

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

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Federal Register Item Number: 438-442 (see listing below)

NPA MUTCD Section Number: Chapter 4S

Legend: Base text shown in proposal is the NPA "clean" proposed text.

NCUTCD recommendation for text to be added in final rule.

- NCUTCD recommendation for text to be deleted in final rule.
- NCUTCD recommendation for text to be moved/relocated in final rule.
- NPA text that was not previously approved by NCUTCD but is now approved.
- Explanatory note: [Note that explains purpose of recommended change.]

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

- NPA #438, Section 4S.01: NCUTCD agrees with NPA content.
- NPA #439, Section 4S.02: NCUTCD agrees with NPA content.
- NPA #440, Section 4S.03: Changes recommended based on Council action in spring 2021.
- NPA #441, Section 4S.04: NCUTCD agrees with NPA content.
- NPA #442, Section 4S.05: NCUTCD agrees with NPA content.

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Section 4S.01 Comments: NCUTCD agrees with 4S.01 as presented in the NPA.

Section 4S.01 General Design and Operation of Flashing Beacons

Support:

A Flashing Beacon is a highway traffic signal with one or more signal sections that operates in a flashing mode. It can provide traffic control when used as an intersection control beacon (see Section 4S.02) or it can provide warning when used in other applications (see Sections 4S.03, 4S.04, and 4S.05).

Standard:

Flashing Beacon units and their mountings shall comply with the provisions of Chapters 4D and 4E, except as otherwise provided in this Chapter.

Beacons shall be flashed at a rate of not less than 50 or more than 60 times per minute. The illuminated period of each flash shall be a minimum of 1/2 and a maximum of 2/3 of the total cycle.

A beacon shall not be included within the border of a sign except for Interchange Exit Direction signs with advisory speed panels (see Section 2E.26).

There shall be two nominal diameter sizes for flashing beacon signal indications: 8 inches and 12 inches.

Guidance:

If used to supplement a warning or regulatory sign, the edge of the beacon signal housing should normally be located no closer than 12 inches outside of the nearest edge of the sign or from the nearest edge of any of the signs and plaques in a sign assembly.

Option:

An automatic dimming device may be used to reduce the brilliance of flashing yellow signal indications during night operation.

Section 4S.02 Comments: NCUTCD agrees with 4S.02 as presented in the NPA.

Section 4S.02 Intersection Control Beacon

Standard:

An Intersection Control Beacon shall consist of one or more signal faces directed toward each approach to an intersection. Each signal face shall consist of one or more signal sections of a standard traffic signal face, with flashing CIRCULAR YELLOW or CIRCULAR RED signal indications in each signal face. They shall be installed and used only at an intersection to control two or more directions of travel.

Application of Intersection Control Beacon signal indications shall be limited to the following:

- A. Yellow on one route (normally the major street) and red for the remaining approaches that are controlled by STOP signs, and
- B. Red for all approaches (if all of the intersection approaches are controlled by STOP signs).

Flashing yellow signal indications shall not face conflicting vehicular approaches.

A STOP sign (see Section 2B.04) shall be used on approaches to which a flashing red signal indication is displayed on an Intersection Control Beacon.

If two horizontally aligned red signal indications are used on an approach for an Intersection Control Beacon, they shall be flashed simultaneously to avoid being confused with grade crossing flashing-light signals. If two vertically aligned red signal indications that have a physical separation between them are used on an approach for an Intersection Control Beacon, they shall be flashed alternately.

Twelve-inch signal indications shall be used for Intersection Control Beacons facing approaches where:

- A. Road users view both flashing beacon and lane-use control signal indications simultaneously; or
- B. The nearest flashing beacon signal face is more than 120 feet beyond the stop line, unless a supplemental near-side flashing beacon signal face is provided.

Guidance:

Twelve-inch signal indications should be used for Intersection Control Beacons facing approaches where:

- A. The posted or statutory speed limit or the 85th-percentile approach speed is higher than 40 mph; or
- B. Where only post-mounted flashing beacon signal faces are used.

An Intersection Control Beacon should not be mounted on a pedestal in the roadway unless the pedestal is within the confines of a traffic or pedestrian island.

Option:

Supplemental signal indications may be used on one or more approaches in order to provide adequate visibility to approaching road users.

Intersection Control Beacons may be used at intersections where traffic or physical conditions do not justify conventional traffic control signals but crash rates indicate the possibility of a special need.

An Intersection Control Beacon is generally located over the center of an intersection; however, it may be used at other suitable locations.

Section 4S.03 Comments: NCUTCD supports the addition of new Standard language in Section 4S.03 prohibiting the use of flashing LEDs in the border or legend of any sign to indicate a regulation or condition is in effect. However, in the NPA for Section 4S.03 the proposed text on this subject is shown as Support rather than Standard. It is important that only the warning beacon be used to indicate the regulation or condition is in effect and that flashing LEDs in sign borders or legends are only for increasing sign conspicuity. For this reason, NCUTCD recommends that this proposed Support sentence be revised to a Standard so that there is consistency on this topic between Sections 4P.03, 4S.03, and 4S.04.

Section 4S.03 Warning Beacon

107 Support:

Typical applications of Warning Beacons include the following:

- A. As supplemental emphasis to signs or object markers on or in front of obstructions that are in or immediately adjacent to the roadway;
- B. As supplemental emphasis to warning signs;
- C. As emphasis for midblock crosswalks;
- D. As supplemental emphasis to regulatory signs, except STOP, DO NOT ENTER, WRONG WAY, and SPEED LIMIT signs; and
- E. In conjunction with a regulatory or warning sign that includes the phrase WHEN FLASHING in its legend or on a supplemental plaque to indicate that the regulation is in effect or that the condition is present only at certain times. It is not appropriate to use flashing light emitting diode (LED) units within the legend or border of the sign to inform road users that the regulation is in effect or that the condition is present.

Standard:

Flashing light emitting diode (LED) units shall not be used within the legend or border of the a regulatory or warning sign or supplementary plaque with the legend WHEN

- FLASHING to inform road users that the regulation is in effect or that the condition is present. (revise Support to Standard for consistency between Sections 4P.03, 4S.03, and 4S.04)
- A Warning Beacon shall consist of one or more signal sections of a standard traffic signal face with a flashing CIRCULAR YELLOW signal indication in each signal section.
 - A Warning Beacon shall be used only to supplement an appropriate warning or regulatory sign or marker.
- Warning Beacons, if used at intersections, shall not face conflicting vehicular approaches.
- 131 Guidance:

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- The condition or regulation justifying Warning Beacons should largely govern their location with respect to the roadway.
- 134 If an obstruction is in or adjacent to the roadway, illumination of the lower portion or the 135 beginning of the obstruction or illumination of the sign on or in front of the obstruction, in 136 addition to the beacon, should be considered.
- Warning Beacons should be operated only during those periods or times when the condition or regulation exists.
- 139 Option:
 - Warning Beacons that are actuated by pedestrians, bicyclists, or other road users may be used as appropriate to provide additional warning to vehicles approaching a crossing or other location.
- If Warning Beacons have more than one signal section, they may be flashed either alternately or simultaneously.
- A Warning Beacon interconnected with a traffic signal controller assembly may be used with a BE PREPARED TO STOP (W3-4) sign and a WHEN FLASHING (W16-13P) plaque (see Section 2C.37).
- 147 Guidance:
- An audible information device should be used with pedestrian-actuated Warning Beacons to
 assist pedestrians with visual disabilities. (NCUTCD concurs with the NPA that these Guidance
 statements are important for accessibility of blind and low vision pedestrians at crosswalks and
 thus recommends they be included in the Final Rule)
- 152 **Standard:**
 - If an audible information device is used in conjunction with a pedestrian-actuated Warning Beacon at a pedestrian crossing, the audible information device shall not use vibrotactile indications or percussive indications.
- 156 Guidance:
- 157 If an audible information device is used in conjunction with a pedestrian-actuated Warning
 158 Beacon at a pedestrian crossing, the audible message should be a speech message that says,
 159 "Yellow lights are flashing". The audible message should be spoken twice. (NCUTCD concurs
 160 with the NPA that these Guidance statements are important for accessibility of blind and low
 161 vision pedestrians at crosswalks and thus recommends they be included in the Final Rule)

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- Section 4S.04 Comments: NCUTCD agrees with 4S.04 as presented in the NPA.
- 166 Section 4S.04 Speed Limit Sign Beacon
- 167 **Standard:**
- 168 A Speed Limit Sign Beacon shall be used only to supplement a Speed Limit sign.
- A Speed Limit Sign Beacon shall consist of one or more signal sections of a standard traffic control signal face, with a flashing CIRCULAR YELLOW signal indication in each signal section. If two or more signal indications are used, they shall be alternately flashed.
- 172 Option:

A Speed Limit Sign Beacon may be used with a fixed or variable Speed Limit sign. If applicable, a flashing Speed Limit Sign Beacon (with an appropriate accompanying sign) may be used to indicate that the displayed speed limit is in effect.

- 176 Standard:
 - Flashing light emitting diode (LED) units shall not be used within the legend or border of a Speed Limit sign to indicate that the displayed speed limit is in effect.

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- Section 4S.05 Comments: NCUTCD agrees with 4S.05 as presented in the NPA.
- 182 Section 4S.05 Stop Beacon
- 183 **Standard:**
 - A Stop Beacon shall be used only to supplement a STOP sign, a DO NOT ENTER sign, or a WRONG WAY sign.
 - A Stop Beacon shall consist of one or more signal sections of a standard traffic signal face with a flashing CIRCULAR RED signal indication in each signal section. If two horizontally aligned signal indications are used for a Stop Beacon, they shall be flashed simultaneously to avoid being confused with grade crossing flashing-light signals. If two vertically aligned signal indications are used for a Stop Beacon, they shall be flashed alternately.
- 192 Guidance:
- The edge of the signal housing of a Stop Beacon should be not less than 12 inches or more than 24 inches from the nearest edge of the STOP sign, DO NOT ENTER sign, or WRONG WAY sign that it supplements.