

## Purpose

The City of Roswell identifies pedestrian safety and speed management as a community priority. One of the successful low cost strategies to improve pedestrian safety is the installation of rectangular rapid flashing beacons (RRFB). RRFBs are user actuated amber LEDs (light-emitting diode) that supplement warning signs at unsignalized intersections or mid-block crosswalks. They use an irregular flash pattern that is similar to emergency flashers on police vehicles to alert vehicles that pedestrians are present or are attempting to cross the road.

While signs and road markings legally establish a crosswalk, they are often not enough to make drivers yield to pedestrians. Studies have found that RRFBs have a significant effect on increasing pedestrian safety at uncontrolled crossings, such as midblock crosswalks and roundabouts. Federal Highway Administration's (FHWA) [Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations](#) provides a comprehensive table on potential pedestrian safety improvement treatments based on speed limit, traffic, and roadway geometry information. As of June 2022, there are no national warrants for the installation of RRFBs. This policy adopts FHWA's Guidelines and Compliance for RRFB Installation per the [Interim Approval 21](#) and dictates that any installation process shall follow said guidelines.

Public-private partnerships (P3s) in transportation are contractual relationships typically between a government, which are the owners of most transportation infrastructure, and a private group. P3s provide a mechanism for greater private-sector participation in all phases of the development, operation, and financing of transportation projects.

In the spirit of P3's, the City of Roswell has developed a process in which local residents, civic groups, Home Owners Associations (HOA's), or private businesses may request to sponsor and fund a new future RRFB signal at an existing crosswalk. For the request or application to be successful, the location would need to meet the criteria outlined in this policy.

An Applicant should review all the information below before submitting an application to the Roswell Department of Transportation:

1. Provide the location and details of the desired crossing point for a new RRFB signal at an existing crosswalk.
  - Clearly outline and document which existing crosswalk people are utilizing to cross the roadway, but also identify the common destination (school, park, bus stop, business, existing sidewalk, etc.) pedestrians are trying to access if one exists.
  - Is the route a Local Road or a State Highway Route? State Highways are managed by the Georgia Department of Transportation (GDOT) and this City policy only applies to local roadways controlled by the City of Roswell.
2. Does the applicant have sufficient funds to partner with the City to install a new RRFB signal at an existing crosswalk? Please note, two RRFB's must be added (one facing each direction).
  - Estimated cost for a RRFB crossing will vary and will need to be reviewed by RDOT staff on a case-by-case basis. Currently, the minimum cost for equipment and installation is typically between \$8,000 and \$15,000 per location.

- Depending on the availability of funding, the City may provide up to 50% of the cost total to accelerate a new RRFB location. The applicant should not assume committing funding will ensure a successful application or outcome.
- The applicant must indicate in the attached application and later verify via signed affidavit they, or their organization, have the required financial commitment available. The applicant must also confirm they are authorized to represent a citizen's group, organization, or HOA. If representing a larger group or HOA, the applicant should also expect to be able to provide further confirmation the group (HOA) has approved (voted on) this project and payment agreement.
- If approved by RDOT, any funding would need to be provided to the City of Roswell prior to any equipment being ordered or city resources are used.

Once received, Roswell Staff will review each request and advise if the proposed crosswalk location meets the criteria for a new RRFB site which is outlined below. Please note if additional costs associated with any additional design, right-of-way, utility relocation cost, supplies, labor, or construction contingency costs are needed, the applicant will have to fund those costs.

If the applicant desires to attempt a crowdfunding approach, it is strongly recommended the applicant contact the City first to determine the project's feasibility and what steps will be required for approval prior to the applicant raising private funding. The City will not intervene in any external disputes over any issues regarding privately raised funding.

### **Roswell review criteria for request by applicants:**

The location of RRFBs will be determined based on its effectiveness to provide a benefit to pedestrians crossing at the crosswalk. With priority consideration given to an identified public safety issue, the Department of Transportation Director and Police Chief or their designee in conjunction with the city traffic engineer will use the following guidelines to determine the applicability and priority of a candidate location to install crosswalks or RRFB:

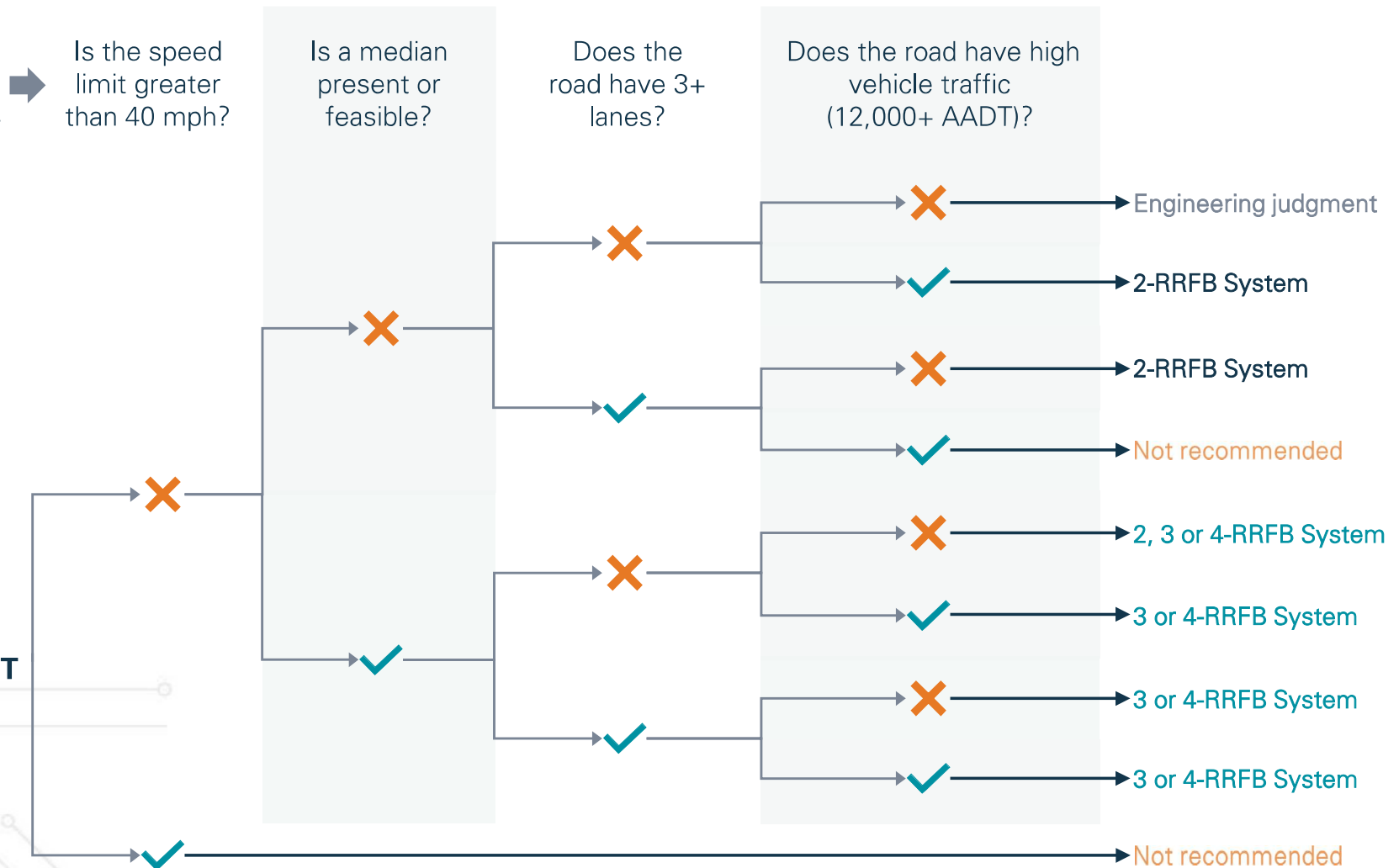
1. Creating safe routes to schools, City services, City parks, large employment centers, existing trail systems, and school bus stops or public transportation stops
2. Existing uncontrolled crosswalk is experiencing no or low yield to pedestrians at the crosswalk
3. Recommendation based on engineering study including the following data analyses (a flowchart of this process is included in the appendix):
  - a. Pedestrian traffic (hourly number of pedestrian crossing the road on an average day)
  - b. Crash data, with a focus on pedestrian crashes
  - c. Vehicular speed data (speed limit and 85<sup>th</sup> percentile speed on an average day)
  - d. Traffic data (average daily traffic in vehicles per day)
  - e. Visibility (sight distance) of the crosswalk/pedestrians at the crosswalk
  - f. Number of lanes crossed
  - g. Vicinity to pedestrian generators such as neighborhoods, schools, recreational areas, etc.
  - h. Conformance of existing facility design to Manual on Uniform Traffic Control Devices (MUTCD), American with Disabilities Act (ADA) requirements, and legal guidelines
4. The suitability or practicality of RRFB's required will be determined by staff based on the RRFB Selection Flowchart.
5. The amount or percentage of the applicant's financial contribution will also be considered independently of staff's site assessment.

# RRFB Selection Flowchart

## Legend

- Engineering judgment = RRFBs are not recommended but are an optional enhancement with or following engineering judgment
- 2-RRFB System = Two RRFB units mounted at the roadside
- 3 or 4-RRFB System = Two RRFB units mounted at the roadside + one to two RRFB units mounted on the median refuge

Use this chart to determine the number of RRFBs ideal for an installation.



Source: Adapted from Oregon Department of Transportation, Report No. FHWA-OR-RD-12-09, [Evaluation of Alternative Pedestrian Traffic Control Devices](#)

