

Office of the City Engineer

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DATE: December 13, 2016 0816-16

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

FROM: Ara Molitor, Traffic Engineer

RE: Traffic Study – Intersection of Erie Street and Hubbard 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 Erie Street and Hubbard Street the current “stop” control is on Hubbard Street facing east and west.
- Erie Street is a two lane; bi-directional local roadway with asphalt overlaid concrete pavement width of 30 feet face to face.
 - There is a “No Parking” restriction of along the east side of Erie through the study area.
- Hubbard Street is a two lane; bi-directional local roadway with asphalt overlaid concrete pavement width of 36 feet face to face.
 - There are no existing parking restrictions on Hubbard Street.
- The neighborhood is completely residential.
- Vision is wide open for the northern quadrants of the intersection. The southern quadrants are partially obstructed by houses on those corners, compromising the stopping sight distances for the east and west bound and north bound conflicting traffic.

Tube counts were taken to determine the ADT’s of the roadways. Erie Street was determined to have an ADT of 728 veh./day. Hubbard Street similarly ADT was 348 veh./day. The total ADT of 1076 was used for the sign warrant analysis.

A 5-year crash analysis (2011-2016) was performed on the intersection. During the study period there were 2 accidents at the intersection. Neither accident was correctable.

The current ADT’s and analysis warrant a “Yield” control (ADT \geq 1000 veh/day). To warrant a 2-way Stop condition (existing condition) 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 and SW corners.

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.
 - I would also caution changing to an “All-Way” stop condition. This would only add to the total intersection delay and add confusion to the traveling public.

- **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.