

Pedestrian Refuge Islands

CRASH REDUCTION STRATEGY SUMMARY

WHAT?

Pedestrian refuge islands (PRIs) are facilities with raised medians that provide pedestrians a space to wait halfway across a street, rather than needing to cross the entire roadway distance at one time.

WHY?

Crossing wide or high-volume intersections can be difficult. These difficulties become greater with decreased walking speeds. However, total vehicle and pedestrian delay decreases when a pedestrian crossing can be divided into two segments.

It can be a long time to find an acceptable gap with both directions of traffic. For example, finding a 12 second gap across both directions of traffic with an AADT of 25,000 can take five minutes. With a PRI, this can be separated into two 6 second gaps, which will average a total wait of less than 20 seconds. Often times a PRI will allow pedestrians to continue to walk at-grade, like in **Figure 1**. This provides protection for pedestrians, while simplifying the process for those with disabilities. PRIs should be considered at any intersection where traffic flow is high or approaches are more than one lane, and pedestrian demand is present.

Figure 1 – Pedestrians Crossing at Refuge Island



Source: NYC Department of Transportation

SAFETY BENEFITS

The following table summarizes the safety benefits of the implementation of a raised median refuge island.

Table 1 – Summary of Safety Benefits

	Yes	No
FHWA Proven Countermeasure	X	
Included in the HSM	X	
14A.4.2.6 – Provide a Raised Median or Refuge Island at Marked and Unmarked Crosswalks (No CMF)		
Included in the CMF Clearinghouse *	X	
Raised median with marked crosswalk (uncontrolled), CMF 0.54, all, 3 stars		

* Note: CMFs with less than a 4 star rating, may not be reliable and are not to be used in crash reduction.

How?

At an intersection, PRIs can exist between lanes in the same direction or between two different directions of traffic. Right turn slip lanes can also be accompanied by a PRI. PRIs should be considered at intersections that have multi-lane approaches, and/or intersections with relatively high volumes.

SUMMARY

PRIs are an FHWA Proven Countermeasure, which means they should be implemented wherever feasible and can be implemented using HSIP funds without a benefit cost ratio. PRIs are easy to implement where a raised median is already present provided that both adequate space be provided for pedestrians to queue within the refuge island and ADA requirements can be maintained within the median. They can decrease pedestrian and

vehicle delay, as well as increasing safety at intersections. PRIs are appropriate at most intersection types and can be implemented at intersections with ample right-of-way.

WORKS CITED

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This document was prepared for the Nevada SHSP Intersections CEA Team (October 10, 2014)

Figure 2 – Pedestrian Refuge Islands at Boulder Highway and Tropicana Avenue

