

## Terminology

IA-11 (original RRFB interim approval)	IA-21 (Revised/new RRFB interim approval)	Key difference(s)	No change
"warning beacon"	"pedestrian-actuated conspicuity enhancement"	Focused on pedestrians	

### 1. General Conditions

IA-11 (original RRFB interim approval)	IA-21 (Revised/new RRFB interim approval)	Key difference(s)	No change
"...shall consist of two rapidly and alternately flashed rectangular yellow indications..."	"shall consist of two rapidly flashed rectangular-shaped yellow indications..."	ALTERNATELY flashed removed	

### 2. Allowable Uses

IA-11 (original RRFB interim approval)	IA-21 (Revised/new RRFB interim approval)	Key difference(s)	No change
"... installed to function as a Warning Beacon (see 2003 MUTCD Section 4K.03)."	"... installed to function as a pedestrian-actuated conspicuity enhancement."	Clarifies RRFB is a distinct device from warning beacons which flash slower (50-60 flashes per minute).	
"... to supplement a W11-2 (Pedestrian) or S1-1 (School) crossing warning sign... located at or immediately adjacent to a marked crosswalk."	"... to supplement a post-mounted W11-2, S1-1, or W11-15 (Trail) crossing warning sign, or an overhead-mounted W11-2, S1-1, or W11-15,... located at or immediately adjacent to an uncontrolled marked crosswalk"	"Adds W11-15 (bicycle and pedestrian crossing sign). Adds "uncontrolled" to marked crosswalk".	Still requires diagonal downward arrow plaque (W16-7P) supplementing primary sign.
"... shall not be used for crosswalks across approaches controlled by YIELD signs, STOP signs, or traffic control signals."	"...shall not be used for crosswalks across approaches controlled by YIELD signs, STOP signs, traffic control signals, or pedestrian hybrid beacons."	Adds pedestrian hybrid beacons to locations were RRFB cannot be used.	Exception for crosswalks across the approach to or egress from a roundabout.
An additional RRFB may used in advance of a crossing where sight distance is restricted with "with an AHEAD (W16-9P) plaque".	An additional RRFB may used in advance of a crossing where sight distance is restricted "with an AHEAD (W16-9P) or distance (W16-2P or W16-2aP) plaque."	A distance plaque may be used in lieu of an ADVANCED plaque.	An additional RRFB may used in advance of a crossing where sight distance is restricted.

### 3. Sign/Beacon Assembly Locations

IA-11 (original RRFB interim approval)	IA-21 (Revised/new RRFB interim approval)	Key difference(s)	No change
			Still requires placement of two RRFBs at each crossing for each approach -one on the left and right side of the crossing (or in median for divided highways).
	Adds that "If the RRFB unit is supplementing an overhead-mounted sign, the RRFB unit shall be mounted directly below the bottom of the sign."	Clarifies RRFB may supplement overhead signs.	
References exception to 2003 MUTCD Section 4K.01	References an exception to Paragraph 5 of Section 4L.01 of 2009 MUTCD regarding placement of RRFB unit between post-mounted sign and arrow plaque.	None	

### 4. Beacon Dimensions and Placement in Sign Assembly

IA-11 (original RRFB interim approval)	IA-21 (Revised/new RRFB interim approval)	Key difference(s)	No change
			Size (5 inches wide by at least 2 inches high) and placement (below sign) criteria remain the same.
		Modifies reference to warning beacons to reflect section heading changes from 2003 MUTCD (section 4k.01) to 2009 MUTC (section 4L.01).	

## 5. Beacon Flashing Requirements

IA-11 (original RRFB interim approval)	IA-21 (Revised/new RRFB interim approval)	Key difference(s)	No change
"... shall flash in a rapidly alternating "wig-wag" flashing sequence..."	"... shall flash in a rapidly flashing sequence."	Removed "wig-wag" requirement and specifies sequence.	
70 to 80 periods of flashing per minute, equal periods of light and dark operation; 2 rapid pulses on one side, 3 on the other.	75 flashing sequences per minute using a specified 800-millisecond flashing sequence	Flashing sequence revised	
"... light intensity of the yellow indications shall meet the minimum specifications of Society of Automotive Engineers (SAE) standard J595..."	"... light intensity of the yellow indications during daytime conditions shall meet the minimum specifications for Class 1 yellow peak luminous intensity in the SAE Standard J595..."	Adds reference to "daytime"	Clarifies the same light intensity required during the daytime, but a reduced intensity ok for nighttime.
	Adds Section 5(e) to recommend a signal dimming device during nighttime conditions to minimize glare.	Adds guidance to dim the light intensity at night.	
	Existing RRFB units with sequences programmed under IA-11 should be reprogrammed as part of a systematic upgrading process, e.g. when the units are served or when existing signs are replaced.	Specifies existing IA-11 approved device flash patterns must meet flash pattern criteria specified in IA-21 during routine maintenance. It does not require addition of accessible features to existing installations that are not accessible.	

## 6. Beacon Operation

IA-11 (original RRFB interim approval)	IA-21 (Revised/new RRFB interim approval)	Key difference(s)	No change
Push Button to Turn On Warning Lights sign SHOULD be mounted with ped pushbutton.	R10-25 Push Button to Turn On Warning Lights sign SHALL be installed.	Section 6(c) changes R10-25 Push Button to Turn On Warning Lights sign from SHOULD to SHALL.	
The duration of a predetermined period of operation of the RRFBs following each actuation should be based on the MUTCD procedures for timing of pedestrian clearance times for pedestrian signals.	The duration of a predetermined period of operation of the RRFBs following each actuation should be based on the procedures provided in Section 4E.06 of the 2009 MUTCD for the timing of pedestrian clearance times for pedestrian signals.	No change to timing, but adds reference for how to determine pedestrian clearance interval.	
	"The predetermined flash period shall be immediately initiated each and every time that a pedestrian is detected either through passive detection or as a result of a pedestrian pressing a pushbutton detector, including when pedestrians are detected while the RRFBs are already flashing and when pedestrians are detected immediately after the RRFBs have ceased flashing."	New requirement clarifying that any activation initiates the start or restart of the flash period.	

## 7. Accessible Pedestrian Features (new to IA-21)

IA-11 (original RRFB interim approval)	IA-21 (Revised/new RRFB interim approval)	Key difference(s)	No change
	"Section 7: If a speech pushbutton information message is used in conjunction with an RRFB: (a) a locator tone shall be provided (b) the audible information device shall not use vibrotactile indications or percussive indications (c) the message should say "Yellow lights are flashing." The message should be spoken twice."	New section addressing accessible features.	