

Regional Engineers

Jack A. Elston

Special Provision for Automated Flagger Assistance Devices

January 13, 2023

This special provision was developed by the Bureau of Safety Programs and Engineering to provide safer working conditions for flaggers by allowing the use of automated flagger assistance devices (AFADs) on two-lane, two-way highways. It has been revised to allow the use of Red/Yellow Lens AFADs, in addition to the STOP/SLOW AFADs that are currently allowed, and to eliminate redundancies with the MUTCD.

This special provision should be used on two-lane highways where two-way traffic will be maintained over one lane of pavement in segments where no sideroads or entrances require deployment of additional flaggers. Applications include rural milling and/or resurfacing projects, bridge maintenance projects, haul road crossings, pavement patching, or other similar projects with slow moving or stationary operations where the use of a flagger is required. AFADs should not be used on projects with numerous intersections where additional flaggers are required to control traffic.

Questions regarding the use of AFADs should be directed to the Bureau of Safety Programs and Engineering.

The districts should include the BDE Check Sheet marked with the applicable special provisions for the April 28, 2023 and subsequent lettings. The Project Coordination and Implementation Section will include a copy in the contract.

80192m

AUTOMATED FLAGGER ASSISTANCE DEVICES (BDE)

Effective: January 1, 2008

Revised: April 1, 2023

Description. This work shall consist of furnishing and operating automated flagger assistance devices (AFADs) as part of the work zone traffic control and protection for two-lane highways where two-way traffic is maintained over one lane of pavement in segments where no sideroads or entrances require deployment of additional flaggers. Use of these devices shall be at the option of the Contractor.

Equipment. AFADs ~~shall be according to the FHWA memorandum, "MUTCD – Revised Interim Approval for the use of Automated Flagger Assistance Devices in Temporary Traffic Control Zones (IA-4R)", dated January 28, 2005. The devices shall be the STOP/SLOW or Red/Yellow Lens type~~ mounted on a trailer or ~~a moveable cart and shall~~ meeting the requirements of the MUTCD and NCHRP 350 or MASH 2016, Category 4.

General. AFADs shall be placed at each end of the traffic control, where a flagger is shown on the plans. The AFAD shall be setup within five degrees of vertical.

Flagger symbol signs as shown on the plans shall be replaced with "BE PREPARED TO STOP" signs when the AFAD is in operation. The AFAD shall be the Stop/Slow type. This device uses remotely controlled "STOP" and "SLOW" signs to alternately control right-of-way.

Personal communication devices shall not be used to operate the AFAD.

~~Signs for the AFAD shall be according to Article 701.03 of the Standard Specifications and the MUTCD. The signs shall be 24 x 24 in. (600 x 600 mm) having an octagon shaped "STOP" sign on one side and a diamond shaped "SLOW" sign on the opposite side. The letters on the signs shall be 8 in. (200 mm) high. If the "STOP" sign has louvers, the full sign face shall be visible at a distance of 50 ft (15 m) and greater.~~

~~The signs shall be supplemented with one of the following types of lights.~~

- ~~(a) Flashing Lights. When flashing lights are used, white or red flashing lights shall be mounted within the "STOP" sign face and white or yellow flashing lights within the "SLOW" sign face.~~
- ~~(b) Stop and Warning Beacons. When beacons are used, a stop beacon shall be mounted 24 in. (600 mm) or less above the "STOP" sign face and a warning beacon mounted 24 in. (600 mm) or less above, below, or to the side of the "SLOW" sign face. As an option, a Type B warning light may be used in lieu of the warning beacon.~~

~~A "WAIT ON STOP" sign shall be placed on the right hand side of the roadway at a point where drivers are expected to stop. The sign shall be 24 x 30 in. (600 x 750 mm) with a black legend and border on a white background. The letters shall be at least 6 in. (150 mm) high.~~

~~This device may include a gate arm or mast arm that descends to a horizontal position when the "STOP" sign is displayed and rises to a vertical position when the "SLOW" sign is displayed. When included, the end of the arm shall reach at least to the center of the lane being controlled. The arm shall have alternating red and white retroreflective stripes, on both sides, sloping downward at 45 degrees toward the side on which traffic will pass. The stripes shall be 6 in. (150 mm) in width and at least 2 in. (50 mm) in height.~~

Flagging Requirements. Flaggers and flagging requirements shall be according to Article 701.13 of the Standard Specifications and the following.

~~AFADs shall be placed at each end of the traffic control, where a flagger is shown on the plans. Each AFAD shall be operated by a flagger trained to operate the specific AFAD to be deployed. A minimum of two flaggers shall be on site at all times during operation. Each flagger shall be positioned outside the lane of traffic and near each AFAD's location. The flaggers shall be able to view the face of the AFAD and approaching traffic during operation.~~

~~To stop traffic, the "STOP" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall descend to a horizontal position. To permit traffic to move, the "SLOW" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall rise to a vertical position.~~

~~Flagging equipment required for traditional flagging shall be available near each AFAD location in the event of AFAD equipment malfunction/failure.~~

~~If used at~~For nighttime flagging, the AFAD and flagger ~~the AFAD location~~ shall be illuminated according to ~~Section~~Article 701.13 of the Standard Specifications.

When not in use, AFADs will be considered non-operating equipment and shall be stored according to Article 701.11 of the Standard Specifications.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the various traffic control items included in the contract.