



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

May 21, 2021
Subject: Supply & Delivery of School Zone
Signage & Rectangular Rapid Flashing
Beacons
State WINs: PH024229.00B & PH024231.00B
Location: **Statewide**
Amendment No. 2

Dear Sir/Ms.:

The following questions have been received:

Question: Page:32 Spec:2b – flash pattern: The flash pattern described in 2(b) does not meet the current MUTCD interim approval IA-21. The current approval calls for the WW+S flash pattern. Can you confirm which flash pattern should be used?

Response: Use the flash rate from the MUTCD

1.

- a. When actuated, the two yellow indications in each RRFB unit shall flash in a rapidly flashing sequence.
- b. As a specific exception to the requirements for the flash rate of beacons provided in Paragraph 3 of Section 4L.01, RRFBs shall use a much faster flash rate and shall provide 75 flashing sequences per minute. Except as provided in Condition 5f below, during each 800-millisecond flashing sequence, the left and right RRFB indications shall operate using the following sequence:

The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds.

Both RRFB indications shall be dark for approximately 50 milliseconds.

The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds.

Both RRFB indications shall be dark for approximately 50 milliseconds.

The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds.

Both RRFB indications shall be dark for approximately 50 milliseconds.

The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds.

Both RRFB indications shall be dark for approximately 50 milliseconds.

Both RRFB indications shall be illuminated for approximately 50 milliseconds.

Both RRFB indications shall be dark for approximately 50 milliseconds.

Both RRFB indications shall be illuminated for approximately 50 milliseconds.

Both RRFB indications shall be dark for approximately 250 milliseconds.

- c. The flash rate of each individual RRFB indication, as applied over the full flashing sequence, shall not be between 5 and 30 flashes per second to avoid frequencies that might cause seizures.
- d. The light intensity of the yellow indications during daytime conditions shall meet the minimum specifications for Class 1 yellow peak luminous intensity in the Society of Automotive Engineers (SAE) Standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated January 2005.
- e. To minimize excessive glare during nighttime conditions, an automatic signal dimming device should be used to reduce the brilliance of the RRFB indications during nighttime conditions.
- f. Existing RRFB units that use the flashing sequence that was specified in the Interim Approval 11 memorandum and a subsequent interpretation (the RRFB indication on the left-hand side emits two slow pulses of light after which the RRFB indication on the right-hand side emits four rapid pulses of light followed by one long pulse of light) should be reprogrammed to the flash pattern specified above in Condition 5b as part of a systematic upgrading process, such as when the units are serviced or when the existing signs are replaced.

Question: Page:32 Spec: 3(e): Would a NEMA 3R cabinet be acceptable? This type of cabinet is commonly used for traffic beacon applications.

Response: No. We want the NEMA 4-x.

Question: Page:32 Spec:3(e): Would a smaller solar panel and/or battery size be acceptable if annual performance is verified through solar power report?

Response: No.

Question: Page:32 & 33 Spec:3(g): Can you confirm that these specifications are referring to overhead illumination as opposed to the RRFB light bars themselves? If so, would a single cobra head-style luminaire be acceptable?

Response: Yes, it is for overhead lighting. Whatever light is used needs to be powered by solar and batteries and turn on only when the pushbutton is pushed.

Question: Page:33 Spec: 643.19: Can you confirm that these RRFB systems should come equipped with an audible APS push button such as the Polara iNX?

Response: No, it does not.

Question: Page:35 Spec: N/A: Would a solar panel size other than 100W be acceptable if performance is verified through a solar power report?

Response: No.

Question: Page: 35 Spec: 1.1 – Dimensions: We offer a 30x42” YOUR SPEED sign that is fully MUTCD-compliant. Would this be acceptable as an alternate?

Response: No.

Question: Page: 36 Spec: 1.4 – Finish: Would a natural aluminum interior be acceptable as opposed to black paint? This enclosure is ventilated, so heat should not be an issue.

Response: Yes.

Consider these changes and information prior to submitting your bid on **May 26, 2021**.

Sincerely,



George M. A. Macdougall P.E.
Contracts & Specifications Engineer