



National Committee on Uniform Traffic Control Devices

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

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TECHNICAL COMMITTEE:	Signals Committee
ITEM NUMBER:	18B-SIG-01
TOPIC:	Pedestrian Signal Requirements
ORIGIN OF REQUEST:	Signals Technical Committee
AFFECTED SECTIONS OF MUTCD:	4D.02 Provisions for Pedestrians 4I.01 Pedestrian Signal Heads 4I.02 Application of Pedestrian Signal Heads

7 8 DEVELOPMENT HISTORY:

- 9 • Approved by Technical Committee: 06/21/2018
- 10 • Approved by NCUTCD Council: 01/11/2019

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

17 18 SUMMARY:

19 This proposal provides installation criteria and guidance for the application of pedestrian signal
20 heads at traffic control signals.

21 22 DISCUSSION

23 Practitioners are facing increased demand to accommodate pedestrians with general guidance.
24 Often, engineers must balance the pressure for pedestrian accommodations against budget
25 constraints. The MUTCD plays a key role in helping the practitioner. Throughout the country
26 there is a lack of uniformity on the provision of pedestrian signal heads at traffic control signals.
27 Some States install pedestrian signals at nearly every traffic signal where other States have far
28 fewer installations. There are many signalized intersections across the Country where there is
29 regular pedestrian activity without any provision of pedestrian signal heads. This proposal
30 bridges that gap by providing clear installation criteria. This proposal adds Standard language
31 that requires pedestrian signal installation for situations with the greatest need for pedestrian
32 signal timing while providing enough flexibility for engineers to consider the unique
33 requirements of every location.

34 Standard language in the current manual could be confusing to practitioners. The Standard
35 language in 4D.02, Provisions for Pedestrians, uses *Engineering Judgement* to determine when
36 pedestrian signal heads shall be provided. The Standard language in 4I.02, Application of
37 Pedestrian Signal Heads, defines four specific conditions when pedestrian signal heads shall be
38 used. To reduce any potential confusion both statements were combined into a single Standard
39 statement. Section 4I.02 was deleted and the Standard language from 4I.02 was moved to
40 Section 4D.02 and the old Standard in 4D.02 was deleted. In addition, a Guidance statement was
41 added which states that pedestrian signal heads should be installed when a marked crosswalk
42 exists at a traffic control signal. This change provides clear guidance on when pedestrian signal
43 heads need to be installed.

44
45 New Guidance language was provided in Section 4D.02 to clarify the need to consider pedestrian
46 signal heads when there is documented pedestrian demand. In addition, new Option language
47 was provided to allow vehicular signal faces to be used for pedestrians under limited conditions.

48
49 The new Standard, Guidance and Option in Section 4D.02 provide the practitioner with enough
50 guidance so that the old Guidance in Section 4I.02 is no longer needed and thus was deleted.

51
52 There will be concern that this proposal creates an unfunded mandate to install pedestrian signals
53 where they are not needed. This is not the case. Although, this proposal will now require
54 pedestrian signals at some locations where none exist, this proposal does not require pedestrian
55 signals in all situations at traffic signals. This proposal will provide practitioners with objective
56 criteria for the provision of pedestrian signal heads.

57
58 This is an important and timely issue that the MUTCD needs to take the lead on.

59 60 **RECOMMENDED MUTCD CHANGES**

61
62 The following present the proposed changes to the current MUTCD within the context of the
63 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
64 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
65 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double
66 underline for additions and ~~green double strikethrough~~ for deletions. In some cases, background
67 comments may be provided with the MUTCD text. These comments are indicated by
68 **[highlighted light blue in brackets]**.

69 70 **PART 4. SIGNALS**

71
72 **Section ~~4D.03~~ 4D.02 Provisions for Pedestrians [Numbering from Section 4D.03 to 4D.02**
73 **revised as per 14A-STC-01 approved in June 2014]**

74 Support:

75 01 Chapter ~~4E~~ contains additional information regarding pedestrian signals and Chapter 4F
76 contains additional information regarding pedestrian hybrid beacons.

77 *Guidance:*

78 02—~~The design and operation of traffic control signals should take into consideration the needs~~
79 ~~of pedestrian as well as vehicular traffic.~~

80 **Standard:**

81 02 The design and operation of traffic control signals shall take into consideration the
82 needs of all modes of traffic. [In the 2009 Manual this was a Standard statement which was
83 changed to Guidance, as approved per 14A-STC-01 in June 2014. We are proposing to change
84 the should to a shall and make this a standard statement again to emphasize the importance of
85 pedestrians. Based on sponsor comments we also changed “the needs of pedestrian as well as
86 vehicular traffic” to “the needs of all traffic”]

87 ~~03 If engineering judgment indicates the need for provisions for a given pedestrian~~
88 ~~movement, signal faces conveniently visible to pedestrians shall be provided by pedestrian~~
89 ~~signal heads (see Chapter 4E) or a vehicular signal face(s) for a concurrent vehicular~~
90 ~~movement.~~ [The old Standard statement, which was modified per 14A-STC-01 in June 2014 by
91 moving paragraph 2 to Guidance, is deleted and replaced with the Standard statement from 4I.02
92 to reduce the ambiguity between the two Standard statements. The statement in Section 4I.02 is
93 relocated to Section 4D.02, as shown below.]

94 02a Pedestrian signal heads shall be used in conjunction with vehicular traffic control
95 signals under any of the following conditions, unless the crossing is prohibited or as
96 provided in the Option in Paragraph 05a:

- 97 A. If the basis for traffic signal installation was justified by an engineering study
98 meeting either Warrant 4, Pedestrian Volume or Warrant 5, School Crossing (see
99 Chapter 4C);
- 100 B. If an exclusive pedestrian signal phase is provided with all conflicting vehicular
101 movements being stopped;
- 102 C. At an established signalized school crossing;
- 103 D. Where there are existing pedestrian accommodations and engineering judgment
104 determines that multi-phase signal indications (as with split-phase timing) would
105 tend to confuse or cause conflicts with pedestrians using a crosswalk guided only by
106 vehicular signal indications;

107
108 *Guidance:*

109 02b Pedestrian signal heads should be installed at each marked crosswalk at a location
110 controlled by a traffic control signal. [This is new language which was added to emphasize the
111 importance of installing pedestrian signal heads where there are marked crosswalks.]

112 ~~03 04 Accessible pedestrian signals (see Sections 4E.09 through 4E.13) that provide information~~
113 ~~in non-visual formats (such as audible tones, speech messages, and/or vibrating surfaces) should~~
114 ~~be provided where determined appropriate by engineering judgment.~~

115 ~~04 05 Where pedestrian movements regularly occur, pedestrians should be provided with sufficient~~
116 ~~time to cross the roadway by adjusting the traffic control signal operation and timing to provide~~
117 ~~sufficient crossing time every cycle or by providing pedestrian detectors.~~

118 ~~05 06 If it is necessary or desirable to prohibit certain pedestrian movements at a traffic control~~
119 ~~signal location, No Pedestrian Crossing (R9-3) signs (see Section 2B.51) should be used if it is~~
120 ~~not practical to provide a barrier or other physical feature to physically ~~prevent~~ discourage the~~
121 ~~pedestrian movements.~~

122 **Option:**

123 05a If the sum of the vehicular yellow change and red clearance interval times for the parallel
124 concurrent vehicular movement satisfies the calculated pedestrian clearance time for the
125 crosswalk, then vehicular signal faces for that vehicular movement that are conveniently visible
126 to pedestrians may be used instead of pedestrian signal heads.

127 [05b Pedestrian signal heads may be used under other conditions based on engineering](#)
128 [judgement.](#)

130 CHAPTER ~~4E~~. PEDESTRIAN CONTROL FEATURES

131 **[Renumbered from Chapter 4E to Chapter 4I, as per 14A-STC-01, approved June 2014]**

132 Section ~~4I.014E.01~~ Pedestrian Signal Heads

133 Support:

134 01 Pedestrian signal heads provide special types of traffic signal indications exclusively
135 intended for controlling pedestrian traffic. These signal indications consist of the illuminated
136 symbols of a WALKING PERSON (symbolizing WALK) and an UPRaised HAND
137 (symbolizing DONT WALK).
138

139 01a [See Section 4D.02 for information on when to use pedestrian signal heads.](#)

140 *Guidance:*

141 02 *Engineering judgment should determine the need for ~~separate pedestrian signal heads (see~~*
142 *~~Section 4D.03 and~~ accessible pedestrian signals (see Section 4E.09)*

143 Support:

144 03 Chapter 4F contains information regarding the use of pedestrian hybrid beacons and Chapter
145 4N contains information regarding the use of In-Roadway Warning Lights at unsignalized
146 marked crosswalks.

147
148 **~~Section 4I.024E.03 Application of Pedestrian Signal Heads~~ [Renumbered from Section 4E.03**
149 **to 4I.02, as per 14A-STC-01, approved June 2014]**

150 **Standard:**

151 ~~01—Pedestrian signal heads shall be used in conjunction with vehicular traffic control~~
152 ~~signals under any of the following conditions:~~

- 153 ~~A. If a traffic control signal is justified by an engineering study and meets either~~
154 ~~Warrant 4, Pedestrian Volume or Warrant 5, School Crossing (see Chapter 4C);~~
- 155 ~~B. If an exclusive signal phase is provided or made available for pedestrian~~
156 ~~movements in one or more directions, with all conflicting vehicular movements~~
157 ~~being stopped;~~
- 158 ~~C. At an established school crossing at any signalized location; or~~
- 159 ~~D. Where engineering judgment determines that multi-phase signal indications (as~~
160 ~~with split-phase timing) would tend to confuse or cause conflicts with pedestrians~~
161 ~~using a crosswalk guided only by vehicular signal indications~~

162
163 *Guidance:*

164 02—*Pedestrian signal heads should be used under any of the following conditions:*

- 165 ~~A. If it is necessary to assist pedestrians in deciding when to begin crossing the roadway in~~
166 ~~the chosen direction or if engineering judgment determines that pedestrian signal heads~~
167 ~~are justified to minimize vehicle-pedestrian conflicts;~~
- 168 ~~B. If pedestrians are permitted to cross a portion of a street, such as to or from a median~~
169 ~~of sufficient width for pedestrians to wait, during a particular interval but are not~~
170 ~~permitted to cross the remainder of the street during any part of the same interval;~~
171 ~~and/or~~

172 ~~C. — If no vehicular signal indications are visible to pedestrians, or if the vehicular signal~~
173 ~~indications that are visible to pedestrians starting a crossing provide insufficient~~
174 ~~guidance for them to decide when to begin crossing the roadway in the chosen~~
175 ~~direction, such as on one way streets, at T intersections, or at multi phase signal~~
176 ~~operations~~

177 **Option:**

178 ~~03 — Pedestrian signal heads may be used under other conditions based on engineering judgment.~~