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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: Abhishek Deora, Seasonal Engineering Aide  
DATE: Friday, June 23rd, 2017  
SUBJECT: 24 Hour Speed and Volume of 7<sup>th</sup> St between Division St and Maple St

City Engineering performed a 24 hour speed study on 7th St between Division St and Maple St beginning on Wednesday, June 21st, 2017 concluded Thursday, June 22nd, 2017. This memo is to formalize City Engineering's initial data observations and findings with to the speed statistics and volume of vehicular traffic on 7<sup>th</sup> Street.

The data was gathered using a JAMAR Traffic Counter, which collected vehicle speed, volume including classification of the vehicle, using two parallel tubes in both Northbound and Southbound 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, 2126 vehicles were recorded. The average (mean) speed of the 2126 vehicles is 16 miles per hour, with 0.8% 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 0%.

## Summary (Combined):

- **Mean Speed:** 18 MPH
- **Number of Vehicles above Posted Speed Limit** 0.8%
- **85<sup>th</sup> Percentile of Speed:** 20 MPH
- **95<sup>th</sup> Percentile of Speed:** 23 MPH

Enclosed:

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

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# Memorandum

The City of Traverse City  
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TO: Timothy J. Lodge, P.E., City Engineer  
FROM: Abhishek Deora, Engineering Aide  
DATE: Friday, June 23rd, 2017  
SUBJECT: 7<sup>th</sup> St between Division St and Maple St

This memo is to formalize City Engineering's initial findings and observations in regard to the class of vehicles traveling on 7th St, between Division St and Maple St.

City Engineering performed a 24-hour classification count of 7th St began at 2:20 pm on June 21st, 2017 and ended at 4:15 pm on June 22nd, 2017. The data was gathered using a Jamar Traffic Counter which collected traffic data, including vehicle classification, for each lane of traffic (northbound and southbound) using two parallel tubes that are placed on the road and are connected to the device. 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 classification of the vehicles into groups. The report shows how many vehicles were within the specified class during one hour intervals as indicated by the report.

A total of 2421 vehicles traveled on 7th St during the 24-hour class count. The vehicle class count showed that 1982 vehicles, 95.3 percent, traveling on 7th St during the count were a class 6 (FHA Scheme F) or less. This means that 95.3 percent of the vehicles traveling on the road have at least three axels.

192 vehicles, 3.6 percent, were bicycles and 60 vehicles, 1.1 percent fell into unknown class. This number could also be partially due to vehicles parking on the tubes for the traffic counter.

## Summary:

- Number of Vehicles: 2421 vehicles
- Class 6 or Higher: 0.0%
- Class 1 to 5: 95.3%
- Class (Bicycles): 3.6%

Encl.: Detailed TraxPro Classification Report

7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

A=Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
06/21/1															
7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	8	127	13	0	0	0	0	0	0	0	0	0	0	0	148
16:00	10	163	14	0	2	0	0	0	0	0	0	0	0	1	190
17:00	11	186	15	0	0	0	0	1	0	0	0	0	0	11	224
18:00	10	83	9	0	1	0	0	0	0	0	0	0	0	7	110
19:00	9	59	4	0	0	0	0	0	0	0	0	0	0	2	74
20:00	6	35	4	0	0	0	0	0	0	0	0	0	0	1	46
21:00	5	31	3	0	1	0	0	0	0	0	0	0	0	1	41
22:00	4	26	0	0	0	0	0	0	0	0	0	0	0	0	30
23:00	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
Total	63	715	64	0	4	0	0	1	0	0	0	0	0	23	870
Percent	7.2%	82.2%	7.4%	0.0%	0.5%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	
AM Peak Vol.															
PM Peak Vol.	17:00	17:00	17:00		16:00			17:00						17:00	17:00
	11	186	15		2			1						11	224



7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

B=Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
06/21/1															
7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	7	0	0	0	0	0	0	0	0	0	0	0	0	1	8
16:00	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14
17:00	15	0	0	0	0	0	0	0	0	0	0	0	0	3	18
18:00	29	0	0	0	0	0	0	0	0	0	0	0	0	10	39
19:00	5	0	0	0	0	0	0	0	0	0	0	0	0	2	7
20:00	6	0	0	0	0	0	0	0	0	0	0	0	0	1	7
21:00	1	0	0	0	0	0	0	0	0	0	0	0	0	4	5
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	77	0	0	0	0	0	0	0	0	0	0	0	0	21	98
Percent	78.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.4%	

AM  
Peak  
Vol.

PM  
Peak  
Vol. 18:00  
29

18:00 18:00  
10 39

7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

B=Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
06/22/1															
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
09:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12 PM	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
13:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
14:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
15:00	4	0	0	0	0	0	0	0	0	0	0	0	0	1	5
16:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	29	0	0	0	0	0	0	0	0	0	0	0	0	1	30
Percent	96.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	
AM Peak Vol.	08:00														08:00
PM Peak Vol.	12:00													15:00	12:00
Grand Total	106	0	0	0	0	0	0	0	0	0	0	0	0	22	128
Percent	82.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.2%	

7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

A=Westbound, B=Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
06/21/1															
7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	15	127	13	0	0	0	0	0	0	0	0	0	0	1	156
16:00	24	163	14	0	2	0	0	0	0	0	0	0	0	1	204
17:00	26	186	15	0	0	0	0	1	0	0	0	0	0	14	242
18:00	39	83	9	0	1	0	0	0	0	0	0	0	0	17	149
19:00	14	59	4	0	0	0	0	0	0	0	0	0	0	4	81
20:00	12	35	4	0	0	0	0	0	0	0	0	0	0	2	53
21:00	6	31	3	0	1	0	0	0	0	0	0	0	0	5	46
22:00	4	26	0	0	0	0	0	0	0	0	0	0	0	0	30
23:00	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
Total	140	715	64	0	4	0	0	1	0	0	0	0	0	44	968
Percent	14.5%	73.9%	6.6%	0.0%	0.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	
AM Peak Vol.															
PM Peak Vol.	18:00	17:00	17:00		16:00			17:00						18:00	17:00
	39	186	15		2			1					17	242	





7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

A=Westbound

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
06/21/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	40	91	16	1	0	0	0	0	0	0	0	0	0	0	148	16-25	107
16:00	60	106	23	1	0	0	0	0	0	0	0	0	0	0	190	16-25	129
17:00	<b>76</b>	<b>108</b>	<b>38</b>	<b>2</b>	0	0	0	0	0	0	0	0	0	0	<b>224</b>	16-25	146
18:00	42	54	14	0	0	0	0	0	0	0	0	0	0	0	110	11-20	68
19:00	17	45	12	0	0	0	0	0	0	0	0	0	0	0	74	16-25	57
20:00	7	29	10	0	0	0	0	0	0	0	0	0	0	0	46	16-25	39
21:00	13	21	7	0	0	0	0	0	0	0	0	0	0	0	41	16-25	28
22:00	7	13	9	1	0	0	0	0	0	0	0	0	0	0	30	16-25	22
23:00	3	2	2	0	0	0	0	0	0	0	0	0	0	0	7	14-23	4
Total	265	469	131	5	0	0	0	0	0	0	0	0	0	0	870		
Percent	30.5%	53.9%	15.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	17:00 76	17:00 108	17:00 38	17:00 2											17:00 224		

7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

A=Westbound

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
	15	20	25	30	35	40	45	50	55	60	65	70	75	999			
06/22/17	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4	15-24	4
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	10-19	2
02:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3	13-22	2
03:00	1	3	0	1	0	0	0	0	0	0	0	0	0	0	5	16-25	3
04:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	11-20	3
05:00	0	5	11	0	0	0	0	0	0	0	0	0	0	0	16	16-25	16
06:00	9	31	16	0	0	0	0	0	0	0	0	0	0	0	56	16-25	47
07:00	20	72	12	1	0	0	0	0	0	0	0	0	0	0	105	16-25	84
08:00	12	68	33	4	0	0	0	0	0	0	0	0	0	0	117	16-25	101
09:00	11	69	26	2	0	0	0	0	0	0	0	0	0	0	108	16-25	95
10:00	19	88	25	0	0	0	0	0	0	0	0	0	0	0	132	16-25	113
11:00	27	95	21	1	0	0	0	0	0	0	0	0	0	0	144	16-25	116
12 PM	36	102	27	0	0	0	0	0	0	0	0	0	0	0	165	16-25	129
13:00	60	101	19	0	0	0	0	0	0	0	0	0	0	0	180	11-20	121
14:00	43	93	23	2	0	0	0	0	0	0	0	0	0	0	161	16-25	116
15:00	46	104	32	3	0	0	0	0	0	0	0	0	0	0	185	16-25	136
16:00	4	26	6	1	0	0	0	0	0	0	0	0	0	0	37	16-25	32
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	289	865	254	15	0	0	0	0	0	0	0	0	0	0	1423		
Percent	20.3%	60.8%	17.8%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	08:00	08:00												11:00	
Vol.	27	95	33	4												144	
PM Peak	13:00	15:00	15:00	15:00												15:00	
Vol.	60	104	32	3												185	
Total	554	1334	385	20	0	0	0	0	0	0	0	0	0	0	2293		
Percent	24.2%	58.2%	16.8%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 9 MPH  
50th Percentile : 17 MPH  
85th Percentile : 20 MPH  
95th Percentile : 23 MPH

Stats  
10 MPH Pace Speed : 16-25 MPH  
Number in Pace : 1719  
Percent in Pace : 75.0%  
Number of Vehicles > 25 MPH : 20  
Percent of Vehicles > 25 MPH : 0.9%  
Mean Speed(Average) : 17 MPH

7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

B=Eastbound

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
	15	20	25	30	35	40	45	50	55	60	65	70	75	999			
06/21/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8	1-10	5
16:00	11	2	1	0	0	0	0	0	0	0	0	0	0	0	14	7-16	7
17:00	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18	1-10	12
18:00	37	2	0	0	0	0	0	0	0	0	0	0	0	0	39	1-10	25
19:00	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1-10	5
20:00	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1-10	5
21:00	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6-15	3
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
Total	92	5	1	0	0	0	0	0	0	0	0	0	0	0	98		
Percent	93.9%	5.1%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	18:00	16:00	16:00												18:00		
	37	2	1												39		

7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

B=Eastbound

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Pace Speed	Number in Pace
06/22/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
07:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1
08:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	*	2
09:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
10:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
11:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
12 PM	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9	1-10	5
13:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
14:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
15:00	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5	1-10	3
16:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	*	2
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	25	5	0	0	0	0	0	0	0	0	0	0	0	0	30		
Percent	83.3%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	07:00													08:00		
Vol.	3	1													4		
PM Peak	12:00	12:00													12:00		
Vol.	7	2													9		
Total	117	10	1	0	0	0	0	0	0	0	0	0	0	0	128		
Percent	91.4%	7.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 2 MPH  
50th Percentile : 8 MPH  
85th Percentile : 13 MPH  
95th Percentile : 17 MPH

Stats  
10 MPH Pace Speed : 1-10 MPH  
Number in Pace : 78  
Percent in Pace : 60.9%  
Number of Vehicles > 25 MPH : 0  
Percent of Vehicles > 25 MPH : 0.0%  
Mean Speed(Average) : 9 MPH

7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

A=Westbound, B=Eastbound

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
06/21/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	47	92	16	1	0	0	0	0	0	0	0	0	0	0	156	11-20	108
16:00	71	<b>108</b>	24	1	0	0	0	0	0	0	0	0	0	0	204	16-25	132
17:00	<b>94</b>	108	<b>38</b>	<b>2</b>	0	0	0	0	0	0	0	0	0	0	<b>242</b>	16-25	146
18:00	79	56	14	0	0	0	0	0	0	0	0	0	0	0	149	11-20	82
19:00	24	45	12	0	0	0	0	0	0	0	0	0	0	0	81	16-25	57
20:00	14	29	10	0	0	0	0	0	0	0	0	0	0	0	53	16-25	39
21:00	18	21	7	0	0	0	0	0	0	0	0	0	0	0	46	14-23	28
22:00	7	13	9	1	0	0	0	0	0	0	0	0	0	0	30	16-25	22
23:00	3	2	2	0	0	0	0	0	0	0	0	0	0	0	7	14-23	4
Total	357	474	132	5	0	0	0	0	0	0	0	0	0	0	968		
Percent	36.9%	49.0%	13.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	17:00 94	16:00 108	17:00 38	17:00 2											17:00 242		

7th St  
Btw Division St and Maple St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

A=Westbound, B=Eastbound

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
	15	20	25	30	35	40	45	50	55	60	65	70	75	999			
06/22/17	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4	15-24	4
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	10-19	2
02:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3	13-22	2
03:00	1	3	0	1	0	0	0	0	0	0	0	0	0	0	5	16-25	3
04:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	11-20	3
05:00	0	5	11	0	0	0	0	0	0	0	0	0	0	0	16	16-25	16
06:00	9	31	16	0	0	0	0	0	0	0	0	0	0	0	56	16-25	47
07:00	21	73	12	1	0	0	0	0	0	0	0	0	0	0	107	16-25	85
08:00	15	69	<b>33</b>	<b>4</b>	0	0	0	0	0	0	0	0	0	0	121	16-25	102
09:00	12	69	26	2	0	0	0	0	0	0	0	0	0	0	109	16-25	95
10:00	21	88	25	0	0	0	0	0	0	0	0	0	0	0	134	16-25	113
11:00	<b>28</b>	<b>95</b>	21	1	0	0	0	0	0	0	0	0	0	0	<b>145</b>	16-25	116
12 PM	43	104	27	0	0	0	0	0	0	0	0	0	0	0	174	16-25	131
13:00	<b>62</b>	101	19	0	0	0	0	0	0	0	0	0	0	0	182	11-20	122
14:00	44	93	23	2	0	0	0	0	0	0	0	0	0	0	162	16-25	116
15:00	50	<b>105</b>	<b>32</b>	<b>3</b>	0	0	0	0	0	0	0	0	0	0	<b>190</b>	16-25	137
16:00	7	26	6	1	0	0	0	0	0	0	0	0	0	0	40	16-25	32
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	314	870	254	15	0	0	0	0	0	0	0	0	0	0	1453		
Percent	21.6%	59.9%	17.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	08:00	08:00												11:00	
Vol.	28	95	33	4												145	
PM Peak	13:00	15:00	15:00	15:00												15:00	
Vol.	62	105	32	3												190	
Total	671	1344	386	20	0	0	0	0	0	0	0	0	0	0	2421		
Percent	27.7%	55.5%	15.9%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 8 MPH  
50th Percentile : 17 MPH  
85th Percentile : 20 MPH  
95th Percentile : 23 MPH

Stats  
10 MPH Pace Speed : 16-25 MPH  
Number in Pace : 1730  
Percent in Pace : 71.5%  
Number of Vehicles > 25 MPH : 20  
Percent of Vehicles > 25 MPH : 0.8%  
Mean Speed(Average) : 16 MPH

7th St  
Btw Division St and Maple St  
Volume

Site Code:  
Station ID:

Latitude: 44' 45.6274 North

Start Time	19-Jun-17 Mon	20-Jun-17 Tue	21-Jun-17 Wed	22-Jun-17 Thu	23-Jun-17 Fri	Weekday Average	24-Jun-17 Sat	25-Jun-17 Sun
12:00 AM	*	*	*	4	*	4	*	*
01:00	*	*	*	2	*	2	*	*
02:00	*	*	*	3	*	3	*	*
03:00	*	*	*	5	*	5	*	*
04:00	*	*	*	3	*	3	*	*
05:00	*	*	*	16	*	16	*	*
06:00	*	*	*	56	*	56	*	*
07:00	*	*	*	107	*	107	*	*
08:00	*	*	*	121	*	121	*	*
09:00	*	*	*	109	*	109	*	*
10:00	*	*	*	134	*	134	*	*
11:00	*	*	*	145	*	145	*	*
12:00 PM	*	*	*	174	*	174	*	*
01:00	*	*	*	182	*	182	*	*
02:00	*	*	*	162	*	162	*	*
03:00	*	*	156	190	*	173	*	*
04:00	*	*	204	40	*	122	*	*
05:00	*	*	242	*	*	242	*	*
06:00	*	*	149	*	*	149	*	*
07:00	*	*	81	*	*	81	*	*
08:00	*	*	53	*	*	53	*	*
09:00	*	*	46	*	*	46	*	*
10:00	*	*	30	*	*	30	*	*
11:00	*	*	7	*	*	7	*	*
Total	0	0	968	1453	0		0	0
Percentage	0.0%	0.0%	45.5%	68.3%	0.0%		0.0%	0.0%
AM Peak	-	-	-	11:00	-	-	-	-
Vol.	-	-	-	145	-	-	-	-
PM Peak	-	-	17:00	15:00	-	-	-	-
Vol.	-	-	242	190	-	-	-	-
Total		0	968					