

National Committee on Uniform Traffic Control Devices

12615 West Keystone Drive * Sun City West, AZ, 85375
Telephone (623)680-9592 * e-mail: ncutcd@aol.com

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Item No.: 18B-RW-01

NCUTCD Proposal for Changes to the Manual on Uniform Traffic Control Devices

TECHNICAL COMMITTEE: Regulatory & Warning Signs Committee and Signals Technical Committee
ITEM NUMBER: 18B-RW-01
TOPIC: R10-23, CROSSWALK STOP ON RED signs for Pedestrian Hybrid Beacon (PHB) locations
ORIGIN OF REQUEST: Signals Technical Committee Representative (Richard Nassi). RW and SIG Technical Committees Joint Task force: Ross Oyen (RWSTC) (chair), Richard Nassi (STC), Lee Roadifer (RWSTC), Tom Heydel (RWSTC)
AFFECTED SECTIONS OF MUTCD: Section 2B.53 and 4F.02

DEVELOPMENT HISTORY:

- Task force: 2-1-18, revised 2-2-18, revised 2-14-18, updated 11-24-18, updated 1-09-19
- Approved by RW Technical Committee: 06/20/2018
- Approved by SIGNAL Technical Committee: 06/20/2018
- Approved by RW Technical Committee following sponsor comments: 01/09/2019
- Approved by SIGNAL Technical Committee following sponsor comments: 01/09/2019
- Approved by NCUTCD Council: 01/10/2019

This is a proposal for recommended changes to the MUTCD that has been approved by the NCUTCD Council. This proposal does not represent a revision of the MUTCD and does not constitute official MUTCD standards, guidance, or options. It will be submitted to FHWA for consideration for inclusion in a future MUTCD revision. The MUTCD can be revised only through the federal rulemaking process.

SUMMARY:

When Pedestrian Hybrid Beacons (PHBs) were first installed in 2000 in Tucson, Arizona the R10-23 (CROSSWALK STOP ON RED) sign was used, along with a temporary sign (FLASHING RED, STOP, PROCEED WHEN SAFE) to inform drivers they may proceed when crossing was clear. Many agencies started using other signs such as pedestrian warning sign (W11-2), the school warning sign (S1-1) or the Pedestrian/Bicycle combination sign (W11-15) and other signs. The R10-23 sign is a SHALL condition in Section 4F.02.

Many States and other municipalities have used PHB's for many years and find that the R10-23 sign is no longer required since drivers understand that they have to stop on a red indication.



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34 **DISCUSSION:**

35 The consistent meaning throughout the MUTCD of a flashing red signal indication (Section
36 4D.04, item F of paragraph 3) is that a road user must come to a complete stop and then proceed
37 only when it is safe to do so subject to the rules applicable after making a stop at a STOP sign.
38 This same consistent meaning applies to traffic control signals (Chapter 4D, pedestrian hybrid
39 beacons (Chapter 4F), emergency-vehicle hybrid beacons (Section 4G.04), intersection control
40 beacons (Section 4L.02), stop beacons (Section 4L.05), and grade crossing flashing-light signals
41 (Section 8C.02). (Source: Bruce Friedman email of August 12, 2016).

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43 The R10-23 CROSSWALK STOP ON RED sign should be an optional sign and the practitioner
44 should be allowed to determine the need for the sign based on engineering judgment.

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46 **RECOMMENDED MUTCD CHANGES**

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48 The following present the proposed changes to the current MUTCD within the context of the
49 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
50 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
51 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double
52 underline for additions and ~~green double strikethrough~~ for deletions. In some cases, background
53 comments may be provided with the MUTCD text. These comments are indicated by
54 highlighted light blue in brackets.

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56 **Chapter 2B. REGULATORY SIGNS, BARRICADES, AND GATES**

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58 **Section 2B.53 Traffic Signal Signs (R10-5 through R10-30)**

59 Option:

60 01 To supplement traffic signal control, Traffic Signal signs R10-5 through R10-30 may be
61 used to regulate road users.

62 02 Traffic Signal signs (see Figure 2B-27) may be installed at certain locations to clarify signal
63 control. Among the legends that may be used for this purpose are LEFT ON GREEN ARROW
64 ONLY (R10-5), STOP HERE ON RED (R10-6 or R10-6a) for observance of stop lines, DO
65 NOT BLOCK INTERSECTION (R10-7) for avoidance of traffic obstructions, USE LANE(S)
66 WITH GREEN ARROW (R10-8) for obedience to lane-use control signals (see Chapter 4M),
67 LEFT TURN YIELD ON GREEN (symbolic circular green) (R10-12), and LEFT TURN YIELD
68 ON FLASHING RED ARROW AFTER STOP (R10-27).

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Figure 2B-27 Traffic Signal Signs and Plaques



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Figure 2B-27 follows Section 2B.54 in the 2009 MUTCD. It is shown here for reference.

Guidance:

03 If used, the LEFT ON GREEN ARROW ONLY (R10-5) sign, the LEFT TURN YIELD ON GREEN (symbolic circular green) (R10-12) sign, or the LEFT TURN YIELD ON FLASHING RED ARROW AFTER STOP (R10-27) sign should be located adjacent to the left-turn signal face.

Option:

04 If needed for additional emphasis, an additional LEFT TURN YIELD ON GREEN (symbolic circular green) (R10-12) sign with an AT SIGNAL (R10-31P) supplemental plaque (see Figure 2B-27) may be installed in advance of the intersection.

05 In situations where traffic control signals are coordinated for progressive timing, the Traffic Signal Speed (I1-1) sign may be used (see Section 2H.03).

Standard:

06 The CROSSWALK STOP ON RED (symbolic circular red) (R10-23) sign (see Figure 2B-27) shall only be used in conjunction with pedestrian hybrid beacons (see Section 4F.02).

07 The EMERGENCY SIGNAL (R10-13) sign (see Figure 2B-27) shall be used in conjunction with emergency-vehicle traffic control signals (see Section 4G.02).

08 The EMERGENCY SIGNAL—STOP ON FLASHING RED (R10-14 or R10-14a) sign (see Figure 2B-27) shall be used in conjunction with emergency-vehicle hybrid beacons (see Section 4G.04).

Option:

09 In order to remind drivers who are making turns at a signalized intersection to yield to or stop for pedestrians, bicycles or both, a Turning Vehicles Yield to (Stop for) Pedestrians (R10-15, R10-15a), Bicycles (R10-15x) or Pedestrians and Bicycles (R10-15xy) sign (see Figure 2B-27) may be used. (approved by Council June 28, 2014, Attachment # 31, Bicycle # 9, 14B.BIK.02)

102 **Standard:**
103 **09a The Turning Vehicles Stop for Pedestrians (R10-15a) sign shall only be used in**
104 **jurisdictions where laws, ordinances or resolutions specifically require that a driver must**
105 **stop for a pedestrian.** (approved by Council 1/06/2017, RWSTC, 16A.RW.02)

106 **Option:**
107 10 A U-TURN YIELD TO RIGHT TURN (R10-16) sign (see Figure 2B-27) may be installed
108 near the left-turn signal face if U-turns are allowed on a protected left-turn movement on an
109 approach from which a right-turn GREEN ARROW signal indication is simultaneously being
110 displayed to drivers making a right turn from the conflicting approach to their left.

111 10a **A U-TURN SIGNAL (R10-XX) sign (see Figure 2B-27) may be installed adjacent to the**
112 **signal face that exclusively controls a u-turn movement.** (approved by Council 6/20/2009,
113 RWSTC)

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115 **ADD sign R10-15a to Figure 2B.27. Add * fluorescent yellow-green background color may**
116 **be used instead of yellow for this sign.** (approved by Council 1-6-2017, 16A.RW.02)



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121 **R10-15x 30 x 30 add to sign details, Figure 2B-27. Add * fluorescent yellow-green**
122 **background color may be used instead of yellow for this sign. 14B.BIK.02**

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126 **R10-15xy 30 x 36 add to sign details, Figure 2B-27. Add * fluorescent yellow-green**
127 **background color may be used instead of yellow for this sign. 14B.BIK.02**

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129 **CHAPTER 4F. PEDESTRIAN HYBRID BEACONS**

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131 **Section 4F.01 Application of Pedestrian Hybrid Beacons**

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133 Support:

134 01 A pedestrian hybrid beacon is a special type of hybrid beacon used to warn and control
135 traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked
136 crosswalk.

137 Option:

138 02 A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian
139 crossings at a location that does not meet traffic signal warrants (see Chapter 4C), or at a location
140 that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to
141 not install a traffic control signal.

142 Standard:

143 03 **If used, pedestrian hybrid beacons shall be used in conjunction with signs and
144 pavement markings to warn and control traffic at locations where pedestrians enter or
145 cross a street or highway. A pedestrian hybrid beacon shall only be installed at a marked
146 crosswalk.**

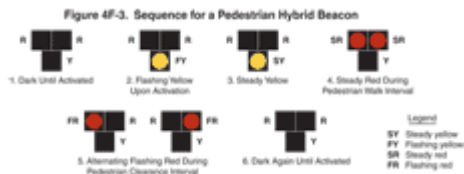
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148 **Section 4F.02 Design of Pedestrian Hybrid Beacons**

149 Standard:

150 01 Except as otherwise provided in this Section, a pedestrian hybrid beacon shall meet the
151 provisions of Chapters 4D and 4E.

152 02 A pedestrian hybrid beacon face shall consist of three signal sections, with a
153 CIRCULAR YELLOW signal indication centered below two horizontally aligned
154 CIRCULAR RED signal indications (see Figure 4F-3).

155 **Figure 4F-3 Sequence for a Pedestrian Hybrid Beacon**



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157 03 **When an engineering study finds that installation of a pedestrian hybrid beacon is
158 justified, then:**

- 159 **A. At least two pedestrian hybrid beacon faces shall be installed for each approach of**
- 160 **the major street,**
- 161 **B. A stop line shall be installed for each approach to the crosswalk,**
- 162 **C. A pedestrian signal head conforming to the provisions set forth in Chapter 4E shall**
- 163 **be installed at each end of the marked crosswalk, and**
- 164 **D. The pedestrian hybrid beacon shall be pedestrian actuated.**
- 165 **E. If a pedestrian beacon is installed at or immediately adjacent to an intersection with**
- 166 **a side road, vehicular traffic on the side road shall be controlled by STOP signs.**
- 167 **(Approved by Council June 23, 2011 – 11A-STC-01.)**
- 168

169 *Guidance:*

170 *04 When an engineering study finds that installation of a pedestrian hybrid beacon is justified,*
171 *then:*

172 ~~*A. The pedestrian hybrid beacon should be installed at least 100 feet from side streets or*~~
173 ~~*driveways that are controlled by STOP or YIELD signs,*~~

174 ~~*A*~~*B. Parking and other sight obstructions should be prohibited for at least 100 feet in*
175 *advance of and at least 20 feet beyond the marked crosswalk, or site accommodations*
176 *should be made through curb extensions or other techniques to provide adequate sight*
177 *distance,*

178 ~~*B*~~*C. The installation should include suitable standard signs and pavement markings, and*

179 ~~*C*~~*D. If installed within a signal system, the pedestrian hybrid beacon should be coordinated.*

180 ***(Approved by Council June 23, 2011 – 11A-STC-01.)***

181 *05 On approaches having posted or statutory speed limits or 85th-percentile speeds in excess of*
182 *35 mph and on approaches having traffic or operating conditions that would tend to obscure*
183 *visibility of roadside hybrid beacon face locations, both of the minimum of two pedestrian hybrid*
184 *beacon faces should be installed over the roadway.*

185 *06 On multi-lane approaches having a posted or statutory speed limits or 85th-percentile*
186 *speeds of 35 mph or less, either a pedestrian hybrid beacon face should be installed on each side*
187 *of the approach (if a median of sufficient width exists) or at least one of the pedestrian hybrid*
188 *beacon faces should be installed over the roadway.*

189 *07 A pedestrian hybrid beacon should comply with the signal face location provisions*
190 *described in Sections 4D.11 through 4D.16.*

191 ***Standard:***

192 ~~***08—A CROSSWALK STOP ON RED (symbolic circular red) (R10-23) sign (see Section***~~
193 ~~***2B.53) shall be mounted adjacent to a pedestrian hybrid beacon face on each major street***~~
194 ~~***approach. If an overhead pedestrian hybrid beacon face is provided, the sign shall be***~~
195 ~~***mounted adjacent to the overhead signal face.***~~

196 *Option:*

197 *08 A CROSSWALK STOP ON RED (symbolic circular red) (R10-23) sign (see Section 2B.53)*
198 *may be mounted adjacent to a pedestrian hybrid beacon face on each major street approach.*

199 *Guidance:*

200 *08a If an overhead pedestrian hybrid beacon face is provided and an R10-23 sign is used, the*
201 *sign should be mounted adjacent to the overhead signal face.*

202 *Option:*

203 *09 A Pedestrian (W11-2) warning sign (see Section 2C.50) with an AHEAD (W16-9P)*
204 *supplemental plaque may be placed in advance of a pedestrian hybrid beacon. A warning beacon*
205 *may be installed to supplement the W11-2 sign.*

206 *Guidance:*

207 *10 If a warning beacon supplements a W11-2 sign in advance of a pedestrian hybrid beacon, it*
208 *should be programmed to flash only when the pedestrian hybrid beacon is not in the dark mode.*

209 ***Standard:***

210 ***11 If a warning beacon is installed to supplement the W11-2 sign, the design and location***
211 ***of the warning beacon shall comply with the provisions of Sections 4L.01 and 4L.03.***

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