



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

6 **Federal Register Item Number:** 446-447 (see listing below)

7 **NPA MUTCD Section Number:** Chapter 4U

8 **Legend:** Base text shown in proposal is the NPA “clean” proposed text.

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- 10 • [NCUTCD recommendation for text to be added in final rule.](#)
 - 11 • ~~NCUTCD recommendation for text to be deleted in final rule.~~
 - 12 • [NCUTCD recommendation for text to be moved/relocated in final rule.](#)
 - 13 • NPA text that was not previously approved by NCUTCD but is now approved.
 - 14 • Explanatory note: [\[Note that explains purpose of recommended change.\]](#)

15 The following pages present NCUTCD recommendations for changes to the MUTCD NPA
16 proposed text, tables, and figures for Chapter 4U. Below is a short summary of the NCUTCD
17 position for each section of this chapter. A more detailed summary is provided at the beginning
18 of each section.

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- 20 • NPA #446, Section 4U.01: NCUTCD agrees with NPA content
 - 21 • NPA #447, Section 4U.02: Changes recommended based on Council action in spring 2021

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23 **Section 4U.01 Comments:** [NCUTCD agrees with 4U.01 as presented in the NPA.](#)

24 **Section 4U.01 Application of In-Roadway Warning Lights**

25 Support:

26 In-Roadway Warning Lights are special types of highway traffic signals installed in the
27 roadway surface to warn road users that they are approaching a condition on or adjacent to the
28 roadway that might not be readily apparent and might require the road users to reduce their speed
29 and/or come to a stop. This includes situations warning of marked school crosswalks, marked
30 midblock crosswalks, marked crosswalks on uncontrolled approaches, marked crosswalks in
31 advance of roundabouts as described in Chapter 3D, and other roadway situations involving
32 pedestrian crossings.

33 **Standard:**

34 **In-Roadway Warning Lights shall not be used for any application that is not described**
35 **in this Chapter.**

36 **When used, In-Roadway Warning Lights shall be flashed and shall not be steadily**
37 **illuminated.**

38 Support:

39 Steadily-illuminated lights installed in the roadway surface are considered to be internally-
40 illuminated raised pavement markers (see Section 3B.14).

41 Option:

42 In-Roadway Warning Lights may be flashed in a manner that includes a continuous flash of
43 varying intensity and time duration that is repeated to provide a flickering effect (see Section
44 4U.02).

45 *Guidance:*

46 *If used, In-Roadway Warning Lights should not exceed a height of 3/4 inch above the*
47 *roadway surface.*

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50 **Section 4U.02 Comments:** NCUTCD agrees with 4U.02 as presented in the NPA with editorial
51 changes.

52 **Section 4U.02 In-Roadway Warning Lights at Crosswalks**

53 Option:

54 In-Roadway Warning Lights may be installed at certain marked crosswalks, based on an
55 engineering study or engineering judgment, to provide additional warning to road users.

56 **Standard:**

57 **If used, In-Roadway Warning Lights at crosswalks shall be installed only at marked**
58 **crosswalks with applicable warning signs. They shall not be used at crosswalks controlled**
59 **by YIELD signs, STOP signs, traffic control signals, or pedestrian hybrid beacons.**

60 **(NCUTCD supports this revision because pedestrian hybrid beacons provide regulatory control,**
61 **while in-roadway warning lights provide enhanced warning control)**

62 **If In-Roadway Warning Lights are used at a crosswalk, the following requirements**
63 **shall apply:**

64 **A. Except as provided in Paragraphs 7 and 8, they shall be installed along both sides of**
65 **the crosswalk and shall span its entire length.**

66 **B. They shall initiate operation based on pedestrian actuation and shall cease operation**
67 **at a predetermined time after the pedestrian actuation or, with passive detection,**
68 **after the pedestrian clears the crosswalk.**

69 **C. They shall display a flashing yellow light when actuated. The flash rate shall be at**
70 **least 50, but no more than 60, flash periods per minute. If they are flashed in a**
71 **manner that includes a continuous flash of varying intensity and time duration that**
72 **is repeated to provide a flickering effect, the flickers or pulses shall not repeat at a**
73 **rate that is between 5 and 30 per second to avoid frequencies that might cause**
74 **seizures.**

75 **D. They shall be installed in the area between the outside edge of the crosswalk line and**
76 **10 feet from the outside edge of the crosswalk.**

77 **E. They shall face away from the crosswalk if unidirectional, or shall face away from**
78 **and across the crosswalk if bidirectional.**

79 **If used on one-lane, one-way roadways, a minimum of two In-Roadway Warning Lights**
80 **shall be installed on the approach side of the crosswalk. If used on two-lane roadways, a**
81 **minimum of three In-Roadway Warning Lights shall be installed along both sides of the**

82 **crosswalk. If used on roadways with more than two lanes, a minimum of one In-Roadway**
83 **Warning Light per lane shall be installed along both sides of the crosswalk.**

84 *Guidance:*

85 *If used, In-Roadway Warning Lights should be installed in the center of each travel lane, at*
86 *the center line of the roadway, at each edge of the roadway or parking lanes, or at other suitable*
87 *locations away from the normal tire track paths.*

88 *The location of the In-Roadway Warning Lights within the lanes should be based on*
89 *engineering judgment.*

90 *Option:*

91 *On one-way streets, In-Roadway Warning Lights may be omitted on the departure side of the*
92 *crosswalk.*

93 *Based on engineering judgment, the In-Roadway Warning Lights on the departure side of the*
94 *crosswalk on the left-hand side of a median may be omitted.*

95 *Unidirectional In-Roadway Warning Lights installed at crosswalk locations may have an*
96 *optional, additional yellow light indication in each unit that is visible to pedestrians in the*
97 *crosswalk to indicate to pedestrians in the crosswalk that the In-Roadway Warning Lights are in*
98 *fact flashing as they cross the street. These yellow lights may flash with and at the same flash*
99 *rate as the light module in which each is installed.*

100 *Guidance:*

101 *If used, the period of operation of the In-Roadway Warning Lights following each actuation*
102 *should be sufficient to allow a pedestrian crossing in the crosswalk to leave the curb or shoulder*
103 *and travel at a walking speed of 3.5 feet per second to at least the far side of the traveled way or*
104 *to a median of sufficient width for pedestrians to wait. Where pedestrians who walk slower than*
105 *3.5 feet per second, or pedestrians who use wheelchairs, routinely use the crosswalk, a walking*
106 *speed of less than 3.5 feet per second should be considered in determining the period of*
107 *operation.*

108 *An audible information device should be used with In-Roadway Warning Lights to provide*
109 *assistance for pedestrians with visual disabilities. (NCUTCD supports this as Guidance as*
110 *audible information is helpful to pedestrians with vision disabilities)*

111 **Standard:**

112 **If pedestrian push buttons (rather than passive detection) are used to actuate the In-**
113 **Roadway Warning Lights, a PUSH BUTTON TO TURN ON WARNING LIGHTS (R10-**
114 **25) sign (see Section 2B.6259) shall be installed explaining the purpose and use of the**
115 **pedestrian push button detector. (editorial)**

116 **Where the period of operation is sufficient only for crossing from a curb or shoulder to**
117 **a median of sufficient width for pedestrians to wait, median-mounted pedestrian actuators**
118 **shall be provided.**

119 **If an audible information device is used in conjunction with In-Roadway Warning**
120 **Lights, the audible information device shall not use vibrotactile indications or percussive**
121 **indications.**

122 *Guidance:*

123 *If an audible information device is used in conjunction with In-Roadway Warning Lights, the*
124 *audible message during the time that the lights are flashing should be a speech message that*
125 *says, "Yellow lights are flashing." The audible message should be spoken twice.*