TRANSPORTATION ENGINEERING DIVISION

FACT SHEETS

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What is a Pedestrian Hybrid Beacon?

A Pedestrian Hybrid Beacon (PHB) is a special type of beacon used to warn and control traffic to assist pedestrians in crossing a street or highway at an uncontrolled location, in conjunction with crosswalk markings and other traffic control devices. Uncontrolled crossings occur where sidewalks or designated walkways intersect a street at a location where no traffic control (i.e., traffic signal or STOP sign) is in place for motorists on that street.

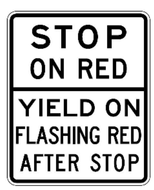
PHBs, which have also been referred to as **H**igh-intensity **A**ctivated cross**W**al**K** beacons (HAWKs), have been found highly effective in improving pedestrian safety by getting motorists to stop and yield to pedestrians. PHBs are push button activated. The displays motorists and pedestrians see at a PHB are illustrated here to the right.

PHB Sequence

	MOTORISTS		PEDESTRIANS	
	See This:	**Do This:**	**See This:**	**Do This:**
1	Dark	**Proceed with Caution** Normally dark until activated		**Push the Button to Cross**
2	Flashing Yellow Light	**Slow Down** Pedestrian has activated the push button		**Wait**
3	Steady Yellow Light	**Prepare to Stop**		**Continue Waiting**
4	Steady Red Light	**Stop and Remain Stopped** Pedestrian in crosswalk		**Start Crossing** When all vehicles are stopped
5	Alternating (like RR crossing)	**Stop** Proceed with caution if clear	15	**Continue Crossing** Countdown indicates time left to finish crossing

The Manual on Uniform Traffic Control Devices (MUTCD) has guidance criteria on when a PHB should be considered based on major-street traffic volumes, roadway speeds, crossing distances, pedestrian volumes, and walking speeds.

If installed within a coordinated traffic signal system, the PHB should be coordinated with adjacent traffic signals to reduce crash potential. This often requires pedestrians to wait for their time to cross due to signal coordination considerations.



A PHB can be installed at a stop-controlled intersection, but this usually requires that stop-controlled minor street approaches be limited to right-turn movements. Since a PHB is not designed to provide minor street displays, minor street through and left-turn movements can pose conflicts.

Overhead PHB

What are those strobe-like beacons that are installed on some pedestrian signs?

A Rectangular Rapid Flash Beacon (RRFB) incorporates a special high-frequency yellow flash sequence to enhance attention-getting effectiveness to provide supplemental emphasis to warning signs for marked crosswalks. RRFBs can be used for both post-mounted and overhead-mounted pedestrian crossing signs, school crossing signs, and trail crossing signs. They can also be used in conjunction with advance warning signs for crosswalks.

Pedestrian Crossing Beacons

Overhead RRFB

RRFBs, which have replaced circular yellow flashers for new crosswalk applications in the city, are pedestrian-actuated by push button. A side-mounted flashing light aimed toward pedestrians is incorporated to provide confirmation they are in operation.

Research has found that RRFBs can produce motorist-yielding rates as high as 98 percent. RRFBs are particularly effective at multi-lane crossings with speed limits less than 40 mph. Unlike PHBs, RRFBs cannot be coordinated with adjacent signals, but they are less expensive to install.

How does the city determine where to install pedestrian crossing beacons and the type?

The city conducts engineering studies to determine where uncontrolled pedestrian crossing improvements on collector and arterial streets are needed and justified. The City utilizes research-based nationally recognized guidance to determine where crosswalks and beacon installations are needed and appropriate. This includes FHWA's Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations that is available at https://highways.dot.gov/safety/pedestrian-bicyclist/step/resources, as well as the MUTCD. Factors considered include a number of street conditions (i.e., number of lanes, speed limit, daily traffic volumes, and existence of a raised median) as well as pedestrian crossing volumes. PHBs are typically more appropriate than RRFBs on multi-lane streets with a posted speed limit at or above 40 mph and traffic volumes greater than 15,000 vehicles per day. The city evaluates locations upon request (a request can be submitted at https://seeclickfix.com/las-vegas). If found to be justified, the city prefers to install beacons that have hard-wired power vs. solar power due to maintenance considerations. However, hard-wired power improvements can affect installation times and cost.

For new developments, the city requires that developers prepare a pedestrian circulation plan that identifies pedestrian crossing improvements that may be needed to accommodate walk trips between the development and nearby attractions (e.g., schools, parks, and retail areas). The needed pedestrian crossing improvements can then be required as part of that development.

Are there other measures used to improve pedestrian crossings on major streets?

Beacon installations are just one tool the city uses to facilitate safe pedestrian crossings. Beacons are installed with other traffic control measures that may include the following:

- High-visibility crosswalk and warning signs*
- Advance "Yield/Stop Here To/For Pedestrian" signs and Yield/Stop lines**
- Median Refuge and/or addition lighting
- Curb extensions and/or parking restrictions
- Road diet treatments

* *Always included per current standards.*
** *Always included per current standards except at roundabouts*

Advance Yield Line & Sign

Median Refuge

Want More Information?

This flyer is for general purposes only. For more information, please contact the city of Las Vegas Department of Public Works, Transportation Engineering Division at (702) 229-6331 or https://seeclickfix.com/las-vegas

NOTE: The **Manual on Uniform Traffic Control Devices (MUTCD)** is used throughout the country as the standard by which traffic control decisions are made. Nevada Revised Statute 484A.430 requires its use for placement of all traffic control devices. Find the ***complete*** MUTCD at https://mutcd.fhwa.dot.gov/ or scan the QR code.

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