Automated Flagging Assistance Device (AFAD) Requirements

Automated Flagging Assistance Devices (AFADs) enable a flagger to be positioned out of the lane of traffic and are used to control road users through temporary traffic control zones. See the Minnesota Temporary Traffic Control Field Manual for specific temporary traffic control layouts. For a list of AFADs that have been approved for use on MnDOT (Minnesota Department of Transportation) projects and by MnDOT Maintenance, please see MnDOT’s Approved/Qualified Products website for Temporary Traffic Control Devices, specifically the Temporary Traffic Control Electronic Equipment webpage.

Product Requirements

In order for a product to be eligible for inclusion on MnDOT’s Automated Flagging Assistance Devices (AFADs) Approved Products List (APL), the product shall meet the following general criteria:

- Have a product webpage.
- Have an owner’s or user’s manual (or something similar) that provides directions on setting up and using the device.
- Meet all standard and guidance statements in the Minnesota Manual on Uniform Traffic Control Devices (MN MUTCD) for AFADs, see Chapter 6E. Flagger Devices; Section 6E.04 through 6E.06.
- Include a gate arm that meets the gate arm requirements as discussed in the MN MUTCD and the following:
  - The gate arm sheeting shall meet or exceed ASTM D4956 Type VIII.
  - The arm shall be able to extend to at least 8 feet.

STOP/SLOW AFADs:

In addition to the general criteria listed above, the STOP/SLOW AFADs shall meet the following criteria:

- The retroreflectivity of the STOP/SLOW signs shall meet ASTM D4956 Type XI.
- The SLOW sign shall be black on fluorescent orange.
- The STOP/SLOW sign shall be at least 36 x 36 inch with letters at least 12 inches high.

Red/Yellow Lens AFADs:

In addition to the general criteria listed above, the Red/Yellow AFADs shall meet the following criteria:

- The red/yellow lens shall include signal visors and backplates.
- The front surface of the lens housing, signal visors, and front surface of the backplate shall have a dull black finish to minimize light reflections and to increase contrast between the lens indication and its background. A solid yellow or solid fluorescent yellow retroreflective sheeting between 3 and 6 inches wide may be added to the perimeter of the backplate.
Application Process

In order to apply for MnDOT’s Automated Flagging Assistance Devices (AFADs) approved products list (APL), the manufacturer or vendor will need to submit an application packet for MnDOT’s review. The application packet shall include the following:

- A complete Application Form.
- The product’s webpage address.
- A link to the Owner’s or User’s Manual.
- The product specification sheet.
- A video showing two complete cycles of operation or an in-person demonstration (where a representative from MnDOT’s Office of Traffic Engineering is present).

All information submitted as part of the application process will be considered public data. Do not submit intellectual property.

MnDOT may request additional information from the applicant. The applicant must provide the requested information to MnDOT within 3 months of MnDOT’s request. Applicants are responsible for meeting this deadline. If MnDOT does not receive the requested information within 3 months, the application will expire, and MnDOT will take no further action on the application. MnDOT will not notify an applicant of an expired application. If an application expires, the applicant may submit a new application packet to MnDOT, which shall include all the requirements set out above.

The application packet shall be submitted electronically to the MnDOT Traffic Standards Engineer, as shown in the application form. Hard or paper copies of an application will be rejected.

MnDOT will review the application packet to determine if the product is eligible for inclusion on MnDOT’s Automated Flagging Assistance Devices (AFADs) Approved Products List.

Ongoing Requirements

In order to maintain the product on MnDOT’s APL, the product must continue to meet the requirements listed in the Product Requirements section of this document. The manufacturer must notify MnDOT of any design changes.

The manufacturer must provide a key contact person (name, email and phone), which will be added to MnDOT’s APL Tracking Spreadsheet. This person should be able to answer general questions about the product and will be the person MnDOT contacts if changes are made to this document and other product specifications. Multiple contacts may be added, but a key contact will always need to be identified.

To help ensure that a product purchased for use on a MnDOT roadway meets the requirements outlined in this document (Automated Flagging Assistance Device (AFAD) Requirements), the manufacturer or vendor must be familiar with this document and direct purchasers (who wish to use the product on a MnDOT Roadway) to products listed on MnDOT’s APL.
Contacts

For questions about the APL application and approval process for Automated Flagging Assistance Devices (AFADs), please contact

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