Effectiveness of a HAWK Beacon Signal at Mid-Block Pedestrian Crossings

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ABSTRACT

Pedestrian signals, particularly at signalized, mid-block crossings can cause delay to a driver, which is termed “excessive delay” in this study. In many cases at a mid-block signal, a pedestrian pushes the button and then quickly crosses the street as soon as the walk signal appears, leaving drivers still facing several seconds of solid red ball and by law, must remain stopped, even though no pedestrians remain in the crossing (i.e., “excessive delay”). On a busy street, a queue of vehicles waiting after all pedestrians have crossed can amount to hundreds of hours of excessive delay per year. The High-intensity Activated crossWalk (HAWK) beacon signal, which is now proposed to be called a “pedestrian hybrid signal” by the Federal Highway Administration (FHWA) in the next Manual on Uniform Traffic Control Devices (MUTCD) (expected 2009), is proven to be effective in decreasing this excessive delay by its different sequence of signal operation. The city of Lawrence was interested in experimenting with the HAWK beacon signal, and so they installed one at a mid-block crossing. A study was conducted at this site to find out the effectiveness of this HAWK beacon signal in decreasing the delay to drivers by comparing it with a similar signalized mid-block crossing in the city. Video cameras were used to capture video at these sites, and the effectiveness of a HAWK beacon signal to reduce excessive delay was analyzed from the videotapes. The HAWK beacon signal proved to be effective in decreasing the excessive delay to the drivers in this study.

Key words: excessive delay—HAWK beacon—mid-block signals