
Memorandum

The City of Traverse City
Engineering Department



TO: Transportation Committee *JS*
FROM: Matthew Sexton, Seasonal Engineering Aide
DATE: Tuesday, May 15th, 2018
SUBJECT: 24 Hour Speed and Volume of Randolph Street, East of Division

City Engineering performed a 24 hour speed study on Randolph Street, East of Division beginning on Monday, May 14th, 2018 and concluding on Tuesday, May 15, 2018. This memo is to formalize City Engineering's initial data observations and findings with to the speed statistics and volume of vehicular traffic on Randolph Street.

The data was gathered using a JAMAR Radar Recorder; this data recorder collects both vehicle speed and volume using radar sensors in both Eastbound and Westbound 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, 528 vehicles were recorded. The average (mean) speed of the 528 vehicles was 14 miles per hour, with 2.1% 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 was 0.0%.

Summary (Combined):

- **Mean Speed:** 14 MPH
- **Number of Vehicles above Posted Speed Limit 2.6%**
- **85th Percentile of Speed:** 19 MPH
- **95th Percentile of Speed:** 24 MPH

Enclosed:

Detailed TraxPro Speed Reports (Combined and Directional)
TraxPro Police Enforcement Reports

Randolph Street Between Divison and Maple Count #107

Randolph Street
Western Ave

Start Time	14-May-18 Mon	15-May-18 Tue	16-May-18 Wed	17-May-18 Thu	18-May-18 Fri	Weekday Average	19-May-18 Sat	20-May-18 Sun
12:00 AM	*	12	*	*	*	12	*	*
01:00	*	4	*	*	*	4	*	*
02:00	*	2	*	*	*	2	*	*
03:00	*	2	*	*	*	2	*	*
04:00	*	6	*	*	*	6	*	*
05:00	*	11	*	*	*	11	*	*
06:00	*	26	*	*	*	26	*	*
07:00	*	87	*	*	*	87	*	*
08:00	*	89	*	*	*	89	*	*
09:00	*	116	*	*	*	116	*	*
10:00	*	95	*	*	*	95	*	*
11:00	*	100	*	*	*	100	*	*
12:00 PM	110	118	*	*	*	114	*	*
01:00	104	76	*	*	*	90	*	*
02:00	71	*	*	*	*	71	*	*
03:00	111	*	*	*	*	111	*	*
04:00	113	*	*	*	*	113	*	*
05:00	92	*	*	*	*	92	*	*
06:00	97	*	*	*	*	97	*	*
07:00	42	*	*	*	*	42	*	*
08:00	59	*	*	*	*	59	*	*
09:00	40	*	*	*	*	40	*	*
10:00	31	*	*	*	*	31	*	*
11:00	20	*	*	*	*	20	*	*
Total	890	744	0	0	0		0	0
Percentage	62.2%	52.0%	0.0%	0.0%	0.0%		0.0%	0.0%
AM Peak	-	09:00	-	-	-	-	-	-
Vol.	-	116	-	-	-	-	-	-
PM Peak	16:00	12:00	-	-	-	-	-	-
Vol.	113	118	-	-	-	-	-	-
Total		744	0					

Randolph Street Between Division and Maple Count #107

Randolph Street
Western Ave

WB	Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
	05/14/18	15	20	25	30	35	40	45	50	55	60	65	70	75	999		*	*
	01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	12 PM	57	15	1	0	0	0	0	0	0	0	0	0	0	0	73	6-15	38
	13:00	49	16	4	2	0	0	0	0	0	0	0	0	0	0	71	1-10	33
	14:00	28	8	6	0	0	0	0	0	0	0	0	0	0	0	42	1-10	19
	15:00	48	16	12	1	0	0	0	0	0	0	0	0	0	0	77	11-20	32
	16:00	27	23	17	8	2	0	0	0	0	0	0	0	0	0	63	16-25	35
	17:00	23	17	8	2	0	0	0	0	0	0	0	0	0	0	50	16-25	25
	18:00	35	9	1	1	0	0	0	0	0	0	0	0	0	0	46	6-15	23
	19:00	14	8	0	2	0	0	0	0	0	0	0	0	0	0	24	11-20	13
	20:00	21	13	5	2	0	0	0	0	0	0	0	0	0	0	41	11-20	20
	21:00	17	3	1	0	0	0	0	0	0	0	0	0	0	0	21	6-15	11
	22:00	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12	1-10	7
	23:00	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8	*	4
	Total	335	132	50	11	0	0	0	0	0	0	0	0	0	0	528		
	Percent AM Peak Vol.	63.4%	25.0%	9.5%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

PM Peak Vol. 12:00 57 15:00 12 13:00 2
 16:00 23 15:00 77

**Randolph Street
Between Divison and Maple
Count #107**

Speed Enforcement Evaluator

Location:
Randolph Street

**Total Percentage of
Enforceable Violations**

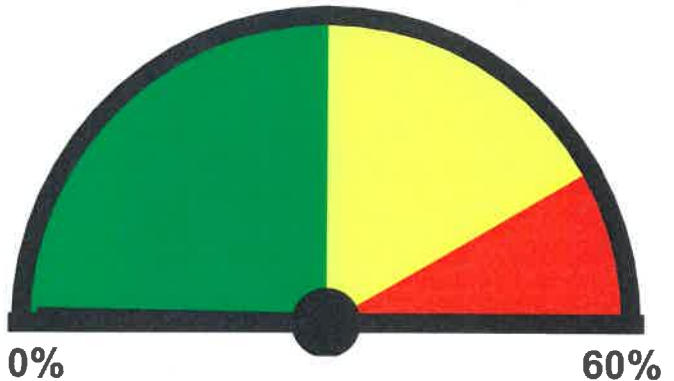
Closest Cross Street:
Western Ave

Analysis Dates:
Monday, May 14, 2018
Tuesday, May 15, 2018

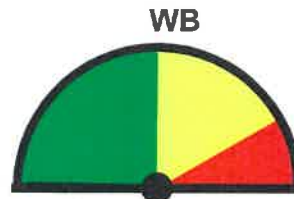
Equipment Used:
Radar Recorder

Installed By:
Matthew Sexton

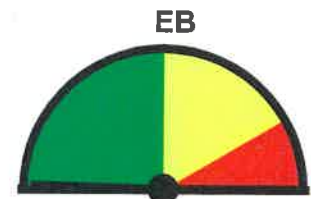
Requested By:
Transportation Committee



0% **60%**
Posted Speed Limit: 25 MPH
Enforcement Tolerance: 5 MPH
Enforcement Limit: 31 MPH & Up
Percentage Above Limit: 0.4%
Enforcement Rating: **LOW**



Percent Above Limit: 0.2%
Enforcement Rating: LOW



Percent Above Limit: 0.6%
Enforcement Rating: LOW

Combined

1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65
0	184	769	487	184	31	6	0	0	0	0	0	0	0

85 percentile = 19

WB

1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65
0	160	447	270	102	18	2	0	0	0	0	0	0	0

85 percentile = 19

EB

1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65
0	24	322	217	82	13	4	0	0	0	0	0	0	0

85 percentile = 20

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