
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 Study of 8th St between Franklin St and Wellington St

City Engineering performed a 24 hour speed study on 8th St between Franklin St and Wellington St beginning on Monday, May 16, 2016 and concluding on 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, 22,058 vehicles were recorded. The average (mean) speed of the 22,058 is 29 miles per hour, with 79.3% of vehicles traveling at speeds above the posted speed limit of 25 miles per hour. Giving motorists an extra 5 miles per hour over the posted speed limit for enforcement tolerance, the number of vehicles speeding is 34.1%. It should be noted, similarly to 8th St between Boardman Ave and Lake St, eastbound traffic travels faster, with a mean speed of 30 miles per hour, while westbound traffic's mean speed is 27 miles per hour. The number of vehicles traveling eastbound that are at speeds over the posted limit is 88.6% while westbound traffic over the posted speed limit is 69.6%.

Analyzing the historical data of this area, a September 2015 memo prepared by John Zarafonitis shows that attributes of the pre- and post-striping 8th St speeds are changing. In 2014, before the 8th St striping project occurred, mean speed was 29 miles per hour. In 2015, after the striping project, mean speeds slowed to 27 miles per hour. Presently, average speeds have risen again back to 2014's average of 29 miles per hour.

Summary (Combined):

- **Mean Speed:** **29 MPH**
- **Percent of Vehicles above the Posted Speed Limit** **79.3%**
- **85th Percentile of Speed:** **33 MPH**

While in 2015 it looks like speed statistics went down, this year, speeds have risen back up.

| Year | Average Speed | Percent above Speed Limit | 85th Percentile |
|----------------|----------------------|--------------------------------------|-----------------------------------|
| 2014 | 29 MPH | 85.8% | 34 MPH |
| 2015 | 27 MPH | 74.4% | 32 MPH |
| 2016 (Present) | 29 MPH | 79.3% | 33 MPH |

Encl.:

September 25 2015 Memorandum to Tim Lodge from John Zarafonitis
Detailed TraxPro Speed Report (Directional and Combined)
TraxPro Police Enforcement Reports