



National Committee on Uniform Traffic Control Devices

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ATTACHMENT NO. 8
Item No.: 17A-STC-01

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NCUTCD Proposal for Changes to the Interim Approval IA-18 Intersection Bicycle Boxes

TECHNICAL COMMITTEE: Signals Technical & Bicycle Technical Committees
ITEM NUMBER: 17A-STC-01
TOPIC: Revisions to Interim Approval IA-18 Intersection Bicycle Boxes
ORIGIN OF REQUEST: Signals Technical & Bicycle Technical Committee
AFFECTED SECTIONS OF MUTCD: None. Interim Approval IA-18 only

DEVELOPMENT HISTORY:

- Approved by Technical Committees (Bicycle and Signal): 01/05/2017
- Approved by NCUTCD Council: 01/06/2017 (unanimous)

This is a proposal for recommended changes to an MUTCD Interim Approval 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. The MUTCD can be revised only through the federal rulemaking process.

SUMMARY:

The Interim Approval IA-18 for Intersection Bicycle Boxes included several General Conditions and provisions that were of concern to both Technical Committees. A Task Force consisting of members from both Technical Committees was formed to develop recommendations to address those concerns. The proposal includes recommended changes to Interim Approval IA-18.

DISCUSSION

FHWA published Interim Approval 18 (IA-18 on October 12, 2016. Members of the Signals Technical Committee and Bicycle Technical Committee identified concerns with some of the provisions of IA-18 and created a joint task force to evaluate IA-18 and identify recommended changes. Due to the timing of the IA publication and time necessary to develop recommended changes, the NCTUCD was not able to distribute the recommendations to its sponsoring organizations for review and comment prior to the January 2017 meeting. Sponsor review and comment is one of the strengths of the NCUTCD process.

Provision 2c on page 3 of IA-18 mandates that where a bicycle box is provided across multiple lanes of an approach, countdown pedestrian signals shall be provided for the crosswalk across the approach on which the bicycle box is located. Boxes crossing multiple lanes are intended to facilitate left turns for bicyclists. It is the general consensus of the NCUTCD that:

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- a. Detecting cyclists in boxes in front of multiple lanes and/or providing the pedestrian signal on a recall basis is problematic for a number of reasons.
 - b. It may be desired to install multiple lane bicycle boxes at locations where crosswalks and pedestrian signals are not provided. Installation of the multiple lane box would require installation of crosswalks and pedestrian signals.
 - c. Installation of separated non-continuous multiple boxes on approach lanes was seen as a preferred design to this treatment. The box would only cross a lane adjacent to the bicycle lane and would not be continuous across multiple lanes.
 - d. Two stage turn boxes would be a preferred design to provide bicyclists with an alternate method for left turns.

50 It is the opinion of the NCUTCD that the FHWA make the following changes to the October 12,
51 2016 IA-18 Bicycle Boxes Interim Approval:

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- 1. Revise IA-18 to delete reference to providing continuous multiple lane bicycle boxes (delete Provision 2c and Attachment Figure IA-18-2).
 - 2. Revise IA-18 to include a Figure illustrating a layout for separated non-continuous bicycle boxes across multiple lanes. Delete current Figure IA-18-2 and replace with new Figures as shown.
 - 3. The NCTUCD requests that the FHWA issue an Interim Approval for the NCUTCD-approved June 2016 Two Stage Turn Queuing Box.

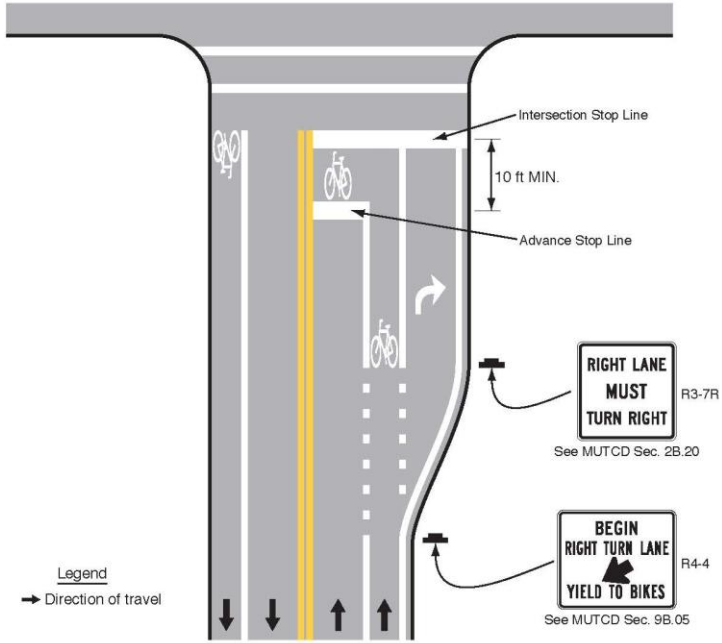
61 **RECOMMENDED CHANGES TO INTERIM APPROVAL IA-18**

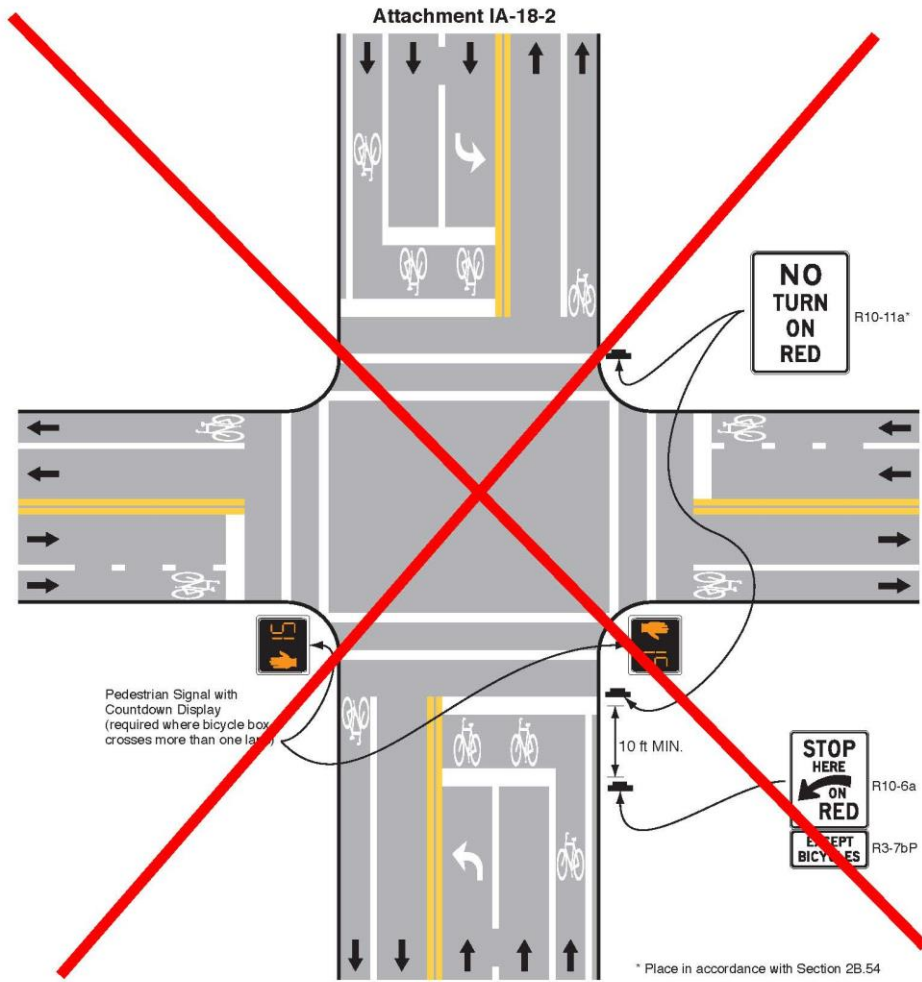
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63 The following present the proposed changes to the current Interim Approval IA-18 within the
64 context of the current IA language. Proposed additions to the IA are shown in blue underline and
65 proposed deletions from the IA are shown in ~~red strikethrough~~.

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- 1. **General Conditions:** The use of bicycle boxes is optional. A Two-Stage Turn Queuing Box should be used instead of multiple lane bicycle boxes. However, if an agency opts to use bicycle boxes under this Interim Approval, such use shall be limited to signalized intersections. The design of the bicycle box shall comply with the design conditions provided below.
 - 2. **Design of Intersection Bicycle Boxes:** The design of the bicycle box (see Attachments IA-18-1 and IA- 18-2) shall comply with the following provisions:
 - a. A bicycle box shall be formed by an advance stop line placed at least 10 feet in advance of the intersection stop line.
 - b. At least one bicycle symbol shall be placed within a bicycle box (see Attachments IA-18-1 and IA-18-2 for placement details).

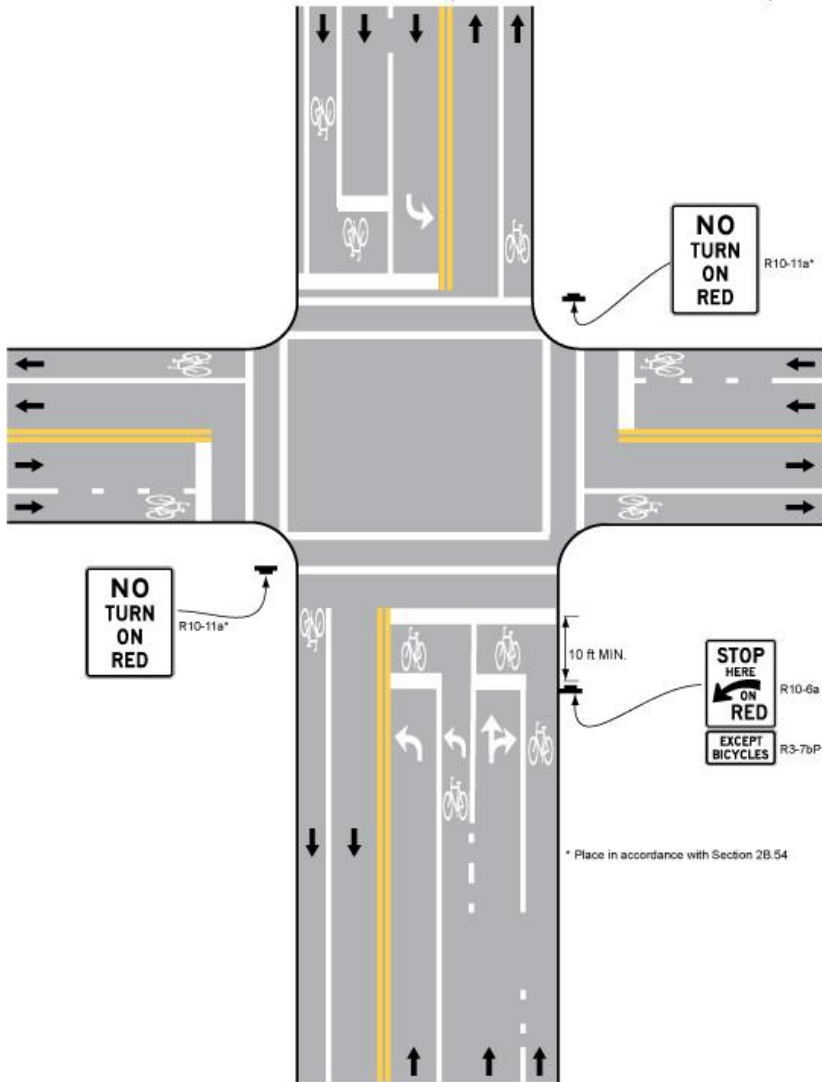
- 82 ~~e. Where a bicycle box is provided across multiple lanes of an approach, countdown~~
83 ~~pedestrian signals (see Section 4E.07 of the 2009 MUTCD) shall be provided for the~~
84 ~~crosswalk across the approach on which the bicycle box is located to inform bicyclists~~
85 ~~whether there is adequate time remaining to cross to an adjacent lane before the onset of~~
86 ~~the green signal phase for that approach.~~
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- 88 c. A NO TURN ON RED (R10-11) sign should be considered wherever a bicycle box is
89 placed in a lane from which turns on red would otherwise be permitted. ~~Turns on Red~~
90 ~~shall be prohibited from the approach where a bicycle box is placed using a NO TURN~~
91 ~~ON RED (R10-11 series) sign.~~
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- 93 d. At least 50 feet of bicycle lane should be provided on the approach to a bicycle box so
94 bicyclists will not need to ride between lanes to enter the bicycle box.
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- 96 e. A STOP HERE ON RED (R10-6 or R10-6a) sign should be provided at the advance stop
97 line defining the bicycle box with an EXCEPT BICYCLES (R3-7bP) word legend plaque
98 below (see Attachments IA-18-1 and IA-18-2).
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- 100 f. Green-colored pavement (see Interim Approval No. 14) may be used within a bicycle box
101 and the approach bicycle lane, where one is provided. A separate request for Interim
102 Approval for green-colored pavement is required if the agency has not already received
103 such an approval.
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Attachment IA-18-1



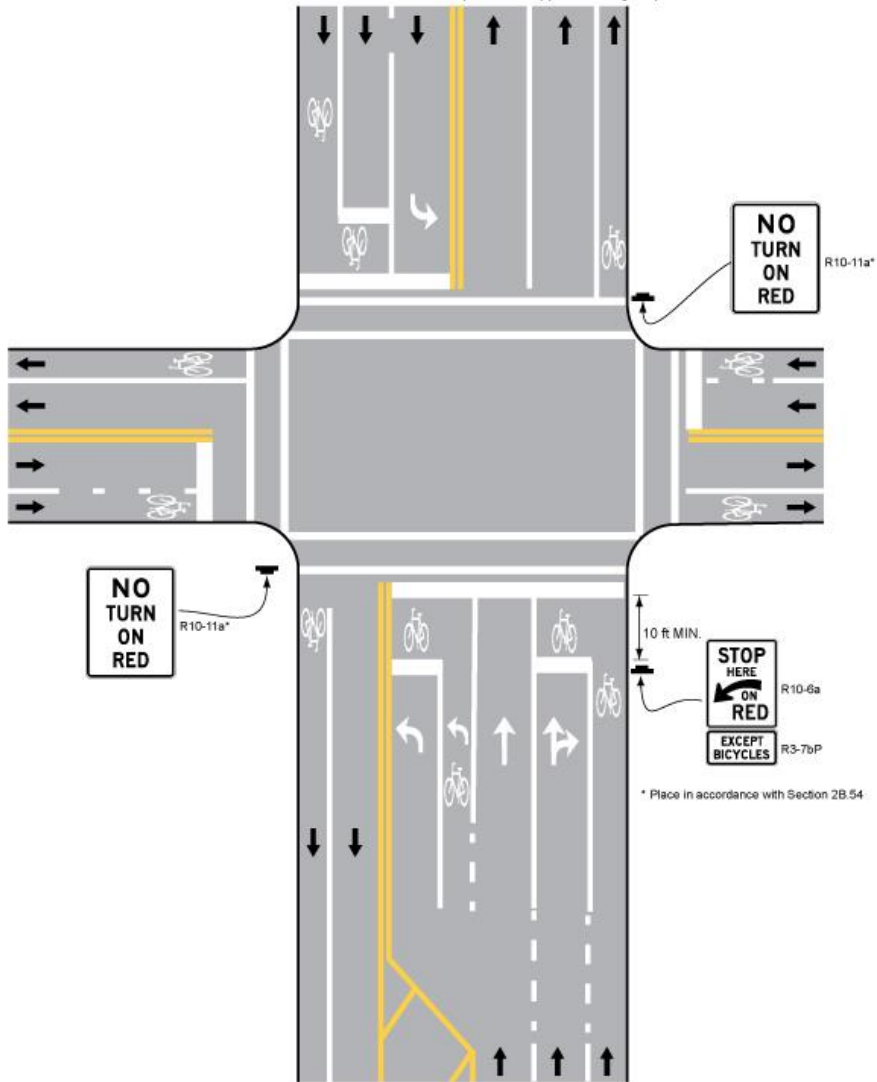


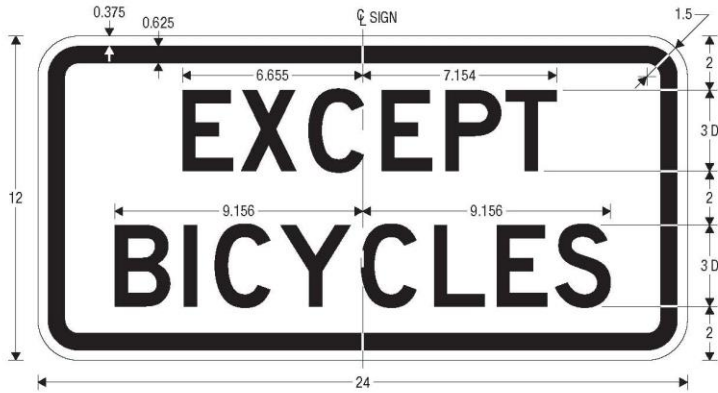
Attachment IA-18-2 (Modified to reflect NCUTCD Recommendations)



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Attachment IA-18-2 (Multilane Approach Diagram)





R3-7bP
EXCEPT BICYCLES (PLAQUE)

COLORS: LEGEND, BORDER — BLACK
BACKGROUND — WHITE (RETROREFLECTIVE)

IA-18-3