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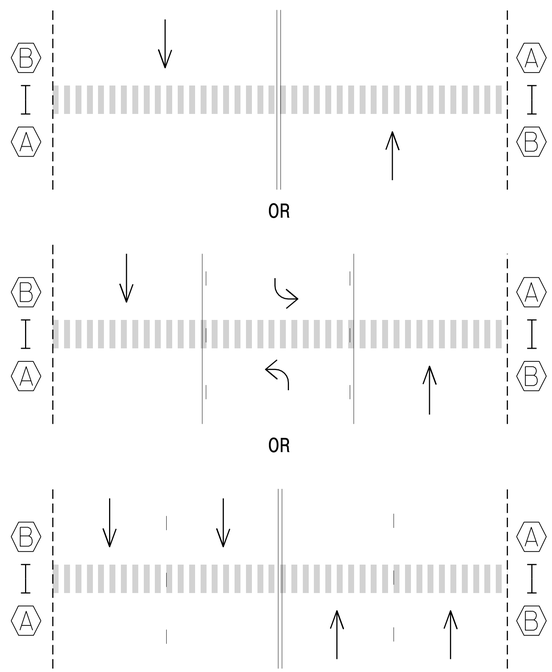
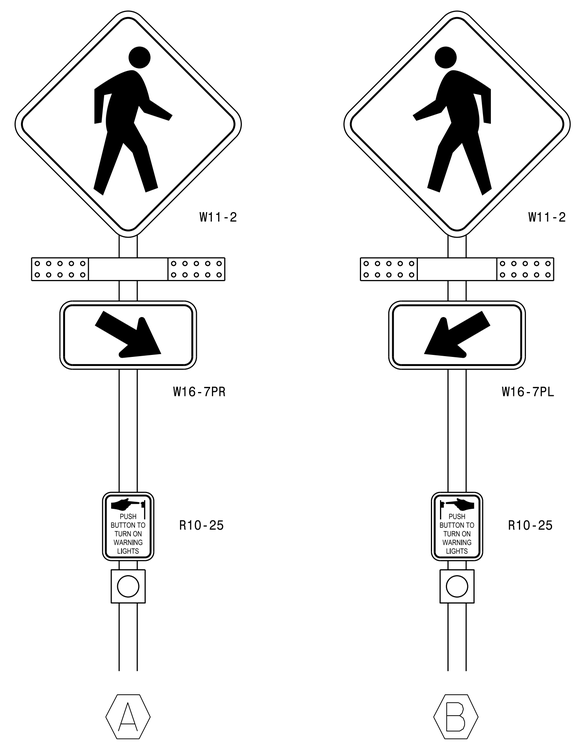
PROJECT REFERENCE NO.	SHEET NO.
U-5906	RRFB

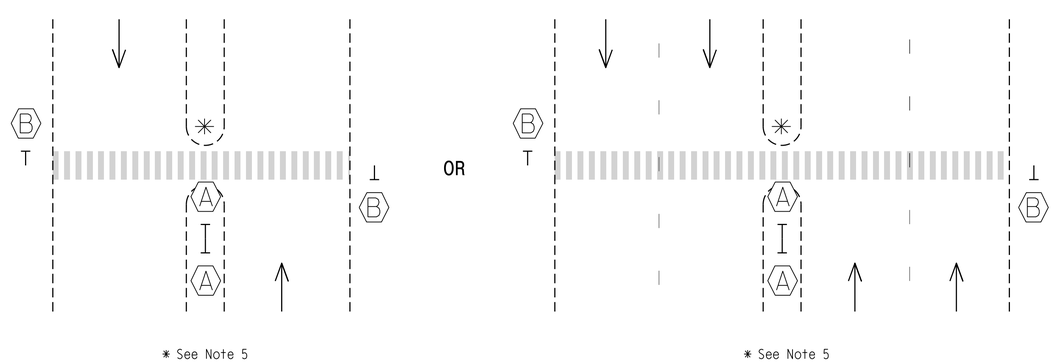
Two to Four Lanes, Undivided



RRFB Sign Detail



Two or Multi-Lanes, Divided



Notes

1. Design the RRFB in accordance with the 2023 MUTCD, 11th Edition, Chapter 4L: Rectangular Rapid-Flashing Beacons. The RRFB unit associated with a post-mounted sign and plaque should be located between the pedestrian crossing warning (W11-2) sign and the supplemental downward diagonal arrow plaque (W16-7p).
2. If needed, a supplemental RRFB with an "AHEAD" (W16-9P) or distance (W16-2P) plaque may be installed on the approach in advance of the crosswalk. The addtional RRFB shall be a supplemental to and not a replacement for the RRFB at the actual crosswalk.
3. When practical, the RRFB and mounting post on the right side of the road shall be mounted on the approach side of the crosswalk closest to approaching traffic.
4. When practical, the RRFB and mounting post on the left side of the road may be mounted on the back of the post for the opposing approach.
5. A RRFB on the left side of the roadway or in the median may be individually mounted on the approach side of the crosswalk closest to approaching traffic, or, when practical, may be mounted back to back on the same post and mounted on either side of the crosswalk in the median.
6. Locate push button sign (R10-25) and push button to face crosswalk, even if it is mounted on the back side of the sign.
7. All RRFB units associated with a given crosswalk (including those with an advance crossing sign) shall, when actuated, simultaneously commence operation of their rapid-flashing indications and shall cease operation simultaneously.
8. For quantitative purposes, a single sided, post mounted RRFB is one assembly unit. A double sided RRFB mounted on the same post is counted as two (2) assemblies.
9. For additional information, see Version 24 of the Transportation Systems Management and Operations (TSMO) Unit Project Special Provisions (PSP).

Timing of RRFBs

When actuated, the two yellow indications in each RRFB unit shall flash in a rapidly flashing sequence.

The RRFB shall flashing sequence shall provide enough time for pedestrians to cross from curb to curb. It is recommened to be a minimum of 7 seconds plus the crossing distance (D) divided by 3.5 feet/per sec., rounded up to the next whole second:

$$\text{Flash Time (sec.)} = 7 + D/3.5$$

Per Section 4L.03 of the 2023 MUTCD, RRFBs shall provide 75 flashing sequences per minute. 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.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
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TSMO Unit
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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA

DocuSigned by: Robert J. Ziemba
SIGNATURE
05/30/2024
DATE

Standard Drawing for Rectangular Rapid Flashing Beacon

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