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DEPARTMENT OF PUBLIC WORKS
Engineering Division – Traffic Section
2625 E. Glendale Avenue
Appleton, WI 54911
TEL (920) 832-5580
FAX (920) 832-5570

To: Municipal Services Committee
From: Eric S. Lom, City Traffic Engineer
Date: June 21, 2021
Re: Traffic Signal Removal Test at Lawrence/Walnut Intersection
(Follow-up to six-month trial)

Lawrence Street from Walnut Street to Elm Street is scheduled to be reconstructed in 2022 (utility work will occur in 2021). The existing Lawrence/Walnut traffic signal's above ground and underground equipment is in very poor condition. If it were to be replaced as a part of the planned reconstruction project, the estimated cost would be \$135,000.

As a part of our normal design process, the Traffic Section reviewed the intersection control at the Lawrence/Walnut intersection. Our review showed the existing traffic volumes are *substantially* lower than what is necessary to meet the FHWA's traffic signal warrants. In fact, the traffic volumes, which have remained essentially steady for the past two decades, come slightly short of meeting the warrants for all-way stop control.

In late 2020, a six-month trial was initiated to test all-way stop control at this intersection, which was accomplished by operating the traffic signal in a red-red flash pattern 24 hours per day. As is our normal procedure, signs were posted advising the public of the test and displaying a phone number drivers could use to provide feedback.

During the trial period we did not receive any internal or external feedback. We solicited feedback from the Appleton Police Department and were advised they would prefer to see the traffic signal replaced with an all-way stop.

Based on our review, we believe the existing and future vehicular traffic at this intersection could be safely accommodated with a 2-way stop. However, based on the large volume of pedestrian crossings at this intersection, combined with the poor sight distance in the southwest quadrant (due to an adjacent building), we recommend the existing traffic signal be decommissioned, and be replaced with all-way stop control.

To accomplish this, the following ordinance action is required:

1. **Create:** "Remove the traffic signal at the intersection of Lawrence Street and Walnut Street."
2. **Create:** "Install all-way stop control at the intersection of Lawrence Street and Walnut Street."