National Committee on
Uniform Traffic Control Devices

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Item No.: 24B-TTC-05

NCUTCD RECOMMENDATION 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:	Section 6L.02, 6L.03, and 6L.04 Section 6P.01 Figures 6L-1 and 6L-2 Figure 6P-10A (new)

DEVELOPMENT HISTORY:

Approved by TTC TC:	06/26/2024, 01/08/2025
Approved by NCUTCD Council:	01/09/2025

This is a recommended change 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 adds a Typical Application for Automated Flagger Assistance Devices (AFAD). 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)”. Figures 6L-1 and 6L-2 from Sections 6L.03 and 6L.04, respectively, are shown as deleted from these Sections. These Figures are used as drawings A and B on the Typical Application.

Other changes to Section 6L.02 were proposed to eliminate the guidance that AFADs not be used for long-term stationary work. If it would be acceptable to have flaggers for long-term stationary work, it should be acceptable to use AFADs to get flaggers out of traffic. The guidance statement requiring states to adopt a policy on the use of AFADs is also proposed to be deleted. The task force wants to allow the use of AFADs whenever flaggers may be handling traffic, not based on ADT or other thresholds.

RECOMMENDED MUTCD CHANGES:

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

PART 6 TEMPORARY TRAFFIC CONTROL

CHAPTER 6L. OTHER TTC ZONE TRAFFIC CONTROL DEVICES

Section 6L.02 Automated Flagger Assistance Devices – General

Support:

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

02 There are two types of AFADs:

A. An AFAD (see Section 6L.03) that uses a remotely controlled STOP/SLOW sign on either a trailer or a movable cart system to alternately control right-of-way.

B. An AFAD (see Section 6L.04) that uses remotely controlled red and yellow lenses and a gate arm to alternately control right-of-way.

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

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

A. Bridge maintenance;

B. Haul road crossings; and

C. Pavement patching.

Option:

03a AFADs may be employed when flagging is used to control road users through temporary traffic control zones.

Standard:

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

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

~~*Guidance:*~~

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

Standard:

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

08 **AFADs shall meet the crashworthy performance criteria contained in Section 6A.04.**

Guidance:

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

Standard:

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

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

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

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

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

13 **Except as provided in Paragraph 14, two flaggers shall be used when using either ~~Method 1~~A or ~~Method 2~~B as provided in Paragraph 12.**

Option:

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

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

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

Guidance:

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

Standard:

16 **When the AFAD is not in use, the AFAD and advance warning signs shall be removed or covered.**

~~*Guidance:*~~

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

~~*A. Conditions applicable for the use of Method 1 and Method 2 AFAD operation,*~~

~~*B. Volume criteria,*~~

~~*C. Maximum distance between AFADs,*~~

~~*D. Conflicting lenses/indications monitoring requirements,*~~

~~*E. Fail safe procedures,*~~

~~*F. Additional signing and pavement markings,*~~

~~*G. Application consistency,*~~

~~*H. Larger signs or lenses to increase visibility, and*~~

~~*I. Use of backplates.*~~

[In Sections 6L.03 and 6L.04, references to Figures 6L-1 and 6L-2 are changed to Figure 6P-10a. For brevity, only the paragraphs containing references to Figures 6L-1 and 6L-2 are included.]

Section 6L.03 STOP/SLOW Automated Flagger Assistance Devices

Standard:

01 **A STOP/SLOW Automated Flagger Assistance Device (AFAD) shall include a STOP/SLOW sign that alternately displays the STOP (R1-1) face and the SLOW (W20-8) face of a STOP/SLOW paddle (see Figure ~~6L-1~~ 6P-10a).**

12 **A WAIT ON STOP (R1-7) sign (see Figure ~~6L-1~~ 6P-10a) shall be displayed to road users approaching the AFAD.**

Option:

13 A GO ON SLOW (R1-8) sign (see Figure ~~6L-1~~ 6P-10a) may also be displayed to road users approaching the AFAD.

14 The WAIT ON STOP/ GO ON SLOW (R1-7a) sign (see Figure ~~6L-1~~ 6P-10a) may also be used to display both messages to approaching road users.

Section 6L.04 Red/Yellow Lens Automated Flagger Assistance Devices

Standard:

01 **A Red/Yellow Lens Automated Flagger Assistance Device (AFAD) shall alternately display a steadily illuminated CIRCULAR RED lens and a flashing CIRCULAR YELLOW lens to control traffic without the need for a flagger in the immediate vicinity of the AFAD or on the roadway (see Figure ~~6L-2~~ 6P-10a).**

05 **A Stop Here On Red (R10-6 or R10-6a) sign (see Section 2B.59) shall be installed on the right-hand side of the approach at the point at which drivers are expected to stop when the steady CIRCULAR RED lens is illuminated (see Figure ~~6L-2~~ 6P-10a).**

Figure 6L-1. Example of the Use of a STOP/SLOW Automated Flagger Assistance Device (AFAD)

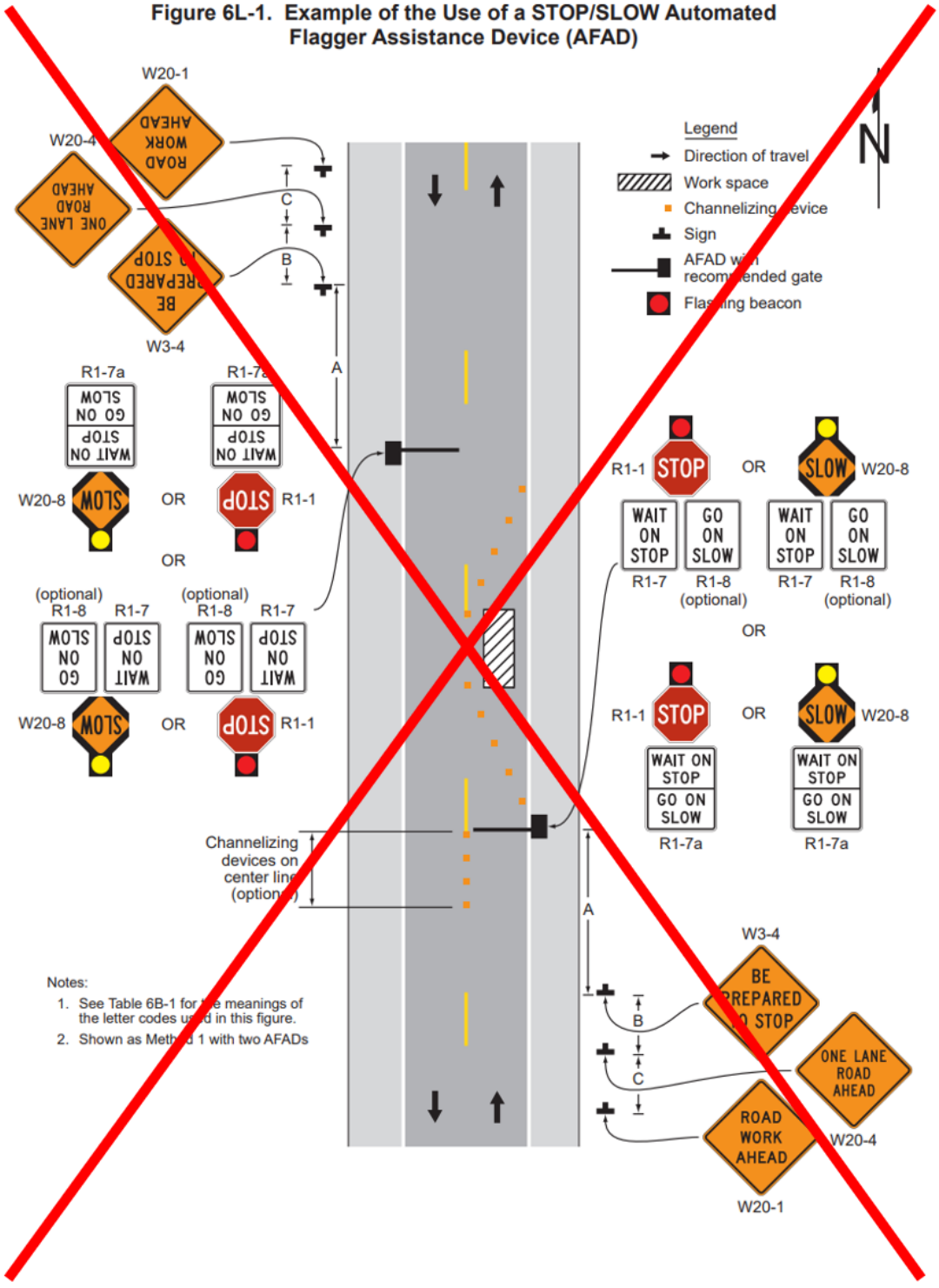
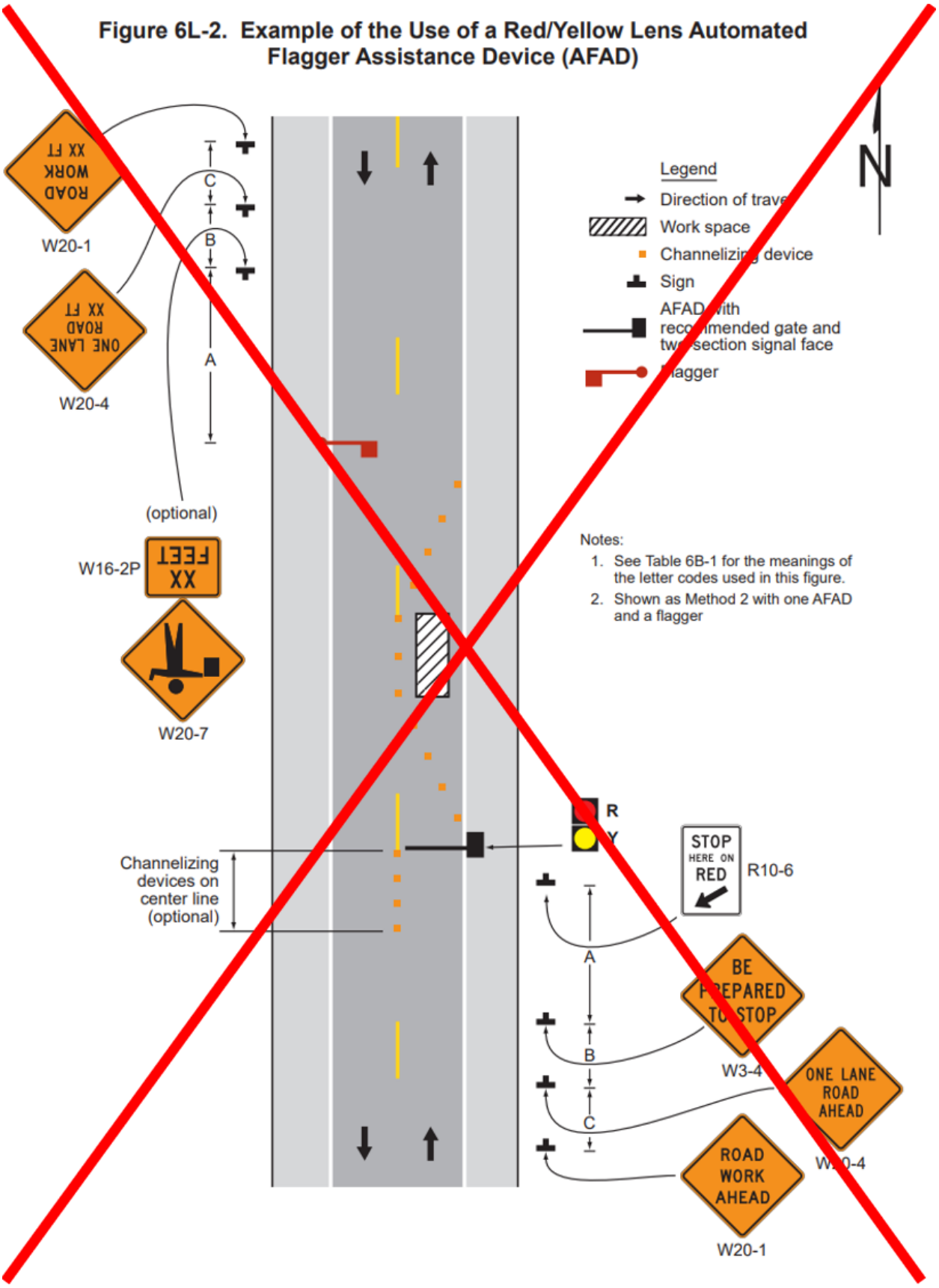


Figure 6L-2. Example of the Use of a Red/Yellow Lens Automated Flagger Assistance Device (AFAD)



CHAPTER 6P. TYPICAL APPLICATIONS

Section 6P.01 Typical Applications

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

Standard:

1. **An AFAD shall be operated only by a flagger (see Section 6D.01) who has been trained on the operation of the AFAD. The flagger(s) operating the AFAD(s) shall not leave the AFAD(s) unattended at any time while the AFAD(s) is being used. [Similar to 6L.02 P11.]**
2. **When used at night, the AFAD location shall be illuminated in accordance with Section 6D.06. [Similar to 6L.02 P5.]**
3. **AFADs shall meet the crashworthy performance criteria contained in Section 6A.04. [Similar to 6L.02 P8.]**
4. **When the AFAD is not in use, the AFAD and advance warning signs shall be removed or covered. [Similar to 6L.02 P16.]**

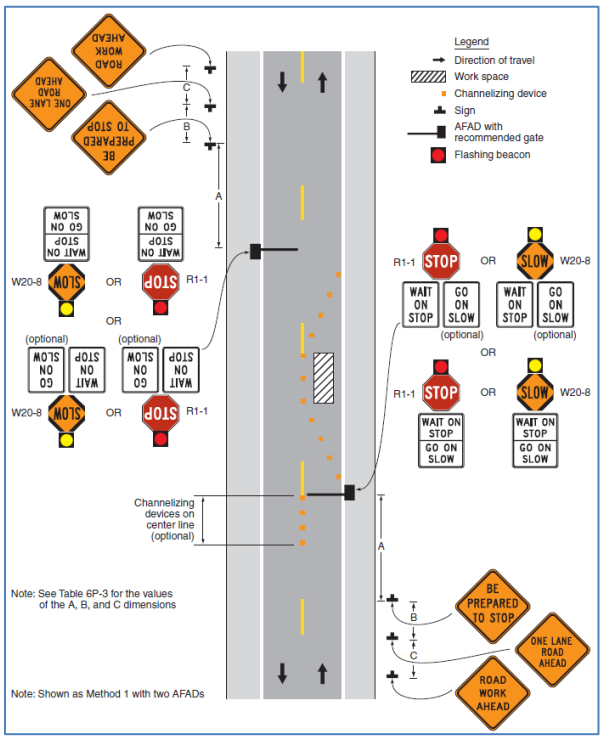
Option:

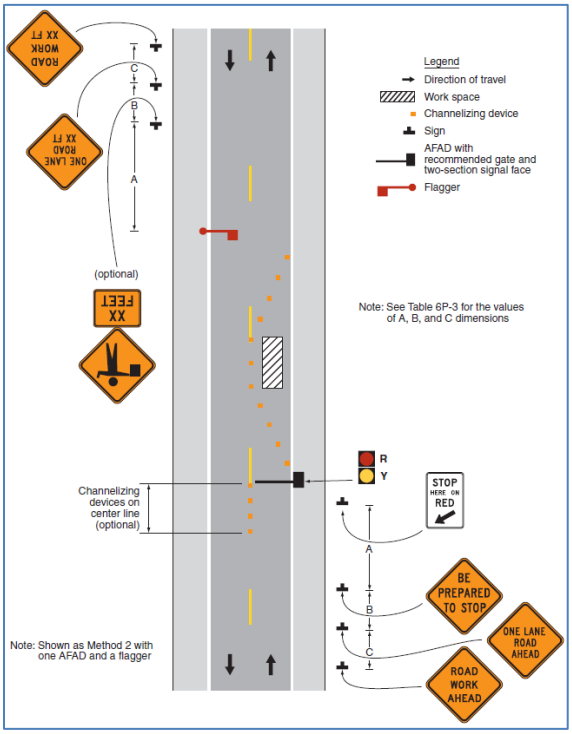
5. A single flagger may operate two AFADS if the flagger has an unobstructed view of the AFADs and an unobstructed view of approaching traffic in both directions.
6. An AFAD and a flagger may be used together with an AFAD at one end of the TTC zone and a flagger at the opposite end.
7. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

Guidance:

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





A – STOP/SLOW AFAD
Example of an AFAD at each end of the TTC zone

B – RED/YELLOW LENS AFAD
Example of an AFAD at one end of the TTC zone and a flagger at the opposite end

Typical Application 10a