
Memorandum

The City of Traverse City
Engineering Department



TO: Timothy J. Lodge, P.E., City Engineer
CC: Russell A. Soyring, AICP, Planning Director
FROM: Colby V. Winter, Seasonal Engineering Aide
DATE: Tuesday, May 17, 2016
SUBJECT: 24 Hour Speed and Volume of 8th St between Boardman Ave and Lake St

City Engineering performed a 24 hour speed study on 8th St between Boardman Ave and Lake St beginning on Monday, May 16, 2016 concluded Tuesday, May 17, 2016. This memo is to formalize City Engineering's initial data observations and findings with to the speed statistics and volume of vehicular traffic on 8th St.

The data was gathered using a JAMAR Radar Recorder, this data recorder collects both vehicle speed and volume using radar sensors in both westbound and eastbound lanes. The raw data compiled and analyzed using TraxPro and reported vehicle speed count for every hour during the study in the increments of 5 miles per hour. The TraxPro software also compiled a report to be sent Traverse City Police Department to evaluate the possible percentage of enforceable violations. This data is organized into a small colored meter where red means there is a high enforcement potential and green equates to a low amount of speed infractions are occurring. For this report, the enforceable minimum speed a vehicle would need to be traveling is 5 miles per hour over the posted speed limit of 25 miles per hour.

During this 24 hour study, 18,545 vehicles were recorded. The average (mean) speed of the 18,545 vehicles is 28 miles per hour, with 71.4% of all vehicles traveling at speeds greater than the posted limit of 25 miles per hour. Giving motorist an extra 5 miles per hour over the posted speed limit for enforcement tolerance, the number of vehicles speeding is 32.0%. It should be noted that eastbound traffic in this area of 8th St between Lake St and Boardman Ave traveled faster on average than westbound traffic, with eastbound traffic traveling with a mean speed of 31 miles per hour and westbound traffic traveling at 26 miles per hour. 81.7% of eastbound traffic sped over the posted speed limit while only 61.8% of westbound traffic sped.

Analyzing the historical data of this area, a September 2015 memo prepared by John Zarafonitis shows that traffic in this area is getting faster. John stated that in 2014, before 8th St was striped, traffic's average speed was 27 miles per hour. In 2015, after 8th St was striped, traffic moved at an average speed of 29 miles per hour. Presently, the traffic moves at a mean speed of 28 miles per hour. The 85th percentiles of traffic speed over all 3 years (2014-2016) have remained at 33 miles per hour.

Summary (Combined):

- Mean Speed: 28 MPH
- Number of Vehicles above Posted Speed Limit : 71.4%
- 85th Percentile of Speed: 33 MPH
- 95th Percentile of Speed: 37 MPH

Year	Mean Speed	85 th Percentile	Percentage above Speed Limit
2014	27 MPH	33 MPH	67.6%
2015	29 MPH	33 MPH	81.5%
2016	28 MPH	33 MPH	71.4%

Encl:

Detailed TraxPro Speed Reports (Combined and Directional)
TraxPro Police Enforcement Reports
September 23, 2015 Memorandum to Tim Lodge from John Zarafonitis