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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: Thursday, June 1<sup>st</sup>, 2017  
SUBJECT: 24 Hour Speed and Volume of Union St between 15<sup>th</sup> St and 16<sup>th</sup> St

City Engineering performed a 24 hour speed study on Union St between 15<sup>th</sup> St and 16<sup>th</sup> St beginning on Wednesday, May 31st, 2017 concluded Thursday, June 1st, 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 Union St.

The data was gathered using a JAMAR Radar Recorder, this data recorder collects both vehicle speed and volume using radar sensors 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, 1585 vehicles were recorded. The average (mean) speed of the 1585 vehicles is 29 miles per hour, with 77.2% 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 35.4%.

## Summary (Combined):

- **Mean Speed:** 29 MPH
- **Number of Vehicles above Posted Speed Limit** 77.2%
- **85<sup>th</sup> Percentile of Speed:** 33 MPH
- **95<sup>th</sup> Percentile of Speed:** 36 MPH

## Enclosed:

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

Union St  
Between 15th & 16th  
Speed

Site Code: 00000001  
Station ID:  
Union St  
15th and 16th  
Latitude: 0' 0.0000 Undefined

A= Southbound

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			
05/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	<b>3</b>	2	<b>18</b>	36	17	2	0	0	0	0	0	0	0	0	78	21-30	54
17:00	0	0	14	<b>37</b>	<b>29</b>	<b>6</b>	0	0	0	0	0	0	0	0	<b>86</b>	26-35	66
18:00	2	1	8	13	17	6	2	0	0	0	0	0	0	0	49	26-35	30
19:00	2	<b>3</b>	1	9	11	6	0	0	0	0	0	0	0	0	32	26-35	20
20:00	1	0	3	11	5	2	0	0	0	0	0	0	0	0	22	26-35	16
21:00	0	2	10	8	4	3	0	0	0	0	0	0	0	0	27	21-30	18
22:00	0	1	3	5	3	1	1	0	0	0	0	0	0	0	14	21-30	8
23:00	0	0	1	2	2	0	0	0	0	0	0	0	0	0	5	24-33	4
Total	8	9	58	121	88	26	3	0	0	0	0	0	0	0	313		
Percent	2.6%	2.9%	18.5%	38.7%	28.1%	8.3%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	16:00	19:00	16:00	17:00	17:00	17:00	18:00								17:00		
	3	3	18	37	29	6	2								86		

Union St  
Between 15th & 16th  
Speed

Site Code: 00000001  
Station ID:  
Union St  
15th and 16th  
Latitude: 0' 0.0000 Undefined

A= Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06/01/17	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	19-28	3
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
02:00	2	0	0	1	1	0	0	0	1	0	0	0	0	1	6	26-35	2
03:00	2	0	1	2	0	0	0	0	0	0	0	0	0	0	5	20-29	3
04:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
05:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3	24-33	2
06:00	0	0	1	3	4	1	0	0	0	0	0	0	0	0	9	26-35	7
07:00	1	0	3	22	12	2	0	1	0	0	0	0	0	0	41	26-35	34
08:00	1	0	3	10	18	4	0	0	0	0	0	0	0	0	36	26-35	28
09:00	0	1	10	19	11	4	0	0	0	0	0	0	0	0	45	26-35	30
10:00	1	1	6	26	11	2	1	0	0	0	0	0	0	0	48	26-35	37
11:00	1	1	16	22	10	4	1	0	0	0	0	0	0	0	55	21-30	38
12 PM	0	0	13	39	18	6	1	1	0	0	0	0	0	0	78	26-35	57
13:00	2	3	15	29	8	4	0	0	0	0	0	0	0	0	61	21-30	44
14:00	1	3	10	23	10	4	0	0	0	0	0	0	0	0	51	26-35	33
15:00	0	4	18	34	17	2	1	0	0	0	0	0	0	0	76	21-30	52
16:00	1	0	0	3	1	0	0	0	0	0	0	0	0	0	5	26-35	4
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	12	13	98	237	122	34	4	2	1	0	0	0	0	1	524		
Percent	2.3%	2.5%	18.7%	45.2%	23.3%	6.5%	0.8%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%			
AM Peak	02:00	09:00	11:00	10:00	08:00	08:00	10:00	07:00	02:00					02:00	11:00		
Vol.	2	1	16	26	18	4	1	1	1					1	55		
PM Peak	13:00	15:00	15:00	12:00	12:00	12:00	12:00	12:00							12:00		
Vol.	2	4	18	39	18	6	1	1							78		
Total	20	22	156	358	210	60	7	2	1	0	0	0	0	1	837		
Percent	2.4%	2.6%	18.6%	42.8%	25.1%	7.2%	0.8%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%			

15th Percentile : 22 MPH  
50th Percentile : 28 MPH  
85th Percentile : 33 MPH  
95th Percentile : 37 MPH

Stats  
10 MPH Pace Speed : 26-35 MPH  
Number in Pace : 568  
Percent in Pace : 67.9%  
Number of Vehicles > 25 MPH : 639  
Percent of Vehicles > 25 MPH : 76.3%  
Mean Speed(Average) : 29 MPH

Union St  
Between 15th & 16th  
Speed

Site Code: 00000001  
Station ID:  
Union St  
15th and 16th  
Latitude: 0' 0.0000 Undefined

B= Northbound

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
05/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	1	2	7	<b>31</b>	22	3	0	0	0	0	0	0	0	0	66	26-35	53
17:00	<b>4</b>	0	5	27	<b>24</b>	<b>8</b>	<b>1</b>	0	0	0	0	0	0	0	<b>69</b>	26-35	51
18:00	1	1	<b>9</b>	14	22	0	0	0	0	0	0	0	0	0	47	26-35	36
19:00	0	0	8	8	7	3	1	0	0	0	0	0	0	0	27	21-30	16
20:00	2	<b>3</b>	3	14	8	2	0	0	0	0	0	0	0	0	32	26-35	22
21:00	0	3	3	4	3	0	0	0	0	0	0	0	0	0	13	19-28	7
22:00	0	0	3	2	0	0	0	0	0	0	0	0	0	0	5	20-29	5
23:00	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
Total	8	9	41	100	86	16	2	0	0	0	0	0	0	0	262		
Percent	3.1%	3.4%	15.6%	38.2%	32.8%	6.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	17:00	20:00	18:00	16:00	17:00	17:00	17:00								17:00		
	4	3	9	31	24	8	1								69		

Union St  
Between 15th & 16th  
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Site Code: 00000001  
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Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06/01/17	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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	*	1
03:00	1	0	2	0	2	0	0	0	0	0	0	0	0	0	5	15-24	2
04:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	34-43	1
05:00	0	1	1	0	0	0	1	0	0	0	0	0	0	0	3	14-23	2
06:00	0	0	3	5	12	1	0	0	0	0	0	0	0	0	21	26-35	17
07:00	0	0	13	24	24	7	1	0	0	0	0	0	0	0	69	26-35	48
08:00	0	0	5	23	21	5	2	0	0	0	0	0	0	0	56	26-35	44
09:00	0	1	6	14	16	1	0	0	0	0	0	0	0	0	38	26-35	30
10:00	1	3	9	17	10	3	0	0	0	0	0	0	0	0	43	26-35	27
11:00	0	1	10	29	5	3	0	0	0	0	0	0	0	0	48	21-30	39
12 PM	1	0	7	29	20	1	0	0	0	0	0	0	0	0	58	26-35	49
13:00	1	2	10	15	13	1	0	0	0	0	0	0	0	0	42	26-35	28
14:00	3	1	11	27	12	0	1	0	0	0	0	0	0	0	55	24-33	39
15:00	1	1	9	22	6	2	1	0	0	0	0	0	0	0	42	21-30	31
16:00	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3	19-28	2
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>Total</b>	<b>9</b>	<b>10</b>	<b>87</b>	<b>207</b>	<b>142</b>	<b>24</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>486</b>		
<b>Percent</b>	<b>1.9%</b>	<b>2.1%</b>	<b>17.9%</b>	<b>42.6%</b>	<b>29.2%</b>	<b>4.9%</b>	<b>1.4%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>			
<b>AM Peak</b>	<b>02:00</b>	<b>10:00</b>	<b>07:00</b>	<b>11:00</b>	<b>07:00</b>	<b>07:00</b>	<b>08:00</b>								<b>07:00</b>		
<b>Vol.</b>	<b>1</b>	<b>3</b>	<b>13</b>	<b>29</b>	<b>24</b>	<b>7</b>	<b>2</b>								<b>69</b>		
<b>PM Peak</b>	<b>14:00</b>	<b>13:00</b>	<b>14:00</b>	<b>12:00</b>	<b>12:00</b>	<b>15:00</b>	<b>14:00</b>								<b>12:00</b>		
<b>Vol.</b>	<b>3</b>	<b>2</b>	<b>11</b>	<b>29</b>	<b>20</b>	<b>2</b>	<b>1</b>								<b>58</b>		
<b>Total</b>	<b>17</b>	<b>19</b>	<b>128</b>	<b>307</b>	<b>228</b>	<b>40</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>748</b>		
<b>Percent</b>	<b>2.3%</b>	<b>2.5%</b>	<b>17.1%</b>	<b>41.0%</b>	<b>30.5%</b>	<b>5.3%</b>	<b>1.2%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>			

15th Percentile : 22 MPH  
50th Percentile : 28 MPH  
85th Percentile : 33 MPH  
95th Percentile : 36 MPH

Stats  
10 MPH Pace Speed : 26-35 MPH  
Number in Pace : 535  
Percent in Pace : 71.5%  
Number of Vehicles > 25 MPH : 584  
Percent of Vehicles > 25 MPH : 78.1%  
Mean Speed(Average) : 29 MPH

Union St  
Between 15th & 16th  
Speed

Site Code: 00000001  
Station ID:  
Union St  
15th and 16th  
Latitude: 0' 0.0000 Undefined

A= Southbound, B= Northbound

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
05/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	<b>4</b>	<b>4</b>	<b>25</b>	<b>67</b>	<b>39</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>144</b>	<b>26-35</b>	<b>106</b>
17:00	<b>4</b>	<b>0</b>	<b>19</b>	<b>64</b>	<b>53</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>155</b>	<b>26-35</b>	<b>117</b>
18:00	<b>3</b>	<b>2</b>	<b>17</b>	<b>27</b>	<b>39</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>96</b>	<b>26-35</b>	<b>66</b>
19:00	<b>2</b>	<b>3</b>	<b>9</b>	<b>17</b>	<b>18</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>59</b>	<b>26-35</b>	<b>35</b>
20:00	<b>3</b>	<b>3</b>	<b>6</b>	<b>25</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>54</b>	<b>26-35</b>	<b>38</b>
21:00	<b>0</b>	<b>5</b>	<b>13</b>	<b>12</b>	<b>7</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>21-30</b>	<b>25</b>
22:00	<b>0</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>21-30</b>	<b>13</b>
23:00	<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>20-29</b>	<b>6</b>
<b>Total</b>	<b>16</b>	<b>18</b>	<b>99</b>	<b>221</b>	<b>174</b>	<b>42</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>575</b>		
<b>Percent</b>	<b>2.8%</b>	<b>3.1%</b>	<b>17.2%</b>	<b>38.4%</b>	<b>30.3%</b>	<b>7.3%</b>	<b>0.9%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>			
<b>AM Peak Vol.</b>																	
<b>PM Peak Vol.</b>	<b>16:00</b>	<b>21:00</b>	<b>16:00</b>	<b>16:00</b>	<b>17:00</b>	<b>17:00</b>	<b>18:00</b>								<b>17:00</b>		
	<b>4</b>	<b>5</b>	<b>25</b>	<b>67</b>	<b>53</b>	<b>14</b>	<b>2</b>								<b>155</b>		

Union St  
Between 15th & 16th  
Speed

Site Code: 00000001  
Station ID:  
Union St  
15th and 16th  
Latitude: 0' 0.0000 Undefined

A= Southbound, B= Northbound

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			
06/01/17	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	19-28	3
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
02:00	3	0	0	2	1	0	0	0	1	0	0	0	0	1	8	26-35	3
03:00	3	0	3	2	2	0	0	0	0	0	0	0	0	0	10	21-30	5
04:00	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	19-28	1
05:00	0	1	1	1	1	1	1	0	0	0	0	0	0	0	6	36-45	2
06:00	0	0	4	8	16	2	0	0	0	0	0	0	0	0	30	26-35	24
07:00	1	0	16	46	36	9	1	1	0	0	0	0	0	0	110	26-35	82
08:00	1	0	8	33	39	9	2	0	0	0	0	0	0	0	92	26-35	72
09:00	0	2	16	33	27	5	0	0	0	0	0	0	0	0	83	26-35	60
10:00	2	4	15	43	21	5	1	0	0	0	0	0	0	0	91	26-35	64
11:00	1	2	26	51	15	7	1	0	0	0	0	0	0	0	103	21-30	77
12 PM	1	0	20	68	38	7	1	1	0	0	0	0	0	0	136	26-35	106
13:00	3	5	25	44	21	5	0	0	0	0	0	0	0	0	103	21-30	69
14:00	4	4	21	50	22	4	1	0	0	0	0	0	0	0	106	24-33	72
15:00	1	5	27	56	23	4	2	0	0	0	0	0	0	0	118	21-30	83
16:00	1	0	1	4	2	0	0	0	0	0	0	0	0	0	8	24-33	6
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	21	23	185	444	264	58	11	2	1	0	0	0	0	1	1010		
Percent	2.1%	2.3%	18.3%	44.0%	26.1%	5.7%	1.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%			
AM Peak	02:00	10:00	11:00	11:00	08:00	07:00	08:00	07:00	02:00					02:00	07:00		
Vol.	3	4	26	51	39	9	2	1	1					1	110		
PM Peak	14:00	13:00	15:00	12:00	12:00	12:00	15:00	12:00							12:00		
Vol.	4	5	27	68	38	7	2	1							136		
Total	37	41	284	665	438	100	16	2	1	0	0	0	0	1	1585		
Percent	2.3%	2.6%	17.9%	42.0%	27.6%	6.3%	1.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%			

15th Percentile : 22 MPH  
50th Percentile : 28 MPH  
85th Percentile : 33 MPH  
95th Percentile : 36 MPH

Stats  
10 MPH Pace Speed : 26-35 MPH  
Number in Pace : 1103  
Percent in Pace : 69.6%  
Number of Vehicles > 25 MPH : 1223  
Percent of Vehicles > 25 MPH : 77.2%  
Mean Speed(Average) : 29 MPH

Site Code: 0000001  
 Station ID:  
 Union St  
 15th and 16th  
 Latitude: 0' 0.0000 Undefined

Start Time	29-May-17 Mon	30-May-17 Tue	31-May-17 Wed	01-Jun-17 Thu	02-Jun-17 Fri	Weekday Average	03-Jun-17 Sat	04-Jun-17 Sun
12:00 AM	*	*	*	3	*	3	*	*
01:00	*	*	*	1	*	1	*	*
02:00	*	*	*	8	*	8	*	*
03:00	*	*	*	10	*	10	*	*
04:00	*	*	*	2	*	2	*	*
05:00	*	*	*	6	*	6	*	*
06:00	*	*	*	30	*	30	*	*
07:00	*	*	*	110	*	110	*	*
08:00	*	*	*	92	*	92	*	*
09:00	*	*	*	83	*	83	*	*
10:00	*	*	*	91	*	91	*	*
11:00	*	*	*	103	*	103	*	*
12:00 PM	*	*	*	136	*	136	*	*
01:00	*	*	*	103	*	103	*	*
02:00	*	*	*	106	*	106	*	*
03:00	*	*	*	118	*	118	*	*
04:00	*	*	144	8	*	76	*	*
05:00	*	*	155	*	*	155	*	*
06:00	*	*	96	*	*	96	*	*
07:00	*	*	59	*	*	59	*	*
08:00	*	*	54	*	*	54	*	*
09:00	*	*	40	*	*	40	*	*
10:00	*	*	19	*	*	19	*	*
11:00	*	*	8	*	*	8	*	*
Total	0	0	575	1010	0		0	0
Percentage	0.0%	0.0%	38.1%	66.9%	0.0%		0.0%	0.0%
AM Peak	-	-	-	07:00	-	-	-	-
Vol.	-	-	-	110	-	-	-	-
PM Peak	-	-	17:00	12:00	-	-	-	-
Vol.	-	-	155	136	-	-	-	-
Total		0	575					



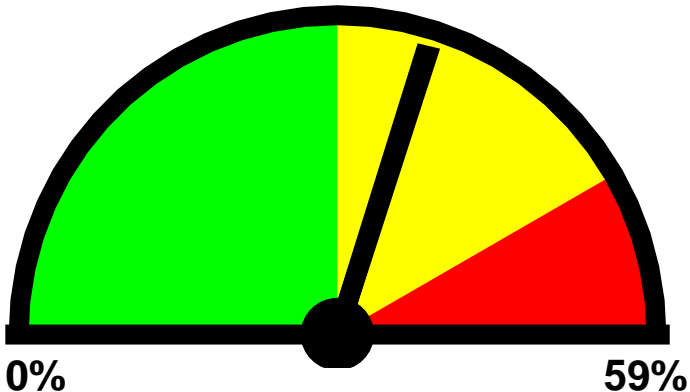
# Speed Enforcement Evaluator

**Location:**  
**Union St**

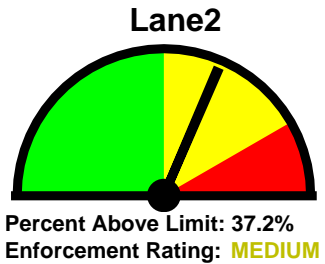
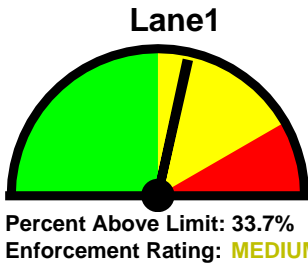
**Total Percentage of  
Enforceable Violations**

**Closest Cross Street:**  
15th and 16th

**Analysis Dates:**  
Wednesday, May 31, 2017  
Thursday, June 01, 2017



**Posted Speed Limit:** 25 MPH  
**Enforcement Tolerance:** 5 MPH  
**Enforcement Limit:** 31 MPH & Up  
**Percentage Above Limit:** 35.4%  
**Enforcement Rating:** **MEDIUM**



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
1	6	23	41	284	665	438	100	16	2	1	0	0	1

85 percentile = 33

Lane1

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
1	5	11	22	156	358	210	60	7	2	1	0	0	1

85 percentile = 33

Lane2

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	1	12	19	128	307	228	40	9	0	0	0	0	0

85 percentile = 33

# Best Times for Enforcement

**Location:**  
**Union St**  
**Closest Cross Street:**  
 15th and 16th

**Analysis Dates:**  
 Wednesday, May 31, 2017  
 Thursday, June 01, 2017

**Sun**

**Mon**

**Tue**

**Wed**

**Combined: 5 PM to 7 PM**  
**Lane1: 5 PM to 7 PM**  
**Lane2: 4 PM to 6 PM**

**Thu**

**Combined: 7 AM to 9 AM**  
**Lane1: 11 AM to 1 PM**  
**Lane2: 7 AM to 9 AM**

**Fri**

**Sat**

