

AFAD – Red & Yellow Lens Worksheet; Section 00225.18

July 7, 2010

Complete this worksheet if you are submitting a **Red & Yellow Lens AFAD** for review.

Product: _____ Model #: _____

Manufacturer: _____

_____, Title _____ Date _____,

I officially represent the manufacturer, and hereby certify that the listed product meets the following requirements. I will notify you if we change the product in any manner that compromises the performance of these requirements.

- Applicable sections of
 - American National Standards Institute (ANSI)
 - Underwriter's Laboratories (UL)
 - National Electrical Safety Code (NESC)
 - National Electrical Code, Oregon Amended (NEC)
 - National Electrical Manufacturers Association (NEMA)
 - Standards of the American Society for Testing and Materials (ASTM)
 - Manual of Uniform Traffic Control Devices (MUTCD) summarized in part, below.
 - Institute of Transportation Engineers (ITE)
 - Local Laws

General Description: 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 on the roadway.

Material Specifications - Products placed on the ODOT **Red & Yellow Lens** AFAD list shall meet the following:

1. The red & yellow sign shall have at least one set of CIRCULAR RED and CIRCULAR YELLOW lenses that are 12 inches in diameter and whose performance and arrangement meet the applicable provisions for traffic signal indications in Part 4 of the MUTCD.
2. Post mounted lenses shall be a minimum of 7 feet above the pavement. If the lenses are mounted over any part of the highway that can be used by motor vehicles, the bottom of the housing shall be at least 15 feet above the pavement.

AFAD – Red & Yellow Lens Worksheet;

Section 00225.18

July 7, 2010

3. Operational units must withstand a design wind speed of 80 mph.
4. The red & yellow sign shall include a gate arm that descends to a down position across the approach lane of traffic when the steady CIRCULAR RED lens is illuminated and then ascends to an upright position when the flashing CIRCULAR YELLOW lens is illuminated. With the AFAD parked 2 feet outside the fog line, the gate arm must be long enough to block one-half of the travel lane being controlled. The gate arm shall be mounted at a height of 36 to 48 inches to the bottom of the arm above the pavement surface, and be covered with alternating red and white retro-reflective stripes at 6 inch intervals measured horizontally. The gate arm shall be mounted at a height of 36 to 48 inches to the bottom of the arm above the pavement surface, and be covered with alternating red and white retro-reflective stripes at 6 inch intervals measured horizontally. When the gate is in the down position:
 - A. The minimum vertical aspect of the arm and sheeting shall be 2 inches.
 - B. The stripes shall slope downward at an angle of 45 degrees from the upper right to the lower left on the side of the arm facing stopped traffic, and from the upper left to the lower right on the side of the arm facing moving traffic in the oncoming direction.
 - C. There must be a 16 inch square, red flag mounted at the end of the arm.
5. A 24 inch by 36 inch “Stop Here On Red” sign shall be installed on the right-hand side of the approach at the point which drivers are expected to stop when the steady CIRCULAR RED lens is illuminated.
6. To stop road users, the AFAD shall display a steadily illuminated CIRCULAR RED lens and the gate arm shall be in the down position. To permit road users to proceed, the AFAD shall display a flashing CIRCULAR YELLOW lens and the gate arm shall be in the upright position.
7. The AFAD shall include a mechanical fail-safe device that prevents the operator(s) from inadvertently actuating a simultaneous display of a flashing CIRCULAR YELLOW lens at each end of the work zone. The mechanical fail-safe device may be manually deactivated (not using remote control(s)) **ONLY** during the use of the AFAD for “Haul Road” applications.
8. A change interval of at least 5 seconds shall be provided as the transition between the display of the flashing CIRCULAR YELLOW indication and the display of the steady CIRCULAR RED indication. During the change interval, the CIRCULAR YELLOW lens shall be steadily illuminated. The gate arm shall remain in the upright position during the display of the steadily illuminated CIRCULAR YELLOW indication.
9. The entire unit, including the remotes shall be weather proof. Cabinets must meet NEMA 3R standards.
10. The remote controls shall use RF frequencies legally available without special licenses, and shall not interfere with other equipment common to the industry.
11. The unit shall meet the appropriate crash test criteria where applicable.

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I understand that if there are any modifications made to this model, I will notify ODOT as soon as possible, for possible re-evaluation. Failure to do so will result in Rejection of the product from the Qualified Products List (QPL).

Submit documentation and submittal forms to:

Oregon DOT – Product Evaluation Coordinator

Mike Dunning

800 Airport Road SE

Salem OR 97301-4798

503-986-3059

<http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/QPL/QPIndex.shtml>