

National Committee on Uniform Traffic Control Devices

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Item No.: 19A-TTC-02

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

TECHNICAL COMMITTEE: Temporary Traffic Control Committee

ITEM NUMBER: 19A-TTC-02

TOPIC: Typical Applications for Roundabouts

ORIGIN OF REQUEST: FHWA MUTCD Team

AFFECTED SECTIONS OF MUTCD: Chapter 6H. Typical Applications
New Notes Page and Figure 6H.XX, Flagging Operation on a Single-Lane Roundabout, TA-XX
New Notes Page and Figure 6H.YY, Inside Lane Closure on a Multi-Lane Roundabout, TA-YY
New Notes Page and Figure 6H.ZZ, Outside Lane Closure on a Multi-Lane Roundabout, TA-ZZ

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DEVELOPMENT HISTORY:

- Approved by Technical Committee: 01/10/2019

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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.

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SUMMARY:

The Temporary Traffic Control Technical Committee recommends three new Typical Application (TA's) to Part 6H involving work within the circulating lane(s) of single and multi-lane roundabouts including "Flagging Operation on a Single-Lane Roundabout", "Inside Lane Closure on a Multi-Lane Roundabout" and "Outside Lane Closure on a Multi-Lane Roundabout".

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DISCUSSION

Modern roundabouts have been constructed in the United States since the early 1990's (approaching 30 years). The pavement within the roundabout intersection have needed regular maintenance treatments, including pavement replacement, since originally constructed. The

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32 current and previous editions of the MUTCD included no guidance in Part 6H (Typical
33 Applications) regarding the use of temporary traffic control for work within the circulating
34 lane(s) of a modern roundabout. As a result, several states have developed their own typical
35 applications to meet these needs including Virginia DOT, Pennsylvania DOT, Oregon DOT,
36 Washington DOT, etc.

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38 Other industry resources for public agencies to utilize include ATSSA’s document “Temporary
39 Traffic Control for Building and Maintaining Single and Multi-lane Roundabouts”, January 2013
40 (<https://drive.google.com/file/d/0B6x5IpW9760GYIE2ZFd6TkZ1Mjg/view>) and the FHWA
41 Work Zone Safety Grant Page through Wayne University (<http://workzone.eng.wayne.edu/>)
42 which includes Temporary Traffic Control Plans (TTCP) software which will develop specific
43 Typical Applications for intersection and roadway sections based on the specific work being
44 performed as well as existing conditions. A total of 20 different TA’s can be generated through
45 the Modern Roundabout Intersection component of the TTCP software.

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47 The Temporary Traffic Control Technical Committee has worked with the NCUTCD’s
48 Roundabout Task Force to narrow down the number of TA’s available to three that would be
49 most useful to practitioners “Flagging Operation on a Single-Lane Roundabout”, “Inside Lane
50 Closure on a Multi-Lane Roundabout” and “Outside Lane Closure on a Multi-Lane
51 Roundabout”. These are consistent with TA’s in current use which were developed by the
52 Virginia DOT, Pennsylvania DOT, Oregon DOT and Washington DOT.

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54 One comment provided by Janet Barlow of Accessible Design for the Blind, who is a frequent
55 guest of the Temporary Traffic Control Technical Committee, was to include crosswalks on each
56 approach to the roundabouts similar to what is shown in the in Chapter 3C. Roundabout
57 Markings. The Temporary Traffic Control Technical Committee concurred with the
58 recommendation and recommended to address this comment at the same time as addressing
59 comments from Sponsors.

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61 **RECOMMENDED MUTCD CHANGES**

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

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72 CHAPTER 6H TYPICAL APPLICATIONS
73 Notes for Figure 6H-XX – Typical Application XX
74 Flagging Operation on a Single-Lane Roundabout

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76 Standard:

- 77 1. Flaggers shall control traffic flow on all approaches of the one-lane roundabout.
- 78 2. When crosswalks or other pedestrian facilities are closed or relocated,
79 temporary facilities shall be detectable and shall include accessibility features
80 consistent with the features present in the existing pedestrian facility. See
81 Figure 6H-29. Crosswalk Closures and Pedestrian Detours (TA-29).
- 82 3. At night, flagger stations shall be illuminated.

83 Guidance:

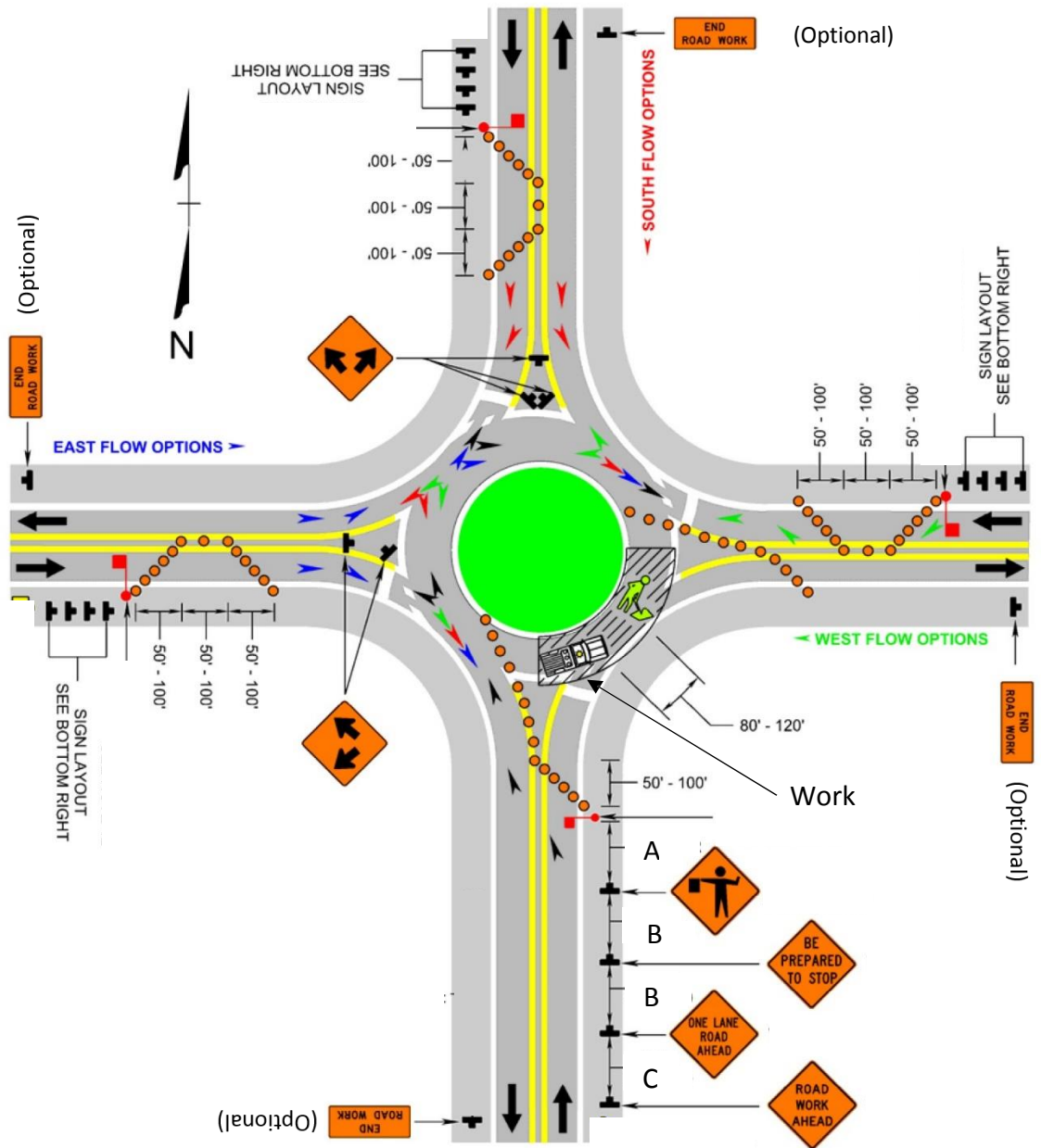
- 84 4. A PCMS should be considered as part of the temporary traffic control plan to
85 provide clear guidance to motorist on all approaches of the roundabout.
- 86 5. When designing the temporary traffic control and installing the channelizing
87 devices for work activities at roundabouts, accommodations for the turning radius
88 of tractor trailer vehicles and other large vehicles should be considered and the
89 work zone designed accordingly.

90 Option:

- 91 6. Periodic adjustments to the channelizing devices may be allowed in an active work zone
92 to accommodate the turning movements of tractor trailer vehicles and other large
93 vehicles.
- 94 7. On the approaches where traffic flow will be split, two pilot vehicles may be used to
95 guide traffic through the roundabout.

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Figure 6H-XX. Flagging Operation on a Single-Lane Roundabout (TA-XX)



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Notes for Figure 6H-YY --Typical Application YY
Inside Lane Closure on a Multi-Lane Roundabout

Standard:

1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility. See Figure 6H-29. Crosswalk Closures and Pedestrian Detours (TA-29).

Guidance:

2. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition.
3. When designing the temporary traffic control and installing the channelizing devices for work activities at roundabouts, accommodations for the turning radius of tractor trailer vehicles and other large vehicles should be considered and the work zone designed accordingly.

Option:

4. Periodic adjustments to the channelizing devices may be allowed in an active work zone to accommodate the turning movements of tractor trailer vehicles and other large vehicles.
5. On a multi-lane approach, either lane may be closed.

133 Notes for Figure 6H-ZZ --Typical Application ZZ
134 Outside Lane Closure on a Multi-Lane Roundabout
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136 Standard:

- 137 1. Multi-lane approaches to the roundabout shall be reduced to one lane and a
138 flagger shall control traffic flow on each approach of the roundabout.
- 139 2. When crosswalks or other pedestrian facilities are closed or relocated, temporary
140 facilities shall be detectable and shall include accessibility features consistent with
141 the features present in the existing pedestrian facility. See Figure 6H-29.
142 Crosswalk Closures and Pedestrian Detours (TA-29).
- 143 3. At night, flagger stations shall be illuminated.

144 Guidance:

- 145 4. Care should be exercised when establishing the limits of the work zone to insure
146 maximum possible sight distance to the flagger station.
- 147 5. A PCMS should be used as part of the temporary traffic control plan to provide clear
148 guidance to motorist on all approaches of the roundabout that must reverse traffic
149 flow.
- 150 6. When designing the temporary traffic control and installing the channelizing devices
151 for work activities at roundabouts, accommodations for the turning radius of tractor
152 trailer vehicles and other large vehicles should be considered and the work zone
153 designed accordingly.

154 Option

- 155 7. Periodic adjustments to the channelizing devices may be allowed in an active work zone
156 to accommodate the turning movements of tractor trailer vehicles and other large
157 vehicles.
- 158 8. On the approaches where traffic flow will be split, two pilot vehicles may be used to
159 guide traffic through the roundabout.

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