways~~ unless engineering judgment determines that a minimum or oversized sign size would be
8 more appropriate.

9 The sizes in the Minimum sign-size column, which is applicable only to the School (S1-1),
10 SCHOOL BUS STOP AHEAD (S3-1), SCHOOL BUS TURN AHEAD (S3-2), and Reduced Speed
11 School Zone Ahead (S4-5, S4-5a) signs, may shall only be used only on local residential streets, in
12 urban areas, and where there are low traffic volumes and low vehicle speeds ~~the 85th-~~
13 ~~percentile speed or posted speed limit is less than 60 km/h (35 mph)~~, as determined by engineering
14 judgment.

15 Reason: The use of minimum size signs wherever traffic volumes and speed are low should be
16 based on engineering judgment. "Conventional Road" is capitalized to be consistent with the
17 column headings in Table 7B-1.

18 The sizes in the Oversized sign-size column shall be used on expressways.

19 Option:

20 The sizes in the Oversized sign-size column may be used for applications that require increased
21 emphasis, improved recognition, or increased legibility.

22 Reason: "Oversized" is capitalized to be consistent with the column headings in Table 7B-1.

23 Signs and plaques larger than those shown in Table 7B-1 may be used (see Section 2A.11).

24 Section 7B.02 Illumination and Reflectorization

25 Standard:

26 The signs used for school area traffic control shall be retroreflectorized or illuminated.

27 Section 7B.03 Position of Signs

28 Guidance:

29 Signs should be placed in positions where they will convey their messages most effectively without
30 restricting lateral ~~clearance~~ offset or sight distances. Placement therefore should consider highway
31 design, alignment, vehicle speed, ~~and~~ roadside development, pedestrians, and other non-motorized road
32 users.

33 Signs should have a ~~maximum practical~~ reasonable clearance lateral offset from the edge of the
34 traveled way for the safety of vehicles that might leave the roadway and strike the sign supports. Except
35 as noted in the Option below, signs should not be closer than 1.8 m (6 ft) from the edge of a paved
36 shoulder, or if none, 3.7 m (12 ft) from the edge of the traveled way.

37 Option:

38 In urban areas, a lesser ~~clearance~~ lateral offset of not less than 0.6 m (2 ft) from the face of the curb
39 may be used. In urban areas, where sidewalk width is limited or existing poles are close to the curb, a
40 ~~clearance~~ lateral offset of 0.3 m (1 ft) from the curb face may be used.

41 ~~In roadway signs for school traffic control areas may be used consistent with the requirements of~~
42 ~~Sections 2B.12, 7B.08, and 7B.11, relocated from Section 7A.04~~

43 Reason: Remove unnecessary references.

44 Section 7B.04 Height of Signs

45 Support:

1 Section 2A.18 contains information regarding the mounting height of signs.

2 **Section 7B.05 Installation of Signs**

3 Support:

4 Section 2A.16 contains information regarding the installation of signs.

5 **Section 7B.06 Lettering**

6 Support:

7 The ~~Federal Highway Administration's~~ **deleted to increase consistency** "Standard Highway Signs [and](#)
8 [Markings](#)" book (see Section 1A.11) contains information regarding sign lettering.

9 **Section 7B.07 Sign Color for School Warning Signs**

10 **Standard:**

11 **Except as noted in the Option, School warning signs, including the "SCHOOL" portion of the**
12 **School Speed Limit (S5-1) sign, and any supplemental plaques used in association with these signs**
13 **shall have a fluorescent yellow-green background with a black legend and border unless otherwise**
14 **stated in this Manual for a specific sign.**

15 **Option:**

16 ~~All school warning signs in addition to the following signs may have a fluorescent yellow-green~~
17 ~~background with a black legend and border:~~

- 18 ~~A. School Advance Warning sign (S1-1);~~
- 19 ~~B. SCHOOL BUS STOP AHEAD sign (S3-1);~~
- 20 ~~C. SCHOOL plaque (S4-3);~~
- 21 ~~D. The "SCHOOL" portion of the School Speed Limit sign (S5-1);~~
- 22 ~~E. XXX FEET plaque (W16-2 series);~~
- 23 ~~F. AHEAD plaque (W16-9p);~~
- 24 ~~G. Diagonal Arrow plaque (W16-7p); and~~
- 25 ~~H. Reduced Speed School Zone Ahead sign (S4-5, S4-5a).~~

26 **Guidance:**

27 ~~When the fluorescent yellow-green background color is used, a systematic approach featuring one~~
28 ~~background color within a zone or area should be used. The mixing of standard yellow and fluorescent~~
29 ~~yellow-green backgrounds within a zone or area should be avoided.~~

30 **Section 7B.08 School ~~Advance Warning Assembly~~ Sign (S1-1 with Supplemental Plaque)**

31 **Guidance:**

32 ~~The School Advance Warning assembly (see Figure 7B-1) should be installed in advance of locations~~
33 ~~where school buildings or grounds are adjacent to the highway, except where a physical barrier such as~~
34 ~~fencing separates schoolchildren from the highway.~~

35 **Standard:**

36 ~~The School Advance Warning assembly shall be used in advance of any installation of the~~
37 ~~School Crosswalk Warning assembly (see Figure 7B-2), or in advance of the first installation of the~~
38 ~~School Speed Limit assembly (see Figure 7B-3).~~

39 ~~If used, the School Advance Warning assembly shall be installed not less than 45 m (150 ft) or~~
40 ~~more than 210 m (700 ft) in advance of the school grounds or school crossings.~~

41 ~~If used, the School Advance Warning assembly shall consist of a School Advance Warning (S1-~~
42 ~~1) sign supplemented with a plaque with the legend AHEAD (W16-9p) or XXX METERS (XXX~~
43 ~~FEET) (W16-2 or W16-2a) to provide advance notice to road users of crossing activity.~~

44 **Support:**

1 Many state and local jurisdictions find it beneficial to advise road users that they are approaching a
2 school that is adjacent to a highway, where additional care is needed, even though no school crossing is
3 involved and the speed limit remains unchanged. Additionally, some jurisdictions designate school zones
4 that have a unique legal standing in that fines for speeding or other traffic violations within designated
5 school zones are increased or special enforcement techniques such as photo radar systems are used. It is
6 important and sometimes legally necessary to mark the beginning and end points of these designated
7 school zones so that the road user is given proper notice.

8 The School (S1-1) sign (see Figure 7B-1) has the following three applications:

- 9 A. School Area or Zone – if used alone, the S1-1 sign warns road users that they are approaching
10 school buildings or grounds, a school crossing, or school related activity adjacent to the highway,
11 and it marks the beginning of a designated school zone (see Figure 7B-2).
- 12 B. School Advance Crossing – if combined with an AHEAD (W16-9P) plaque or an XX METERS
13 (FEET) (W16-2P or W16-2aP) plaque to comprise the School Advance Crossing assembly, the
14 S1-1 sign warns road users that they are approaching a crossing where schoolchildren cross the
15 roadway (see Figure 7B-3).
- 16 C. School Crossing – if combined with a downward diagonal pointing arrow (W16-7P) plaque to
17 comprise the School Crossing assembly, the S1-1 sign warns approaching road users of the
18 location of a crossing where schoolchildren cross the roadway (see Figures 7B-3 and 7B-4).

19 **Section 7B.09 School Area or School Zone Sign**

20 Option:

21 The School (S1-1) sign may be installed in advance of locations where school buildings or grounds
22 are adjacent to the highway to warn road users that they are approaching a school area.

23 Standard:

24 If a school zone has been designated under State or local statute, a School (S1-1) sign shall be
25 installed to mark the beginning point(s) of the designated school zone (see Figure 7B-2).

26 If a reduced speed zone for a school area has been established, a School (S1-1) sign shall be
27 installed in advance (see Table 2C-4 for advance placement guidelines) of the first School Speed
28 Limit sign assembly or S5-1 sign that is encountered in each direction as traffic approaches the
29 reduced speed zone (see Figure 7B-4).

30 Option:

31 A School (S1-1) sign that is installed to warn road users of a school area or a school zone (see Figure
32 7B-2) may be supplemented with a SCHOOL (S4-3P) plaque or an appropriate enforcement sign or
33 plaque, such as a FINES HIGHER, FINES DOUBLE, or \$XX FINE plaque (see Section 2B.17).

34 If a school area or school zone is located on a cross street ~~in close proximity to an intersection, less~~
35 than 38 m (125 ft) from edge of a street or highway, a School (S1-1) sign with a supplemental arrow
36 (W16-5P or W16-6P) plaque (see Figure 7B-1) may be installed on each approach of ~~to~~ the cross street
37 ~~intersection or highway~~ to warn road users making a turn onto the cross street that they will encounter a
38 school area or school zone soon after making the turn.

39 **Reason: Improve the clarity of the provision and reference the appropriate figure in which the**
40 **sign and plaques are shown.**

41 **Section 7B.10 School Advance Crossing Assembly**

42 Standard:

43 The School Advance Crossing assembly (see Figure 7B-1) shall consist of a School (S1-1) sign
44 supplemented with an AHEAD (W16-9P) plaque or an XX METERS (FEET) (W16-2P or W16-
45 2aP) plaque.

46 Except as noted in the Option below, a School Advance Crossing assembly shall be used in
47 advance (see Table 2C-4 for advance placement guidelines) of the first School Crossing assembly

1 [\(see Section 7B.11\) that is encountered in each direction as traffic approaches a school crosswalk](#)
2 [\(see Figure 7B-3\).](#)

3 Option:

4 [The School Advance Crossing assembly may be omitted \(see Figure 7B-4\) where a School \(S1-1\)](#)
5 [sign \(see Section 7B.09\) is installed in advance of the School Crossing assembly.](#)

6 [If a school crosswalk is located on a cross street in close proximity to an intersection, less than 38 m](#)
7 [\(125 ft\) from edge of a street or highway, a School Advance Crossing assembly with a supplemental](#)
8 [arrow \(W16-5P or W16-6P\) plaque \(see Figure 7B-1\) may be installed on each approach of the cross](#)
9 [street intersection or highway to warn road users making a turn onto the cross street that they will](#)
10 [encounter a school area or school zone soon after making the turn.](#)

11 **Reason: Improve the clarity of the provision and reference the appropriate figure in which the**
12 **assembly and plaques are shown.**

13 A 300 mm (12 in) reduced size in-street School ~~Advance Warning~~ (S1-1) sign (see Figure 7B-5),
14 installed in compliance with the mounting height and breakaway requirements for In-Street Pedestrian
15 Crossing (R1-6 or R1-6a) signs (see Section 2B.12), may be used in advance of a school crossing to
16 supplement the ~~ground-~~ post-mounted school warning signs. A 300 x 150 mm (12 x 6 in) reduced size
17 AHEAD (W16-9P) plaque may be mounted below the reduced size in-street School ~~Advance Warning~~
18 (S1-1) sign. **this paragraph was in Section 7B.08 of the 2003 MUTCD**

19 **Section ~~7B.09~~ 7B.11 School ~~Crosswalk Warning Crossing~~ Assembly ~~(S1-1 with Diagonal~~
20 ~~Arrow)~~**

21 **Standard:**

22 **If used, the School ~~Crosswalk Warning Crossing~~ assembly (see Figure 7B-1) shall be installed at**
23 **the ~~marked crosswalk~~ school crossing (see Figures 7B-3 and 7B-4), or as close to it as possible, and**
24 **shall consist of a School ~~Advance Warning~~ (S1-1) sign supplemented with a diagonal downward**
25 **pointing arrow (W16-7P) plaque to show the location of the crossing.**

26 **The School ~~Crosswalk Warning Crossing~~ assembly shall not be used at ~~marked crosswalks~~**
27 **crossings other than those adjacent to schools and those on established school pedestrian routes.**

28 **The School ~~Crosswalk Warning Crossing~~ assembly shall not be installed on approaches**
29 **controlled by a STOP sign.**

30 ~~Guidance:~~

31 ~~The School ~~Crosswalk Warning~~ assembly should be installed at marked crosswalk(s), including those~~
32 ~~at signalized locations, used by students going to and from school (see Figure 7B-2) as determined by an~~
33 ~~engineering study.~~

34 Option:

35 [The In-Street Pedestrian Crossing \(R1-6 or R1-6a\) sign \(see Section 2B.12 and Figure 7B-5\) or the](#)
36 [In-Street Schoolchildren Crossing \(R1-6b or R1-6c\) sign \(see Figure 7B-5\)](#) may be used at unsignalized
37 school crossings. ~~When~~ If used at a school crossing, a 300 x 100 mm (12 x 4 in) SCHOOL (S4-3P)
38 plaque (see Figure 7B-5) may be mounted above the sign.

39 [The Overhead Pedestrian Crossing \(R1-9 or R1-9a\) sign \(see Section 2B.12 and Figure 2B-2\) may be](#)
40 [used at unsignalized school crossings.](#)

41 A 300 mm (12 in) reduced size in-street **added to increase accuracy** School ~~Advance Warning~~ (S1-1)
42 sign (see Figure 7B-5) may be used at an unsignalized school crossing instead of the In-Street Pedestrian
43 Crossing (R1-6 or R1-6a) or the In-Street Schoolchildren Crossing (R1-6b or R1-6c) sign. A 300 x 150
44 mm (12 x 6 in) reduced size diagonal downward pointing **edited to increase consistency** arrow (W16-7P)
45 plaque may be mounted below the reduced size in-street School ~~Advance Warning~~ (S1-1) sign.

46 **Standard:**

1 If an In-Street Pedestrian Crossing sign, an In-Street Schoolchildren Crossing sign, or a
2 reduced size in-street School ~~Advance Warning~~ (S1-1) sign is placed in the roadway, the sign
3 support shall comply with the mounting height and breakaway requirements for In-Street
4 Pedestrian Crossing (R1-6 or R1-6a) signs (see Section 2B.12).

5 The In-Street Pedestrian Crossing sign, the In-Street Schoolchildren Crossing sign, the
6 Overhead Pedestrian Crossing sign, and the reduced size in-street School ~~Advance Warning~~ (S1-1)
7 sign shall not be used at signalized locations.

8 **Section ~~7B.10~~ 7B.12 ~~SCHOOL BUS STOP AHEAD~~ School Bus Stop Ahead Sign (S3-1)**

9 Guidance:

10 The ~~SCHOOL BUS STOP AHEAD~~ School Bus Stop Ahead (S3-1, ~~S3-1~~) sign (see Figure 7B-1)
11 should be installed in advance of locations where a school bus, when stopped to pick up or discharge
12 passengers, is not visible to road users for a distance of 150 m (500 ft) in advance as determined by the
13 “0” column under Condition B of Table 2C-4, an adequate distance and where there is no opportunity to
14 relocate the school bus stop to provide adequate sight distance ~~150 m (500 ft) of visibility~~ the distance
15 specified in Table 2C-4.

16 **Reason: It is unnecessary to refer to Table 2C-4 regarding the location of specific warning**
17 **signs.**

18 **Section 7B.13 SCHOOL BUS TURN AHEAD Sign (S3-2)**

19 Option:

20 The SCHOOL BUS TURN AHEAD (S3-2) sign (see Figure 7B-1) may be installed in advance of
21 locations where a school bus turns around on a roadway at a location not visible to approaching road users
22 for a distance as determined by the “0” column under Condition B of Table 2C-4, an adequate distance
23 and where there is no opportunity to relocate the school bus turn around to provide adequate sight
24 distance the distance specified in Table 2C-4

25 **Reason: It is unnecessary to refer to Table 2C-4 regarding the location of specific warning**
26 **signs.**

27 **Section ~~7B.11~~ 7B.14 School Speed Limit Assembly (S4-1P, S4-2P, S4-3P, S4-4P, S4-6P, S5-
28 **1)****

29 **Standard:**

30 A School Speed Limit assembly (see Figure 7B-1) or a School Speed Limit (S5-1) sign (see
31 Figure 7B-1) shall be used to indicate the speed limit where a reduced speed zone for a school area
32 has been established (~~in accordance with law based upon an engineering study~~) or where a speed
33 limit is specified for such areas by statute. The School Speed Limit assembly or School Speed Limit
34 sign shall be placed at or as near as practical to the point where the reduced speed zone begins (see
35 Figure 7B-4).

36 Guidance:

37 The reduced speed zone should begin either at a point 60 m (200 ft) from the crosswalk, or at a point
38 30 m (100 ft) from the school property line, based on whichever is encountered first as traffic approaches
39 the school.

40 **Standard:**

41 The School Speed Limit assembly shall be either a fixed-message sign assembly or a changeable
42 message sign.

43 The fixed-message School Speed Limit assembly shall consist of a top plaque (S4-3P) with the
44 legend SCHOOL, a Speed Limit (R2-1) sign, and a bottom plaque (S4-1P, S4-2P, S4-4P, or S4-6P)
45 indicating the specific periods of the day and/or days of the week that the special school speed limit
46 is in effect (see Figure 7B-1).

47 Option:

1 Changeable message signs (see [Sections 2A.07 Chapter 2M](#) and [Section 6F.57](#)) may be used to
2 inform drivers of the ~~special~~ school speed limit. If the sign is internally illuminated, it may have a white
3 legend on a black background. Changeable message signs with flashing beacons may be used for ~~the~~
4 ~~more-critical~~ situations, where greater emphasis of the special school speed limit is needed.

5 Guidance:

6 Even though it might not always be practical because of special features to make changeable message
7 signs conform in all respects to the ~~accepted~~ standards [in this Manual for fixed-message signs](#), during the
8 periods that the school speed limit is in effect, their basic shape, message, legend layout, and colors
9 should ~~conform to~~ [comply with](#) the standards for fixed-message signs.

10 A confirmation ~~beacon~~ [light](#) or device to indicate that the speed limit message is in operation should
11 be considered for inclusion on the back of the changeable message sign.

12 **Option Standard:**

13 Fluorescent yellow-green pixels ~~may~~ **shall** be used when ~~the school-related~~ **“SCHOOL”**
14 ~~messages are is shown displayed~~ **edited to increase consistency** on a changeable message sign [for a](#)
15 [school speed limit](#).

16 **Option:**

17 Changeable message signs may use blank-out messages or other methods in order to display the
18 school speed limit only during the periods it applies.

19 Changeable message signs that display the speed of approaching drivers (see Section 2B.13) may be
20 used in a school speed limit zone.

21 A Speed Limit Sign Beacon ([see Section 4L.04](#)) also may be used, with a WHEN
22 FLASHING legend, to identify the periods that the school speed limit is in effect. ~~The~~
23 ~~signal lenses indications~~ of the Speed Limit Sign Beacon may be positioned within the
24 ~~face of the School Speed Limit (S5-1) sign (see Figure 7B-1).~~

25 **Reason: It is well known that under certain light and weather conditions,**
26 **the flashing beacon causes halation that obscures the sign message.**
27 **Therefore, it is inappropriate to permit a sign design where the sign legend**
28 **would not be legible. A flashing beacon is not permitted within the border of**
29 **any other sign. Other flashing beacons used with signs must have at least a**
30 **12 inch separation from the sign face. The internal Flasher-School Speed**
31 **Limit sign was/has been manufactured for many years, recognized by some**
32 **state codes, and used by some school districts. It apparently has been**
33 **retained in the MUTCD so that those schools do not have to replace existing**
34 **signs. Many of those older signs are becoming obsolete and inoperable**
35 **although some still are in use. Note, Similar change needed to Sections**
36 **4L.01 and 4L.04.**

37 A FINES HIGHER (~~R2-6~~), [FINES DOUBLE](#), or [\\$XX FINE](#) ~~sign~~ plaque (see Section 2B.17) may be
38 used to advise road users when increased fines are imposed for traffic violations in school zones.

39 **Section ~~7B.12~~ 7B.15 Reduced ~~Speed~~ School ~~Zone~~ Speed Limit Ahead Sign (S4-5, S4-5a)**

40 Option:

41 The Reduced ~~Speed~~ School ~~Zone~~ [Speed Limit](#) Ahead (S4-5, S4-5a) sign (see Figure 7B-1) may be
42 used to inform road users of a reduced speed zone when engineering judgment indicates that advance
43 notice would be appropriate.

44 **Standard:**

1 If used, the Reduced **Speed** School **Zone** **Speed Limit** Ahead sign shall be followed by a School
2 Speed Limit sign or a School Speed Limit assembly.

3 The speed limit displayed on the Reduced **Speed** School **Zone** **Speed Limit** Ahead sign shall be
4 identical to the speed limit displayed on the subsequent School Speed Limit sign or School Speed
5 Limit assembly.

6 Section ~~7B.13~~ **7B.16** **END SCHOOL ZONE Sign (S5-2)**

7 Standard:

8 The downstream end of a designated school area or school zone (see Section 7B.09) shall be
9 marked with an END SCHOOL ZONE (S5-2) sign (see Figures 7B-1 and 7B-2).

10 The downstream end of an authorized and posted school speed zone shall be marked with a
11 standard Speed Limit sign showing the speed limit for the section of highway that follows or with
12 an END SCHOOL ZONE (S5-2) sign (see Figures 7B-1 and 7B-4). ~~A~~ a standard Speed Limit sign
13 showing the speed limit for the section of highway that is downstream from the authorized and
14 posted school speed zone. Where the school speed zone and the designated school zone or school
15 area terminate at the same location, the Speed Limit sign shall be mounted on the same post as the
16 END SCHOOL ZONE (S5-2) sign (See Figure 7B-4).

17 **Reason:** It should not be necessary to mark the end of a school (reduced) speed zone with an
18 **END SCHOOL ZONE** when it ends at a location different from where the school zone/school area
19 ends. In that case, the NPA would require the posting of the **END SCHOOL ZONE** at two separate
20 locations. The suggested change eliminates that duplication.

21 Section ~~7B.14~~ **7B.17** **Parking and Stopping Signs (R7 and R8 Series)**

22 Option:

23 Parking and stopping regulatory signs may be used to prevent parked or waiting vehicles from
24 blocking pedestrians' views, and drivers' views of pedestrians, and to control vehicles as a part of the
25 school traffic plan.

26 Support:

27 Parking signs and other signs governing the stopping and standing of vehicles in school areas cover a
28 wide variety of regulations. Typical examples of regulations are as follows:

- 29 A. No Parking X:XX AM to X:XX PM School Days Only,
- 30 B. No Stopping X:XX AM to X:XX PM School Days Only,
- 31 C. XX Min Loading X:XX AM to X:XX PM School Days Only, and
- 32 D. No Standing X:XX AM to X:XX PM School Days Only.

33 Sections 2B.53, 2B.54, and 2B.55 contain information regarding the signing of parking regulations in
34 school zone areas.

35

1 CHAPTER 7C. MARKINGS – Not Shown -- deferred to Markings Technical Committee

2

3

4 ~~CHAPTER 7D. SIGNALS~~ cross references to Part 4 were added in Section 7A.04

5 ~~Section 7D.01 General~~

6 Support:

7 ~~Part 4 contains information regarding highway traffic signals in school areas. The School Crossing~~

8 ~~signal warrant is described in Section 4C.06.~~

9

1 CHAPTER ~~7E.~~ 7D. CROSSING SUPERVISION

2 Section ~~7E.01~~ 7D.01 Types of Crossing Supervision

3 Support:

4 There are ~~two~~ three types of school crossing supervision:

- 5 A. Adult control of pedestrians and vehicles by adult crossing guards ~~or uniformed law enforcement~~
- 6 ~~officers, and~~
- 7 B. Adult control of pedestrians and vehicles by uniformed law enforcement officers, and
- 8 C. Student control of only pedestrians with student patrols.

9 ~~Information for the organization, operation, and administration of an adult crossing guard program are~~
10 ~~given in “Civilian Guards for School Crossings” (available from the Center for Public Safety of~~
11 ~~Northwestern University, 405 Church Street, Evanston, IL 60204) and “Adult School Crossing Guards”~~
12 ~~(available from the American Automobile Association, 1000 AAA Drive, Heathrow, FL 32746). deleted~~
13 ~~because neither of these publications are still available~~

14 Information ~~for regarding~~ the organization, administration, and operation of a student school safety
15 patrol program are given is contained in the “Policies and Practices for AAA School Safety Patrols
16 Operations Manual” (available from the American Automobile Association, 1000 AAA Drive, Heathrow,
17 FL 32746 see Section 1A.11).

18 Section ~~7E.02~~ 7D.02 Adult Crossing Guards

19 Option:

20 Adult crossing guards may be used to provide gaps in traffic at school crossings where an engineering
21 study has shown that adequate gaps need to be created (see Section 7A.03), and where authorized by law.

22 Section ~~7E.03~~ 7D.03 Qualifications of Adult Crossing Guards

23 Support:

24 High standards for selection of adult crossing guards are essential because they are responsible for
25 schoolchildren within and in the immediate vicinity of school crosswalks.

26 Guidance:

27 Adult crossing guards should possess the following minimum qualifications:

- 28 A. Average intelligence;
- 29 B. Good physical condition, including sight, hearing, and mobility ability to move and maneuver
- 30 quickly in order to avoid danger from errant vehicles;
- 31 C. Ability to control a STOP paddle effectively to provide approaching road users with a clear, fully
- 32 direct view of the paddle’s STOP message during the entire crossing movement;
- 33 D. Ability to communicate specific instructions clearly, firmly, and courteously;
- 34 E. Ability to recognize potentially dangerous traffic situations and warn and manage students in
- 35 sufficient time to avoid injury.
- 36 F. Mental alertness;
- 37 G. Neat appearance;
- 38 H. Good character;
- 39 I. Dependability; and
- 40 J. An overall sense of responsibility for the safety of students.

41 Section ~~7E.04~~ 7D.04 Uniform of Adult Crossing Guards ~~and Student Patrols~~

42 ~~Guidance:~~

43 ~~Adult crossing guards should be uniformed so that road users and pedestrians can recognize them and~~
44 ~~respond to their signals. The uniforms should be distinctively different from those worn by regular law~~
45 ~~enforcement officers.~~

46 **Standard:**

1 Law enforcement officers performing school crossing supervision and adult crossing guards
2 shall wear high-visibility retroreflective safety apparel labeled as ANSI ~~107-1999~~ 107-2004 107-2006
3 standard performance for Class 2 as described in Section 6E.02.

4 **Reason: Reference the current ANSI standard.**

5 ~~Student patrols shall wear high-visibility retroreflective safety apparel labeled as ANSI 107-~~
6 ~~1999 standard performance for Class 1 as described in Section 6E.02.~~

7 ~~Guidance:~~

8 ~~Law enforcement officers should wear high-visibility retroreflective material over their uniforms~~
9 ~~when directing nighttime operations.~~

10 Section ~~7E.05~~ 7D.05 Operating Procedures for Adult Crossing Guards

11 ~~Guidance~~ Standard:

12 Adult crossing guards ~~should~~ shall not direct traffic in the usual law enforcement regulatory
13 sense. In the control of traffic, they ~~should~~ shall pick opportune times to create a ~~reasonably safe~~
14 sufficient gap in the traffic flow. At these times, they ~~should~~ shall stand in the roadway to indicate
15 that pedestrians are about to use or are using the crosswalk, and that all vehicular traffic must stop.

16 Adult crossing guards ~~should~~ shall use a STOP paddle. The STOP paddle ~~should~~ shall be the
17 primary hand-signaling device.

18 ~~Standard:~~

19 The STOP (R1-1) paddle shall be an octagonal shape. The background of the STOP face shall
20 be red with at least 150 mm (6 in) series ~~capital~~ upper-case white letters and border. The paddle
21 shall be at least 450 mm (18 in) in size and have the word message STOP on both sides. The paddle
22 shall be retroreflectorized or illuminated when used during hours of darkness.

23 Option:

24 The STOP paddle may be modified to improve conspicuity by incorporating ~~red or~~ white or red
25 flashing lights on both sides of the paddle. The red or white flashing lights may be arranged in any of the
26 following patterns:

- 27 A. Two ~~red or~~ white or red lights centered vertically above and below the STOP legend,
- 28 B. Two ~~red or~~ white or red lights centered horizontally on each side of the STOP legend,
- 29 C. One ~~red or~~ white or red light centered below the STOP legend,
- 30 D. A series of eight or more small ~~red or~~ white or red lights no larger than 6 mm (0.25 in) in
31 diameter along the outer edge of the paddle, arranged in an octagonal pattern at the eight corners
32 of the STOP paddle (more than eight lights may be used only if the arrangement of the lights is
33 such that it clearly conveys the octagonal shape of the STOP paddle), or
- 34 E. A series of white lights forming the shapes of the letters in the legend.

35 **Standard:**

36 If flashing lights are used on the STOP paddle, the flash rate shall be at least 50, but not more
37 than 60, flash periods per minute.

38 ~~Section 7E.06~~ Uniformed Law Enforcement Officers

39 ~~Option:~~

40 ~~Uniformed law enforcement officers may be used for school crossing supervision.~~

41 ~~Section 7E.07~~ Student Patrols

42 ~~Option:~~

43 ~~Student patrols may be used to direct and control pedestrians at crossings near schools where~~
44 ~~adequate gaps in traffic occur frequently enough so that gaps do not need to be created.~~

1 ~~Student patrols may be used to direct and control pedestrians at signalized intersections where turning~~
2 ~~movements are not a significant problem, and may be used to assist adult crossing guards in the control of~~
3 ~~pedestrians at crossing locations used by large numbers of pedestrians.~~

4 ~~Guidance:~~

5 ~~Student patrols should not be responsible for directing vehicular traffic. They should not function as~~
6 ~~uniformed law enforcement officers or adult crossing guards.~~

7 ~~**Section 7E.08 Choice of Student Patrols**~~

8 ~~Guidance:~~

9 ~~Student patrols should be carefully selected. They should be students from the fifth grade or higher.~~
10 ~~Leadership and reliability should be determining qualities for patrol membership.~~

11 ~~Parental approval should be obtained in writing before a student is used as a member of a student~~
12 ~~patrol.~~

13 ~~**Section 7E.09 Operating Procedures for Student Patrols**~~

14 ~~Guidance:~~

15 ~~Student patrols should use a flagging device to stop pedestrians behind the curb or edge of the~~
16 ~~roadway, and should allow them to cross only when there is an adequate gap in traffic.~~

17 ~~**Standard:**~~

18 ~~Flagging devices used during periods of twilight or darkness shall be retroreflective or~~
19 ~~illuminated.~~

20 ~~Because they are not authorized to direct vehicular traffic, student patrols shall not use a STOP~~
21 ~~paddle.~~

22

1 ~~CHAPTER 7F. GRADE-SEPARATED CROSSINGS~~ replaced by new Section 7A.05

2 ~~Section 7F.01 Function~~

3 ~~Option:~~

4 ~~Grade-separated crossings may be used to physically separate the crossing of school pedestrian traffic~~
5 ~~and vehicular flow.~~

6 ~~Section 7F.02 Types of Grade Separated Crossings~~

7 ~~Option:~~

8 ~~Grade-separated crossings may be either overpasses over the highway or underpasses under the~~
9 ~~highway.~~

10 ~~Guidance:~~

11 ~~The design should follow the guidelines given in the published policies of the American Association~~
12 ~~of State Highway and Transportation Officials, such as "A Policy on Geometric Design of Highways and~~
13 ~~Streets" (see Section 1A.11).~~

14 ~~Support:~~

15 ~~Experience has shown that overpasses are more satisfactory than underpasses for pedestrian~~
16 ~~crossings, as overpasses are easier to maintain and supervise.~~

17 ~~Section 7F.03 Criteria for Use of Grade Separated Crossings~~

18 ~~Guidance:~~

19 ~~If use of the grade separation will be less convenient to pedestrians than an at-grade crossing, barriers~~
20 ~~or supervision should be considered to assure a satisfactory level of use.~~

21