



# National Committee on Uniform Traffic Control Devices

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Item No.: 20B-SIG-01

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

**TECHNICAL COMMITTEE:** Signals Technical Committee  
**ITEM NUMBER:** 20B-SIG-01  
**TOPIC:** Accessible Pedestrian Pushbutton Locations  
**ORIGIN OF REQUEST:** Signals Technical Committee  
**AFFECTED SECTIONS OF MUTCD:** 4I-06 Pedestrian Detectors

### DEVELOPMENT HISTORY:

- Approved by Technical Committee: 06/17/2020
- Revised by Technical Committee: 01/12/2021
- Approved by NCUTCD Council: 01/19/2021

*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:

This proposal does the following:

1. Provides a new Figure (4I-Y) showing the preferred placement of pedestrian detection on street corners with a single pedestrian access ramp serving two crosswalks: and,
2. Revises Figure 4I-X to be consistent with existing MUTCD text and AASHTO clear zone requirements.

### DISCUSSION

1. **Proposed Figure 4I-Y:** Very little guidance is provided for the placement of pedestrian detectors on street corners with a single pedestrian access ramp serving two crosswalks. The practice of using a single ramp to serve two crosswalks is not recommended because of the added complexities for pedestrians with disabilities. However, physical constraints frequently limit a corner to a single ramp. Positioning pedestrian detectors on corners with single access ramps is more challenging than on corners with two ramps because single ramp corners do not allow optimum placement to accommodate all types of disabilities. The needs of vision impaired pedestrians are different than those of mobility impaired pedestrians. The goal is to develop a design that, although not optimum, will

35 work for all disabilities. A revised figure is proposed which would clarify proper  
36 placement of pedestrian detectors while allowing for defined flexibility and latitude,  
37 where necessary, to accommodate unique conditions for a given location. These  
38 revisions are shown in a new Figure 4I-Y.

39 **Post Sponsor Comments:** The following revisions have been made to Figure 4I-Y: 1)  
40 The notes were revised to be consistent with the notes on Figure 4I-X; 2) The shaded  
41 areas designating permissible pushbutton location were pulled back 2.5 feet from the  
42 ramp flares and 1 foot from the top of the ramp to be in compliance with PROWAG; 3)  
43 The figure number in the heading was changed from 4I-X to 4I-Y; 4) The “preferred  
44 area” shading was changed from liner to radial; 5) Dashed lines were included around the  
45 “preferred area” in the legend; 6) The figure reference in Note 7 was corrected to reflect  
46 the correct figure number

- 47  
48 2. **Revision Figure 4I-X:** When the revisions were approved to Figure 4I-X at the January  
49 2020 National Committee meeting, the minimum distance between the pedestrian  
50 pushbutton and curb was incorrect. The figure showed a minimum distance of 1-foot, yet  
51 the text in Section 4I-06 Guidance clearly indicates the minimum distance is 1.5 feet  
52 which is compliant with the AASHTO clear zone requirements. This proposal changes  
53 the minimum distance from 1 foot to 1.5 feet to be consistent with existing MUTCD  
54 Guidance.

55 **Post Sponsor Comments:** The following revisions have been made to Figure 4I-X: 1)  
56 Note 5 was added to clarify the dimensions in the figure are referenced to the face of the  
57 curb; 2) Dashed lines were included around the “preferred area” in the figure legend; 3)  
58 The shaded areas designating permissible pushbutton location were pulled back 2.5 feet  
59 from the ramp flares and 1 foot from the top of the ramp to be in compliance with  
60 PROWAG; 4) The phrase “center of the intersection” was added to Note 1 to be  
61 consistent with Figure 4I-Y.

- 62  
63 3. **Post sponsor revisions to text:** 1) Under Guidance, note L was added to reinforce that  
64 pushbuttons should be located at least 2.5 feet away from the ramp flares and 1 foot away  
65 from the top of the ramp; 2) Line 159 (line 150 on this document), the word “typical” was  
66 included to address a sponsor comment.

## 67 68 **RECOMMENDED MUTCD CHANGES**

69  
70 The following present the proposed changes to the current MUTCD within the context of the  
71 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and  
72 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously  
73 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double  
74 underline for additions and ~~green double strikethrough~~ for deletions. In some cases, background  
75 comments may be provided with the MUTCD text. These comments are indicated by  
76 **[highlighted light blue in brackets]**.

PART 4. HIGHWAY TRAFFIC SIGNALS

CHAPTER ~~4E~~ 4I. ~~TRAFFIC CONTROL SIGNALS FOR FREEWAY ENTRANCE RAMP~~ PEDESTRIAN CONTROL FEATURES

Section ~~4E.08~~ 4I.065 **Pedestrian Detectors** [Renumbered from Section 4E.08 to 4I.06, as per 14A-STC-01, approved June 2014. When 4I.02 as per 14A-STC-01, approved June 2014 “Application of Pedestrian Signal Heads” was deleted per 18B-SIG-02 January 2019, 4I.06 was renumbered to 4I.05]

Option:

01 Pedestrian detectors may be pushbuttons or passive detection devices.

Support:

02 Passive detection devices register the presence of a pedestrian in a position indicative of a desire to cross, without requiring the pedestrian to push a button. Some passive detection devices are capable of tracking the progress of a pedestrian as the pedestrian crosses the roadway for the purpose of extending or shortening the duration of certain pedestrian timing intervals.

03 The provisions in this Section place pedestrian pushbuttons within easy reach of pedestrians who are intending to cross each crosswalk and make it obvious which pushbutton is associated with each crosswalk. These provisions also position pushbutton poles in optimal locations for installation of accessible pedestrian signals (see Sections ~~4E.09~~ 4J-01 through ~~4E.13~~ 4J-05).

Information regarding reach ranges and other important accessibility needs [Approved January 2020, 19B-SIG-03 Added in address sponsor comments concerning the proposed Standard language, being deleted, referencing specific details to ADAAG rather than provide specific specifications in the MUTCD] can be found in the “Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)” (see Section ~~1A.11~~ 1A.04). The provisions in this Section place pedestrian pushbuttons where pedestrians using wheelchairs or other mobility aids can readily actuate the pushbutton and quickly reach the access ramp.

03a These provisions place the pedestrian pushbutton close to the crosswalk where a pedestrian is more likely to use the pushbutton. [Approved January 2020, 19B-SIG-03 Added to provide more clarity to the practitioner on how to best determine placement of pedestrian signals]

Guidance:

04 *If pedestrian pushbuttons are used, they should be capable of easy activation requiring no more than 5 pounds of force, not require tight grasping, pinching, or twisting of the wrist, and be conveniently located near each end of the crosswalks. Except as provided in Paragraphs 5 and 6, pedestrian pushbuttons should be located to meet all of the following criteria (see ~~Figure 4E-3~~ Figure 4I-X [Approved January 2020 as per 19B-SIG-03] and Figure 4I-Y):*

- A. *Unobstructed and accessible within one or more of the reach ranges specified in Section 308, and from clear ground clearance as specified in Section 305, of the 2010 ADA Standards for Accessible Design adjacent to a level all-weather surface to provide access from a wheelchair;* [NPA proposed language]
- B. ~~Where there is an all-weather surface,~~ To provide [NPA proposed language] *a wheelchair accessible route from the pushbutton to the ramp;*
- ~~C. Between the edge of the crosswalk line (extended) farthest from the center of the intersection and the side of a curb ramp (if present), but not greater than 5 feet from said crosswalk line;~~ [Approved January 2020, 19B-SIG-03 Removed because it is often better for blind pedestrians to stand at the edge of the access ramp farthest from the intersection]

124 nearer the tangent section of the curb so as to provide clearer delineation of the edge of  
125 the roadway. The removed language does not allow this.]

126 C. On the side of the curb ramp which is farthest from the center of the intersection;  
127 [Approved January 2020, 19B-SIG-03 Added language attempts to provide more  
128 uniformity as well as greater separation between buttons on a corner]

129 D. Not greater than 10 feet from the edge of the associated curb ramp which is farthest from  
130 the center of the intersection; [Approved January 2020, 19B-SIG-03 Added language  
131 clarifies that the button should not be greater than 10 feet from the ramp]

132 E. Not greater than 5 feet from the outside edge of the marked crosswalk farthest from the  
133 center of the intersection; [Approved January 2020, 19B-SIG-03 Added language  
134 clarifies how close to the ramp the buttons should be placed]

135 F. Not farther from the crosswalk than the stop line is, if present;  
136 ~~G.~~ Between 1.5 and 6 feet from the edge face of the curb, or from the outside edge of the  
137 shoulder; (or if no shoulder exists, from the outside edge of the pavement); [NPA  
138 proposed language]

139 ~~H.~~ With the face of the pushbutton parallel to the crosswalk to be used; and  
140 ~~I.~~ At a mounting height of approximately 3.5 feet, but no more than 4 feet, above the  
141 sidewalk.

142 J. Allow a minimum 4-foot continuous clear width for a pedestrian access route. [Approved  
143 January 2020, 19B-SIG-03 Added language ensures there is enough space for  
144 wheelchairs to maneuver.]

145 K. Outside the ~~stoped area~~ flared side [NPA proposed language] of the curb ramp, if  
146 present. [Approved January 2020, 19B-SIG-03 Changed to reflect ITE comment  
147 and changed again in Council]

148 L. 2.5 feet minimum from the side of the ramp wing and 1 foot minimum from the top of the  
149 ramp. [In response to sponsor comments regarding the placement of the pushbutton next to the  
150 ramp wing, Approved January 2021, 20B-SIG-01]

151 *05 Where there are physical constraints that make it impractical to place the pedestrian*  
152 *pushbutton adjacent to a level all-weather surface, the surface should be as level as feasible.*

153 *06 Where there are physical constraints that make it impractical to place the pedestrian*  
154 *pushbutton between 1.5 and 6 feet from the edgeface of the curb; or from the outside edge of the*  
155 *shoulder; (or if no shoulder exists, from the edge of the pavement), it should not be farther than*  
156 *10 feet from the edgeface of curb; or from the outside edge of the shoulder; (or if no shoulder*  
157 *exists, from the edge of the pavement).* [NPA proposed language]

158 *07 Except as provided in Paragraph 8, where two pedestrian pushbuttons are provided on the*  
159 *same corner of a signalized location, the pushbuttons should be separated by a distance of at*  
160 *least 10 feet.*

161 Option:

162 *08 Where there are physical constraints on a particular corner that make it impractical to provide*  
163 *the 10-foot separation between the two pedestrian pushbuttons, ~~the pushbuttons may be placed~~*  
164 *~~closer together~~ or when an exclusive pedestrian phase is used at an intersection, and the*  
165 *pedestrian signals controlling the crosswalks on a given corner of the intersection both operate*  
166 *together such that the "WALK" indication is always simultaneous for both crosswalks the*  
167 *pushbuttons may be placed closer together or on the same pole.* [Revised June 2013, 14A-STC-  
168 01]

169 Support:

170 09 Figure 4Y-4 shows typical pedestrian pushbutton locations for a variety of situations.  
171 *09a Figure 4I-Y shows typical pedestrian pushbutton locations for use where a single ramp exists*  
172 *or is the only available alternative.*

173 **Standard:**

174 10 **If a pedestrian pushbutton is provided, a sign** (see Section 2B.52) shall **also** be **mounted**  
175 **adjacent to or integral with** **installed explaining the purpose and use of the** pedestrian  
176 **pushbuttons** **detector**; **explaining their purpose and use.**

177 Option:

178 11 At certain locations, a supplemental sign in a more visible location may be used to call  
179 attention to the pedestrian pushbutton.

180 **Standard:**

181 12 **The positioning of pedestrian pushbuttons and the legends on the pedestrian**  
182 **pushbutton signs shall clearly indicate which crosswalk signal is actuated by each**  
183 **pedestrian pushbutton.**

184 13 **If the pedestrian clearance time is sufficient only to cross from the curb or shoulder to a**  
185 **median of sufficient width for pedestrians to wait and the signals are pedestrian actuated,**  
186 **an additional pedestrian detector shall be provided in the median.**

187 *Guidance:*

188 14 *The use of additional pedestrian detectors on islands or medians where a pedestrian might*  
189 *become stranded should be considered.*

190 15 *If used, special purpose pushbuttons (to be operated only by authorized persons) should*  
191 *include a housing capable of being locked to prevent access by the general public and do not*  
192 *need an instructional sign.*

193 **Standard:**

194 16 **If used, a pilot light or other means of indication installed with a pedestrian pushbutton**  
195 **shall not be illuminated until actuation. Once it is actuated, the pilot light shall remain**  
196 **illuminated until the pedestrian's green or WALKING PERSON (symbolizing WALK)**  
197 **signal indication is displayed.**

198 ~~17 **If a pilot light is used at an accessible pedestrian signal location (see Sections 4E.09**~~  
199 ~~**through 4E.13), each actuation shall be accompanied by the speech message "wait."**~~

200 **[Revised June 2013, 14A-STC-01 Repeat of Paragraph 23 in Section 4E.11.]**

201 Option:

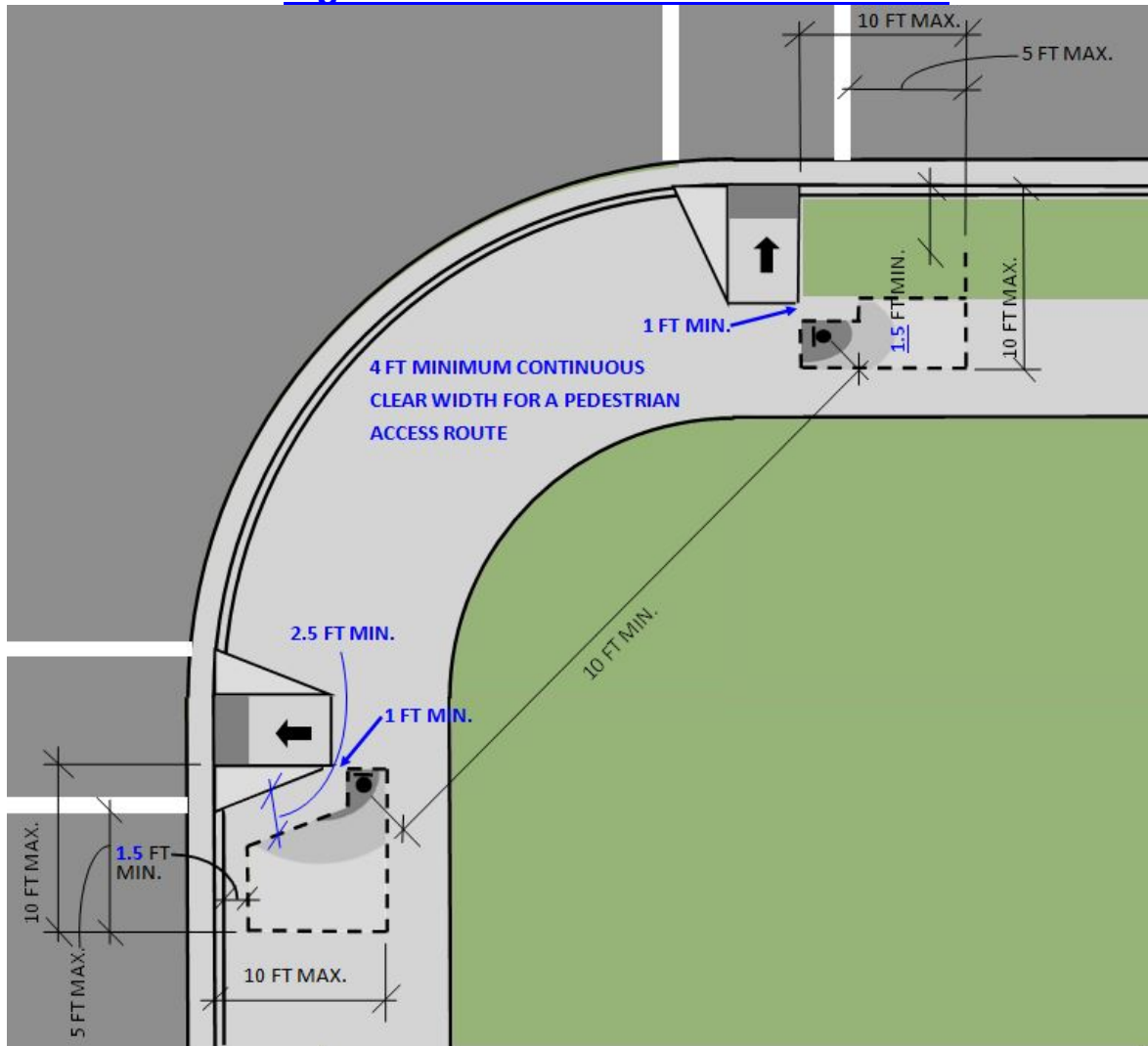
202 ~~17~~ **17** At signalized locations with a demonstrated need and subject to equipment capabilities,  
203 pedestrians with special needs may be provided with additional crossing time by means of an  
204 extended pushbutton press.

205 **Standard:**

206 ~~18~~ **18** **If additional crossing time is provided by means of an extended pushbutton press, a**  
207 **PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME (R10-32P) plaque**  
208 **(see Figure 2B-26) shall be mounted adjacent to or integral with the pedestrian pushbutton**  
209 **installed.** **[NPA proposed language]**

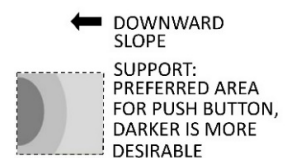
210

**Figure 4I-X. Pushbutton Location Area**



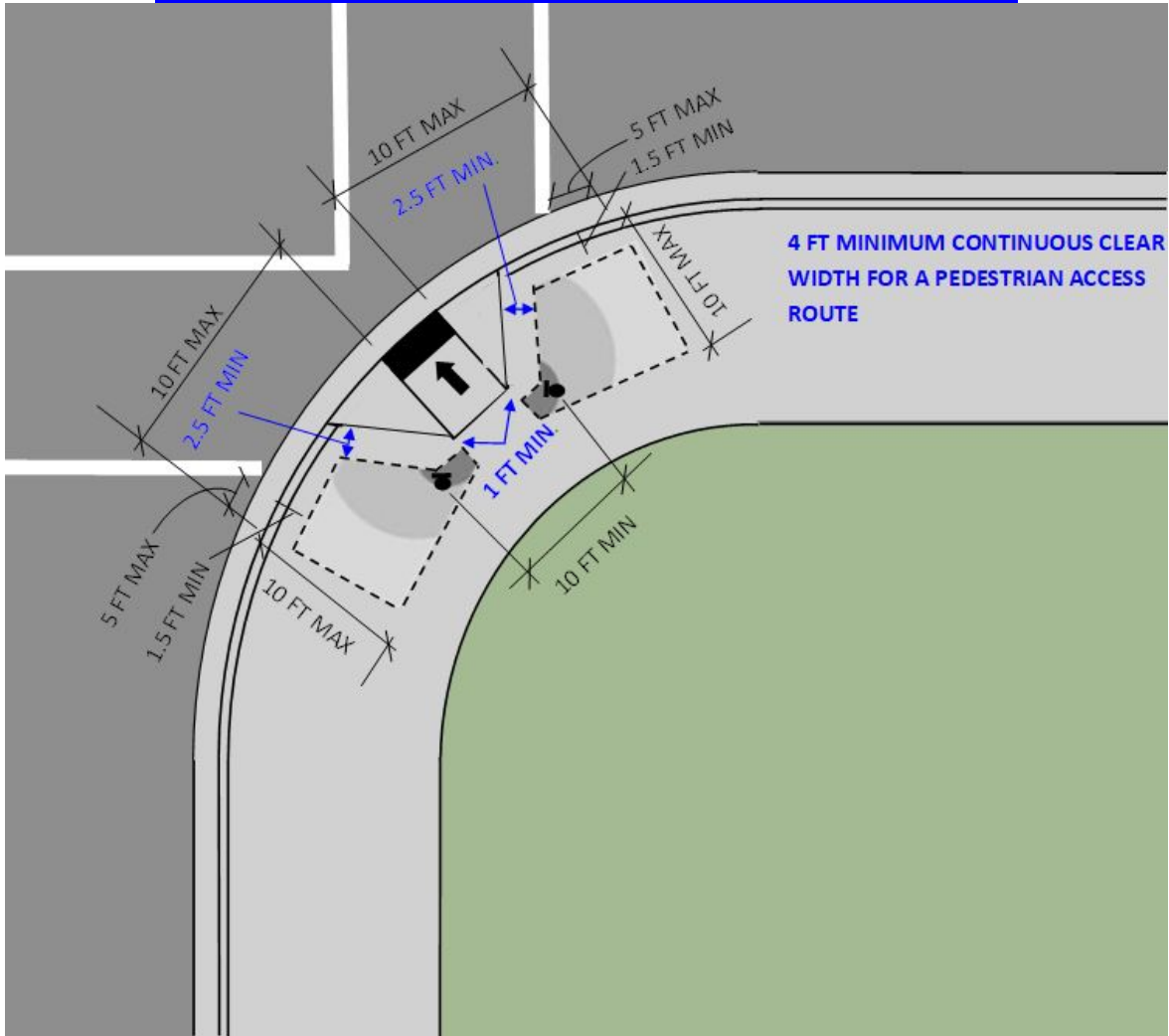
**NOTES:**

1. [No greater than 5 feet from the outside edge of the marked crosswalk farthest from the center of the intersection.](#)
2. [Not farther from the crosswalk than the stop line, if present.](#)
3. Any maximum (MAX) or minimum (MIN) dimensions shown are based on Guidance Statements.
4. Two pedestrian pushbuttons on a corner should be separated by [a minimum of 10 feet](#). The 10-foot dimension shown in this figure is in reference to the [placement of the pushbuttons within their respective areas](#) (see 4I.05).
5. [All dimensions referencing the curb are measured from the face of curb.](#)
6. Figure [4I-4](#) ~~4E-4~~ shows typical pushbutton locations.
7. [Allow a minimum 4-foot continuous clear width for a pedestrian access route.](#)
8. [2.5 feet minimum from the side of the ramp wing and 1 foot minimum from the top of the ramp.](#)



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**Figure 4I-XY. Pushbutton Location Area For Use Where A Single Ramp Exists Or Is The Only Available Alternative**



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**NOTES:**

1. This figure is shown for an existing ramp or when conditions preclude the installation of two ramps on a corner
2. No greater than 5 feet from the outside edge of a marked crosswalk farthest from the center of the intersection.
3. Not farther from the curb ramp than the stop line, if present.
4. Any maximum (MAX) or minimum (MIN) dimensions shown are based of Guidance Statements.
5. Two pedestrian pushbuttons on a corner should be separated by a minimum of 10 feet. The 10-foot dimension shown in this figure is in reference to the placement of the pushbuttons within their respective areas (see 4I.05).
6. All dimensions referencing the curb are measured from the face of curb.
7. Figure 4E-4 shows typical pushbutton locations.
8. Allow a minimum 4-foot continuous clear width for a pedestrian access route.
9. 2.5 feet minimum from the side of the ramp wing and 1 foot minimum from the top of the ramp.

