



# National Committee on Uniform Traffic Control Devices

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Item Number: 26A-TTC-01

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

**COMMITTEE / TASK FORCE:** Temporary Traffic Control Technical Committee  
**ITEM NUMBER:** 26A-TTC-01  
**TOPIC:** AFAD Signs, Gates, and Visors  
**ORIGIN OF REQUEST:** TTC Other Traffic Control Devices (Ch. 6L) Task Force  
**AFFECTED SECTIONS OF MUTCD:** 6G.03a, 6G.11a, 6L.02, 6L.03, and 6L.04, Typical Application 10a (Figure 6P-10a)

### DEVELOPMENT HISTORY:

Approved by TTC TC: .....01/07/2026  
Approved by NCUTCD Council: .....

*This is a proposed change to the MUTCD that has been developed by a technical committee, joint committee, or joint task force of the NCUTCD. The NCUTCD is distributing this 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, options, or support. 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:

The proposal adds to Chapter 6G addressing regulatory signs used with Automated Flagger Assistance Devices (AFADs). The proposal also improves consistency in gate arm and visor requirements for STOP/SLOW and Red/Yellow Lens AFADs.

### DISCUSSION:

#### Signs:

Section 6L.03, STOP/SLOW Automated Flagger Assistance Devices (AFAD), describes three regulatory signs that are unique in application to the STOP/SLOW AFAD: the WAIT ON STOP (R1-7), GO ON SLOW (R1-8), and WAIT ON STOP / GO ON SLOW (R1-7a) signs. The Technical Committee believes that having the description of the signs in a separate section from Chapter 6G, which defines regulatory signs, as possibly being a point of confusion to users of the Manual. Therefore, this proposal provides for a new section included in Chapter 6G to describe the signs, with edits to Section 6L.03 to clarify the operation.

#### Gate arms:

Paragraph 09 of Section 6L.03 provides Guidance that STOP/SLOW AFADs should have a gate arm, whereas Paragraph 04 of Section 6L.04 presents a Standard that gate arms shall be used with Red/Yellow Lens AFADs. Research has shown that violation rates of STOP/SLOW AFADs without gate

40 arms are very high, and that the use of gate arms on these types of AFADs significantly reduces the  
41 rate of violations ( see <https://static.tti.tamu.edu/tti.tamu.edu/documents/0-6407-1.pdf>, Table 22).

42  
43 Therefore, TTC Committee proposes to (a) move all gate arm requirements from 6L.03 and 6L.04 to  
44 6L.02, since gate arm requirements should be the same regardless of AFAD variety, (b) consistently  
45 require that gate arms shall be used, and (c) establish a minimum gate arm length. Additionally, the  
46 AFAD Legend in the Typical Application TA-10a will change to reflect this edit.

47  
48 Concern exists that a very short gate arm could be used on narrow two-lane highways, reducing the  
49 visibility of the arm itself and lead to increased AFAD violations. Therefore, an absolute minimum length  
50 of 8 feet is recommended for both STOP/SLOW and Red/Yellow AFADs in addition to the requirement  
51 to reach the middle of the travel lane. Given the consistency in the proposed requirements regarding  
52 gate arms for both types of AFADs, the TTC committee proposes to move them from Section 6L.03 and  
53 Section 6L.04 to Section 6L.02.

54  
55 *Visors:*

56 Concerns also exist over Red/Yellow AFAD beacon visibility in bright sunlight conditions. Therefore, a  
57 requirement has been added that signal visors shall be provided on the lenses. Finally, the wording of  
58 Section 6L.04, Paragraph 05 differs from Section 6L.03, Par 12 and 15, even though they address the  
59 same need for signing to be used in conjunction with the AFADs. The requirements in 6L.04 were  
60 modified to be consistent with those in Section 6L.03.

61  
62 **RECOMMENDED MUTCD CHANGES:**

63 The following present the proposed changes to the current MUTCD within the context of the current  
64 MUTCD language. Proposed additions to the MUTCD are shown in blue underline and proposed  
65 deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously approved by NCUTCD  
66 Council (but not yet adopted by FHWA) are shown in green double underline for additions and ~~green  
67 double strikethrough~~ for deletions. In some cases, background comments may be provided with the  
68 MUTCD text. These comments are indicated by bracketed white text in shaded green. Deletions  
69 made by a technical committee, joint committee, or task force after initial distribution to sponsoring  
70 organizations are shown in ~~highlighted red strikethrough and sans-serif text~~. Additions made by a  
71 technical committee, joint committee, or task force after initial distribution to sponsoring organizations  
72 are shown in underline blue and sans-serif text.

73  
74 **PART 6**

75 **TEMPORARY TRAFFIC CONTROL**

76  
77 **CHAPTER 6G. TTC ZONE REGULATORY SIGNS**

78  
79 Section 6G.03a STOP/SLOW Paddle and Signs (R1-1 and W20-8) [Previously approved material in  
80 this section is from 25A-TTC-05, June 2025]

81 Standard:

82 01 The STOP/SLOW paddle (R1-1 and W20-8, see Figure 6D-1) shall have an octagonal shape on a rigid  
83 handle. When used at night, the STOP/SLOW paddle shall be retroreflective.

84 01a The STOP/SLOW sign used on Automated Flagger Assistance Devices (AFADs) (R1-1 and W20-8, see  
85 Figure 6P-10a) shall have an octagonal shape, shall be fabricated of rigid material, and shall be mounted  
86 with the bottom of the sign a minimum of 6 feet above the pavement on an appropriate support. The size of  
87 the STOP/SLOW sign shall be at least 24 x 24 inches with letters at least 8 inches high. The background of  
88 the STOP face shall be red with white letters and border. The background of the SLOW face shall be  
89 diamond-shaped and orange with black letters and border. Both faces of the STOP/SLOW sign shall be  
90 retroreflectorized. [Paragraph 01a moved from 6L.03, Paragraph 02]

- 91 Guidance:
- 92 02 The STOP/SLOW paddle should be fabricated from lightweight semi-rigid material.
- 93 Option:
- 94 03 The STOP/SLOW paddle may be modified to improve conspicuity by incorporating either white or red
- 95 flashing lights on the STOP face, and either white or yellow flashing lights on the SLOW face. The flashing lights
- 96 may be arranged in any of the following patterns:
- 97 A. Two white or red lights, one centered vertically above and one centered vertically below the STOP
- 98 legend; and/or two white or yellow lights, one centered vertically above and one centered vertically
- 99 below the SLOW legend;
- 100 B. Two white or red lights, one centered horizontally on each side of the STOP legend; and/or two white or
- 101 yellow lights, one centered horizontally on each side of the SLOW legend;
- 102 C. One white or red light centered below the STOP legend; and/or one white or yellow light centered below
- 103 the SLOW legend;
- 104 D. A series of eight or more small white or red lights no larger than ¼ inch in diameter along the outer edge
- 105 of the paddle, arranged in an octagonal pattern at the eight corners of the border of the STOP face; and/
- 106 or a series of eight or more small white or yellow lights no larger than ¼ inch in diameter along the outer
- 107 edge of the paddle, arranged in a diamond pattern along the border of the SLOW face; or
- 108 E. A series of white lights forming the shapes of the letters in the legend.
- 109 Standard:
- 110 04 If flashing lights are used on the STOP face of the paddle, their colors shall be all white or all red. If
- 111 flashing lights are used on the SLOW face of the paddle, their colors shall be all white or all yellow.
- 112 05 If more than eight flashing lights are used, the lights shall be arranged such that they clearly convey the
- 113 octagonal shape of the STOP face of the paddle and/or the diamond shape of the SLOW face of the paddle.
- 114 06 If flashing lights are used on the STOP/SLOW paddle, the flash rate shall be at least 50, but not more
- 115 than 60, flashes per minute.
- 116 Option:
- 117 07 The STOP/SLOW paddle may be increased in size to 24 x 24 inches.

118 **Table 6G-1. Temporary Traffic Control Regulatory Sign and Plaque Sizes**

Sign or Plaque	Sign Designation	Section	Conventional Road	Freeway or Expressway	Minimum
Stop	R1-1	6G.02	30 x 30	-	-
<del>Stop (on Stop/Slow Paddle)</del>	<del>R1-1</del>	<del>6G.02</del>	<del>48 x 48</del>	<del>=</del>	<del>=</del>
<u>Stop/Slow Paddle</u>	<u>R1-1, W20-8</u>	<u>6G.03a</u>	<u>18 x 18</u>	<u>=</u>	<u>=</u>
<u>Stop/Slow AFAD Sign</u>	<u>R1-1, W20-8</u>	<u>6G.03a</u>	<u>24 x 24</u>	<u>=</u>	<u>=</u>
Yield	R1-2	6G.02	36 x 36 x 36*	-	30 x 30 x 30*
To Oncoming Traffic (plaque)	R1-2aP	6G.02	36 x 30	48 x 36	24 x 18
Wait on Stop	R1-7	<del>6L.03</del> <u>6G.11a</u>	24 x 30	24 x 30	
Wait on Stop - Go on Slow	R1-7a	<del>6L.03</del> <u>6G.11a</u>	30 x 36	30 x 36	
Go on Slow	R1-8	<del>6L.03</del> <u>6G.11a</u>	24 x 30	24 x 30	
Speed Limit	R2-1	6G.08	24 x 30*	36 x 48	

119 [Remainder of Table 6G-1 omitted for brevity. Previously approved changes shown in Table 6G-1 are from

120 25A-TTC-05, June 2025.

121

122 **Section 6G.11a STOP/SLOW Automated Flagger Assistance Device (AFAD) Signs (R1-7, R1-7a, and**

123 **R1-8)**

124 **Standard:**

125 01 A WAIT ON STOP (R1-7) sign (see Figure 6G-1) shall be displayed on STOP/SLOW AFADs to road

126 users approaching the device.

127 Option:  
 128 02 A GO ON SLOW (R1-8) sign (see Figure 6G-1) may also be displayed to road users approaching the AFAD.  
 129 03 The WAIT ON STOP/ GO ON SLOW (R1-7a) sign (see Figure 6G-1) may also be used as an option to the  
 130 R1-7 and R1-8 signs to display both messages to approaching road users. [Moved from Section 6L.03,  
 131 paragraphs 12 through 14.]  
 132

**Figure 6G-1. Regulatory Signs and Plaques in Temporary Traffic Control Zones (Sheet 1 of 2)**



Note: See Chapter 2B for information on the application of these signs.

134 CHAPTER 6L. OTHER TTC ZONE TRAFFIC CONTROL DEVICES  
135

136 Section 6L.02 Automated Flagger Assistance Devices – General

137 Support:

138 01 Automated Flagger Assistance Devices (AFADs) enable a flagger(s) to be positioned out of the lane of traffic  
139 and are used to control road users through temporary traffic control zones. These devices are designed to be  
140 remotely operated either by a single flagger at one end of the TTC zone or at a central location, or by separate  
141 flaggers near each device’s location.

142 02 There are two types of AFADs:

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

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

147 03 ~~AFADs might be appropriate for short-term and intermediate-term activities (see Section 6N.01).~~ Typical  
148 applications uses include TTC activities such as, but not limited to:

149 A. Bridge maintenance;

150 B. Haul road crossings; and

151 C. Pavement patching.

152 Option:

153 03a AFADs may be employed when flagging is used to control road users through temporary traffic  
154 control zones. [Previously approved proposed changes shown above are from Item No. 24B-TTC-05,  
155 January 2025.]

156 **Standard:**

157 04 AFADs shall only be used in situations where there is only one lane of approaching traffic in the  
158 direction to be controlled.

159 05 When used at night, the AFAD location shall be illuminated in accordance with Section 6D.06.

160 05a AFADs shall include a gate arm that descends to a down position across the approach lane of traffic  
161 when the AFAD indicates that traffic must stop, and then ascends to an upright position when the AFAD  
162 indicates that is allowable to proceed. [Replaces Paragraph 09 from Section 6L.03 and Paragraph 04  
163 from Section 6L.04 to make the gate arm requirement uniform for both AFAD types.]

164 Option:

165 05b The gate arm may rotate horizontally across the travel lane to indicate the need to stop, and then rotate away  
166 from the travel lane to indicate that it is allowable to proceed. [Replaces Paragraph 10 in Section 6L.03 and is  
167 revised to allow use on both types of AFADs.]

168 **Standard:**

169 05c Gate arms shall be fully retroreflective on both sides and shall have vertical alternating red and white  
170 stripes at 16-inch intervals measured horizontally as shown in Figure 8D-1. When the arm is blocking the  
171 approach lane:

172 A. The minimum vertical aspect of the arm and sheeting shall be 2 inches,

173 B. The minimum length of the arm shall be 8 feet, and

174 C. The end of the arm shall reach at least to the center of the lane being controlled.

175 [Replaces Paragraph 11 in Section 6L.03 and Paragraph 04 in Section 6L.04. Adds sub-item B.]

176 ~~Guidance:~~

177 06 ~~AFADs should not be used for long-term stationary work (see Section 6N.01).~~ [Previously approved  
178 proposed change from Item No. 24B-TTC-05.]

179 **Standard:**

180 07 Because AFADs are not traffic control signals, they shall not be used as a substitute for ~~or a~~  
181 ~~replacement for a continuously operating~~ temporary traffic control signals as described in Section 6L.01.  
182 [Previously approved change from Item No. 24B-TTC-05.]

183 08 AFADs shall meet the crashworthy performance criteria contained in Section 6A.04.

184 *Guidance:*

185 09 *If used, AFADs should be located in advance of one-lane, two-way tapers and downstream from the point*  
186 *where approaching traffic is to stop in response to the device.*

187 **Standard:**

188 10 **If used, AFADs shall be placed so that all of the signs and other items controlling traffic movement are**  
189 **readily visible to the driver of the initial approaching vehicle with advance warning signs alerting other**  
190 **approaching traffic to be prepared to stop.**

191 11 **If used, an AFAD shall be operated only by a flagger (see Section 6D.01) who has been trained on the**  
192 **operation of the AFAD. The flagger(s) operating the AFAD(s) shall not leave the AFAD(s) unattended at any**  
193 **time while the AFAD(s) is being used.**

194 12 **The use of AFADs shall conform to one of the following methods:**

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

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

197 13 **Except as provided in Paragraph 14, two flaggers shall be used when using either ~~Method 1 A~~**  
198 **or ~~Method 2 B~~ as provided in Paragraph 12. [Previously approved proposed changes from Item No.**  
199 **24B-TTC-05.]**

200 **Option:**

201 14 **A single flagger may simultaneously operate two AFADs ~~(Method 1)~~ or may operate a single AFAD on one**  
202 **end of the TTC zone while being the flagger at the opposite end of the TTC zone ~~(Method 2)~~ if both of the**  
203 **following conditions are present:**

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

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

206 *Guidance:*

207 15 *When an AFAD is used, the advance warning signing should include a ROAD WORK AHEAD (W20-1) sign,*  
208 *a ONE LANE ROAD (W20-4) sign, and a BE PREPARED TO STOP (W3-4) sign.*

209 **Standard:**

210 16 **When the AFAD is not in use, the AFAD and advance warning signs shall be removed or covered.**

211 ~~*Guidance:*~~

212 17 ~~*A State or local agency that elects to use AFADs should adopt a policy, based on engineering judgment,*~~  
213 ~~*governing AFAD applications. The policy should also consider more detailed and/or more restrictive requirements*~~  
214 ~~*for AFAD use, such as the following:*~~

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

216 ~~*B. Volume criteria,*~~

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

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

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

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

221 ~~*G. Application consistency,*~~

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

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

224 **[Previously approved changes above from Item No. 24B-TTC-05.]**

225

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

227 **Standard:**

228 01 **A STOP/SLOW Automated Flagger Assistance Device (AFAD) shall include a STOP/SLOW sign (see**  
229 **[Section 6G.03a](#) and [Table 6G-1](#)) that alternately displays the STOP (R1-1) face and the SLOW (W20-8) face**  
230 **of a STOP/SLOW paddle (see Figure ~~6L-1~~ [6P-10a](#)). [Previously approved change from Item 24B-TTC-**  
231 **05]**

232 02 ~~**The AFAD's STOP/SLOW sign shall have an octagonal shape, shall be fabricated of rigid material,**~~  
233 ~~**and shall be mounted with the bottom of the sign a minimum of 6 feet above the pavement on an appropriate**~~  
234 ~~**support. The size of the STOP/SLOW sign shall be at least 24 x 24 inches with letters at least 8 inches high.**~~  
235 ~~**The background of the STOP face shall be red with white letters and border. The background of the SLOW**~~

236 ~~face shall be diamond-shaped and orange with black letters and border. Both faces of the STOP/SLOW sign~~  
237 ~~shall be retroreflectorized.~~ [Moved to Section 6G.03a]

238 03 The AFAD's STOP/SLOW sign shall have a means to positively lock, engage, or otherwise maintain the  
239 sign assembly in a stable condition when set in the STOP or SLOW position.

240 04 The AFAD's STOP/SLOW sign shall be supplemented with active conspicuity devices by incorporating  
241 either:

- 242 A. White or red flashing lights within the STOP face and white or yellow flashing lights within the  
243 SLOW face meeting the provisions contained in Section 6D.02; or
- 244 B. A Stop Beacon (see Section 4S.05) mounted a maximum of 24 inches above the STOP face and a  
245 Warning Beacon (see Section 4S.03) mounted a maximum of 24 inches above, below, or to the side  
246 of the SLOW face. The Stop Beacon shall not be flashed or illuminated when the SLOW face is  
247 displayed, and the Warning Beacon shall not be flashed or illuminated when the STOP face is  
248 displayed. Except for the mounting locations, the beacons shall comply with the provisions of  
249 Chapter 4S.

250 Option:

251 05 Type B warning light(s) (see Section 6L.07) or strobe lights may be used in lieu of the Warning Beacon  
252 during display of the SLOW face of the AFAD's STOP/SLOW sign.

253 **Standard:**

254 06 If Type B warning lights or strobe lights are used in lieu of a Warning Beacon, they shall flash  
255 continuously when the SLOW face is displayed and shall not be flashed or illuminated when the STOP face  
256 is displayed.

257 Option:

258 07 The faces of the AFAD's STOP/SLOW sign may include louvers to improve the stability of the device in  
259 windy or other adverse environmental conditions.

260 **Standard:**

261 08 If louvers are used, the louvers shall be designed such that the full sign face is visible to approaching  
262 traffic at a distance of 50 feet or greater.

263 *Guidance:*

264 09 ~~The STOP/SLOW AFAD should include a gate arm that descends to a down position across the approach~~  
265 ~~lane of traffic when the STOP face is displayed and then ascends to an upright position when the SLOW face is~~  
266 ~~displayed.~~ [Moved to Paragraph 05a of Section 6L.02 and changed to a Standard.]

267 Option:

268 10 ~~In lieu of a stationary STOP/SLOW sign with a separate gate arm, the STOP/SLOW sign may be attached to~~  
269 ~~a mast arm that physically blocks the approach lane of traffic when the STOP face is displayed and then moves to a~~  
270 ~~position that does not block the approach lane when the SLOW face is displayed.~~ [Moved to Paragraph 05b of  
271 Section 6L.02 and revised to allow for both AFAD types.]

272 **Standard:**

273 11 ~~Gate arms, if used, shall be fully retroreflectorized on both sides, and shall have vertical alternating red~~  
274 ~~and white stripes at 16-inch intervals measured horizontally as shown in Figure 8D-1. When the arm is in~~  
275 ~~the down position blocking the approach lane:~~

- 276 A. ~~The minimum vertical aspect of the arm and sheeting shall be 2 inches, and~~
- 277 B. ~~The end of the arm shall reach at least to the center of the lane being controlled.~~

278 [Moved to Paragraph 05c of Section 6L.02.]

279 12 ~~A WAIT ON STOP (R1-7) sign (see Figure 6L-1 6P-10a) shall be displayed to road users approaching~~  
280 ~~the AFAD.~~ [Moved to Paragraph 01 in Section 6G.11a.]

281 Option:

282 13 ~~A GO ON SLOW (R1-8) sign (see Figure 6L-1 6P-10a) may also be displayed to road users approaching the~~  
283 ~~AFAD.~~

284 14 ~~The WAIT ON STOP/ GO ON SLOW (R1-7a) sign (see Figure 6L-1 6P-10a) may also be used to display~~  
285 ~~both messages to approaching road users.~~ [Moved to Paragraphs 02 and 03 in Section 6G.11a.]

286 **Standard:**

287 15 A WAIT ON STOP (R1-7) sign, the GO ON SLOW (R1-8) sign (see Section 6G.11a), if used, or the  
288 optional combined WAIT ON STOP/GO ON SLOW (R1-7a) ~~The GO ON SLOW sign, if used, and the~~  
289 ~~WAIT ON STOP~~ sign shall be positioned on the same support structure as the AFAD, or immediately  
290 adjacent to the AFAD such that they are in the same direct line of view of approaching traffic as the sign  
291 faces of the AFAD.

292 16 To inform road users to stop, the AFAD shall display the STOP face and the red or white lights, if used,  
293 within the STOP face shall flash or the Stop Beacon shall flash. To inform road users to proceed, the AFAD  
294 shall display the SLOW face and the yellow or white lights, if used, within the SLOW face shall flash or the  
295 Warning Beacon or the Type B warning lights shall flash.

296 17 If STOP/SLOW AFADs are used to control traffic in a one-lane, two-way TTC zone, safeguards shall  
297 be incorporated to prevent the flagger(s) from simultaneously displaying the SLOW face at each end of the  
298 TTC zone. Additionally, the flagger(s) shall not display the AFAD's SLOW face until all oncoming vehicles  
299 have cleared the one-lane portion of the TTC zone.

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

302 **Standard:**

303 01 A Red/Yellow Lens Automated Flagger Assistance Device (AFAD) shall alternately display a steadily  
304 illuminated CIRCULAR RED lens and a flashing CIRCULAR YELLOW lens to control traffic without the  
305 need for a flagger in the immediate vicinity of the AFAD or on the roadway (see Figure ~~6L-2~~ 6P-10a).

306 02 Red/Yellow Lens AFADs shall have at least one set of CIRCULAR RED and CIRCULAR YELLOW  
307 lenses that are 12 inches in diameter. Each lens shall be equipped with signal visors. Unless otherwise  
308 provided in this Section, the lenses and their arrangement, CIRCULAR RED on top and CIRCULAR  
309 YELLOW below, shall comply with the applicable provisions for traffic signal indications in Part 4. If the  
310 set of lenses is post-mounted, the bottom of the housing (including brackets) shall be at least 7 feet above the  
311 pavement. If the set of lenses is located over any portion of the highway that can be used by motor vehicles,  
312 the bottom of the housing (including brackets) shall be at least 15 feet above the pavement.

313 Option:

314 03 Additional sets of CIRCULAR RED and CIRCULAR YELLOW lenses, located over the roadway or on the  
315 left-hand side of the approach and operated in unison with the primary set, may be used to improve visibility and/  
316 or conspicuity of the AFAD.

317 **Standard:**

318 04 ~~A Red/Yellow Lens AFAD shall include a gate arm that descends to a down position across the~~  
319 ~~approach lane of traffic when the steady CIRCULAR RED lens is illuminated and then ascends to an~~  
320 ~~upright position when the flashing CIRCULAR YELLOW lens is illuminated. The gate arm shall be fully~~  
321 ~~retroreflectorized on both sides, and shall have vertical alternating red and white stripes at 16-inch intervals~~  
322 ~~measured horizontally as shown in Figure 8D-1. When the arm is in the down position blocking the~~  
323 ~~approach lane:~~

324 ~~A. The minimum vertical aspect of the arm and sheeting shall be 2 inches, and~~

325 ~~B. The end of the arm shall reach at least to the center of the lane being controlled.~~

326 **[Moved to Paragraph 5c of Section 6L.02.]**

327 05 ~~A Stop Here On Red~~ STOP HERE ON RED (R10-6 or R10-6a) sign (see Section 2B.59) shall be  
328 displayed to road users approaching the AFAD installed on the right hand side of the approach at the point  
329 at which drivers are expected to stop when the steady CIRCULAR RED lens is illuminated (see Figure ~~6L-2~~  
330 6P-10a).

331 Option:

332 05a The STOP HERE ON RED (R10-6 or R10-6a) sign may be positioned on the same support structure as the  
333 AFAD when, based on engineering judgment, the sign and the AFAD's CIRCULAR RED/CIRCULAR YELLOW  
334 lenses are both visible to stopped traffic at the gate arm.

335 Standard:

336 06 To inform road users to stop, the AFAD shall display a steadily illuminated CIRCULAR RED lens ~~and~~  
337 ~~the gate arm shall be in the down position.~~ To inform road users to proceed, the AFAD shall display a  
338 flashing CIRCULAR YELLOW lens ~~and the gate arm shall be in the upright position.~~ [Gate arm position  
339 requirements moved to Paragraph 05a and 05b in Section 6L.02.]

340 07 If Red/Yellow Lens AFADs are used to control traffic in a one-lane, two-way TTC zone, safeguards  
341 shall be incorporated to prevent the flagger(s) from actuating a simultaneous display of a flashing  
342 CIRCULAR YELLOW lens at each end of the TTC zone. Additionally, the flagger shall not actuate the  
343 AFAD's display of the flashing CIRCULAR YELLOW lens until all oncoming vehicles have cleared the one-  
344 lane portion of the TTC zone.

345 08 A change interval shall be provided as the transition between the display of the flashing CIRCULAR  
346 YELLOW indication and the display of the steady CIRCULAR RED indication. During the change interval,  
347 the CIRCULAR YELLOW lens shall be steadily illuminated. The gate arm shall remain in the upright  
348 position during the display of the steadily illuminated CIRCULAR YELLOW change interval.

349 09 A change interval shall not be provided between the display of the steady CIRCULAR RED indication  
350 and the display of the flashing CIRCULAR YELLOW indication.

351 *Guidance:*

352 10 *The steadily illuminated CIRCULAR YELLOW change interval should have a duration of at least 5 seconds,*  
353 *unless a different duration, within the range of durations recommended by Section 4F.17, is justified by*  
354 *engineering judgment.*

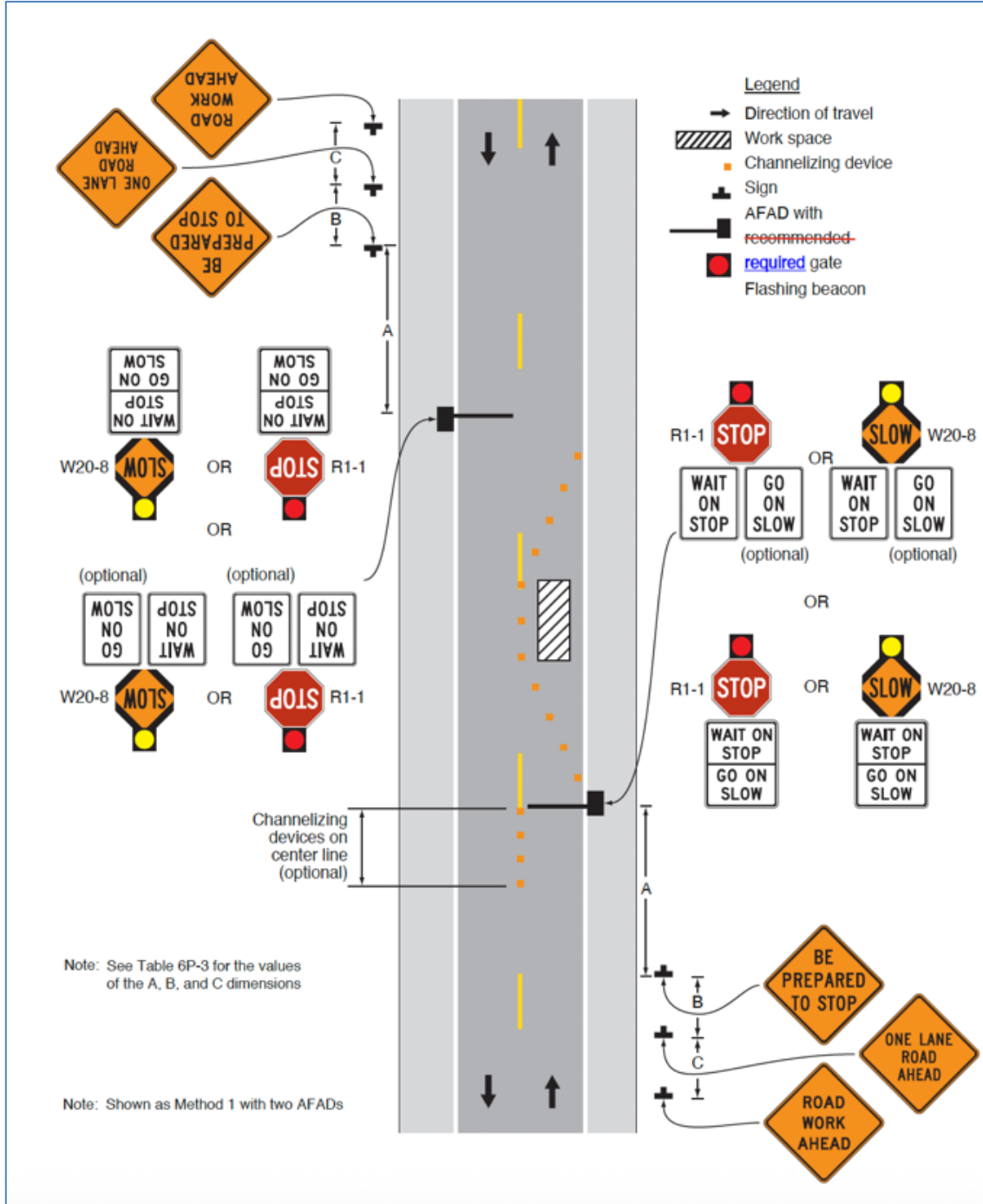
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## CHAPTER 6P. TYPICAL APPLICATIONS

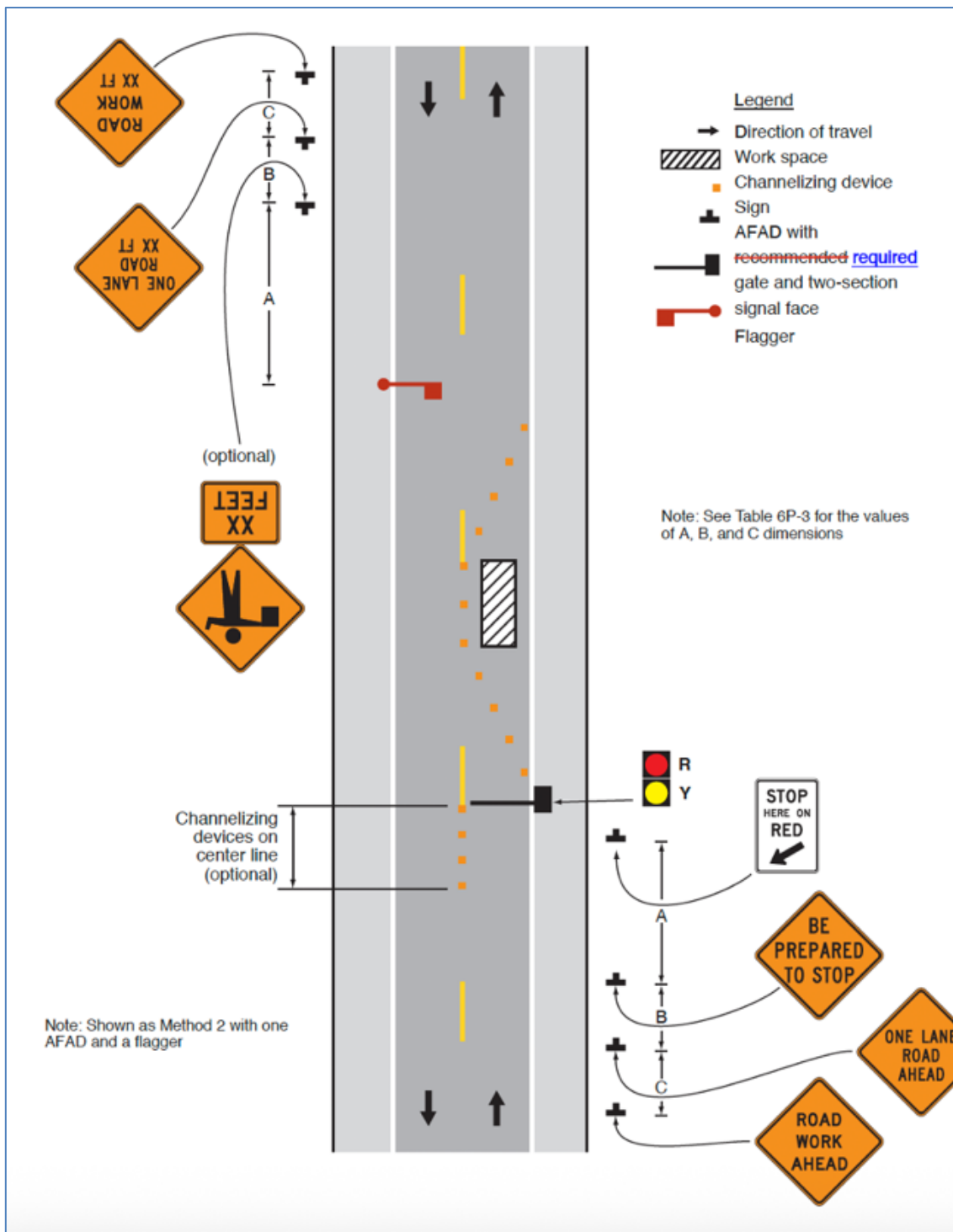
### Section 6P.01 Typical Applications

**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**  
**Example of an AFAD at each end of the TTC zone**



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**B – RED/YELLOW LENS AFAD**

**Example of an AFAD at one end of the TTC zone and a flagger at the opposite end**

367 [Gate arm requirements are changed from optional to required. Previous change to Figure number and  
 368 titles are from approved recommended change 24B-TTC-05. No changes were required to the notes for  
 369 this figure.]

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