

Attachment No. 6

**Item No.: 17A-BIK-01
(BTC version 1.3)**

**NCUTCD Proposal for Changes to the
Manual on Uniform Traffic Control Devices**

TECHNICAL COMMITTEE: Bicycle Technical Committee
ITEM NUMBER: 17A-BIK-01
TOPIC: Raised Devices along Bicycle Lanes
ORIGIN OF REQUEST: Bicycle Technical Committee
**AFFECTED SECTIONS
OF MUTCD:** Section 9C.04

DEVELOPMENT HISTORY:

- Approved by Bicycle Technical Committee: 06/09/2016
- Concurrence by Markings Technical Committee: 01/04/2017
- Approved by NCUTCD Council: 06/30/2017

This is a proposal for recommended changes to the MUTCD that has been approved by the NCUTCD Council. This proposal does not represent a revision of the MUTCD and does not constitute official MUTCD standards, guidance, or options. It 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:

This proposal revises Section 9C.04 – Markings for Bicycle Lanes to update the Manual in accordance with the current practice for design of separated bicycle lanes as defined and illustrated by other FHWA and national bicycle lane design references.

DISCUSSION

Bicycle lanes are defined as preferential use lanes and have been installed in many localities throughout the U.S. Operational problems that occur at bicycle lane installations include motor vehicles parking in the bicycle lane and/or motor vehicles using the bicycle lane as a travel lane to pass slow moving or stopped motor vehicles in the adjacent travel lanes. Channelizing devices may be desirable to channelize bicycle and motor vehicle traffic where encroachment of motor vehicles into a bicycle lane is a problem or where motorists and bicyclists are prohibited from turning across the path of one another.

37 To address these problems, many agencies and municipalities have installed marked buffers and
38 separated bicycle lanes. Many of these installations include channelizing devices between the
39 bicycle lane and adjacent travel lane.

40
41 The current text in Section 9C.04 recommends against the use of posts and raised pavement
42 markers adjacent to bicycle lanes, however, in May 2015 FHWA published the *Separated Bike*
43 *Lane Planning and Design Guide* which depicts numerous types of channelizing devices along
44 bicycle lanes. These devices include barrier, flexible delineators, rigid posts and curbs. This
45 proposal modifies Section 9C.04 to comply with the guidance in the FHWA *Separated Bike*
46 *Lane Planning and Design Guide*.

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48 **RECOMMENDED MUTCD CHANGES**

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50 The following present the proposed changes to the current MUTCD within the context of the
51 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
52 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
53 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double
54 underline for additions and ~~green double strikethrough~~ for deletions. In some cases, background
55 comments may be provided with the MUTCD text. These comments are indicated by highlight
56 ted light blue in brackets.

57
58 **PART 9. TRAFFIC CONTROL FOR BICYCLE FACILITIES**

59
60 **CHAPTER 9C. MARKINGS**

61
62 **Section 9C.04 Markings for Bicycle Lanes**

63 Support:
64 01 Pavement markings designate that portion of the roadway for preferential use by bicyclists
65 (see Section 3D.01). Markings inform all road users of the restricted nature of the bicycle lane.
66 (approved by NCUTCD Council 06/23/2011)

67 **Standard:**
68 02 Longitudinal pavement markings and bicycle lane symbol or word markings (see
69 Figure 9C-3) shall be used to define bicycle lanes. (approved by NCUTCD Council
70 06/23/2011)

71 *Guidance:*
72 03 ~~If used, The first bicycle lane symbol or word, symbol, and/or arrow marking (see Figure~~
73 ~~9C-3) in a bicycle lane should be placed at the beginning of the bicycle lane and the~~
74 ~~downstream symbol or word markings should be placed at periodic intervals along the bicycle~~
75 ~~lane based on engineering judgment.~~ (approved by NCUTCD Council 06/23/2011)

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78 ~~**Standard:**~~
79 04 ~~If the bicycle lane symbol marking is used in conjunction with word or arrow~~
80 ~~messages, it shall precede them.~~ (approved by NCUTCD Council 06/23/2011)

81 Option:

82 04 An arrow marking (see Figure 9C-3) may be used in conjunction with the bicycle lane
83 symbol or word marking, placed downstream from the symbol or word marking.
84 ~~05 If the word, symbol, and/or arrow pavement markings shown in Figure 9C-3~~ Where the
85 bicycle lane symbol or word markings are used, Bike Lane signs (see Section 9B.04) may also be
86 used, but to avoid overuse of the signs not necessarily adjacent to every set of pavement
87 markings. (approved by NCUTCD Council 06/23/2011)

88 **Standard:**

89 06 Except as provided in Paragraph 06a, A-a through bicycle lane shall not be positioned
90 **to the right of a right turn only lane or to the left of a left turn only lane.**

91 **Option:**

92 06a A through bicycle lane may be positioned to the right of a right turn only lane or to the left
93 of a left turn only lane provided that the bicycle lane is controlled by a traffic signal that displays
94 bicycle signal indications. [from FHWA 2013 draft NPA] Refer to Chapter 9D for Standards,
95 Guidance and Options regarding bicycle signals and phasing. (or new Chapter XX as noted in
96 Joint STC/BTC proposal for Bicycle Signal Faces approved by NCUTCD Council June 28,
97 2014)

98 **Support:**

99 07 Unless controlled by a bicycle signal indication, a A bicyclist continuing straight through an
100 intersection from the right of a right-turn lane or from the left of a left-turn lane would be
101 inconsistent with normal traffic behavior and would violate the expectations of right- or left-
102 turning motorists.

103 **Guidance:**

104 *08 When the right through lane is dropped to become a right turn only lane, the bicycle lane*
105 *markings should stop at least 100 feet before the beginning of the right-turn lane. Through*
106 *bicycle lane markings should resume to the left of the right turn only lane.*

107 *09 An optional through-right turn lane next to a right turn only lane should not be used where*
108 *there is a through bicycle lane. If a capacity analysis indicates the need for an optional through-*
109 *right turn lane, the bicycle lane should be discontinued at the intersection approach.*

110 ~~*10—Posts or raised pavement markers should not be used to separate bicycle lanes from*~~
111 ~~*adjacent travel lanes.*~~

112 **Support:**

113 ~~*11—Using raised devices creates a collision potential for bicyclists by placing fixed objects*~~
114 ~~*immediately adjacent to the travel path of the bicyclist. In addition, raised devices can prevent*~~
115 ~~*vehicles turning right from merging with the bicycle lane, which is the preferred method for*~~
116 ~~*making the right turn. Raised devices used to define a bicycle lane can also cause problems in*~~
117 ~~*cleaning and maintaining the bicycle lane.*~~