

comments from the City of Tucson, Arizona, and ATSSA in support of the Crossbuck Shield sign. Sixteen commenters representing the NCUTCD and its railroad technical committee, railroad owners and associations, State and local DOTs, and private citizens expressed opposition to the use of the Crossbuck Shield sign, suggesting that consideration of these proposed changes be deferred pending the NCUTCD's consideration of the recommendations of NCHRP Report 470⁶¹ regarding requiring the display of a YIELD sign or a STOP sign where appropriate, in conjunction with the Crossbuck sign. Given the strong response opposing the proposal, the FHWA believes that the proposal of the Crossbuck Shield was premature and removes all text and graphic references regarding the Crossbuck Shield sign from this final rule. States currently using the Crossbuck Shield sign under approved experimentations may request an extension in writing from the FHWA to continue experimental use.

Also, the FHWA revises the second STANDARD statement to clarify the placement of retroreflective white material on the front and back of the supports for highway-rail grade crossing Crossbuck signs, to within 0.6 m (2 ft) above the edge of the roadway, except on the side of those supports where a STOP or YIELD sign or flashing lights have been installed, or on the back side of supports for Crossbuck signs installed on one-way streets. In the NPA, the FHWA proposed a distance of 0.3 m (1 ft) from ground level, however the FHWA revises the wording in this final rule to reflect the many comments that FHWA received from the NCUTCD and its railroad technical committee, railroad owners and operators, State DOTs in regions where snowfall is common, and private citizens suggesting that 0.6 m (2 ft) was more appropriate due to potential maintenance problems in northern States associated with snow. In addition, the change from "near ground level" to "above the edge of the roadway" responds to many of the same commenters who suggested that referencing to the height of the edge of the roadway promotes a more uniform display and is more consistent with other sections of the MUTCD.

Additionally, the FHWA received one comment from the Connecticut DOT regarding the second paragraph of the GUIDANCE statement relating to

minimum lateral clearance for the nearest edge of the Crossbuck sign to the shoulder or the traveled way. The Connecticut DOT indicated that the 3.7 m (12 ft) requirement seemed excessive and could affect the motorist's sight to the sign due to physical limitations in rural areas. The NPA did not propose any significant changes to this statement, rather the NPA included editorial changes to add that this GUIDANCE refers to the "minimum" lateral clearance and to clarify that the greater of 1.8 m (6 feet) from the edge of the shoulder or 3.7 m (12 ft) from the edge of the traveled way in rural areas (whichever is greater) should be used. Because this is a GUIDANCE, if there is a good engineering reason for placing the sign closer to the edge of the roadway, agencies may do so. The FHWA adopts the language as proposed in the NPA with one punctuation revision.

318. In Section 8B.04 Highway-Rail Grade Crossing Advance Warning Signs (W10 series) (numbered Section 8B.03 in the NPA), the FHWA revises the first STANDARD statement, item A, to better define where Highway-Rail Grade Crossing Advance Warning (W10-1) signs are not required on an approach to a crossing from a T-intersection with a parallel highway. Five commenters from the NCUTCD, the Utah Transit Authority, a traffic engineering consultant and private citizens opposed the revision, stating that the wording is repeated in the first paragraph of the second STANDARD statement. One commenter from the Nevada DOT supported the revisions. The FHWA declines deleting item A because it discusses a specific situation for which no W10-1 sign is required on an approach to a grade crossing. Item A refers only to "T-intersections" where W10-3 signs are used in both directions of the parallel highway. Item A covers approaches where all vehicles crossing the track have turned onto the approach from the parallel highway, whereas text in the second STANDARD statement covers all intersections including 4-way intersections and T-intersections where the track crosses the top of the intersection. The FHWA adopts the wording as proposed in the NPA.

Additionally, the FHWA revises the second STANDARD statement to clarify the proper use of the W10-2, W10-3, and W10-4 advance warning signs if the distance from the parallel highway to the railroad tracks is less than 30 m (100 feet). The FHWA received comments from the Kansas DOT and Yakima County, Washington, regarding these changes. The Kansas DOT suggested that these changes would result in the

addition of too many additional railroad signs at a high cost to local jurisdictions and limited benefit to the traveling public. The FHWA believes that if the crossing is within 100 feet of the parallel highway, it is important for adequate safety that turning drivers are warned that they will encounter a crossing soon after turning.

Yakima County, Washington, suggested that these signs are a combination of railroad crossing warning and intersection warning signs, and therefore should be placed in accordance with Chapter 2A and Table 2C-4. The FHWA agrees and revises the statement in this final rule to include placing the signs in accordance with the guidelines for Intersection Warning Signs in Table 2C-4.

319. In Section 8B.06 Turn Restrictions During Preemption (numbered Section 8B.05 in the NPA), the FHWA received several comments from members of the NCUTCD Railroad and Light Rail Transit Committee stating that the committee recommended deleting the track image that appears in the center of the R3-1a and R3-2a signs, and to call these signs R3-1 and R3-2, because they would become identical to the turn prohibition signs in Chapter 2B. The committee felt that track depiction is unnecessary and clutters the signs. The FHWA acknowledges that these symbol signs involving tracks may need to be re-designed to enhance clarity and legibility, but rather than to use the R3-1 and R3-2 signs, the FHWA withdraws the R3-1a and R3-2a signs (with tracks) as proposed in the NPA and reassigns these signs as word message signs "NO LEFT/RIGHT TURN ACROSS TRACKS" in this final rule. The FHWA believes that it is important to use signs that clearly convey that turning across the tracks is prohibited, not necessarily all turns at a location.

320. The FHWA adds a new section titled, "Section 8B.10 STOP HERE WHEN FLASHING Sign (R8-10)" (numbered Section 8B.09 in the NPA), which contains an OPTION statement describing the use of the STOP HERE WHEN FLASHING (R8-10) sign as it relates to highway-rail grade crossings. The FHWA received one comment from NCUTCD in support of the new section and one comment from the Ohio DOT suggesting that the FHWA revise the arrow on the STOP HERE WHEN FLASHING (R8-10) sign from a tapered shaft arrow to a straight shaft arrow. The FHWA agrees and adopts this change.

321. The FHWA adds a new section titled, "Section 8B.11 STOP HERE ON RED Sign (R10-6)" (numbered Section 8B.10 in the NPA), which contains SUPPORT, OPTION, and GUIDANCE

⁶¹ NCHRP Report 470, "Traffic Control Devices for Passive Railroad-Highway Grade Crossings", 2002, is available for downloading from the Transportation Research Board at the following URL: http://gulliver.trb.org/publications/nchrp/nchrp_rpt_470-a.pdf