



National Committee on Uniform Traffic Control Devices

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Item No.: 24B-TTC-05

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

COMMITTEE / TASK FORCE: Temporary Traffic Control Technical Committee
ITEM NUMBER: 24B-TTC-05
TOPIC: Automated Flagger Assistance Device (AFAD) Typical Application
ORIGIN OF REQUEST: Initiated by TTC to create more typical applications
AFFECTED SECTIONS OF MUTCD: Revisions to Section 6L.02; New Notes Page and Figure 6P-10a Lane Closure on a Two-Lane Road Using Automated Flagger Assistance Device (AFAD)

DEVELOPMENT HISTORY:

Approved by TTC: 06/26/2024
Approved by NCUTCD Council:

This is a proposal for recommended changes to the MUTCD that has been developed by a technical committee or joint task force 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 adds a Typical Application for Automated Flagger Assistance Devices, moving some information from Section 6L.02 to the Notes page of the Typical Application. Figures 6L-1 and 6L-2 are deleted from Sections 6L.03 and 6L.04, respectively, and are used as drawings A and B on the Typical Application.

The proposal also revises guidance on the appropriate work duration for use of AFADs.

DISCUSSION:

The TTC Technical Committee proposes to add a new Typical Application (TA) to Chapter 6P to address the use of Automated Flagger Assistance Devices (AFADs). There are currently Figures and text in Chapter 6L but no Typical Applications. A new TA for AFADs is proposed including "STOP/SLOW Automated Flagger Assistance Devices (AFAD)" and "Red/Yellow Lens Automated Flagger Assistance Devices (AFAD)". The notes that were included on the Typical

34 Application are removed from Section 6L.02. Figures 6L-1 and 6L-2 from Sections 6L.03 and
35 6L.04, respectively, are shown as deleted from these Sections. These Figures are used as
36 drawings A and B on the Typical Application.

37
38 Other changes to Section 6L.02 were made to eliminate the guidance that AFADs not be used
39 for long-term stationary work. If it would be acceptable to have flaggers for long-term stationary
40 work, it should be acceptable to use AFADs to get flaggers out of traffic. The guidance
41 statement requiring states to adopt a policy on the use of AFADs is also proposed to be deleted.
42 The technical committee determined this is a holdover from when AFADs were new traffic
43 control devices. The task force wants to allow the use of AFADs whenever flaggers may be
44 handling traffic, not based on ADT or other thresholds.

45
46 **RECOMMENDED MUTCD CHANGES:**
47 The following present the proposed changes to the current MUTCD within the context of the
48 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
49 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
50 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double
51 underline for additions and ~~green double strikethrough~~ for deletions. In some cases,
52 background comments may be provided with the MUTCD text. These comments are indicated
53 by bracketed white text in shaded green. Deletions made by a technical committee or task
54 force after initial distribution to sponsoring organizations are shown in ~~highlighted red~~
55 ~~strikethrough and Helvetica text~~. Additions made by a technical committee or task force after
56 initial distribution to sponsoring organizations are shown in underline blue and Helvetica text.

57 58 **PART 6 TEMPORARY TRAFFIC CONTROL**

59 60 **CHAPTER 6L. OTHER TTC ZONE TRAFFIC CONTROL DEVICES**

61 62 **Section 6L.02 Automated Flagger Assistance Devices – General**

63 Support:

64 01 Automated Flagger Assistance Devices (AFADs) enable a flagger(s) to be positioned out of the lane
65 of traffic and are used to control road users through temporary traffic control zones. These devices are
66 designed to be remotely operated either by a single flagger at one end of the TTC zone or at a central
67 location, or by separate flaggers near each device's location.

68 02 There are two types of AFADs:

- 69 A. An AFAD (see Section 6L.03) that uses a remotely controlled STOP/SLOW sign on either a
70 trailer or a movable cart system to alternately control right-of-way.
- 71 B. An AFAD (see Section 6L.04) that uses remotely controlled red and yellow lenses and a gate arm
72 to alternately control right-of-way.

73 03 ~~AFADs might be appropriate for short-term and intermediate-term activities (see Section 6N.01).~~

74 Typical applications include TTC activities such as, but not limited to:

- 75 A. Bridge maintenance;
- 76 B. Haul road crossings; and
- 77 C. Pavement patching.

78 Option:

79 03a AFADs may be used any time flaggers are controlling road users through temporary traffic control
80 zones.

81 **Standard:**

82 04 AFADs shall only be used in situations where there is only one lane of approaching traffic in
83 the direction to be controlled.

84 *Guidance:*

85 04a *AFADs should not be used at intersecting roads and driveways.*

86 05 ~~When used at night, the AFAD location shall be illuminated in accordance with Section 6D.06.~~

87 **[Moved to Typical Application Notes]**

88 *Guidance:*

89 06 ~~AFADs should not be used for long-term stationary work (see Section 6N.01).~~

90 **Standard:**

91 07 Because AFADs are not traffic control signals, they shall not be used as a substitute for or a
92 replacement for a continuously operating temporary traffic control signal as described in Section
93 6L.01.

94 08 ~~AFADs shall meet the crashworthy performance criteria contained in Section 6A.04.~~ **[Moved to**

95 **Typical Application Notes]**

96 *Guidance:*

97 09 *If used, AFADs should be located in advance of one-lane, two-way tapers and downstream from the*
98 *point where approaching traffic is to stop in response to the device.*

99 **Standard:**

100 10 If used, AFADs shall be placed so that all of the signs and other items controlling traffic
101 movement are readily visible to the driver of the initial approaching vehicle with advance warning
102 signs alerting other approaching traffic to be prepared to stop.

103 11 If used, an AFAD shall be operated only by a flagger (see Section 6D.01) who has been trained
104 on the operation of the AFAD. The flagger(s) operating the AFAD(s) shall not leave the AFAD(s)
105 unattended at any time while the AFAD(s) is being used.

106 12 The use of AFADs shall conform to one of the following methods:

107 A. An AFAD at each end of the TTC zone (Method 1), or

108 B. An AFAD at one end of the TTC zone and a flagger at the opposite end (Method 2).

109 13 Except as provided in Paragraph 14, two flaggers shall be used when using either Method 1 or
110 Method 2.

111 **Option:**

112 14 A single flagger may simultaneously operate two AFADs (Method 1) or may operate a single AFAD
113 on one end of the TTC zone while being the flagger at the opposite end of the TTC zone (Method 2) if
114 both of the following conditions are present:

115 A. The flagger has an unobstructed view of the AFAD(s), and

116 B. The flagger has an unobstructed view of approaching traffic in both directions.

117 *Guidance:*

118 15 *When an AFAD is used, the advance warning signing should include a ROAD WORK AHEAD (W20-*
119 *1) sign, a ONE LANE ROAD (W20-4) sign, and a BE PREPARED TO STOP (W3-4) sign.*

120 **Standard:**

121 16 ~~When the AFAD is not in use, the AFAD and advance warning signs shall be removed or~~
122 ~~covered.~~ **[Moved to Typical Application Notes]**

123 *Guidance:*

124 17 ~~A State or local agency that elects to use AFADs should adopt a policy, based on engineering~~
125 ~~judgment, governing AFAD applications. The policy should also consider more detailed and/or more~~
126 ~~restrictive requirements for AFAD use, such as the following:~~

- 127 ~~— A. Conditions applicable for the use of Method 1 and Method 2 AFAD operation;~~
- 128 ~~— B. Volume criteria;~~
- 129 ~~— C. Maximum distance between AFADs;~~
- 130 ~~— D. Conflicting lenses/indications monitoring requirements;~~
- 131 ~~— E. Fail safe procedures;~~
- 132 ~~— F. Additional signing and pavement markings;~~
- 133 ~~— G. Application consistency;~~
- 134 ~~— H. Larger signs or lenses to increase visibility; and~~
- 135 ~~— I. Use of backplates.~~

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137 **Notes for 6P-10a – Typical Application 10a**
138 **Lane Closure on a Two-Lane Road Using Automated Flagger Assistance**
139 **Device (AFAD)**

140 **Standard:**

- 141 1. An AFAD shall be operated only by a flagger (see Section 6D.01) who has been trained on
142 the operation of the AFAD. The flagger(s) operating the AFAD(s) shall not leave the
143 AFAD(s) unattended at any time while the AFAD(s) is being used. [Moved from 6L.02]
- 144 2. When used at night, the AFAD location shall be illuminated in accordance with Section
145 6D.06. [Moved from 6L.02]
146 AFADs shall meet the crashworthy performance criteria contained in Section 6A.04.
147 [Moved from 6L.02]
- 148 4. When the AFAD is not in use, the AFAD and advance warning signs shall be removed or
149 covered. [Moved from 6L.02]

150 **Option:**

- 151 5. A single flagger may operate two AFADs if the flagger has an unobstructed view of the AFADs
152 and an unobstructed view of approaching traffic in both directions. [Moved from 6L.02]
- 153 6. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
- 154 7. An AFAD and a flagger may be used together with an AFAD at one end of the TTC zone and a
155 flagger at the opposite end. [Moved from 6L.02]

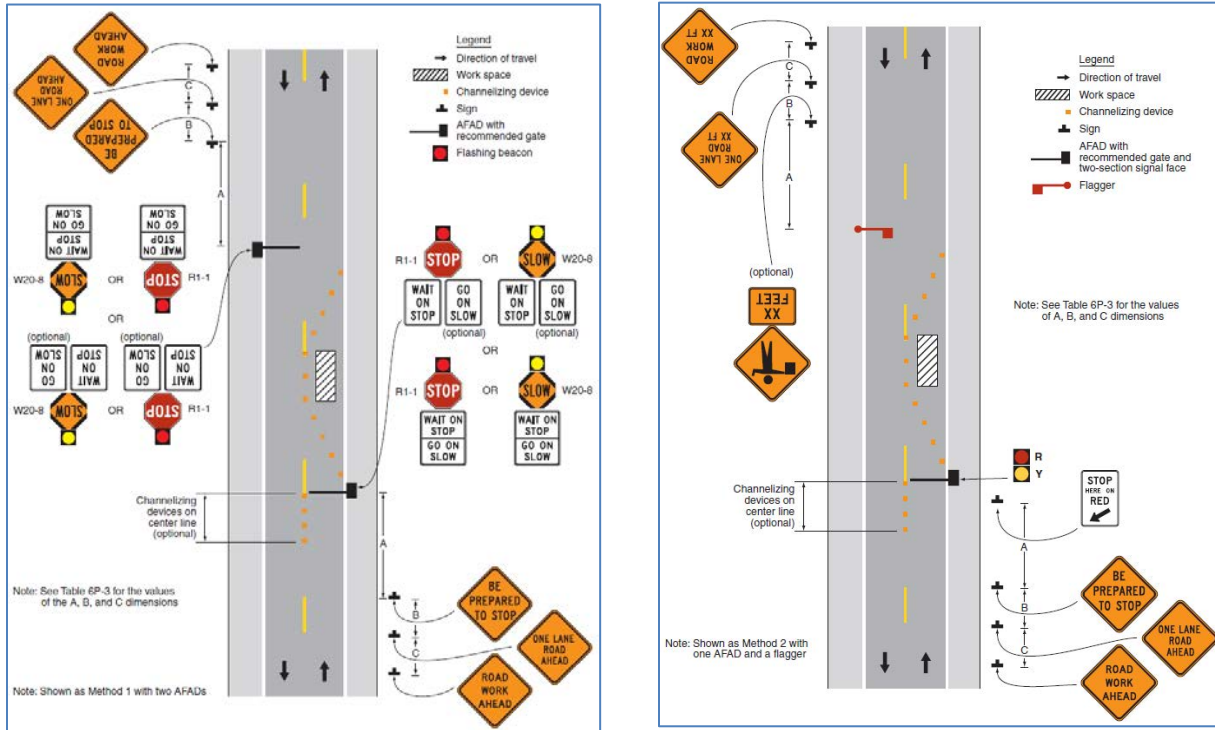
156 **Guidance:**

- 157 8. Flaggers should be positioned in a location that allows continuous line of sight to the AFAD(s).
158 The flagger should be positioned off the roadway and away from traffic, work vehicles, and
159 equipment.
- 160 9. The buffer space should be extended so that the two-way traffic taper is placed before a
161 horizontal (or crest vertical) curve to provide adequate stopping sight distance for the flagger
162 and a queue of stopped vehicles.
- 163 10. When a grade crossing exists within or upstream of the transition area and it is anticipated that
164 queues resulting from the lane closure might extend through the grade crossing, the TTC zone
165 should be extended so that the transition area precedes the grade crossing.
- 166 11. When a grade crossing equipped with active warning devices exists within the activity area,
167 provisions should be made for keeping flaggers informed as to the activation status of these
168 warning devices.
- 169 12. When a grade crossing exists within the activity area, drivers operating on the left-hand side of
170 the normal center line should be provided with comparable warning devices as for drivers
171 operating on the right-hand side of the normal center line.

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13. Early coordination with the railroad company or light rail transit agency should occur before work starts.

Figure 6P-10a. Lane Closure on a Two-Lane Road Using Automated Flagger Assistance Device (AFAD) (TA-10a)



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A – STOP/SLOW AFAD B – RED/YELLOW LENS AFAD
Typical Application 10a