

**Revision 1 for the 2017 School Area Traffic Safety Manual
Dated April 2021**

The following list of technical revisions are issued to accommodate changes adopted by the MOA Traffic Engineering Department to the 2017 School Area Traffic Safety Manual (SATSM). Please replace the existing pages with the corrected pages to ensure the edition is both accurate and current.

Page 5, Section 7B.09

- In Paragraph 2 of MOA Traffic Policies, replace the first “S5-2” with “S5-2, S5-2B_A” and replace the second “S5-2” with “S5-2B_A”.

Page 6, Section 7B.10

- In Paragraph 2 of MOA Traffic Policies, replace “S6-100” with “S6-2_A”.
- At the end of Paragraph 2 of MOA Traffic Policies, add the following sentence that reads “The END SCHOOL ZONE (S5-2B_A) sign should be used when combined with a SPEED LIMIT (R2-1) sign.”

Page 9, Figure 4. Sample Advance School Sign Locations

- Replace “S5-2” signs with “S5-2B_A” signs.
- Replace “A-S6-100” signs with “S6-2_A” signs.
- Add the following to Notes, “***If no R2-1 sign is installed, replace the S5-2B_A with S5-2.”

Page 10, Figure 5. Sample Advance School Sign with Crossing Sign Locations

- Replace “S5-2” signs with “S5-2B_A” signs.
- Replace “A-S6-100” signs with “S6-2_A” signs.
- Add the following to Notes, “***If no R2-1 sign is installed, replace the S5-2B_A with S5-2.”

Page 11, Figure 6. Sample 20 MPH When Flashing Sign Locations

- Replace “A-S6-100” signs with “S6-2_A” signs.

Page 15, Figure 10. Sample Roundabout Sign Locations

- Replace “S5-2” signs with “S5-2B_A” signs.
- Replace “A-S6-100” signs with “S6-2_A” signs.
- Add the following to Notes, “***If no R2-1 sign is installed, replace the S5-2B_A with S5-2.”

Page 16 & 17, Section 7B.15

- Replace sign caption “S6-100” with “S6-2_A”.
- After Paragraph 3 of MOA Traffic Policies, add the following sentence that reads “When installing a SPEED LIMIT sign at the end of school zones, replace END SCHOOL ZONE S5-2 with S5-2_A.”

Page 18 & 19, Section 7B.100

- Replace sign caption “S6-100” with “S6-2_A”.
- In Paragraph 2 of MOA Traffic Policies, delete the first sentence that reads “MOA shall replace the DRUG FREE SCHOOL ZONE S6-100 ATM sign code with A-S6-100” and replace the second and third “A-S6-100” and “S6-100” with “S6-2_A”.

Page D-1 & D-2, Appendix D Sign Table

- For the REDUCE SPEED LIMIT AHEAD S4-5, S4-5a row, remove the S4-5a sign designation.
- Below the row for REDUCE SCHOOL SPEED LIMIT AHEAD S4-5 sign, insert new row for REDUCE SCHOOL SPEED LIMIT AHEAD S4-5a sign with the following information: Sign Designation “S4-5a”; Section “7B.16”; Conventional Road “36 x 36”; Oversized “48 x 48”; and S4-5a Image.
- Below the row for END SCHOOL ZONE S5-2 sign, insert new row for END SCHOOL ZONE S5-2B_A sign with the following information: Sign Designation “S5-2B_A”; Section “7B.09”; Conventional Road “24 x 18”; Oversized “30 x 24”; and S5-2B_A Image.
- For the DRUG FREE SCHOOL ZONE A-S6-100 sign, replace the following information: Sign Designation “A-S6-100” with “S6-2_A”; Oversized “36 x 30” with “30 x 24”; and replace the A-S6-100 Image with the S6-2_A Image.
- For the SPEED LIMIT R2-1 sign, replace “36 x 48” with “30 x 36” in the Oversized column.
- For the FINES HIGHER R2-6P sign, replace “36 x 24” with “30 x 24” in the Oversized column.
- For the AHEAD W16-9P sign, replace “24 x 12” with “36 x 12” in the Conventional Road column and remove “30 x 18” from the Oversized column.

MOA Traffic Policies

MOA will adhere to MUTCD and ATM except with the following modification:

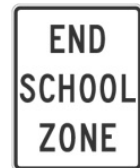
School (S1-1) signs for in-street School Advance Warning shall not be reduced in size. The S1-1 sign shall be a minimum of 36-in by 36-in. See Appendix E for list of signs and sign sizes.

ATM Figure 7B-100 shall not be used to identify school zone sign locations. Typical school zone sign locations are shown in Figures 4 through 10 of this manual.

Section 7B.09 School Zone Sign (S1-1) and Plaques (S4-3P, S4-7P) and END SCHOOL ZONE Sign (S5-2)

Standard:

- ⁰¹ If a school zone has been designated under State or local statute as described in Section 7A.02, a School (S1-1) sign (see Figure 7B-1) shall be installed ~~to identify the beginning point(s) of the designated school zone~~ not less than 150 feet nor more than 700 feet in advance of the school grounds or school crossings (see ~~Figure 7B-2~~ Figure 7B-100).



(S5-2)

Support:

- ^{01A} “School grounds” typically refer to school property. However, when school property frontage is lengthy, school grounds may be interpreted as the area where students frequently cross the road.

Option:

- ⁰² A School Zone (S1-1) sign may be supplemented with a SCHOOL (S4-3P) plaque (see Figure 7B-1).
- ⁰³ A School Zone (S1-1) sign may be supplemented with an ALL YEAR (S4-7P) plaque (see Figure 7B-1) if the school operates on a 12-month schedule.
- ⁰⁴ The downstream end of a designated school zone may be identified with an END SCHOOL ZONE (S5-2) sign (see Figures 7B-1 and 7B-2-Figure 7B-100).
- ⁰⁵ If a school zone is located on a cross street in close proximity to the intersection, a School Zone (S1-1) sign with supplemental arrow (W16-5P or W16-6P) plaque may be installed on each approach of the street or highway to warn road users making a turn onto the cross street that they will encounter a school zone soon after making the turn.

MOA Traffic Policies

MOA will adhere to MUTCD and ATM except with the following modifications:

All school zones shall end with an END SCHOOL ZONE (S5-2, S5-2B_A) sign. A standard SPEED LIMIT (R2-1) sign showing the speed for a section of roadway which follows the school zone may be mounted above the S5-2B_A sign.

Rev. 1

ATM Figure 7B-100 shall not be used to identify school zone sign locations. Typical school zone sign locations are shown in Figures 4 through 10 of this manual.

Section 7B.10 Higher Fines Zone Signs (R2-10, R2-11) and Plaques

Standard:

- ⁰¹ “Where increased fines are imposed for traffic violations within a designated school zone, a BEGIN HIGHER FINES ZONE (R2-10) sign (see Figure 7B-1) or a FINES HIGHER (R2-6P), FINES DOUBLE (R2-6aP), or XX FINE (R2-6bP) plaque



(R2-6p)

(see Figure 2B-3) shall be installed as a supplement to the School Zone (S1-1) sign to identify the beginning point of the higher fines zone (see [Figures 7B-2 and 7B-3](#) [Figure 7B-100](#)).

Option:

- 02 Where appropriate, one of the following plaques may be mounted below the sign that identifies the beginning point of the higher fines zone:
 - A. An S4-1P plaque (see Figure 7B-1) specifying the times that the higher fines are in effect,
 - B. A WHEN CHILDREN ARE PRESENT (S4-2P) plaque (see Figure 7B-1), or
 - C. A WHEN FLASHING (S4-4P) plaque (see Figure 7B-1) if used in conjunction with a yellow flashing beacon.

Standard:

- 03 **Where a BEGIN HIGHER FINES ZONE (R2-10) sign or a FINES HIGHER (R2-6P) plaque supplementing a School Zone (S1-1) sign is posted to notify road users of increased fines for traffic violations, an END HIGHER FINES ZONE (R2-11) sign (see Figure 7B-1) or an END SCHOOL ZONE (S5-2) sign shall be installed at the downstream end of the zone to notify road users of the termination of the increased fines zone (see [Figures 7B-2 and 7B-3](#) [Figure 7B-100](#)).**

MOA Traffic Policies

MOA will adhere to MUTCD and ATM except with the following modifications:

The FINES HIGHER (R2-6P) sign and BEGIN HIGHER FINES ZONE (R2-10) sign may be placed on the DRUG FREE SCHOOL ZONE (S6-2_A) sign assembly. The END SCHOOL ZONE (S5-2B_A) sign should be used when combined with a SPEED LIMIT (R2-1) sign.

ATM Figure 7B-100 shall not be used to identify school zone sign locations. Typical school zone sign locations are shown in Figures 4 through 10 of this manual.

Rev. 1

Section 7B.11 School Advance Crossing Assembly

Standard:

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



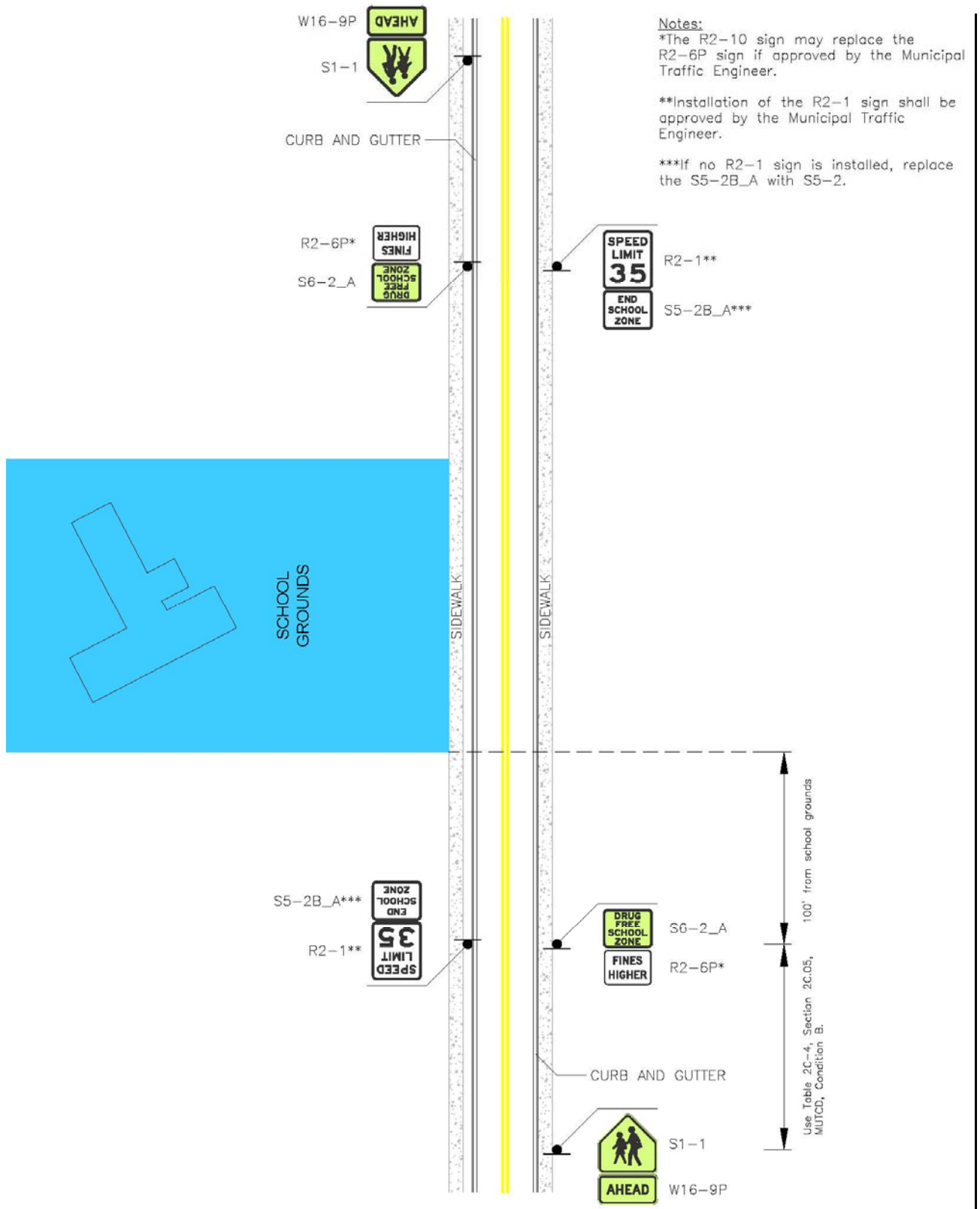
(School Advance Crossing Assembly)

- 02 **Except as provided in Paragraph 3, a School Advance Crossing assembly shall be used in advance (see Table 2C-4 for advance placement guidelines) of the first School Crossing assembly (see Section 7B.12) that is encountered in each direction as traffic approaches a school crosswalk (see [Figure 7B-4](#) [Figure 7B-100](#)).**

Option:

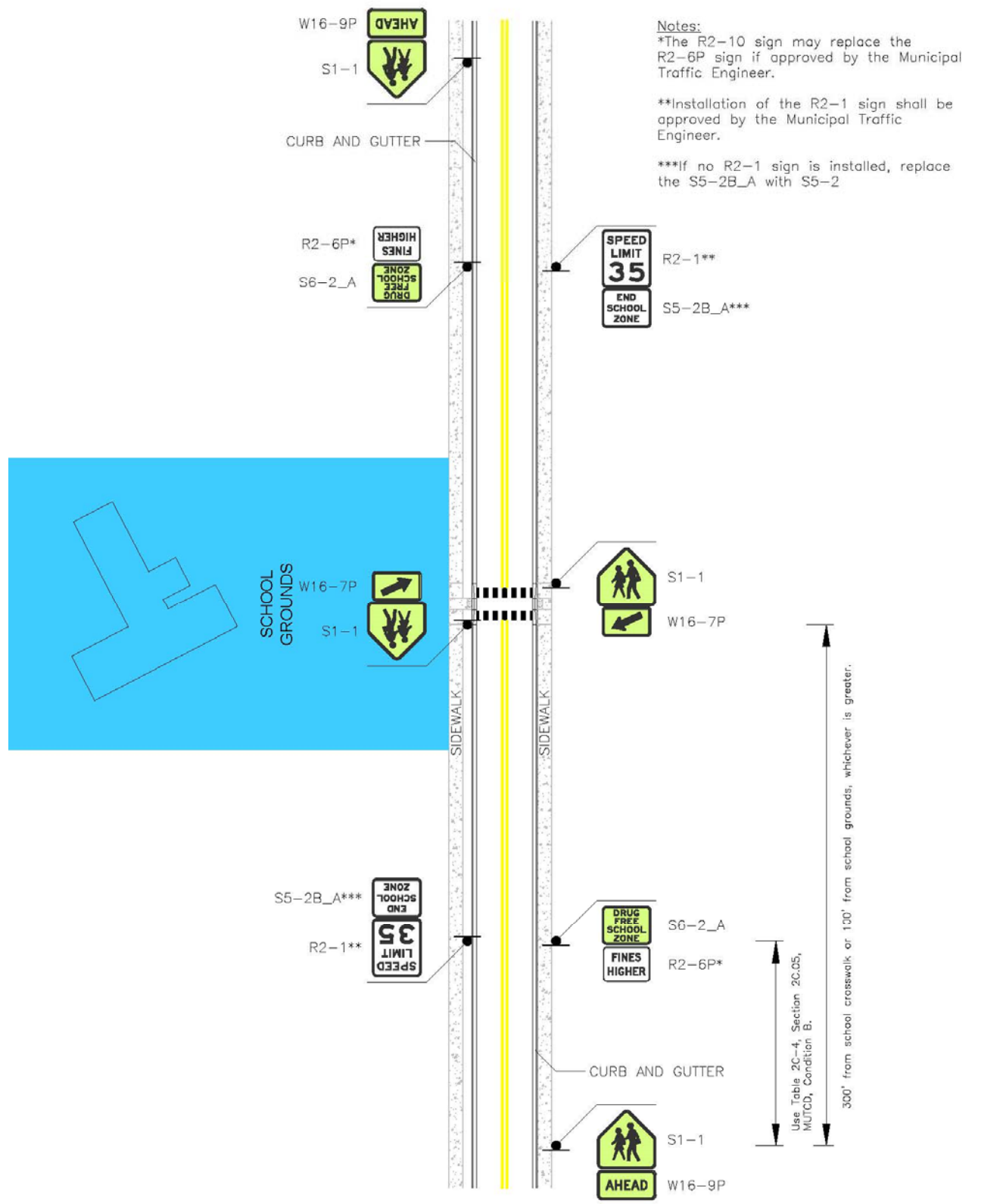
- 03 The School Advance Crossing assembly may be omitted (see Figure 7B-5) where a School Zone (S1-1) sign (see Section 7B.09) is installed to identify the beginning of a school zone in advance of the School Crossing assembly.
- 04 If a school crosswalk is located on a cross street in close proximity to an intersection, a School Advance Crossing assembly with a supplemental arrow (W16-5P or W16-6P) plaque may be installed on each approach of the street or highway to warn road users making a turn onto the cross street that they will encounter a school crosswalk soon after making the turn.
- 05 A 12-inch reduced size in-street School (S1-1) sign (see Figure 7B-6), installed in compliance with the mounting height and special mounting support requirements for In-Street Pedestrian Crossing (R1-6 ~~or R1-6a~~) signs (see Section 2B.12), may be used in advance of a school crossing to supplement the post-mounted school warning signs. A 12 x 6-inch reduced size AHEAD (W16-9P) plaque may be mounted below the reduced size in-street School (S1-1) sign.

Figure 4. Sample Advance School Sign Locations



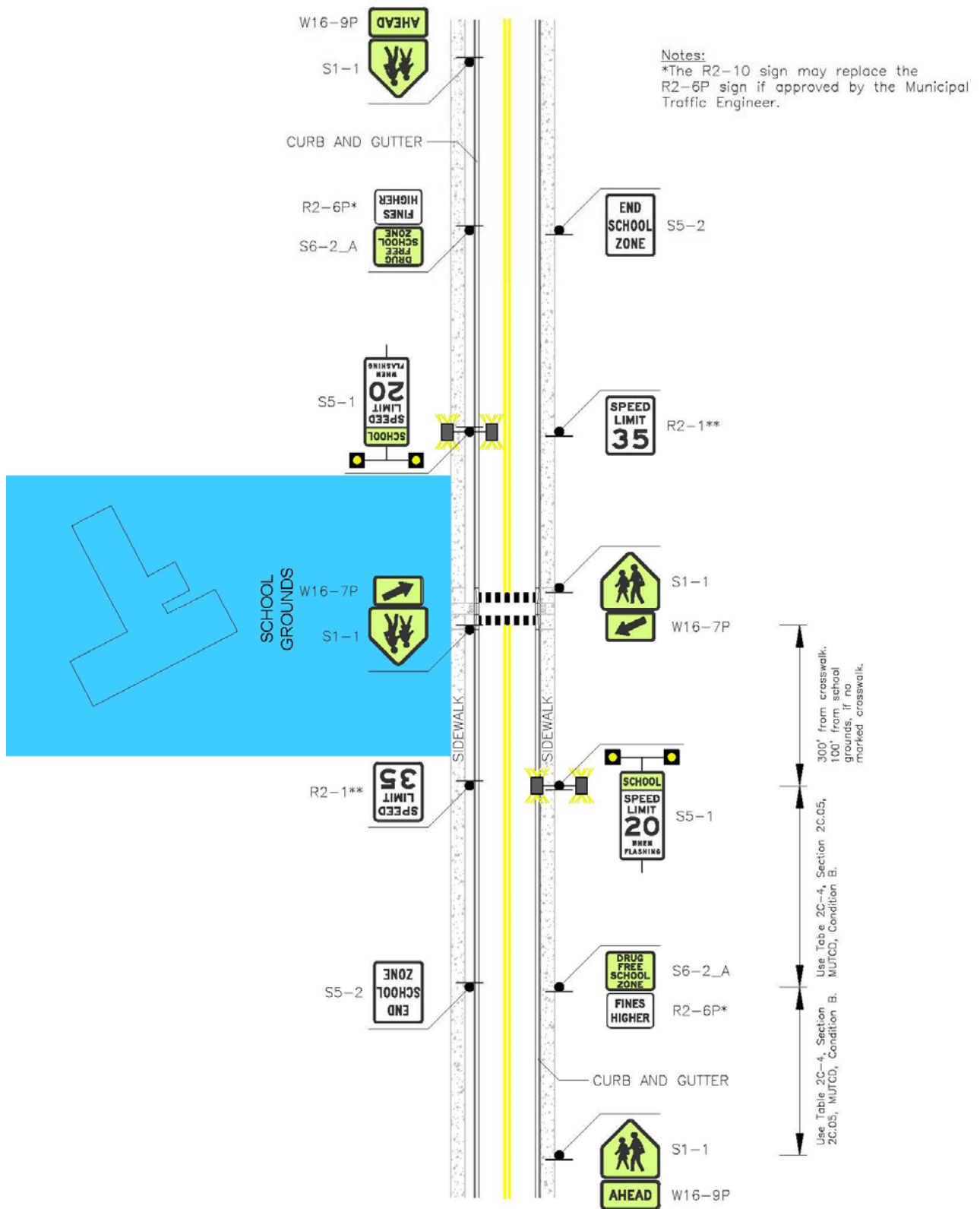
Rev. 1

Figure 5. Sample Advance School Sign with Crossing Sign Locations



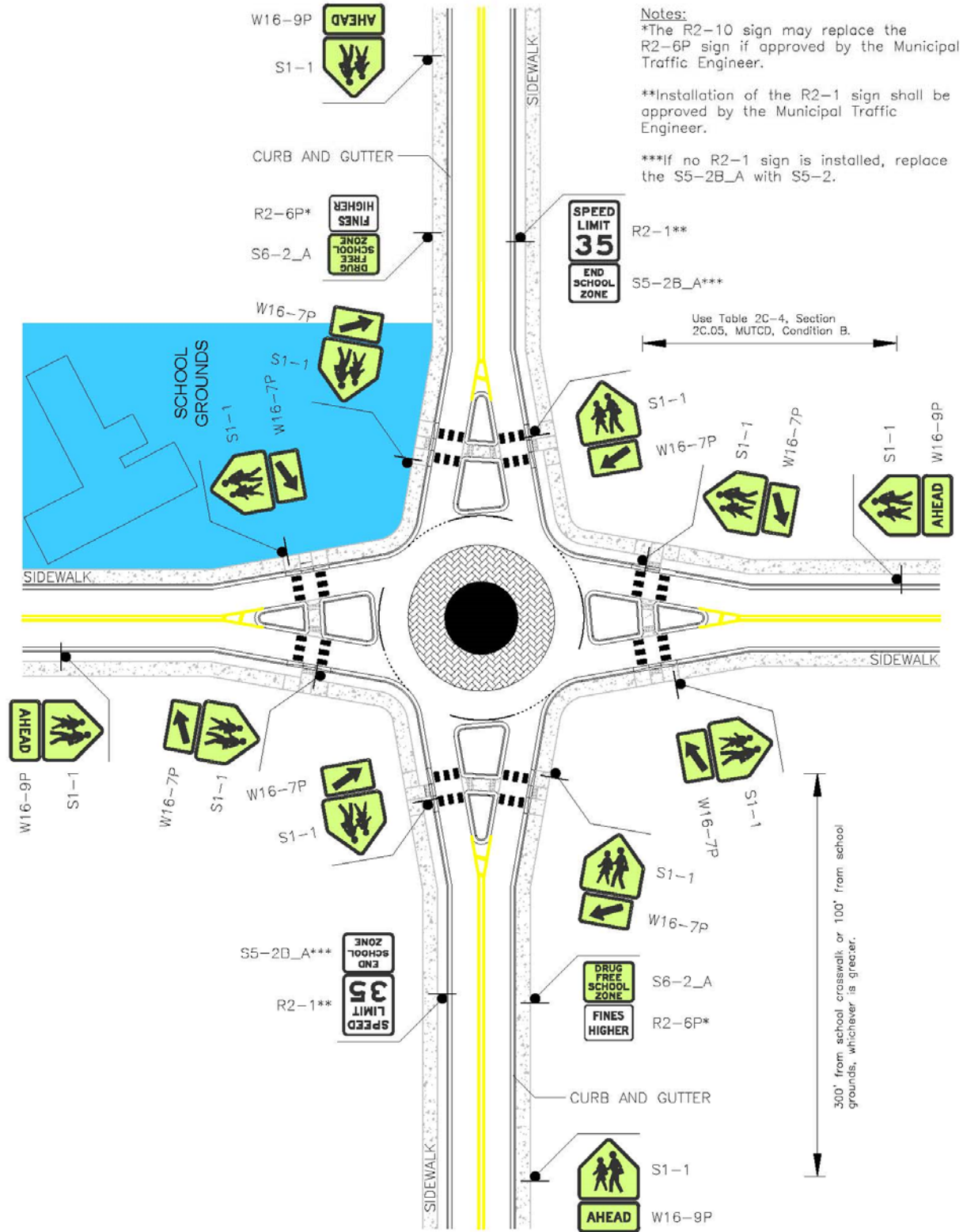
Rev. 1

Figure 6. Sample 20 MPH When Flashing Sign Locations



Rev. 1

Figure 10. Sample Roundabout Sign Locations



Rev. 1

Section 7B.15 School Speed Limit Assembly (S4-1P, S4-2P, S4-3P, S4-4P, S4-6P, S5-1) and END SCHOOL SPEED LIMIT Sign (S5-3)



Rev. 1

Standard:

⁰¹ A School Speed Limit assembly (see Figure 7B-1) or a School Speed Limit (S5-1) sign (see Figure 7B-1) shall be used to indicate the speed limit where a reduced school speed limit zone has been established based upon an engineering study or where a reduced school speed limit is specified for such areas by statute. The School Speed Limit assembly or School Speed Limit sign shall be placed at or as near as practical to the point where the reduced school speed limit zone begins (see Figures 7B-3 and 7B-5).

⁰² If a reduced school speed limit zone has been established, a School (S1-1) sign shall be installed in advance (see Table 2C-4 for advance placement guidelines) of the first school Speed Limit sign assembly or S5-1 sign that is encountered in each direction as traffic approaches the reduced school speed limit zone (see Figures 7B-3 and 7B-5).

⁰³ Where increased fines are imposed for traffic violations within a reduced school speed limit zone, a FINES HIGHER (R2-6P), FINES DOUBLE (R2-6aP), or \$XX FINE (R2-6bP) plaque (see Figure 2B-3) shall be installed as a supplement to the reduced school speed limit sign to notify road users.

⁰⁴ Except as provided in Paragraph 5, the downstream end of an authorized and posted reduced school speed limit zone shall be identified with an END SCHOOL SPEED LIMIT (S5-3) sign (see Figures 7B-1 and 7B-5).

Option:

⁰⁵ If a reduced school speed limit zone ends at the same point as a higher fines zone, an END SCHOOL ZONE (S5-2) sign may be used instead of a combination of an END HIGHER FINES ZONE (R2-11) sign and END SCHOOL SPEED LIMIT (S5-3) sign.

⁰⁶ A standard Speed Limit sign showing the speed limit for the section of highway that is downstream from the authorized and posted reduced school speed limit zone may be mounted on the same post above the END SCHOOL SPEED LIMIT (S5-2) sign or the END SCHOOL ZONE (S5-2) sign.

Guidance:

⁰⁷ *The beginning point of a reduced school speed limit zone should be at least 200 feet in advance of the school grounds, a school crossing, or other school related activities; however, this 200 foot distance should be increased if the reduced school speed limit is 30 mph or higher.*

^{07A} *The reduced speed school zone should begin at a point approximately 300 feet from the school crosswalk, if there is one. If a marked crosswalk is not present, the reduced speed school zone should begin at a point at approximately 100 feet in advance of the school area.*

^{07B} *The School Speed Limit (S5-1) sign should be supplemented by a Speed Limit Beacon consisting of three signal sections with a flashing CIRCULAR YELLOW signal indication of 8-inch*

diameter in each signal section. The signal sections should be mounted vertically directly above the S5-1 sign. The bottom two beacons should be illuminated alternatively and face oncoming traffic. The top flashing beacon should face the opposite direction to indicate when the beacon is in operation.

Standard:

⁰⁸ **The School Speed Limit assembly shall be either a fixed-message sign assembly or a changeable message sign.**

⁰⁹ **The fixed-message School Speed Limit assembly shall consist of a top plaque (S4-3P) with the legend SCHOOL, a Speed Limit (R2-1) sign, and a bottom plaque (S4-1P, S4-2P, S4-4P, OR S4-6P) indicating the specific periods of the day and/or days of the week that the special school speed limit is in effect (see Figure 7B-1).**

Option:

¹⁰ Changeable message signs (see Chapter 2L and Section 6F.60) may be used to inform drivers of the school speed limit. If the sign is internally illuminated, it may have a white legend on a black background. Changeable message signs with flashing beacons may be used for situations where greater emphasis of the special school speed is needed.

Guidance:

¹¹ *Even though it might not always be practical because of special features to make changeable message signs conform in all respects to the standards in this Manual for fixed-message signs, during the periods that the school speed limit is in effect, their basic shape, message, legend layout, and colors should comply with the standards for fixed-message signs.*

¹² *A confirmation light or device to indicate that the speed limit message is in operation should be considered for inclusion on the back of the changeable message sign.*

Standard:

¹³ **Fluorescent yellow-green pixels shall be used when the “SCHOOL” message is displayed on a changeable message sign for a school speed limit.**

Option:

¹⁴ Changeable message signs may use blank-out messages or other methods in order to display the school speed limit only during the periods it applies.

¹⁵ Changeable message signs that display the speed of approaching drivers (see Section 2B.13) may be used in a school speed limit zone.

¹⁶ A Speed Limit Sign Beacon (see Section 4L.04) also may be used, with a WHEN FLASHING legend, to identify the periods that the school speed limit is in effect.”

MOA Traffic Policies

MOA will adhere to MUTCD and ATM except with the following modifications:

Within the MOA, the S5-1 School Speed Limit sign shall be used. The size of the sign shall conform to the MUTCD. The remainder of the sign, SPEED LIMIT 20 WHEN FLASHING, shall be black lettering on a white background. The S4-1P, S4-2P, S4-4P, and S4-6P signs shall not be used within the MOA.

A SPEED LIMIT (R2-1) sign may be installed at the beginning of all school zones with the Municipal Traffic Engineer’s approval. An additional SPEED LIMIT sign may also be placed at the end of school zones with the Municipal Traffic Engineer’s approval. When installing a SPEED LIMIT sign at the end of school zones, replace END SCHOOL ZONE S5-2 with S5-2B_A.

Rev. 1

The SCHOOL SPEED LIMIT 20 WHEN FLASHING sign (S5-1) shall be installed with four (4) signal heads with 8- or 12-inch diameter, as determined by the Municipal Traffic Engineer, yellow lenses. They shall be mounted directly above the S5-1 sign. Two beacons shall be illuminated alternately with two facing oncoming vehicular traffic and two facing opposing vehicular traffic to indicate when the speed reductions are in effect.

ATM Figure 7B-100 shall not be used to identify school zone sign locations. Typical school zone sign locations are shown in Figures 4 through 10 of this manual.



Section 7B.16 Reduced School Speed Limit Ahead Sign (S4-5, S4-5a)

Guidance:

- 01 “A Reduced School Speed Limit Ahead (S4-5, S4-5a) sign (see Figure 7B-1) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by ~~more than 10 mph~~ 20 mph or more, or where engineering judgment indicates that advance notice would be appropriate. (S4-5)

Standard:

- 02 **If used, the Reduced School Speed Limit Ahead sign shall be followed by a School Speed Limit sign or a School Speed Limit assembly.**
- 03 **The speed limit displayed on the Reduced School Speed Limit Ahead sign shall be identical to the speed limit displayed on the subsequent School Speed Limit sign or School Speed Limit assembly.”**

MOA Traffic Policies

MOA will adhere to MUTCD and ATM except with the following modification:

The REDUCED SCHOOL SPEED ZONE AHEAD sign (S4-5, S4-5a) shall be used on street approaches which enter a roadway within a school zone containing a “20 MPH When Flashing” zone. The REDUCED SCHOOL SPEED ZONE AHEAD sign will have arrows indicating the direction the “20 MPH When Flashing” zone extends.

[\[This is a new section. There is no corresponding section in the MUTCD.\]](#)

Section 7B.100 DRUG FREE SCHOOL ZONE Sign (S6-100)

Standard:

- 01 Alaska Statute 28.01.010(d) states, “The municipality shall post a sign indicating that the school is a drug-free school zone at each location in which it has installed a sign identifying the location of a school.” Accordingly, signs conveying this message shall be placed below, or near, all School Advance Warning (S1-1) signs.



(S6-2_A with R2-1)

Rev. 1

Support:

The posting of this sign is a municipal, not a state, responsibility.

Option:

The sign may be the S6-100 shown in the ASDS or another sign that conveys the required message.”

MOA Traffic Policies

MOA will adhere to MUTCD and ATM except with the following modification:

All school zones shall include the installation of the DRUG FREE SCHOOL ZONE (S6-2_A) plate. The DRUG FREE SCHOOL ZONE (S6-2_A) sign should be mounted above the FINES HIGHER (R2-6P) sign, BEGIN HIGHER FINES ZONE (R2-10) sign, or SPEED LIMIT (R2-1) sign assemblies. The

Rev. 1

S6-2_A sign shall not be placed at school crossing locations. The plate shall be black lettering on a fluorescent yellow-green background.

ATM Figure 7B-100 shall not be used to identify school zone sign locations. Typical school zone sign locations are shown in Figures 4 through 10 of this manual.

CHAPTER 7C. MARKINGS

Section 7C.02 Crosswalk Markings

Guidance:

⁰¹ *Crosswalks should be marked at all intersections on established routes to a school where there is substantial conflict between motorists, bicyclists, and student movements; where students are encouraged to cross between intersections; where students would not otherwise recognize the proper place to cross; or where motorists or bicyclists might not expect students to cross (see Figure 7A-1).*

⁰² *Crosswalk lines should not be used indiscriminately. An engineering study considering the factors described in Section 3B.18 should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled by a STOP or YIELD sign.*

⁰³ *Because non-intersection school crossings are generally unexpected by the road user, warning signs (see Section 7B.11 and 7B.12) should be installed for all marked school crosswalks at non-intersection locations. Adequate visibility of students by approaching motorists and of approaching motorists by students should be provided by parking prohibitions or other appropriate measures.*

Support:

⁰⁴ Section 3B.18 contains provisions regarding placement and design of crosswalks, and section 3B.16 contains provisions regarding the placement and design of the stop lines and yield lines that are associated with them. Provisions regarding the cur markings that can be used to establish parking regulations on the approaches to crosswalks are contained in Section 3B.23.

Standard:

^{04A} **Crosswalk markings shall be placed at officially designated school crossings.**

^{04B} **School crosswalks shall be installed in accordance with the applicable provisions of Section 3B.18.**

MOA Traffic Policies

MOA will adhere to MUTCD and ATM. The MOA will use the Longitudinal Crosswalk with Gaps (ATM Figure 3B-101) at uncontrolled school crossing locations unless otherwise specified by the Traffic Engineer.

Section 7C.03 Pavement Word, Symbol, and Arrow Markings

Option:

⁰¹ If used, the School word marking may extend to the width of two approach lanes (see Figure 7C-1).

Guidance:

⁰² *If the two-lane SCHOOL word marking is used, the letters should be 10 feet or more in height.*

Support:

⁰³ Section 3B.20 contains provisions regarding other word, symbol, and arrow pavement markings that can be used to guide, warn, or regulate traffic.

Sign	Sign Designation	Section ⁴	Conventional Road ^{2,3}	Oversized ^{1,2}	Sample
School	S1-1	7B.08	36 x 36	48 x 48	
School Bus Stop Ahead	S3-1	7B.13	36 x 36	48 x 48	
School Bus Turn Ahead	S3-2	7B.14	36 x 36	48 x 48	
Reduced School Speed Limit Ahead	S4-5	7B.16	36 x 36	48 x 48	
Reduced School Speed Limit Ahead	S4-5a	7B.16	36 x 36	48 x 48	
School Speed Limit 20 When Flashing	S5-1	7B.15	24 x 48	36 x 72	
End School Zone	S5-2	7B.09	24 x 30	36 x 48	
End School Zone	S5-2B_A	7B.09	24 x 18	30 x 24	
Drug Free School Zone	S6-2_A	7B.100 ⁵	24 x 18	30 x 24	
In-Street Ped Crossing	R1-6b	7B.11, 7B.12	12 x 36	–	
Speed Limit	R2-1	7B.15	24 x 30	30 x 36	

Rev. 1

Plaque	Sign Designation	Section ⁴	Conventional Road ^{2,3}	Oversized ^{1,2}	Sample
Begin Higher Fines Zone	R2-10	7B.10	24 x 30	36 x 48	
End Higher Fines Zone	R2-11	7B.10	24 x 30	36 x 48	
Fines Higher	R2-6P	7B.10	24 x 18	30 x 24	
XX FT	W16-2aP	7B.08	24 x 12	30 x 18	
Turn Arrow	W16-5P	7B.08, 7B.09, 7B.11	24 x 12	30 x 18	
Advance Turn Arrow	W16-6P	7B.08, 7B.09, 7B.11	24 x 12	30 x 18	
Diagonal Arrow	W16-7P	7B.12	24 x 12	30 x 18	
Ahead	W16-9P	7B.11	36 x 12	–	

Rev. 1

- Notes:
1. Larger sizes may be used when appropriate.
 2. Dimensions are shown in inches and are shown as width x height.
 3. Minimum sign sizes for multi-lane conventional roads shall be as shown in the Conventional Road column.
 4. The Section column is based on MUTCD and ATM sections.
 5. This section is located within the ATM only.