Office of the City Engineer

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0540-16

DATE: December 12, 2016

TO: John Rooney, Assistant Commissioner of Public Works / City Engineer

FROM: Ara Molitor, Traffic Engineer

RE: Traffic Study – Intersection of Jefferson Street and West High Street.

Purpose: Determine if the warrants for intersection control dictate a change in existing conditions for the intersection.

Method: Field observation, traffic counts, crash analysis and sign warrant analysis.

ANALYSIS

Existing Conditions:

- At the intersection of Jefferson Street and West High Street the current "stop" control is on West High Street facing east and west.
- Both streets are two lane, bi-directional local roadways with a concrete pavement width of 30 feet face to face – narrower than our standard street width of 36' f/f that allows for parking.
- There are no existing parking restrictions at this intersection for any leg of the intersection.
- The neighborhood is completely residential.
- Vision is wide open for the northern quadrants and the southwest quadrant of the intersection. The southeast quadrant is partially obstructed by the house on that corner, compromising the stopping sight distances for the west bound and north bound conflicting traffic.

Tube counts were taken to determine the ADT's of the roadways. Jefferson Street was determined to have an ADT of 405 veh./day. West High St. similarly ADT was 296 veh./day. The total ADT of 701 was used for the sign warrant analysis.

A 5-year crash analysis (2011-2016) was performed on the intersection. During the study period there was 1 crash near the intersection and that crash was not correctable. (Inattentive driving – sideswipe of a parked car. Driver was looking at his phone for directions) This accident occurred during the construction of STH 38 this summer.

The current ADT's and analysis do **not** even warrant a "Yield" control (ADT >= 1000 veh/day). To warrant a 2-way Stop condition (existing) an ADT between 2000 and 8000 veh/day is recommended. I believe the current control can be justified because of the vision obstruction on the SE corner.

RECOMMENDATIONS

- Leave the intersection "AS IS". I would caution changing the intersection with such low volumes to a lesser control ever. This would only make the intersection function more dangerously.

- **DO NOT** switch Stop sign directions for the same reasons as above. The ADT's for the 2 roads are low enough that the total delay of the intersection approaches zero.