



National Committee on Uniform Traffic Control Devices

12615 West Keystone Drive * Sun City West, AZ, 85375
Telephone (623)680-9592 * e-mail: ncutcd@aol.com

Attachment No. 5
Item No.: 18B-MKG-02

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

TECHNICAL COMMITTEE: Markings Committee
ITEM NUMBER: 18B-MKG-02
TOPIC: Lane-Reduction Transition Markings – Advance Warning Distances
ORIGIN OF REQUEST: Related to a joint effort by Markings and R/W Signs Committee on Lane Drops on Freeways. Specific issue on Figure 3B.14 was referred to Chair by Washington State DOT member on the Committee – Brian Walsh
AFFECTED SECTIONS OF MUTCD: Section 3B.09, Figure 3B.14 Lane Transition

DEVELOPMENT HISTORY:

- Approved by Technical Committee: 6/21/2018
- Approved by NCUTCD Council: MM/DD/YYYY

This is a proposal for recommended changes to the MUTCD that has been developed by a technical committee of the NCUTCD. The NCUTCD is distributing it 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, or options. 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:

This proposal provides an option for determining the distance required before ending a broken line pattern in lane transition areas. An option statement has been added to Section 3C.09 while modifying Figure 3B.14. Additional language in the option statement to allow dotted extension lines to the end of the lane and taper area is proposed to support existing practice in many state DOTs.

DISCUSSION

Washington State DOT, as well as other jurisdictions, have been installing and marking passing lanes per the latest edition of the MUTCD (2009). Based on current guidance of signing and marking lane transition areas independent of their site-specific needs, the proposal is to take Figure 3B.14 and modify it to show a further extension of the broken line striping pattern. This

33 will prevent the common premature ending of passing maneuvers by motorists and inform the
34 motorist of additional passing lane length. Operationally, motorists do not use the full length of
35 the full width portion of the passing area since the striping pattern ends prematurely hundreds of
36 feet before the transition at the taper. By adding this option statement, jurisdictions can utilize
37 and maximize the effective passing lane distance available. The passing lane effective length is
38 critical for getting around slower moving vehicles. When installing a passing lane, widening the
39 road is a significant investment and utilizing the passing lane effectively is critical to maximize
40 the investment in mobility.

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42 **RECOMMENDED MUTCD CHANGES**

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44 The following present the proposed changes to the current MUTCD within the context of the
45 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
46 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
47 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double
48 underline for additions and ~~green double strikethrough~~ for deletions. In some cases, background
49 comments may be provided with the MUTCD text. These comments are indicated by
50 **[highlighted light blue in brackets]**.

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52 **PART 3. MARKINGS**

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54 **CHAPTER 3B. PAVEMENT AND CURB MARKINGS**

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56 **Section 3B.09 Lane-Reduction Transition Markings**

57 Support:

58 01 Lane-reduction transition markings are used where the number of through lanes is reduced
59 because of narrowing of the roadway or because of a section of on-street parking in what would
60 otherwise be a through lane. Lane-reduction transition markings are not used for lane drops.

61 **Standard:**

62 02 **Except as provided in Paragraph 3, where pavement markings are used, lane-**
63 **reduction transition markings shall be used to guide traffic through transition areas where**
64 **the number of through lanes is reduced, as shown in Figure 3B-14. On two-way roadways,**
65 **no-passing zone markings shall be used to prohibit passing in the direction of the**
66 **convergence, and shall continue through the transition area.**

67 Option:

68 03 On low-speed urban roadways where curbs clearly define the roadway edge in the lane-
69 reduction transition, or where a through lane becomes a parking lane, the edge line and/or
70 delineators shown in Figure 3B-14 may be omitted as determined by engineering judgment.

71 *Guidance:*

72 04 *For roadways having a posted or statutory speed limit of 45 mph or greater, the transition*
73 *taper length for a lane-reduction transition should be computed by the formula $L = WS$. For*
74 *roadways where the posted or statutory speed limit is less than 45 mph, the formula $L = WS^2/60$*
75 *should be used to compute the taper length.*

76

77 Support:

78 05 Under both formulas, L equals the taper length in feet, W equals the width of the offset
79 distance in feet, and S equals the 85th-percentile speed or the posted or statutory speed limit,
80 whichever is higher.

81 *Guidance:*

82 06 *Where observed speeds exceed posted or statutory speed limits, longer tapers should be*
83 *used.*

84 Option:

85 07 On new construction, where no posted or statutory speed limit has been established, the
86 design speed may be used in the transition taper length formula.

87 *Guidance:*

88 08 *Lane line markings should be discontinued one-quarter of the distance between the Lane*
89 *Ends sign (see Section 2C.42) and the point where the transition taper begins.*

90 Option:

91 08a Lane line markings may be continued an additional one-quarter of the distance between the
92 Lane Ends sign (see Section 2C.42) and the point where the transition taper begins.

93 08b Dotted line extensions may be used instead of lane line markings within the lane reduction
94 transition area.

95 *Guidance:*

96 09 *Except as provided in Paragraph 3 for low-speed urban roadways, the edge line markings*
97 *shown in Figure 3B-14 should be installed from the location of the Lane Ends warning sign to*
98 *beyond the beginning of the narrower roadway.*

99 Support:

100 10 Pavement markings at lane-reduction transitions supplement the standard signs. See Section
101 3B.20 for provisions regarding use of lane-reduction arrows.

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Figure 3B-14. Examples of Applications of Lane-Reduction Transition Markings

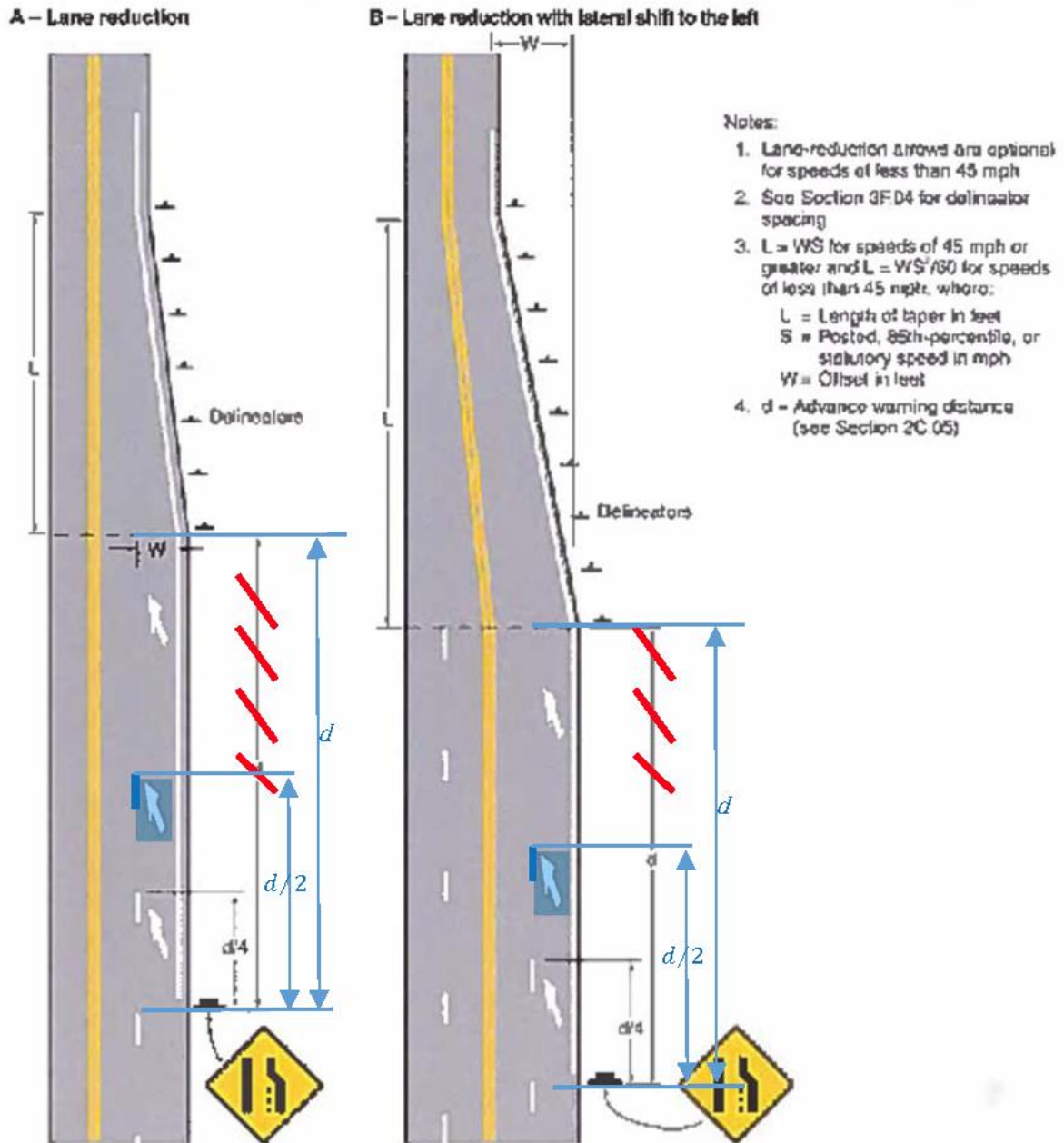


Figure 3B-14. Examples of Applications of Lane-Reduction Transition Markings

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