National Committee on
Uniform Traffic Control Devices

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National Committee on Uniform Traffic Control Devices (NCUTCD)
Recommended Changes to Proposed Text for 11th Edition of the MUTCD
Docket Number: FHWA-2020-0001

Federal Register Item Number: 540-552
NPA MUTCD Section Number: Section 8B.01-8B.26
Legend: Base text shown in proposal is the NPA "clean" proposed text.

- NCUTCD recommendation for text to be added in final rule.
- ~~NCUTCD recommendation for text to be deleted in final rule~~.
- NCUTCD recommendation for text to be moved/relocated in final rule.
- NPA text that was not previously approved by NCUTCD but is now approved.
- Explanatory note: [Note that explains purpose of recommended change.]

The following pages present NCUTCD recommendations for changes to the MUTCD NPA proposed text, tables, and figures for Chapter 8B. Below is a short summary of the NCUTCD position for each section of this chapter. A more detailed summary is provided at the beginning of each section.

- NPA #N/A: Section 8B.01: NCUTCD agrees with NPA content.
- NPA #540: Section 8B.02: NCUTCD agrees with NPA content.
- NPA #541: Section 8B.03. NCUTCD agrees with NPA content.
- NPA #542: Section 8B.04: Changes recommended based on Council action in spring 2021.
- NPA #543: Section 8B.05: NCUTCD agrees with NPA content.
- NPA #544: Section 8B.06: NCUTCD agrees with NPA content.
- NPA #545: Section 8B.07: NCUTCD agrees with NPA content.
- NPA #546: Section 8B.08: NCUTCD agrees with NPA content.
- NPA #N/A: Sections 8B.09-8B.15: NCUTCD agrees with NPA content.
- NPA #547: Section 8B.16: Changes recommended based on Council action in spring 2021.
- NPA #548: Section 8B.17: NCUTCD agrees with NPA content.
- NPA #N/A: Sections 8B.18-8B.19: NCUTCD agrees with NPA content.
- NPA #549: Section 8B.20: NCUTCD agrees with NPA content.
- NPA #N/A: Section 8B.21-8B.22: NCUTCD agrees with NPA content.
- NPA #550: Section 8B.23: NCUTCD agrees with NPA content.
- NPA #551: Section 8B.24: NCUTCD agrees with NPA content.
- NPA #N/A: Section 8B.25: NCUTCD agrees with NPA content.
- NPA #552: Section 8B.26: NCUTCD agrees with NPA content.

Section 8B.01 Comments: NCUTCD agrees with 8B.01 as presented in the NPA.

Section 8B.01 Purpose and Application

Support:

Passive traffic control systems, consisting of signs and pavement markings only, identify and direct attention to the location of a grade crossing and advise road users to reduce their speed or stop at the grade crossing as necessary in order to yield to any rail traffic occupying, or approaching and in proximity to, the grade crossing.

Signs and markings regulate, warn, and guide the road users so that they, as well as LRT vehicle operators on mixed-use alignments, can take appropriate action when approaching a grade crossing.

Unless otherwise provided in this Chapter, the provisions of Part 2 are applicable to the design and location of signs at grade crossings, and the provisions of Part 3 are applicable to the design and location of pavement markings at grade crossings.

Section 8B.02 Comments: NCUTCD agrees with 8B.02 as presented in the NPA.

Section 8B.02 Sizes of Grade Crossing Signs

Standard:

The minimum sizes of grade crossing signs shall be as shown in Table 8B-1.

Option:

Signs larger than those shown in Table 8B-1 may be used (see Section 2A.07).

Section 8B.03 Comments: NCUTCD agrees with 8B.03 as presented in the NPA.

Section 8B.03 Grade Crossing (Crossbuck) Sign (R15-1) and Number of Tracks Plaque (R15-2P) at Active and Passive Grade Crossings

Standard:

The Grade Crossing (R15-1) sign (see Figure 8B-1), commonly identified as the Crossbuck sign, shall be retroreflective white with the words RAILROAD CROSSING in black lettering, mounted as shown in Figure 8B-2.

Support:

In most States, the Crossbuck sign requires road users to yield the right-of-way to rail traffic at a grade crossing.

Standard:

As a minimum, one Crossbuck sign shall be used on each highway approach to every highway-rail grade crossing, alone or in combination with other traffic control devices.

As a minimum, one Crossbuck sign shall be used on each highway approach to every gated highway-LRT grade crossing on a semi-exclusive alignment, alone or in combination with other traffic control devices.

Option:

A Crossbuck sign may be used on a highway approach to a highway-LRT grade crossing on a mixed-use alignment or non-gated semi-exclusive alignment, alone or in combination with other traffic control devices.

Standard:

If there are two or more tracks at a grade crossing, the number of tracks shall be indicated on a supplemental Number of Tracks (R15-2P) plaque (see Figure 8B-1) of inverted T shape mounted below the Crossbuck sign in the manner shown in Figure 8B-2.

On each approach to a highway-rail grade crossing and, if used, on each approach to a highway-LRT grade crossing, the Crossbuck sign shall be installed on the right-hand side of the highway on each approach to the grade crossing. Where restricted sight distance or unfavorable highway geometry exists on an approach to a grade crossing, or where there is a one-way multi-lane approach, an additional Crossbuck sign shall be installed on the left-hand side of the highway, possibly placed back-to-back with the Crossbuck sign for the opposite approach, or otherwise located so that two Crossbuck signs are displayed for that approach.

At all passive grade crossings where Crossbuck signs have been installed, a strip of retroreflective white material not less than 2 inches in width shall be used on the back of each blade of each Crossbuck sign for the length of each blade, except those where Crossbuck signs have been installed back-to-back or where double-faced Crossbuck signs have been installed.

Except as provided in Paragraph 14, where there is a curb, a lateral offset of at least 2 feet shall be provided from the face of the vertical curb to the closest part of the Crossbuck sign.

Except as provided in Paragraph 14, where there is no curb, a lateral offset to the closest part of the Crossbuck sign of at least 6 feet from the edge of the traveled way, and at least 2 feet from the edge of a paved or surfaced shoulder shall be provided.

Guidance:

Crossbuck signs should be located such that all physical aspects of the sign and its support are at least 12 feet from the center of the nearest track.

Crossbuck signs should be located with respect to the highway pavement or shoulder in accordance with the criteria in Chapter 2A and Figures 2A-2 and 2A-3.

The minimum lateral offset for the nearest edge of the Crossbuck sign should be 6 feet from the edge of the shoulder (or 6 feet from the edge of the traveled way if no shoulder is present) in rural areas, and 2 feet from the face of the curb in urban areas.

Where unusual conditions make variations in location and lateral offset appropriate, engineering judgment should be used to provide the best practical combination of view and clearances (see Section 2A.15).

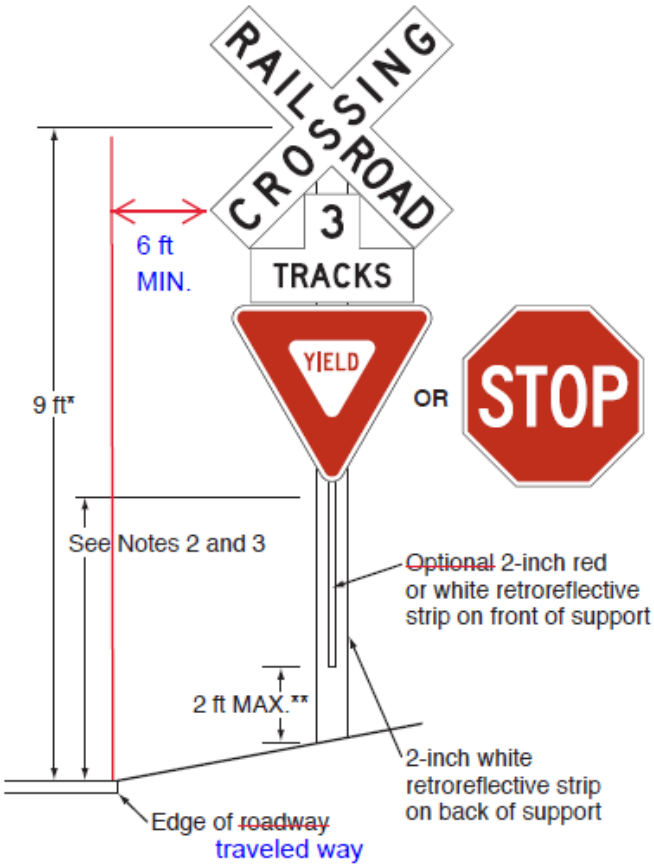
Except as provided in Paragraph 16, the mounting height of Crossbuck signs, measured vertically from the center of the sign to the elevation of the nearest edge of the pavement, should be approximately 9 feet (see Figure 8B-2).

Option:

The 9-foot mounting height for the Crossbuck sign may be varied as required by local conditions and may be increased to accommodate signs mounted below the Crossbuck sign.

NCUTCD generally agrees with Figure 8B-3 as presented in the NPA, but recommends changes to add the 6 foot lateral offset dimension to be consistent with Figure 2A-2 and delete the word "optional" for the retroreflective strip because the strip is only optional when the Stop or Yield is mounted on a separate post.

Figure 8B-3. Crossbuck Assembly with a YIELD or STOP Sign on a Separate Sign Support



Section 8B.04 Comments: NCUTCD recommends changes to Guidance statements in 8B.04 to delete "engineering study" and add references to the Diagnostic Team because the Diagnostic Team should determine whether STOP or YIELD signs are appropriate at passive grade crossings and at T-intersections with inadequate clear storage distance. NCUTCD also recommends changes to the Standard statement to delete the requirement for a YIELD sign on the approach to a passive grade crossing at a highway-highway intersection controlled by a traffic signal because the Diagnostic Team should make the determination of the appropriate traffic control devices.

Section 8B.04 Crossbuck Assemblies with YIELD or STOP Signs at Passive Grade Crossings

Standard:

A Crossbuck Assembly shall consist of a Crossbuck (R15-1) sign, and a Number of Tracks (R15-2P) plaque if two or more tracks are present, that complies with the provisions of Section 8B.03, and either a YIELD (R1-2) or STOP (R1-1) sign installed on the same support, except as provided in Paragraph 10. YIELD or STOP signs used at passive grade crossings shall be installed in compliance with the provisions of Section 2B.30, and Figures 8B-2 and 8B-3.

At all public highway-rail grade crossings that are not equipped with the active traffic control systems that are described in Chapter 8D, except crossings where road users are directed by an authorized person on the ground to not enter the crossing at all times that an approaching train is about to occupy the crossing, a Crossbuck Assembly shall be installed on the right-hand side of the highway on each approach to the highway-rail grade crossing.

If a Crossbuck sign is used on a highway approach to a public highway-LRT grade crossing that is not equipped with the active traffic control systems that are described in Chapter 8D, a Crossbuck Assembly shall be installed on the right-hand side of the highway on each approach to the highway-LRT grade crossing.

Where restricted sight distance or unfavorable highway geometry exists on an approach to a grade crossing that has a Crossbuck Assembly, or where there is a one-way multi-lane approach, an additional Crossbuck Assembly shall be installed on the left-hand side of the highway.

A YIELD sign shall be the default traffic control device for Crossbuck Assemblies on all highway approaches to passive grade crossings unless an engineering study performed by the regulatory agency or highway authority having jurisdiction over the roadway approach determines that a STOP sign is appropriate.

Guidance:

The use of STOP signs at passive grade crossings should be limited to unusual conditions where requiring all highway vehicles to make a full stop is ~~deemed essential by an engineering study~~ determined by a Diagnostic Team. Among the factors that should be considered in the engineering study are the line of sight to approaching rail traffic (giving due consideration to seasonal crops or vegetation beyond both the highway and railroad or LRT rights-of-ways), the number of tracks, the speeds of trains or LRT equipment and highway vehicles, and the crash history at the grade crossing.

Where a passive grade crossing on the stem of a T- intersection creates an inadequate clear storage distance between the tracks and the parallel roadway, and where adequate sight

distance to oncoming traffic on the parallel roadway is available to road users stopped on the approach to the grade crossing, consideration should be given to installing a STOP sign at the Crossbuck Assembly instead of at the highway-highway intersection for traffic approaching the T-intersection. If the STOP sign is installed at the Crossbuck Assembly instead of at the highway-highway intersection, a Diagnostic Team should consider~~ation should be given to~~ installing ~~a YIELD sign or intersection~~ some other traffic control device at the highway-highway intersection. (edit Guidance statements because the Diagnostic Team should determine use of STOP signs at a grade crossing and appropriate signing for t-intersections)

Standard:

If a Crossbuck Assembly is installed on the approach to a passive grade crossing located at a highway-highway intersection controlled by a traffic control signal that is not interconnected with the grade crossing and not preempted by the approach of rail traffic, a Diagnostic Team shall be convened to determine the appropriate traffic control devices. ~~YIELD sign with a TO TRAINS (R15-9P) supplemental plaque shall be installed on the Crossbuck Assembly.~~ A STOP sign shall not be installed on a Crossbuck Assembly in this situation. (edit Standard statement because the Diagnostic Team should determine the use of a YIELD sign and supplemental plaque)

Support:

Sections 8A.01 through 8A.05 contain information regarding the responsibilities of the highway agency and the railroad company or LRT agency regarding the selection, design, and operation of traffic control devices placed at grade crossings.

Option:

If a YIELD or STOP sign is installed for a Crossbuck Assembly at a grade crossing, it may be installed on the same support as the Crossbuck sign or it may be installed on a separate support at a point where the highway vehicle is to stop, or as near to that point as practical, but in either case, the YIELD or STOP sign is considered to be a part of the Crossbuck Assembly.

Standard:

If a YIELD or STOP sign is installed on an existing Crossbuck sign support, the mounting height, measured vertically from the bottom of the YIELD or STOP sign to the top of the curb, or in the absence of curb, measured vertically from the bottom of the YIELD or STOP sign to the elevation of the nearest edge of the traveled way, shall be at least 4 feet (see Figure 8B-2).

If a Crossbuck Assembly is installed on a new sign support (see Figure 8B-2) or if the YIELD or STOP sign is installed on a separate support (see Figure 8B-3), the mounting height, measured vertically from the bottom of the YIELD or STOP sign to the top of the curb, or in the absence of curb, measured vertically from the bottom of the YIELD or STOP sign to the elevation of the nearest edge of the traveled way, shall be at least 5 feet in rural areas and shall be at least 7 feet in areas where parking or pedestrian movements are likely to occur.

Guidance:

If a YIELD or STOP sign is installed for a Crossbuck Assembly at a grade crossing on a separate support than the Crossbuck sign (see Figure 8B-3), the YIELD or STOP sign should be placed in the same plane as the Crossbuck sign and closer to the traveled way than the Crossbuck sign. The minimum separation between the nearest point of the YIELD or STOP sign and the nearest point of the Crossbuck sign should be 2 inches as shown in Figure 8B-3. On roadways where no curb exists, the minimum lateral offset of the YIELD or STOP sign should be

6 feet from the edge of the traveled way. Except as provided in Paragraph 14 in Section 8B.03, on roadways where a curb exists, the minimum lateral offset of the YIELD or STOP sign should be 2 feet from the face of the curb.

Support:

The meaning of a Crossbuck Assembly that includes a YIELD sign is that a road user approaching the grade crossing needs to be prepared to decelerate, and when necessary, yield the right-of-way to any rail traffic that might be occupying the crossing or might be approaching and in such close proximity to the crossing that it would be unsafe for the road user to cross.

Certain commercial motor vehicles and school buses are required to stop at all grade crossings in accordance with 49 CFR 392.10 even if a YIELD sign (or just a Crossbuck sign) is posted.

The meaning of a Crossbuck Assembly that includes a STOP sign is that a road user approaching the grade crossing must come to a full stop not less than 15 feet short of the nearest rail, and remain stopped while the road user determines if there is rail traffic either occupying the crossing or approaching and in such close proximity to the crossing that the road user must yield the right-of-way to rail traffic. The road user is permitted to proceed when it is safe to cross.

Standard:

A vertical strip of retroreflective white material, not less than 2 inches in width, shall be used on each Crossbuck support at passive grade crossings for the full length of the back of the support from the Crossbuck sign or Number of Tracks plaque to within 2 feet above the ground or elevation of the near edge of the traveled way (whichever is higher), except as provided in Paragraph 18. A white retroreflective strip wrapped around a round support shall satisfy this requirement as long as the round support has an outside diameter of at least 2 inches.

Option:

The vertical strip of retroreflective material may be omitted from the back sides of Crossbuck sign supports installed on one-way streets and at pathway or sidewalk grade crossings (see Section 8E.05).

If a YIELD or STOP sign is installed on the same support as the Crossbuck sign, a vertical strip of red (see Section 2A.17) or white retroreflective material that is at least 2 inches wide may be used on the front of the support from the YIELD or STOP sign to within 2 feet above the ground or elevation of the near edge of the traveled way (whichever is higher).

Standard:

If a Crossbuck sign support at a passive grade crossing does not include a YIELD or STOP sign (either because the YIELD or STOP sign is placed on a separate support or because a YIELD or STOP sign is not present on the approach), a vertical strip of retroreflective white material, not less than 2 inches in width, shall be used for the full length of the front of the support from the Crossbuck sign or Number of Tracks plaque to within 2 feet above the ground or elevation of the near edge of the traveled way (whichever is higher). A white retroreflective strip wrapped around a round support shall satisfy this requirement as long as the round support has an outside diameter of at least 2 inches.

At all grade crossings where YIELD or STOP signs are installed, Yield Ahead (W3-2) or Stop Ahead (W3-1) signs shall also be installed if the criteria for their installation in Section 2C.36 is met.

Support:

Section 8C.03 contains provisions regarding the use of stop lines or yield lines at grade crossings.

Section 8B.05 Comments: NCUTCD agrees with 8B.05 as presented in the NPA.

Section 8B.05 Use of STOP (R1-1) or YIELD (R1-2) Signs without Crossbuck Signs at Highway-LRT Grade Crossings

Guidance:

The use of only STOP or YIELD signs for road users at highway-LRT grade crossings should be limited to those crossings where the need and feasibility is established by an engineering study. Such crossings should have all of the following characteristics:

A. The crossing roadways are secondary in character (such as a minor street with one lane in each direction, an alley, or a driveway) with low traffic volumes and low speed limits. The specific thresholds of traffic volumes and speed limits should be determined by the local agencies.

B. The line of sight for an approaching LRT operator is adequate from a sufficient distance such that the operator can sound an audible signal and bring the LRT equipment to a stop before arriving at the crossing.

C. The road user has sufficient sight distance at the stop line to permit the vehicle to cross the tracks before the arrival of the LRT equipment.

D. If at an intersection of two roadways, the intersection does not meet the warrants for a traffic control signal as provided in Chapter 4C.

E. The LRT tracks are located such that highway vehicles are not likely to stop on the tracks while waiting to enter a cross street or highway.

Standard:

For all highway-LRT grade crossings where only STOP (R1-1) or YIELD (R1-2) signs are installed, the placement shall comply with the requirements of Section 2B.20. Stop Ahead (W3-1) or Yield Ahead (W3-2) Advance Warning signs shall also be installed if the criteria for their installation given in Section 2C.36 is met.

Section 8B.06 Summary: NCUTCD agrees with 8B.06 as presented in the NPA.

Section 8B.06 Grade Crossing Advance Warning Signs (W10-1 through W10-4)

Standard:

A Grade Crossing Advance Warning (W10-1) sign (see Figure 8B-4) shall be used on each highway in advance of every grade crossing, except in the following circumstances:

A. On an approach to a grade crossing from an intersection with a parallel highway if the distance from the edge of the track to the edge of the parallel roadway is less than 100 feet and W10-2, W10-3, or W10-4 signs are used on the approaches of the parallel highway (see Paragraph 5);

B. On low-volume, low-speed highways crossing minor spurs or other tracks that are infrequently used and road users are directed by an authorized person on the

ground to not enter the crossing at all times that approaching rail traffic is about to occupy the crossing;

C. In business or commercial areas where active grade crossing traffic control systems are in use;

D. Where physical conditions do not permit even a partially effective display of the sign; or

E. At highway-LRT grade crossings where Crossbuck signs are not used.

The placement of the Grade Crossing Advance Warning sign shall be in accordance with Section 2C.04 and Table 2C-3.

If a YIELD or STOP sign is present at a passive grade crossing, a Yield Ahead (W3-2) or Stop Ahead (W3-1) Advance Warning sign shall also be installed if the criteria for their installation given in Section 2C.36 is met. If a Yield Ahead or Stop Ahead sign is installed on the approach to the crossing, the W10-1 sign shall be installed upstream from the Yield Ahead or Stop Ahead sign. The Yield Ahead or Stop Ahead sign shall be located in accordance with Table 2C-3. The minimum distance between the signs shall be in accordance with Section 2C.04 and Table 2C-3.

Option:

On divided highways and one-way streets, an additional W10-1 sign may be installed on the left-hand side of the roadway.

Standard:

If the distance between the tracks and a parallel highway, from the edge of the tracks to the edge of the parallel roadway, is less than 100 feet, W10-2, W10-3, or W10-4 signs (see Figure 8B-4) shall be installed on each approach of the parallel highway to warn road users making a turn that they will encounter a grade crossing soon after making a turn, and a W10-1 sign for the approach to the tracks shall not be required to be between the tracks and the parallel highway.

If the W10-2, W10-3, or W10-4 signs are used, sign placement in accordance with the guidelines for Intersection Warning signs in Table 2C-3 using the speed of through traffic shall be measured from the highway intersection.

Guidance:

If the distance between the tracks and the parallel highway, from the edge of the tracks to the edge of the parallel roadway, is 100 feet or more, a W10-1 sign should be installed in advance of the grade crossing, and the W10-2, W10-3, or W10-4 signs should not be used on the parallel highway.

Section 8B.07 Comments: NCUTCD agrees with 8B.07 as presented in the NPA.

Section 8B.07 DO NOT STOP ON TRACKS Sign (R8-8)

Guidance:

If a STOP or YIELD sign is installed at a location, including at a circular intersection, that is downstream from the grade crossing such that highway vehicle queues are likely to extend onto the tracks, a DO NOT STOP ON TRACKS (R8-8) sign should be used.

Except where a pre-signal (see Section 8D.12) is installed for the purpose of keeping the area between the tracks and a nearby downstream traffic control signal clear of vehicles, if a traffic control signal is installed within 200 feet downstream from the grade crossing such that

highway vehicle queues are likely to extend onto the tracks, a DO NOT STOP ON TRACKS (R8-8) sign should be used.

A DO NOT STOP ON TRACKS (R8-8) sign should be installed whenever an engineering study determines that the potential for highway vehicles stopping on the tracks at a grade crossing is significant.

The R8-8 sign, if used, should be located on the right-hand side of the highway on either the near or far side of the grade crossing, depending upon which position provides better visibility to approaching drivers.

Option:

DO NOT STOP ON TRACKS signs may be placed on both sides of the track.

On divided highways and one-way streets, a second DO NOT STOP ON TRACKS sign may be placed on the near or far left-hand side of the highway at the grade crossing to further improve visibility of the sign.

Section 8B.08 Comments: NCUTCD agrees with 8B.08 as presented in the NPA.

Section 8B.08 TRACKS OUT OF SERVICE Sign (R8-9)

Option:

The TRACKS OUT OF SERVICE (R8-9) sign (see Figure 8B-1) may be used at a grade crossing instead of a Crossbuck (R15-1) sign and a Number of Tracks (R15-2P) plaque or instead of a Crossbuck Assembly when railroad or LRT tracks have been temporarily or permanently abandoned, but only until such time that the tracks are removed or covered.

Standard:

When tracks are out of service, except as provided in Paragraphs 3 and 4, traffic control devices and gate arms shall be removed and the signal heads shall be removed or hooded or turned from view to clearly indicate that they are not in operation.

When tracks are out of service, even if TRACKS OUT OF SERVICE (R8-9) signs have been installed, Emergency Notification System (I-13) signs (see Section 8B.26) shall be retained at the grade crossing and shall be visible to road users.

Option:

Warning signs, such as the Low Ground Clearance Grade Crossing (W10-5) sign and the Skewed Crossing (W10-12) sign, that warn road users about physical roadway conditions that are still present at the grade crossing may be left in place after the tracks are taken out of service until the tracks have been removed or covered.

Standard:

The R8-9 sign shall be removed when the tracks have been removed or paved over or when the grade crossing is returned to service. The Emergency Notification System (I-13) signs shall be removed when the tracks have been removed or paved over.

Section 8B.09 Comments: NCUTCD agrees with 8B.09 as presented in the NPA.

Section 8B.09 STOP HERE WHEN FLASHING Sign (R8-10, R8-10a)

Option:

The STOP HERE WHEN FLASHING (R8-10, R8-10a) sign (see Figure 8B-1) may be used at a grade crossing to inform drivers of the location of the stop line or the point at which to stop when the flashing-light signals (see Section 8D.02) are activated.

Section 8B.10 Comments: NCUTCD agrees with 8B.10 as presented in the NPA.

Section 8B.10 STOP HERE ON RED Sign (R10-6, R10-6a)

Support:

The STOP HERE ON RED (R10-6, R10-6a) sign (see Figure 8B-1) defines and facilitates observance of stop lines at traffic control signals.

Option:

A STOP HERE ON RED sign may be used at locations where highway vehicles frequently violate the stop line or where it is not obvious to road users where to stop.

Guidance:

If possible, stop lines should be placed at a point where the highway vehicle driver has adequate sight distance along the track.

Section 8B.11 Comments: NCUTCD agrees with 8B.11 as presented in the NPA.

Section 8B.11 EXEMPT Grade Crossing Plaques (R15-3P, W10-1aP)

Option:

When authorized by law or regulation, an EXEMPT (R15-3P) plaque (see Figure 8B-1) with a white background may be used below the Crossbuck sign or Number of Tracks plaque, if present, at the grade crossing, and an EXEMPT (W10-1aP) plaque (see Figure 8B-4) with a yellow background may be used below the Grade Crossing Advance Warning (W10-1 through W10-4) sign.

Where neither the Crossbuck sign nor the advance warning signs exist for a particular highway-LRT grade crossing, an EXEMPT (R15-3P) plaque with a white background may be placed on its own post on the near right-hand side of the approach to the crossing.

Support:

These plaques inform drivers of highway vehicles carrying passengers for hire, school buses carrying students, or highway vehicles carrying hazardous materials that a stop is not required at certain designated grade crossings, except when rail traffic is approaching or occupying the grade crossing, or the driver's view is blocked.

Section 8B. 12 Comments: NCUTCD agrees with 8B.12 as presented in the NPA.

Section 8B.12 Light Rail Transit Only Lane Signs (R15-4 Series)

Support:

The Light Rail Transit Only Lane (R15-4 Series) signs (see Figure 8B-1) are used for multi-lane operations, where road users might need additional guidance on lane use and/or restrictions.

Option:

Light Rail Transit Only Lane signs may be used on a roadway lane limited to only LRT use to indicate the restricted use of a lane in semi-exclusive and mixed alignments.

Guidance:

If used, the R15-4a, R15-4b, and R15-4c signs should be installed on posts adjacent to the roadway containing the LRT tracks or overhead above the LRT only lane.

Option:

If the trackway is paved, preferential lane markings (see Chapter 3E) may be installed, but only in combination with Light Rail Transit Only Lane signs.

Support:

The trackway is the continuous way designated for LRT, including the entire dynamic envelope. Section 8C.06 contains more information regarding the dynamic envelope.

Section 8B.13 Comments: NCUTCD agrees with 8B.13 as presented in the NPA.

Section 8B.13 Do Not Pass Light Rail Transit Signs (R15-5, R15-5a)

Support:

A Do Not Pass Light Rail Transit (R15-5) sign (see Figure 8B-1) is used to indicate that motor vehicles are not allowed to pass LRT vehicles that are loading or unloading passengers where there is no raised platform or physical separation from the lanes upon which other motor vehicles are operating.

Option:

The R15-5 sign may be used in mixed-use alignments and may be mounted overhead where there are multiple lanes.

Instead of the R15-5 symbol sign, a regulatory sign with the word message DO NOT PASS STOPPED TRAIN (R15-5a) may be used (see Figure 8B-1).

Guidance:

If used, the R15-5 sign should be located immediately before the LRT boarding area.

Section 8B.14 Comments: NCUTCD agrees with 8B.14 as presented in the NPA.

Section 8B.14 No Motor Vehicles on Tracks Signs (R15-6, R15-6a)

Support:

The No Motor Vehicles On Tracks (R15-6) sign (see Figure 8B-1) is used where there are adjacent traffic lanes separated from the LRT lane by a curb or pavement markings.

Guidance:

The DO NOT ENTER (R5-1) sign should be used where a road user could wrongly enter an LRT only street.

Option:

A No Motor Vehicles On Tracks sign may be used to deter motor vehicles from driving on the trackway. It may be installed on a 3-foot flexible post between double tracks, on a post alongside the tracks, or overhead.

Instead of the R15-6 symbol sign, a regulatory sign with the word message DO NOT DRIVE ON TRACKS (R15-6a) may be used (see Figure 8B-1).

A reduced size of 12 x 12 inches may be used if the R15-6 sign is installed between double tracks.

Standard:

The smallest size for the R15-6 sign shall be 12 x 12 inches.

Section 8B.15 Comments: NCUTCD agrees with 8B.15 as presented in the NPA.

Section 8B.15 Divided Highway with Light Rail Transit Crossing Signs (R15-7 Series)

Option:

The Divided Highway with Light Rail Transit Crossing (R15-7) sign (see Figure 8B-1) may be used as a supplemental sign on the approach legs of a roadway that intersects with a divided highway where LRT equipment operates in the median. The sign may be placed beneath a STOP sign or mounted separately.

Guidance:

The number of tracks displayed on the R15-7 sign should be the same as the actual number of tracks.

Standard:

When the Divided Highway With Light Rail Transit Crossing sign is used at a four-legged intersection, the R15-7 sign shall be used. When used at a T-intersection, the R15-7a sign shall be used.

Section 8B.16 Comments: NCUTCD generally agrees with 8B.16 as presented in the NPA, but recommends a change to delete the Standard statement that requires the LOW GROUND CLEARANCE educational plaque remain in place for 3 years because the Option statement in Section 2A.09 allows educational plaques to be left in place as long as they are in serviceable condition. NCUTCD also recommends changes to convert the Guidance statement about word message warning signs and selective exclusion regulatory signs to an Option Statement because road authorities should have flexibility to determine which types of vehicles need to be addressed at a grade crossing.

Section 8B.16 Low Ground Clearance Grade Crossing Sign (W10-5)

Guidance:

If the highway profile conditions are sufficiently abrupt to create a hang-up situation for long wheelbase vehicles or for trailers with low ground clearance, the Low Ground Clearance Grade Crossing (W10-5) sign (see Figure 8B-4) should be installed in advance of the grade crossing.

Standard:

Because this symbol might not be readily recognizable by the public, the Low Ground Clearance Grade Crossing (W10-5) warning sign shall be accompanied by a LOW

GROUND CLEARANCE (W10-5P) educational plaque. ~~**The LOW GROUND CLEARANCE educational plaque shall remain in place for at least 3 years after the initial installation of the W10-5 sign (see Section 2A.09).**~~ (remove 3 year timeline so that the plaque remains inplace per Section 2A.09)

~~Guidance~~ Option:

Because other vehicle types and combinations also face the potential risk of hanging up at a grade crossing, word message warning signs and selective exclusion regulatory signs (see Section 2B.52) for specific vehicle types and combinations may ~~should~~ be used in addition to ~~, or in place of,~~ the Low Ground Clearance Grade Crossing (W10-5) sign. (change the Guidance statement to an Option statement to allow road authorities flexibility to make decisions on the type of vehicle to address)

Support:

While not all inclusive, some potential low ground clearance vehicles and combinations include single-unit trucks, buses, motor coaches, low-boy trailers, car carriers, and recreational vehicles.

Guidance:

Auxiliary plaques such as AHEAD, NEXT CROSSING, or USE NEXT CROSSING (with appropriate arrows), or a supplemental distance plaque should be placed below the W10-5 sign at the nearest intersecting highway where a vehicle can detour or at a point on the highway wide enough to permit a U-turn.

If engineering judgment of roadway geometric and operating conditions confirms that highway vehicle speeds across the tracks should be below the posted speed limit, a W13-1P advisory speed plaque should be posted.

Guidance:

A signed detour should be installed to guide potential hang-up vehicles to alternate nearby crossings to avoid the potential hang-up condition.

Support:

Information on ground clearance requirements at grade crossings is available in the "American Railway Engineering and Maintenance-of-Way Association's Engineering Manual," or the American Association of State Highway and Transportation Officials' "Policy on Geometric Design of Highways and Streets" (see Section 1A.05).

An inventory of crossings with low ground clearance concerns, including a list of potential vehicle types that could hang-up on the crossing, can be useful in tracking locations of low ground clearance crossings. Specific geometric conditions, known incidents, or anecdotal evidence of vehicle hang-ups can also be used to identify crossings with low ground clearance concerns.

Section 8B. 17 Comments: NCUTCD agrees with 8B.17 as presented in the NPA.

Section 8B.17 Light Rail Transit Approaching-Activated Blank-Out Warning Sign (W10-7)

Support:

The Light Rail Transit Approaching-Activated Blank-Out (W10-7) warning sign (see Figure 8B-4) supplements the traffic control devices to warn road users crossing the tracks of approaching LRT equipment.

Option:

A Light Rail Transit Approaching-Activated Blank-Out warning sign may be used at signalized intersections near highway-LRT grade crossings or at crossings controlled by STOP signs or automatic gates.

Support:

The provisions contained in Chapter 2L for blank-out signs are applicable to the W10-7 sign.

Section 8B.18 Comments: NCUTCD agrees with 8B.18 as presented in the NPA.

Section 8B.18 TRAINS MAY EXCEED 80 MPH Sign (W10-8)

Guidance:

Where trains are permitted to travel at speeds exceeding 80 mph, a TRAINS MAY EXCEED 80 MPH (W10-8) sign (see Figure 8B-4) should be installed facing road users approaching the highway-rail grade crossing.

If used, the TRAINS MAY EXCEED 80 MPH signs should be installed between the Grade Crossing Advance Warning (W10-1 through W10-4) sign (see Figure 8B-4) and the highway-rail grade crossing on all approaches to the highway-rail grade crossing. The locations should be determined based on specific site conditions.

Section 8B.19 Comments: NCUTCD agrees with 8B.19 as presented in the NPA.

Section 8B.19 NO TRAIN HORN Sign or Plaque (W10-9, W10-9P)

Standard:

Either a NO TRAIN HORN (W10-9) sign (see Figure 8B-4) or a NO TRAIN HORN (W10-9P) plaque shall be installed in each direction at each highway-rail grade crossing where a quiet zone has been established in compliance with 49 CFR Part 222. If a W10-9P plaque is used, it shall supplement and be mounted directly below the Grade Crossing Advance Warning (W10-1 through W10-4) sign (see Figure 8B-4).

Section 8B.20 Comments: NCUTCD agrees with 8B.20 as presented in the NPA.

Section 8B.20 Storage Space Signs (W10-11, W10-11a, W10-11b)

Guidance:

A Storage Space (W10-11) sign supplemented by a word message Storage Distance (W10-11a) sign (see Figure 8B-4) should be used where there is a highway intersection in close proximity to the grade crossing and an engineering study determines that adequate space is not available to store a design vehicle(s) between the highway intersection and the train or LRT equipment dynamic envelope.

The Storage Space (W10-11 and W10-11a) signs should be mounted in advance of the grade crossing at an appropriate location to advise drivers of the space available for highway vehicle storage between the highway intersection and the grade crossing.

Option:

A Storage Space (W10-11b) sign (see Figure 8B-4) may be mounted beyond the grade crossing at the highway intersection under the STOP or YIELD sign or just prior to the signalized intersection to remind drivers of the storage space between the tracks and the highway intersection.

Standard:

The Storage Space sign shall not be used as a replacement for the required Advance Warning (W10-1) sign. If used, the Storage Space sign shall supplement the W10-1 sign and shall be mounted on a separate post.

Section 8B.21 Comments: NCUTCD agrees with 8B.21 as presented in the NPA.

Section 8B.21 Skewed Crossing Sign (W10-12)

Option:

The Skewed Crossing (W10-12) sign (see Figure 8B-4) may be used at a skewed grade crossing to warn road users that the tracks are not perpendicular to the highway.

Guidance:

If the Skewed Crossing sign is used, the symbol should show the direction of the crossing (near left to far right as shown in Figure 8B-4, the sign image, or the mirror image if the track goes from far left to near right).

Standard:

The Skewed Crossing sign shall not be used as a replacement for the required Advance Warning (W10-1) sign. If used, the Skewed Crossing sign shall supplement the W10-1 sign and shall be mounted on a separate post.

Section 8B.22 Comments: NCUTCD agrees with 8B.22 as presented in the NPA.

Section 8B.22 NO GATES OR LIGHTS Plaque (W10-13P)

Option:

The NO GATES OR LIGHTS (W10-13P) plaque (see Figure 8B-4) may be mounted below the Grade Crossing Advance Warning (W10-1 through W10-4) sign at grade crossings that are not equipped with automatic gates or automated signals.

Section 8B.23 Comments: NCUTCD agrees with 8B.23 as presented in the NPA.

Section 8B.23 Next Crossing Plaques (W10-14P, W10-14aP)

Option:

The NEXT CROSSING (W10-14P) plaque may be mounted below the Low Ground Clearance (W10-5) sign (see Section 8B.16) or Skewed Crossing (W10-12) sign to indicate to a road user that the warning is associated with the next grade crossing. This plaque may be used where multiple grade crossings exist in close proximity to one another.

The USE NEXT CROSSING (W10-14aP) plaque may be mounted below the Low Ground Clearance (W10-5) sign (see Section 8B.16) to advise a road user with a low clearance load to

use the crossing after the upcoming crossing to avoid encountering a low ground clearance situation.

Section 8B.24 Comments: NCUTCD agrees with 8B.24 as presented in the NPA.

Section 8B.24 ROUGH CROSSING Plaque (W10-15P)

Option:

The ROUGH CROSSING (W10-15P) plaque may be mounted below the Grade Crossing Advance Warning (W10-1 through W10-4) sign on the approach to a grade crossing to provide supplemental information that the surface or condition of the grade crossing might require a reduced speed or some other appropriate action by the road user.

If the grade crossing is rough, word message signs such as BUMP, DIP, or ROUGH CROSSING may be installed. A W13-1P advisory speed plaque may be installed below the word message sign in advance of rough crossings.

Section 8B.25 Comments: NCUTCD agrees with 8B.25 as presented in the NPA.

Section 8B.25 Light Rail Transit Station Sign (I-12)

Option:

The Light Rail Transit Station (I-12) sign (see Section 2H.01) may be used to direct road users to an LRT station or boarding location. It may be supplemented by the name of the transit system and by arrows as provided in Section 2D.08.

Section 8B.26 Comments: NCUTCD agrees with 8B.26 as presented in the NPA.

Section 8B.26 Emergency Notification System Sign (I-13)

Standard:

Emergency Notification System (I-13) signs (see Figure 8B-5) shall be installed on each approach at all highway-rail grade crossings, and at all highway-LRT grade crossings on semi-exclusive alignments, to provide information to road users so that they can notify the railroad company or LRT agency about emergencies or malfunctioning traffic control devices.

When Emergency Notification System signs are used at a highway-rail grade crossing, they shall, at a minimum, include the USDOT grade crossing inventory number and the emergency contact telephone number.

When Emergency Notification System signs are used at a highway-LRT grade crossing, they shall, at a minimum, include a unique crossing identifier and the emergency contact telephone number.

The minimum width of the Emergency Notification System sign shall be 12 inches and the minimum height shall be 9 inches. The lettering on Emergency Notification System signs for the telephone number, the grade crossing inventory number, and the explanation of the purpose of the sign shall be composed of numerals and upper-case letters that are at least 1 inch in height.

Emergency Notification System signs shall be retroreflective.

Except as provided in Paragraph 7, Emergency Notification System signs shall have a white legend and border on a blue background.

Option:

The seven-character grade crossing inventory number may be shown on the sign as a black legend on a white rectangular background.

Guidance:

Except as provided in Paragraph 12, Emergency Notification System signs should be attached to the Crossbuck Assemblies or grade crossing signal masts on the right-hand side of each roadway approach to the grade crossing rather than on the railroad or LRT signal control equipment housings. Emergency Notification System signs should be oriented so the face of the sign is approximately parallel to the edge of the roadway or pathway and is visible to road users or pathway users.

The Emergency Notification System signs should be positioned so as to not obstruct any traffic control devices or limit the view of rail traffic approaching the grade crossing.

Emergency Notification System signs mounted on Crossbuck Assemblies or signal masts should only be large enough to provide the necessary contact information. Use of larger signs that might obstruct the view of rail traffic or other highway vehicles should be avoided.

At station crossings, Emergency Notification System signs or information should be posted in a conspicuous location.

Option:

Emergency Notification System signs may be located on a separate post.

Additional Emergency Notification System signs may be installed at a grade crossing.
