



# National Committee on Uniform Traffic Control Devices

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Item No.: 25A-BIK-04

## NCUTCD PROPOSAL FOR CHANGES TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

**COMMITTEE / TASK FORCE:** Bicycle Technical Committee  
**ITEM NUMBER:** 25A-BIK-04  
**TOPIC:** Bicycle Lane Definitions  
**ORIGIN OF REQUEST:** Bicycle Technical Committee  
**AFFECTED SECTIONS** 1C.02  
**OF MUTCD:** 2B.30  
9B.04, 9B.05, 9E.01, 9E.02, 9E.03, 9E.14

### DEVELOPMENT HISTORY:

Approved by Bicycle TC: 06/24/2024, 01/09/2025  
Approved by RWSTC: 06/24/2024  
Approved by Edit Committee: 10/14/2024  
Approved by NCUTCD Council:

*This is a proposed change to the MUTCD that has been developed by a technical committee, joint committee, or joint task force of the NCUTCD. The NCUTCD is distributing this to its sponsoring organizations for review and comment. Sponsor comments will be considered in revising the proposal prior to NCUTCD Council consideration. This proposal does not represent a revision of the MUTCD and does not constitute official MUTCD standards, guidance, options, or support. If approved by the NCUTCD Council, the recommended changes will be submitted to FHWA for consideration for inclusion in a future MUTCD revision. The MUTCD can be revised only through the federal rulemaking process.*

### SUMMARY:

The 2023 MUTCD added definitions for various types of bicycle lanes but did not include a definition for the most common type of bicycle lane—a bicycle lane adjacent to a general purpose lane(s) without a horizontal buffer or vertical separation. This lack of definition for the most common type of bicycle lane makes it unclear if provisions for signing and/or marking a bicycle lane apply to all types of bicycle lanes or only to a specific type of bicycle lane(s). The purpose of this proposal is to include a definition for the most common type of bicycle lane and to provide clarification regarding the applicability of the signing and marking provisions to the various bicycle lane types. It is noted that this proposal does not change the intent of the 2023 Manual related to the selection of the appropriate bicycle lane type or its configuration.

### DISCUSSION:

The NCUTCD submitted a comment to the docket to add new definitions in “Section 1C.02 Definitions for Terms and Phrases Used in this Manual” for the various types of bicycle lanes currently in use throughout the US. FHWA included those definitions with some text edits in the 2023 MUTCD. By including new definitions for buffer-separated, counter-flow, and separated

38 bicycle lanes, the 2023 MUTCD provides definitions that are consistent with the new additional  
39 content for various types of bicycles lanes included in Part 9.

40  
41 Unfortunately, a definition for the most common type of bicycle lane—a marked bicycle lane  
42 adjacent to a general-purpose lane(s) without a horizontal buffer or vertical separation—is not  
43 included. Additionally, the 2023 Manual refers to the most common bicycle lane with a variety of  
44 terms including “typical”, “standard” and “conventional”.

45  
46 In some instances, the Standards, Guidance, Options and Support for signing and marking  
47 bicycle lanes clearly apply to only specific types of bicycle lanes. In other instances, it is not  
48 clear whether the MUTCD content applies to all types of bicycle lanes or only to a specific  
49 type(s).

50  
51 This proposal includes the addition of a definition for the most common type of bicycle lane as a  
52 “conventional” bicycle lane and revises the text as appropriate to clarify whether the provisions  
53 apply to all types of bicycle lanes or only to a specific type(s). It is noted that the use of the term  
54 “conventional” was presented to the Edit Committee and it was agreed that it was the most  
55 appropriate term.

56  
57 **RECOMMENDED MUTCD CHANGES:**

58 The following present the proposed changes to the current MUTCD within the context of the  
59 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and  
60 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously  
61 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double  
62 underline for additions and ~~green double strikethrough~~ for deletions. In some cases,  
63 background comments may be provided with the MUTCD text. These comments are indicated  
64 by bracketed white text in shaded green. Deletions made by a technical committee or task  
65 force after initial distribution to sponsoring organizations are shown in ~~highlighted red~~  
66 ~~strikethrough and Helvetica text~~. Additions made by a technical committee or task force after  
67 initial distribution to sponsoring organizations are shown in underline blue and Helvetica text.

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69 **PART 1. GENERAL**  
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71 **CHAPTER 1C. DEFINITIONS, ACRONYMS, AND ABBREVIATIONS USED IN THIS**  
72 **MANUAL**

73  
74 **Section 1C.02 Definitions of Words and Phrases Used in this Manual**

75 **Standard:**  
76 01 **Unless otherwise defined in this Section, or in other Parts of this Manual, words or phrases**  
77 **shall have the meaning(s) as defined in the “Uniform Vehicle Code,” “AASHTO Transportation**  
78 **Glossary (Highway Definitions),” or other appropriate publications.**  
79 02 **Where a term that is defined in this Section or elsewhere in this Manual has a different**  
80 **definition in another resource or in common use, the definition herein shall govern for purposes of**  
81 **the applicability of the provisions of this Manual.**  
82 03 **The following words and phrases, when used in this Manual, shall have the following**  
83 **meanings:**  
84 **25. Bicycle Lane—a portion of a roadway that has been designated for preferential or exclusive**  
85 **use by bicyclists and defined ~~A typical bicycle lane is delineated from the adjacent general-~~**  
86 **~~purpose lane(s)~~ by longitudinal pavement markings and bicycle lane symbol or word**  
87 **markings and, if used, signs. ~~Other types~~ Types of bicycle lanes include:**

88 (a) **Buffer-Separated Bicycle Lane**—a bicycle lane that is separated from the adjacent  
89 **general-purpose** lane(s) by a pattern of standard longitudinal pavement markings that is  
90 wider than a normal or wide lane line marking.

91 (b) Conventional Bicycle Lane—a one-directional bicycle lane that provides a path  
92 of travel for bicyclists in the same direction as adjacent general traffic and which is  
93 delineated from the adjacent lane(s) only by longitudinal pavement markings and no  
94 buffer.

95 ~~(b)~~ (c) **Counter-Flow Bicycle Lane**—a one-directional bicycle lane that provides a lawful  
96 path of travel for ~~bicycles~~ bicyclists in the opposite direction from general traffic on a  
97 roadway that allows general traffic to travel in only one direction. Counter-flow bicycle  
98 lanes are designated by the traffic control devices used for other bicycle lanes.

99 ~~(c)~~ (d) **Separated Bicycle Lane**—an exclusive facility for bicyclists that is located within or  
100 directly adjacent to the roadway and that is physically separated from motor vehicle  
101 traffic with a vertical element. Separated bicycle lanes are differentiated from other  
102 bicycle lanes by a vertical element.

## 103 104 105 PART 2. SIGNS

### 106 107 CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

#### 108 109 Section 2B.30 Advance Intersection Lane Control Signs (R3-8 Series)

110 Option:

111 01 Advance Intersection Lane Control (R3-8, R3-8a, and R3-8b) signs (see Figure 2B-4) may be used to  
112 indicate the configuration of all lanes ahead.

113 02 The word messages ONLY, THRU, HOV 2+, TAXI, BUS, or BIKE, or the bicycle symbol, may be  
114 used within the border in combination with the arrow symbols of the R3-8 sign series. The R3-5cP, R3-  
115 5dP, and R3-5gP supplemental plaques may be installed at the top outside border of the R3-8 sign over  
116 the applicable lane designation on the sign. The diamond symbol may be used instead of the word  
117 message HOV. The minimum allowable vehicle occupancy requirement may vary based on the level  
118 established for a particular facility.

119 03 Where a conventional or buffer-separated bicycle lane is between two general-purpose lanes the R3-  
120 8 series signs may be modified to show the bicycle lane with a white legend on a black background in  
121 accordance with designs of the R3-8x series signs (see Figure 2B-4).

122 *Guidance:*

123 04 *When used, an Advance Intersection Lane Control sign should be placed at an adequate distance in*  
124 *advance of the intersection, either along the lane tapers or at the beginning of the turn lane so that road*  
125 *users can select the appropriate lane (see Figure 2A-4).*

126 Option:

127 05 An Advance Intersection Lane Control sign may be repeated closer to the intersection along the  
128 approach for additional emphasis.

129 **Standard:**

130 06 **An Advance Intersection Lane Control (R3-8 series) sign shall not be mounted at the far side of**  
131 **an intersection to which it applies.**

132 07 **Where three or more approach lanes are available to traffic, Advance Intersection Lane**  
133 **Control (R3-8 series) signs, if used, shall be post-mounted in advance of the intersection and shall**  
134 **not be mounted overhead.**

135 08 **When only the two outermost lanes of the roadway are shown on a R3-8 sign, the R3-5bP or**  
136 **R3-5fP plaque shall be mounted above the R3-8 sign.**

138 **PART 9. TRAFFIC CONTROL FOR BICYCLE FACILITIES**

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140 **CHAPTER 9B. REGULATORY SIGNS**

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142 **Section 9B.04 Bicycle Lane Signs and Plaques (R3-17, R3-5hP, R3-17aP, and R3-17bP)**

143 **Standard:**

144 01 **The Bike Lane (R3-17) sign and the BIKE LANE (R3-5hP), AHEAD (R3-17aP), and ENDS**  
145 **(R3-17bP) plaques (see Figure 9B-1) shall be used only in conjunction with marked bicycle lanes as**  
146 **described in Sections 9E.01, 9E.06, and 9E.07.**

147 *Guidance:*

148 02 *If used, Bicycle Lane signs and plaques should be located at the beginning of the bicycle lane and in*  
149 *advance of the downstream end of the bicycle lane.*

150 *Option:*

151 03 Additional Bicycle Lane signs and plaques may be used at periodic intervals along the bicycle lane  
152 as determined by engineering judgment based on the operating speed of bicycle and other traffic, block  
153 length, distances from adjacent intersections, and other considerations.

154 *Support:*

155 04 Section 2B.33 contains information for the application of BEGIN and END plaques.

156 05 Section 9B.03 contains information on displaying the bicycle lane on Advance Intersection Lane  
157 Control signs.

158 *Option:*

159 06 Where two or more movements from a bicycle lane are allowed, or where the emphasis of allowed  
160 bicycle movements is needed, an Optional Movement Lane Control sign (see Section 2B.29) may be  
161 supplemented with a BIKE LANE (R3-5hP) plaque above the Optional Movement Lane Control sign.

162 07 Where [conventional or buffer-separated](#) bicycle lanes are located between travel lanes on  
163 intersection approaches or where only a single bicycle movement is allowed from a certain bicycle lane, a  
164 Mandatory Movement Lane Control sign (see Section 2B.28) may be supplemented with a BIKE LANE  
165 plaque to require a bicyclist in a particular bicycle lane at an intersection to stay in the same lane and  
166 proceed straight through the intersection, or to indicate a required turn from a particular bicycle lane.

167  
168 **Section 9B.05 BEGIN RIGHT TURN LANE YIELD TO BIKES Sign (R4-4)**

169 *Option:*

170 01 Where motor vehicles entering a mandatory right-turn lane must weave across bicyclists in  
171 [conventional or buffer-separated](#) bicycle lanes, the BEGIN RIGHT TURN LANE YIELD TO BIKES  
172 (R4-4) sign (see Figure 9B-1) may be used to inform both the motorist and the bicyclist of this weaving  
173 maneuver (see Figures 9E-3 and 9E-4).

174 *Guidance:*

175 02 *The R4-4 sign should not be used when bicyclists need to move left because of a right-turn lane drop*  
176 *situation.*

177  
178 **CHAPTER 9E. MARKINGS**

179  
180 **Section 9E.01 Bicycle Lanes**

181 *Support:*

182 01 Pavement markings designate that portion of the roadway for preferential use by bicyclists. Markings  
183 inform all road users of the restricted nature of the bicycle lane.

184 **Standard:**

185 02 **Longitudinal pavement markings and bicycle lane symbol or word markings (see Figure 9E-1)**  
186 **shall be used to define bicycle lanes.**

187 *Guidance:*

188 03 *The first symbol or word marking in a bicycle lane should be placed at the beginning of the bicycle*  
189 *lane and downstream symbol or word markings should be placed after major intersections. Additional*  
190 *symbol or word markings should be placed at periodic intervals along the bicycle lane based on*  
191 *engineering judgment.*

192 Option:

193 04 An arrow marking (see Figure 9E-1) may be used in conjunction with the bicycle lane symbol or  
194 word marking, placed downstream from the symbol or word marking.

195 05 Where the bicycle lane symbols or word markings are used, Bicycle Lane signs (see Section 9B.04)  
196 may also be used, but not necessarily adjacent to every set of pavement markings in order to avoid  
197 overuse of the signs.

198 Support:

199 06 Section 3H.06 contains information on green-colored pavement for use in bicycle lanes.

200 **Standard:**

201 07 **The bicycle symbol or BIKE LANE pavement word marking and the pavement marking**  
202 **arrow shall not be used in a shoulder.**

203 08 **A portion of the roadway shall not be established as both a shoulder and a bicycle lane.**

204 Support:

205 09 Where a shoulder is provided or is of sufficient width to meet the expectation of a highway user in  
206 that it can function as a space for emergency, enforcement, or maintenance activities, or avoidance or  
207 recovery maneuvers, Section 9B.16 contains information regarding the Bicycles Use Shoulder Only sign  
208 that can be used to denote locations on a freeway or expressway where bicycles are permitted on an  
209 available and usable shoulder.

210 10 Examples of pavement markings for [conventional](#) bicycle lanes on a two-way street are shown in  
211 Figure 9E-2.

212

## 213 **Section 9E.02 Bicycle Lanes at Intersection Approaches**

214 **Standard:**

215 01 **Except as provided in Paragraph 2 of this Section, a through [conventional or buffer-separated](#)**  
216 **bicycle lane shall not be positioned to the right of a right turn only lane or to the left of a left turn**  
217 **only lane.**

218 Option:

219 02 A through bicycle lane may be positioned to the right of a right turn only lane or to the left of a left  
220 turn only lane provided that the bicycle lane is controlled by a traffic signal that displays bicycle signal  
221 indications (see Chapter 4H).

222 Support:

223 03 Unless controlled by a bicycle signal indication, a bicyclist continuing straight through an  
224 intersection from the right of a right turn only lane or from the left of a left turn only lane would be  
225 inconsistent with normal traffic behavior and would violate the expectations of right-turning or left-  
226 turning motorists.

227 *Guidance:*

228 04 *When the right (left) through lane is dropped to become a mandatory right-turn (left-turn) lane, the*  
229 *[conventional or buffer-separated](#) bicycle lane markings should stop at least 100 feet before the beginning*  
230 *of the right-turn (left-turn) lane. Through bicycle lane markings should resume to the left (right) of the*  
231 *mandatory right-turn (left-turn) lane.*

232 05 *Except as provided in Paragraph 2 of this Section, an optional through-right (through-left) turn lane*  
233 *next to a mandatory right-turn (left-turn) lane should not be used where there is a through [conventional](#)*  
234 *[or buffer-separated](#) bicycle lane.*

235 **Standard:**

236 06 **A [conventional or buffer-separated](#) bicycle lane located on an intersection approach between**  
237 **general-purpose lanes for motor vehicle movements shall be marked with at least one bicycle**

238 symbol **or word marking** [Known Error correction issued by FHWA] and at least one arrow  
239 pavement marking as provided in Paragraph 4 of Section 9E.01.

240 07 A bicycle lane shall not be marked within a general-purpose lane, either with dotted or any  
241 other line markings.

242 Option:

243 08 Where there is insufficient width in the roadway to include both a bicycle lane and a general-purpose  
244 turn lane, bicycle travel may be accommodated within the turn lane or general-purpose lane using shared-  
245 lane markings.

246 **Standard:**

247 09 **Where a general-purpose turn lane is controlled by a traffic control signal, through bicycle**  
248 **movements shall not be accommodated in the turn lane unless the turning movement is always**  
249 **permitted to proceed simultaneously with the adjacent through movement.**

250 Support:

251 10 Examples of conventional bicycle lane markings on approaches to intersections are shown in Figures  
252 9E-3 and 9E-4.

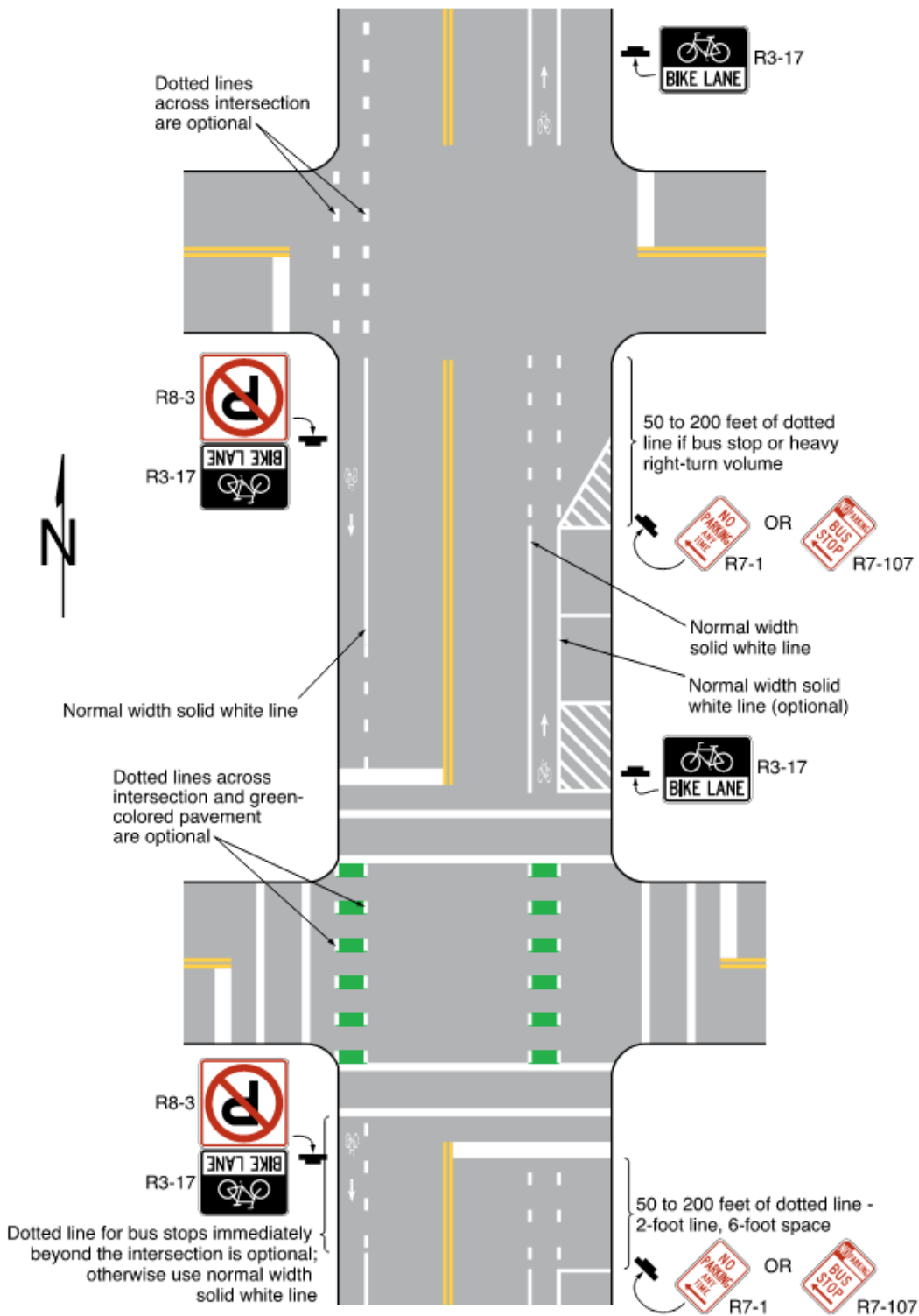
253 *Guidance:*

254 11 *The longitudinal line defining a conventional or buffer-separated bicycle lane should be dotted on*  
255 *approaches to intersections where turning vehicles are permitted to cross the path of through-moving*  
256 *bicycles (see Figure 9D-7).*

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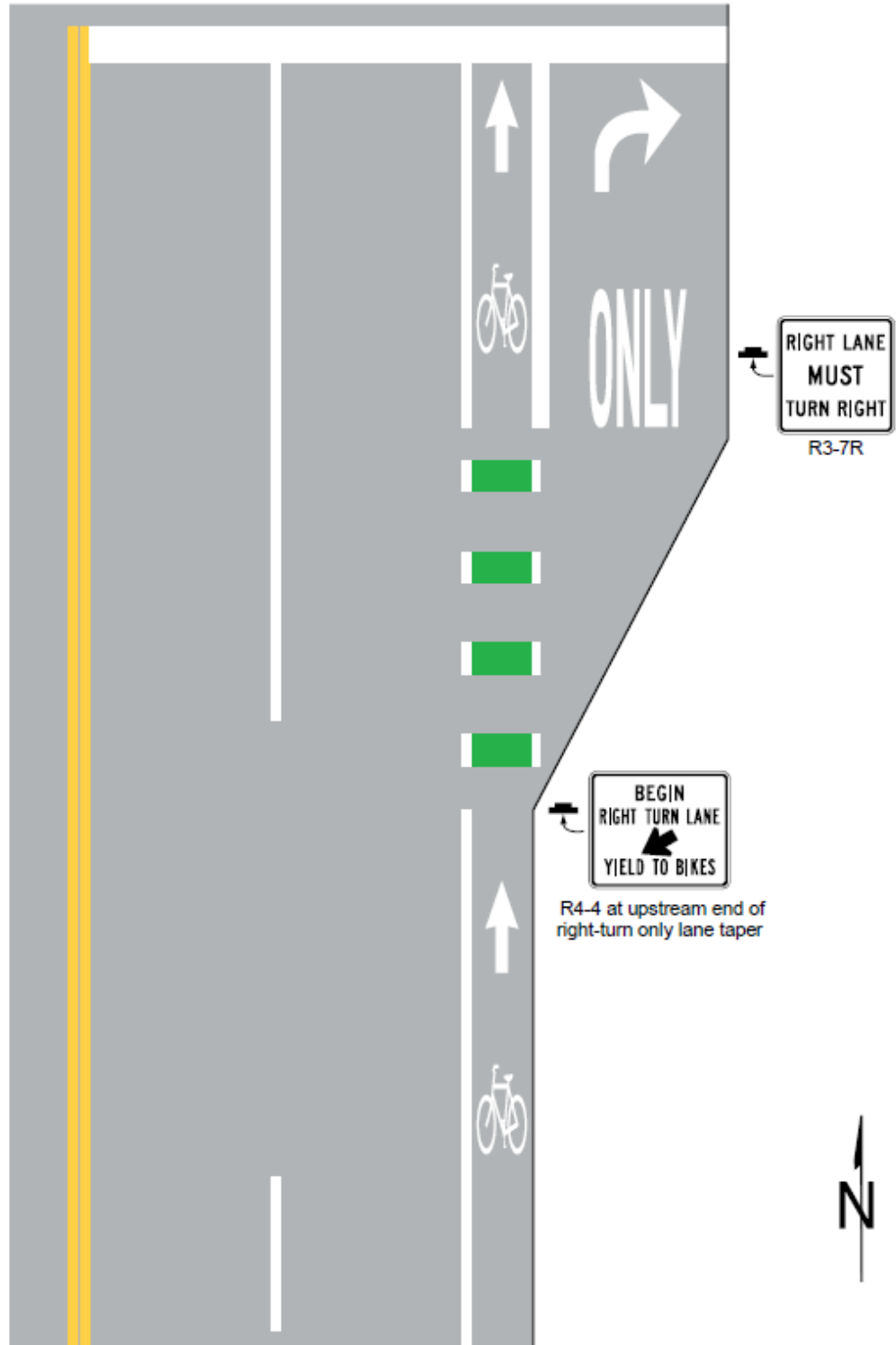
**Figure 9E-2. Example of Pavement Markings for Conventional Bicycle Lanes on a Two-Way Street**



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**Figure 9E-3. Examples of Conventional Bicycle Lane Markings on an Approach to an Intersection**  
(Sheet 1 of 3)

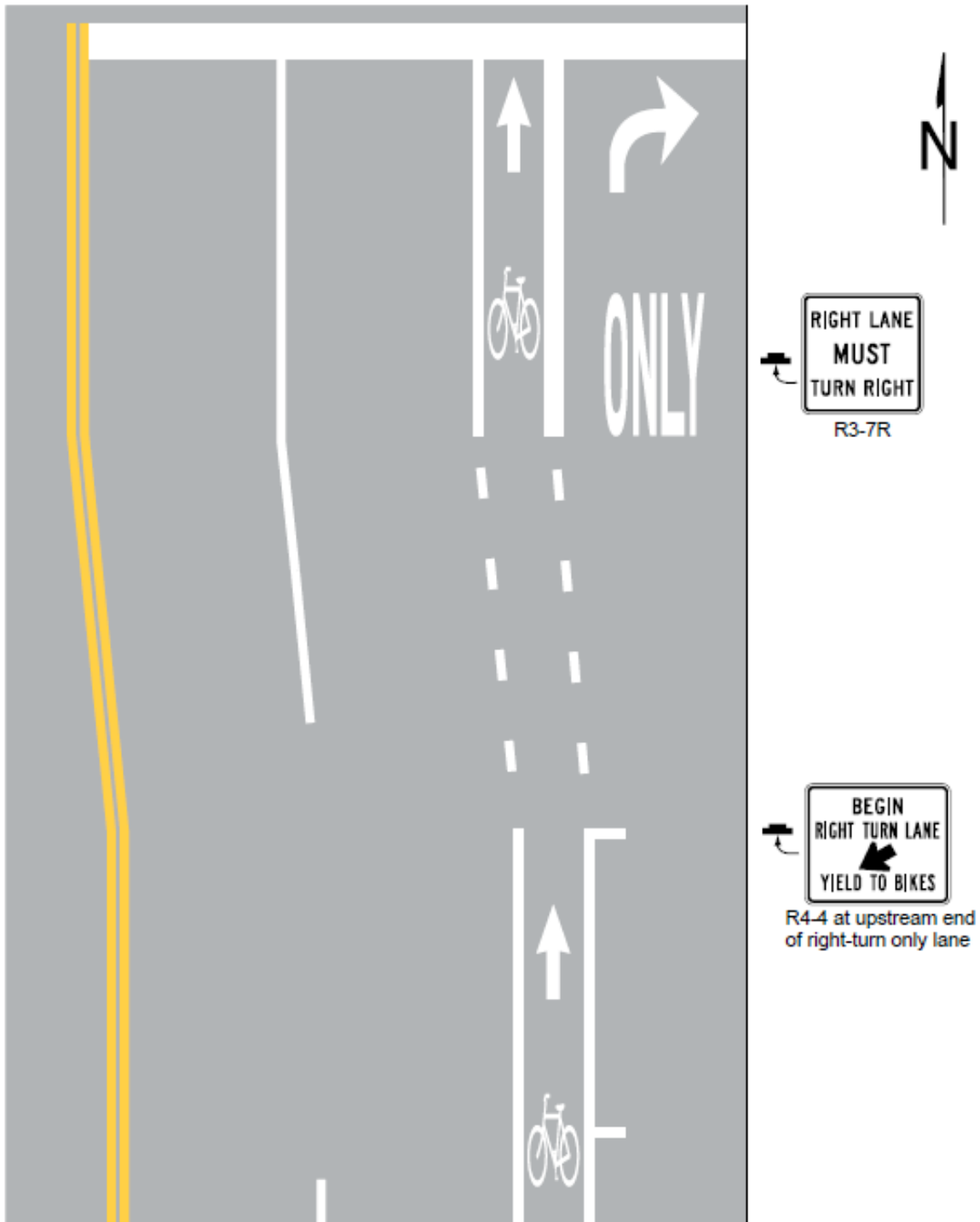


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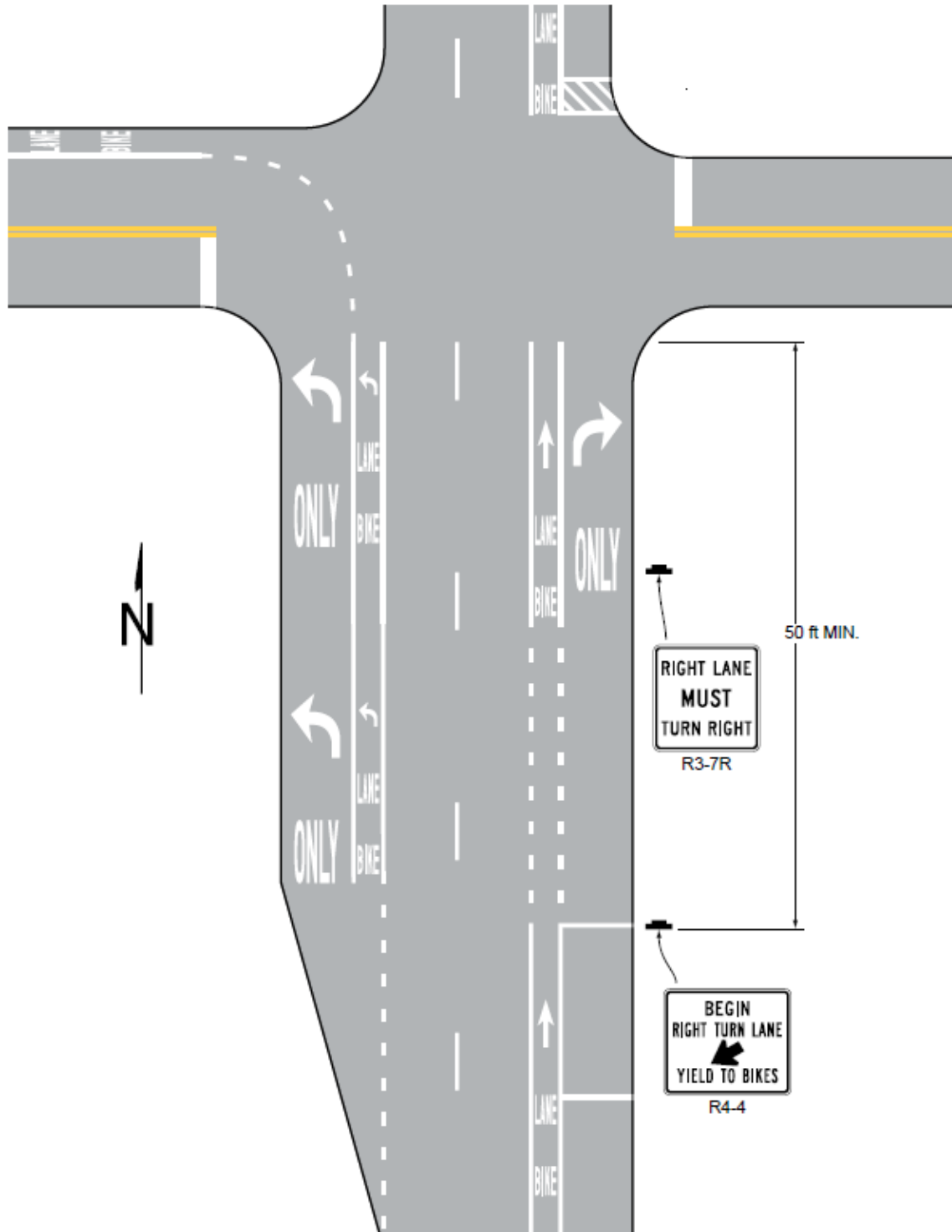
**Figure 9E-3. Examples of Conventional Bicycle Lane Markings on an Approach to an Intersection**  
(Sheet 2 of 3)



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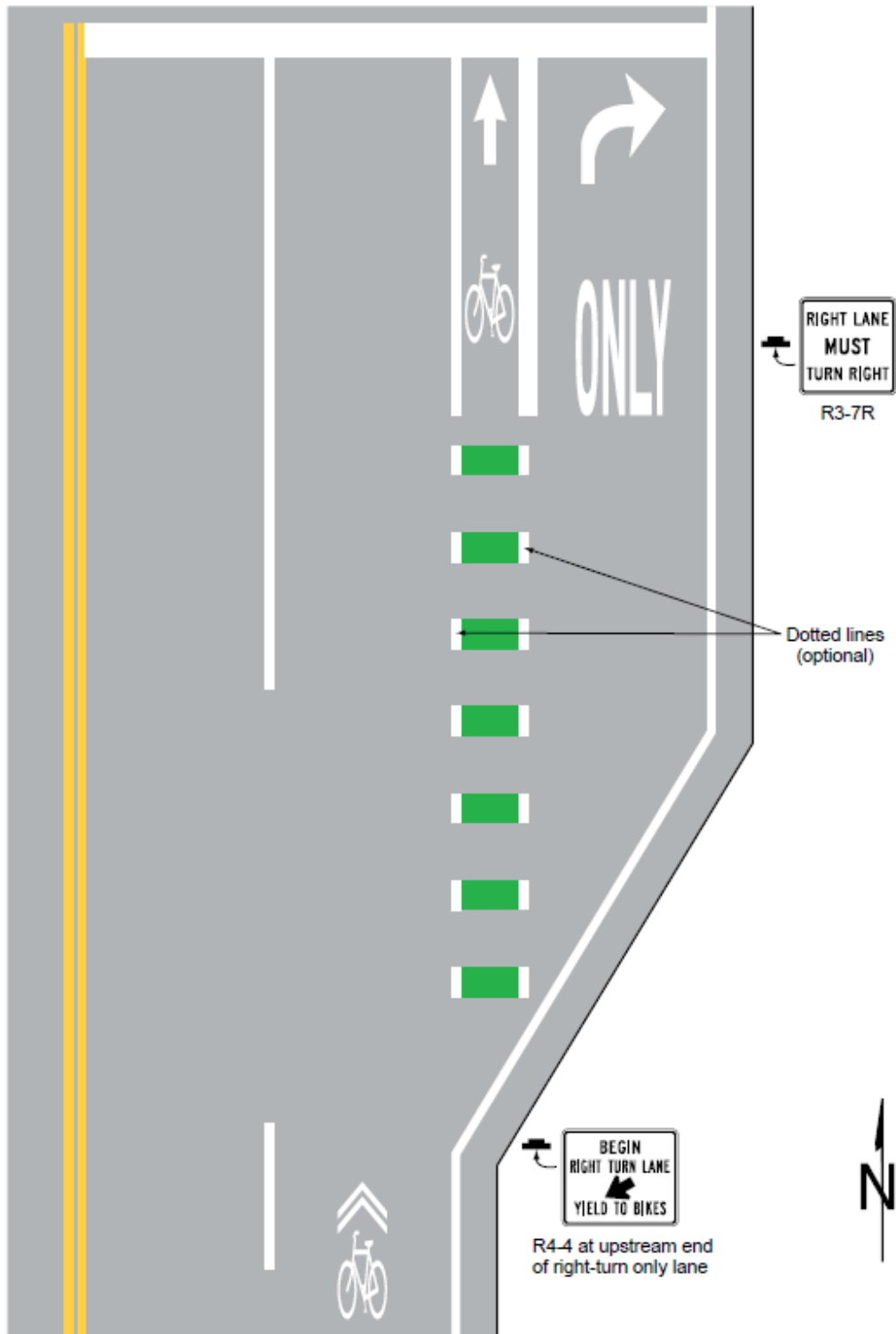
**Figure 9E-3. Examples of Conventional Bicycle Lane Markings on an Approach to an Intersection**  
(Sheet 3 of 3)



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Figure 9E-4. Example of **Conventional** Bicycle Lane Markings on an Approach to an Intersection that Transitions from a Shared Lane



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286 Support:  
287 12 Buffer-separated and separated bicycle lanes require additional considerations at intersections,  
288 including sight distances for bicycles and other road users, user expectations, and intersection geometry.

289 Option:  
290 13 A buffer-separated or separated bicycle lane may be shifted closer to, or farther away from the  
291 adjacent general-purpose lane depending upon site-specific conditions (see Drawings D and E in Figure  
292 9E-7).

293 Support:  
294 14 A buffer-separated or separated bicycle lane shifted away from the adjacent general-purpose lane at  
295 an intersection can create space for a motor vehicle to queue between the general-purpose lane and the  
296 extension of the bicycle lane. This design can also improve the safety and comfort of bicyclists by  
297 reducing the speed of turning motor vehicles, improving sightlines, and creating additional buffer space  
298 prior to the conflict point with turning motor vehicles.

299 15 The purpose of shifting a buffer-separated or separated bicycle lane away from the adjacent general-  
300 purpose lane is to allow the driver of a turning vehicle to undertake the tasks of turning and scanning for  
301 bicycle cross traffic in isolation versus simultaneously. Sufficient sight distance for both drivers and  
302 bicyclists is important in this design (see Drawing E in Figure 9E-7).

303 16 The purpose of shifting a buffer-separated or separated bicycle lane toward the adjacent general-  
304 purpose lane is to improve the visibility of bicyclists to the adjacent traffic and avoid conflicts between  
305 turning motor vehicles and bicyclists (see Drawing D in Figure 9E-7).

306 17 Staggering stop lines (see Section 3B.19) so that general-purpose lanes stop further in advance from  
307 the intersection than the bicycle lane can improve the visibility of bicyclists for drivers of turning vehicles  
308 (see Drawing D in Figure 9E-7).

309 Option:  
310 18 Where a general-purpose mandatory turn lane is provided at an intersection and the approach also  
311 includes a separated or buffer-separated bicycle lane, a mixing zone may be established to allow general-  
312 purpose turning traffic to share the roadway space with bicyclists (see Figure 9E-5).

#### 313 **Standard:**

314 19 **Mixing zones shall be used only where the bicycle lane is one-way in the same direction of**  
315 **travel as the adjacent general-purpose lane.**

316 20 **Mixing zones with a yielding area shall have yield markings indicating where general-purpose**  
317 **traffic entering the shared space shall yield to bicyclists.**

318 21 **Where a mixing zone continues to the intersection itself sharing space between bicyclists and**  
319 **general-purpose turning traffic, shared-lane markings and turn arrows shall be provided in the**  
320 **lane.**

#### 321 Support:

322 22 Mixing zones require bicycles and general traffic to share space, interrupting a buffer-separated or  
323 separated bicycle lane where bicycle traffic is otherwise separated from general traffic. The preference is  
324 to provide a dedicated bicycle facility for the intersection approach. If that is not possible, the mixing  
325 zone needs to indicate that bicyclists and motorists are entering a shared condition.

#### 326 *Guidance:*

327 23 *Where a mixing zone provides for the re-establishment of a bicycle lane after bicycles and general-*  
328 *purpose lanes cross paths, a buffered or physically- separated space should be provided between the*  
329 *bicycle lane and the adjacent general-purpose lane (see Drawing C in Figure 9E-5). **Change to omit***  
330 *hyphen after physically-*

### 332 **Section 9E.03 Extensions of Bicycle Lanes through Intersections**

#### 333 Support:

334 01 Extensions of bicycle lanes through intersections can help identify the paths of bicyclists and guide  
335 them on movements that could be difficult to discern. Extensions of bicycle lanes through intersections

336 also assist other road users of the intersection to identify where bicyclists are expected to operate and to  
337 recognize potentially unexpected conflict points.

338 02 The design, placement, and maintenance of bicycle lane extensions through intersections are  
339 important considerations, especially when contiguous to a crosswalk, to avoid potential confusion to  
340 pedestrians with vision disabilities.

341 03 The width and color of lane extension markings are discussed in Section 3B.11.

342 Option:

343 04 The bicycle symbol, the arrow marking, pavement word markings, or a combination thereof may be  
344 used in bicycle lane extensions through intersections.

345 05 Green-colored pavement may be used in a bicycle lane extension in accordance with the provisions  
346 of Section 3H.06.

347 **Standard:**

348 06 **Shared-lane markings or chevron markings shall not be used in bicycle lanes or bicycle lane  
349 extensions (see Section 9E.09).**

350 07 **Extensions of bicycle lanes through intersections shall use dotted line patterns.**

351 Support:

352 08 Separated and buffer-separated bicycle lanes may have alignments that are not as obvious within an  
353 intersection as a ~~standard~~-conventional bicycle lane, therefore additional conspicuity is important where  
354 these types of bicycle lanes cross intersections.

355 *Guidance:*

356 09 *Lane extension markings should be used to extend a buffer-separated or separated bicycle lane  
357 through intersections and driveways.*

358 10 *The extension of a bicycle lane through an intersection should use two lines defining both lateral  
359 limits of the bicycle lane.*

360 **Standard:**

361 11 **Where the path of the bicycle lane through the intersection is contiguous to a crosswalk, two  
362 longitudinal dotted lines shall be provided to establish the lateral limits of the bicycle lane  
363 extension. The transverse line establishing one side of the crosswalk, or the limit of a high-visibility  
364 crosswalk pattern (see Section 3C.05) that does not employ a transverse line, shall not be used to  
365 demarcate one side of the bicycle lane extension.**

366

## 367 **Section 9E.14 Bicycle Route Pavement Markings**

368 Option:

369 01 Bicycle route pavement markings simulating guide signs for bicycle routes (see Section 9D.02  
370 through 9D.07) and route auxiliary plaques (see Section 9D.08) may be used to supplement guide signing  
371 to help bicyclists in navigation (see Figure 9E-15).

372 **Standard:**

373 02 **Bicycle route pavement markings shall be limited to shared-use paths, separated bicycle lanes,  
374 or buffer-separated bicycle lanes. Bicycle route pavement markings shall not be used in ~~standard~~  
375 ~~conventional~~ bicycle lanes or in shared lanes.**

376 *Guidance:*

377 03 *A systematic methodology of locating guide signs for bicycle routes adjacent to the bicycle route  
378 pavement marking should be used that includes locations where either the sign or the pavement marking  
379 can exist alone to avoid overuse of the guide sign or the pavement marking.*

380 04 *The route marker pavement marking should be elongated.*

381 05 *The location, size, and materials of the route marker pavement marking should be designed in a  
382 manner that will minimize the loss of traction for bicyclists under wet conditions.*