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# Memorandum

The City of Traverse City  
Engineering Department



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TO: Timothy J. Lodge, P.E., City Engineer  
FROM: John Zarafonitis, Seasonal Engineering Intern  
DATE: Wednesday, October 7, 2015  
SUBJECT: 2 Day Speed Study of Webster St. between Boardman Ave. and Wellington St.

City Engineering performed an on-site 2 day speed count beginning Wednesday, September 23, 2015 at 3 pm until Friday, September 25, 2015 at 9 am on Webster St. between Boardman Ave. and Wellington St. This memo is to formalize City Engineering's initial findings and observations with regard to the speeds of vehicles on Webster St.

The data was gathered using a Jamar Radar Recorder which collected traffic data, including vehicle speed, for each lane of traffic (eastbound and westbound). This information was then analyzed and the data for each lane compiled into one report, regardless of direction, using TraxPro. The TraxPro report organized the speeds of the vehicles into groups based on 5 mile per hour increments, starting with 0-15 miles per hour. The report shows how many vehicles were within the specified speed range during the time indicated by the report. The speed data was also analyzed through TraxPro's Police Report program to evaluate the possible percentage of enforceable violations. This data was then organized into a small colored chart where red means high enforcement potential and green means low on a total scale for enforceable violations of 30 percent. For this report the enforceable minimum speed a vehicle would need to be traveling was set to 5 miles per hour over the posted speed limit.

During the 2 day study, 894 vehicles were recorded on this section of Webster St. with about 74 percent of eastbound vehicles traveling between 16 and 25 miles per hour with an average speed of 21 miles per hour. Westbound vehicles had an average speed of 21 miles per hour, with about 62 percent traveling between 21 and 30 miles per hour. The percentage of westbound vehicles recorded at speeds over 25 miles per hour was 28.8 percent, about 13 percent higher than the about 16 percent of eastbound vehicles traveling at speeds over the posted speed limit.

## Summary (Combined):

- Speed Limit: 25 mph
- Number of Recorded Vehicles (2 day): 894
- Average Speed: 21 mph
- Total Enforcement Rating: Low
- Total Percentage Above Speed Limit: 24.7 %

	Average Daily Traffic (#)	Percent Change (%)	
2007 (May/June)	464	61.85	
2014 (July)*	751		
2015 (September)	568		-24.37

\* = Done on the 2<sup>nd</sup> and 3<sup>rd</sup>, just before Cherry Festival

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## Summary (Directional):

Traffic Direction	Percent Over Speed Limit (%)	Average Speed (mph)	10 Mile Per Hour Pace Speed (mph)	85 <sup>th</sup> Percentile Speed (mph)
Westbound	28.8	21	21-30	27
Eastbound	15.6	21	16-25	25

Encl.: Detailed TraxPro Speed Reports (Combined and Directional)  
TraxPro Enforcement Report