



National Committee on Uniform Traffic Control Devices

13236 North 7th Street, Suite 4-259, Phoenix, Arizona 85022

Phone/Text: 231-4-NCUTCD (231-462-8823)

E-mail: secretary@ncutcd.org Website: <https://ncutcd.org>

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2 **National Committee on Uniform Traffic Control Devices (NCUTCD)**
3 **Recommended Changes to Proposed Text for 11th Edition of the MUTCD**
4 **Docket Number: FHWA-2020-0001**

5
6 **Federal Register Item Number:** 47 – 108 (see listing below)

7 **NPA MUTCD Section Number:** Sections 2B.01 – 2B.77

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

- 9 • Addition to NPA text: [Added text proposed by NCUTCD](#).
- 10 • Deletion of NPA text: [~~Deleted text proposed by NCUTCD~~](#).
- 11 • Moving NPA text: [Moved text proposed by NCUTCD](#).
- 12 • NPA text added by FHWA and not previously approved by NCUTCD Council: [NPA text not previously approved by NCUTCD Council but recommended for approval](#).
- 13 • Explanatory note: [\[Note that explains purpose of recommended change.\]](#)
- 14 • References in 00X-XXX-00 format refer to previous NCUTCD recommendations
- 15 • References in 00X-XXX-00 format refer to previous NCUTCD recommendations
- 16 • References in 00X-XXX-00 format refer to previous NCUTCD recommendations
- 17 • References in 00X-XXX-00 format refer to previous NCUTCD recommendations

18
19 The following pages present NCUTCD recommendations for changes to the MUTCD NPA
20 proposed text, tables, and figures for Chapter 2B. Below is a short summary of the NCUTCD
21 position for each section of this chapter. A more detailed summary is provided at the beginning
22 of each section.

- 23 • NPA #47, Section 2B.01: Changes recommended based on Council action in spring 2021
- 24 • NPA #48, Section 2B.02: Changes recommended based on Council action in spring 2021
- 25 • NPA #49, Section 2B.03: Changes recommended based on Council action in spring 2021
- 26 • NPA #50 and 51, Section 2B.04: Changes recommended based on Council action in spring
- 27 • NPA #51, Section 2B.04: Changes recommended based on Council action in spring 2021
- 28 • NPA #NA, Section 2B.05: Changes recommended based on Council action in spring 2021
- 29 • NPA #50 and 52, Section 2B.06: Changes recommended based on Council action in spring
- 30 • NPA #50 and 53, Section 2B.07: Changes recommended based on Council action in spring
- 31 • NPA #50 and 53, Section 2B.07: Changes recommended based on Council action in spring 2021
- 32 • NPA #50 and 54, Section 2B.08: Changes recommended based on prior Council action
- 33 • NPA #56, Section 2B.09: Changes recommended based on Council action in spring 2021
- 34 • NPA #56, Section 2B.10: Changes recommended based on Council action in spring 2021
- 35 • NPA #57, Section 2B.11: Changes recommended based on prior Council action
- 36 • NPA #58, Section 2B.12: Changes recommended based on Council action in spring 2021
- 37 • NPA #59, Section 2B.13: Changes recommended based on Council action in spring 2021
- 38 • NPA #60, Section 2B.14: Changes recommended based on prior Council action
- 39 • NPA #61, Section 2B.15: Changes recommended based on prior Council action

- 41 • NPA #62, Section 2B.16: Changes recommended based on Council action in spring 2021
42 • NPA #63, Section 2B.17: Changes recommended based in prior Council action
43 • NPA #64, Section 2B.18: Changes recommended based on Council action in spring 2021
44 • NPA #65, Section 2B.19: Changes recommended based on Council action in spring 2021
45 • NPA #66, Section 2B.20: Changes recommended based on Council action in spring 2021
46 • NPA #67, Section 2B.21: Changes recommended based on Council action in spring 2021
47 • NPA #68, Section 2B.22: Changes recommended based on Council action in spring 2021
48 • NPA #NA, Section 2B.23: Changes recommended based on Council action in spring 2021
49 • NPA #69, Section 2B.24: Changes recommended based on Council action in spring 2021
50 • NPA #70, Section 2B.25: Changes recommended based on Council action in spring 2021
51 • NPA #71, Section 2B.26: Changes recommended based on Council action in spring 2021
52 • NPA #72, Section 2B.27: Changes recommended based on Council action in spring 2021
53 • NPA #73, Section 2B.28: Changes recommended based on Council action in spring 2021
54 • NPA #74, Section 2B.29: Changes recommended based on Council action in spring 2021
55 • NPA #NA, Section 2B.30: Changes recommended based on Council action in spring 2021
56 • NPA #75 and 76, Section 2B.31: Changes recommended based on Council action in spring
57 2021
58 • NPA #NA, Section 2B.32: NCUTCD agrees with NPA content
59 • NPA #NA, Section 2B.33: Changes recommended based on Council action in spring 2021
60 • NPA #78, Section 2B.34: Changes recommended based on Council action in spring 2021
61 • NPA #NA, Section 2B.35: Changes recommended based on Council action in spring 2021
62 • NPA #NA, Section 2B.36: Changes recommended based on Council action in spring 2021
63 • NPA #NA, Section 2B.37: Changes recommended based on Council action in spring 2021
64 • NPA #79, Section 2B.38: Changes recommended based on Council action in spring 2021
65 • NPA #NA, Section 2B.39: Changes recommended based on Council action in spring 2021
66 • NPA #NA, Section 2B.40: Changes recommended based on Council action in spring 2021
67 • NPA #NA, Section 2B.41: NCUTCD agrees with NPA content
68 • NPA #NA, Section 2B.42: NCUTCD agrees with NPA content
69 • NPA #NA, Section 2B.43: NCUTCD agrees with NPA content
70 • NPA #NA, Section 2B.44: Changes recommended based on Council action in spring 2021
71 • NPA #81, Section 2B.45: Changes recommended based on Council action in spring 2021
72 • NPA #82, Section 2B.46: Changes recommended based on Council action in spring 2021
73 • NPA #83 and 84, Section 2B.47: Changes recommended based in prior Council action
74 • NPA #85, Section 2B.48: Changes recommended based in prior Council action
75 • NPA #86, Section 2B.49: Changes recommended based on Council action in spring 2021
76 • NPA #87, Section 2B.50: Changes recommended based in prior Council action
77 • NPA #88 and 90, Section 2B.51: NCUTCD agrees with NPA content
78 • NPA #89, Section 2B.52: Changes recommended based on Council action in spring 2021
79 • NPA #93, Section 2B.53: Changes recommended based on Council action in spring 2021
80 • NPA #94, Section 2B.54: Changes recommended based on Council action in spring 2021
81 • NPA #95, Section 2B.55: Changes recommended based on Council action in spring 2021
82 • NPA #96, Section 2B.56: Changes recommended based on Council action in spring 2021
83 • NPA #97, Section 2B.57: Changes recommended based on Council action in spring 2021
84 • NPA #NA, Section 2B.58: Changes recommended based on Council action in spring 2021

- 85 • NPA #98, Section 2B.59: Changes recommended based on Council action in spring 2021
86 • NPA #99, Section 2B.60: Changes recommended based on Council action in spring 2021
87 • NPA #100, Section 2B.61: NCUTCD recommends changes based in prior Council action
88 • NPA #101, Section 2B.62: Changes recommended based on Council action in spring 2021
89 • NPA #NA, Section 2B.63: NCUTCD recommends changes based in prior Council action
90 • NPA #NA, Section 2B.64: NCUTCD agrees with NPA content
91 • NPA #NA, Section 2B.65: NCUTCD agrees with NPA content
92 • NPA #102, Section 2B.66: Changes recommended based on Council action in spring 2021
93 • NPA #103, Section 2B.67: Changes recommended based on Council action in spring 2021
94 • NPA #104, Section 2B.68: Changes recommended based on Council action in spring 2021
95 • NPA #NA, Section 2B.69: NCUTCD agrees with NPA content
96 • NPA #NA, Section 2B.70: NCUTCD agrees with NPA content
97 • NPA #105 and 106, Section 2B.71: Changes recommended based on Council action in
98 spring 2021
99 • NPA #105 and 106, Section 2B.72: Changes recommended based on Council action in
100 spring 2021
101 • NPA #107, Section 2B.73: Recommend changes to text/table/figure
102 • NPA #107, Section 2B.74: NCUTCD agrees with NPA content
103 • NPA #NA, Section 2B.75: Recommend changes to text/table/figure
104 • NPA #NA, Section 2B.76: NCUTCD agrees with NPA content
105 • NPA # 108, Section 2B.77: NCUTCD recommends restoring language from 2009 MUTCD
106
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107
108 **Section 2B.01 Comments:** NCUTCD recommends adding a Support paragraph to address low-
109 volume rural roads in accordance with NCUTCD recommendation 13B-RW-01, as Part 5 no
110 longer addresses these facilities.

111
112 **Section 2B.01 Application of Regulatory Signs**

113 **Standard:**

114 **Regulatory signs shall be used to inform road users of selected traffic laws or**
115 **regulations and indicate the applicability of the legal requirements.**

116 **Regulatory signs shall be installed at or near where the regulations apply. The signs**
117 **shall clearly indicate the requirements imposed by the regulations and shall be designed**
118 **and installed to provide adequate visibility and legibility in order to obtain compliance.**

119 **Regulatory signs shall be retroreflective or illuminated (see Section 2A.20).**

120 **Support:**

121 On low-volume rural roads, the need for regulatory signs is limited. Enforcement is a
122 consideration. (add Support paragraph to address low-volume rural roads per 13B-RW-01)

124
125 **Section 2B.02 Comments:** NCUTCD recommends moving the prohibition on using a
126 changeable message sign for STOP sign display to 2B.04 and 2B.05, adding a Standard
127 paragraph addressing dynamic message signs, hybrid signs, and blank-out signs, and deleting the
128 Standard paragraph prohibiting blank-out or changeable displays for STOP or YIELD signs, all
129 in accordance with NCUTCD recommendation 20B-RW-03.

130
131 **Section 2B.02 Design of Regulatory Signs**
132 **Standard:**
133 Regulatory signs shall be rectangular unless specifically designated otherwise.
134 Regulatory signs shall be designed in accordance with the sizes, shapes, colors, and legends
135 contained in the "Standard Highway Signs" publication (see Section 1A.05).
136 Dynamic message signs, hybrid signs and blank-out signs shall meet the design
137 requirements in terms of shape, color, size and font. They shall display exact duplicates of
138 standard static signs or other sign legends using standard symbols, the Standard Alphabets
139 and letter forms, route shields and other typical sign legends with no apparent loss of
140 resolution or recognition to the road user when compared with static versions of the same
141 sign or legend, except as noted in Section 2L.04 for hybrid and blank-out signs.

142 [add a Standard paragraph addressing dynamic message signs, hybrid signs, and blank-out
143 signs per 20B-RW-03)]

144 **Support:**
145 The use of educational plaques to supplement symbol signs is described in Section 2A.19.
146 **Standard:**
147 LED signs displaying a part-time regulatory message incorporating a prohibitory
148 message that includes a red circle and diagonal of a static sign shall display a red symbol
149 that approximates the same red circle and diagonal as closely as possible. The prohibited
150 movement symbol shall be a white LED symbol on a black background or a black symbol
151 on a full-matrix white LED background.
152 **Option:**
153 The LEDs in the border of regulatory signs may be static or flash at rates per Section 2A.
154 20.
155 **Standard:**
156 A regulatory sign displayed entirely with LEDs and incorporated within the border of a
157 larger full matrix changeable message sign shall display the regulatory sign legend in the
158 size, shape, color and legend of the standard regulatory sign.
159 ~~A blank-out or changeable display shall not be used for a STOP (R1-1) sign or a YIELD~~
160 ~~(R1-2) sign.~~
161 (delete the paragraph above so as to allow blank out or changeable displays for STOP signs
162 per 20B-RW-03)]

164
165 **Section 2B.03 Comments:** NCUTCD recommends adding an Option and Standard paragraph
166 addressing sign size on site roadways open to public travel in accordance with NCUTCD
167 recommendation 15A-RW-02.

168
169 **Section 2B.03 Size of Regulatory Signs**
170 **Standard:**
171 Except as provided in Section 2A.07, the sizes for regulatory signs shall be as shown in
172 Table 2B-1.
173 **Support:**
174 Section 2A.07 contains information regarding the applicability of the various columns in
175 Table 2B-1.

176 **Standard:**

177 Except as provided in Paragraphs 5 and 6, the minimum sizes for regulatory signs
178 facing traffic on multi-lane conventional roads shall be as shown in the Multi-Lane column
179 of Table 2B-1.

180 The typical size of regulatory signs applied on low-volume rural roads with operating
181 speeds of 30 mph or less shall be as shown in the Minimum column of Table 2B-1.

182 Option:

183 Where the posted speed limit is 35 mph or less on a multi-lane highway or street, other than
184 for a STOP sign, the size shown in the Single Lane column in Table 2B-1 may be used.

185 Where a regulatory sign, other than a STOP sign, is placed on the left-hand side of a multi-
186 lane roadway in addition to the installation of the same regulatory sign on the right-hand side or
187 the roadway, the size shown in the Single Lane column in Table 2B-1 may be used for both the
188 sign on the right-hand side and the sign on the left-hand side of the roadway.

189 *Guidance:*

190 *The minimum sizes for regulatory signs facing traffic on exit and entrance ramps at major
191 interchanges connecting an Expressway or Freeway with an Expressway or Freeway (see
192 Section 2E.11) should be as shown in the column of Table 2B-1 that corresponds to the mainline
193 roadway classification (Expressway or Freeway). If a minimum size is not provided in the
194 Freeway column, the minimum size in the Expressway column should be used. If a minimum size
195 is not provided in the Freeway or Expressway Column, the size in the Oversized column should
196 be used.*

197 *The minimum size for all regulatory signs facing traffic on exit and entrance ramps at all
198 other interchanges (see Section 2E.11) should be the regulatory sign size shown in Table 2B-1
199 Conventional Road Single Lane column for single-lane ramps and Multi-lane column for multi-
200 lane ramps.*

201 Option:

202 The minimum sign size for the site roadways open to public travel with operating speeds less
203 than 25 mph may be 6 inches less in both width and height than the single-lane conventional
204 road size except for supplemental plaques identified as "P" in the sign designation in Table 2B-1.
205 (add Option paragraph addressing sign size on site roadways open to public travel per 15A-RW-
206 02)

207 **Standard**

208 Where a Site Roadway open to public travel intersects with a street or highway, the sign
209 size for the regulatory STOP or YIELD sign shall be sizes shown in Table 2B-1. (add

210 Option paragraph addressing sign size on site roadways open to public travel per 15A-RW-02)

211 Option:

212 The size shown in the Single-Lane column of Table 2B-1 may be used on a multi-lane
213 approach for the following signs:

- 214 A. The NO TURN ON RED (R10-11, R10-11a, and R10-11b) signs.
- 215 B. The RIGHT (LEFT) ON RED ARROW AFTER STOP (R10-17a) sign.

216 **Standard:**

217 If a single-lane R10-11, R10-11a, R10-11b, or R10-17a sign size as shown in Table 2B-1
218 is used on an approach on the far side of the intersection, and the distance between the stop
219 line and the sign is more than 120 feet, then a duplicate sign shall be required on the near
220 side of the intersection to supplement the sign on the far side of the intersection.

Table 2B-1. Regulatory Sign and Plaque Sizes

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Stop	R1-1	2B.04	30 x 30	36 x 36	—	—	30 x 30*	48 x 48
Yield	R1-2	2B.05	36 x 36 x 36	48 x 48 x 48	48 x 48 x 48	60 x 60 x 60	30 x 30 x 30*	—
To Oncoming Traffic (plaque)	R1-2aP	2B.18	24 x 18	24 x 18	36 x 30	48 x 36	24 x 18	—
To Traffic in Circle (plaque)	R1-2bP	2B.18	24 x 15	24 x 15	—	—	—	36 x 24
To All Lanes (plaque)	R1-2cP	2B.18	24 x 15	24 x 15	—	—	—	36 x 24
All Way (plaque)	R1-3P	2B.04	18 x 6	18 x 6	—	—	—	30 x 12
Yield Here to Pedestrians	R1-5	2B.19	—	36 x 36	—	—	—	36 x 36
Stop Here for Pedestrians	R1-5b	2B.19	—	36 x 36	—	—	—	36 x 36
In-Street Ped Crossing	R1-6,6a	2B.20	12 x 36	12 x 36	—	—	—	—
In-Street Trail Crossing	R1-6d,6e	2B.20	12 x 36	12 x 36	—	—	—	—
Overhead Ped Crossing	R1-9,9a	2B.20	90 x 24	90 x 24	—	—	—	—
Overhead Trail Crossing	R1-9d,9e	2B.20	90 x 24	90 x 24	—	—	—	—
Except Right Turn (plaque)	R1-10P	2B.04	24 x 18	24 x 18	—	—	—	—
Speed Limit	R2-1	2B.21	24 x 30	30 x 36	36 x 48	48 x 60	18 x 24	30 x 36
Truck Speed Limit (plaque)	R2-2P	2B.22	24 x 24	24 x 24	36 x 36	48 x 48	—	36 x 36
Bus Speed Limit (plaque)	R2-2aP	2B.22	24 x 24	24 x 24	36 x 36	48 x 48	—	36 x 36
Truck-Bus Speed Limit (plaque)	R2-2bP	2B.22	24 x 30	24 x 30	36 x 42	48 x 54	—	36 x 42
Vehicles Over X Tons Speed Limit (plaque)	R2-2cP	2B.22	24 x 30	24 x 30	36 x 42	48 x 54	—	36 x 42
Night Speed Limit (plaque)	R2-3P	2B.23	24 x 24	24 x 24	36 x 36	48 x 48	—	36 x 36
Minimum Speed Limit (plaque)	R2-4P	2B.24	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Combined Speed Limit	R2-4a	2B.24	24 x 48	24 x 48	36 x 72	48 x 96	—	36 x 72
Unless Otherwise Posted (plaque)	R2-5P	2B.21	24 x 18	24 x 18	—	—	—	—
Citywide (plaque)	R2-5aP	2B.21	24 x 6	24 x 6	—	—	—	—
Neighborhood (plaque)	R2-5bP	2B.21	24 x 6	24 x 6	—	—	—	—
Residential (plaque)	R2-5cP	2B.21	24 x 6	24 x 6	—	—	—	—
Fines Higher (plaque)	R2-6P	2B.25	24 x 18	24 x 18	36 x 24	48 x 36	—	36 x 24
Fines Double (plaque)	R2-6aP	2B.25	24 x 18	24 x 18	36 x 24	48 x 36	—	36 x 24
\$XX Fine (plaque)	R2-6bP	2B.25	24 x 18	24 x 18	36 x 24	48 x 36	—	36 x 24
Begin Higher Fines Zone	R2-10	2B.25	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
End Higher Fines Zone	R2-11	2B.25	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
End Variable Speed Limit	R2-13	2B.21	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
End Truck Speed Limit	R2-14	2B.21	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Movement Prohibition	R3-1,2,3,4,18,27	2B.26	24 x 24	36 x 36	36 x 36	—	—	48 x 48
Movement Prohibition Trucks	R3-1b	2B.26	24 x 36	36 x 48	36 x 48	36 x 48	—	48 x 60
Movement Prohibition Trucks Buses	R3-1c	2B.26	24 x 36	36 x 48	36 x 48	36 x 48	—	48 x 60
Movement Prohibition Trucks Over X Tons	R3-1d	2B.26	24 x 48	36 x 72	36 x 72	36 x 72	—	48 x 96
Movement Prohibition Except Buses	R3-1e	2B.26	24 x 36	36 x 48	36 x 48	36 x 48	—	48 x 60
Movement Prohibition Excepts Buses Taxis	R3-1f	2B.26	24 x 42	36 x 66	36 x 66	36 x 66	—	48 x 84
Movement Prohibition Time and Day	R3-1g	2B.26	30 x 42	30 x 42	42 x 66	42 x 66	—	54 x 84
Movement Prohibition Multiple Times and Day	R3-1h	2B.26	30 x 42	30 x 42	42 x 66	42 x 66	—	54 x 84
Mandatory Movement Lane Control	R3-5,5a	2B.26	30 x 36	30 x 36	—	—	—	—
Left Lane (plaque)	R3-5bP	2B.26	30 x 12	30 x 12	—	—	—	—
HOV 2+ (plaque)	R3-5cP	2B.28	24 x 12	24 x 12	—	—	—	—
Taxi Lane (plaque)	R3-5dP	2B.28	30 x 12	30 x 12	—	—	—	—
Right Lane (plaque)	R3-5fP	2B.28	30 x 12	30 x 12	—	—	—	—
Bus Lane (plaque)	R3-5gP	2B.28	30 x 12	30 x 12	—	—	—	—
Optional Movement Lane Control	R3-6	2B.29	30 x 36	30 x 36	—	—	—	—
Optional Movement U and Left Turn	R3-6a	2B.29	30 x 36	30 x 36	—	—	—	—
Optional Movement Left Turns	R3-6b	2B.29	30 x 36	30 x 36	—	—	—	—
Right (Left) Lane Must Turn Right (Left)	R3-7	2B.28	30 x 30	36 x 36	—	—	—	—
Except Buses (plaque)	R3-7aP	2B.26	24 x 12	24 x 12	—	—	—	—
Except Bicycles (plaque)	R3-7bP	2B.26	24 x 12	24 x 12	—	—	—	—
Advance Intersection Lane Control	R3-8,8a,8b,8xa, 8xb,8xc	2B.30	Varies x 30	Varies x 30	—	—	—	Varies x 36
Two-Way Left Turn Only (overhead)	R3-9a	2B.32	30 x 36	30 x 36	—	—	—	—
Two-Way Left Turn Only (post-mounted)	R3-9b	2B.32	24 x 36	24 x 36	—	—	—	36 x 48
Begin	R3-9cP	2B.33	30 x 12	30 x 12	—	—	—	—
End	R3-9dP	2B.33	30 x 12	30 x 12	—	—	—	—
Reversible Lane Control (symbol)	R3-9e	2B.34	108 x 48	108 x 48	—	—	—	—
Reversible Lane Control (post-mounted)	R3-9f	2B.34	30 x 42	36 x 54	—	—	—	—
Advance Reversible Lane Control Transition Signaling	R3-9g,9h	2B.34	108 x 36	108 x 36	—	—	—	—
End Reverse Lane	R3-9i	2B.34	108 x 48	108 x 48	—	—	—	—
Lane For Left Turn Only	R3-19	2B.28	30 x 24	30 x 24	—	—	—	—
Lane For U and Left Turns Only	R3-19a	2B.28	30 x 30	30 x 30	—	—	—	—
Begin Right (Left) Turn Lane	R3-20	2B.28	24 x 36	24 x 36	—	—	—	—
All Turns (U-Turn) from Right Lane	R3-23,23a	2B.35	60 x 36	60 x 36	—	—	—	—
All Turns (U-Turn) with arrow	R3-24,24b, 25,25b,26a	2B.35	72 x 18	72 x 18	—	—	—	—
U-Turns and Left Turns with arrow	R3-24a,25a,26	2B.35	60 x 24	60 x 24	—	—	—	—
Right Lane Must Exit	R3-33	2B.31	—	—	78 x 36	78 x 36	—	—
Right Lane Must Exit	R3-33a	2B.31	—	—	42 x 60	42 x 60	—	—
Do Not Pass	R4-1	2B.36	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24*	36 x 48
Pass With Care	R4-2	2B.37	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24*	36 x 48
Slower Traffic Keep Right	R4-3	2B.38	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24*	36 x 48
Trucks Use Right Lane	R4-5	2B.39	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48

Table 2B-1. Regulatory Sign and Plaque Sizes

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Keep Right	R4-7,7a,7b	2B.40	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24"	36 x 48
Narrow Keep Right	R4-7c	2B.40	18 x 30	18 x 30	—	—	—	—
Keep Left	R4-8,8a,8b	2B.40	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Narrow Keep Left	R4-8c	2B.40	18 x 30	18 x 30	—	—	—	—
Stay In Lane	R4-9	2B.41	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Runaway Vehicles Only	R4-10	2B.42	48 x 48	48 x 48	—	—	—	—
Slow Vehicles with XX or More Following Vehicles Must Use Turn-Out	R4-12	2B.43	42 x 24	42 x 24	—	—	—	—
Slow Vehicles Must Use Turn-Out Ahead	R4-13	2B.43	42 x 24	42 x 24	—	—	—	—
Slow Vehicles Must Turn Out	R4-14	2B.43	30 x 42	30 x 42	—	—	—	—
Keep Right Except to Pass	R4-16	2B.38	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24"	36 x 48
Do Not Drive on Shoulder	R4-17	2B.44	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Do Not Pass on Shoulder	R4-18	2B.44	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
All Traffic	R4-20	2B.45	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Right (Left) Turn Only	R4-21	2B.45	24 x 30	24 x 30	—	—	—	—
Do Not Enter	R5-1	2B.47	30 x 30	36 x 36	36 x 36	48 x 48	—	36 x 36
Wrong Way	R5-1a	2B.48	36 x 24	42 x 30	36 x 24	42 x 30	30 x 18	42 x 30
No Trucks	R5-2,2a	2B.46	24 x 24	24 x 24	30 x 30	36 x 36	—	36 x 36
Except Local Deliveries (plaque)	R5-2aP	2B.46	24 x 12	24 x 12	30 x 15	36 x 18	—	36 x 18
No Thru Trucks	R5-2b	2B.46	24 x 30	24 x 30	30 x 36	36 x 48	—	36 x 48
No Motor Vehicles	R5-3	2B.46	24 x 24	24 x 24	—	—	24 x 24	—
No Commercial Vehicles	R5-4	2B.46	24 x 30	24 x 30	36 x 48	36 x 48	—	—
No Vehicles with Lugs	R5-5	2B.46	24 x 30	24 x 30	36 x 48	48 x 60	—	—
No Bicycles	R5-6	2B.46	24 x 24	24 x 24	30 x 30	36 x 36	24 x 24"	48 x 48
No Non-Motorized Traffic	R5-7	2B.46	30 x 24	30 x 24	42 x 24	48 x 30	—	42 x 24
No Motor-Driven Cycles	R5-8	2B.46	30 x 24	30 x 24	42 x 24	48 x 30	—	42 x 24
No Pedestrians, Bicycles, Motor-Driven Cycles	R5-10	2B.46	30 x 36	30 x 36	—	—	—	—
No Pedestrians, Bicycles, Motor-Driven Cycles On Freeway	R5-10a	2B.46	30 x 36	30 x 36	—	—	—	—
No Pedestrians or Bicycles	R5-10b	2B.46	30 x 18	30 x 18	—	—	—	—
No Pedestrians	R5-10c	2B.46	24 x 12	24 x 12	—	—	—	—
Authorized Vehicles Only	R5-11	2B.46	30 x 24	30 x 24	—	—	—	—
No Thru Traffic	R5-12	2B.46	24 x 30	24 x 30	—	—	—	30 x 36
One Way	R6-1	2B.50	36 x 12	54 x 18	54 x 18	54 x 18	—	54 x 18
One Way	R6-2	2B.50	24 x 30	30 x 36	36 x 48	48 x 60	18 x 24	36 x 48
Divided Highway Crossing	R6-3,3a	2B.51	30 x 24	30 x 24	36 x 30	—	—	36 x 30
Roundabout Circulation (plaque)	R6-5P	2B.50	30 x 30	30 x 30	—	—	—	—
Begin One Way	R6-6	2B.50	24 x 30	30 x 36	—	—	—	—
End One Way	R6-7	2B.50	24 x 30	30 x 36	—	—	—	—
Parking Restrictions	R7-1,2,2a,3,4,5,6,8,10,21,22,107,108	2B.53,2B.54	12 x 18	12 x 18	—	—	—	—
Van Accessible (plaque)	R7-8P	2B.53,2B.54	18 x 6	18 x 6	—	—	—	—
Fee Station	R7-20	2B.53,2B.54	24 x 18	24 x 18	—	—	—	—
Pay by Phone (plaque)	R7-21p	2B.53,2B.54	12 x 6	12 x 6	—	—	—	—
No Parking (with bus symbol)	R7-107a	2B.53,2B.54	12 x 24	12 x 24	—	—	—	—
No Parking (with bus symbol and transit logo)	R7-107b	2B.53,2B.54	12 x 30	12 x 30	—	—	—	—
No Parking Except Electric Vehicles	R7-111	2B.53,2B.54	12 x 18	12 x 18	—	—	—	—
No Parking Except Electric Vehicles (part-time)	R7-111a	2B.53,2B.54	12 x 18	12 x 18	—	—	—	—
Electric Vehicle Parking (time limit)	R7-112	2B.53,2B.54	12 x 18	12 x 18	—	—	—	—
Electric Vehicle Parking (time limit part-time)	R7-112a	2B.53,2B.54	12 x 18	12 x 18	—	—	—	—
Electric Vehicle Parking (time limit part-time)	R7-112b	2B.53,2B.54	12 x 21	12 x 21	—	—	—	—
No Parking Except While Charging	R7-113	2B.53,2B.54	12 x 18	12 x 18	—	—	—	—
Vehicle Must Be Plugged In (plaque)	R7-113aP	2B.53,2B.54	12 x 6	12 x 6	—	—	—	—
Vacate Stall When Charging Completed (plaque)	R7-113bP	2B.53,2B.54	12 x 6	12 x 6	—	—	—	—
Vehicle Charging Only (time limit)	R7-114	2B.53,2B.54	12 x 18	12 x 18	—	—	—	—
Vehicle Charging Only (time limit part-time)	R7-114a,114b	2B.53,2B.54	12 x 18	12 x 18	—	—	—	—
Vehicle Charging Only (time limit part-time)	R7-114b	2B.53,2B.54	12 x 21	12 x 21	—	—	—	—
No Parking/Restricted Parking (combined sign)	R7-200	2B.53,2B.54	24 x 18	24 x 18	—	—	—	—
No Parking/Restricted Parking (combined sign)	R7-200a	2B.53,2B.54	12 x 30	12 x 30	—	—	—	—
Tow Away Zone (plaque)	R7-201P,201aP	2B.53,2B.54	12 x 6	12 x 6	—	—	—	—
This Side of Sign (plaque)	R7-202P	2B.53,2B.54	12 x 6	12 x 6	—	—	—	—
Snow Emergency Route	R7-203	2B.53,2B.54	18 x 24	18 x 24	—	—	—	24 x 30
No Parking on Pavement	R8-1	2B.53,2B.54	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
No Parking Except on Shoulder	R8-2	2B.53,2B.54	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
No Parking (symbol)	R8-3	2B.53,2B.54	24 x 24	30 x 30	36 x 36	48 x 48	12 x 12	36 x 36
No Parking	R8-3a	2B.53,2B.54	24 x 30	24 x 30	36 x 36	48 x 48	18 x 24	36 x 36
On Pavement	R8-3c	2B.53,2B.54	24 x 36	24 x 36	—	—	18 x 30	36 x 54
On Bridge	R8-3d	2B.53,2B.54	24 x 36	24 x 36	—	—	18 x 30	36 x 54
On Tracks	R8-3e	2B.53,2B.54	24 x 36	24 x 36	—	—	18 x 30	36 x 54
Except on Shoulder	R8-3f	2B.53,2B.54	24 x 36	24 x 36	—	—	18 x 30	36 x 54
Emergency Parking Only	R8-4	2B.56	30 x 24	30 x 24	48 x 36	—	48 x 36	—

Table 2B-1. Regulatory Sign and Plaque Sizes

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
No Stopping on Pavement	R8-5	2B.53,2B.54	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
No Stopping Except on Shoulder	R8-6	2B.53,2B.54	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Emergency Stopping Only	R8-7	2B.56	30 x 24	30 x 24	48 x 36	48 x 36	—	48 x 36
Walk on Left Facing Traffic	R9-1	2B.57	18 x 24	18 x 24	—	—	—	—
Cross Only at Crosswalks	R9-2	2B.58	12 x 18	12 x 18	—	—	—	—
No Pedestrians	R9-3	2B.58	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
No Pedestrian Crossing	R9-3a	2B.58	12 x 18	12 x 18	—	—	—	—
Use Crosswalk (plaque)	R9-3bP	2B.58	18 x 12	18 x 12	—	—	—	—
No Hitchhiking (symbol)	R9-4	2B.57	18 x 18	18 x 18	—	—	—	24 x 24
No Hitchhiking	R9-4a	2B.57	18 x 24	18 x 24	—	—	12 x 18	—
No Skaters	R9-13	2B.46	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
No Equestrians	R9-14	2B.46	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
No Snowmobiles	R9-15	2B.46	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
Cross Only On Green	R10-1	2B.59	12 x 18	12 x 18	—	—	—	—
Pedestrian Signs and Plaques	R10-3b,3c,3d,3j,3k,4 2,3,3b,3c,3d,3j,3k,4	2B.59	9 x 12	9 x 12	—	—	—	—
Pedestrian Signs		2B.59	9 x 15	9 x 15	—	—	—	—
Left on Green Arrow Only	R10-5	2B.60	30 x 36	30 x 36	48 x 60	—	24 x 30	48 x 60
Stop Here on Red	R10-6	2B.60	24 x 36	24 x 36	—	—	—	36 x 48
Stop Here on Red	R10-6a	2B.60	24 x 30	24 x 30	—	—	—	36 x 42
Do Not Block Intersection	R10-7	2B.60	24 x 30	24 x 30	—	—	—	—
Use Lane with Green Arrow	R10-8	2B.60	30 x 36	30 x 36	36 x 42	—	—	60 x 72
Left (Right) Turn Signal	R10-10	2B.60	24 x 30	24 x 30	—	—	—	30 x 36
U-Turn Signal	R10-10a	2B.60	24 x 30	24 x 30	—	—	—	30 x 36
Left (Right) Lane Signal	R10-10b	2B.60	24 x 30	24 x 30	—	—	—	30 x 36
Left (Right) Turn Lane Signal	R10-10c	2B.60	24 x 30	24 x 30	—	—	—	30 x 36
No Turn on Red	R10-11	2B.61	24 x 30	24 x 30	—	—	—	36 x 48
No Turn on Red	R10-11a	2B.61	24 x 30	24 x 30	—	—	—	36 x 48
No Turn on Red	R10-11b	2B.61	24 x 24	24 x 24	—	—	—	36 x 36
No Turn on Red Except From Right Lane	R10-11c	2B.61	30 x 42	30 x 42	—	—	—	—
No Turn on Red From This Lane	R10-11d	2B.61	30 x 42	30 x 42	—	—	—	—
Left Turn Yield on Green	R10-12	2B.60	30 x 36	30 x 36	—	—	—	—
Left Turn Yield on Flashing Yellow Arrow	R10-12a	2B.60	30 x 36	30 x 36	—	—	—	—
Left Turn Yield to Bicycles	R10-12b	2B.60	30 x 36	30 x 36	—	—	—	—
Emergency Signal	R10-13	2B.60	42 x 30	42 x 30	—	—	—	—
Emergency Signal - Stop on Flashing Red	R10-14	2B.60	36 x 42	36 x 42	—	—	—	—
Emergency Signal - Stop on Flashing Red (overhead)	R10-14a	2B.60	60 x 24	60 x 24	—	—	—	—
Stop Here on Flashing Red	R10-14b	2B.60	24 x 36	24 x 36	—	—	—	36 x 48
Turning Vehicles Yield to Peds	R10-15	2B.60	30 x 30	30 x 30	—	—	—	—
Turning Vehicles Stop for Peds	R10-15a	2B.60	30 x 30	30 x 30	—	—	—	—
U-Turn Yield to Right Turn	R10-16	2B.60	30 x 36	30 x 36	—	—	—	—
Right on Red Arrow After Stop	R10-17a	2B.61	30 x 36	30 x 36	—	—	—	—
Traffic Laws Photo Enforced	R10-18	2B.62	36 x 24	36 x 24	48 x 30	54 x 36	—	54 x 36
Traffic Signal Photo Enforced	R10-18a	2B.62	36 x 30	36 x 30	48 x 36	—	30 x 42	54 x 42
Photo Enforced (symbol plaque)	R10-19P	2B.62	24 x 12	24 x 12	36 x 18	48 x 24	—	48 x 24
Photo Enforced (plaque)	R10-19aP	2B.62	24 x 18	24 x 18	36 x 30	48 x 36	—	48 x 36
MON-FRI (and times) (3 lines) (plaque)	R10-20aP	2B.61	24 x 24	24 x 24	—	—	—	—
SUNDAY (and times) (2 lines) (plaque)	R10-20aP	2B.61	24 x 18	24 x 18	—	—	—	—
Crosswalk, Stop on Red	R10-23	2B.60	24 x 30	24 x 30	—	—	—	—
Wait on Steady Red - Yield on Flashing Red After Stop	R10-23a	2B.60	24 x 30	24 x 30	—	—	—	—
Push Button for Warming Lights	R10-25	2B.59	9 x 12	9 x 12	—	—	—	—
Left Turn Yield on Flashing Red Arrow After Stop	R10-27	2B.60	30 x 36	30 x 36	—	—	—	—
XX Vehicles Per Green	R10-28	2B.63	24 x 30	24 x 30	—	—	—	—
XX Vehicles Per Green Each Lane	R10-29	2B.63	36 x 24	36 x 24	—	—	—	—
Right Turn on Red Must Yield to U-Turn	R10-30	2B.61	30 x 36	30 x 36	—	—	—	—
At Signal (plaque)	R10-31P	2B.60	24 x 9	24 x 9	—	—	—	—
Push Button for 2 Seconds for Extra Crossing Time	R10-32P	2B.59	9 x 12	9 x 12	—	—	—	—
Keep Off Median	R11-1	2B.64	24 x 30	24 x 30	—	—	—	—
Road Closed	R11-2	2B.65	48 x 30	48 x 30	—	—	—	—
Road Closed - Local Traffic Only	R11-3a,3b,4	2B.65	60 x 30	60 x 30	—	—	—	—
Weight Limit	R12-1	2B.66	24 x 30	24 x 30	36 x 48	—	—	36 x 48
Weight Limit	R12-5	2B.66	24 x 36	24 x 36	36 x 48	48 x 60	—	—
Specialized Hauling Vehicle Weight Limit	R12-6	2B.66	24 x 36	24 x 36	36 x 48	48 x 60	—	60 x 72
Emergency Vehicle Weight Limit	R12-7	2B.66	30 x 36	30 x 36	48 x 60	48 x 60	—	48 x 60
Emergency Vehicle Weight Limit (plaque)	R12-7aP	2B.66	30 x 30	30 x 30	48 x 48	48 x 48	—	48 x 48
Vehicle Inspection Area	R13-1	2B.67	72 x 54	72 x 54	96 x 72	132 x 90	—	—
Truck Route	R14-1	2B.68	24 x 18	24 x 18	—	—	—	—
Hazardous Material	R14-2,3	2B.69	24 x 24	24 x 24	30 x 30	36 x 36	—	42 x 42
National Network	R14-4,5	2B.70	30 x 30	30 x 30	36 x 36	36 x 36	—	42 x 42
Move Over Reduce Speed	R16-3	2B.72	54 x 48	54 x 48	78 x 60	108 x 96	—	78 x 60
Minor Crashes Move Vehicles from Travel	R16-4	2B.71	54 x 36	54 x 36	78 x 48	108 x 60	—	78 x 48

Table 2B-1. Regulatory Sign and Plaque Sizes

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Lights On When Using Wipers or Raining	R16-5,6	2B.74	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Turn On Headlights Next XX Miles	R16-7	2B.74	48 x 15	48 x 15	72 x 24	96 x 30	—	72 x 24
Turn On, Check Headlights	R16-8,9	2B.74	30 x 15	30 x 15	48 x 24	60 x 30	—	48 x 24
Begin, End Daytime Headlight Section	R16-10,11	2B.74	48 x 15	48 x 15	72 x 24	96 x 30	—	72 x 24
No Hand-Held Phones By Driver	R16-15	2B.73	—	—	72 x 48	72 x 48	—	—
No Hand-Held Phones By Driver	R16-15a	2B.73	30 x 42	30 x 42	—	—	—	—

* See Table 9B-1 for minimum size required for signs on bicycle facilities

Notes:

1. Larger signs may be used when appropriate
2. Dimensions in Inches are shown as width x height

226
227 FHWA proposes adding new signs to Table 2B-1. NCUTCD generally agrees, but proposes
228 deletion of some new signs. NCUTCD also proposes other signs for addition. See section
229 comments for details.

230

231

232 **Section 2B.04 Comments:** NCUTCD recommends moving the prohibition on using a
233 changeable message sign for STOP sign display from 2B.02 to here.

234

235 **Section 2B.04 STOP Sign (R1-1) and ALL-WAY Plaque (R1-3P)**
236 **Standard:**

237 When it is determined that a full stop is always required on an approach to an
238 intersection, a STOP (R1-1) sign shall be used.

239 The STOP sign shall be an octagon with a white legend and border on a red
240 background.

241 Secondary legends shall not be used on STOP sign faces.

242 **The STOP (R1-1) sign shall not be displayed using a changeable message sign.** (moved
243 from Section 2B.02)

244 At intersections where all approaches are controlled by STOP signs (see Section 2B.13),
245 an ALL- WAY supplemental plaque (R1-3P) shall be mounted below each STOP sign. The
246 ALL-WAY plaque shall have a white legend and border on a red background.

247 The following statement in the 2009 MUTCD is proposed to be deleted: **The ALL-WAY plaque
248 shall only be used if all intersection approaches are controlled by STOP signs.** NCUTCD
249 agrees.

250 Supplemental plaques with legends such as 2-WAY, 3-WAY, 4-WAY, or other numbers
251 of ways shall not be used with STOP signs.

252 Support:

253 The use of the CROSS TRAFFIC DOES NOT STOP (W4-4P) plaque (and other plaques
254 with variations of this word message) is described in Section 2C.65.

255 **Guidance:**

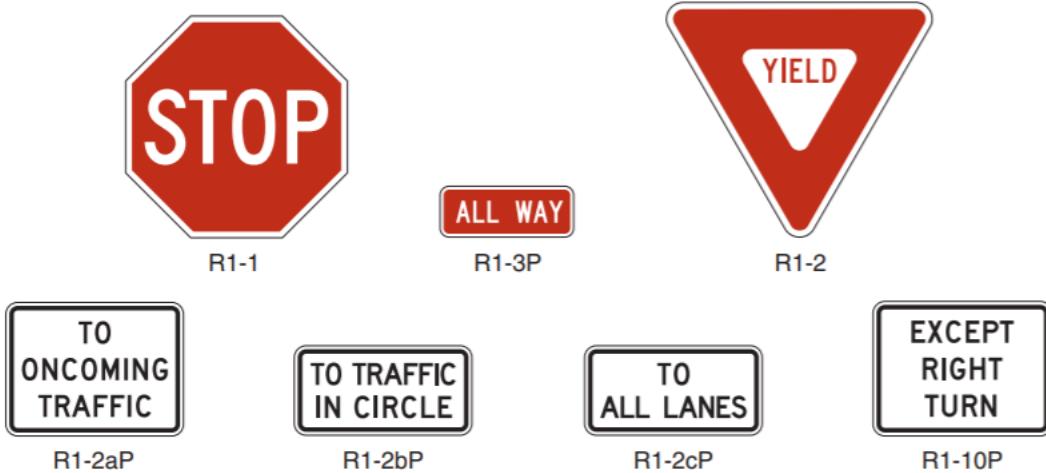
256 *Plaques with the appropriate alternative messages of TRAFFIC FROM LEFT (RIGHT)
257 DOES NOT STOP (W4-4aP) or ONCOMING TRAFFIC DOES NOT STOP (W4-4bP) should be
258 used at intersections where STOP signs control all but one approach to the intersection, unless
259 the only non-stopped approach is from a one-way street.*

260 Option:

261 An EXCEPT RIGHT TURN (R1-10P) plaque may be mounted below the STOP sign if an
262 engineering study determines that a special combination of geometry and traffic volumes is
263 present that makes it possible for right-turning traffic on the approach to be permitted to enter the
264 intersection without stopping.

265 Support:
266 The design and application of Stop Beacons are described in Section 4S.05.
267

Figure 2B-1. STOP and YIELD Signs and Plaques



268
269 NCUTCD agrees with Figure 2B-1 as presented in the NPA.
270

271
272 **Section 2B.05 Comments:** NCUTCD recommends moving the prohibition on using a
273 changeable message sign for YIELD sign display from 2B.02 to here.

274
275 **Section 2B.05 YIELD Sign (R1-2)**

276 **Standard:**

277 The YIELD (R1-2) sign shall be a downward-pointing equilateral triangle with a wide
278 red border and the legend YIELD in red on a white background.

279 **The YIELD (R1-2) sign shall not be displayed using a changeable message sign.** (moved
280 from Section 2B.02)

281 Support:

282 The YIELD sign requires road users to yield the right-of-way to other traffic on certain
283 approaches to an intersection. Vehicles controlled by a YIELD sign need to slow down to a
284 speed that is reasonable for the
285 existing conditions or stop when necessary to avoid interfering with conflicting traffic.

286
287
288 **Section 2B.06 Comments:** NCUTCD recommends adding wording to Guidance list item G for
289 clarification. NCUTCD agrees with the revision from Guidance to Standard for prohibiting
290 STOP or YIELD signs for speed control.

291
292 **Section 2B.06 General Considerations**

293 Support:

294 Unsignalized intersections represent the most common form of intersection right-of-way
295 control. Selection of control type might be impacted by specific requirements of state law or
296 local ordinances.

297 Roundabouts and traffic circles are intersection designs and are not traffic control devices.
298 The decision to convert an intersection from a conventional intersection to a circular intersection
299 is an engineering design decision and not a traffic control device decision. As such, criteria for
300 conversion from a conventional intersection to a circular intersection are not included in the
301 MUTCD.

302 *Guidance:*

303 *The type of traffic control used at an unsignalized intersection should be the least restrictive
304 that provides appropriate levels of safety and efficiency.*

305 *Support:*

306 Some types of right-of-way control that can exist at an unsignalized intersection are listed
307 below in order from the least restrictive to the most restrictive.

- 308 A. No intersection control: There are no right-of-way traffic control devices on any of the
309 approaches to the intersection (See Section 2B.04c for guidance).
- 310 B. Yield Control: YIELD signs are placed on all approaches (for a roundabout), on opposing
311 approaches for a 4-leg intersection, on a single approach for a 3 ~~2~~-leg intersection, or in
312 the median of a divided highway. The YIELD signs are placed on the minor road. (See
313 Section 2B.04b for guidance)
- 314 C. Minor road stop control: STOP signs are typically placed on opposing approaches (for a
315 4-leg intersection) or on a single approach (for a 3-leg intersection). The STOP signs are
316 normally placed on the minor road. (See Section 2B.04a for guidance on selecting the
317 minor road.)
- 318 D. All-way stop control: STOP signs are placed on all approaches to the intersection. (See
319 Section 2B.04f for guidance.)

320 *Guidance:*

321 *When selecting a form of intersection control, the following factors should be considered:*

- 322 A. *Vehicular, bicycle, and pedestrian traffic volumes on all approaches. Where the term
323 units/day or units/hour is indicated, it should be the total of vehicular, bicycle, and
324 pedestrian volume.*
- 325 B. *Driver yielding behavior with regard to bicyclists and pedestrians;*
- 326 C. *Number and angle of approaches;*
- 327 D. *Approach speeds;*
- 328 E. *Sight distance available on each approach; and*
- 329 F. *Reported crash experience.*
- 330 G. *presence of a grade crossing near the intersection for queue back up from the
331 intersection. (add wording for clarification)*

332 *Support:*

333 Appropriate traffic calming or other speed-control measures are available to control vehicle
334 speeds, such as those that do not have the potential to diminish the effectiveness of traffic control
335 devices when used for their specified purpose.

336 **Standard:**

337 **Yield or Stop signs shall not be used for speed control.** NPA change from Guidance to
338 Standard. NCUTCD agrees.

339 **Because the potential for conflicting commands could create driver confusion, Yield or**
340 **Stop signs shall not be used in conjunction with any traffic control signal operation, except**
341 **in the following cases:**

- 342 A. If the signal indication for an approach is a flashing red at all times;
- 343 B. If a minor street or driveway is located within or adjacent to the area controlled by
344 the traffic control signal, but does not require separate traffic signal control because
345 an extremely low potential for conflict exists; or
- 346 C. If a channelized turn lane is separated from the adjacent travel lanes by an island
347 and the channelized turn lane is not controlled by a traffic control signal.

348 **Except as provided in Section 2B.11, STOP signs and YIELD signs shall not be installed**
349 **on different approaches to the same unsignalized intersection if those approaches conflict**
350 **with or oppose each other.**

351 **Portable or part-time STOP or YIELD signs shall not be used except for emergency**
352 **and temporary traffic control zone purposes.**

353 **A portable or part-time (folding) STOP sign that is manually placed into view and**
354 **manually removed from view shall not be used during a power outage to control a**
355 **signalized approach unless the maintaining agency establishes that the signal indication**
356 **that will first be displayed to that approach upon restoration of power is a flashing red**
357 **signal indication and that the portable STOP sign will be manually removed from view**
358 **prior to stop-and-go operation of the traffic control signal.**

359 **Option:**

360 A portable or part-time (folding) Stop sign that is electrically or mechanically operated such
361 that it only displays the Stop message during a power outage and ceases to display the Stop
362 message upon restoration of power may be used during a power outage to control a signalized
363 approach.

364 **Support:**

365 The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.

366 Section 9B.01 contains provisions regarding the assignment of priority at a shared-use
367 path/roadway intersection.

369
370 **Section 2B.07 Comments:** NCUTCD generally agrees with 2B.07 as presented in the NPA, as it
371 is consistent with NCUTCD recommendation 15B-RW-02, but offers editorial corrections to
372 conform the NPA to 15B-RW-02.

374 **Section 2B.07 Determining the Minor Road for Unsignalized Intersections**

375 **Guidance:**

376 *The selection of the minor road to be controlled by YIELD or STOP signs should be based on*
377 *one or more of the following criteria:*

- 378 A. A roadway intersecting a designated through or numbered highway.
- 379 B. A roadway with the lower functional classification.
- 380 C. A roadway with the lower traffic volume.
- 381 D. A roadway with the lower speed limit
- 382 E. A roadway that intersects with a roadway that has a higher priority for one or more
383 modes of travel.

384 When two roadways that have relatively equal volumes, speeds, and/or other characteristics
385 intersect, the following factors should be considered in selecting the minor road for installation
386 of YIELD or STOP signs: (add “other” for clarity per 15B-RW-02)

- 387 A. Controlling the direction that conflicts the most with established pedestrian crossing
388 activity or school walking routes;
- 389 B. Controlling the direction that has obscured vision, dips, or bumps that already require
390 drivers to use lower operating speeds; and
- 391 C. Controlling the direction that has the best sight distance from a controlled position to
392 observe conflicting traffic.

393

394
395 **Section 2B.08 Comments:** NCUTCD agrees with 2B.08 as presented in the NPA, as it is
396 generally consistent with NCUTCD recommendation 15B-RW-02.

397

398 **Section 2B.08 Right-of-Way Intersection Control Considerations**

399 *Guidance:*

400 Before converting to a more restrictive form of right-of-way control at an unsignalized
401 intersection, consideration should be given, but not limited, to the following alternative
402 treatments to address safety, operational, or other concerns.

- 403 A. Where Yield or Stop controlled, installing Stop Ahead or Yield Ahead signs on the
404 appropriate approaches to the intersection.
- 405 B. Removing parking on one or more approaches.
- 406 C. Removing sight distance restrictions.
- 407 D. Installing signs along the major street to warn road users approaching the intersection;
- 408 E. Relocating the stop line(s) and making other changes to improve the sight distance at the
409 intersection;
- 410 F. Installing measures designed to reduce speeds on the approaches;
- 411 G. Installing an intersection control beacon (see Section 4S.02) or stop beacon (see Section
412 4S.05) at the intersection to supplement STOP sign control;
- 413 H. Installing a warning beacon (see Section 4S.03) on warning signs in advance of a STOP
414 sign controlled intersection on major- and/or minor-street approaches;
- 415 I. Adding one or more lanes on a minor-street approach to reduce the number of vehicles
416 per lane on the approach;
- 417 J. Revising the geometrics at the intersection to channelize vehicular movements and
418 reduce the time required for a vehicle to complete a movement, which could also assist
419 pedestrians;
- 420 K. Revising the geometrics at the intersection to add pedestrian median refuge islands
421 and/or curb extensions;
- 422 L. Installing roadway lighting if a disproportionate number of crashes occur at night;
- 423 M. Restricting one or more turning movements on a full- or part-time basis if alternate
424 routes are available;
- 425 N. Installing on the major street a pedestrian-actuated device: warning beacon (see Section
426 4S.03), rectangular rapid-flashing beacon (see Section 4L.01), or In-Roadway Warning
427 Lights (see Chapter 4U), if pedestrian safety is the major concern; (revised by FHWA
428 from 15B-RW-02 - NCUTCD agrees)

- 429 O. If the warrant is satisfied, installing multi-way STOP sign control; (added by FHWA
430 from 4B.04 - NCUTCD agrees)
- 431 P. *Installing on the major street a pedestrian hybrid beacon (see Chapter 4J) if pedestrian*
432 *safety is the major concern;*
- 433 Q. *Installing a roundabout; and*
- 434 R. *Employing other alternatives, depending on conditions at the intersection.*
-

436
437 **Section 2B.09 Comments:** NCUTCD agrees with 2B.09 as presented in the NPA, as it is
438 generally consistent with NCUTCD recommendation 15B-RW-02.

439
440 **Section 2B.09 No Intersection Control**

441 *Guidance:*

442 *The decision not to use intersection control should be based on engineering judgment.*

443 Option:

444 The following factors may be considered:

- 445 A. Intersection sight distance is adequate on all approaches.
- 446 B. All approaches to the intersection are a single lane and there are no separate turn lanes.
- 447 C. The combined vehicular, bicycle, and pedestrian volume (existing or projected) entering
448 the intersection from all approaches averages less than 1,000 units per day or 80 units in
449 the peak hour.
- 450 D. There are no marked crosswalks or bicycle lanes on any approach. (added by FHWA -
451 NCUTCD agrees)
- 452 E. None of the approaches to the intersection are for a through highway, main road, or
453 higher functional classification. (revised by FHWA from 15B-RW-02 - NCUTCD
454 agrees)
- 455 F. The angle of intersection is between 90 and 75 degrees.
- 456 G. The functional classification of the intersecting streets is either the intersection of two
457 local streets or the intersection of a local street with a collector street.
-

459
460 **Section 2B.10 Comments:** NCUTCD generally agrees with 2B.10 as presented in the NPA, as it
461 is reasonably consistent with NCUTCD recommendations 15B-RW-02 and 19A-RW-01, but
462 recommends revising the next-to-last Standard paragraph to clarify which vehicles must yield.

463
464 **Section 2B.10 Yield Control**

465 *Guidance:*

466 *At intersections where a full stop is not necessary at all times, consideration should first be*
467 *given to using less restrictive measures such as YIELD signs.*

468 *Yield control should be considered when engineering judgment indicates that all of the*
469 *following conditions exist:* (minor text change from 15B-RW-02 - NCUTCD agrees)

- 470 A. *Intersection sight distance is adequate on the approaches to be controlled by*
471 *YIELD signs.*
- 472 B. *All approaches to the intersection are a single lane and there are no separate turn*
473 *lanes.*
- 474 C. *One of the following crash-related criteria applies:*

475 1. *For changing from no intersection control to yield control, there have been*
476 *two or more reported crashes that are susceptible to correction by*
477 *installation of a YIELD sign in the previous 12 months.* (minor text change
478 from 15B-RW-02 - NCUTCD agrees)

479 2. *For changing from minor road stop control to yield control, there have been*
480 *two or fewer reported crashes in the previous 12 months* (minor text change
481 from 15B-RW-02 - NCUTCD agrees)

482 D. *Entering intersection volume of less than 1800 units per day or 140 units in the*
483 *peak hour.*

484 E. *The angle of intersection is between 90 and 75 degrees.*

485 F. *The functional classification of the intersecting streets is either the intersection of*
486 *two local streets or the intersection of a local street with a collector street.*

487 **Option:**

488 YIELD signs may be established at an intersection when any of the following conditions
489 apply:

490 A. At the second intersection of a divided highway crossing or median break functioning
491 as two separate intersections (see Figures 2B-12 and 2B-15). In this case, a YIELD sign
492 may be installed at the entrance to the second intersection.

493 B. For a channelized turn lane that is separated from the adjacent travel lanes by an island,
494 even if the adjacent lanes at the intersection are controlled by a highway traffic control
495 signal or by a Stop sign.

496 C. At an intersection where a special problem exists and where engineering judgment
497 indicates the problem to be susceptible to correction by the use of the YIELD sign.

498 D. Facing the entering roadway for a merge-type movement if engineering judgment
499 indicates that control is needed because acceleration geometry and/or sight distance is
500 not adequate for merging traffic operation.

501 E. On low-volume rural roads if engineering judgment indicates that the YIELD would
502 provide adequate control. (added by FHWA - NCUTCD agrees)

503 F. On an approach to an intersection where the only permissible movement is a right turn
504 movement with an intersection geometry similar to a channelized right turn lane or an
505 approach to a roundabout.

506 **Guidance:**

507 The YIELD signs should be installed on opposing minor street approaches (for a 4-leg
508 intersection) or on the minor approach (for a 3-leg intersection). (See Section 2B-X3) for
509 information to identify the minor road). When two intersecting roadways have relatively equal
510 volumes, speeds and other characteristics, yield control should be installed on the approach that
511 conflicts the most with established pedestrian crossing activity or school walking routes or
512 bicycle crossing activity.

513 **Standard:**

514 A YIELD sign shall be used to require road users on ~~the right-of-way to other traffic at~~
515 the entrance to a roundabout to yield the right-of-way to vehicles on the circulatory
516 roadway. (revise to clarify which vehicles must yield) Yield signs at roundabouts shall be
517 used to control the approach roadways and shall not be used to control the circulatory
518 roadway.

519 YIELD signs shall not be placed on all of the approaches to an intersection, except at
520 roundabouts.

521

522

523 **Section 2B.11 Comments:** NCUTCD agrees with 2B.11 as presented in the NPA, as it is
524 reasonably consistent with NCUTCD recommendation 15B-RW-02.

525

526 **Section 2B.11 Minor Road Stop Control**

527 *Guidance:*

528 *Stop control on the minor road approach or approaches to an intersection should be
529 considered when engineering judgment indicates that one or more of the following conditions
530 exist:*

531 *A. A restricted view exists that requires road users to stop in order to adequately
532 observe conflicting traffic on the through street or highway;*

533 *B. Crash records indicate that:*

534 *1. For a four-leg intersection, there are three or more reported crashes in a 12-month
535 period or six or more reported crashes in a 36-month period. The crashes should be
536 susceptible to correction by installation of two-way stop control*

537 *2. For a three-leg intersection, there are three or more reported crashes in a 12-month
538 period or five or more reported crashes in a 36-month period. The crashes should
539 be susceptible to correction by installation of two-way stop control.*

540 *C. The intersection is of a lower functional classification road with a higher functional
541 classification road*

542 *D. Conditions that previously supported installation of an all-way stop control under all-
543 way stop control criteria no longer exist.*

544 *On low-volume rural roads, a STOP sign should be considered at an intersection where
545 engineering judgment indicates that Item C above is applicable or where the intersection has
546 inadequate sight distance for the operating vehicle speeds. (new Guidance - NCUTCD agrees)*

548

549 **Section 2B.12 Comments:** NCUTCD recommends revising part of 2B.12 to address site
550 roadways open to public travel to be consistent with NCUTCD recommendation 15B-RW-02.

551

552 **Section 2B.12 All-Way Stop Control**

553

554 *Guidance:*

555 *The decision to establish all-way stop control at an unsignalized intersection should be based
556 on an engineering study. All-way stop control should not be established at intersections where
557 there is significant imbalance between traffic volumes at intersecting streets. The engineering
558 study for all-way stop control should include an analysis of factors related to the existing
559 operation and safety at the intersection, the potential to improve these conditions, and the
560 applicable factors contained in the following all-way stop control warrants:*

561 *All-Way Stop Control Warrant A: Crash Experience (Section 2B.13)*

562 *A. All-Way Stop Control Warrant B: Sight Distance (Section 2B.14)*

563 *B. All-Way Stop Control Warrant C: Transition to Signal Control or YIELD Control at a
564 Roundabout (Section 2B.15)*

565 *C. All-Way Stop Control Warrant D: Peak Hour Volume (Vehicle, Pedestrians, Bicycles)
566 (Section 2B.16)*

567 D. All-Way Stop Control Warrant E: Other Factors (Section 2B.17)

568 Option:

569 The decision to install a multi-way stop control on site roadways open to public travel may
570 be based on engineering judgement (add Guidance from 15B-RW-02)

571 Standard:

572 **The satisfaction of an all-way stop control warrant or warrants shall not in itself**
573 **require the installation of all-way stop control at an unsignalized intersection.**

575
576 **Section 2B.13 Comments:** NCUTCD recommends deleting option C as it can conflict with
577 Section 2B.14.

578 579 **Section 2B.13 All-Way Stop Control Warrant A: Crash Experience**

580 Option:

581 All-way stop control may be installed at an intersection where an engineering study indicates
582 that:

- A. For a four-leg intersection, there are five or more reported crashes in a 12-month period
583 or six or more reported crashes in a 36-month period, that were of a type susceptible to
584 correction by the installation of all-way stop control.
- B. For a three-leg intersection, there are four or more reported crashes in a 12-month
585 period or five or more reported crashes in a 36-month period that were of a type
586 susceptible to correction by the installation of all-way stop control.
- C. ~~The sight distance on the minor road approaches controlled by a Stop sign is not
587 adequate for a vehicle to turn onto or cross the major (uncontrolled) road.~~ (address in
588 2B.14)

592
593
594 **Section 2B.14 Comments:** NCUTCD agrees with 2B.14 as presented in the NPA, as it is
595 reasonably consistent with NCUTCD recommendation 15B-RW-02.

596 597 **Section 2B.14 All-Way Stop Control Warrant B: Sight Distance**

598 Option:

599 All-way stop control may be installed at an intersection where an engineering study indicates
600 that sight distance on the minor road approaches controlled by a Stop sign is not adequate for a
601 vehicle to turn onto or cross the major (uncontrolled) road.

602 Support:

603 At such a location, a road user, after stopping, cannot see conflicting traffic and is not able to
604 negotiate the intersection unless conflicting cross traffic is also required to stop. ~~(concur this
605 content should be here and not in 2B.13)~~

606
607
608 **Section 2B.15 Comments:** NCUTCD agrees with 2B.15 as presented in the NPA, as it is
609 consistent with NCUTCD recommendation 15B-RW-02.

610 611 **Section 2B.15 All-Way Stop Control Warrant C: Transition to Signal Control or YIELD**
612 **Control at a Roundabout**

613 Option:
614 All-way stop control may be installed at locations where all-way stop control is an interim
615 measure that can be installed to control traffic while arrangements are being made for the
616 installation of the traffic control signals at the intersection or YIELD control at a roundabout.
617

618
619 **Section 2B.16 Comments:** NCUTCD recommends revising 2B.16 to be consistent with
620 NCUTCD recommendation 15B-RW-02, specifically changing “and” to “but” in list item B.
621
622

623 **Section 2B.16 All-Way Stop Control Warrant D: 8-Hour Volume (Vehicle, Pedestrians,
624 Bicycles)**

625 Option:
626 All-way stop control may be installed at an intersection where an engineering study
627 indicates:
628 A. The volume entering the intersection from the major street approaches (total of both
629 approaches) averages at least 300 units per hour for each of any 8 hours of an average
630 day; and
631 B. The volume entering the intersection from the minor street approaches (total of both
632 approaches) averages at least 200 units per hour for each of any of the same 8 hours; ~~and~~
633 but (“and” is erroneous - should be “but”)
634 C. If the 85th percentile approach speed of the major-street traffic exceeds 40 mph, the
635 minimum vehicular volume warrants are 70 percent of the values in Items A and B.
636

637
638 **Section 2B.17 Comments:** NCUTCD agrees with 2B.17 as presented in the NPA, as it is
639 reasonably consistent with NCUTCD recommendation 15B-RW-02.
640

641 **Section 2B.17 All-Way Stop Control Warrant E: Other Factors**

642 Option:
643 All-way stop control may be installed at an intersection where an engineering study indicates
644 that all-way stop control is needed due to other factors not addressed in the other all-way stop
645 control warrants. Such other factors may include, but are not limited to, the following:
646 A. The need to control left-turn conflicts;
647 B. An intersection of two residential neighborhood collector (through) streets of similar
648 design and operating characteristics where all-way stop control would improve traffic
649 operational characteristics of the intersection; or
650 C. Where pedestrian and/or bicycle movements justify the installation of all-way stop
651 control.
652

653
654
655 **Section 2B.18 Comments:** NCUTCD agrees with most changes in 2B.17, but recommends
656 adding Option text to address private roadways open to public travel to be consistent with
657 NCUTCD recommendation 15A-RW-02.
658

659 **Section 2B.18 STOP Sign or YIELD Sign Placement**

660 **Standard:**

661 The STOP or YIELD sign shall be installed on the near side of the intersection on the
662 right-hand side of the approach to which it applies. When the STOP or YIELD sign is
663 installed at this required location and the sign visibility is restricted, a Stop Ahead sign (see
664 Section 2C.37) shall be installed in advance of the STOP sign or a Yield Ahead sign (see
665 Section 2C.37) shall be installed in advance of the YIELD sign.

666 The STOP or YIELD sign shall be located as close as practical to the intersection it
667 regulates, while optimizing its visibility to the road user it is intended to regulate.

668 **STOP signs and YIELD signs shall not be mounted on the same post.**

669 **Guidance:**

670 *STOP or YIELD signs should not be placed farther than 50 feet from the edge of the
671 pavement of the intersected roadway (see Drawing F in Figure 2A-3).*

672 *A sign that is mounted back-to-back with a STOP or YIELD sign should stay within the edges
673 of the STOP or YIELD sign. If necessary, the size of the STOP or YIELD sign should be
674 increased so that any other sign installed back-to-back with a STOP or YIELD sign remains
675 within the edges of the STOP or YIELD sign*

676 *Supplemental plaques used in conjunction with a STOP or YIELD sign should be limited to
677 those specified for such use in this Manual.*

678 **Option:**

679 Where drivers proceeding straight ahead must yield to traffic approaching from the
680 opposite direction, such as at a one-lane bridge, a TO ONCOMING TRAFFIC (R1-2aP) plaque
681 may be mounted below the YIELD sign.

682 Where drivers must yield to traffic in a multi-lane roundabout, a TO TRAFFIC IN CIRCLE
683 (R1-2bP) or TO ALL LANES (R1-2cP) plaque may be mounted below the YIELD sign.

684 **Support:**

685 Figure 2A-3 shows examples of some typical placements of STOP signs and YIELD signs.

686 Section 2A.12 contains additional information about separate and combined mounting of
687 other signs with STOP or YIELD signs.

688 **Guidance:**

689 *Stop lines that are used to supplement a STOP sign should be located as described in Section
690 3B.19. Yield lines that are used to supplement a YIELD sign should be located as described in
691 Section 3B.19.*

692 *Where there is a marked crosswalk at the intersection, the STOP sign should be installed in
693 advance of the crosswalk line nearest to the approaching traffic.*

694 *Except at roundabouts, where there is a marked crosswalk at the intersection, the YIELD
695 sign should be installed in advance of the crosswalk line nearest to the approaching traffic.*

696 *Where two roads intersect at an acute angle, the STOP or YIELD sign should be positioned
697 at an angle, or shielded, so that the legend is out of view of traffic to which it does not apply.*

698 *If a raised splitter island is available on the left-hand side of a multi-lane roundabout
699 approach, an additional YIELD sign should be placed on the left-hand side of the approach.*

700 **Option:**

701 If a raised splitter island is available on the left-hand side of a single lane roundabout
702 approach, an additional YIELD sign may be placed on the left-hand side of the approach.

703 At wide-throat intersections or where two or more approach lanes of traffic exist on the
704 signed approach, observance of the right-of-way control may be improved by the installation of

705 an additional STOP or YIELD sign on the left-hand side of the road and/or the use of a stop or
706 yield line. At channelized intersections or at divided roadways separated by a median, the
707 additional STOP or YIELD sign may be placed on a channelizing island or in the median. An
708 additional STOP or YIELD sign may also be placed overhead facing the approach at the
709 intersection to improve observance of the right-of-way control.

710 **Standard:**

711 **More than one STOP sign or more than one YIELD sign shall not be placed on the**
712 **same support facing in the same direction.**

713 Option:

714 For a yield-controlled channelized right-turn movement onto a roadway without an
715 acceleration lane and for an entrance ramp onto a freeway or expressway without an acceleration
716 lane, a NO MERGE AREA (W45P) supplemental plaque (see Section 2C.47) may be mounted
717 below a Yield Ahead (W3-2) sign and/or below a YIELD (R1-2) sign when engineering
718 judgment indicates that road users would expect an acceleration lane to be present.

719 At the junction of two private roadways open to public travel, when the operating speeds are less
720 than 25 mph on both roadways, a STOP or YIELD sign may be installed at a location on other
721 than the right-hand side as necessitated by physical constraints. (add Option from 15A-RW-02 to
722 address private roadways open to public travel)

723

724 **Section 2B.19 Comments:** NCUTCD agrees with some changes, but recommends revising
725 2B.19 to be consistent with NCUTCD recommendations 13A-RW-01 and 18A-RW-01, []
726 including optional use of a STATE LAW legend and use of these signs on both single lane and
727 multi-lane approaches.

728

729 **Section 2B.19 Yield Here To Pedestrians Signs and Stop Here For Pedestrians Signs (R1-5**
730 **Series)**

731 Support:

732 The R1-5 series signs are intended to mitigate the scenario that can place pedestrians at risk
733 by blocking other drivers' view of pedestrians and by blocking the pedestrians' view of the
734 vehicles approaching in the adjacent lanes.

735 Standard:

736 **Yield Here To (Stop Here For) Pedestrians (R1-5, R1-5a, R1-5b, or R1-5c) signs shall**
737 **only be used if yield (stop) lines are used in advance of a marked crosswalk that crosses an**
738 **uncontrolled multi-lane approach.** (change to allow use at single-lane roadways per 18A-RW-
739 01) **The Stop Here for Pedestrians signs shall only be used where the law specifically**
740 **requires that a driver must stop for a pedestrian in a crosswalk. The legend STATE LAW**
741 **shall not be displayed on the R1-5 series signs.** (revise to not prohibit STATE LAW legend on
742 signs as used by many agencies and per 13A-RW-01)

743 If yield (stop) lines and Yield Here To (Stop Here For) Pedestrians signs are used in
744 advance of a crosswalk that crosses an uncontrolled multi-lane approach, the signs shall
745 be placed 20 to 50 feet in advance of the nearest crosswalk line (see Section 3B.19 and
746 Figure 3B-16). (change to allow use at single-lane roadways per 18A-RW-01)

747 Option:

748 The R1-5a and R1-5c signs may be used in place of the R1-5 and R1-5b signs provided that
749 the signs are only used in advance of a marked crosswalk that crosses an uncontrolled multi-lane

751 approach within school zones (see Part 7). (change to allow use at single-lane roadways per 18A-
752 RW-01)

753 **Guidance:**

754 *When Yield Here To (Stop Here For) Pedestrians signs are provided in advance of a
755 crosswalk across an multi-lane approach, parking should be prohibited in the area between the
756 yield (stop) line and the crosswalk.*

757 *Yield (stop) lines and Yield Here To (Stop Here For) Pedestrians signs should not be used in
758 advance of crosswalks that cross an approach to or departure from a roundabout.*

759 **Option:**

760 Yield Here To (Stop Here For) Pedestrians signs may be used in accordance with Paragraphs
761 2 through 4 of this Section even if yield (stop) lines are not used.

762 A Pedestrian Crossing (W11-2) warning sign may be placed overhead or may be post-
763 mounted with a diagonal downward pointing arrow (W16-7P) plaque at the crosswalk location
764 where Yield Here To (Stop Here For) Pedestrians signs have been installed in advance of the
765 crosswalk. The legend STATE LAW may be displayed at the top of the R1-5, R1-5a, R1-5b, and
766 R1-5c signs, if applicable. (revise to allow optional STATE LAW legend on signs as used by
767 many agencies and per 13A-RW-01)

768 **Standard:**

769 **If a W11-2 sign has been post-mounted at the crosswalk location where a Yield Here To
770 (Stop Here For) Pedestrians sign is used on the approach, the Yield Here To (Stop Here
771 For) Pedestrians sign shall not be placed on the same post as the W11-2 sign.**

772 **Option:**

773 An advance Pedestrian Crossing (W11-2) warning sign with an AHEAD or a distance
774 supplemental plaque may be used in conjunction with a Stop Here For (Yield Here To)
775 Pedestrians sign on the approach to the same crosswalk.

776 In-Street Pedestrian Crossing signs and Stop Here For (Yield Here To) Pedestrians signs may
777 be used together at the same crosswalk.

779 **Section 2B.20 Comments:** NCUTCD agrees with some changes, but recommends revising
780 2B.20 to be consistent with NCUTCD recommendation 16B-RW-02 and the results of [redacted]
781 Experiment 2(09)-85, including optional alternatives of placing sign on a lane line or on top of
782 curb or in the gutter to create a “gateway” treatment.
783

784 **Section 2B.20 In-Street and Overhead Pedestrian and Trail Crossing Signs (R1-6 series
785 and R1-9 Series)**

786 **Option:**

787 The In-Street Pedestrian Crossing (R1-6 or R1-6a) sign (see Figure 2B-2), In-Street Trail
788 Crossing (R1-6b or R1-6c) sign (see Figure 2B-2), Overhead Pedestrian Crossing (R1-9 or R1-
789 9a) sign (see Figure 2B-2), or the Overhead Trail Crossing (R1-9d or R1-9e) may be used to
790 remind road users of laws regarding right-of-way at an unsignalized crosswalk. The legend
791 STATE LAW may be displayed at the top of the R1-6 series and R1-9 series signs if applicable.
792 On the R1-6 series signs, the legends STOP or YIELD may be used instead of the appropriate
793 STOP sign or YIELD sign symbol. (recommended editorial change)

794 Highway agencies may develop and apply criteria for determining the applicability of In-
795 Street Crossing signs.

797 **Standard:**

798 **If used, the In-Street Pedestrian or Trail Crossing sign shall be placed at one or more of**
799 **the following locations at or near the crosswalk:**

- 800 A. **in the roadway at the crosswalk location on the center line;**
801 B. **on a median island;**
802 C. **or, in the case of a one-way roadway application, on a lane line;**
803 D. **on either the top of the curb or the bottom of curb which is level with the**
804 **roadway**

805 (revise to allow “gateway” treatments per 16B-RW-02)

806 **The In-Street Pedestrian or Trail Crossing sign shall not be post-mounted on the left-**
807 **hand or righthand side of the roadway.**

808 **If used, the Overhead Pedestrian or Trail Crossing sign shall be placed over the**
809 **roadway at the crosswalk location.**

810 **If used, the In-Street or Overhead Pedestrian Crossing sign shall be used only as a**
811 **supplement to a Pedestrian Crossing (W11-2) warning sign with a diagonal downward-**
812 **pointing arrow (W16-7P) plaque at the crosswalk location.**

813 **If used, the In-Street or Overhead Trail Crossing sign shall be used only as a**
814 **supplement to a Trail Crossing (W11-15) warning sign with a diagonal downward-pointing**
815 **arrow (W16-7P) plaque at the crosswalk location.**

816 **An In-Street or Overhead Pedestrian or Trail Crossing sign shall not be placed in**
817 **advance of the crosswalk to educate road users about the State law prior to reaching the**
818 **crosswalk, nor shall it be installed as an educational display that is not near any crosswalk.**

819 *Guidance:*

820 *If an island (see Chapter 3I) is available, the In-Street Pedestrian or Trail Crossing sign, if*
821 *used, should be placed on the island.*

822 *Option:*

823 In-Street Pedestrian or Trail Crossing signs may be mounted back to back in the median or
824 on the centerline of an undivided roadway.

825 **Standard:**

826 **The In-Street Pedestrian or Trail Crossing sign and the Overhead Pedestrian Crossing**
827 **or Trail sign shall not be used at crosswalks on approaches controlled by a traffic control**
828 **signal, pedestrian hybrid beacon, or an emergency vehicle hybrid beacon.**

829 **The STOP FOR legend shall only be used in States where the State law specifically**
830 **requires that a driver must stop for a pedestrian or bicycle in a crosswalk.**

831 **Except where the In-Street Crossing sign is placed on a physical island, the sign support**
832 **shall be designed to bend over and then bounce back to its normal vertical position when**
833 **struck by a vehicle.**

834 *Option:*

835 The In-Street and Overhead Pedestrian and Trail Crossing sign may be used at intersections
836 or midblock pedestrian crossings with flashing beacons.

837 *Support:*

838 The provisions of Section 2A.14 concerning mounting height are not applicable for the In-
839 Street Pedestrian Crossing sign. See Section 2A.21 for sign mounting methods.

840 **Standard:**

841 **The top of an In-Street Pedestrian or Trail Crossing sign shall be a maximum of 4 feet**
842 **above the pavement surface. The top of an In-Street Pedestrian or Trail Crossing sign**
843 **placed in an island shall be a maximum of 4 feet above the island surface.**

844 Option:

845 The In-Street Pedestrian Crossing or Trail Crossing signs may be used seasonally to prevent
846 damage in winter because of plowing operations, and may be removed at night if the pedestrian
847 activity at night is minimal.

848 Both sign mounting types, In-Street Crossing (R1-6 series) signs and Overhead Crossing
849 (R1-9 series) signs may be used together at the same crosswalk.

850

851 **Section 2B.21 Comments:** There are a significant variety of philosophies and practices in
852 setting speed zones across the US. Efforts to achieve consensus on a single recommended
853 approach or practice may not be successful. NCUTCD recommends revising 2B.21 to focus this
854 section on the design and placement of speed signing and remove material dealing solely with
855 speed zoning practice, since the process of speed zone determination is not a traffic control
856 device. Setting speed limits is a traffic engineering practice and should not be in a national
857 standard for traffic control devices. This is addressed in other engineering references outside the
858 MUTCD that provide effective guidance to practitioners and others on this subject. NCUTCD
859 also recommends other changes in general accordance with NCUTCD recommendation 18B-
860 RW-03.

862 **SPEED LIMIT SIGNS AND PLAQUES**

864 **Section 2B.21 Speed Limit Sign (R2-1)**

865 **Standard:** Support:

866 01 Speed zones (other than statutory speed limits e.g, established by Federal or state law) ~~shall~~
867 only be are established on the basis of an engineering study that has been performed in
868 accordance with traffic engineering practices.

869 **Guidance:**

870 02 Among the factors that are ~~should be~~ considered when establishing or reevaluating speed
871 limits within speed zones are the following:

- 872 A. Speed distribution of free-flowing vehicles (such as current 85th percentile; the pace;
873 review of past speed studies)
- 874 B. Reported crash experience for at least a 12-month period relative to similar roadways
- 875 C. Road characteristics (such as lane widths; curb/shoulder condition; grade; alignment;
876 median type; sight distance)
- 877 D. Road context (such as roadside development and environment, ~~(number of driveways,~~
878 land use); functional classification; parking practices; presence of sidewalk/bicycle
879 ~~facilities~~ pedestrian activity; bicycle activity)
- 880 E. Road Users (such as pedestrian activity, bicycle activity)

881 (NCUTCD recommends revising this to Support and adding additional information)

882 ~~03 When a speed limit within a speed zone is posted on a freeways, or expressways or rural~~
883 ~~highway, it should maximize the percentage of vehicles in the pace and should be within 5 mph of~~
884 ~~the 85th percentile speed of free flowing traffic vehicles.~~

885 ~~04 Except in urbanized locations within rural regions, when a speed limit within a speed zone~~
886 ~~is posted on a rural highway, it should be within 5 mph of the 85th percentile speed of free~~
887 ~~flowing traffic vehicles.~~

888 ~~05 State and local agencies should conduct engineering studies to reevaluate non statutory~~
889 ~~speed limits on segments of their roadways that have undergone significant changes since the~~
890 ~~last review, (such as the addition or elimination of parking or driveways, changes in the number~~
891 ~~of travel lanes, changes in the configuration of bicycle lanes, changes to road geometries,~~
892 ~~changes to road context, changes in traffic control signal coordination, or significant changes in~~
893 ~~traffic volumes).~~

894 ~~06 Speed studies for signalized intersection approaches should be taken outside the influence~~
895 ~~area of the traffic control signal, which is generally considered to be approximately 1/2 mile to~~
896 ~~avoid obtaining skewed results for the 85th percentile speed. If the signal spacing is less than 1~~
897 ~~mile, the speed study should be at approximately the middle of the segment.~~

898 (delete, as this is not a traffic control device and is covered in other references that describe how
899 to establish speed limits)

900 **Support:**

901 07 In addition to the factors in Paragraph 2, there are other available resources for practitioners
902 that can assist when establishing or reevaluating speed limits within speed zones. The FHWA's
903 Engineering Speed Limits (https://safety.fhwa.dot.gov/speedmgt/eng_spd_lmts/) Web page
904 provides information on resources and tools that can be used to help practitioners set speed limits
905 for specific segments of roads.

906 **Standard:**

907 08 The Speed Limit (R2-1) sign ([see Figure 2B-3](#)) shall display the limit established by
908 law, ordinance, regulation, or as adopted by the authorized agency based on the
909 engineering study. The speed limits displayed shall be in multiples of 5 mph.
910 (add figure reference)

911 09 Speed Limit (R2-1) signs, indicating speed limits for which posting is required by law,
912 shall be located at the points of change from one speed limit to another.

913 10 At the downstream end of the section to which a speed limit applies, a Speed Limit sign
914 showing the next speed limit shall be installed.

915 11 Speed Limit signs indicating the statutory speed limits shall be installed at entrances to
916 the State and, where appropriate, at jurisdictional boundaries in urban areas.

917 **Guidance:**

918 12 Additional Speed Limit signs should be installed beyond major intersections and at other
919 locations where it is necessary to remind road users of the speed limit that is applicable.

920 **Support:**

921 13 In general, the maximum speed limits applicable to rural and urban roads are established:

- A. Statutorily – a maximum speed limit applicable to a particular class of road, such as
923 freeways or city streets, that is established by State law; or
924 B. As altered speed zones – based on engineering studies.

925 14 State statutory limits might restrict the maximum speed limit that can be established on a
926 particular road, notwithstanding what an engineering study might indicate.

927 15 The "Traffic Control Devices Handbook" contains suggested criteria on the spacing of speed
928 limit signs.

929 [15a Advisory Speed signs and plaques are discussed in Sections 2C.12 and 2C.59. Temporary](#)
930 [Traffic Control Zone Speed signs are discussed in Part 6. The WORK ZONE \(G20-5aP\) plaque](#)

931 intended for installation above a Speed Limit sign is discussed in Section 6G.08. School Speed
932 Limit signs are discussed in Section 7B.05~~7B.06~~. (moved per 18B-RW-03)

933 Option:

934 16 If a jurisdiction has a policy of installing Speed Limit signs in accordance with statutory
935 requirements only on the streets that enter a city, neighborhood, or residential area to indicate the
936 speed limit that is applicable to the entire city, neighborhood, or residential area unless otherwise
937 posted, a CITYWIDE (R25aP), NEIGHBORHOOD (R2-5bP), or RESIDENTIAL (R2-5cP)
938 plaque may be mounted above the Speed Limit sign and an UNLESS OTHERWISE POSTED
939 (R2-5P) plaque may be mounted below the Speed Limit sign (see Figure 2B-3).

940 Guidance:

941 17 A Reduced Speed Limit (W3-5 or W3-5a), Variable Speed Zone (W3-5b), or Truck Speed
942 Zone (W3-5c) Ahead sign (see Section 2C.~~4140~~) should be used to inform road users of a
943 reduced speed zone where the speed limit is being reduced by more than 10 mph, or where
944 engineering judgment indicates the need for advance notice to comply with the posted speed limit
945 ahead.

946 Option:

947 18 If a W3-5b sign is posted to provide notice of a variable speed zone, an END VARIABLE
948 SPEED LIMIT (R2-13) sign (see Figure 2B-3) may be installed at the downstream end of the
949 zone to provide notice to road users of the termination of the speed zone.

950 Standard:

951 19 If a W3-5c sign is posted to provide notice of a truck speed zone, an END TRUCK
952 SPEED LIMIT (R2-14) sign (see Figure 2B-3) shall be installed at the downstream end of
953 the zone to provide notice to road users of the termination of the speed zone.

954 Guidance:

955 20 An advisory speed plaque (see Section 2C.59) mounted below a warning sign should be used
956 to warn road users of an advisory speed for a roadway condition. A Speed Limit sign should not
957 be used for this ~~situation purpose~~.

958 (terminology change for consistency with paragraph below)

959 21 Advance traffic control warning signs (see Section 2C.36), ~~advance~~ intersection warning
960 signs (see Section 2C.~~4642~~), and/or other traffic control devices are appropriate warning prior to
961 a signalized intersection. A speed limit ~~sign~~ should not be used for this purpose.

962 (delete "advance" for consistency with Section 2C.42)

963 Option:

964 22 ~~Three~~~~Two~~ types of Speed Limit signs may be used indicating a fixed or variable speed limit:
965 ~~one to designate passenger car speeds, including any nighttime information or minimum speed~~
966 ~~limit that might apply; and the other to show any~~

967 A. A maximum speed limit.

968 B. A special speed limits for trucks and~~or~~ other vehicles, and

969 C. Special speed limits for nighttime or minimum speeds.

970 (revise per 18B-RW-03)

971 Guidance:

972 23 No more than three speed limits should be displayed on any one Speed Limit sign or
973 assembly.

974 Option:

975 24 A variable speed limit sign that changes the speed limit for traffic and ambient conditions
976 may be displayed using hybrid or DMS SPEED LIMIT (R2-1a, R2-1b, R2-1c, R2-1d) signs (see

977 [Figure 2B-3 and Chapter 2L\) and](#) installed provided that the appropriate speed limit is displayed
978 at the proper times and locations in accordance with paragraphs ~~3, 4, and 6~~ [10 and 12](#) of this
979 section. (revise per 18B-RW-03)

980 **Standard:**

981 25 The variable speed limit sign legend "SPEED LIMIT" shall be a black legend on a white
982 retroreflective background. The variable speed limit legend shall be displayed in white LEDs
983 on an opaque black background. (revise to Option per 18B-RW-03)

984 Support:

985 26 See Section 2C.[1413](#) for the provisions for the use of a Vehicle Speed Feedback plaque
986 mounted below a Speed Limit Sign that displays to approaching drivers the speed at which they
987 are traveling.

988 ~~27 Advisory Speed signs and plaques are discussed in Sections 2C.59 and 2C.12. Temporary
989 Traffic Control Zone Speed signs are discussed in Part 6. The WORK ZONE (G20-5aP) plaque
990 intended for installation above a Speed Limit sign is discussed in Section 6G.08. School Speed
991 Limit signs are discussed in Section 7B.05.~~ (relocated)

992
993
994 **Section 2B.22 Comments:** NCUTCD agrees with 2B.22 as presented in the NPA with minor
995 editorial changes, as it is reasonably consistent with NCUTCD recommendation 11A-RW-04.

996
997 **Section 2B.22 Vehicle Speed Limit Plaques (R2-2P Series)**

998 **Standard:**

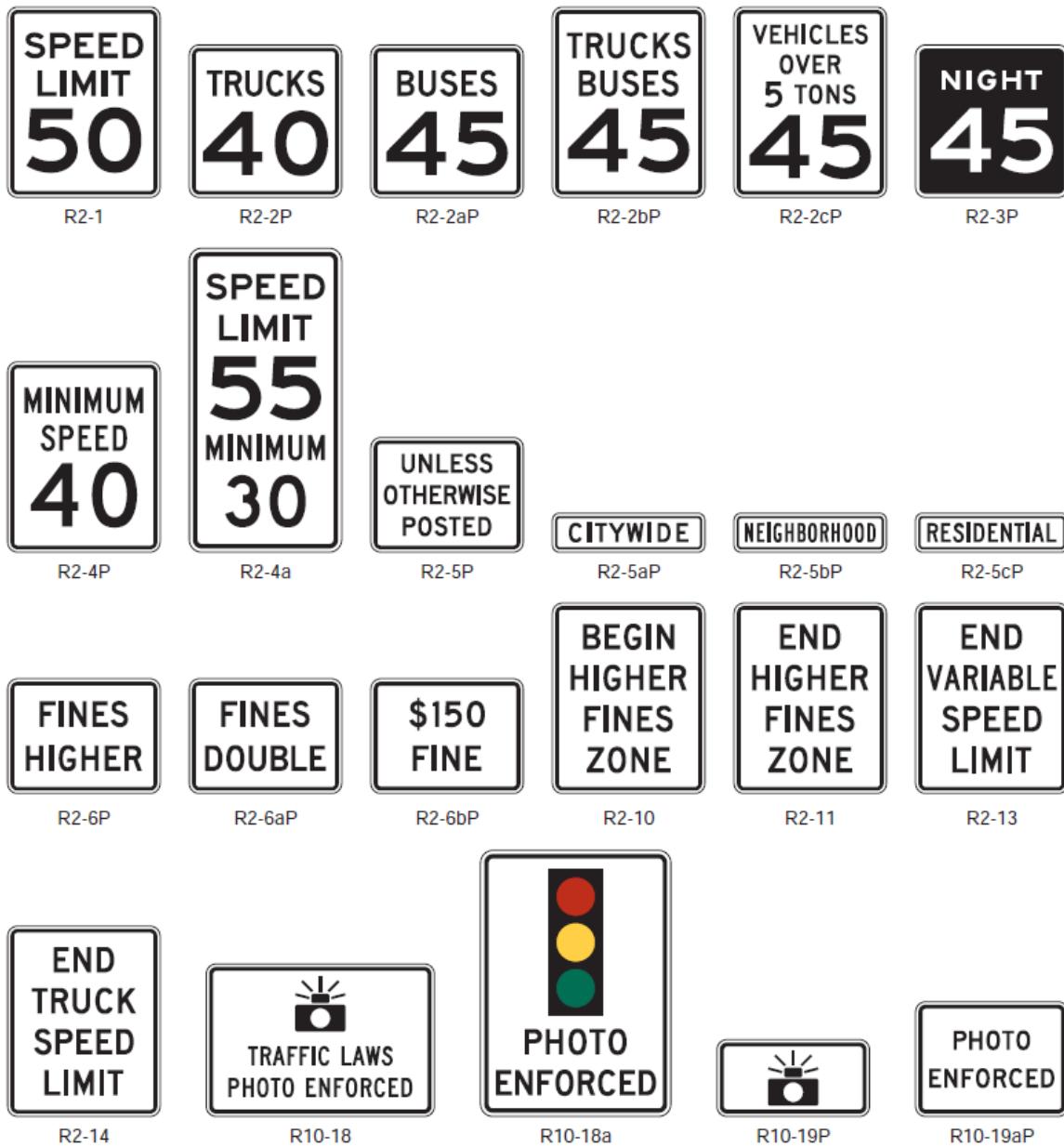
999 Where a special speed limit applies to certain classes of vehicles, the TRUCKS XX (R2-
1000 2P) plaque, BUSES XX (R2-2aP) plaque, TRUCKS BUSES XX (R2-2bP) plaque, or
1001 VEHICLES OVER X TONS XX (R2-2cP) plaque ([see Figure 2B-3](#)) shall be displayed
1002 below the Speed Limit (R2-1) sign, except as provided in Paragraph 2 of this Section.
1003 (add figure reference)

1004 Option:

1005 The legend of a Vehicle Speed Limit (R2-2P series) plaque may be combined in a single
1006 sign and displayed below the SPEED LIMIT XX legend, similar to the Combined Maximum and
1007 Minimum Speed Limits (R2-4a) sign (see Section 2B.25).

1008 A different vehicle class legend may be substituted on the R2-2P series plaque for other
1009 classes of vehicles not included in Paragraph 1 of this Section.

Figure 2B-3. Speed Limit and Photo Enforcement Signs and Plaques



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1011

1012

1013

1014 **Section 2B.23 Comments:** NCUTCD agrees with 2B.23 as presented in the NPA.

1015

1016 **Section 2B.23 Night Speed Limit Plaque (R2-3P)**

1017 **Standard:**

1018 Where different speed limits are prescribed for day and night, both limits shall be
1019 posted.

1020 *Guidance:*
1021 *A Night Speed Limit (R2-3P) plaque (see Figure 2B-3) should be reversed using a white*
1022 *retroreflective legend and border on a black background.*

1023 Option:
1024 A Night Speed Limit plaque may be combined with or installed below the standard Speed
1025 Limit (R2-1) sign.

1026
1027
1028 **Section 2B.24 Comments:** NCUTCD agrees with 2B.24 as presented in the NPA.
1029

1030 **Section 2B.24 Minimum Speed Limit Plaque (R2-4P) and Combined Maximum and**
1031 **Minimum Speed Limits (R2-4a) Sign**

1032 ***Standard:** A Minimum Speed Limit (R2-4P) plaque (see Figure 2B-3) shall be displayed only in*
1033 *combination with a Speed Limit sign. Where used, the R2-4P plaque shall be mounted*
1034 *below a Speed Limit (R2-1) sign.*

1035 Option:
1036 Where engineering judgment determines that slow speeds on a highway might impede the
1037 normal and reasonable movement of traffic, the Minimum Speed Limit plaque may be installed
1038 below a Speed Limit (R2-1) sign to indicate the minimum legal speed. In lieu of a sign assembly
1039 with the R2-1 sign and R2-4P plaque, the Combined Maximum and Minimum Speed Limits (R2-
1040 4a) sign may be used.

1041
1042
1043
1044
1045 **Section 2B.25 Comments:** NCUTCD recommends revising 2B.25 to address references to other
1046 Parts and be consistent with NCUTCD recommendation 20B-RW-03.
1047

1048 **Section 2B.25 Higher Fines Signs and Plaque (R2-6P, R2-10, and R2-11)**

1049 *Guidance:*

1050 *If increased fines are imposed for traffic violations within a designated zone of a roadway, a*
1051 *BEGIN HIGHER FINES ZONE (R2-10) sign (see Figure 2B-3) or a FINES HIGHER (R2-6P)*
1052 *plaque should be used to provide notice to road users.*

1053 *If an R2-10 sign or an R2-6P plaque is posted to provide notice of increased fines for traffic*
1054 *violations, an END HIGHER FINES ZONE (R2-11) sign should be installed at the downstream*
1055 *end of the zone to provide notice to road users of the termination of the increased fines zone.*

1056 *The BEGIN HIGHER FINES ZONE sign or FINES HIGHER plaque should be located at*
1057 *the beginning of the temporary traffic control zone, school zone, or other applicable designated*
1058 *zone and just beyond any interchanges, major intersections, or other major traffic generators.*

1059 *Agencies should limit the use of the Higher Fines signs and plaque to locations where work*
1060 *is actually underway, or to locations where the roadway, shoulder, or other conditions,*
1061 *including the presence of a school zone and/or a reduced school speed limit zone, require a*
1062 *speed reduction or extra caution on the part of the road user.*

1063 ***Standard:***

1065 **The Higher Fines signs and plaque shall have a black legend and border on a white**
1066 **rectangular background. All supplemental plaques mounted below the Higher Fines signs**
1067 **and plaque shall have a black legend and border on a white rectangular background.**

1068 **The FINES HIGHER plaque shall be mounted below an applicable regulatory or**
1069 **warning sign in a temporary traffic control zone ([see Section 6G.08](#)), a school zone ([see](#)**
1070 **[Section 7B.06](#)), or other applicable designated zone.**

1071 (The section as proposed in the NPA removes references to Part 6 and Part 7. It is important to
1072 retain these references, given that they are in a Standard statement. It seems most appropriate to
1073 reference them here.)

1074 Option:

1075 Alternate legends such as BEGIN (or END) DOUBLE FINES ZONE may also be used for
1076 the R2-10 and R2-11 signs.

1077 The legend FINES HIGHER on the R2-6P plaque may be replaced by FINES DOUBLE
1078 (R2-6aP), \$XX FINE (R2-6bP), or another legend appropriate to the specific regulation (see
1079 Figure 2B-3).

1080 The following may be mounted below an R2-10 sign or R2-6P plaque:

- 1081 A. A supplemental plaque specifying the times that the higher fines are in effect (similar to
1082 the S4-1P plaque shown in Figure 7B-1), or
- 1083 B. A supplemental plaque WHEN CHILDREN (WORKERS) ARE PRESENT, or
- 1084 C. A supplemental plaque WHEN FLASHING (similar to the S4-4P plaque shown in
1085 Figure 7B-1) if used in conjunction with a warning yellow flashing beacon.

1086 (revise per 20B-RW-03)

1087 **Support:**

1088 ~~Section 6G.08 contains information regarding other signs and plaques associated with~~
1089 ~~increased fines for traffic violations in temporary traffic control zones.~~

1090 (see above re references)

1092 **Section 2B.26 Comments:** NCUTCD generally agrees with 2B.26 as presented in the NPA, but
1093 recommends revisions: include the NCUTCD-recommended Except Bicycles plaque (R5-xxP)
1094 for use under these signs and in Figure 2B-4 in accordance with NCUTCD recommendation
1095 09A-BIK-01 along with the R3-7bP, address dynamic message signs in accordance with
1096 NCUTCD recommendation 20B-RW-03, and continue the use of R4 series Roundabout signs
1097 instead of W1-6 One Direction Large Arrow signs for travel direction within a roundabout.
1098

1099 ***MOVEMENT AND LANE CONTROL SIGNS***

1100 **Section 2B.26 Movement Prohibition Signs (R3-1 through R3-4, R3-18, and R3-27)**

1101 **Standard:**

1102 **Movement Prohibition signs shall be installed where specific movements are prohibited**
1103 **at an intersection approach except as provided in Paragraphs 13 and 17 of this Section.**

1104 **Guidance:**

1105 Movement Prohibition signs should only be used to prohibit a turn or through movement
1106 from an entire approach and should not be used to designate movements that are required or
1107 permitted from a specific lane or lanes on a multi-lane approach.

1108 Movement Prohibition signs should be placed where they will be most easily seen by road
1109 users who might be intending to make the movement.

1111 *If No Right Turn (R3-1) signs (see Figure 2B-4) are used, at least one should be placed either
1112 over the roadway or at a right-hand corner of the intersection.*

1113 *If No Left Turn (R3-2) signs (see Figure 2B-4) are used, at least one should be placed over
1114 the roadway, at the far left-hand corner of the intersection, on a median, or in conjunction with
1115 the STOP sign or YIELD sign located on the near right-hand corner.*

1116 *Except as provided in Item C of Paragraph 9 for signalized locations, if NO TURNS (R3-3)
1117 signs (see Figure 2B-4) are used, two signs should be used, one at a location specified for a No
1118 Right Turn sign and one at a location specified for a No Left Turn sign.*

1119 *If No U-Turn (R3-4) signs (see Figure 2B-4) or combination No U-Turn/No Left Turn (R3-
1120 18) signs (see Figure 2B-4) are used, at least one should be used at a location specified for No
1121 Left Turn signs.*

1122 Option:

1123 If both left turns and U-turns are prohibited, the combination No U-Turn/No Left Turn (R3-
1124 18) sign (see Figure 2B-4) may be used instead of separate R3-2 and R3-4 signs.

1125 Support:

1126 Sections 2B.~~19~~27, 2B.~~20~~28, 2B.~~21~~29 and 2B.~~22~~30 contain information regarding lane
1127 control signs that indicate the required or permitted movements from individual lanes.
1128 (correct section numbers)

1129 Guidance:

1130 *If No Straight Through (R3-27) signs (see Figure 2B-4) are used, at least one should be
1131 placed either over the roadway or at a location where it can be seen by road users who might be
1132 intending to travel straight through the intersection.*

1133 *If turn prohibition signs are installed in conjunction with traffic control signals:*

- A. *The No Right Turn sign should be installed adjacent to a signal face viewed by road
1135 users in the right-hand lane.*
- B. *The No Left Turn (or No U-Turn or combination No U-Turn/No Left Turn) sign should be
1137 installed adjacent to a signal face viewed by road users in the left-hand lane.*
- C. *A NO TURNS sign should be placed adjacent to a signal face viewed by all road users on
1139 that approach, or two signs should be used.*

1140 Option:

1141 If turn prohibition signs are installed in conjunction with traffic control signals, an additional
1142 Movement Prohibition sign may be post-mounted to supplement the sign mounted overhead.

1143 Where ONE WAY signs are used (see Section ~~2B.54~~2B.50), No Left Turn and No Right
1144 Turn signs may be omitted.

1145 When the movement restriction applies during certain time periods only, the following
1146 Movement Prohibition signing alternatives may be used and are listed in order of preference:

- A. *A ~~blank~~blank-out or dynamic message part time display regulatory sign (see Chapter 2L)
1148 that displays the prohibited movement only during the time that the movement
1149 prohibition is applicable, especially at signalized intersections.*

1150 (refer to dynamic message signs per 20B-RW-03)

- B. Permanently mounted signs incorporating a supplementary legend showing the hours and
1152 days during which the prohibition is applicable (see Figure 2B-4).
- C. Portable signs, installed by proper authority, located off the roadway at each corner of the
1153 intersection. The portable signs are only to be used during the time that the movement
1154 prohibition is applicable.

1156 Where the movement restriction applies to certain vehicle classes, permanently mounted
1157 signs incorporating a supplementary legend showing the vehicle class restriction (R3-1b through
1158 R3-1d) or exception (R3-1e, ~~and~~ R3-1f, R5-xxP plaque, or R3-7bP plaque) may be used (See
1159 Figure 2B-4).

1160 (add R5-xxP per 09A-BIK-01)

1161 **Standard:**

1162 ~~The blank-out part-time electronic display Movement Prohibition sign shall consist of a red circle and diagonal with a white prohibited movement on an opaque black background.~~

1163 (delete - Chapter 2L governs design of blank-out dynamic message signs, and revision in Option
1164 above correctly points to 2L as a reference)

1165 Option:

1166 Movement Prohibition signs may be omitted at a ramp entrance to an expressway or a
1167 channelized intersection where the design is such as to indicate clearly the one-way traffic
1168 movement on the ramp or turning lane.

1169 **Standard:**

1170 **The No Left Turn (R3-2) sign, the No U-Turn (R3-4) sign, and the combination No U-Turn/No Left Turn (R3-18) sign shall not be used at approaches to roundabouts to prohibit drivers from turning left onto the circulatory roadway of a roundabout.**

1171 Support:

1172 At roundabouts, the use of R3-2, R3-4, or R3-18 signs to prohibit left turns onto the
1173 circulatory roadway might confuse drivers about the possible legal turning movements around
1174 the roundabout.~~—ONE WAY (R6-1R or R6-2R) sign and/or One Direction Large Arrow (W1-6)~~
1175 ~~(See Section 2C.10) signs (see Section 2C.10) are the appropriate signs to indicate the travel direction within a roundabout.~~
1176 ~~Roundabout Direction Arrow (R6-4 series) signs and/or ONE WAY (R6-1R or R6-2R) signs are the appropriate signs to indicate the travel direction within the roundabout.~~

1177 (revise to continue use of R4 series Roundabout signs instead of W1-6 One Direction Large Arrow signs)

1178 In Figure 2B-4, also include the NCUTCD-proposed design for the R5-xxP Except Bicycles plaque in addition to the R3-7bP.

1179 Section 2B.27 Comments: NCUTCD agrees with 2B.27 as presented in the NPA with minor
1180 editorial changes.

1181 **Section 2B.27 Intersection Lane Control Signs (R3-5 through R3-8)**

1182 **Standard:**

1183 **Intersection Lane Control signs, if used, shall require road users in certain lanes to turn, shall permit turns from a lane where such turns would otherwise not be permitted, shall require a road user to stay in the same lane and proceed straight through an intersection, or shall indicate permitted movements from a lane.**

1184 Support:

1185 Intersection Lane Control signs have three applications:

1186 A. Mandatory Movement Lane Control (R3-5 series, ~~R3-5a~~, and R3-7 series) signs,

- 1202 B. Optional Movement Lane Control (R3-6 series) sign, and
1203 C. Advance Intersection Lane Control (R3-8 series) signs.

1204 (insert “series” where appropriate)

1205 Guidance:

1206 *When Intersection Lane Control signs are mounted overhead, each sign used should be
1207 placed over the lane or a projection of the lane to which it applies.*

1208 *On signalized approaches where through lanes that become mandatory turn lanes, multiple-
1209 lane turns that include shared lanes for through and turning movements, or other lane-use
1210 regulations are present that would be unexpected by unfamiliar road users, overhead lane
1211 control signs should be installed at the signalized location over the appropriate lanes or
1212 projections thereof and in advance of the intersection over the appropriate lanes.*

1213 *Where overhead mounting on the approach is impractical for the advance and/or intersection
1214 lane-use signs, one of the following alternatives should be employed:*

- 1215 A. *At locations where through lanes become mandatory turn lanes, a mandatory movement
1216 lane control (R3-7) sign should be post-mounted on the left-hand side of the roadway
1217 where a through lane is becoming a mandatory left-turn lane on a one-way street or
1218 where a median of sufficient width for the signs is available, or on the right-hand side of
1219 the roadway where a through lane is becoming a mandatory right-turn lane.*
- 1220 B. *At locations where a through lane is becoming a mandatory left-turn lane on a two-way
1221 street where a median of sufficient width for the signs is not available, and at locations
1222 where multiple-lane turns
1223 that include shared lanes for through and turning movements are present, an Advance
1224 Intersection Lane Control (R3-8 series) sign should be post-mounted in a prominent
1225 location in advance of the intersection, and consideration should be given to the use of
1226 an oversized version in accordance with Table 2B-1.*

1227 *Use of an overhead sign for one approach lane should not require installation of overhead
1228 signs for the other lanes of that approach.*

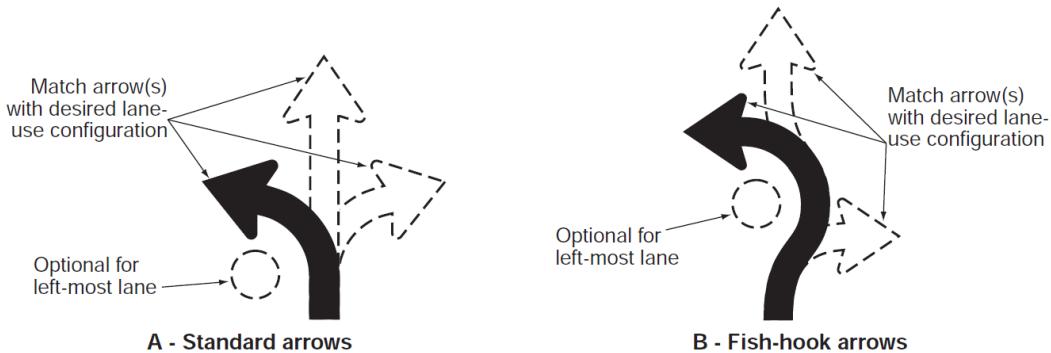
1229 Option:

1230 *Intersection Lane Control signs may be omitted where:*

- 1231 A. A turn bay has been provided by physical construction or pavement
1232 markings, and
- 1233 B. Only the road users using such turn bays are permitted to make a turn in
1234 that direction.

1235 At roundabouts, Intersection Lane Control (R3-5, R3-6, and R3-8 series) signs may display
1236 any of the arrow symbol options shown in Figure 2B-15

Figure 2B-5. Intersection Lane Control Sign Arrow Options for Roundabouts



1237

1238

1239 **Section 2B.28 Comments:** NCUTCD recommends revisions to 2B.28 in accordance with
1240 NCUTCD recommendations 14A-BIK-03 and 20B-RW-02 and to clarify text: relocate and
1241 revise text for clarity, add references to HOV, taxi, and bike lanes, and clarify placement of R3-5
1242 signs.

1243

1244 **Section 2B.28 Mandatory Movement Lane Control Signs (R3-5, ~~R3-5a~~, R3-7, R3-19 and
1245 ~~R3-20 Series, and R3-20~~)**

1246 **Standard:**

1247 **Mandatory Movement Lane Control (R3-5, R3-5a, and R3-7) signs (see Figure 2B-4), if
1248 used, shall indicate only the single vehicle movement that is required from the lane. The
1249 Mandatory Movement Lane Control (R3-5 and R3-5a) symbol signs shall include the
1250 legend ONLY. The R3-7 sign shall be for post-mounting only. The R3-7 sign shall not be
1251 mounted at the far side of the intersection.**

1252 (relocate text)

1253 When the mandatory movement applies to lanes exclusively designated for HOV
1254 traffic, the HOV 2+ (R3-5cP) supplemental plaque shall be used. When the mandatory
1255 movement applies to lanes that are not HOV facilities, but are lanes exclusively designated
1256 for ~~buses and/or taxis and/or bicycles~~, the ~~word message TAXI LANE (R3-5dP) and/or bike~~
1257 ~~symbol LANE (R3-5gP)~~ supplemental plaques shall be used (see Section 2B.23a for bus
1258 lane plaques).

1259 (revise per 14A-BIK-03)

1260 ~~The Mandatory Movement Lane Control (R3-7) sign shall include the legend RIGHT
1261 (LEFT) LANE MUST TURN RIGHT (LEFT). The Mandatory Movement Lane Control
1262 (R3-5 and R3-5a) symbol signs shall include the legend ONLY.~~

1263 (First sentence deleted as redundant to updated figures showing both R3-7R and R3-7L
1264 separately. Second sentence moved to Standard paragraph above.)

1265 ~~The R3-7 sign shall be for post-mounting only. The R3-7 sign shall not be mounted at
1266 the far side of the intersection.~~

1267 (moved to Standard paragraph above)

1268 **Mandatory Movement Lane Control (R3-5 and R3-5a) symbol signs when, if used**
1269 **overhead, shall be mounted **overhead** over the specific lanes to which they apply (see**
1270 **Section 2B.2729).**

1271 (clarify to avoid misunderstanding that R3-5 signs may {see Option below} be used in a post
1272 mounted configuration, as the NPA eliminated the words “where the number of lanes available
1273 to through traffic on an approach is three or more”)

1274 *Guidance:*

1275 *If used, the Mandatory Movement Lane Control (R3-7) sign should be located in advance of*
1276 *the intersection, such as near the upstream end of the mandatory movement lane, and/or at the*
1277 *intersection where the regulation applies.*

1278 *The use of the Mandatory Movement Lane Control (R3-7) word message sign should be*
1279 *limited to only locations that are adjacent to the full-width portion of a mandatory turn lane.*
1280 *The R3-7 sign should not be installed adjacent to a through lane in advance of a turn bay taper*
1281 *or adjacent to a turn bay taper.*

1282 *Mandatory Movement Lane Control signs should be accompanied by lane-use arrow*
1283 *markings, especially where traffic volumes are high, where there is a high percentage of*
1284 *commercial vehicles, or where other distractions exist.*

1285 *An EXCEPT BUSES (R3-7aP, see Section 2B.23a) or EXCEPT BICYCLES (R3-7bP)*
1286 *plaque should be used. ~~W~~here the mandatory movement lane control signs restriction do*
1287 *not apply to buses or bicycles.*

1288 (revise per 20B-RW-02)

1289 Option:

1290 Mandatory Movement Lane Control (R3-5R or R3-5L or R3-5a) signs may be placed
1291 at the intersection (including use on traffic control signal poles and arms). Advance
1292 Intersection Lane Control (R3-8) signs (see Section 2B.30) may be post-mounted signs
1293 where overhead R3-5 signs are not utilized.

1294 (clarify to define that signal poles and arms are adequate placement, and that Advance
1295 Intersection Lane Control signs may be post-mounted)

1296 The Straight Through Only (R3-5a) sign may be used to require a road user in a particular
1297 lane to proceed straight through an intersection.

1298 The diamond symbol may be used instead of the word message HOV on the R3-5cP
1299 supplemental plaque.

1300 Where a mandatory left lane is added at a median for a restricted crossing U turn, road or
1301 driveway, a A LANE FOR LEFT TURN ONLY (R3-19) or LANE FOR U AND LEFT TURNS
1302 ONLY (R3-19a), or LANE FOR U TURNS ONLY sign may be used where a mandatory left
1303 turn lane is added at a median location and may be post-mounted on the median at the beginning
1304 of the taper. Where a U turn is also allowed from a LANE FOR U AND LEFT TURNS ONLY
1305 (R3-19a) may be used. (revise for clarity)

1306 Where a R3-19 series sign is used, Mandatory Movement Lane Control signs along the turn
1307 lane in the median may be omitted.

1308 The R3-19 series signs may be used where the added median turn lane is separated from the
1309 through lanes by a channelizing or divisional island.

1310 On a conventional road where a shoulder that is open to part-time travel (see Chapter 2G)
1311 becomes a mandatory turn lane, the BEGIN RIGHT TURN LANE (R3-20R) sign may be post-
1312 mounted on the righthand side of the roadway at the upstream end of the turn lane taper of a
1313 mandatory right-turn lane. Where the shoulder is on the left-hand side of the roadway, the
1314 BEGIN LEFT TURN LANE (R3-20L) sign (see Figure 2B-4) may be post-mounted on a median
1315 (or on the left-hand side of the roadway for a one-way street) at the upstream end of the turn lane
1316 taper of a mandatory left-turn lane.

1317 ***Guidance:***

1318 ~~Where the transition from a paved shoulder to a mandatory turn lane might not be apparent~~
1319 ~~and traffic regularly enters the shoulder to access the turn lane, a DO NOT DRIVE ON~~
1320 ~~SHOULDER (R4-17) sign (see Section 2B.36) should be used to supplement the standard~~
1321 ~~Mandatory Movement Lane Control (R3-5 series and/or R3-7) signs.~~

1322 On the approach to a mandatory turn lane where traffic may enter the shoulder to access the
1323 turn lane inappropriately, a DO NOT DRIVE ON SHOULDER (R4-17) sign may be used to
1324 supplement the standard Mandatory Movement Lane Control (R3-5 and/or R3-7 series) signs
1325 (see Section 2B.28).

1326 (revise for clarity)

1330 NCUTCD recommends the following revisions to Figure 2B-4:

- 1331 • Include the NCUTCD-proposed design for the R5-xxP Except Bicycles plaque in addition to
1332 the R3-7bP
- 1333 • Add “U Turn Only” sign
- 1334 • Add R3-8x series sign for bus & bike lanes
- 1335 • Add R3-5hP Bike Lane plaque for use with W3-5 series mandatory movement signs
- 1336 • Include both the R3-5L and R3-5R
- 1337 • Include both the R3-7L and R3-7R
- 1338 • Add R3-19 series sign for LANE FOR U TURN ONLY

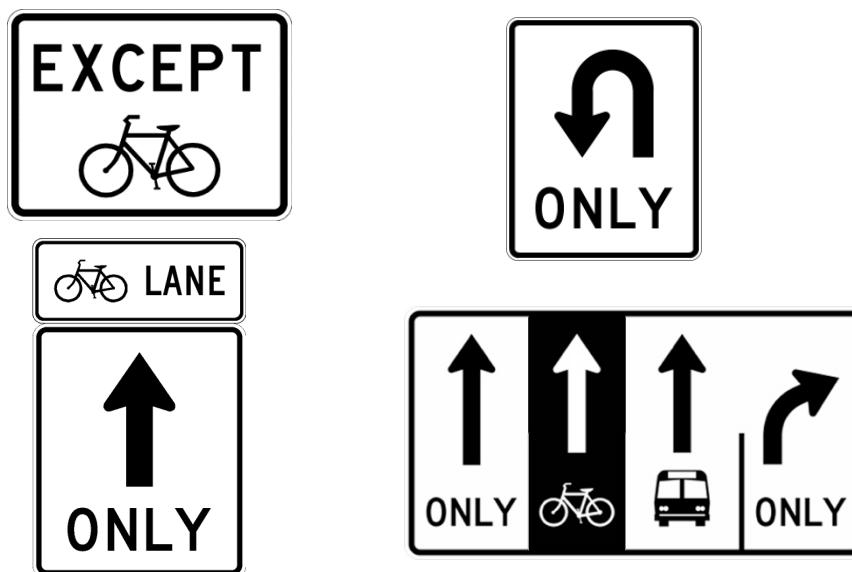
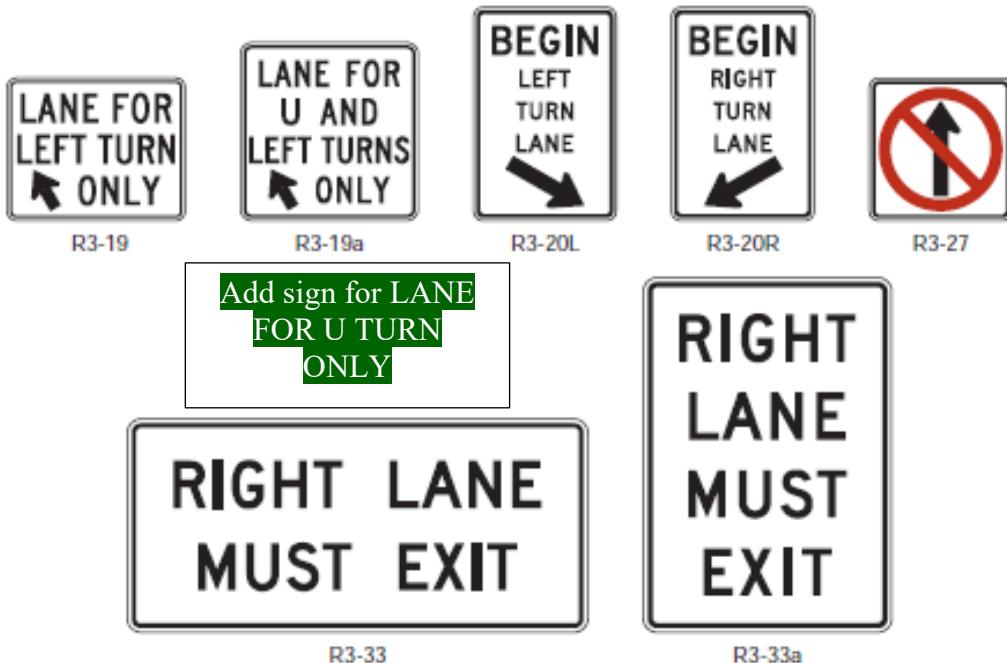


Figure 2B-4. Movement Prohibition and Lane Control Signs and Plaques (Sheet 1 of 2)



* The diamond symbol may be used instead of the "HOV" word message. The minimum vehicle occupancy level may vary, such as 2+, 3+, 4+. The words "LANE" or "ONLY" may be used with this sign when appropriate.

Figure 2B-4. Movement Prohibition and Lane Control Signs and Plaques (Sheet 2 of 2)



1342
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1344
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Section 2B.29 Comments: NCUTCD agrees with 2B.29 as presented in the NPA with minor changes to restore 2009 MUTCD wording that appears to have been erroneously deleted.

1350 **Section 2B.29 Optional Movement Lane Control Sign (R3-6 Series)**

1351 **Standard:**

1352 **Optional Movement Lane Control (R3-6, R3-6a and R3-6b) signs, if used, shall be used for two or more movements from a specific lane or to emphasize permitted movements.**

1354 **Where the number of lanes available to through traffic on an approach is three or more, an Red Optional Movement Lane Control sign, if used, shall be mounted overhead over the specific lane to which it applies.**

1357 **(restore wording from the 2009 MUTCD that appears to have been erroneously deleted)**

1358 **If used, the Optional Movement Lane Control signs shall indicate all permissible movements from specific lanes.**

1360 **Because more than one movement is permitted from the lane, the word message ONLY shall not be used on an Optional Movement Lane Control sign.**

1362 **Optional Movement Lane Control signs shall be used for two or more movements from a specific lane where a movement, not allowed by State statute or local ordinance, is permitted.**

1365 **The Optional Movement Lane Control signs shall not be used alone to effect a turn prohibition.**

1366 **Guidance:**

1368 *If used, the Optional Movement Lane Control sign should be located overhead in advance of*
1369 *the intersection, such as near the upstream end of an adjacent mandatory movement lane, and/or*
1370 *overhead at the intersection where the regulation applies.*

1372
1373 **Section 2B.30 Comments:** NCUTCD agrees with 2B.30 as presented in the NPA with minor
1374 editorial changes. Note that despite the number of changes from the 2009 MUTCD, FHWA did
1375 not have a Federal Register item for this section.

1376 **Section 2B.30 Advance Intersection Lane Control Signs (R3-8 Series)**

1377 Option:

1379 Advance Intersection Lane Control (R3-8, R3-8a, and R3-8b) signs (see Figure 2B-4) may be
1380 used to indicate the configuration of all lanes ahead.

1381 The word messages ONLY, THRU, HOV 2+, TAXI, BUS, or BIKE, or the bicycle symbol,
1382 may be used within the border in combination with the arrow symbols of the R3-8 sign series.
1383 The HOV 2+, R3-5cP, R3-5dP and R3-5gP supplemental plaques may be installed at the top
1384 outside border of the R3-8 sign over the applicable lane designation on the sign. The diamond
1385 symbol may be used instead of the word message HOV. The minimum allowable vehicle
1386 occupancy requirement may vary based on the level established for a particular facility.

1387 Where a bicycle lane is between two general purpose lanes the R3-8 series signs may be
1388 modified to show the bicycle lane with a white legend on a black background in accordance with
1389 designs of the R3-8x series signs. (See Figure 2B-4).

1390 *Guidance:*

1391 *When used, an Advance Intersection Lane Control sign should be placed at an adequate*
1392 *distance in advance of the intersection, either along the lane tapers or at the beginning of the*
1393 *turn lane so that road users can select the appropriate lane (see Figures 2A-4 and 2A-5 a and b).*

1394 Option:

1395 An Advance Intersection Lane Control sign may be repeated closer to the intersection along
1396 the approach for additional emphasis.

1397 **Standard:**

1398 **An Advance Intersection Lane Control (R3-8 series) sign shall not be mounted at the**
1399 **far side of an intersection to which it applies.**

1400 Where three or more approach lanes are available to traffic, Advance Intersection Lane
1401 Control (R3-8 series) signs, if used, shall be post-mounted in advance of the intersection
1402 and shall not be mounted overhead (see Section 2B.29).

1403 **When only the two outermost lanes of the roadway are shown on a R3-8 sign, the R3-**
1404 **5bP and R35fP shall be mounted above the R3-8 sign.** (added for clarity)

1406
1407 **Section 2B.31 Comments:** NCUTCD agrees with 2B.31 as presented in the NPA.

1408
1409 **Section 2B.31 RIGHT (LEFT) LANE MUST EXIT Signs (R3-33, R3-33a)**

1410 Option:

1411 A RIGHT (LEFT) LANE MUST EXIT (R3-33) sign (see Figure 2B-4) may be used to
1412 supplement an overhead EXIT ONLY guide sign to inform road users that traffic in the right-

1413 hand (left-hand) lane of a roadway that is approaching a grade-separated interchange is required
1414 to depart the roadway on the exit ramp at the next interchange.

1415 The R3-33a sign may be used in place of the R3-33 sign where the roadside width is limited
1416 and will not accommodate the R3-33 sign.

1417 Support:

1418 Section 2C.50 contains information regarding a warning sign that can be used in advance of
1419 lane drops at grade-separated interchanges.

1420

1421

1422 **Section 2B.32 Comments:** NCUTCD agrees with 2B.32 as presented in the NPA.

1423

1424 **Section 2B.32 Two-Way Left Turn Only Signs (R3-9a, R3-9b)**

1425 *Guidance:*

1426 *Two-Way Left Turn Only (R3-9a or R3-9b) signs (see Figure 2B-6) should be used in*
1427 *conjunction with the required pavement markings where a non-reversible lane is reserved for the*
1428 *exclusive use of left-turning vehicles in either direction and is not used for passing, overtaking,*
1429 *or through travel.*

1430 Option:

1431 The post-mounted R3-9b sign may be used as an alternate to or a supplement to the overhead
1432 R3-9a sign. The legend BEGIN or END may be used within the border of the main sign itself, or
1433 on an R3-9cP or R3-9dP plaque mounted immediately above it.

1434 Support:

1435 Signing is especially helpful to drivers in areas where the two-way left turn only maneuver is
1436 new, in areas subject to environmental conditions that frequently obscure the pavement
1437 markings, and on peripheral streets with two-way left turn only lanes leading to an extensive
1438 system of routes with two-way left turn only lanes.

1439

1440

1441 **Section 2B.33 Comments:** NCUTCD agrees with 2B.33 as presented in the NPA.

1442

1443 **Section 2B.33 BEGIN and END Plaques (R3-9cP, R3-9dP)**

1444 Option:

1445 The BEGIN (R3-9cP) or END (R3-9dP) plaque (see Figure 2B-6), mounted directly above a
1446 regulatory sign, may be used to inform road users of the location where a regulatory condition
1447 begins or ends.

1448

1449

1450 **Section 2B.34 Comments:** NCUTCD agrees with 2B.34 as presented in the NPA.

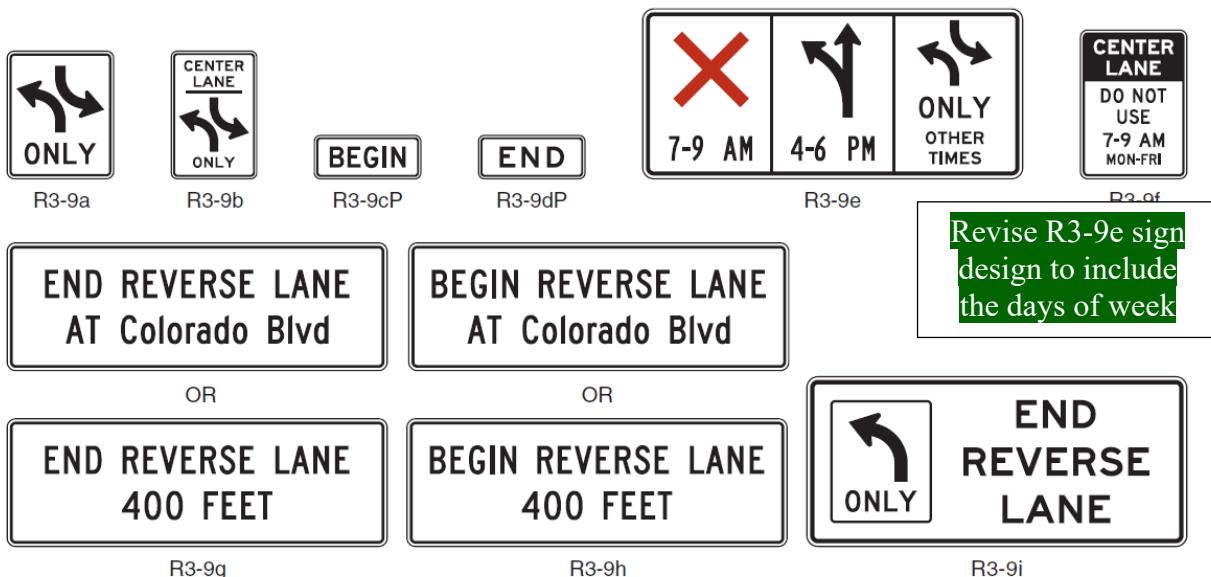
1451

1452 **Section 2B.34 Reversible Lane Control Signs (R3-9e through R3-9i)**

1453 Option:

1454 A reversible lane may be used for through traffic (with left turns either permitted or
1455 prohibited) in alternating directions during different periods of the day, and the lane may be used
1456 for exclusive left turns in one or both directions during other periods of the day as well.
1457 Reversible Lane Control (R3-9e through R3-9i) signs (see Figure 2B-6) may be either static type
1458 or changeable message type. (See Chapter 4T for lane use control signals for reversible lanes).
1459 These signs may be either post-mounted or overhead.

Figure 2B-6. Center and Reversible Lane Control Signs and Plaques



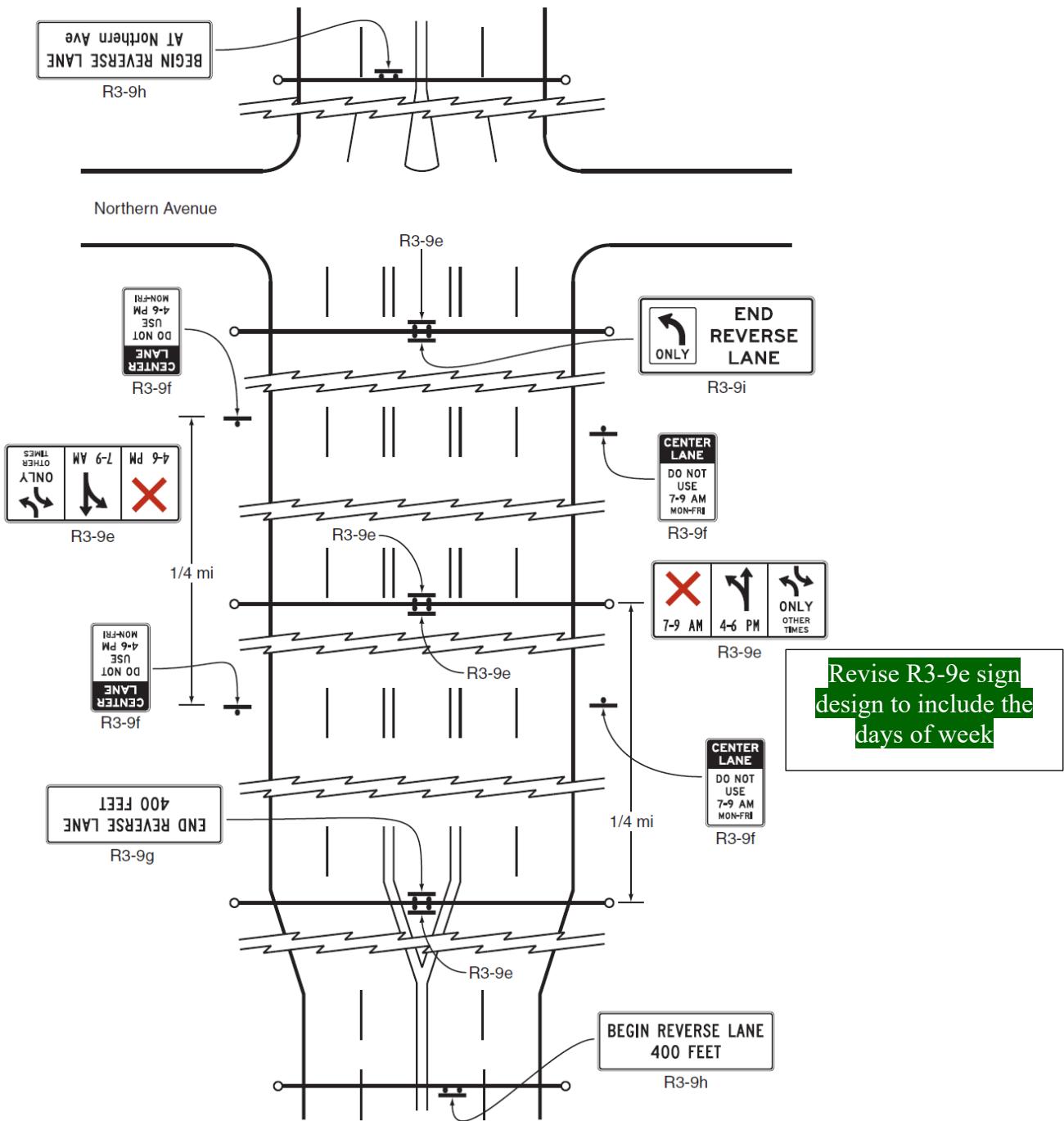
1460 NCUTCD agrees with Figure 2B-6 as presented in the NPA, with a minor change: Revise R3-9e
1461 sign design to include the days of week.
1462

1463 **Standard:**

1464 **Where it is determined by an engineering study that lane-use control signals or
1465 physical barriers are not necessary, the lane shall be controlled by overhead Reversible
1466 Lane Control signs (see Figure 2B-3).**

1467 **Post-mounted Reversible Lane Control signs shall be used only as a supplement to
1468 overhead signs or signals. Post-mounted signs shall be identical in design to the overhead
1469 signs and an additional legend such as CENTER LANE shall be added to the top of the sign
1470 (R3-9f) to indicate which lane is controlled.**

Figure 2B-7. Location of Reversible Two-Way Left-Turn Signs



1472

1473

1474 NCUTCD agrees with Figure 2B-7 as presented in the NPA, with a minor change: Revise R3-9e
1475 sign design to include the days of week.

1476

1477 Option:

1478 Reversing traffic flow may be controlled with pavement markings and Reversible Lane
1479 Control signs (without the use of lane control signals), when all of the following conditions are
1480 met:
1481 A. Only one lane is being reversed,
1482 B. An engineering study indicates that the use of Reversible Lane Control signs alone would
1483 result in an acceptable level of safety and efficiency, and
1484 C. There are no unusual or complex operations in the reversible lane pattern.

1485 **Standard:**

1486 **Reversible Lane Control signs shall contain the legend or symbols designating the**
1487 **allowable uses of the lane and the time periods such uses are allowed. Where symbols and**
1488 **legends are used, their meanings shall be as shown in Table 2B-2.**

1489 **Reversible Lane Control signs shall consist of a white background with a black legend**
1490 **and border, except for the R3-9e sign, where the color red is used.**

1491 **Symbol signs, such as the R3-9e sign, shall consist of the appropriate symbol in the**
1492 **upper portion of the sign with the appropriate times of the day and days of the week below**
1493 **it. All times of the day and days of the week shall be accounted for on the sign to eliminate**
1494 **confusion to the road user.**

1495 In situations where more than one message is conveyed to the road user, such as on the
1496 R3-9e sign, the sign legend shall be arranged as follows:

- 1497 A. The prohibition or restriction message is the primary legend and shall be on the top
1498 for word message signs and to the far left for symbol signs,
1499 B. The permissive use message shall be displayed as the second legend, and
1500 C. The OTHER TIMES message shall be displayed at the bottom for word message
1501 signs and to the far right for symbol signs.

**Table 2B-2. Meanings of Symbols and Legends
on Reversible Lane Control Signs**

Symbol / Word Message	Meaning
Red X on white background	Lane closed
Upward pointing black arrow on white background (if left turns are permitted, the arrow shall be modified to show left / through arrow)	Lane open for through travel and any turns not otherwise prohibited
Black two-way left-turn arrows on white background and legend ONLY	Lane may be used only for left turns in either direction (i.e., as a two-way left-turn lane)
Black single left-turn arrow on white background and legend ONLY	Lane may be used only for left turns in one direction (without opposing left turns in the same lane)

1502
1503

1504 NCUTCD agrees with Table 2B-2 as presented in the NPA.
1505

- 1506 Option:
- 1507 The symbol signs may also include a downward pointing arrow with the legend THIS LANE.
1508 The term OTHER TIMES may be used for either the symbol or word message sign.
- 1509 **Standard:**
- 1510 **A Reversible Lane Control sign shall be mounted over the approximate center of the**
1511 **lane that is being reversed.**
- 1512 **If the vertical or horizontal alignment is curved to the degree that a driver would be**
1513 **unable to see at least one sign, and preferably two signs, then additional overhead signs**
1514 **shall be installed. The placement of the signs shall be such that the driver will have a**
1515 **definite indication of the lanes specifically reserved for use at any given time. Special**
1516 **consideration shall be given to major generators introducing traffic between the normal**
1517 **sign placement.**
- 1518 **Transitions at the entry to and exit from a section of roadway with reversible lanes shall**
1519 **include advance signs to notify or warn drivers of the boundaries of the reversible lane**
1520 **controls. The R3-9g or R3-9h signs shall be used for this purpose.**
- 1521 Option:
- 1522 More than one sign may be used at the termination of the reversible lane to emphasize the
1523 importance of the message (R3-9i).
- 1524 Where longitudinal barriers separate opposing directions of traffic, the R3-9g or R3-9h signs
1525 may be omitted.
- 1526 **Standard:**
- 1527 **Flashing beacons, if used to supplement the overhead Reversible Lane Control signs,**
1528 **shall comply with the applicable requirements for flashing beacons in Chapter 4S.**
- 1529 **When used in conjunction with Reversible Lane Control signs, the Turn Prohibition**
1530 **signs (R3-1 to R3-4, R3-18) shall be mounted overhead and separate from the Reversible**
1531 **Lane Control signs. The Turn Prohibition signs shall be designed and installed in**
1532 **accordance with Section 2B.28.**
- 1533 *Guidance:*
- 1534 *For additional emphasis, a supplemental plaque stating the distance of the prohibition, such*
1535 *as NEXT 1 MILE, should be added to the Turn Prohibition signs that are used in conjunction*
1536 *with Reversible Lane Control signs.*
- 1537 *If used, overhead signs should be located at intervals not greater than 1/4 mile. The bottom*
1538 *of the overhead Reversible Lane Control signs should not be more than 19 feet above the*
1539 *pavement grade.*
- 1540 *Where more than one sign is used at the termination of a reversible lane, they should be at*
1541 *least 250 feet apart. Longer distances between signs are appropriate for streets with speeds over*
1542 *35 mph, but the separation should not exceed 1,000 feet.*
- 1543 *Because left-turning vehicles have a significant impact on the safety and efficiency of a*
1544 *reversible lane operation, if an exclusive left-turn lane or two-way left-turn lane cannot be*
1545 *incorporated into the lane-use pattern for a particular peak or off-peak period, consideration*
1546 *should be given to prohibiting left turns and U-turns during that time period.*
- 1547 *Reversible Lane Control signs and parking signs should be consistent in message during the*
1548 *same operational periods.*

1549

1550

1551 **Section 2B.35 Comments:** NCUTCD agrees with 2B.35 as presented in the NPA.

1552

1553 **Section 2B.35 Jughandle Signs (R3-23, R3-24, R3-25, and R3-26 Series)**

1554 Support:

1555 A jughandle turn is a left-turn or U-turn that because of special geometry is made by initially
1556 making a right turn. This type of turn can increase the operational efficiency of a roadway by
1557 eliminating the need for exclusive left-turn lanes and can increase the operational efficiency of a
1558 traffic control signal by eliminating the need for protected left-turn phases. A jughandle turn can
1559 also provide an opportunity for trucks and commercial vehicles to make a U-turn where the
1560 median and roadway are not of sufficient width to accommodate a traditional U-turn by these
1561 vehicles.

1562 Figure 2B-8 shows the various signs that can be used for signing jughandle turns. Figure 2B-
1563 9 shows examples of regulatory and destination guide signing for various types of jughandle
1564 turns.

1565 **Standard:**

1566 **On multi-lane roadways, since road users generally anticipate that they need to be in
1567 the left-hand lane when approaching a location where they desire to turn left or make a U-
1568 turn, an ALL TURNS FROM RIGHT LANE (R3-23) or a U TURN FROM RIGHT LANE
1569 (R3-23a) sign (see Figure 2B-95)**

1570 **shall be installed in advance of the location to inform drivers that left turns and/or U-turns
1571 will be made from the right-hand lane.**

1572 Option:

1573 Where a median of sufficient width is available, supplemental regulatory or guide signs may
1574 also be placed on the left-hand side of the roadway.

1575 **Standard:**

1576 **An R3-24 series sign with an upward diagonal arrow pointing to the right if the
1577 jughandle entrance is designed as an exit ramp (see Drawings A and B of Figure 2B-9) or
1578 an R3-25 series sign with a horizontal arrow pointing to the right if the jughandle entrance
1579 is designed as an intersection shall be installed on the right-hand side of the roadway at the
1580 entrance to the jughandle. The legend on the sign shall be ALL TURNS, U TURN, or U
1581 AND LEFT TURNS, as appropriate.**

1582 **If the jughandle is designed such that the jughandle entrance is downstream of the
1583 location where the turn would normally have been made (see Drawing C of Figure 2B-9),
1584 an R3-26 series sign with an arrow pointing straight upward shall be installed on the right-
1585 hand side of the roadway at the intersection to inform road users that they need to proceed
1586 straight through the intersection in order to make a left turn or U-turn. The legend on the
1587 sign shall be U TURN or U AND LEFT TURNS, as appropriate.**

1588 Support:

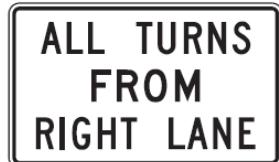
1589 The R3-24, R3-25, and R3-26 series of signs are designed to be mounted below conventional
1590 guide signs.

1591 Section 2C.12 contains information regarding the use of advisory exit and ramp speed signs
1592 for exit ramps.

1593
1594

Section 2D.39 contains information regarding the use of guide signs for jughandles.

Figure 2B-8. Jughandle Regulatory Signs



R3-23



R3-23a



R3-24



R3-24a



R3-24b



R3-25



R3-25a



R3-25b



R3-26



R3-26a

1595
1596

NCUTCD agrees with Figure 2B-8 as presented in the NPA.

Figure 2B-9. Examples of Applications of Jughandle Regulatory and Guide Signing
 (Sheet 1 of 3)

A – Turns made prior to the intersection

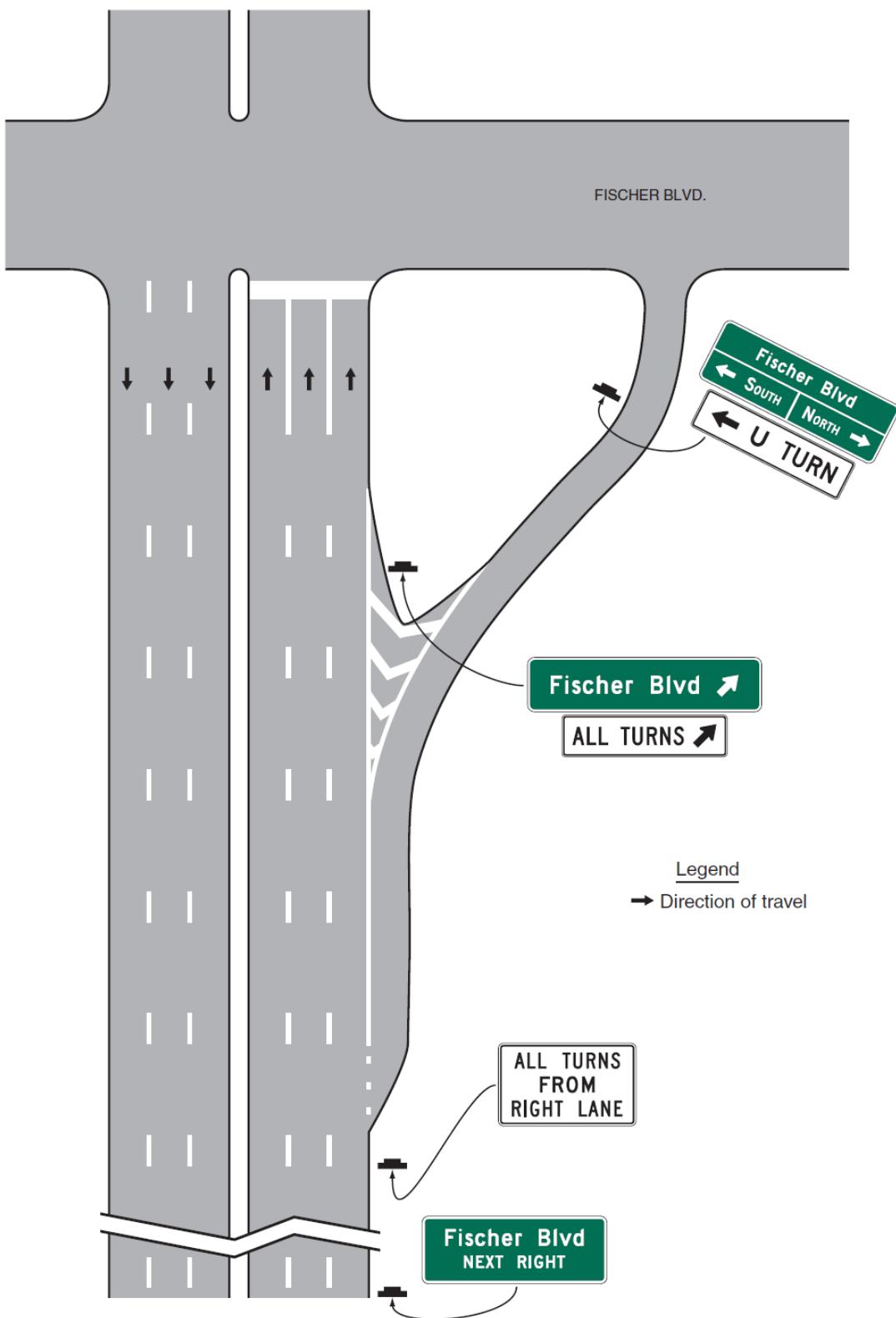


Figure 2B-9. Examples of Applications of Jughandle Regulatory and Guide Signing
 (Sheet 2 of 3)

B - Traditional jughandle

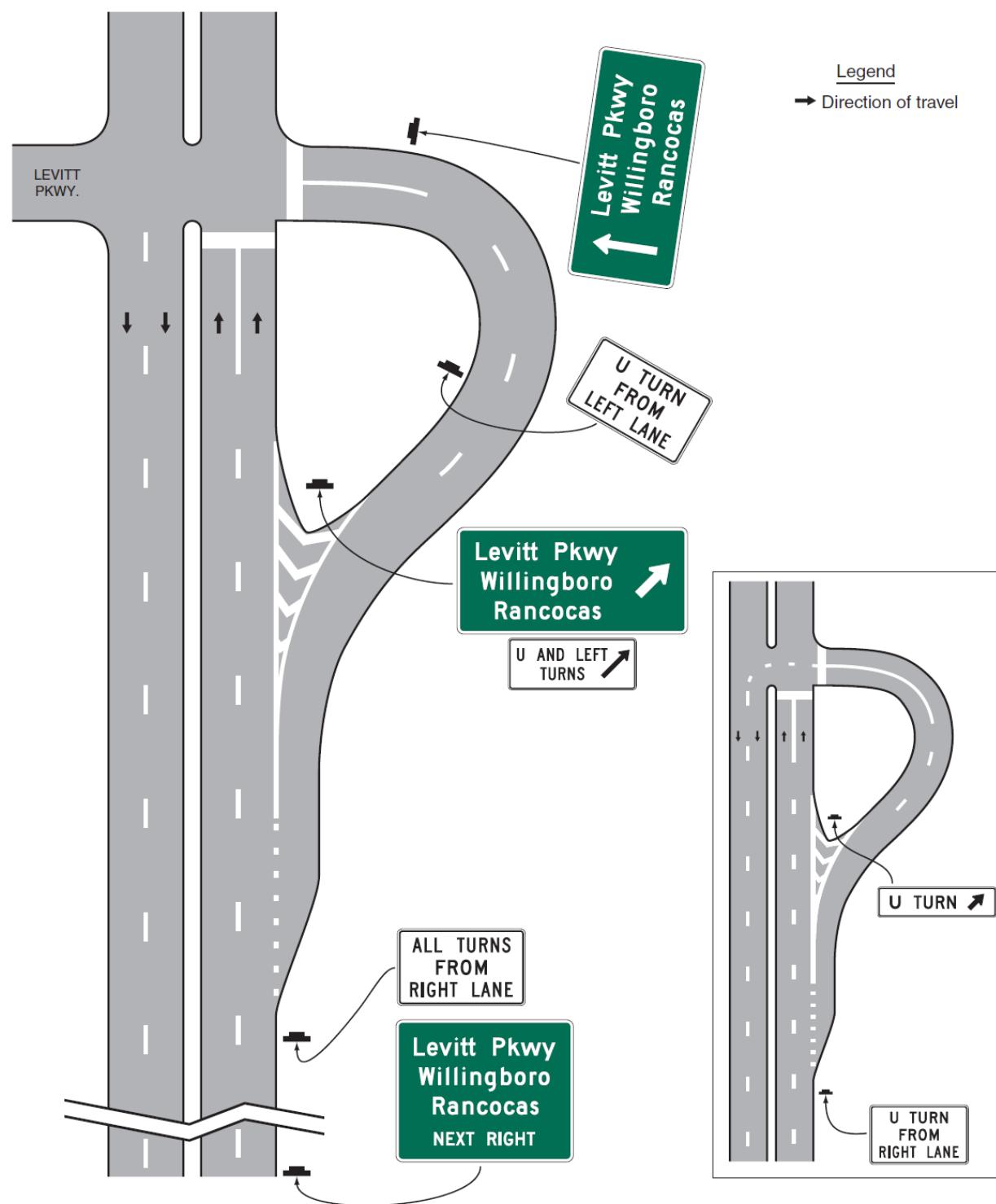
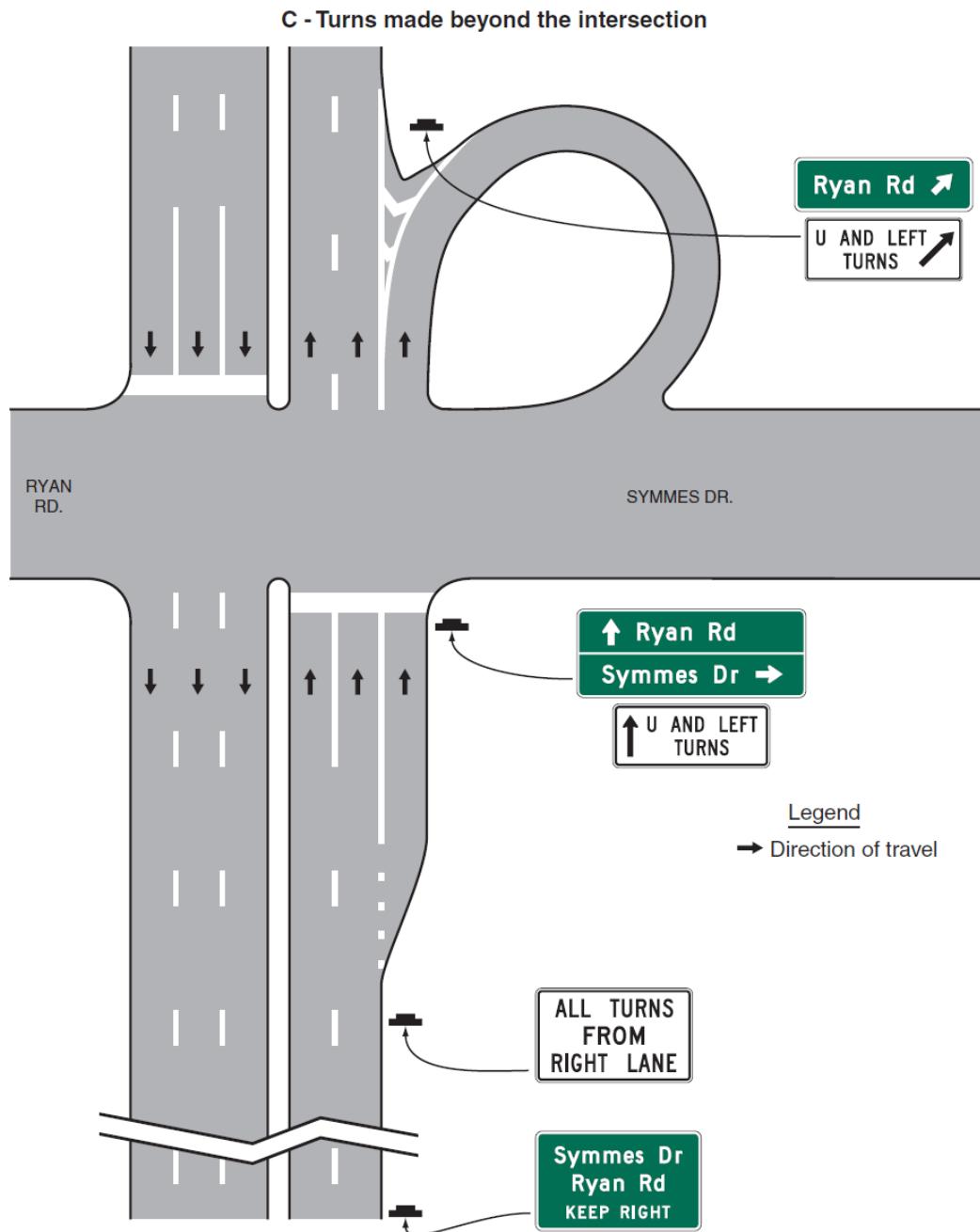


Figure 2B-9. Examples of Applications of Jughandle Regulatory and Guide Signing
 (Sheet 3 of 3)



1599

1600

1601 NCUTCD agrees with Figure 2B-9 as presented in the NPA.

1602

1603

1604 **Section 2B.36 Comments:** NCUTCD agrees with 2B.36 as presented in the NPA with minor
 1605 editorial changes.

1606

1607 **Section 2B.36 DO NOT PASS Sign (R4-1)**

1608 Option:

1609 The DO NOT PASS (R4-1) sign (see Figure 2B-10) may be used in addition to pavement
1610 markings (see Section 3B.03) to emphasize the restriction on passing. The DO NOT PASS sign
1611 may be used at the beginning of, and at intervals within, a zone through which sight distance is
1612 restricted or where other conditions make overtaking and passing inappropriate.

1613 If signing is needed on the left-hand side of the roadway for additional emphasis, NO
1614 PASSING ZONE (W14-3) signs may be used (see Section 2C.[453](#)). (change reference to Section
1615 [2B.53](#))

1616 Support:

1617 Standards for determining the location and extent of no-passing zone pavement markings are
1618 set forth in Section 3B.03.

1619
1620 **Section 2B.37 Summary:** NCUTCD agrees with 2B.37 as presented in the NPA.

1621
1622 **Section 2B.37 PASS WITH CARE Sign (R4-2)**

1623 *Guidance:*

1624 *The PASS WITH CARE (R4-2) sign (see Figure 2B-10) should be installed at the downstream
1625 end of a no passing zone if a DO NOT PASS sign has been installed at the upstream end of the
1626 zone.*

1627
1628 **Section 2B.38 Comments:** NCUTCD generally agrees with 2B.38 as presented in the NPA, as
1629 it is consistent with NCUTCD recommendation 15B-RW-01, but offers minor editorial
1630 corrections.

1631 **Section 2B.38 KEEP RIGHT EXCEPT TO PASS Sign (R4-16) and SLOWER TRAFFIC
1632 KEEP RIGHT Sign (R4-3)**

1633 Option:

1634 The KEEP RIGHT EXCEPT TO PASS (R4-16) sign (see Figure 2B-10) may be used on
1635 roadways where there are two lanes in one direction of travel to direct drivers to stay in the right-
1636 hand lane except when they are passing another vehicle.

1637 *Guidance:*

1638 *If used, the KEEP RIGHT EXCEPT TO PASS sign should be installed ~~just beyond~~ at the
1639 beginning of a two-lane section of roadway and at selected locations along two-lane roadways
1640 for additional emphasis.*

1641 Option:

1642 The SLOWER TRAFFIC KEEP RIGHT (R4-3) sign (see Figure 2B-10) may be used on
1643 multi-lane roadways to reduce unnecessary lane changing and improve capacity.

1644 (clarify purpose of passing lanes)

1645 *Guidance:*

1649 *If used, the SLOWER TRAFFIC KEEP RIGHT sign should be installed just beyond at the*
1650 *beginning of a multi-lane roadway pavement, and at selected locations where there is a tendency*
1651 *on the part of some road users to drive in the left-hand lane (or lanes) below the normal speed of*
1652 *traffic. This sign should not be used on the approach to an interchange or through an*
1653 *interchange area (revise per 15B-RW-01)*

1654

1655

1656

1657 **Section 2B.39 Comments:** NCUTCD generally agrees with 2B.39 as presented in the NPA, but
1658 offers minor revisions for consistency with NCUTCD recommendation 15B-RW-01.

1659

1660 **Section 2B.39 TRUCKS USE RIGHT LANE Sign (R4-5)**

1661 *Guidance:*

1662 *If an extra lane has been provided for trucks and other slow-moving traffic, a SLOWER*
1663 *TRAFFIC KEEP RIGHT (R4-3) sign (see Figure 2B-10), TRUCKS USE RIGHT LANE (R4-5)*
1664 *sign (see Figure 2B-10), or other appropriate sign should be installed at the beginning of the*
1665 *lane.*

1666 *Option:*

1667 The SLOWER TRAFFIC KEEP RIGHT sign may be used as a supplement or as an
1668 alternative to the TRUCKS USE RIGHT LANE sign. Both signs may be used on multi-lane
1669 roadways to improve capacity and reduce lane changing.

1670 The TRUCKS USE RIGHT LANE (R4-5) sign may be used on multi-lane roadways to
1671 reduce unnecessary lane changing.

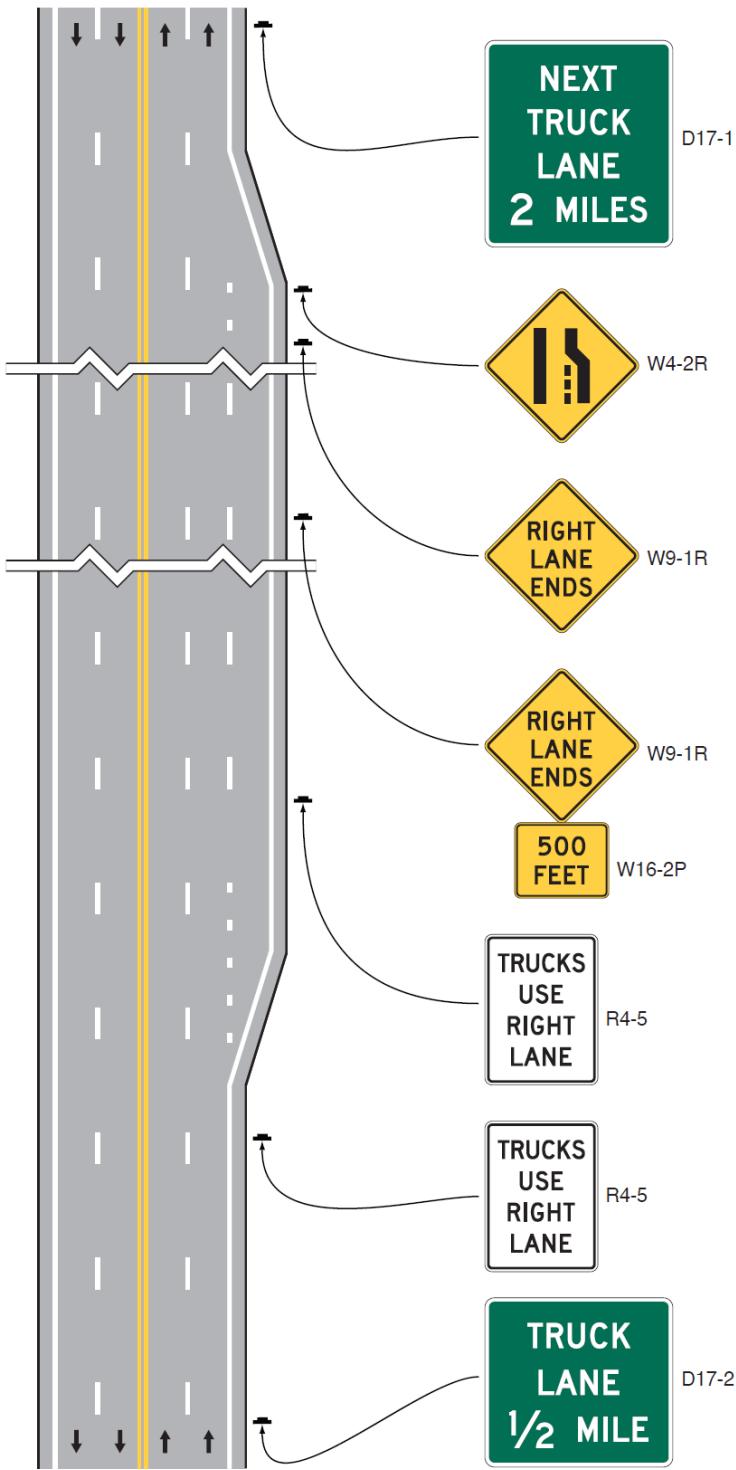
1672 *Guidance:*

1673 *If an extra lane has been provided for trucks and other slow-moving traffic, a Lane Ends sign*
1674 *(see Section 2C.4~~9~~7) should be installed in advance of the point where the extra lane ends.*
1675 *Appropriate pavement markings should be installed at both the upstream and downstream ends*
1676 *of the extra lane (see Section 3B.12 and Figure 3B-1~~3~~4).*

1677 *Support:*

1678 Section 2D.5~~4~~3 contains ~~information provisions~~ regarding advance information signs for
1679 extra lanes ~~that have been provided~~ for trucks and other slow-moving traffic. Figure 2D-27
1680 illustrates an example of the relative locations of signs and pavement markings used for passing
1681 and truck lanes. (revise per 15B-RW-01)

Figure 2D-27. Example of Signing for a Truck Lane



1682
1683
1684
1685

1686 **Section 2B.40 Comments:** NCUTCD agrees with 2B.40 as presented in the NPA, as it is
1687 generally consistent with NCUTCD recommendation 19A-RW-01, but recommends the final
1688 Standard statement be revised to Guidance to allow needed flexibility in sign placement.

1689

1690 **Section 2B.40 Keep Right and Keep Left Signs (R4-7 Series, R4-8 Series)**

1691 Option:

1692 The Keep Right (R4-7) sign (see Figure 2B-10) may be used at locations where it is
1693 necessary for traffic to pass only to the right-hand side of a roadway feature or obstruction. The
1694 Keep Left (R4-8) sign (see Figure 2B-10) may be used at locations where it is necessary for
1695 traffic to pass only to the left-hand side of a roadway feature or obstruction.

1696 *Guidance:*

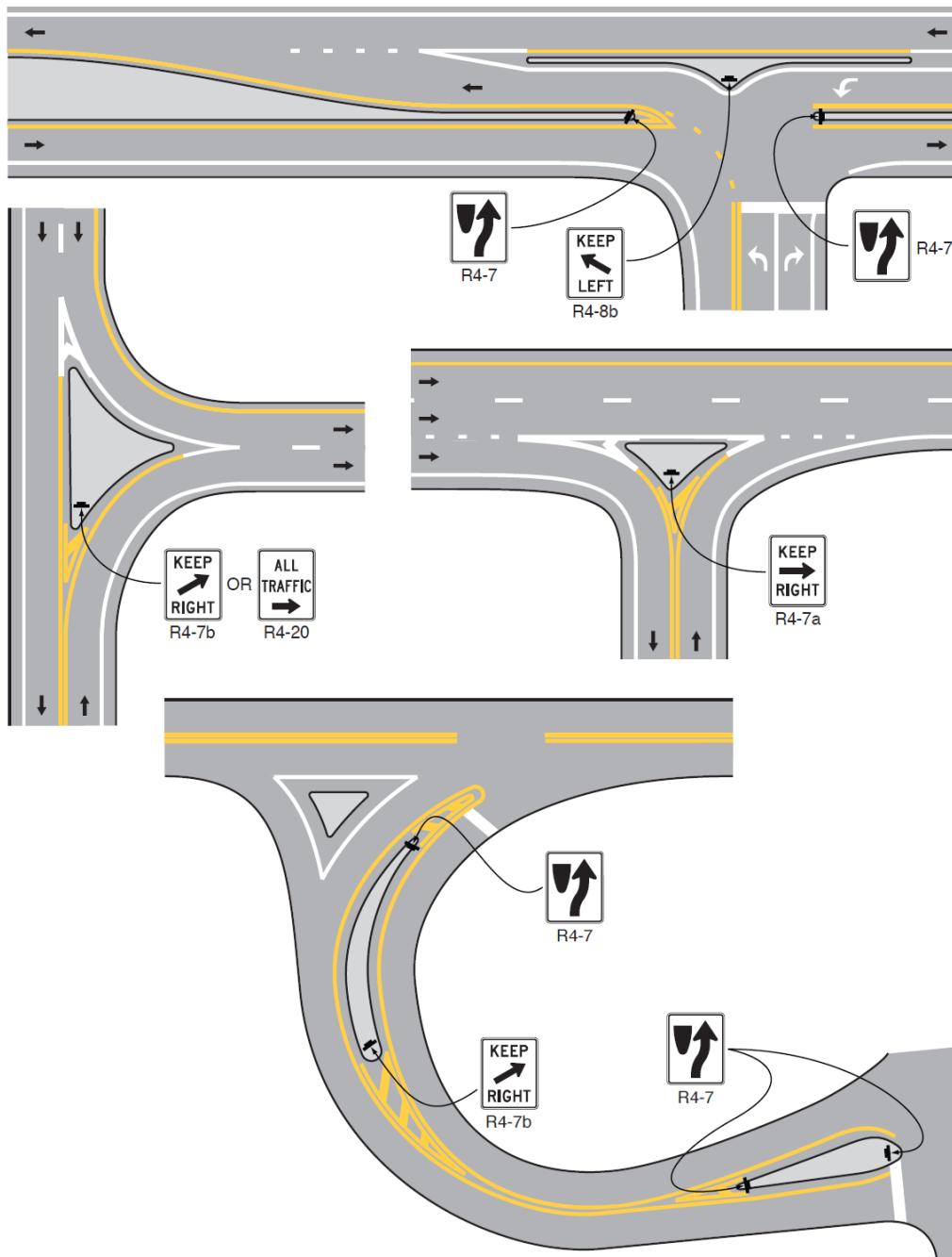
1697 *At locations where it is not readily apparent that traffic is required to keep to the right, a
1698 Keep Right sign should be used.*

1699 *If used, the Keep Right sign should be installed as close as practical to approach ends of
1700 raised medians, parkways, islands, and underpass piers. The sign should be mounted on the face
1701 of or just in front of a pier or other obstruction separating opposite directions of traffic in the
1702 center of the highway such that traffic will have to pass to the right-hand side of the sign.*

1703 *Where the approach end of the island channelizes traffic away from the approach direction,
1704 such as on a loop ramp, the word legend (R4-7a, R4-7b, R4-8a, or R4-8b) signs should be used
1705 instead of the symbol (R4-7 or R4-8) signs to emphasize the degree of curvature away from the
1706 approach direction (see Figure 2B-11).*

1707

Figure 2B-11. Examples of Keep Right and Keep Left Sign Placement



1708

1709 NCUTCD generally agrees with Figure 2B-11 as presented in the NPA, but recommends that
1710 signs be depicted in proper alignment on the figure, similar to other MUTCD figures.

1711

1712 **Standard:**

1713 **The Keep Right (Left) sign shall not be installed on the right-hand (left-hand) side of**
1714 **the roadway in a position where traffic must pass to the left-hand (right-hand) side of the**
1715 **sign.**

1716 Option:

1717 The Keep Right sign may be omitted at intermediate ends of divisional islands and medians.

1718 Word message KEEP RIGHT (LEFT) with an arrow (R4-7a or R4-7b) signs (see Figure 2B-
1719 10) may be used instead of the R4-7 or R4-8 symbol signs.

1720 A narrow Keep Right (R4-7c) sign (see Figure 2B-10) may be installed on the approach end
1721 of a median island that is less than 4 feet wide at the point where the sign is to be located.

1722 **Standard:**

1723 **A narrow Keep Right (R4-7c) sign shall not be installed on a median island that has a**
1724 **width of 4 feet or more at the point where the sign is to be located.**

1725 Option:

1726 The Keep Right sign may be installed in the median of a divided highway crossing that
1727 functions as a single intersection such that it is visible to traffic on the divided highway and
1728 angled as needed toward the applicable crossroad approach as shown in Figure 2B-18.

1729 Support:

1730 Section 2B.[4050](#) provides more information about the use of the Keep Right sign in
1731 combination with or in lieu of ONE-WAY signs at divided highway crossings.

1732 **Standard:***Guidance*

1733 *If Keep Right signs are installed, they should shall be placed as close as practical to the*
1734 *approach ends of the medians and should shall be visible to traffic on the divided highway and*
1735 *angled toward the applicable crossroad approach as shown in Figure 2B-18. (revise to*
1736 *Guidance to allow needed flexibility in sign placement)*

1739 **Section 2B.41 Comments:** NCUTCD agrees with 2B.41 as presented in the NPA.

1741 **Section 2B.41 STAY IN LANE Sign (R4-9)**

1742 Option:

1743 A STAY IN LANE (R4-9) sign (see Figure 2B-10) may be used on multi-lane highways to
1744 direct road users to stay in their lane until conditions permit shifting to another lane.

1745 *Guidance:*

1746 *If a STAY IN LANE sign is used, it should be accompanied by a solid double white lane*
1747 *line(s) to prohibit lane changing.*

1750 **Section 2B.42 Comments:** NCUTCD agrees with 2B.42 as presented in the NPA.

1752 **Section 2B.42 RUNAWAY VEHICLES ONLY Sign (R4-10)**

1753 *Guidance:*

1754 *A RUNAWAY VEHICLES ONLY (R4-10) sign (see Figure 2B-10) should be installed near a*
1755 *truck escape (or runaway truck) ramp entrance to discourage other road users from entering the*
1756 *ramp.*

1759 **Section 2B.43 Comments:** NCUTCD agrees with 2B.43 as presented in the NPA.
1760

1761 **Section 2B.43 Slow Vehicle Turn-Out Signs (R4-12, R4-13, and R4-14)**

1762 Support:

1763 On two-lane highways in areas where traffic volumes and/or vertical or horizontal curvature
1764 make passing difficult, turn-out areas are sometimes provided for the purpose of giving a group
1765 of faster vehicles an opportunity to pass a slow-moving vehicle.

1766 Option:

1767 A SLOW VEHICLES WITH XX OR MORE FOLLOWING VEHICLES MUST USE
1768 TURN-OUT (R4-12) sign (see Figure 2B-10) may be installed in advance of a turn-out area to
1769 inform drivers who are driving so slow that they have accumulated a specific number of vehicles
1770 behind them that they are required by the traffic laws of that State to use the turn-out to allow the
1771 vehicles following them to pass.

1772 Support:

1773 The specific number of vehicles displayed on the R4-12 sign provides law enforcement
1774 personnel with the information they need to enforce this regulation.

1775 Option:

1776 If an R4-12 sign has been installed in advance of a turn-out area, a SLOW VEHICLES
1777 MUST USE

1778 TURN-OUT AHEAD (R4-13) sign (see Figure 2B-10) may also be installed downstream from
1779 the R4-12 sign, but upstream from the turn-out area, to remind slow drivers that they are required
1780 to use a turn-out that is a short distance ahead.

1781 Standard:

1782 **If an R4-12 sign has been installed in advance of a turn-out area, a SLOW
1783 VEHICLES MUST TURN OUT (with arrow) (R4-14) sign (see Figure 2B-10) shall be
1784 installed at the entry point of the turn-out area.**

1785 Support:

1786 Section 2D.52 contains information regarding advance information signs for slow
1787 vehicle turn-out areas.

1788
1789 **Section 2B.44 Comments:** NCUTCD recommends revising 2B.44 to include relocated text from
1790 2B.28 regarding use of the R4-17 sign on the approach to a mandatory turn lane.
1791

1792 **Section 2B.44 DO NOT DRIVE ON SHOULDER Sign (R4-17) and DO NOT PASS ON
1794 SHOULDER Sign (R4-18)**

1795 Option:

1796 The DO NOT DRIVE ON SHOULDER (R4-17) sign (see Figure 2B-10) may be installed to
1797 inform road users that using the shoulder of a roadway as a travel lane is prohibited.

1798 A DO NOT DRIVE ON SHOULDER (R4-17) sign may be used (see Section 2B.28) on the
1799 approach to a mandatory turn lane where traffic may enter the shoulder to access the turn lane
1800 inappropriately. (text relocated from 2B.28 and edited)

1802 The DO NOT PASS ON SHOULDER (R4-18) sign (see Figure 2B-10) may be installed to
1803 inform road users that using the shoulder of a roadway to pass other vehicles is prohibited.

1804

1805

1806 **Section 2B.45 Comments:** NCUTCD does not concur with adding the proposed R4-21 sign to
1807 the MUTCD. The R4-21 sign seems to be a word version of the R3-5 sign. Delete all text
1808 referencing the R4-21 sign.

1809

1810 **Section 2B.45 ALL TRAFFIC Sign (R4-20) and RIGHT (LEFT) TURN ONLY Sign (R4-
1811 21)**

1812 Option:

1813 The ALL TRAFFIC (R4-20) sign may be used at an intersection where all traffic on the
1814 approach to the intersection must turn in the direction indicated and the Movement Prohibition
1815 (see Section 2B.28) and/or One Way (see Section 2B.51) signs do not adequately convey the
1816 allowable direction of travel.

1817 ~~The RIGHT (LEFT) TURN ONLY (R4-21) sign may be used at or on an approach to an
1818 intersection where all traffic on that approach must turn in the direction indicated.~~

1819 *Guidance:*

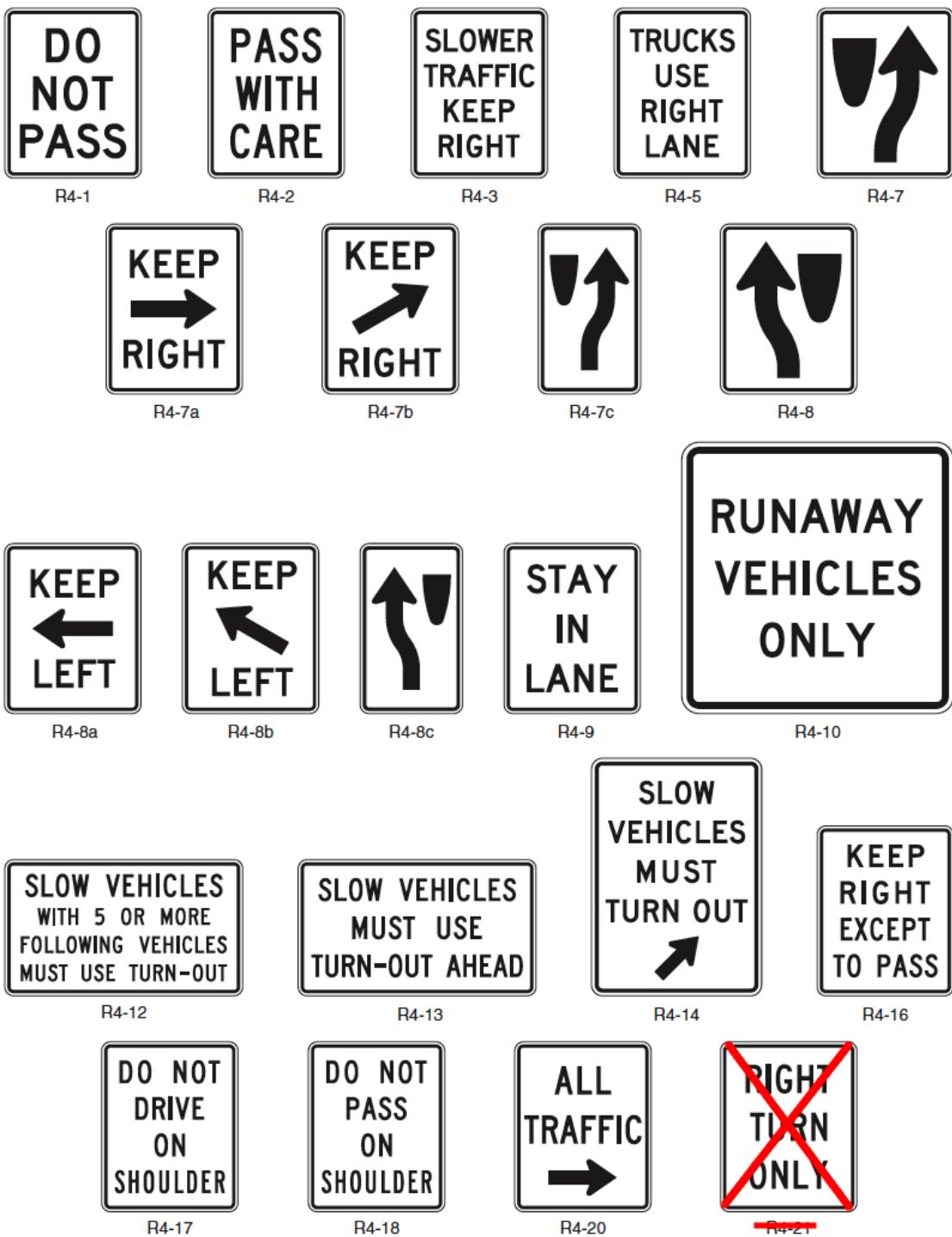
1820 ~~The RIGHT (LEFT) TURN ONLY sign should not be used for a channelized turn lane
1821 separated from the adjacent travel lanes by an island.~~

1822 Standard:

1823 The ALL TRAFFIC sign shall not be used to substitute for the Keep Right (R4-7 series)
1824 or Keep Left (R4-8 series) signs.

1825 ~~The RIGHT (LEFT) TURN ONLY sign shall not be used to substitute for the
1826 Mandatory Movement Lane Control signs (see Sections 2B.29 and 2B.30).~~

Figure 2B-10. Passing, Keep Right, and Slow Traffic Signs



1827

1828

1829 NCUTCD agrees with Figure 2B-10 as presented in the NPA, except the R4-21 sign should be
1830 deleted.

1831

1832

1833
1834 **Section 2B.46 Comments:** NCUTCD generally agrees with 2B.46 as presented in the NPA as it
1835 is reasonably consistent with NCUTCD recommendation 17A-RW-02, but recommends that the
1836 R5-2a NO TRUCKS sign be retained and to add a R5-xx No ATVs sign in accordance with []
1837 NCUTCD recommendation 18B-BIK-03. The design of the No ATVs sign was evaluated as part
1838 of a Traffic Control Devices Pooled Fund Study. Since the NO THRU TRUCKS word message
1839 sign has been retained, it makes sense to also retain the NO TRUCKS word message sign.
1840

1841 SELECTIVE EXCLUSION SIGNS

1842 Section 2B.46 Selective Exclusion Signs

1843 Support:

1844 Selective Exclusion signs (see Figure 2B-12) give notice to road users that State or local
1845 statutes or ordinances exclude designated types of traffic from using particular roadways or
1846 facilities.

1847 **Standard:**

1848 **If used, Selective Exclusion signs shall clearly indicate the type of traffic that is
1849 excluded.**

1850 Support:

1851 Typical exclusion messages include:

- 1852 A. No Trucks (R5-2) or NO TRUCKS (R5-2a),
- 1853 B. NO MOTOR VEHICLES (R5-3),
- 1854 C. NO COMMERCIAL VEHICLES (R5-4),
- 1855 D. NO TRUCKS (VEHICLES) WITH LUGS (R5-5),
- 1856 E. No Bicycles (R5-6),
- 1857 F. NO NON-MOTORIZED TRAFFIC (R5-7),
- 1858 G. NO MOTOR-DRIVEN CYCLES (R5-8),
- 1859 H. No Pedestrians (R9-3),
- 1860 I. No Skaters (R9-13),
- 1861 J. No Equestrians (R9-14),
- 1862 K. No Snowmobiles (R9-15),
- 1863 L. No ATVs (R5-xx), (added per 18B-BIK-03)
- 1864 M. No Hazardous Material (R14-3) (see Section 2B.72).
- 1865 N. NO THRU TRAFFIC (R5-12),
- 1866 O. NO THRU TRUCKS (R5-2b), and
- 1867 P. EXCEPT LOCAL DELIVERIES plaque (R5-2aP)

1868 Appropriate combinations or groupings of these legends into a single sign, such as NO
1869 PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES (R5-10 and R5-10a), or NO
1870 PEDESTRIANS OR BICYCLES (R5-10b) may be used.

1871 **Guidance:**

1872 *If an exclusion is governed by vehicle weight, a Weight Limit sign (see Section 2B.69) should
1873 be used instead of a Selective Exclusion sign.*

1874 *If used on a ramp to a freeway or expressway where pedestrian and bicycle travel are
1875 prohibited by law or regulation, the NO PEDESTRIANS OR BICYCLES (R5-10b) sign should be
1876 installed in a location where it is clearly visible to any pedestrian or bicyclist attempting to enter
1877 the limited access facility from a street intersecting the ramp. In locations where a freeway or
1878 expressway is accessed from a ramp from a roadway parallel to the freeway or expressway, the*

1879 sign should be placed in a location that clearly indicates the prohibition applies only to the
1880 freeway or expressway or to the ramp.

1881 The Selective Exclusion sign should be placed on the right-hand side of the roadway at an
1882 appropriate distance from the intersection so as to be clearly visible to all road users turning
1883 into the roadway that has the exclusion. The NO PEDESTRIANS (R5-10c) or No Pedestrian
1884 Crossing (R9-3) sign (see Section 2B.61) should be installed so as to be clearly visible to
1885 pedestrians who are at a location where an alternative route is available.

1886 Option:

1887 The NO PEDESTRIANS (R5-10c) or No Pedestrian Crossing (R9-3) sign may also be used
1888 at underpasses or elsewhere where pedestrian facilities are not provided.

1889 The NO THRU TRAFFIC (R5-12) or NO THRU TRUCKS (R5-2b) signs may be used at
1890 locations to prohibit through traffic from using a particular roadway or facility.

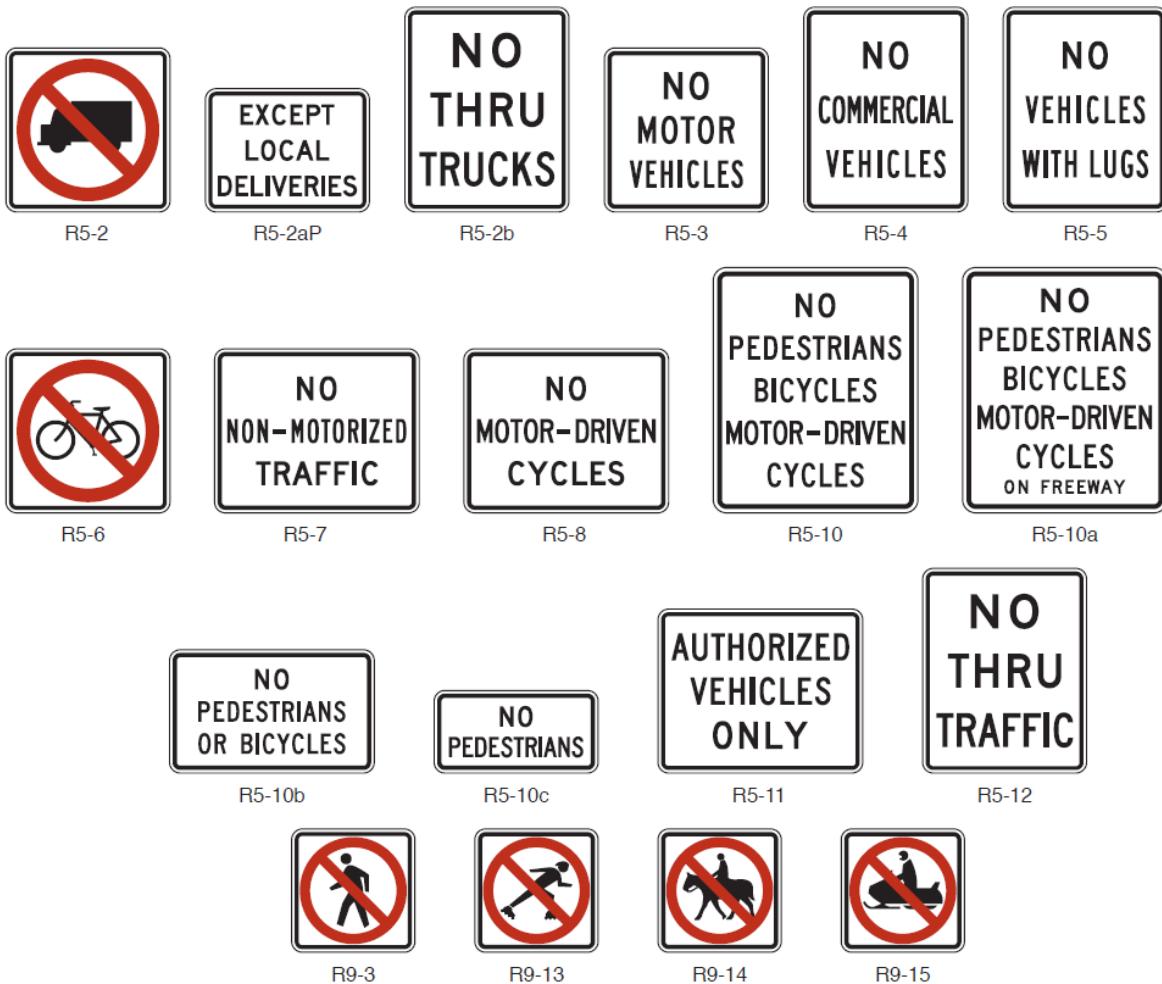
1891 The EXCEPT LOCAL DELIVERIES (R5-2aP) plaque may be mounted below the R5-2 or
1892 R5-2b sign.

1893 The NO TRUCKS (R5-2a) word message sign may be used as an alternate to the No Trucks
1894 (R5-2) symbol sign.

1895 The No Snowmobiles Symbol sign (R9-15) may be used where snowmobiles are prohibited
1896 on roadways or shared-use paths.

1897 The AUTHORIZED VEHICLES ONLY (R5-11) sign may be used at median openings and
1898 other locations to prohibit vehicles from using the median opening or facility unless they have
1899 special permission (such as law enforcement vehicles or emergency vehicles) or are performing
1900 official business (such as highway agency vehicles).

Figure 2B-12. Selective Exclusion Signs



1901
1902
1903
1904
1905



R5-xx

1906
1907
1908
1909
1910
1911
1912

NCUTCD recommends adding the R5-xx No ATVs sign to Table 2B-1 with the following information:

Sign or Plaque	Sign Designation	Section	Conventional Road		Exp.	Fwy.	Min.	Oversized
			Single Lane	Multi-Lane				
No ATVs	R5-xx	2B.46	18" x 18"	18" x 18"	24 x 24	30 x 30	-	30 x 30

1913

1914

1915

1916 ***DO NOT ENTER, WRONG WAY, ONE-WAY and Related Signs and Plaques***

1917

1918 **Section 2B.47 Comments:** NCUTCD recommends revising 2B.47 to address site roadways
1919 open to public travel in accordance with NCUTCD recommendation 15A-RW-02, to specifically
1920 note Standard exceptions in Option statements, and reference Figure 2B-14.

1921

1922 **Section 2B.47 DO NOT ENTER Sign (R5-1)**

1923 **Standard:**

1924 The DO NOT ENTER (R5-1) sign (see Figure 2B-13) shall be used where traffic is
1925 prohibited from entering a restricted roadway, except as indicated in the option statements
1926 below (see Figures 2B-15, 2B-16, 2B-17 and 2B-18).

1927 The DO NOT ENTER (R5-1) sign shall be used where a two-way roadway becomes a
1928 one-way roadway as shown in Figure 2B-15, and near the downstream end of an
1929 interchange exit ramp as shown in Figure 2B-19 (see Section 2B.49).

1930 Except as noted in paragraph 4, a DO NOT ENTER (R5-1) sign shall be installed at an
1931 intersection with a divided highway where the crossing functions as two separate
1932 intersections, as shown in Figure 2B-16.

1933 **Option:**

1934 A DO NOT ENTER (R5-1) sign may be installed at an intersection with a divided highway
1935 where the crossing functions as a single intersection as shown in Figure 2B-18.

1936 A DO NOT ENTER (R5-1) sign may be omitted on a low speed urban street that is a divided
1937 highway at a crossing that functions as two separate intersections.

1938 **Guidance:**

1939 The DO NOT ENTER sign, if used, should be placed directly in view of a road user at the
1940 point where a road user could wrongly enter a divided highway, one-way roadway, or ramp.
1941 The sign should be mounted, facing traffic that might enter the roadway or ramp in the wrong
1942 direction.

1943 At a crossing with a divided highway that functions as a single intersection; the sign, if
1944 used, should be placed on the outside edge side of the roadway facing traffic that might enter
1945 the roadway in the wrong direction.

1946 If the DO NOT ENTER sign would be visible to traffic to which it does not apply, the sign
1947 should be turned away from, or shielded from, the view of that traffic.

1948 **Option:**

1949 On divided roadway median openings with operating speeds less than 25 mph on site roadways
1950 that are off the public right-of-way but are open to public travel without full-time access
1951 restrictions, a DO NOT ENTER sign may be omitted only if an R4-7 or R6-1 sign is installed.
1952 (include per 15A-RW-02)

1953

1954 A second DO NOT ENTER sign may be used, particularly where traffic approaches from an
1955 intersecting roadway (see Figure 2B-16).

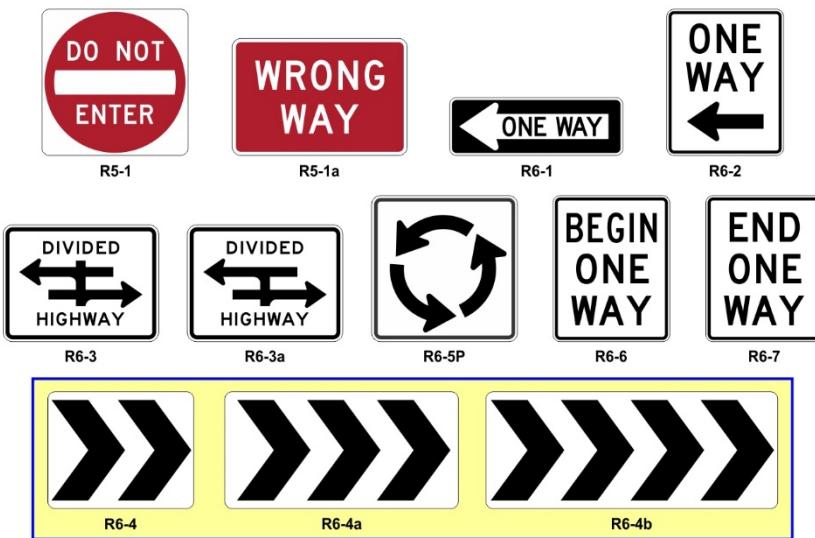
1956 White or red LEDs may be installed within the border of the DO NOT ENTER sign to
1957 enhance the conspicuity of the sign. The LEDs may be vehicle actuated to flash at the rates as
1958 shown in Section 2A.20.

1959 Support:

1960 Section 2B.49 contains information regarding an optional lower mounting height for DO
1961 NOT ENTER signs that are located along an exit ramp facing a road user who is traveling in the
1962 wrong direction, as shown in Figure 2B-14. (This figure is not otherwise referenced in Section
1963 2B.47)

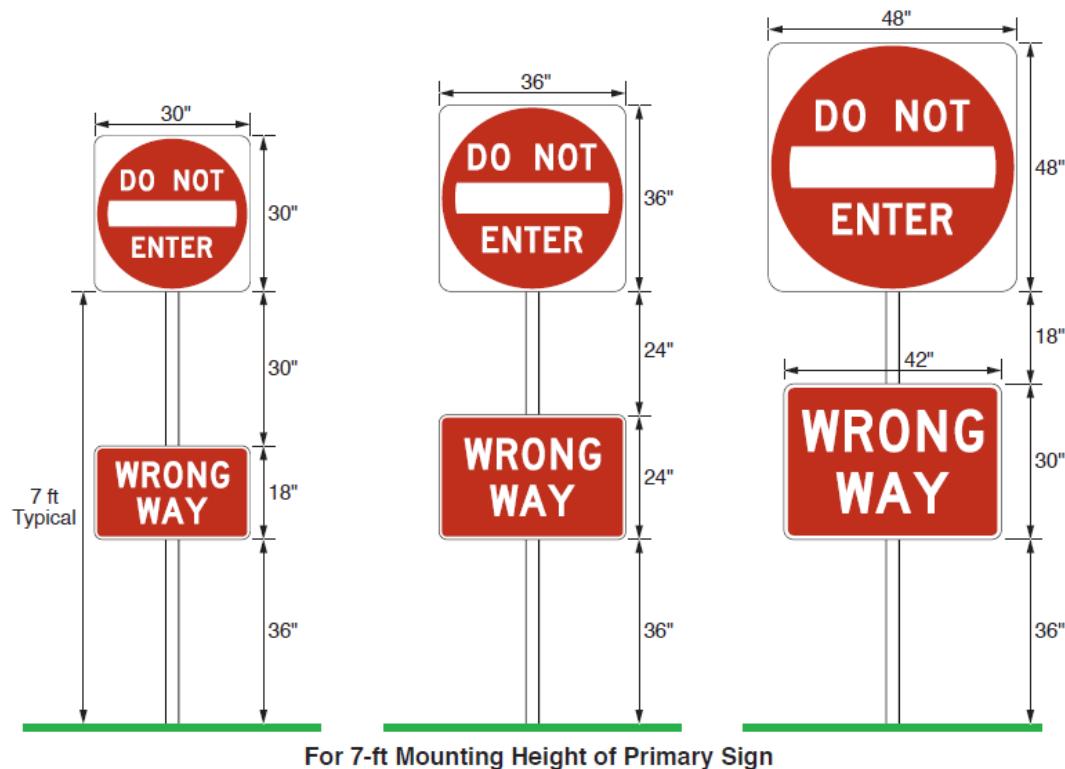
1964

Figure 2B-13. DO NOT ENTER, WRONG WAY, ONE WAY, and Related Signs and Plaques .

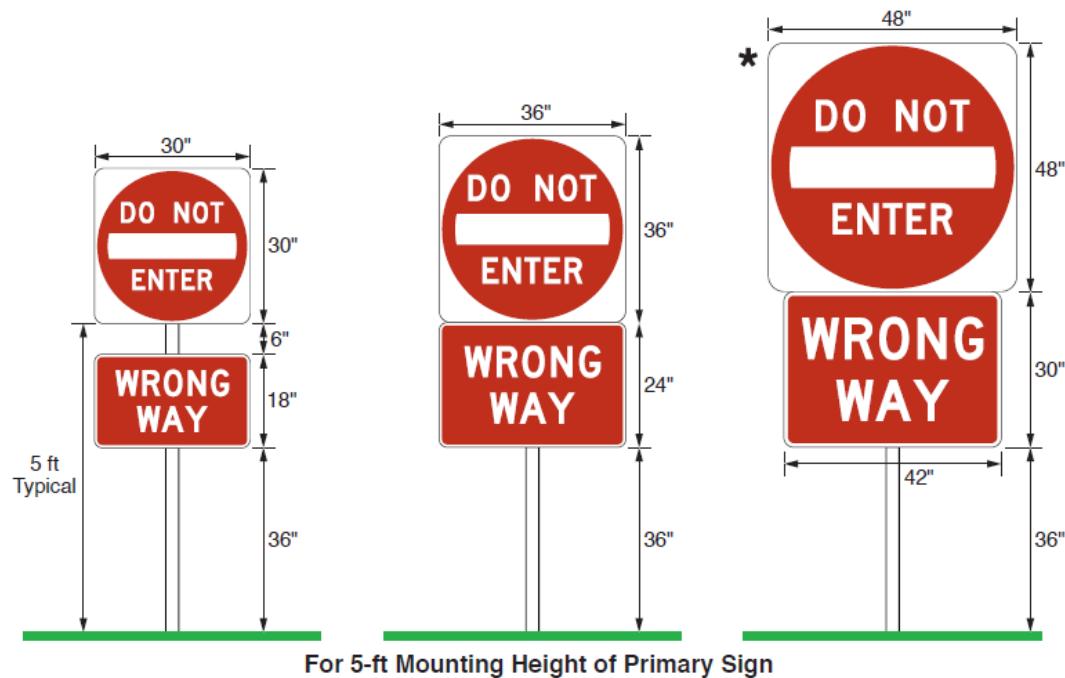


1965
1966 NCUTCD agrees with Figure 2B-13 as presented in the NPA, but recommends including the R6-
1967 4 series roundabout arrow signs from Figure 2B-20 of the 2009 MUTCD.

Figure 2B-14. Examples of Low-Mounted Wrong Way Signs with Do Not Enter Signs for Wrong Way Traffic Control



For 7-ft Mounting Height of Primary Sign



* Sign is higher than the 5 ft mounting height as the size of the 42" x 30" Wrong Way sign is controlling.

1968

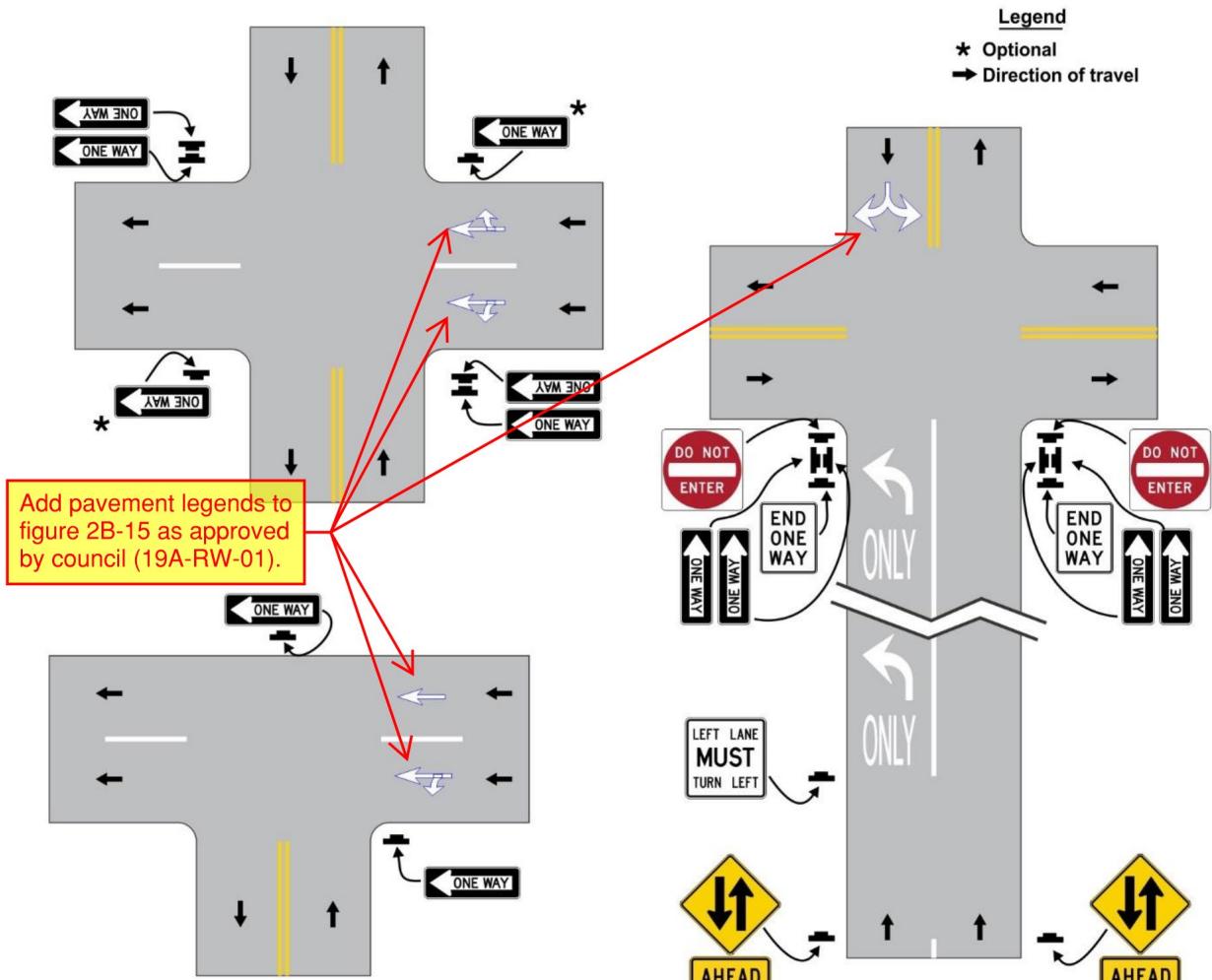
1969

1970

NCUTCD agrees with Figure 2B-14 as presented in the NPA.

1971
1972

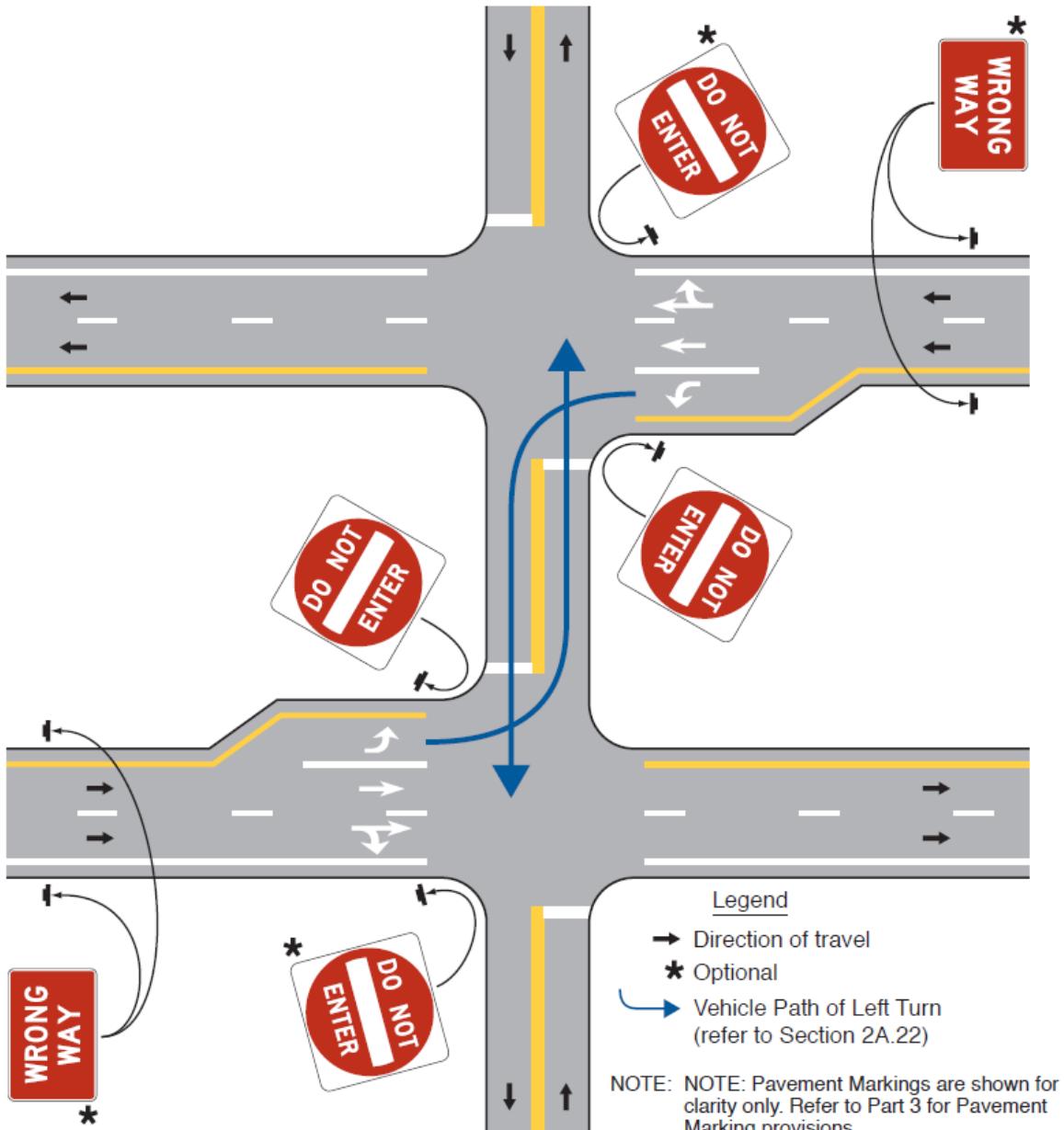
Figure 2B-15. Locations of ONE WAY Signs



1973
1974
1975
1976
1977

NCUTCD agrees with Figure 2B-15 as presented in the NPA, except NCUTCD recommends pavement legends be added to the figure in accordance with NCUTCD recommendation 19A-RW-01.

Figure 2B-16. Locations of Do Not Enter and Wrong-Way Signing for Divided Highways Crossings that Function as Two Separate Intersections

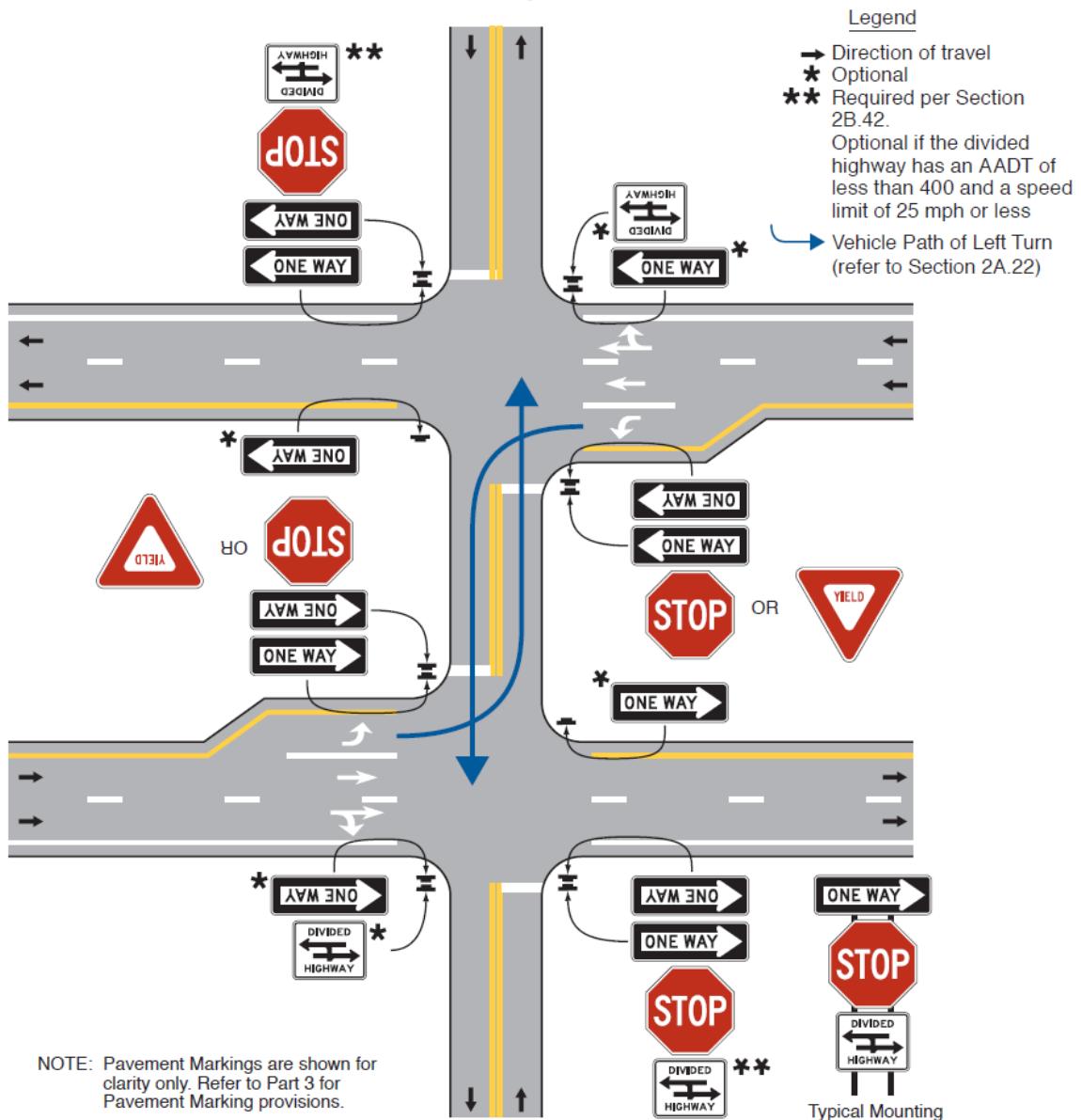


1978
1979
1980
1981

NCUTCD agrees with Figure 2B-16 as presented in the NPA.

1982

Figure 2B-17. ONE WAY Signing for Divided Highways Crossings that Function as Two Separate Intersections.



1983

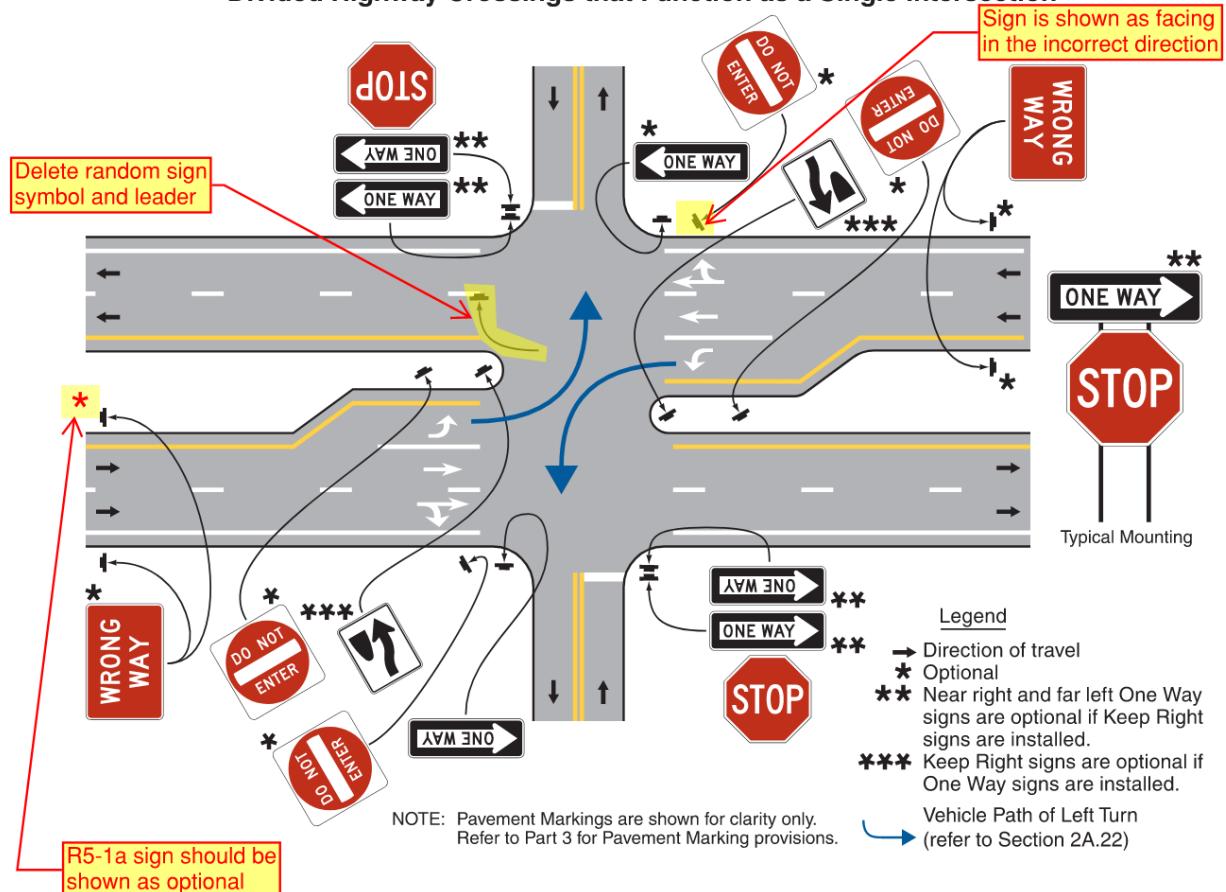
1984

1985

1986

NCUTCD agrees with Figure 2B-17 as presented in the NPA.

Figure 2B-18. ONE WAY, DO NOT ENTER, and WRONG WAY Signing for Divided Highway Crossings that Function as a Single Intersection

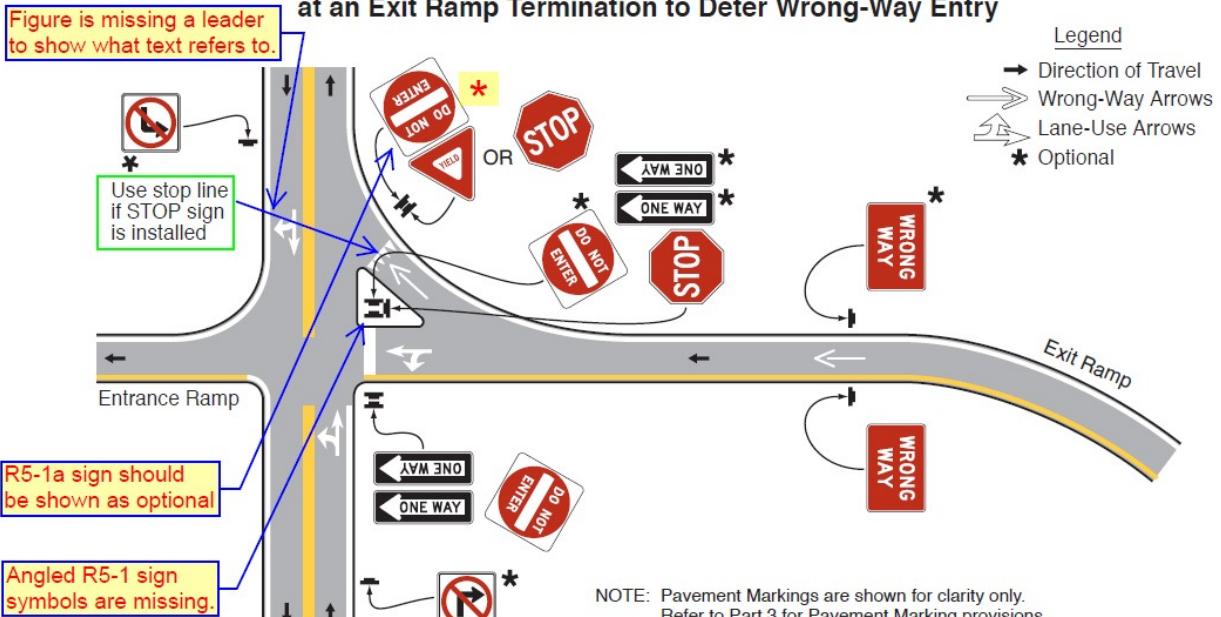


1987
1988
1989
1990
1991
1992

NCUTCD agrees with Figure 2B-18 as presented in the NPA, with the following revisions:

- Delete random sign symbol and leader
- Show DO NOT ENTER sign in upper right in correct orientation
- R5-1a sign should be shown as optional

Figure 2B-19. Example of Application of Regulatory Signing and Pavement Markings at an Exit Ramp Termination to Deter Wrong-Way Entry

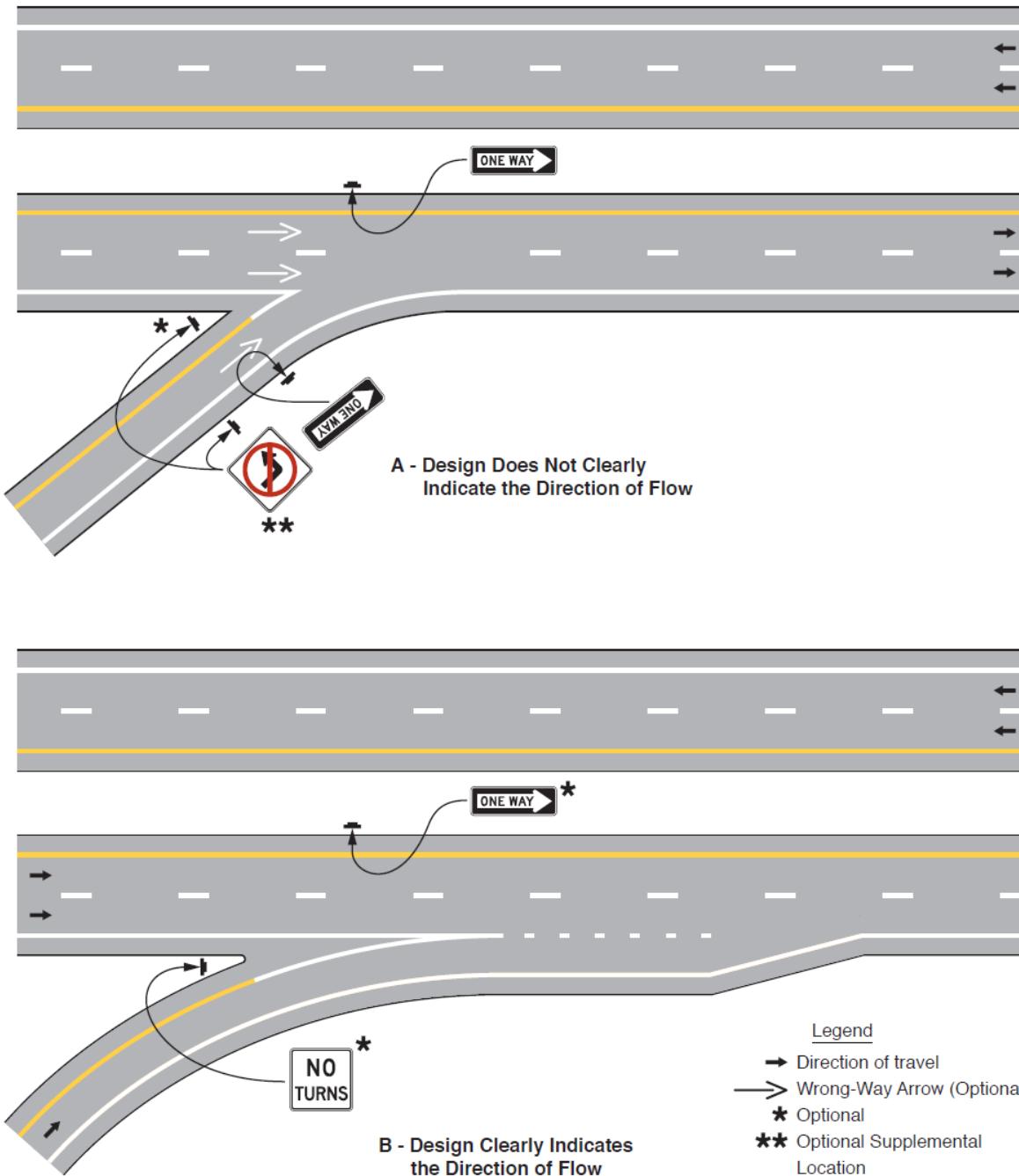


1993
1994
1995
1996
1997
1998
1999

NCUTCD agrees with Figure 2B-19 as presented in the NPA, with the following revisions:

- Figure is missing a leader between text and yield line
 - R5-1a sign should be shown as optional
 - Angled R5-1 sign symbols are missing
-

Figure 2B-20. Example of Application of Regulatory Signing and Pavement Markings at an Entrance Ramp Terminal



2000
2001

2002 NCUTCD agrees with Figure 2B-20 as presented in the NPA.

2003

2004

2005

2006 Section 2B.48 Comments: NCUTCD recommends revising 2B.48 to delete the phrase
2007 “mounted below DO NOT ENTER signs” in the Support paragraph. NCUTCD’s position is that

a lower mounting height should be allowable regardless of whether the WRONG WAY sign is below a DO NOT ENTER sign. The wording recommended for deletion also conflicts with Section 2B.49, which states that “a DO NOT ENTER sign(s) and/or a WRONG WAY sign(s) that is located along the exit ramp at a location downstream from the intersection with the crossroad facing a road user who is traveling in the wrong direction may be installed at a minimum mounting height of 3 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the pavement.”

Section 2B.48 WRONG WAY Sign (R5-1a)

Option:

The WRONG WAY (R5-1a) sign (see Figure 2B-13) may be used as a supplement to the DO NOT ENTER sign where a crossroad intersects a one-way roadway in a manner that does not physically discourage or prevent wrong-way entry (see Figure 2B-16).

Guidance:

If used, the WRONG WAY sign should be placed at a location along the exit ramp or the one-way roadway farther from the crossroad than the DO NOT ENTER sign (see Section 2B.50).

The WRONG WAY sign should be placed on the same side of the road as the DO NOT ENTER sign.

Support:

Section 2B.49 contains information regarding an optional lower mounting height for WRONG WAY signs ~~mounted below DO NOT ENTER signs~~ (delete this phrase to return to 2009 MUTCD wording) that are located along an exit ramp facing a road user who is traveling in the wrong direction.

Option:

White or red LEDs may be installed within the border of the WRONG WAY sign to enhance the conspicuity of the sign. The LEDs may be vehicle actuated to flash at the rates as shown in Section 2A.20.

Section 2B.49 Comments: NCUTCD recommends revising 2B.49 to better define the applicable highway type, strengthen the language addressing wrong-way movements, and restore 2009 MUTCD wording referring to other engineering measures.

Section 2B.49 Wrong-Way Traffic Control at Interchange Ramps

Standard:

At freeway and expressway interchange exit ramp terminals where the ramp intersects a crossroad in such a manner that wrong-way entry ~~could inadvertently be made~~ is not physically prevented, the following signs shall be used (see Figure 2B-19):

- A. At least one ONE WAY sign for each direction of travel on the crossroad shall be placed where the exit ramp intersects the crossroad indicating that the ramp is

2050 **restricted to one-way travel.** (changes recommended to better define the location
2051 highway type)

- 2052 B. At least one DO NOT ENTER sign shall be conspicuously placed near the
2053 downstream end of the exit ramp in positions appropriate for full view of a road
2054 user starting to enter wrongly from the crossroad.
2055 C. At least one WRONG WAY sign shall be placed on the exit ramp facing a road user
2056 traveling in the wrong direction.

2057 *Guidance:*

2058 *At ramp terminals with adjacent entrance and exit ramps, such as may be found at some*
2059 *partial cloverleaf interchanges, ONE WAY signs should be placed so as to provide clear*
2060 *indication of the proper one-way restrictions for both ramps.*

2061 In addition, the following pavement markings should be used (see Figure 2B-19):

- 2062 A. On two-lane paved crossroads at interchanges, solid double yellow lines should be used
2063 as a center line for an adequate distance on both sides approaching the ramp
2064 intersections.
2065 B. Where crossroad channelization or ramp geometrics do not ~~make physically prevent~~
2066 wrong-way movements ~~difficult~~, a lane-use arrow should be placed in each lane of an
2067 exit ramp near the crossroad terminal where it will be clearly visible to a potential
2068 wrong-way road user. (changes recommended to make reference to other type ramps
2069 encountered)

2070 Option:

2071 The following traffic control devices may be used to supplement the signs and pavement
2072 markings described in Paragraphs 1 and 2:

- 2073 A. Additional ONE WAY signs may be placed, especially on two-lane rural crossroads,
2074 appropriately in advance of the ramp intersection to supplement the required ONE WAY
2075 sign(s). B. Additional WRONG WAY signs may be used.
2076 C. Slender, elongated wrong-way arrow pavement markings (see Figure 3B-24) intended
2077 primarily to warn wrong-way road users that they are traveling in the wrong direction
2078 may be placed upstream from the ramp terminus (see Figure 2B-19) to indicate the
2079 correct direction of traffic flow. Wrongway arrow pavement markings may also be
2080 placed on the exit ramp at appropriate locations near the crossroad junction to indicate
2081 wrong-way movement. The wrong-way arrow markings may consist of pavement
2082 markings or bidirectional red-and-white raised pavement markers or other units that show
2083 red to wrong-way road users and white to other road users (see Figure 3B-21).
2084 D. Lane-use arrow pavement markings may be placed on the exit ramp and crossroad near
2085 their intersection to indicate the permissive direction of flow.
2086 E. Freeway entrance signs (see Section 2D.49) may be used.
2087 F. Lane control signs or movement prohibition signs may be used on the approaches to the
2088 exit ramp.
2089 G. A Keep Right (R4-7 or R4-7c) may be used on a ramp median nose for wrong-way traffic
2090 control.

2091 *Guidance:*

2092 *On interchange entrance ramps where the ramp merges with the through roadway and the*
2093 *design of the interchange does not clearly make evident the direction of traffic on the separate*

2094 roadways or ramps, a ONE WAY sign visible to traffic on the entrance ramp and through
2095 roadway should be placed on each side of the through roadway near the entrance ramp merging
2096 point as illustrated in Figure 2B-20.

2097 Option:

2098 On interchange entrance ramps where the ramp merges with the through roadway and the
2099 design of the interchange does not clearly make evident the direction of traffic on the separate
2100 roadways or ramps a NO LEFT TURN (R3-2) sign may be located on the left side of the
2101 entrance ramp at the gore. If a NO LEFT TURN (R3-2) sign is located on the left a
2102 supplemental R3-2 sign may be installed right side of the entrance ramp.

2103 On interchange entrance ramps where the ramp merges with the through roadway and the
2104 design clearly indicates the direction of flow, a ONE WAY sign may be placed visible to traffic
2105 on the entrance ramp and/or a NO TURNS (R3-3) sign may be placed visible to traffic on the
2106 entrance ramp and through roadway at the gore area as illustrated in Figure 2B-20.

2107 Where there are no parked cars, pedestrian activity or other obstructions such as snow or
2108 vegetation, and if an engineering study indicates that a lower mounting height would address
2109 wrong-way movements on freeway or expressway exit ramps, a DO NOT ENTER sign(s) and/or
2110 a WRONG WAY sign(s) that is located along the exit ramp at a location downstream from the
2111 intersection with the crossroad facing a road user who is traveling in the wrong direction may
2112 be installed at a minimum mounting height of 3 feet, measured vertically from the bottom of the
2113 sign to the elevation of the near edge of the pavement. At the intersection with the crossroad, a
2114 WRONG WAY sign may be mounted at a minimum height of 3 feet on the same support on
2115 which a DO NOT ENTER sign is mounted at a height that complies with the provisions of
2116 Section 2A.18. (See Figure 2B-14)

2117 At locations where engineering judgment determines that a special need exists, other
2118 standard warning or prohibitive methods and devices may be used as a deterrent to the wrong-
2119 way movement. This sentence is in the 2009 MUTCD, and we do not support its deletion by
2120 FHWA. Because of the severe safety implications of wrong-way entries, it is important to
2121 emphasize the need to consider additional measures.

2122 Support:

2123 Sections 2B.48, 2B.49, and 2B.53 contain further information on signing to avoid wrong-way
2124 movements at at-grade intersections on expressways.

2125

2126

2127 **Section 2B.50 Comments:** NCUTCD recommends revising 2B.50 to continue the use of R4
2128 series Roundabout signs instead of W1-6 One Direction Large Arrow signs for travel direction
2129 within a roundabout, revise figure references, and add Option text to address private roadways
2130 open to public travel in accordance with NCUTCD recommendation 15A-RW-02.

2131

2132 **Section 2B.50 ONE WAY Signs (R6-1, R6-2)**

2133

2134 **Standard:**

2135 **Except as provided in Paragraph 6, the ONE WAY (R6-1 or R6-2) sign (see Figure 2B-
2136 15) shall be used to indicate streets or roadways upon which vehicular traffic is allowed to
2137 travel in one direction only.**

2138 **ONE WAY signs shall be placed parallel to the one-way street at all alleys and**
2139 **roadways that intersect one-way roadways as shown in Figure 2B-16.**

2140 At the crossing of a roadway with a divided highway that functions as two separate
2141 intersections, , ONE WAY signs shall be placed, visible to each crossroad approach, on the
2142 near right and far left corners of each intersection with the directional roadways (see
2143 Figure 2B-17).

2144 At the crossing of a roadway with a divided highway that functions as a single
2145 intersection Keep Right (R4-7) (see Section 2B.42) signs and/or ONE WAY signs shall be
2146 installed (see Figures 2B-10 and 2B-11). If Keep Right signs are installed, they shall be
2147 placed as close as practical to the approach ends of the medians and shall be visible to
2148 traffic on the divided highway and angled (as needed) toward the applicable crossroad
2149 approach as shown in Figure 2B-18. If ONE WAY signs are installed, they shall be placed
2150 on the near right and far left corners of the intersection and shall be visible to each
2151 crossroad approach.

2152 Option:

2153 At the crossing of a roadway with a divided highway, regardless of function as a single or
2154 separate intersections, ONE WAY signs may also be placed on the far right corner of the
2155 intersection as shown in Figures 2B-17 and 2B-18 .

2156 ONE WAY signs may be omitted on the one-way roadways of divided highways, where the
2157 design of interchanges indicates the direction of traffic on the separate roadways.

2158 Support:

2159 See Section 2B.49 for the placement of ONE WAY signs at a crossroad with an interchange.

2160 **Standard:**

2161 **If used at unsignalized intersections with one-way streets, ONE WAY signs shall be**
2162 **placed on the near right and the far left corners of the intersection facing traffic entering or**
2163 **crossing the one-way street (see Figure 2B-16).**

2164 **If used at signalized intersections with one-way streets, ONE WAY signs shall be placed**
2165 **near the appropriate signal faces, on the poles holding the traffic signals, on the mast arm**
2166 **or span wire holding the signals, or at the locations specified for unsignalized intersections.**

2167 At unsignalized T-intersections where the roadway at the top of the T-intersection is a
2168 one-way roadway, ONE WAY signs shall be placed on the near right and the far side of the
2169 intersection facing traffic on the stem approach (see Figure 2B-16).

2170 Option:

2171 Where the central island of a roundabout allows for the installation of signs, ONE WAY
2172 signs may be used instead of or in addition to a Roundabout Directional Arrow (R6-4 series)
2173 sign (See Figure 2B-13) ~~One Direction Large Arrow Sign (see Section 2C.10)~~ to direct
2174 traffic counter-clockwise around the central island. NCUTCD recommends continuing the
2175 use of R4 series Roundabout signs instead of W1-6 One Direction Large Arrow signs for
2176 travel direction within a roundabout.

2177 **Standard:**

2178 ~~When a One Direction Large Arrow sign is used without a ONE WAY sign, the R6-5P~~
2179 ~~plaque shall be mounted below the Yield sign on the approach to a roundabout.~~

2180 Guidance:

2181 *Where used on the central island of a roundabout, the mounting height of a ONE WAY*
2182 *sign should be at least 4 feet, measured vertically from the bottom of the sign to the elevation of*
2183 *the near edge of the traveled way.*

2184 Support:

2185 ~~Examples of Regulatory and Warning signs for roundabouts are shown in Figures 2B-21~~
2186 ~~through 2B-23.~~ (omit these references to Figures 2B-21 through 2B-23 because these figures do
2187 not address the application of one-way signs)

2188 Option:

2189 The BEGIN ONE WAY (R6-6) sign (see Figure 2B-13) may be used to notify road users
2190 of the beginning point of a one direction of travel restriction on the street or roadway. The
2191 END ONE WAY (R6-7) sign (see Figure 2B-13) may be used to notify road users of the ending
2192 point of a one direction of travel restriction on the street or roadway.

2193 A ONE WAY sign may be omitted for site roadways open to public travel that intersect one-
2194 way driving aisles when wrong way pavement marking arrows and/or stop line the full width of
2195 the aisle and/or stop markings are used. (add Option text to address private roadways open to
2196 public travel per NCUTCD recommendation 15A-RW-02)

2199 **Section 2B.51 Comments:** NCUTCD agrees with 2B.51 as presented in the NPA.

2200 **Section 2B.51 Divided Highway Crossing Signs (R6-3, R6-3a)**

2201 **Standard:**

2202 **On unsignalized minor-street approaches from which both left turns and right turns**
2203 **are permitted onto a divided highway at a crossing that functions as two separate**
2204 **intersections (see Section 2A.23), except as provided in Paragraph 2, a Divided Highway**
2205 **Crossing (R6-3 or R6-3a) sign (see Figure 2B-13) shall be used to advise road users that**
2206 **they are approaching an intersection with a divided highway (see Figure 2B-17).**

2207 Option:

2208 If the divided highway has a traffic volume of less than 400 AADT and a speed limit of 25
2209 mph or less, at a crossing that functions as two separate intersections, the Divided Highway
2210 Crossing signs facing the unsignalized minor-street approaches may be omitted.

2211 A Divided Highway Crossing sign may be used on signalized minor-street approaches from
2212 which both left turns and right turns are permitted onto a divided highway to advise road users
2213 that they are approaching an intersection with a divided highway.

2214 **Standard:**

2215 **If a Divided Highway Crossing sign is used at a four-legged intersection, the R6-3 sign**
2216 **shall be used. If used at a T-intersection, the R6-3a sign shall be used.**

2217 **The Divided Highway Crossing sign shall be located on the near right corner of the**
2218 **intersection, mounted beneath a STOP or YIELD sign or on a separate support.**

2219 Option:

2220 An additional Divided Highway Crossing sign may be installed on the left-hand side of the
2221 approach to supplement the Divided Highway Crossing sign on the near right corner of the
2222 intersection.

2227 **Section 2B.52 Comments:** NCUTCD recommends revising 2B.52 to continue the use of R4
2228 series Roundabout signs instead of W1-6 One Direction Large Arrow signs for travel direction
2229 within a roundabout, and add appropriate figure references.

2230

2231 **Section 2B.52 Roundabout Circulation Plaque (R6-5P)**

2232

2233 *Guidance:*

2234 *Where the central island of a roundabout does not provide a reasonable place to install a sign,*
2235 *Roundabout Circulation (R6-5P) ([see Figures 2B-13 and 2B-21](#)) plaques should be placed below*
2236 *the YIELD signs on each approach.*

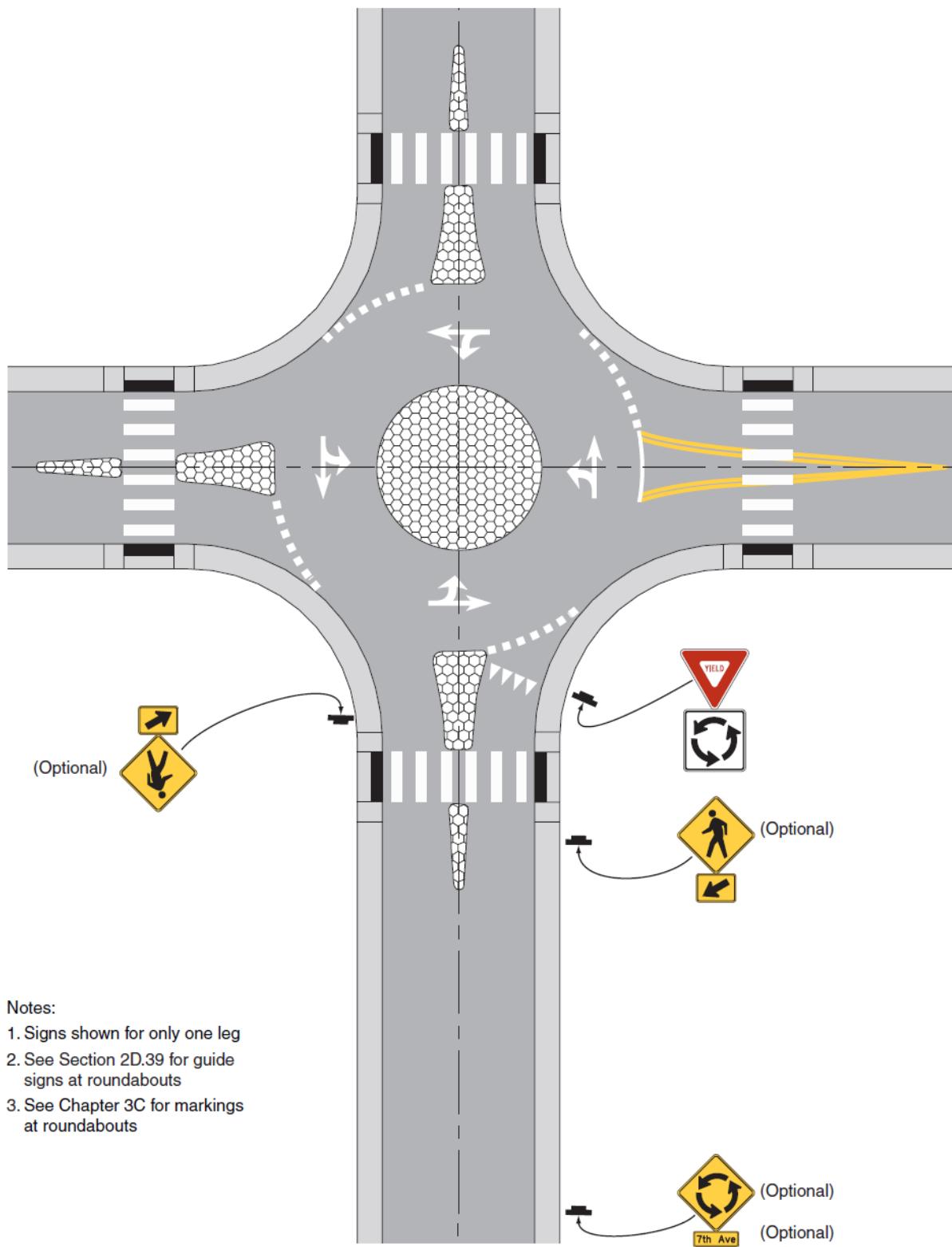
2237 Option:

2238 At roundabouts where ONE WAY and/or ~~One Direction Large Arrow~~ [Roundabout Directional](#)
2239 [Arrow \(R6-4 series\) \(See Figure 2B-13 above\)](#) signs have been installed in the central island,
2240 Roundabout Circulation plaques may be placed below the YIELD signs on approaches to
2241 roundabouts to supplement the central island signs ([see Figures 2B-22 and 2B-23](#)).

2242 The Roundabout Circulation plaque may be used at any type of circular intersection.

2243

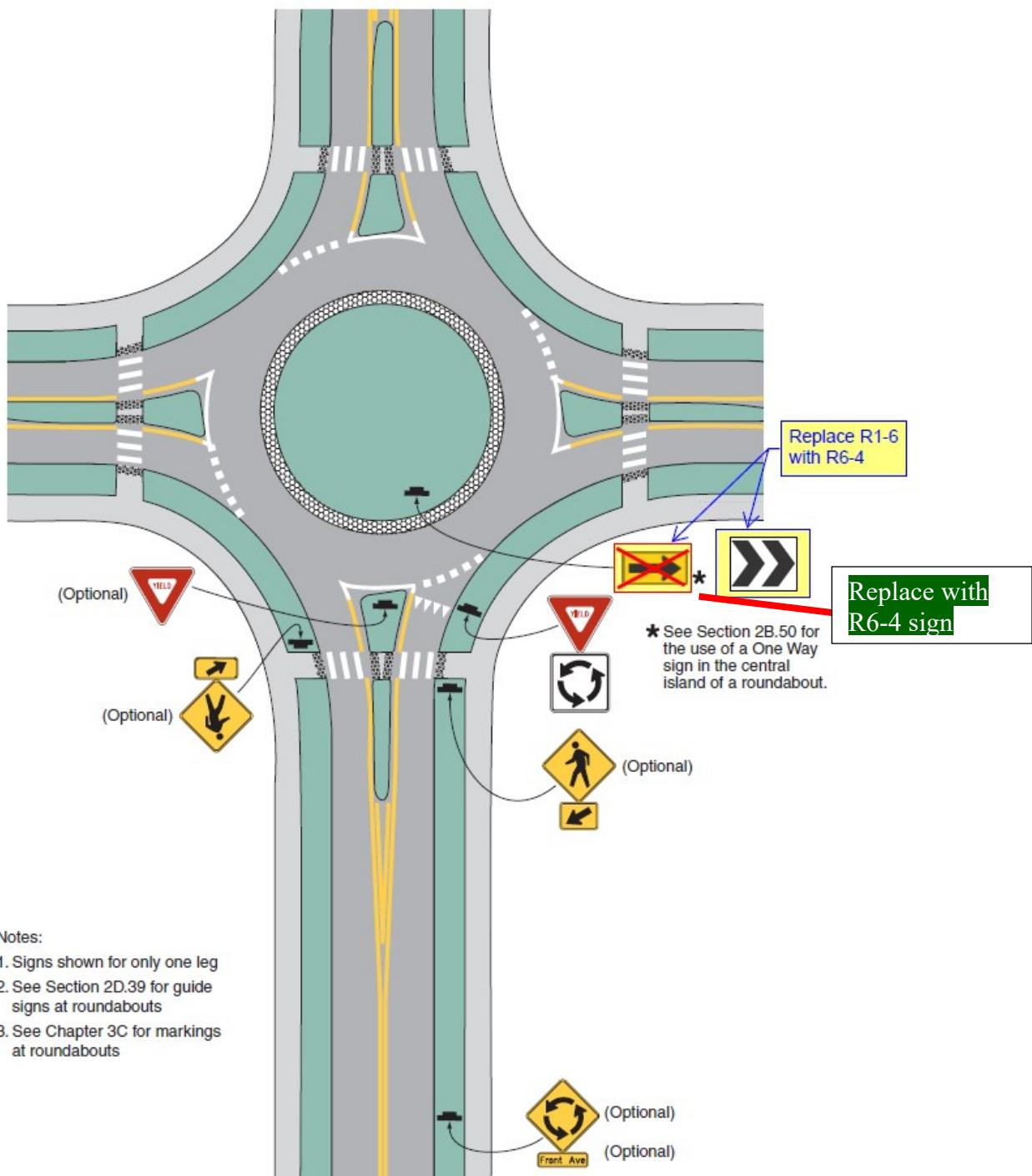
Figure 2B-21. Example of Regulatory and Warning Signs for a Mini-Roundabout



2244

2245 NCUTCD agrees with Figure 2B-21 as presented in the NPA.

Figure 2B-22. Example of Regulatory and Warning Signs for a One-Lane Roundabout



Notes:

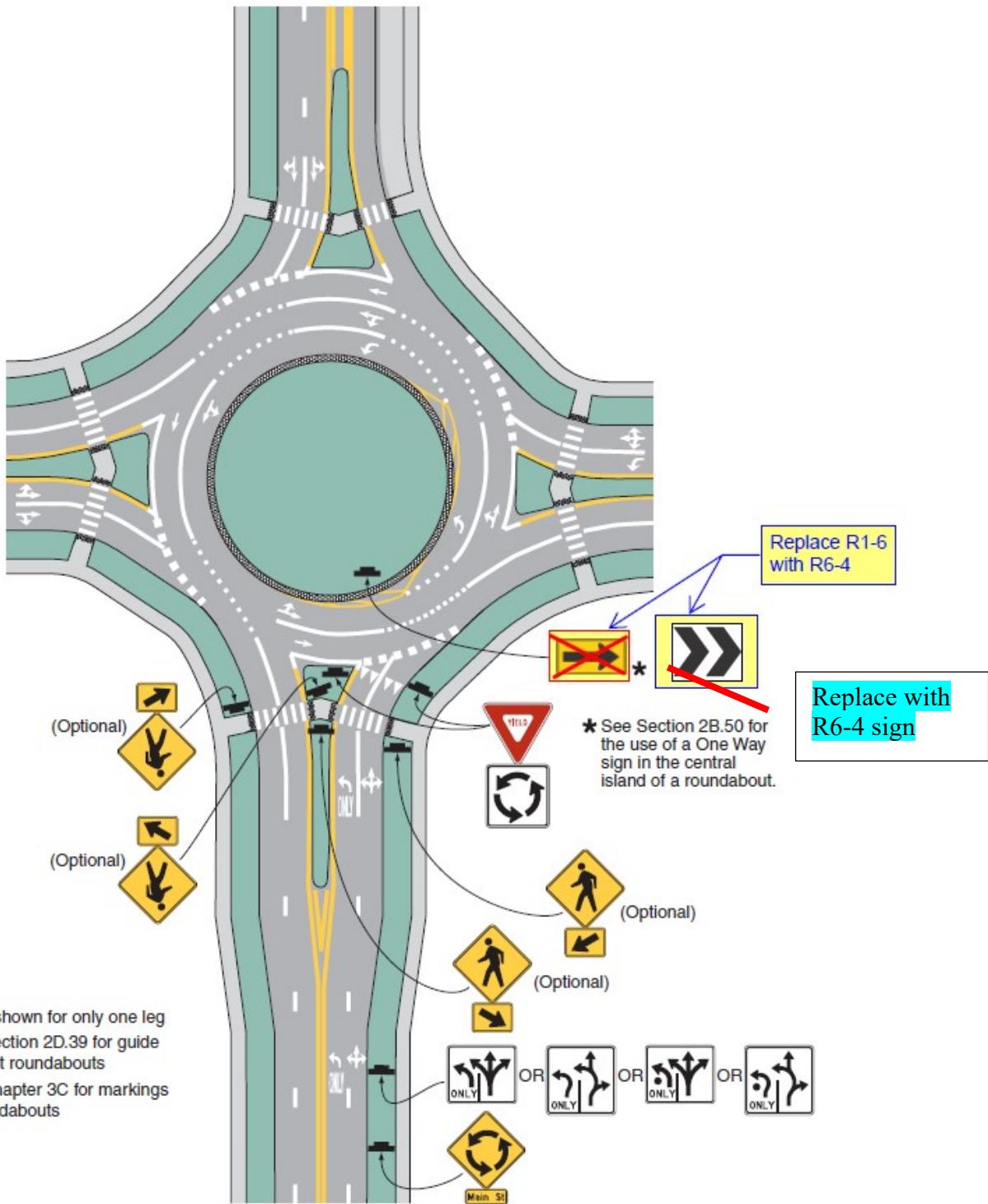
1. Signs shown for only one leg
2. See Section 2D.39 for guide signs at roundabouts
3. See Chapter 3C for markings at roundabouts

2246

2247 NCUTCD agrees with Figure 2B-22 as presented in the NPA, except that a R6-4 roundabout arrow sign be used instead of the W1-6 large arrow sign.
2248

2249

Figure 2B-23. Example of Regulatory and Warning Signs for a Two-Lane Roundabout with Consecutive Double Lefts



2250

2251 NCUTCD agrees with Figure 2B-23 as presented in the NPA, except that a R6-4 roundabout
2252 arrow sign be used instead of the W1-6 large arrow sign.
2253

2254
2255
2256
2257
2258

Section 2B.53 Comments: NCUTCD generally agrees with 2B.53 as presented in the NPA, as it is generally consistent with NCUTCD recommendation 16A-RW-01, but recommends additional revisions for clarity.

2259
2260

PARKING, STANDING, STOPPING, AND EMERGENCY SIGNS

Section 2B.53 Parking, Standing, and Stopping Signs (R7 and R8 Series)

2262 Support:

2263 Parking signs pertain to the parking, stopping, and standing of vehicles along the roadway and in designated parking areas. They cover a wide variety of regulations, and only general guidance can be provided here.

2264 The word “standing” when used on the R7 and R8 series of signs refers to the practice of a driver keeping the vehicle in a stationary position while continuing to occupy the vehicle.

2265 Local agency codes may distinguish active loading, active passenger loading and/or waiting.
The word “stopping” when used on the R7 and R8 series signs refers to any vehicle, occupied by a driver or not, that stops.

2266 (add information to define ‘stopping’)

2267 Parking signs are categorized as either (1) prohibiting parking or (2) permissive permitting
parking with restrictions on how parking is allowed. They are further categorized as either
parking (R7 series) signs or emergency parking (R8 series) signs.

2268 (minor edit)

2269 The types of parking prohibitions that might be encountered include, but are not limited to
parking, standing or stopping being:

1. Parking, standing, or stopping is Prohibited at all times.
2. Parking, standing, or stopping is Prohibited only certain times of the day and/or days of the week.
3. Parking, standing, or stopping is Prohibited with exceptions, such as for bus stops, loading/unloading zones, persons with disabilities, or electric vehicle charging stations.
4. Parking, standing, or stopping is Prohibited under certain conditions or events, such as Snow Emergency Routes.

2270 (simplify and remove repetitive wording in list)

2271 Permissive parking signs allowing parking with restrictions include, but are not limited to:

1. Parking only allowed for limited time duration, such as 30 minutes, 1 hour, etc.
2. Pay Metered parking requiring payment at an individual or a multi-space parking meter, or through electronic means such as by telephone or mobile application.
3. Reserved parking for persons with disabilities or patrons or employees of a business select vehicle types such as vehicles of persons with disabilities, electric charging, police/government vehicles, motorcycles, bicycles, valet, taxi stands (vehicle pedicab, horse drawn), carpools, car sharing, emergency parking and others.
4. Angled or back-in angled parking when it is not commonly utilized in the area.
5. Parking programs such as neighborhood/residential permits, school areas, or special events.

2272 (additional information defining parking types per 16A-RW-01)

2298

2299

2300 **Section 2B.54 Comments:** NCUTCD recommends revising 2B.54 to be generally consistent
2301 with NCUTCD recommendations 16A-RW-01 and 13B-RW-03.

2302

2303 **Section 2B.54 Design of Parking, Standing, and Stopping Signs**

2304 **Standard:**

2305 Parking, Standing, or Stopping signs shall be rectangular or square.

2306 Public agencies shall follow established law (state law, local ordinance, or regulation) as
2307 adopted by the authorized agency regarding what messages are allowed on parking signs.

2308 The legend on parking signs shall state applicable regulations. Parking signs (see
2309 Figures 2B-24 and 2B-25) shall comply with the standards of shape, color, and location.
2310 Prohibitive Prohibited Parking signs (See Figure 2B-24 for some commonly used examples)
2311 shall be used where parking is prohibited at all times or at specific times. Except as
2312 otherwise provided in this Section, Prohibitive Prohibited Parking signs shall have a red
2313 legend and border on a white background and, when the parking prohibition symbol is
2314 used, the symbol "P" shall be black. (minor edit)

2315 Permissive Parking signs shall be used where only time-limited parking or parking in
2316 a particular manner is allowed. Permissive Parking signs shall have a green legend and
2317 border on a white background.

2318 Parking information, should be displayed from top to bottom of the sign, as applicable, in the
2319 order listed:

- 2320 A. Any tow-away message or symbol; (move up from NPA position F per 16A-RW-
2321 01)
- 2322 B. The restriction or prohibition;
- 2323 C. The times of the day that it is applicable, if not at all hours;
- 2324 D. The days of the week that it is applicable, if not every day;
- 2325 E. Qualifying or supplementary information; and
- 2326 F. Exemptions to the restriction of prohibition.

2327 **Option:**

2328 A tow away message or symbol may be installed at the top or bottom of a parking sign.
2329 (revise per 16A-RW-01)

2330 **Guidance:**

2331 If the parking restriction or prohibition applies to a limited area or zone, the limits of the
2332 restriction should be shown by arrows or supplemental plaques. If arrows are used and if the
2333 sign is at the end of a parking zone, there should be a single-headed arrow pointing in the
2334 direction that the regulation is in effect. ~~If the sign is at an intermediate point in a zone, there
2335 should be a double-headed arrow pointing both ways.~~ (revise per 16A-RW-01) When a single
2336 sign is used at the transition point between two parking zones, it should display a right and left
2337 arrow pointing in the direction that the respective restrictions apply.

2338 **Standard:**

2339 The times and days for which the parking regulations are in effect shall be posted if
2340 they are not in effect at all times of day or all days of the week.

2341 Option:

2342 The words NO PARKING may be used as an alternative to the No Parking symbol (see R7-
2343 2a sign in Figure 2B-24). (relocate for clarity)

2344 As an alternate to the use of arrows to show designated ~~restriction regulation~~ zones, the
2345 following word messages may be used: BEGIN, END, HERE TO CORNER, HERE TO,
2346 ALLEY, THIS SIDE OF SIGN, **THIS BLOCK**. (improve wording per 16A-RW-01)

2347 If the sign is at an intermediate point in a zone, there may be a double-headed arrow pointing
2348 both ways. (revise per 16A-RW-01)

2349 If a roadway has an adjacent paved shoulder, the legend NO PARKING EXCEPT ON
2350 SHOULDER or NO STOPPING EXCEPT ON SHOULDER may be used. The R7-7, R7-8, R7-
2351 9 and R7-9a~~R8-3 symbol~~ signs or the word message NO PARKING may be used to prohibit any
2352 parking along a roadway. Word message supplemental plaques may be mounted below the NO
2353 PARKING (R7-5) signs. ~~The R8-3 series sign may include word legends such as ON~~
2354 ~~PAVEMENT (R8-3e), ON BRIDGE (R8-3d), ON TRACKS (R8-3e), and EXCEPT ON~~
2355 ~~SHOULDERS (R8-3f).~~

2356 NCUTCD recommends revisions per 16A-RW-01. To place new symbol signs added in the NPA
2357 properly with prohibited parking signs, NCUTCD recommends renumbering the R8-3 series
2358 signs into the R7 series.

2359 Guidance:

2360 ~~Where special parking restrictions are imposed during heavy snowfall or a declared snow~~
2361 ~~emergency, Snow Emergency Route (R7-203) signs (see Figure 2B-24) should be installed. The~~
2362 ~~legend should be modified to display the specific regulations. The upper section of the sign~~
2363 ~~should display the designation as a snow emergency route in a white legend and border on a red~~
2364 ~~background.~~

2365 NCUTCD recommends that this paragraph (focused on emergencies) be moved to Section 2B.56
2366 and sign renumbered in R8 series.

2367 *If a fee is charged for on-street parking and payments are made at a multi-space parking*
2368 *meter, instead of individual parking meters for each parking space, Metered Pay Parking (R7-21*
2369 *through R7-22) signs (see Figure 2B-24) should be used to define the area where the multi-space*
2370 *parking meter applies. The Multi-Space Pay Parking Meter (R7-20) sign (see Figure 2B-24)*
2371 *should be used at the meter location to direct road users to the meter.*

2372 ~~(change “meter” to “pay” per 16A-RW-01)~~

2373 Option:

2374 ~~Where payments can be made electronically, such as by telephone or mobile application, the~~
2375 ~~Mobile Parking Payment (R7-21aP) plaque may be installed below a Pay Metered-Parking sign.~~
2376 ~~(change “meter” to “pay” and renumber)~~

2377 Standard:

2378 **If the metered parking is subject to a maximum time limit, the appropriate time limit**
2379 **(number of hours or minutes) shall be displayed on the Metered Pay Parking (R7-21) signs**
2380 **and, except as provided in Paragraph 16 of this Section, on the Multi-space Pay Parking**
2381 **Meter (R7-20) signs.**

2382 ~~(change “meter” to “pay”)~~

2383 Option:

2384 ~~Where the maximum time limit varies by the time of the day or day of the week, the display~~
2385 ~~of the time limits may be omitted from the R7-20 sign and, instead, be displayed on the multi-~~
2386 ~~space pay parking meter so that they are visible to pedestrians as they make payments.~~

2387 ~~(change “meter” to “pay”)~~

2388 Standard:

2389 **Where parking spaces are reserved for persons with disabilities, the Accessible Parking**
2390 **(R7-8) sign shall be used to designate the space and shall display the official International**
2391 **Symbol of Accessibility.**

2392 **Where parking spaces that are reserved for persons with disabilities are designed to**
2393 **accommodate wheelchair vans, a VAN ACCESSIBLE (R7-8aP) plaque shall be mounted**
2394 **below the R7-8 sign.**

2395 *Guidance:*

2396 *Where parking spaces are reserved for charging electric vehicles, a RESERVED PARKING*
2397 *for charging electric vehicles (R7-31) sign (see Figure 2B-24) should be installed adjacent to*
2398 *the designated space.*

2399 *Where parking spaces are designated for parking of electric vehicles, an Electric Vehicle*
2400 *Parking (R7-111 series, R7-112 series, and R7-113) sign (see Figure 2B-24) should be installed*
2401 *adjacent to the designated spaces. Where there is no time limit, a R7-111 series sign should be*
2402 *used.*

2403 (do not concur with NPA wording - recommend wording from 13B-RW-03)

2404 *Where on-street parking spaces are reserved for charging electric vehicles and have time*
2405 *restrictions, XX HOUR Parking for charging electric vehicle (R7-25 or R25a) sign (see Figure*
2406 *2B-24) should be installed adjacent to the designated space.*

2407 *Where parking is subject to a time limit, a R7-112 series sign should be used. Where electric*
2408 *vehicles are only allowed to park in a space while charging, a R7-113 sign should be used.*

2409 *Where parking spaces are designated for charging of electric vehicles, a R7-113 sign or R7-*
2410 *114 series sign (see Figure 2B-24) should be installed adjacent to the designated spaces.*

2411 *Where additional restrictions apply while a vehicle occupies the designated space, the R7-*
2412 *113P series plaques should be installed below the R7-113 sign or the R7-114 series signs.*

2413 (do not concur with NPA wording - recommend wording from 13B-RW-03)

2414 Option:

2415 Where parking is prohibited during certain hours and time-limited parking or parking in a
2416 particular manner is allowed during certain other time periods, the red Parking Prohibition and
2417 green Permissive Parking signs may be designed as follows:

- 2418 A. Two 12 x 18-inch parking signs may be used with the red Parking Prohibition signs
2419 (R7-1 to R7-10, or text signs) installed above or to the left of the green Permissive
2420 Parking sign (R7-108 R7-21-R7-25, or text signs); or
2421 B. A single sign (R7-200 or R7-200a) may be used.

2422 (revise per 16A-RW-01)

2423 At the transition point between two parking zones, a single sign (R7-200 or R7-200a) or two
2424 signs mounted side-by-side may be used.

2425 *The words NO PARKING may be used as an alternative to the No Parking symbol (see R7-2*
2426 *sign in Figure 2B-24). (relocated above)*

2427 *The R7-201P plaque may have a black or red symbol and border on a white background.*
2428 (relocate below to group with plaques)

2429 Alternate designs for the R7-107 sign may be developed such as the R7-107a sign (see Figure
2430 2B-24). Alternate designs may include, on a single sign, a transit logo, an approved bus symbol,
2431 a parking prohibition, the words BUS STOP, and an arrow. The reverse side of the R7-107
2432 series signs may display bus routing information for pedestrians.

2433 A Tow-Away Zone (R7-201 or R7-201aP) plaque (see Figure 2B-24) may be mounted above
2434 or below any parking prohibition sign. The word legend TOW-AWAY ZONE may be
2435 incorporated into the parking prohibition sign in lieu of using a separate plaque.
2436 (minor edit to allow plaques above or below sign)

2437 The R7-201P plaque may have a black or red symbol and border on a white background.
2438 (relocated from above)

2439 *Guidance:*

2440 When a legend other than that on the standard parking signs is necessary, letter height,
2441 symbol size, and basic sign layout should be consistent with the those shown on the standard
2442 parking signs as detailed in the "Standard Highway Signs and Markings" publication.

2443 In general, the letter height of the principal legend on parking signs sized for urbanized
2444 applications should be at least 2 inches.

2445

2446 NCUTCD recommends reorganizing and retitling parking signs in Figures 2B-24 and 2B-25.
2447 NCUTCD is recommending changes to some sign designs as described and depicted. See
2448 example figures with revised sign designs. We recommend that signs be grouped and subtitled
2449 into prohibited, permissive, reserved, and emergency categories.

2450 **Figure 2B-24, Sheet 1**

2451 Subheading: "Prohibited Parking Signs"

2452 R7-1 - No Parking Symbol + ANY TIME + arrow

2453 R7-2 - No Parking Symbol + Hours + arrow

2454 R7-2a - "NO" (in red rectangle) PARKING with hours and time below (similar in design to R7-
2455 1xx series signs in NPA)

2456 R7-3 - No Parking Symbol + Except Sundays/Holidays + Arrow

2457 R7-4 - No Standing + ANY TIME + arrow (no change)

2458 R7-4a - NO STOPPING ON PAVEMENT (was R8-5 in 2009 MUTCD - move to this sheet)

2459 R7-4b - NO STOPPING EXCEPT ON SHOULDER (was R8-6 in 2009 MUTCD - move to this
2460 sheet)

2461 R7-5 - No Parking Symbol on square panel (was R8-3 in 2009 MUTCD - move to this sheet)

2462 R7-6 - No Parking Symbol + LOADING ZONE + arrow

2463 R7-7 - No Parking Symbol + ON BRIDGE (was R8-3d in NPA)

2464 (R7-7 in 2009 MUTCD is deleted and replaced by new R7-10)

2465 R7-8 - NO STOPPING ON TRACKS (R8-3e in NPA is deleted, as the message should be to
2466 prohibit stopping, not parking) (R7-8 in 2009 MUTCD is renumbered to R7-30)

2467 R7-10 - No Parking Symbol + BUS STOP + arrow

2468 R7-10a - same as R7-107a in NPA

2469 R7-10b - same as R7-107b in NPA (was R7-107a in 2009 MUTCD)

2470 R7-xx - No Parking Symbol + EXCEPT ON SHOULDER (was R8-3f in NPA)

2471 R7-xy - No Parking Symbol + ON PAVEMENT (was R8-3c in NPA)

2472 Subheading: "Combination Signs"

2473 R7-200 - same as 2009 MUTCD and NPA

2474 R7-200a - same as 2009 MUTCD and NPA

2475 Subheading: "Plaques"

2476 R7-201P - same as 2009 MUTCD and NPA

2477 R7-202aP - same as 2009 MUTCD and NPA

2478 R7-202 - same as 2009 MUTCD and NPA

2479

2480 **Figure 2B.24, Sheet 2**

2481 Subheading: "Permissive Parking Signs"

2482 R7-20 - same as 2009 MUTCD and NPA

2483 R7-21 - same as R7-21 from 2009 MUTCD (not NPA)

2484 R7-21a - same as NPA

2485 R7-21P - same as NPA

2486 R7-22 - same as R7-22 from 2009 MUTCD (not NPA)

2487 R7-23 - same as R7-23a from 2009 MUTCD

2488 R7-23a - same as R7-108 from 2009 MUTCD and NPA

2489 R7-24 - same as R7-10 in NPA

2490 R7-25 - "2 HOUR" (in green rectangle) + Parking Symbol + EV Symbol + arrow

2491 R7-25a - same as R7-112a in NPA

2492 R7-25aP - same as R7-113aP in NPA
2493 R7-25bP - same as R7-113bP in NPA
2494 Subheading: “Reserved Parking Signs”
2495 R7-30 - same as R7-8 from 2009 MUTCD
2496 R7-30P - same as R7-8P from 2009 MUTCD
2497 R7-31 - RESERVED PARKING + EV Symbol + CHARGING ONLY
2498

Figure 2B-25

2500 Revise caption to “Emergency Parking Signs”
2501 R8-1 - same as R7-203 from 2009 MUTCD and NPA
2502 R8-4 - same as R8-4 from 2009 MUTCD and NPA
2503 R8-7 - same as R8-7 from 2009 MUTCD and NPA
2504 R8-8 - same as R8-8 from 2009 MUTCD and NPA
2505

2506 **Figure 2B-24**
 2507 **Parking, Stopping and Standing Signs and Plaques (R7 Series) (Sheet 1 of 2)**
 2508
 2509

PROHIBITED PARKING SIGNS

					
R7-1	R7-2	R7-2a	R7-3	R7-4	R7-4a
					
R7-4b	R7-5	R7-6	R7-7	R7-8	R7-10
					
R7-10a	R7-10b	R7-xx	R7-xy		

COMBINATION SIGNS

				
R7-200		R7-200a		

PLAQUES

				
R7-201P	R7-201aP	R7-202		

2511 **Figure 2B-24**
 2512 **Parking, Stopping and Standing Signs and Plaques (R7 Series) (Sheet 2 of 2)**
 2513
 2514

PERMISSIVE PARKING SIGNS

				
R7-20		R7-21	R7-21P	R7-22
				
R7-23	R7-23a	R7-24	R7-25	R7-25a
				
R7-25aP	R7-25bP			

2515
 2516

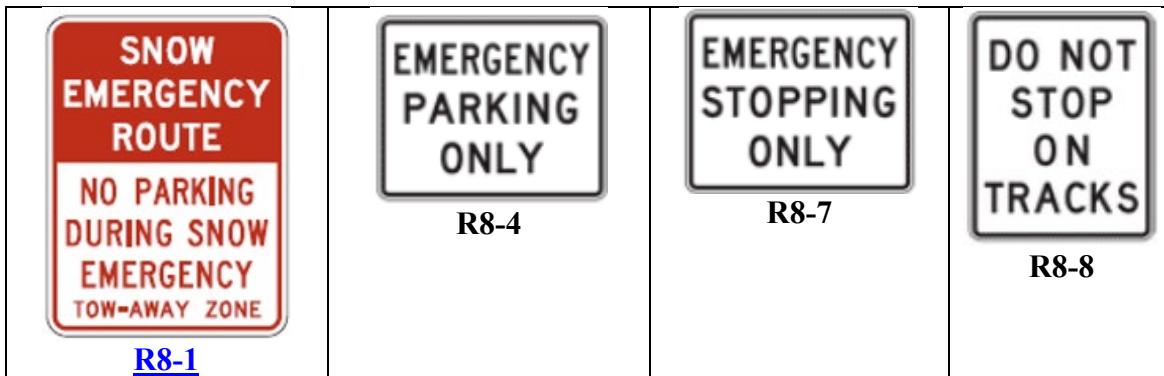
RESERVED PARKING SIGNS

					
R7-30	R7-30P	R7-31			
					
R7-112	R7-112a	R7-112b	R7-114	R7-114a	R7-114b

2517

2518
2519
2520
2521

Figure 2B-25
Emergency Parking and Stopping Signs and Plaques (R8 Series)



2522
2523
2524
2525
2526
2527

Section 2B.55 Summary: NCUTCD generally agrees with 2B.55 as presented in the NPA, as it is reasonably consistent with NCUTCD recommendation 16A-RW-01, but does not agree with added Option text.

Section 2B.55 Placement of Parking, Stopping, and Standing Signs

Support:

The efficacy of Parking, Stopping, and Standing signs, when used on conventional roads in urbanized or developed environments, depends on their visibility and consistent placement along a street or within a particular block. It is often not practicable for the entire legend to be legible from similar distances as for other types of signs. Therefore, it is important that their conventional form be recognizable from an adequate distance such that the road user can obtain the information upon closer inspection.

Guidance:

When signs with arrows are used to indicate the extent of the restricted zones, the signs should be set at an angle of not less than 30 degrees or more than 45 degrees with the line of traffic flow in order to be visible to approaching traffic.

When signs are placed at the head of perpendicular parking stalls, the signs should be parallel to the roadway facing the parking stall.

Spacing of signs should be based on legibility, conspicuity, and sign orientation.

If the zone is long, signs should be used at intermediate points within the zone.

If the signs are mounted at an angle of 90 degrees to the curb line, two signs should be mounted back to back at the transition point between two parking zones, each with an appended THIS SIDE OF SIGN (R7202P) supplemental plaque.

If the signs are mounted at an angle of 90 degrees to the curb line, signs without any arrows or appended plaques should be used at intermediate points within a parking zone, facing in the direction of approaching traffic. Otherwise, the standards of placement should be the same as for signs using directional arrows.

Option:

2552 ~~Blanket regulations that apply to an entire jurisdiction may, if legal, be posted in the vicinity~~
2553 ~~of the jurisdictional boundary lines.~~ Blanket regulations that apply to a posted zone or district, if
2554 legal, may be posted at the entry points to the zone or district.
2555 NCUTCD does not agree with added Option text. Add "If legal" for clarity.
2556

2557
2558 **Section 2B.56 Comments:** NCUTCD recommends revising 2B.56 to continue to allow red as a
2559 legend color and relocate language from 2B.54.

2560 **Section 2B.56 Emergency Restriction Signs (R8-1, R8-4, R8-7, R8-8)**

2561 **Standard:**

2562 **Emergency Restriction signs shall be rectangular and shall have a red or black legend**
2563 **and border on a white background.**

2564 NCUTCD recommends red be allowed as a legend color. Retain 2009 MUTCD language as it is
2565 consistent with other changes below.

2566 **Guidance:**

2567 *Where special parking restrictions are imposed during heavy snowfall or a declared snow*
2568 *emergency, Snow Emergency Route (R8-1) signs (see Figure 2B-25) should be installed. The*
2569 *legend should be modified to display the specific regulations. The upper section of the sign*
2570 *should display the designation as a snow emergency route in a white legend and border on a red*
2571 *background.*

Moved from Section 2B.54 as it describes an emergency restriction and is better suited for inclusion in Section 2B.56.

2572 **Option:**

2573 The EMERGENCY PARKING ONLY (R8-4) sign (see Figure 2B-25) or the EMERGENCY
2574 STOPPING ONLY (R8-7) sign (see Figure 2B-25) may be used to discourage or prohibit
2575 shoulder parking, particularly where scenic or other attractions create a tendency for road users
2576 to stop temporarily.

2577 The DO NOT STOP ON TRACKS (R8-8) sign (see Figure 8B-1) may be used to discourage
2578 or prohibit parking or stopping on railroad or light rail transit tracks (see Section 8B.07).

2579 **Section 2B.57 Summary:** NCUTCD agrees with Figure 2B.57 as presented in the NPA.

2580 ***PEDESTRIAN SIGNS***

2581 **Section 2B.57 WALK ON LEFT FACING TRAFFIC and No Hitchhiking Signs (R9-1, R9-
2582 4, R9-4a)**

2583 **Option:**

2584 The WALK ON LEFT FACING TRAFFIC (R9-1) sign (see Figure 2B-26) may be used on
2585 highways where no sidewalks are provided.

2586 **Guidance:**

2587 *If used, the WALK ON LEFT FACING TRAFFIC sign should be installed on the right-hand*
2588 *side of the road where pedestrians walk on the pavement or shoulder in the absence of*
2589 *pedestrian pathways or sidewalks.*

2590 **Option:**

2596 The No Hitchhiking (R9-4) sign (see Figure 2B-26) may be used to prohibit standing in or
2597 adjacent to the roadway for the purpose of soliciting a ride. The R9-4a word message sign (see
2598 Figure 2B-26) may be used as an alternate to the R9-4 symbol sign.
2599

Figure 2B-26. Pedestrian Signs and Plaques (Sheet 1 of 2)



R9-1



R9-2



R9-3



R9-3a



R9-3bP



R9-4



R9-4a



R10-1



R10-2



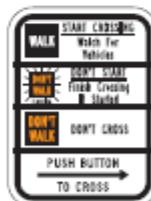
R10-3



R10-3a



R10-3b



R10-3c



R10-3d



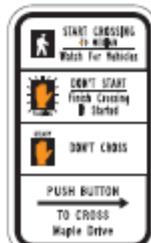
R10-3e



R10-3f



R10-3g



R10-3h

2600

2601

2602

2603

NCUTCD agrees with Figure 2B-26 Sheet 1 as presented in the NPA.

2604 **Section 2B.58 Comments:** NCUTCD agrees with 2B.58 as presented in the NPA, but
2605 recommends improved wording for Support.

2606

2607 **Section 2B.58 Pedestrian Crossing Signs (R9-2, R9-3)**

2608 Option:

2609 Pedestrian Crossing signs (see Figure 2B-26) may be used to limit pedestrian crossing to
2610 specific locations.

2611 **Standard:**

2612 **If used, Pedestrian Crossing signs shall be installed to face pedestrian approaches.**

2613 Option:

2614 Where crosswalks are clearly defined, the CROSS ONLY AT CROSSWALKS (R9-2) sign
2615 may be used to prohibit pedestrians from crossing at locations away from crosswalks.

2616 The No Pedestrian Crossing (R9-3) sign may be used to prohibit pedestrians from crossing a
2617 roadway at an undesirable location or in front of a school or other public building where a
2618 crossing is not designated.

2619 The NO PEDESTRIAN CROSSING (R9-3a) word message sign may be used as an alternate
2620 to the R9-3 symbol sign. The USE CROSSWALK (R9-3bP) supplemental plaque, along with an
2621 arrow, may be installed below either sign to designate the direction of the crossing.

2622 Support:

2623 One of the most frequent uses of the Pedestrian Crossing signs is at signalized intersections
2624 that have three crossings that can be used and one leg that cannot be crossed. Pedestrians with
2625 low-vision capabilities might need barricade(s) additional features or other features than traffic
2626 control devices to communicate the prohibition of pedestrian crossing.

2627 (improved wording for Support)

2628 *Guidance:*

2629 *The R9-3bP plaque should not be installed in combination with educational plaques.*

2631 **Section 2B.59 Comments:** NCUTCD agrees with 2B.59 as presented in the NPA.

2632

2633 **Section 2B.59 Traffic Signal Pedestrian and Bicycle Actuation Signs (R10-1 through R10- 2634 4, and R10-24 through R10-26)**

2635 Standard:

2636 Where manual actuation of a traffic signal is required for pedestrians or bicyclists to
2637 call a signal phase to cross the roadway, traffic signal signs applicable to pedestrian
2638 actuation (see Figure 2B-26) or bicyclist actuation (see Figure 9B-1) shall be mounted
2639 immediately above or incorporated into the pushbutton detector units (see Section 4I.06).

2640 Support:

2641 Traffic Signal signs applicable to pedestrians include:

- 2642 A. CROSS ONLY ON GREEN (symbolic circular green) (R10-1);
2643 B. CROSS ONLY ON (symbolic walk indication) SIGNAL (R10-2); C.
2644 Push Button for Walk Signal (R10-3 series); and
2645 D. Push Button for Green Signal (R10-4 series).

2646 Option:

2647 The following signs may be used as an alternate for the R10-3 and R10-4 signs:

- 2648 A. Push Button to Cross Street Wait for Walk Signal (R10-3a); or

2650 B. Push Button to Cross Street Wait for Green Signal (R10-4a).

2651 The name of the street to be crossed may be substituted for the word STREET in the legends
2652 on the R103a and R10-4a signs.

2653 *Guidance:*

2654 *The finger in the pushbutton symbol on the R10-3, R10-3a, R10-4, and R10-4a signs should
2655 point in the same direction as the arrow on the sign.*

2656 Option:

2657 Where symbol-type pedestrian signal indications are used, an educational sign (R10-3b) may
2658 be used instead of the R10-3 sign to improve pedestrian understanding of pedestrian indications
2659 at signalized intersections. Where word-type pedestrian signal indications are being retained for
2660 the remainder of their useful service life, the legends WALK/DONT WALK may be substituted
2661 for the symbols on the educational sign R10-3b, thus creating educational sign R10-3c. The
2662 R10-3d educational sign may be used to inform pedestrians that the pedestrian clearance time is
2663 sufficient only for the pedestrian to cross to the median at locations where pedestrians cross in
2664 two stages using a median refuge island. The R10-3e educational sign may be used where
2665 countdown pedestrian signals have been provided. In order to assist the pedestrian in
2666 understanding which pushbutton to push, the R10-3f to R10-3i educational signs that provide the
2667 name of the street to be crossed may be used instead of the R10-3b to R10-3e educational signs.
2668 The R10-3j sign may be used where a pedestrian pushbutton is only to activate the accessible
2669 pedestrian signals. The R10-3k sign may be used where a pedestrian pushbutton has sensors to
2670 allow for touch-free activation.

2671 The R10-24 or R10-26 sign (see Section 9B.11) may be used where a pushbutton detector
2672 has been installed exclusively to actuate a green phase for bicyclists.

2673 The R10-25 sign (see Figure 2B-26) may be used where a pushbutton detector has been
2674 installed for pedestrians to activate In-Roadway Warning Lights (see Chapter 4U) or
2675 flashing beacons that have been added to the pedestrian warning signs. Support:

2676 Section 4I.06 contains information regarding the application of the R10-32P plaque.

2677

2678

Figure 2B-26. Pedestrian Signs and Plaques (Sheet 2 of 2)



2679
 2680 NCUTCD agrees with Figure 2B-26 Sheet 2 as presented in the NPA, but recommends the
 2681 legend on the lower region of the R10-25 sign be revised in accordance with one of the following
 2682 options:

- WAIT FOR GAP IN TRAFFIC; or
- CROSS WITH CAUTION

2683
 2684
 2685
 2686
 2687 **Section 2B.60 Comments:** NCUTCD recommends revising 2B.60 to agree with prior NCUTCD
 2688 proposals and improve clarity. NCUTCD supports the use of Turning Vehicles Yield to Bicycles
 2689 and Turning Vehicles Yield to Bicycles and Pedestrians signs because turning vehicles may pose
 2690 a significant hazard to the bicycle mode as well as the pedestrian mode.

TRAFFIC SIGNAL SIGNS

Section 2B.60 Traffic Signal Signs (R10-~~56~~ through R10-30)

2691 Option:

2692 To supplement traffic signal control, Traffic Signal signs R10-~~56~~ through R10-30 may be
 2693 used to regulate road users.

2694 Traffic Signal signs (see Figure 2B-27) may be installed at certain locations to clarify signal
 2695 control. Among the legends that may be used for this purpose are ~~LEFT ON GREEN ARROW~~
 2696 ~~ONLY (R10-5)~~, (revise per 09A-RW-04) STOP HERE ON RED (R10-6 or R10-6a) for
 2697 observance of stop lines, DO NOT BLOCK INTERSECTION (R10-7) for avoidance of traffic
 2698 obstructions, USE LANE(S) WITH GREEN ARROW (R10-8) for obedience to lane-use control
 2699 signals (see Chapter 4T), U TURN SIGNAL (R10-10a) sign for exclusive control of a U-turn
 2700 movement (relocate text) LEFT TURN YIELD ON GREEN (symbolic circular green) (R10-12),
 2701 LEFT TURN YIELD ON FLASHING YELLOW ARROW (R10-12a), and LEFT TURN
 2702 YIELD ON FLASHING RED ARROW AFTER STOP (R10-27).

2703 A U TURN YIELD TO RIGHT TURN (R10-16) sign (see Figure 2B-27) may be installed
 2704 near the left-turn signal face if U-turns are allowed on a protected left-turn movement on an

2708 approach from which a right-turn GREEN ARROW signal indication is simultaneously being
2709 displayed to drivers making a right turn from the conflicting approach to their left. (relocate text)

2710 *Guidance:*

2711 *If used, the LEFT ON GREEN ARROW ONLY (R10-5) sign, the LEFT TURN YIELD ON
2712 GREEN (symbolic circular green) (R10-12) sign, the LEFT TURN YIELD ON FLASHING
2713 YELLOW ARROW (R10-12a), or the LEFT TURN YIELD ON FLASHING RED ARROW AFTER
2714 STOP (R10-27) sign should be located adjacent to the left-turn signal face.*

2715 *If used, the RIGHT TURN YIELD ON FLASHING (symbolic yellow arrow) (R10-YYa), or the
2716 RIGHT TURN YIELD ON FLASHING RED ARROW AFTER STOP (R10-27a) sign should be
2717 located adjacent to the right-turn signal face. (revise per 18B-RW-02)*

2718 Option:

2719 If needed for additional emphasis, any of the signs described in paragraph 02 above an
2720 additional LEFT TURN YIELD ON GREEN (symbolic circular green) (R10-12) sign with an
2721 AT SIGNAL (R10-31P) supplemental plaque (see Figure 2B-27) may be installed with the signs
2722 described in paragraph 02 in advance of the intersection. (revise per 18B-RW-02)

2723 Where the DO NOT BLOCK INTERSECTION or TURNING VEHICLES STOP/YIELD
2724 TO PEDESTRIAN/BIKE signs are limited to time, day, event or condition, a blank-out sign or
2725 DMS (see Chapter 2L) may be used. (revise per 20B-RW-03)

2726 In situations where traffic control signals are coordinated for progressive timing, the Traffic
2727 Signal Speed (I1-1) sign may be used (see Section 2H.03).

2728 *Standard:*

2729 ~~The LEFT TURN YIELD TO Bicycles (R10-12b) sign shall be limited to applications
2730 where the conflicting bicycle movement would be unexpected in direction, location, or some
2731 other quality that would run counter to the expectation of a turning motorist.~~

2732 ~~The LEFT TURN YIELD TO Bicycles sign shall not be installed for motor vehicle
2733 traffic subjected to a counter-flow bicycle operation when the opposing bicycle movement
2734 is controlled by a bicycle signal face (see Chapter 4H).~~

2735 *Support:*

2736 ~~Situations where the LEFT TURN YIELD TO Bicycles sign may be appropriate include,
2737 but are not limited to, where drivers are turning across a separated bicycle lane or a buffer
2738 separated bicycle lane.~~

2739 *Guidance:*

2740 ~~The LEFT TURN YIELD TO Bicycles sign should be located adjacent to the left turn signal
2741 face.~~

2742 Option:

2743 ~~If needed for additional emphasis, an additional LEFT TURN YIELD TO Bicycles sign
2744 with an AT SIGNAL (R10-31P) supplemental plaque (see Figure 2B-27) may be installed in
2745 advance of the intersection for motor vehicles. (relocate text elsewhere in section)~~

2746 *Standard:*

2747 The CROSSWALK-STOP ON RED (symbolic circular red) (R10-23) and WAIT ON
2748 STEADY RED-YIELD ON FLASHING RED AFTER STOP (R10-23a) signs (see Figure
2749 2B-27) shall only be used in conjunction with pedestrian hybrid beacons (see Section 4J.02).

2750 The EMERGENCY SIGNAL (R10-13) sign (see Figure 2B-27) shall be used in
2751 conjunction with emergency-vehicle traffic control signals (see Section 4M.02).

2752 **The EMERGENCY SIGNAL—STOP ON FLASHING RED (R10-14 or R10-14a) sign**
2753 (see Figure 2B-27) shall be used in conjunction with emergency-vehicle hybrid beacons (see
2754 Section 4N.02).

2755 Option:

2756 If needed for extra emphasis, a STOP HERE ON FLASHING RED (R10-14b) sign may be
2757 installed with an emergency-vehicle hybrid beacon.

2758 **Standard:**

2759 The LEFT TURN YIELD TO Bicycles (R10-12b) sign shall be limited to applications
2760 where the conflicting bicycle movement would be unexpected in direction, location, or some
2761 other quality that would run counter to the expectation of a turning motorist.

2762 The LEFT TURN YIELD TO Bicycles sign shall not be installed for motor vehicle
2763 traffic subjected to a counter-flow bicycle operation when the opposing bicycle movement
2764 is controlled by a bicycle signal face (see Chapter 4H).

2765 Support:

2766 Situations where the LEFT TURN YIELD TO Bicycles sign may be appropriate include, but
2767 are not limited to, where drivers are turning across a separated bicycle lane or a buffer-separated
2768 bicycle lane.

2769 **Guidance:**

2770 The LEFT TURN YIELD TO Bicycles sign should be located adjacent to the left-turn signal
2771 face.

2772 Option:

2773 If needed for additional emphasis, an additional LEFT TURN YIELD TO Bicycles sign with
2774 an AT SIGNAL (R10-31P) supplemental plaque (see Figure 2B-27) may be installed in advance
2775 of the intersection for motor vehicles.(relocate text)

2776 Where conditions may warrant additional emphasis to drivers turning at a signalized
2777 intersection where potential pedestrian conflicts may not be readily apparent, a Turning Vehicles
2778 Yield to (Stop For) Pedestrians (R10-15, R10-15a), Bicycles (R10-15b) or Pedestrians and
2779 Bicycles (R10-15c) sign (see Figure 2B-27) may be used. Revise per 14B-BIK-02. NCUTCD
2780 supports the use of a combined pedestrian/bicycle sign because turning vehicles may pose a
2781 significant hazard to both modes.

2782 **Standard:**

2783 **The Turning Vehicles Stop for Pedestrians (R10-15a) sign shall only be used in**
2784 **jurisdictions where laws, ordinances or resolutions specifically require that a driver must**
2785 **stop for a pedestrian.**

2786 Option:

2787 At signalized intersections on roadways with a bicycle lane or separated bicycle lane
2788 positioned adjacent to a general purpose lane from which turns are permitted, a Turning Vehicles
2789 Yield to Bicycles (R10-15b) sign (see Figure 2B-27 and Figure 9C-6) may be used on the
2790 approach to the intersection to remind drivers who are making turns to yield to a bicycle in the
2791 bicycle lane when turning across or merging into the bicycle lane.

2792 At signalized intersections on roadways with a shared use path that crosses intersecting
2793 streets or driveways, or where turning vehicles would cross an adjacent bicycle lane and
2794 crosswalk, a Turning Vehicles Yield to Bicycles and Pedestrians (R10-15c) sign (see Figure 2B-
2795 27) may be used on the approach to the intersection to remind drivers who are making turns to
2796 yield to bicycles and to pedestrians in the crosswalk.

2797 **Standard:**

2798 **The Turning Vehicles Yield to Bicycles (R10-15b) sign or Turning Vehicles Yield to**
2799 **Bicycles and Pedestrians (R10-15c) sign shall not be used at signalized intersections where**
2800 **the bicycle movement is protected by the signal phasing from all-conflicting simultaneous**
2801 **motor vehicle movement at the signalized location.**

2802 Guidance:

2803 *The Turning Vehicles Yield to Bicycles (R10-15b) sign should not be used on the approach to*
2804 *signalized intersections where a bicycle lane or separated bicycle lane transitions to a shared*
2805 *lane for use by turning vehicles together with through or turning bicyclists.*

2806 Support:

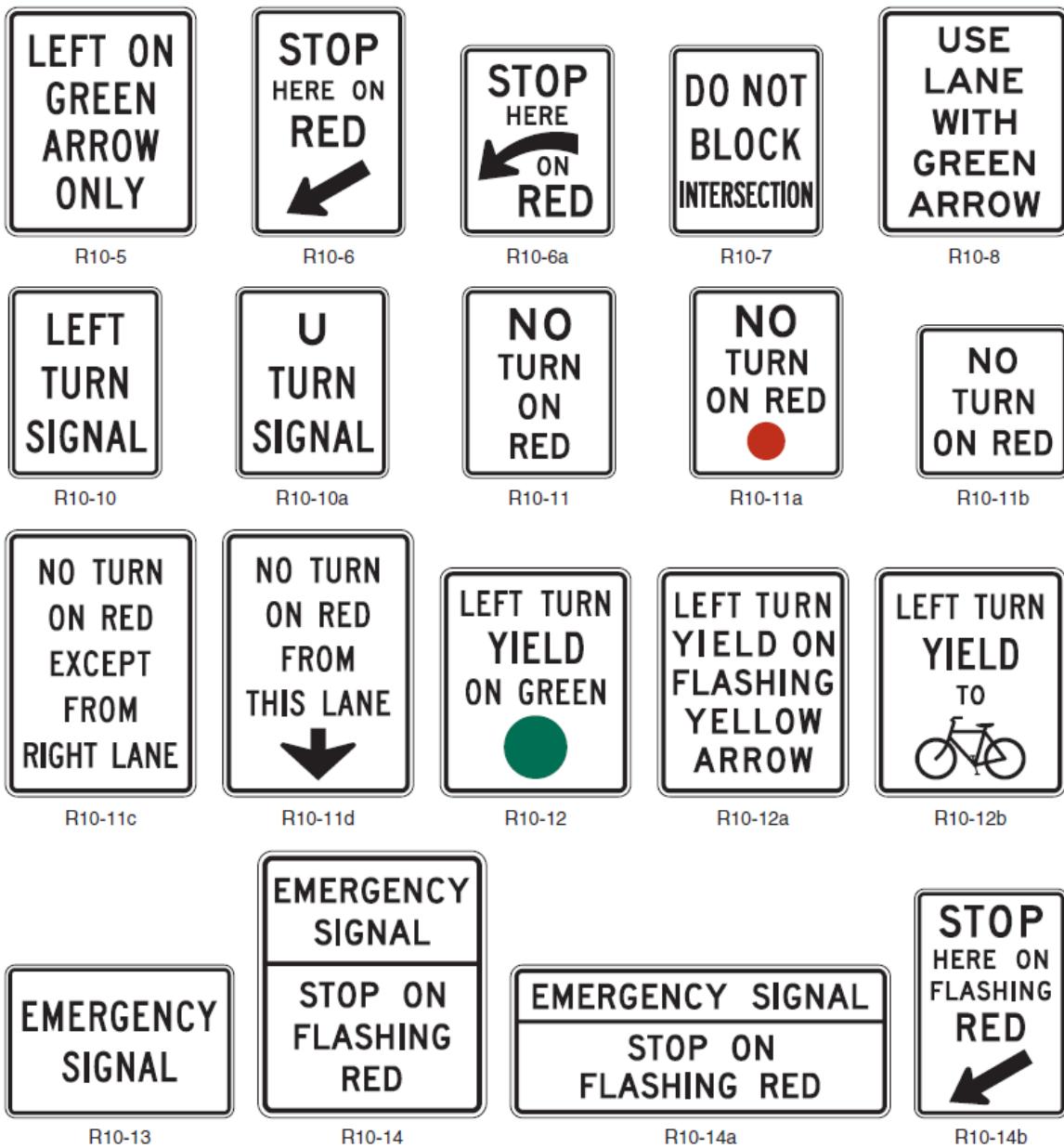
2807 Use of R10-15b and R10-15c signs at unsignalized intersections and mid-block locations is
2808 described in Section 9B.14 Revise per 18B-BIK-01. NCUTCD supports the use of a bicycle sign
2809 because turning vehicles may pose a significant hazard to the bicycle mode as well as the
2810 pedestrian mode.

2811 Option:

2812 ~~A U TURN YIELD TO RIGHT TURN (R10-16) sign (see Figure 2B-27) may be installed~~
2813 ~~near the left turn signal face if U turns are allowed on a protected left turn movement on an~~
2814 ~~approach from which a right turn GREEN ARROW signal indication is simultaneously being~~
2815 ~~displayed to drivers making a right turn from the conflicting approach to their left.~~ (relocate text
2816 elsewhere in section)

2817 ~~A U TURN SIGNAL (R10-10a) sign (see Figure 2B-27) may be installed adjacent to the~~
2818 ~~signal face that exclusively controls a U-turn movement~~ (relocate text elsewhere in section)

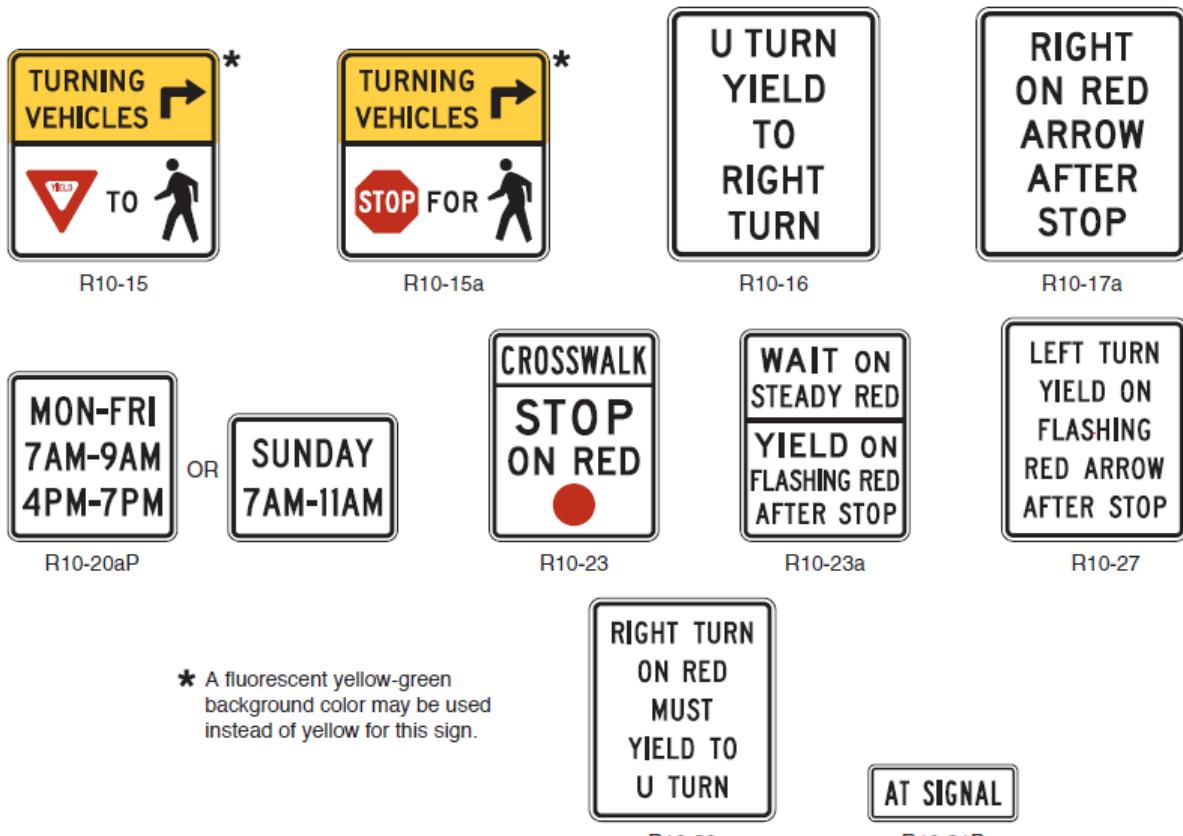
Figure 2B-27. Traffic Signal Signs and Plaques (Sheet 1 of 2)



2819
2820

NCUTCD agrees with Figure 2B-27 Sheet 1 as presented in the NPA.

Figure 2B-27. Traffic Signal Signs and Plaques (Sheet 2 of 2)



2821

R10-30

AT SIGNAL

R10-31D

2822

2823

2824 NCUTCD agrees with Figure 2B-27 Sheet 2 as presented in the NPA, but recommends adding
2825 the following signs:

2826 R10-15b Turning Vehicles Yield to Bicycles

2827 R10-15c Turning Vehicles Yield to Bicycles and Pedestrians

2828 R10-yyA RIGHT TURN YIELD ON FLASHING (symbolic yellow arrow)

2829

2830

2831 **Section 2B.61 Comments:** NCUTCD recommends revising 2B.61 to agree with prior
2832 NCUTCD proposals and improve clarity.

2833

2834 **Section 2B.61 No Turn on Red Signs (R10-11 Series, R10-17a, and R10-30)**

2835 **Standard:**

2836 **Where a right turn on red (or a left turn on red from a one-way street to a one-way**
2837 **street) is to be prohibited, NO TURN ON RED (R10-11, R10-11a) word message sign (see**
2838 **Figure 2B-27) or a NO TURN ON RED (symbolic circular red) (R10-11b) sign (see Figure**
2839 **2B-27) shall be used.**

2840 *Guidance:*

2841 *If used, the No Turn on Red sign should be installed near the appropriate signal head. A No*
2842 *Turn on Red sign should be considered when an engineering study finds that one or more of the*
2843 *following conditions exists:*

2844 *A. Inadequate sight distance to vehicles approaching from the left (or right, if applicable);*

2845 *B. Geometrics or operational characteristics of the intersection that might result in*

2846 *unexpected conflicts;*

2847 *C. An exclusive pedestrian phase;*

2848 *D. An unacceptable number of pedestrian conflicts with right-turn-on-red maneuvers,*
2849 *especially involving children, older pedestrians, or persons with disabilities;*

2850 *E. More than three right-turn-on-red accidents reported in a 12-month period for the*
2851 *particular approach; or*

2852 *F. The skew angle of the intersecting roadways creates difficulty for drivers to see traffic*
2853 *approaching from their left.*

2854 *Option:*

2855 ~~A blank-out part time restriction prohibited movement (R3-1, R3-2, R3-4, R3-18, and R3-~~
2856 ~~27) sign (See Section 2B.28) may be used instead of a static NO TURN ON RED sign, to~~
2857 ~~display either the NO TURN ON RED legend or the No Right Turn symbol or word message, as~~
2858 ~~appropriate, only at certain times during the day or during one or more portion(s) of a particular~~
2859 ~~cycle of the traffic signal. When the no turn on red restriction applies during certain time periods~~
2860 ~~only, the following signing alternatives may be used:~~

2861 *A. Movement prohibition (R3-1, R3-4, R3-18, R3-27) or NO TURN ON RED signs*
2862 *displayed by using blank-out sign or DMS (see chapter 2L) for the hours during which the*
2863 *prohibition is applicable. This may apply during one or more portion(s) of a particular*
2864 *cycle of the traffic control signal.*

2865 *B. Static signs incorporating a supplementary legend (R10-20aP, see Figure 2B-27) showing*
2866 *the hours and days during which the prohibition is applicable. (revise per 20B-RW-03)*

2867 ~~Alternatively, a supplemental R10-20aP plaque (see Figure 2B-27) showing times of day~~
2868 ~~(similar to the S4-1P plaque shown in Figure 7B-1) with a black legend and border on a white~~
2869 ~~background may be mounted below a No Turn on Red sign to indicate that the restriction is in~~
2870 ~~place only during certain times.~~

2871 ~~White LEDs may be used in the border and activated during periods of turn prohibition to~~
2872 ~~enhance the sign conspicuity.~~

2873 On signalized approaches with more than one right-turn lane, a NO TURN ON RED
2874 EXCEPT FROM RIGHT LANE (R10-11c) sign (see Figure 2B-27) may be post-mounted at the
2875 intersection or a NO TURN ON RED FROM THIS LANE (with down arrow) (R10-11d) sign
2876 (see Figure 2B-27) may be mounted over the approximate center of the lane from which turns on
2877 red are prohibited.

2878 *Guidance:*

2879 *Where turns on red are permitted and the signal indication is a steady RED ARROW, the*
2880 *RIGHT (LEFT)ON RED ARROW AFTER STOP (R10-17a) sign (see Figure 2B-27) should be*
2881 *installed adjacent to the RED ARROW signal indication.*

2882 Option:

2883 A RIGHT TURN ON RED MUST YIELD TO U-TURN (R10-30) sign (see Figure 2B-27)

2884 may be installed to remind road users that they must yield to conflicting U-turn traffic on the

2885 street or highway onto which they are turning right on a red signal after stopping.



R10-11



R10-11a



R10-11b

2886
2887

2888
2889 **Section 2B.62 Comments:** NCUTCD agrees with 2B.62 as presented in the NPA with minor
2890 editorial changes.

2891
2892 **Section 2B.62 Photo Enforced Signs and Plaques (R10-18, R10-19P, R10-19aP, R10-18a)**

2893 Option:

2894 A TRAFFIC LAWS PHOTO ENFORCED (R10-18) sign (see Figure 2B-3) may be installed
2895 at a jurisdictional boundary to advise road users that some of the traffic regulations within that
2896 jurisdiction are being enforced by photographic equipment.

2897 A Traffic Signal PHOTO ENFORCED Photo Enforced (R10-18a) sign may be installed on
2898 an approach to a signalized location where red-light cameras are present on any approach to the
2899 signalized location. Both a A Signal Ahead (W3-3) sign and a Traffic Signal Photo Enforced
2900 (R10-18a) sign may be used on the same approach provided that they are on separate supports.

2901 A PHOTO ENFORCED Photo Enforced (R10-19P) plaque or a PHOTO ENFORCED (R10-
2902 19aP) word message plaque (see Figure 2B-3) may be mounted below a regulatory sign to advise
2903 road users that the regulation is being enforced by photographic equipment.

2904 A Traffic Signal PHOTO ENFORCED Sign (R10-18a) sign may be installed on any
2905 approach to a signalized location where a red-light camera is present on any of the approaches to
2906 the signalized location. in advance of or at a traffic signal to advise road users that signal
2907 compliance is being enforced by photographic equipment.

2908 Standard:

2909 The Traffic Signal PHOTO ENFORCED Photo Enforced (R10-18a) sign shall not be
2910 installed on any approach approaches to a signalized locations where there are no red-light
2911 cameras are not present on any of the approaches to the signalized location.

2912 A Traffic Signal PHOTO ENFORCED Photo Enforced (R10-18a) sign shall not be
2913 installed on the same support in combination with a Signal Ahead (W3-3) sign.

2914 If used below a regulatory sign, the Photo Enforced (R10-19P or R10-19aP) plaque shall
2915 be a rectangle with a black legend and border on a white background.



R10-18



R10-18a



R10-19P



R10-19aP

Four of the signs from Figure 2B-3 are shown above pertaining to this section for information and reference.

Section 2B.63 Comments: NCUTCD generally agrees with 2B.63 as presented in the NPA, but recommends minor revisions in accordance with NCUTCD recommendation 20B-RW-03.

Section 2B.63 Ramp Metering Signs (R10-28 and R10-29)

Option:

When ramp control signals (see Chapter 4P) are used to meter traffic on a freeway or expressway entrance ramp, regulatory signs with legends appropriate to the control may be installed adjacent to the ramp control signal faces.

For entrance ramps with only one controlled lane, an XX VEHICLE(S) PER GREEN (R10-28) sign (see

Figure 2B-28) may be used to inform road users of the number of vehicles that are permitted to proceed during each short display of the green signal indication. For entrance ramps with more than one controlled lane, an XX VEHICLE(S) PER GREEN EACH LANE (R10-29) (see Figure 2B-28) sign may be used to inform road users of the number of vehicles that are permitted to proceed from each lane during each short display of the green signal indication.

Where the ramp meter condition is limited by time, day, event, or condition, a blank-out sign or DMS (see Chapter 2L) may be used. (revise per 20B-RW-03)

Figure 2B-28. Ramp Metering Signs



R10-28



R10-29

NCUTCD agrees with Figure 2B-28 as presented in the NPA.

Section 2B.64 Comments: NCUTCD agrees with 2B.64 as presented in the NPA.

2943
2944 **Section 2B.64 KEEP OFF MEDIAN Sign (R11-1)**
2945 Option:
2946 The KEEP OFF MEDIAN (R11-1) sign (see Figure 2B-29) may be used to prohibit driving
2947 into or parking on the median.
2948 *Guidance:*
2949 *The KEEP OFF MEDIAN sign should be installed on the left-hand side of the roadway
2950 within the median at random intervals as needed wherever there is a tendency for encroachment.*

2952
2953 **Section 2B.65 Comments:** NCUTCD agrees with 2B.65 as presented in the NPA.
2954
2955 **Section 2B.65 ROAD CLOSED Sign (R11-2) and LOCAL TRAFFIC ONLY Signs (R11-3
2956 Series, R11-4)**
2957 *Guidance:*
2958 *The ROAD CLOSED (R11-2) sign should be installed where roads have been closed to all
2959 traffic (except authorized vehicles).*
2960 *ROAD CLOSED—LOCAL TRAFFIC ONLY (R11-3) or ROAD CLOSED TO THRU
2961 TRAFFIC (R11-4) signs should be used where through traffic is not permitted, or for a closure
2962 some distance beyond the sign, but where the highway is open for local traffic up to the point of
2963 closure.*
2964 **Standard:**
2965 **The Road Closed (R11-2, R11-3 series, and R11-4) signs (see Figure 2B-29) shall be
2966 designed as horizontal rectangles. These signs shall be preceded by the applicable Advance
2967 Road Closed warning sign with the secondary legend AHEAD and, if applicable, an
2968 Advance Detour warning sign (see Section 6H.04).**
2969 Option:
2970 An intersecting street name or a well-known destination may be substituted for the XX
2971 MILES AHEAD legend in urban areas.
2972 The word message BRIDGE OUT may be substituted for the ROAD CLOSED legend where
2973 applicable.

2975
2976 **Section 2B.66 Comments:** NCUTCD recommends revising 2B.66 to agree with prior and
2977 pending NCUTCD proposals. NCUTCD recommends replacing the R12-6, R12-7, and R12-7aP
2978 weight and emergency vehicle symbol signs and plaques with improved designs, and adding a
2979 new R12-8 sign.

2980
2981 **Section 2B.66 Weight Limit Signs (R12-1 through R12-7)**
2982 *Guidance:*
2983 *Weight limit signs (see Figure 2B-29 for some commonly used examples) should be used to
2984 indicate a structure has a vehicle weight restriction.*
2985 Option:
2986 The Weight Limit (R12-1) sign carrying the legend WEIGHT LIMIT XX TONS may be
2987 used to indicate vehicle weight restrictions
2988 *Guidance:*

2989 *The units shown on any weight limit sign should be consistent within a state or region with*
2990 *respect to pounds or tons.*

2991 *Vehicle weight restrictions should be depicted using gross vehicle weight. Vehicle weight*
2992 *restrictions using weight per axle or empty vehicle weight should not be used unless local laws*
2993 *require the signs to depict weight restrictions in such a ~~that~~ manner.* (minor edit)

2994 **Option:**

2995 Posting of specific load limits may be accomplished by use of the Weight Limit symbol sign
2996 (R12-5). A sign containing the legend WEIGHT LIMIT on the top two lines, and showing up to
2997 three different truck symbols and their respective weight limits for which restrictions apply may
2998 be used, with the weight limits displayed to the right of each symbol as XX T. A bottom line of
2999 legend stating GROSS WT may be included if needed for enforcement purposes.

3000 **Support:**

3001 Specialized Hauling Vehicles (SHVs) is a single unit truck with closely spaced multiple
3002 axles. ~~are closely spaced multi-axle single unit trucks~~. Examples include dump trucks,
3003 construction vehicles, solid waste trucks and other hauling trucks. SHVs typically have 4 to 7
3004 axles. (edit for clarity)

3005 **Option:**

3006 The Weight Limit (R12-6) sign displaying consecutive lines of ~~the~~ legend WEIGHT LIMIT
3007 SINGLE 2-3 AXLES XX TONS, 4-5 AXLES XX TONS, 6+ AXLES XX TONS, and
3008 COMBINATION XX TONS may be used to indicate vehicle weight restrictions for Specialized
3009 Hauling Vehicles.

3010 **Standard:**

3011 **The symbols shown on the R12-5 and R12-6 Weight Limit sign shall apply to all trucks**
3012 **of that configuration (single-unit, single-trailer or multi-trailer) regardless of the shape of**
3013 **the vehicle. Symbolic representations of other vehicle shapes or modifications of standard**
3014 **symbols shall not be used except for the standard Emergency Vehicle symbol when a**
3015 **special load rating for such vehicles exists.** (revise to allow use of EV symbol for EV weight
3016 limit signs per 17A-RW-03)

3017 **Option:**

3018 The facility type (i.e. "BRIDGE") may be added or omitted if the posting applies to a
3019 different facility type.

3020 **Guidance:**

3021 Only trucks and axle configurations with weight limits should be shown.

3022 **Standard:**

3023 **If the R12-5 sign depicts only one single-unit vehicle symbol, the weight limit associated**
3024 **with that single-unit vehicle symbol shall apply to all single-unit vehicles, regardless of**
3025 **number of axles.**

3026 **The weight limit associated with the single-trailer vehicle symbol shall apply to all**
3027 **single-trailer vehicles, regardless of number of axles or vehicle shape.**

3028 **The weight limit associated with the multi-trailer vehicle symbol shall apply to all -**
3029 **multi- trailer vehicles with two or more trailers, regardless of number of axles or vehicle**
3030 **shape.**

3031 **Guidance:**

3032 The R12-5 and R12-6 Weight Limit sign should not show more than 3 symbols so as to not
3033 decrease comprehension of the sign by drivers.

3034 **Option:**

3035 The symbols shown in the R12-5 Weight Limit sign may be modified to show additional
3036 axles. (revise per 17A-RW-03)

3037 **Standard:**

3038 **If used, the Weight Limit sign (see Figure 2B-29), ~~with an advisory distance ahead~~**
3039 **legend, shall be located in advance of the applicable section of highway or structure. ~~so that~~**
3040 **~~prohibited vehicles can detour or turn around prior to the limit zone~~**

3041 **Guidance:**

3042 The Weight Limit Sign with an advisory distance ahead legend should be located so that
3043 prohibited vehicles can detour or turn around prior to the limit zone. (revise Standard to
3044 Guidance)

3045 **Option:**

3046 The BRIDGE LIMITED TO ONE TRUCK AT A TIME sign (R12-8) may be used where
3047 conditions dictate. (revise per 17A-RW-03)

3048 **Support:**

3049 An emergency vehicle is designed to be used under emergency conditions to transport
3050 personnel and equipment to support the suppression of fires and mitigation of other hazardous
3051 situations. Emergency vehicles are typically operated by fire departments and are primarily
3052 equipped for firefighting, but are also used to respond to and mitigate other hazardous situations
3053 in an emergency. They can create higher load effects compared to non-emergency vehicles of
3054 similar weight. legal loads.

3055 **Option:**

3056 ~~The Emergency Vehicle Weight Limit (R12-7) sign carrying the legend EMERGENCY~~
3057 ~~VEHICLE WEIGHT LIMIT SINGLE AXLE XX TONS, TANDEM XX TONS, and GROSS~~
3058 ~~XX TONS may be used to indicate vehicle weight restrictions for emergency vehicles.~~

3059 **Guidance:**

3060 If state or federal law requires the posting of emergency vehicle weight limits at a bridge for
3061 fire trucks or other emergency vehicles, then the bridge should be posted using the R12-7a or
3062 R12-7b Emergency Vehicle Weight Limit sign.

3063 Emergency vehicle weight limits should not be posted except where required by state or
3064 federal law.

3065 Road agencies should implement other methods of outreach to fire departments and other
3066 emergency vehicle agencies in lieu of or in addition to physical signs, such as online bridge
3067 posting information, so that emergency vehicle agencies can plan their response routes prior to
3068 incidents occurring.

3069 **Support:**

3070 Road agencies may be required to erect emergency vehicle weight limit signs for bridges on
3071 or near the Interstate system by 23 U.S.C. 127(a) of the Federal Code, which was modified as a
3072 part of the 2015 Fixing America's Surface Transportation Act (FAST Act).

3073 NCUTCD recommends revising this section in accordance with proposed NCUTCD
3074 recommendations.

3075 **Standard:**

3076 **When mounted below a primary Weight Limit sign the Emergency Vehicle Weight**
3077 **Limit plaque (R12-7ap) shall be used.**

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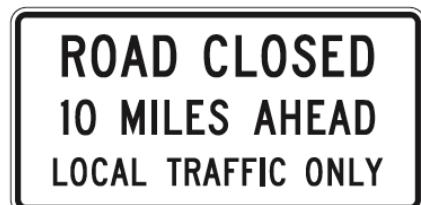
Figure 2B-29. Road Closed and Weight Limit Signs



R11-1



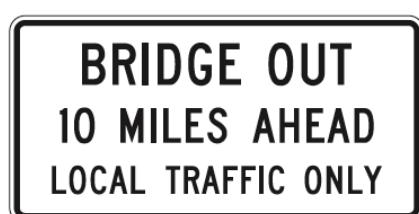
R11-2



R11-3



R11-3a



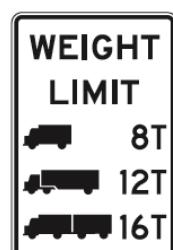
R11-3b



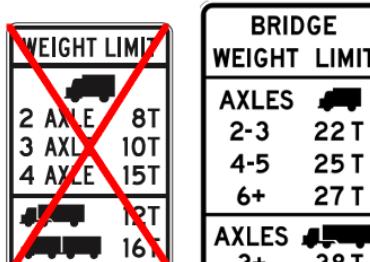
R11-4



R12-1



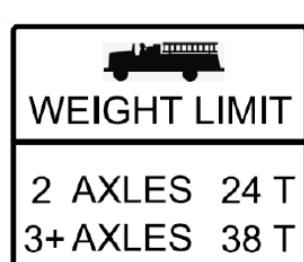
R12-5



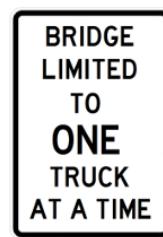
R12-6



R12-7



R12-7aP



R12-8

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NCUTCD recommends revising Figure 2B-29 to replace the R12-6, R12-7, and R12-7aP weight and emergency vehicle symbol signs and plaques with improved designs, and add a new R12-8 sign.

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Section 2B.67 Comments: NCUTCD agrees with 2B.67 as presented in the NPA.

Section 2B.67 Vehicle Inspection Area Signs (R13-1 Series)

Guidance:

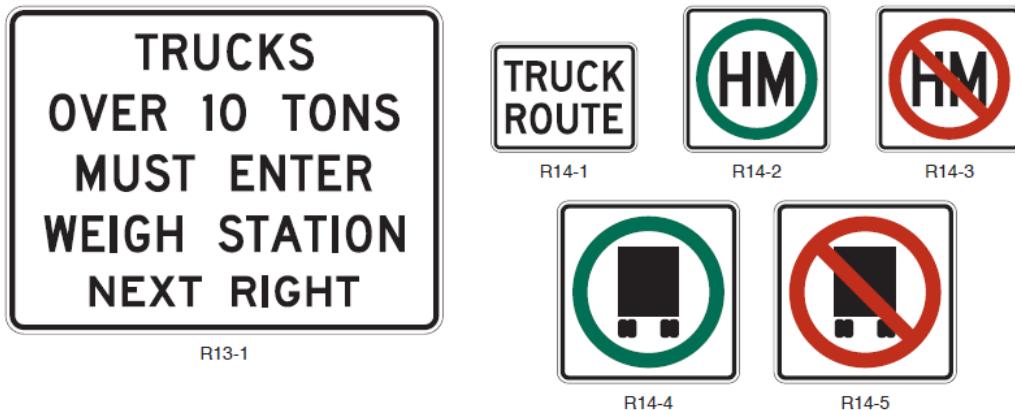
An R13-1 sign with the legend TRUCKS OVER XX TONS MUST ENTER WEIGH STATION NEXT RIGHT should be used to direct appropriate traffic into an inspection station.

The R13-1 sign should be supplemented by the D8 series of guide signs (see Section 2D.50).

Option:

The R13-1 legend may be modified to match the specific type of inspection conducted at the station.

Figure 2B-30. Truck Signs



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NCUTCD agrees with Figure 2B-30 as presented in the NPA.

Section 2B.68 Comments: NCUTCD agrees with 2B.68 as presented in the NPA.

Section 2B.68 TRUCK ROUTE Sign (R14-1)

Guidance:

The TRUCK ROUTE (R14-1) sign should be used to mark a route that has been designated to allow truck traffic.

Support:

See Section 2D.20 regarding the use of the TRUCK (M4-4) auxiliary sign on a designated numbered alternative route.

Section 2B.69 Comments: NCUTCD agrees with 2B.69 as presented in the NPA.

Section 2B.69 Hazardous Material Signs (R14-2, R14-3)

Option:

The Hazardous Material Route (R14-2) sign (see Figure 2B-30) may be used to identify routes that have been designated by proper authority for vehicles transporting hazardous

3121 material.

3122 On routes where the transporting of hazardous material is prohibited, the Hazardous Material
3123 Prohibition (R14-3) sign (see Figure 2B-30) may be used.

3124 *Guidance:*

3125 *If used, the Hazardous Material Prohibition sign should be installed on a street or roadway
3126 at a point where vehicles transporting hazardous material have the opportunity to take an
3127 alternate route.*

3129

3130 **Section 2B.70 Comments:** NCUTCD agrees with 2B.70 as presented in the NPA.

3131

3132 **Section 2B.70 National Network Signs (R14-4, R14-5)**

3133 Support:

3134 The signing of the National Network routes for trucking is optional.

3135 **Standard:**

3136 **When a National Network route is signed, the National Network (R14-4) sign (see
3137 Figure 2B-30) shall be used.**

3138 Option:

3139 The National Network Prohibition (R14-5) sign (see Figure 2B-30) may be used to identify
3140 routes, portions of routes, and ramps where trucks are prohibited. The R14-5 sign may also be
3141 used to mark the ends of designated routes.

3142

3143

3144

3145 **Section 2B.71 Comments:** NCUTCD agrees with 2B.71 as presented in the NPA.

3146

3147 **OTHER REGULATORY SIGNS**

3148 **Section 2B.71 MINOR CRASHES MOVE VEHICLES FROM TRAVEL LANES (R16-4)**

3149 **Sign**

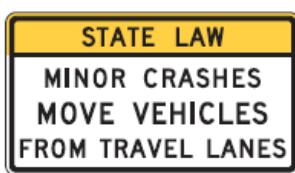
3150 **Option:**

3151 A STATE LAW MINOR CRASHES MOVE VEHICLES FROM TRAVEL LANES (R16-4)
3152 sign (see Figure 2B-31) may be installed in accordance with the provisions of Section 2A.01 to
3153 require motorists to move their vehicle out of the travel lanes if they have been involved in a
3154 crash.

3155

3156

Figure 2B-31. Other Regulatory Signs



3157

R16-3

R16-4

R16-15

R16-15a

3158 NCUTCD agrees with Figure 2B-31 as presented in the NPA.
3159

3160
3161 **Section 2B.72 Comments:** NCUTCD agrees with 2B.72 as presented in the NPA.
3162

3163 **Section 2B.72 Move Over or Reduce Speed Sign**

3164 Option:

3165 A STATE LAW MOVE OVER OR REDUCE SPEED FOR VEHICLES STOPPED ON
3166 SHOULDER (R16-3) sign (see Figure 2B-31) may be installed in accordance with the
3167 provisions of Section 2A.01 to require motorists to change lanes and/or reduce speed when
3168 passing stopped emergency vehicles on the shoulder.

3170
3171 **Section 2B.73 Comments:** NCUTCD agrees with 2B.73 as presented in the NPA with minor
3172 editorial changes.

3173
3174 **Section 2B.73 No Hand-Held Phones Use by Driver Signs (R16-15, R16-15a)**

3175 Option:

3176 A STATE LAW NO HAND-HELD PHONES USE BY DRIVER (R16-15, R16-15a) sign
3177 (see Figure 2B-31) may be installed in accordance with the provisions of Section 2A.01 to notify
3178 drivers that they are prohibited from using hand-held telephones while driving. [Modify text to
3179 match sign legend]

3180
3181 **Section 2B.74 Comments:** NCUTCD agrees with 2B.74 as presented in the NPA.

3182
3183 **Section 2B.74 Headlight Use Signs (R16-5 through R16-11)**

3184 Support:

3185 Some States require road users to turn on their vehicle headlights under certain weather
3186 conditions, as a safety improvement measure on roadways experiencing high crash rates, or in
3187 special situations such as when driving through a tunnel.

3188 Figure 2B-32 shows the various signs that can be used for informing motorists of these
3189 requirements.

3190 Option:

3191 A LIGHTS ON WHEN USING WIPERS (R16-5) sign or a LIGHTS ON WHEN RAINING
3192 (R16-6) sign may be installed in accordance with the provisions of Section 2A.01 to inform road
3193 users of State laws regarding headlight use. Although these signs are typically installed facing
3194 traffic entering the State just inside the State border, they also may be installed at other locations
3195 within the State.

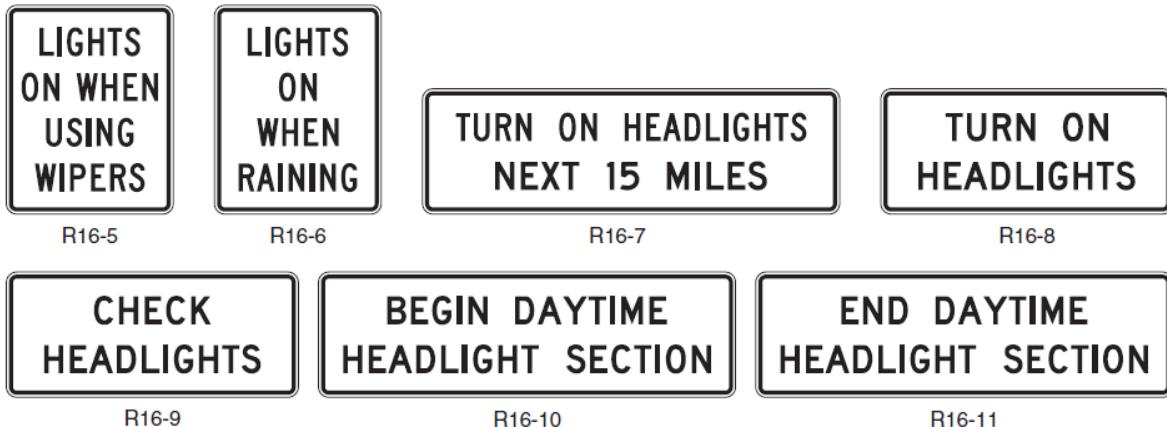
3196 Guidance:

3197 *If a particular section of roadway has been designated as a safety improvement zone within*
3198 *which headlight use is required, a TURN ON HEADLIGHTS NEXT XX MILES (R16-7) sign or a*
3199 *BEGIN DAYTIME HEADLIGHT SECTION (R16-10) sign should be installed at the upstream*
3200 *end of the section, and a END DAYTIME HEADLIGHT SECTION (R16-11) sign should be*
3201 *installed at the downstream end of the section.*

3202 Option:

A TURN ON HEADLIGHTS (R16-8) sign may be installed to require road users to turn on their headlights in special situations such as when driving through a tunnel. A CHECK HEADLIGHTS (R16- 9) sign may be installed downstream from the special situation to inform drivers that the using their headlights is no longer required.

Figure 2B-32. Headlight Use Signs



3209 R16-9 R16-10
3210 NCUTCD agrees with Figure 2B-32 as presented in the NPA.

Section 2B.75 Comments: NCUTCD agrees with 2B.75 as presented in the NPA.

Section 2B.75 Seat Belt Symbol

Guidance:

The seat belt symbol should not be used alone. If used, the seat belt symbol should be incorporated into regulatory sign messages for mandatory seat belt use.

Section 2B.76 Comments: NCUTCD agrees with 2B.76 as presented in the NPA.

Section 2B.76 Barricades

Option:

Barricades may be used to mark any of the following conditions:

- A. A roadway ends,
 - B. A ramp or lane closed for operational purposes, or
 - C. The permanent or semi-permanent closure or termination of a roadway.

Standard:

When used to warn and alert road users of the terminus of a roadway in other than temporary traffic control zones, barricades shall meet the design criteria of Section 6K.07 for a Type 3 Barricade, except that the colors of the stripes shall be retroreflective white and retroreflective red.

Option:

An end-of-roadway marker or markers may be used as described in Section 2C.72.

Guidance:

Appropriate advance warning signs (see Chapter 2C) should be used.

3238

3239

3240 **Section 2B.77 Comments:** NCUTCD recommends retaining text from the 2009 MUTCD
3241 proposed for deletion in the NPA, and include text from NCUTCD recommendation 15A-EC-01.

3242

3243 **Section 2B.77 Gates**

3244 Support:

3245 Gates described in this section used for weather or other emergency conditions are typically
3246 permanently installed to enable the gate to be immediately deployed as needed to prohibit the
3247 entry of traffic to the highway segment(s).

3248 A gate typically features a gate arm that is moved from a vertical to a horizontal position or
3249 is rotated in a horizontal plane from parallel to traffic to perpendicular to traffic. Traffic is
3250 obstructed and required to stop when the gate arm is placed in a horizontal position
3251 perpendicular to traffic. Another type of gate consists of a segment of fence (usually on rollers)
3252 that swings open and closed, or that is retracted to open and then extended to close.

3253 Gates are sometimes used to enforce a required stop. Some examples of such uses are the
3254 following:

- 3255 A. Parking facility entrances and exits,
3256 B. Private community entrances and exits,
3257 C. Military base entrances and exits,
3258 D. Toll plaza lanes,
3259 E. Movable bridges (see Chapter 4J),
3260 F. Automated Flagger Assistance Devices (see Chapter 6E), and
3261 G. Grade crossings (see Part 8).

3262 Gates are sometimes used to periodically close a roadway or a ramp. Some examples of
3263 such uses are the following:

- 3264 A. Closing ramps to implement counter-flow operations for evacuations,
3265 B. Closing ramps that lead to reversible lanes, and
3266 C. Closing roadways for weather events such as snow, ice, or flooding, or for other
3267 emergencies. (retain text from 2009 MUTCD)

3268 **Standard:**

3269 Except as provided in Paragraph 6, gate arms, if used, shall be fully retroreflective on
3270 both sides, have vertical stripes alternately red and white at 16-inch intervals measured
3271 horizontally as shown in Figure 8C-1. The width (which becomes the height of the
3272 retroreflective sheeting when the gate is in the down position) of the retroreflective sheeting
3273 on the front of the gate arm shall be at least 4 inches.

3274 Option:

3275 If used on a one-way roadway or ramp, the retroreflective sheeting may be omitted on the
3276 side of the gate (or rolling fence) facing away from approaching traffic.

3277 Where gate arms are used to block off ramps into reversible lanes or to redirect approaching
3278 traffic, the red and white striping may be angled such that the stripes slope downward at an angle
3279 of 45 degrees toward the side of the gate arm on which traffic is to pass.

3280 **Standard:**

3281 **The gate arm shall extend across the approaching lane or lanes of traffic to effectively**
3282 **block motor vehicle and/or pedestrian travel as appropriate.**

3283 *Guidance:*

3284 *When a gate that is rotated in a horizontal plane is in the position where it is parallel to*
3285 *traffic (indicating that the roadway is open), the outer end of the gate arm should be rotated to*
3286 *the downstream direction (from the perspective of traffic in the lane adjacent to the gate support)*
3287 *to prevent spearing if the gate is struck by an errant vehicle.*

3288 **Option:**

3289 Red lights may be attached to traffic gates. (retain text from 2009 MUTCD)

3290 **Standard:**

3291 **If red lights are attached to a traffic gate, the red lights shall be steadily illuminated or**
3292 **flashed only during the period when the gate is in the horizontal or closed position and**
3293 **when the gate is in the process of being opened or closed.**

3294 **Except as provided in Paragraph 3, rolling sections of fence, if used, shall include either**
3295 **a horizontal strip of retroreflective sheeting on both sides of the fence with vertical stripes**
3296 **alternately red and white at 16-inch intervals measured horizontally to simulate the**
3297 **appearance of a gate arm in the horizontal position, or one or more Type 4 object markers**
3298 **(see Section 2C.72), or both. If a horizontal strip of retroreflective sheeting is used, the**
3299 **bottom of the sheeting shall be located 3.5 to 4.5 feet above the roadway surface.**

3300 If a chain, cable, or other device is used to restrict access to roadways on sites that are
3301 off the public right-of-way but are open to public travel without full-time access
3302 restrictions, it shall be clearly marked with a Type 4 object marker or a retroreflective sign
3303 suspended from or attached to the chain, cable, or other device (See Section 2C.63 for
3304 object marker sizes) (revise per 15A-EC-01)

3305

3306
