



# 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 11<sup>th</sup> Edition of the MUTCD Docket Number: FHWA-2020-0001

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**Federal Register Item Number:** 443-445 (see listing below)

**NPA MUTCD Section Number:** Chapter 4T

**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 4T. 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 #443, Section 4T.01: NCUTCD agrees with NPA content.
- NPA #NA, Section 4T.02: NCUTCD agrees with NPA content.
- NPA #444, Section 4T.03: NCUTCD agrees with NPA content.
- NPA #445, Section 4T.04: NCUTCD agrees with NPA content.

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

### Section 4T.01 Application of Lane-Use Control Signals

Support:

Lane-use control signals are special overhead signals that permit or prohibit the use of specific lanes of a street or highway or that indicate the impending prohibition of their use. Lane-use control signals are distinguished by placement of special signal faces over a certain lane or lanes of the roadway and by their distinctive shapes and symbols. Supplementary signs are sometimes used to explain their meaning and intent.

Lane-use control signals are most commonly used for reversible-lane control, but are also used in certain non-reversible lane applications and for toll plaza lanes (see Section 4R.02).

*Guidance:*

*An engineering study should be conducted to determine whether a reversible-lane operation can be controlled satisfactorily by static signs (see Section 2B.36) or whether lane-use control signals are necessary. Lane-use control signals should be used to control reversible-lane operations if any of the following conditions are present:*

- More than one lane is reversed in direction;*

- 41 B. *Two-way or one-way left turns are allowed during peak-period reversible operations, but*
- 42 *those turns are from a different lane than used during off-peak periods;*
- 43 C. *Other unusual or complex operations are included in the reversible-lane pattern;*
- 44 D. *Demonstrated crash experience occurring with reversible-lane operation controlled by*
- 45 *static signs that can be corrected by using lane-use control signals at the times of*
- 46 *transition between peak and off-peak patterns; and/or*
- 47 E. *An engineering study indicates that the safety and efficiency of the traffic operations of a*
- 48 *reversible-lane system would be improved by lane-use control signals.*

49 **Standard:**

50 **Pavement markings (see Section 3B.04) shall be used in conjunction with reversible-**

51 **lane control signals.**

52 **Option:**

53 Lane-use control signals may also be used if there is no intent or need to reverse lanes, but

54 there is a need to indicate the open or closed status of one or more lanes, such as:

- 55 A. On a freeway, if it is desired to close certain lanes at certain hours to facilitate the
- 56 merging of traffic from a ramp or other freeway;
- 57 B. On a freeway, near its terminus, to indicate a lane that ends;
- 58 C. On a freeway or long bridge, to indicate that a lane may be temporarily blocked by a
- 59 crash, breakdown, construction or maintenance activities, or similar temporary
- 60 conditions; and
- 61 D. On a conventional road or driveway, at access or egress points to or from a facility, such
- 62 as a parking garage, where one or more lanes of the access or egress are opened or closed
- 63 at various times.

64 A USE LANE(S) WITH GREEN ARROW (R10-8) sign (see Section 2B.63) may be used in

65 conjunction with lane-use control signals.

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68 **Section 4T.02 Comments: NCUTCD agrees with 4T.02 as presented in the NPA.**

69 **Section 4T.02 Meaning of Lane-Use Control Signal Indications**

70 **Standard:**

71 **The meanings of lane-use control signal indications shall be as follows:**

- 72 **A. A steady DOWNWARD GREEN ARROW signal indication shall mean that the**
- 73 **lane which the arrow signal indication is located over is open to vehicle travel in that**
- 74 **direction.**
- 75 **B. A steady YELLOW X signal indication shall mean that the lane with the Yellow X**
- 76 **signal indication located over it is about to be closed to vehicle traffic in that**
- 77 **direction and shall be followed by a steady RED X signal indication.**
- 78 **C. A steady WHITE TWO-WAY LEFT-TURN ARROW signal indication (see Figure**
- 79 **4T-1) shall mean that the lane with the turning arrows indication located over it is**
- 80 **open to traffic making a left turn from either direction of travel, but not for through**
- 81 **travel.**
- 82 **D. A steady WHITE ONE-WAY LEFT-TURN ARROW signal indication (see Figure**
- 83 **4T-1) shall mean that the lane with the turning arrow indication located over it is**

84 open to traffic making a left turn in that direction (without opposing turns in the  
85 same lane), but not for through travel.

- 86 E. A steady RED X signal indication shall mean that the lane with the Red X signal  
87 indication over it is closed to vehicle traffic in the direction viewed by the road user.  
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90 **Figure 4T-1 Comments: NCUTCD agrees with Figure 4T-1 as presented in the NPA.**  
91 **Figure 4T-1. Left-Turn Lane-Use Control Signals**  
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94 **Section 4T.03 Comments: NCUTCD agrees with 4T.03 as presented in the NPA.**

95 **Section 4T.03 Design of Lane-Use Control Signals**

96 **Standard:**

97 All lane-use control signal indications shall be in units with rectangular signal faces and  
98 shall have opaque backgrounds. Except as provided in Paragraph 13, the nominal  
99 minimum height and width of each DOWNWARD GREEN ARROW, YELLOW X, and  
100 RED X signal face shall be 18 inches for typical applications. Except as provided in  
101 Paragraph 13, the WHITE TWO-WAY LEFT-TURN ARROW and WHITE ONE-WAY  
102 LEFT-TURN ARROW signal faces shall have a nominal minimum height and width of 30  
103 inches.

104 Each lane to be reversed or closed shall have signal faces with at least a DOWNWARD  
105 GREEN ARROW and a RED X symbol.

106 Each reversible lane that also operates as a two-way or one-way left-turn lane during  
107 certain periods shall have signal faces that also include the applicable WHITE TWO-WAY  
108 LEFT-TURN ARROW or WHITE ONE-WAY LEFT-TURN ARROW symbol.

109 Each non-reversible lane immediately adjacent to a reversible lane shall have signal  
110 indications that display a DOWNWARD GREEN ARROW to traffic traveling in the  
111 permitted direction and a RED X to traffic traveling in the opposite direction.

112 If in separate signal sections, the relative positions, from left to right, of the signal  
113 indications shall be RED X, YELLOW X, DOWNWARD GREEN ARROW, WHITE  
114 TWO-WAY LEFT-TURN ARROW, WHITE ONE-WAY LEFT-TURN ARROW.

115 *Guidance:*

116 *The color of lane-use control signal indications should be clearly visible for 2,300 feet at all*  
117 *times under normal atmospheric conditions, unless otherwise physically obstructed.*

118 *Lane-use control signal faces should be located approximately over the center of the lane*  
119 *controlled.*

120 *If the area to be controlled is more than 2,300 feet in length, or if the vertical or horizontal*  
121 *alignment is curved, intermediate lane-use control signal faces should be located over each*  
122 *controlled lane at frequent intervals. This location should be such that road users will at all*  
123 *times be able to see at least one signal indication and preferably two along the roadway, and*  
124 *will have a definite indication of the lanes specifically reserved for their use.*

125 *All lane-use control signal faces should be located in a straight line across the roadway*  
126 *approximately at right angles to the roadway alignment.*

127 *On roadways having intersections controlled by traffic control signals, the lane-use control*  
128 *signal face should be located sufficiently far in advance of or beyond such traffic control signals*  
129 *to prevent them from being misconstrued as traffic control signals.*

130 **Standard:**

131 **Except as provided in Paragraph 12, the bottom of the signal housing of any lane-use**  
132 **control signal face shall be a minimum of 15 feet and a maximum of 19 feet above the**  
133 **pavement grade.**

134 **Option:**

135 The bottom of a lane-use control signal housing may be lower than 15 feet above the  
136 pavement if it is mounted on a canopy or other structure over the pavement, but not lower than  
137 the vertical clearance of the structure.

138 Except for lane-use control signals at toll plazas (see Section 4R.02), in areas with minimal  
139 visual clutter and with speeds of less than 40 mph, lane-use control signal faces with nominal  
140 height and width of 12 inches may be used for the DOWNWARD GREEN ARROW, YELLOW  
141 X, and RED X signal faces, and lane-use control signal faces with nominal height and width of  
142 18 inches may be used for the WHITE TWO-WAY LEFT-TURN ARROW and WHITE ONE-  
143 WAY LEFT-TURN ARROW signal faces.

144 Other sizes of lane-use control signal faces larger than 18 inches with proportional  
145 dimensions and with message recognition distances appropriate to signal spacing may be used  
146 for the DOWNWARD GREEN ARROW, YELLOW X, and RED X signal faces.

147 Non-reversible lanes not immediately adjacent to a reversible lane on any street so controlled  
148 may also be provided with signal indications that display a DOWNWARD GREEN ARROW to  
149 traffic traveling in the permitted direction and a RED X to traffic traveling in the opposite  
150 direction.

151 The signal indications provided for each lane may be in separate signal sections or may be  
152 superimposed in the same signal section.

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155 **Section 4T.04 Comments: NCUTCD agrees with 4T.04 as presented in the NPA.**

156 **Section 4T.04 Operation of Lane-Use Control Signals**

157 **Standard:**

158 **All lane-use control signals shall be coordinated so that all the signal indications along**  
159 **the controlled section of roadway are operated uniformly and consistently. The lane-use**  
160 **control signal system shall be designed to reliably guard against showing any prohibited**  
161 **combination of signal indications to any traffic at any point in the controlled lanes.**

162 **For reversible-lane control signals, the following combination of signal indications shall**  
163 **not be simultaneously displayed over the same lane to both directions of travel:**

- 164 **A. DOWNWARD GREEN ARROW in both directions,**  
165 **B. YELLOW X in both directions,**  
166 **C. WHITE ONE-WAY LEFT-TURN ARROW in both directions,**

- 167 **D. DOWNWARD GREEN ARROW in one direction and YELLOW X in the other**  
168 **direction,**  
169 **E. WHITE TWO-WAY LEFT-TURN ARROW or WHITE ONE-WAY LEFT-TURN**  
170 **ARROW in one direction and DOWNWARD GREEN ARROW in the other**  
171 **direction,**  
172 **F. WHITE TWO-WAY LEFT-TURN ARROW in one direction and WHITE ONE-**  
173 **WAY LEFT-TURN ARROW in the other direction, and**  
174 **G. WHITE ONE-WAY LEFT-TURN ARROW in one direction and YELLOW X in**  
175 **the other direction.**

176 **A moving condition in one direction shall be terminated either by the immediate display**  
177 **of a RED X signal indication or by a YELLOW X signal indication followed by a RED X**  
178 **signal indication.**

179 *Guidance:*

180 *In either case, the duration of the RED X signal indication should be sufficient to allow*  
181 *clearance of the lane before any moving condition is allowed in the opposing direction.*

182 **Standard:**

183 **Whenever a DOWNWARD GREEN ARROW signal indication is changed to a WHITE**  
184 **TWO-WAY LEFT-TURN ARROW signal indication, the RED X signal indication shall**  
185 **continue to be displayed to the opposite direction of travel for an appropriate duration to**  
186 **allow traffic time to vacate the lane being converted to a two-way left-turn lane.**

187 **If an automatic control system is used, a manual control to override the automatic**  
188 **control shall be provided.**

189 *Guidance:*

190 *The type of control provided for reversible-lane operation should be such as to permit either*  
191 *automatic or manual operation of the lane-use control signals.*

192 **Standard:**

193 **If used, lane-use control signals shall be operated continuously, except that lane-use**  
194 **control signals that are used only for special events or other infrequent occurrences and**  
195 **lane-use control signals on non-reversible freeway lanes are permitted to be darkened when**  
196 **not in operation. The change from normal operation to non-operation shall occur only**  
197 **when the lane-use control signals display signal indications that are appropriate for the**  
198 **lane use that applies when the signals are not operated. The lane-use control signals shall**  
199 **display signal indications that are appropriate for the existing lane use when changed from**  
200 **non-operation to normal operations. Also, traffic control devices shall clearly indicate the**  
201 **proper lane use when the lane control signals are not in operation.**

202 **Support:**

203 **Section 2B.36 contains additional information concerning considerations involving left-turn**  
204 **prohibitions in conjunction with reversible-lane operations. Section 2G.24 contains additional**  
205 **information concerning lane-use control signals used for part-time travel on a shoulder. Section**  
206 **2G.25 contains additional information concerning lane-use control signals used for active lane**  
207 **management on freeways and expressways.**