



In-Pavement LED Pedestrian Crossing Operations and Effectiveness

Project Number 2011-04

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Problem Life-threatening situations can arise when pedestrians try to cross a street and vehicles fail to yield the right-of-way. In addition, recent trends have shown an increase in citizens choosing to walk or bike to their destinations. This has increased the number of conflicts in urban areas where heavy pedestrian and vehicle traffic occurs simultaneously during peak periods. The City of St. Anthony Village specifically identified a mid-block crossing on Silver Lake Road at 34th Avenue NE as a dangerous location with many pedestrian-vehicle conflicts and the potential of a severe accident.

Solution The City of St. Anthony Village identified and installed a pedestrian-activated in-pavement lighting system designed to increase driver compliance with state law and minimize potential dangerous situations. The system warns motorists as they are approaching the mid-block pedestrian crossing when it is occupied by pedestrians or about to be occupied by pedestrians. The system includes three primary components: a push-button activation mechanism, bidirectional in-pavement LEDs, and pedestrian crossing blinker signs.

Procedure To evaluate the system's effectiveness, traffic counts were taken before and after the system's installation. The initial count was collected in March 2012, and the system was installed in September 2012. Two weeks after the initial installation, the blinker LEDs were realigned to optimize their brightness for drivers.

Results The city has received numerous positive comments about the system. Driver compliance in yielding the right-of-way to pedestrians using the mid-block crosswalk has increased by 12 percent, bringing total compliance to nearly 100 percent. In addition, the percentage of jaywalkers and pedestrians experiencing long waits at the crossing has decreased. No additional system maintenance has been required, and the system has performed well in the cold, snowy Minnesota weather. The city did discover that community outreach to residents was necessary to maximize use and understanding of the system.

Approximate Cost \$79,500

OPERA Funding \$10,000

Implementation Installation of the system was completed in September 2012, and final pedestrian counts and evaluations were completed in May 2013. The system continues to be operational at the mid-block crossing on Silver Lake Road at 34th Avenue NE.

Status Complete

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