



Multi-Way Stop for the Intersection of  
Front Stand Hall St  
City Engineering Department  
August 2017

**Criteria for Multi-Way Stop Installation**

Based on MUTCD 2009 Edition Standards

**Criterion 1: Crash Experience**

This criterion is **not satisfied** because there were only 4 accidents at this intersection in the past 12 months that could have been prevented by a Multi-Way Stop.

**Criterion 2: 8-hour Vehicular Volume**

This criterion is **satisfied** because the vehicles per hour entering the intersection of Front St and Hall St coming from Front St is 844, which does exceed the required minimum 300 vehicles per hour for any 8 hours of an average day. The vehicle per hour entering the intersection from Hall St is 271, which does exceed the required minimum 200 vehicles per hour for the same 8 hours.

**Criterion 3: Major Road Approach Speed**

This criterion is **not satisfied** because the 85<sup>th</sup>-percentile approach speed of traffic on Front St is 28 mph, which does not exceed the required minimum of 40 mph. However, it should be noted that 32.1% of the traffic on Lake Ave was over the posted limit, with a mean speed of 23 mph both directions, 25 mph Westbound, and 22 mph Eastbound.

**Additional Notes:**

Based on MUTCD 2009 standards one of the criteria is satisfied for Multi-way stop Installation.

Prepared By:

Date: 08/28/17

Abhishek Deora, Engineering Aide

Reviewed By:

Date:

Encl:

*Handwritten signature*

*Handwritten date: 9-6-17*



Site Code: 000000000000  
Station ID:

Latitude: 0° 0.0000 South

A to B	0	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number	
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	9999		Speed	in Pace	
06/12/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	40	121	201	33	3	2	1	2	0	2	1	1	3	25	435	16-25	324	
17:00	20	108	203	48	2	1	1	2	3	2	0	1	1	21	413	16-25	312	
18:00	7	39	199	61	7	1	1	0	0	1	0	0	0	7	323	21-30	260	
19:00	5	68	165	33	0	0	2	1	0	0	0	0	0	3	277	16-25	233	
20:00	6	64	111	26	2	1	1	0	0	0	0	0	0	6	217	16-25	175	
21:00	1	21	79	32	2	0	0	0	0	0	0	0	0	2	137	21-30	111	
22:00	3	16	43	27	2	1	0	1	0	0	0	0	0	1	94	21-30	70	
23:00	0	7	19	9	4	0	0	0	0	0	0	0	0	0	39	21-30	28	
Total	82	444	1020	269	22	6	6	6	3	5	1	2	4	65	1935			
Percent AM Peak	4.2%	22.9%	52.7%	13.9%	1.1%	0.3%	0.3%	0.3%	0.2%	0.3%	0.1%	0.1%	0.2%	3.4%				

Vol.	16:00	17:00	18:00	18:00	18:00	19:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00
PM Peak Vol.	40	121	203	61	7	2	2	2	3	2	1	1	3	25
AM Peak Vol.	16:00	17:00	18:00	18:00	18:00	19:00	16:00	16:00	17:00	16:00	16:00	16:00	16:00	16:00
	40	121	203	61	7	2	2	2	3	2	1	1	3	25
	435	413	323	277	217	137	94	39	1935					

Site Code: 000000000000  
Station ID:

Latitude: 0° 0.0000 South

Start Time	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	80	85	90	95	100	105	110	115	120	125	130	135	140			
06/13/17	2	5	14	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	21-30	22	
01:00	0	1	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	21-30	15	
02:00	0	1	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	21-30	14	
03:00	1	1	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	21-30	8	
04:00	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	16-25	6	
05:00	0	7	5	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	21-30	13	
06:00	3	12	49	43	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	21-30	92	
07:00	6	15	146	80	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	263	21-30	226	
08:00	5	31	187	62	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	301	21-30	249	
09:00	15	64	196	35	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	329	16-25	261	
10:00	9	109	182	29	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	301	16-25	291	
11:00	36	177	164	21	8	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	329	16-25	261	
12 PM	44	178	148	19	2	3	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	446	16-25	343	
13:00	49	176	171	21	4	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	421	16-25	328	
14:00	18	176	121	15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	457	16-25	349	
15:00	22	170	173	25	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	354	16-25	298	
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	417	16-25	344
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	210	1124	1586	379	43	15	10	16	7	7	7	12	5	16	7	7	7	7	12	12	5	5	6	6	134	3554			
Percent	5.9%	31.6%	44.6%	10.7%	1.2%	0.4%	0.3%	0.5%	0.2%	0.2%	0.2%	0.3%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.1%	0.1%	0.2%	0.2%	3.8%				
AM Peak	11:00	11:00	09:00	07:00	11:00	07:00	09:00	11:00	10:00	08:00	08:00	11:00	10:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	10:00	10:00	11:00	11:00	11:00	11:00			
Vol.	36	177	196	80	8	2	2	5	1	2	2	3	2	5	1	2	2	2	3	3	2	2	3	3	26	446			
PM Peak	13:00	12:00	15:00	15:00	13:00	12:00	13:00	12:00	12:00	13:00	13:00	13:00	12:00	12:00	12:00	13:00	13:00	12:00	13:00	13:00	12:00	12:00	13:00	14:00	13:00				
Vol.	49	178	173	25	4	3	3	4	2	3	3	3	4	4	2	3	3	3	3	3	3	3	1	19	457				
Total	292	1568	2606	648	65	21	16	22	10	12	12	13	7	22	10	12	12	12	13	13	7	7	10	199	5489				
Percent	5.3%	28.6%	47.5%	11.8%	1.2%	0.4%	0.3%	0.4%	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	3.6%					

Stats  
10 MPH Pace Speed : 16-25 MPH  
Number in Pace : 4188  
Percent in Pace : 76.3%  
Number of Vehicles > 25 MPH : 1023  
Percent of Vehicles > 25 MPH : 18.6%  
Mean Speed(Average) : 22 MPH

Site Code: 000000000000  
 Station ID:

B to A  
 Start Time  
 06/12/17  
 Latitude: 0' 0.0000 South

Start Time	15	16:00	20	16:00	21:00	25	26:30	30:00	31:35	35:00	36:40	41:00	45:00	46:50	51:00	55:00	56:00	60:00	61:00	65:00	66:00	70:00	71:00	75:00	76:00	9999	Total	Pace Speed	Number in Pace	
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	27	27	19	19	174	137	140	140	19	137	4	4	2	4	1	1	0	0	1	1	1	1	0	0	12	409	21-30	312		
17:00	14	19	161	75	103	103	27	27	11	11	0	0	0	2	1	0	0	0	0	0	0	0	1	13	365	21-30	302			
18:00	13	7	62	56	54	74	74	74	11	11	1	1	0	1	0	0	0	1	0	0	0	0	3	5	232	21-30	179			
19:00	3	5	11	36	36	45	45	45	8	8	0	0	0	0	0	0	0	0	0	0	0	0	1	4	165	21-30	136			
20:00	2	2	19	24	24	24	24	24	12	12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	138	21-30	110		
21:00	0	1	14	12	12	12	12	12	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	100	21-30	81			
22:00	0	1	14	12	12	12	12	12	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	21-30	43		
23:00	0	1	14	12	12	12	12	12	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	21-30	26		
Total	64	70	597	589	100	100	100	100	100	100	8	8	3	8	3	3	1	1	1	2	2	1	5	39	1490					
Percent	4.3%	4.7%	40.1%	39.5%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	0.5%	0.5%	0.2%	0.5%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.3%	2.6%							
AM Peak																														
Vol.																														
PM Peak	16:00	16:00	16:00	17:00	18:00	18:00	18:00	18:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	17:00	17:00	16:00					
Vol.	27	27	174	140	27	27	27	27	27	27	4	4	2	4	1	1	1	1	1	1	1	1	3	13	409					

E Front St  
East Of Hall St  
Count#27

Site Code: 000000000000  
Station ID:

B to A Latitude: 0' 0.0000 South

Start Time	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	9999	Total	Pace Speed	Number in Pace		
06/13/17	0	1	2	9	1	7	30	1	35	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	21-30	16		
01:00	0	2	0	1	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	14-23	3		
02:00	0	0	0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	20-29	4		
03:00	1	0	0	7	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	21-30	9			
04:00	0	0	0	4	3	3	3	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	21-30	7			
05:00	0	0	0	18	9	33	33	9	9	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	21-30	51			
06:00	4	1	1	20	119	119	203	21	21	6	4	3	1	1	1	1	1	3	3	1	1	1	1	1	1	1	173	26-35	140			
07:00	9	3	3	80	50	203	50	50	50	4	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	367	21-30	283			
08:00	6	5	5	118	190	156	190	44	44	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370	21-30	308			
09:00	11	23	33	134	171	131	131	26	26	1	1	0	0	0	0	0	0	2	2	1	1	1	1	1	1	5	361	21-30	291			
10:00	27	33	41	171	12	12	12	12	12	1	1	1	1	3	3	0	0	0	0	1	1	1	2	2	2	6	396	21-30	303			
11:00	17	41	66	182	8	95	84	8	8	1	1	0	0	2	2	1	1	0	0	0	0	1	1	1	1	15	364	21-30	278			
12 PM	32	66	84	192	84	84	84	8	8	0	0	2	2	3	3	2	2	2	2	3	3	1	1	3	3	20	418	21-30	277			
13:00	22	67	81	181	61	61	61	8	8	1	1	2	2	1	1	1	0	1	1	2	2	2	2	0	0	13	361	16-25	249			
14:00	145	40	40	171	54	54	54	5	5	5	1	1	1	0	0	0	0	2	2	1	1	1	1	0	0	10	435	21-30	230			
15:00	24	40	40	172	7	122	122	7	7	1	1	4	4	3	3	1	1	3	3	1	1	0	0	2	2	14	394	21-30	295			
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
Total	298	322	1462	1264	201	24	13	4	13	4	10	10	10	105	105	3748																
Percent	8.0%	8.6%	39.0%	33.7%	5.4%	0.6%	0.3%	0.1%	0.3%	0.3%	0.3%	0.3%	0.3%	2.8%	2.8%																	
AM Peak	10:00	11:00	11:00	07:00	07:00	06:00	07:00	10:00	10:00	11:00	07:00	07:00	10:00	10:00	10:00	10:00																
Vol.	27	41	182	203	50	6	3	3	3	1	3	1	1	15	15	396																
PM Peak	14:00	13:00	12:00	15:00	12:00	14:00	15:00	12:00	12:00	12:00	15:00	12:00	12:00	12:00	12:00	14:00																
Vol.	145	67	192	122	8	5	4	4	3	2	3	3	3	20	20	435																
Total	362	392	2059	1853	301	32	17	7	14	7	14	12	15	144	144	5238																
Percent	6.9%	7.5%	39.3%	35.4%	5.7%	0.6%	0.3%	0.1%	0.3%	0.4%	0.3%	0.2%	0.3%	2.7%	2.7%																	

Stats  
 10 MPH Pace Speed : 21-30 MPH  
 Number in Pace : 3929  
 Percent in Pace : 75.0%  
 Number of Vehicles > 25 MPH : 2425  
 Percent of Vehicles > 25 MPH : 46.3%  
 Mean Speed(Average) : 25 MPH



E Front St  
East Of Hall St  
Count#27

Site Code: 000000000000  
Station ID:

Latitude: 0' 0.0000 South

A to B, B to A

Start Time	0	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	9999	Total	Pace Speed	Number in Pace
06/13/17	2	6	3	12	23	15	6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	21-30	38	
01:00	0	0	0	1	12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21-30	18	
02:00	0	1	1	12	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	21-30	18	
03:00	2	1	1	11	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21-30	17		
04:00	0	1	1	9	4	4	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	21-30	13		
05:00	0	7	7	23	41	41	1	1	13	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85	21-30	64		
06:00	7	13	13	69	162	162	6	6	23	23	6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	284	21-30	231	
07:00	15	18	18	226	283	283	6	6	55	55	6	3	3	0	0	0	0	0	4	4	1	1	1	1	2	16	630	21-30	510		
08:00	11	36	36	305	49	49	2	2	252	252	2	0	0	1	1	1	0	0	2	2	0	0	0	0	0	12	671	21-30	558		
09:00	26	87	87	330	31	31	1	1	191	191	1	2	2	2	2	2	0	0	2	2	1	1	0	0	0	17	690	21-30	522		
10:00	36	142	142	353	160	160	3	3	160	160	3	3	2	2	4	4	1	1	0	0	1	1	4	4	2	28	749	21-30	515		
11:00	53	218	218	346	116	116	3	3	116	116	3	3	1	1	7	7	1	1	0	0	3	3	2	2	4	41	810	16-25	566		
12 PM	76	244	244	340	103	103	3	3	103	103	3	3	3	3	7	7	4	4	2	2	5	5	2	2	2	3	37	839	16-25	587	
13:00	71	243	243	352	82	82	3	3	82	82	3	5	5	2	5	5	2	2	4	4	5	5	2	2	1	31	818	16-25	598		
14:00	163	216	216	292	69	69	5	5	292	292	7	5	2	2	2	2	0	0	2	2	2	2	2	2	2	0	29	789	16-25	515	
15:00	46	210	210	345	11	11	147	147	11	11	4	4	5	3	3	3	3	3	4	4	4	4	1	1	3	25	811	16-25	557		
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Total	508	1446	1446	3048	1643	1643	244	244	39	39	24	24	29	29	29	20	11	11	20	20	22	22	13	13	16	16	239	7302			
Percent	7.0%	19.8%	19.8%	41.7%	22.5%	22.5%	3.3%	3.3%	0.5%	0.5%	0.3%	0.3%	0.4%	0.4%	0.4%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	3.3%				
AM Peak	11:00	11:00	11:00	10:00	10:00	07:00	07:00	07:00	06:00	06:00	07:00	07:00	11:00	11:00	11:00	10:00	10:00	10:00	07:00	07:00	11:00	11:00	10:00	10:00	10:00	11:00	11:00	11:00			
Vol.	53	218	218	353	283	283	6	6	55	55	3	3	7	7	7	4	1	1	4	4	3	3	4	4	4	4	41	810			
PM Peak	14:00	12:00	12:00	13:00	15:00	15:00	14:00	14:00	13:00	13:00	13:00	12:00	12:00	12:00	12:00	13:00	12:00	12:00	13:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00			
Vol.	163	244	244	352	147	147	5	5	12	12	5	5	7	7	7	4	4	4	4	4	5	5	2	2	3	3	37	839			
Total	654	1960	1960	4665	2501	2501	366	366	53	53	33	33	43	43	43	26	17	17	26	26	25	25	16	16	25	25	343	10727			
Percent	6.1%	18.3%	18.3%	43.5%	23.3%	23.3%	3.4%	3.4%	0.5%	0.5%	0.3%	0.3%	0.4%	0.4%	0.4%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.2%	3.2%				

Stats  
 10 MPH Pace Speed : 21-30 MPH  
 Number in Pace : 7194  
 Percent in Pace : 67.1%  
 Number of Vehicles > 25 MPH : 3448  
 Percent of Vehicles > 25 MPH : 32.1%  
 Mean Speed(Average) : 23 MPH

E. Front St  
 East of Hall St  
 Count# 27

Site Code: 000000000000  
 Station ID:

Latitude: 0' 0.0000 South

Start Time	12-Jun-17 Mon	13-Jun-17 Tue	14-Jun-17 Wed	15-Jun-17 Thu	16-Jun-17 Fri	Weekday Average	17-Jun-17 Sat	18-Jun-17 Sun
12:00 AM	*	47	*	*	*	47	*	*
01:00	*	21	*	*	*	21	*	*
02:00	*	20	*	*	*	20	*	*
03:00	*	21	*	*	*	21	*	*
04:00	*	17	*	*	*	17	*	*
05:00	*	85	*	*	*	85	*	*
06:00	*	284	*	*	*	284	*	*
07:00	*	630	*	*	*	630	*	*
08:00	*	671	*	*	*	671	*	*
09:00	*	690	*	*	*	690	*	*
10:00	*	749	*	*	*	749	*	*
11:00	*	810	*	*	*	810	*	*
12:00 PM	*	839	*	*	*	839	*	*
01:00	*	818	*	*	*	818	*	*
02:00	*	789	*	*	*	789	*	*
03:00	*	811	*	*	*	811	*	*
04:00	844	*	*	*	*	844	*	*
05:00	778	*	*	*	*	778	*	*
06:00	555	*	*	*	*	555	*	*
07:00	442	*	*	*	*	442	*	*
08:00	355	*	*	*	*	355	*	*
09:00	237	*	*	*	*	237	*	*
10:00	143	*	*	*	*	143	*	*
11:00	71	*	*	*	*	71	*	*
Total	3425	7302	0	0	0		0	0
Percentage	31.9%	68.1%	0.0%	0.0%	0.0%		0.0%	0.0%
AM Peak	-	11:00	-	-	-	-	-	-
Vol.	-	810	-	-	-	-	-	-
PM Peak	16:00	12:00	-	-	-	-	-	-
Vol.	844	839	-	-	-	-	-	-
Total		7302	0					



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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: Tuesday, July 18th, 2017  
SUBJECT: 24 Hour Speed and Volume of Hall St Between Garland and Front St

City Engineering performed a 24 hour speed study on Hall St between Garland St and Front St beginning on Monday, July 17th, 2017 concluded Tuesday, July 18th, 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 Hall 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, 3361 vehicles were recorded. The average (mean) speed of the 3361 vehicles is 19 miles per hour, with 15.6% 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 3.0%.

### Summary (Combined):

- **Mean Speed:** 19 MPH
- **Number of Vehicles above Posted Speed Limit** 15.6%
- **85<sup>th</sup> Percentile of Speed:** 25 MPH
- **95<sup>th</sup> Percentile of Speed:** 29 MPH

### Enclosed:

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

Hall St  
Btw Front St and Garland St  
Speed

Site Code: 00000001  
Station ID: Hall St  
Btw Front St and Garland St  
Latitude: 0° 0.0000 South

A=Northbound		1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number	
Start	Time	15	20	25	30	35	40	45	50	55	60	65	70	75	80		Speed	In Pace	
07/17/17		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	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	26	57	49	14	1	0	0	0	0	0	0	0	0	0	147	16-25	106	
	14:00	28	57	40	5	1	0	0	0	0	0	0	0	0	0	131	16-25	97	
	15:00	19	48	48	14	0	0	0	0	0	0	0	0	0	0	129	16-25	96	
	16:00	18	38	41	13	2	0	0	0	0	0	0	0	0	0	112	16-25	79	
	17:00	34	61	40	13	1	0	0	0	0	0	0	0	0	0	149	16-25	101	
	18:00	21	37	20	12	1	0	0	0	0	0	0	0	0	0	91	16-25	57	
	19:00	19	28	26	9	0	0	0	0	0	0	0	0	0	0	82	16-25	54	
	20:00	21	20	21	6	0	1	0	0	0	0	0	0	0	0	69	16-25	41	
	21:00	11	25	21	5	1	0	0	0	0	0	0	0	0	0	63	16-25	46	
	22:00	1	9	18	10	1	0	0	0	0	0	0	0	0	0	39	19-28	28	
	23:00	3	5	13	9	0	0	0	0	0	0	0	0	0	0	30	21-30	22	
	Total	201	385	337	110	8	1	0	0	0	0	0	0	0	0	1042			
	Percent	19.3%	36.9%	32.3%	10.6%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
AM Peak																			
Vol.																			
PM Peak	17:00	17:00	17:00	13:00	13:00	16:00	20:00												
Vol.	34	61	49	14	14	2	1												

17:00  
149

Hall St  
Btw Front St and Garland St  
Speed

Site Code: 00000001  
Station ID:  
Hall St  
Btw Front St and Garland St  
Latitude: 0' 0.0000 South

A=Northbound		1	16	21	26	31	36	41	46	51	56	61	66	71	76	Pace	Number
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	80	Total	Speed	In Pace
07/18/17	0	3	1	1	0	0	0	0	0	0	0	0	0	0	7	16-25	5
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	14-23	2
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	9-18	1
03:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	*	1
04:00	1	0	2	2	4	0	0	0	0	0	0	0	0	0	5	20-29	4
05:00	2	5	4	4	11	2	0	0	0	0	0	0	0	0	18	16-25	9
06:00	4	14	3	12	18	4	1	0	0	0	0	0	0	0	34	15-24	17
07:00	9	30	12	12	12	3	0	0	0	0	0	0	0	0	74	16-25	42
08:00	18	41	34	31	3	0	0	0	0	0	0	0	0	0	108	16-25	75
09:00	29	35	31	3	2	0	0	0	0	0	0	0	0	0	100	16-25	66
10:00	27	45	27	5	2	0	0	0	0	0	0	0	0	0	106	16-25	72
11:00	37	50	36	7	0	0	0	0	0	0	0	0	0	0	130	16-25	86
12 PM	24	54	46	10	1	1	0	0	0	0	0	0	0	0	136	16-25	100
13:00	10	9	10	3	0	0	0	0	0	0	0	0	0	0	32	16-25	19
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	162	288	208	76	19	2	0	0	0	0	0	0	0	0	755		
Percent	21.5%	38.1%	27.5%	10.1%	2.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
AM Peak	11:00	11:00	11:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00		
Vol.	37	50	36	18	4	1									11:00		
PM Peak	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00		
Vol.	24	54	46	10	1	1									130		
Total	363	673	545	186	27	3	0	0	0	0	0	0	0	0	1797		
Percent	20.2%	37.5%	30.3%	10.4%	1.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
15th Percentile:		11 MPH															
50th Percentile:		18 MPH															
85th Percentile:		24 MPH															
95th Percentile:		28 MPH															

Stats  
10 MPH Pace Speed : 16-25 MPH  
Number in Pace : 1218  
Percent in Pace : 67.8%  
Number of Vehicles > 25 MPH : 216  
Percent of Vehicles > 25 MPH : 12.0%  
Mean Speed(Average) : 19 MPH

Hall St  
Btw Front St and Garland St  
Speed

Site Code: 00000001  
Station ID:  
Hall St  
Btw Front St and Garland St  
Latitude: 0° 0.0000 South

B=Southbound Start Time	16		21		26		31		36		41		46		51		56		61		66		71		76		Pace Number in Pace	
	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	00	05	10	15	20	25	30	35	Total		
07/17/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
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	17	36	40	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	16-25	76
14:00	29	32	26	13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	16-25	58
15:00	40	43	39	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134	16-25	82
16:00	26	35	31	17	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112	16-25	66
17:00	32	47	34	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	16-25	81
18:00	22	42	24	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	16-25	66
19:00	24	25	29	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85	16-25	54
20:00	20	20	20	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	16-25	40
21:00	6	4	16	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	19-28	21
22:00	5	2	14	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	21-30	19
23:00	0	5	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	21-30	11
Total	221	291	279	101	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	908		
Percent AM Peak Vol.	24.3%	32.0%	30.7%	11.1%	1.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		

PM Peak Vol.	15:00	17:00	13:00	13:00	16:00	15:00
	40	47	40	19	3	1
	15:00	17:00	13:00	13:00	16:00	15:00
	40	47	40	19	3	1

Hall St  
Btw Front St and Garland St  
Speed

Site Code: 00000001  
Station ID:  
Hall St  
Btw Front St and Garland St  
Latitude: 0' 0.0000 South

B=Southbound		1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number	
Start	Time	15	20	25	30	35	40	45	50	55	60	65	70	75	80		Speed	In Pace	
07/18/17		2	1	2	2	1	0	0	0	0	0	0	0	0	0	8	21-30	4	
	01:00	0	1	3	4	0	0	0	0	0	0	0	0	0	0	8	21-30	7	
	02:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1	
	03:00	1	1	1	1	1	0	0	0	0	0	0	0	0	0	5	26-35	2	
	04:00	1	0	3	1	0	0	0	0	0	0	0	0	0	0	5	21-30	4	
	05:00	0	3	3	5	0	0	0	0	0	0	0	0	0	0	11	20-29	8	
	06:00	2	6	6	13	12	4	1	0	0	0	0	0	0	0	44	26-35	25	
	07:00	0	10	29	36	11	2	0	0	0	0	0	0	0	0	88	21-30	65	
	08:00	5	25	38	40	7	1	0	0	0	0	0	0	0	0	116	21-30	78	
	09:00	18	29	33	17	1	0	0	0	0	0	0	0	0	0	98	16-25	62	
	10:00	20	41	46	16	9	0	0	0	0	0	0	0	0	0	132	16-25	87	
	11:00	25	55	41	10	7	0	0	0	0	0	0	0	0	0	138	16-25	96	
	12 PM	29	48	43	9	0	0	0	0	0	0	0	0	0	0	129	16-25	91	
	13:00	9	9	13	5	2	0	0	0	0	0	0	0	0	0	38	16-25	22	
	14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Total		113	229	261	159	51	7	1	0	0	0	0	0	0	0	821			
Percent		13.8%	27.9%	31.8%	19.4%	6.2%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
AM Peak		11:00	11:00	10:00	08:00	06:00	06:00	06:00								11:00			
Vol.		25	55	46	40	12	4	1								138			
PM Peak		12:00	12:00	12:00	12:00	13:00										12:00			
Vol.		29	48	43	9	2										129			
Total		334	520	540	260	66	8	1	0	0	0	0	0	0	0	1729			
Percent		19.3%	30.1%	31.2%	15.0%	3.8%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
		15th Percentile : 11 MPH																	
		50th Percentile : 20 MPH																	
		85th Percentile : 26 MPH																	
		95th Percentile : 29 MPH																	
		10 MPH Pace Speed : 16-25 MPH																	
		Number in Pace : 1060																	
		Percent in Pace : 61.3%																	
		Number of Vehicles > 25 MPH : 335																	
		Percent of Vehicles > 25 MPH : 19.4%																	
		Mean Speed(Average) : 20 MPH																	

Stats

10 MPH Pace Speed : 16-25 MPH  
Number in Pace : 1060  
Percent in Pace : 61.3%  
Number of Vehicles > 25 MPH : 335  
Percent of Vehicles > 25 MPH : 19.4%  
Mean Speed(Average) : 20 MPH

Hall St  
Btw Front St and Garland St  
Speed

Site Code: 00000001  
Station ID:  
Hall St  
Btw Front St and Garland St  
Latitude: 0° 0.0000 South

A=Northbound, B=Southbound		16	21	26	31	36	41	46	51	56	61	66	71	76	76	999	Total	Pace	Number	
Start	Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90		Speed	In Place	
07/17/17		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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		93	89	33	3	0	0	0	0	0	0	0	0	0	0	0	261	16-25	182	
14:00		89	66	18	3	0	0	0	0	0	0	0	0	0	0	0	233	16-25	155	
15:00		91	87	25	0	1	0	0	0	0	0	0	0	0	0	0	263	16-25	178	
16:00		44	72	30	5	0	0	0	0	0	0	0	0	0	0	0	224	16-25	145	
17:00		66	74	20	3	0	0	0	0	0	0	0	0	0	0	0	271	16-25	182	
18:00		43	44	20	2	0	0	0	0	0	0	0	0	0	0	0	188	16-25	123	
19:00		53	55	16	0	0	0	0	0	0	0	0	0	0	0	0	167	16-25	108	
20:00		41	41	10	1	1	0	0	0	0	0	0	0	0	0	0	134	16-25	81	
21:00		17	37	10	3	0	0	0	0	0	0	0	0	0	0	0	96	16-25	66	
22:00		6	32	15	3	0	0	0	0	0	0	0	0	0	0	0	67	21-30	47	
23:00		3	19	14	0	0	0	0	0	0	0	0	0	0	0	0	46	21-30	33	
Total		422	616	211	23	2	0	0	0	0	0	0	0	0	0	0	1950			
Percent		21.6%	31.6%	10.8%	1.2%	0.1%	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		17:00	13:00	13:00	16:00	15:00											17:00			
Vol.		66	108	33	5	1											271			

Hall St  
Btw Front St and Garland St  
Speed

Site Code: 00000001

Station ID:

Hall St  
Btw Front St and Garland St  
Latitude: 0' 0.0000 South

A=Northbound, B=Southbound		1	16	21	26	31	36	41	46	51	56	61	66	71	76	76	999	Total	Pace	Number	
Start	Time	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90		Speed	In Pace	
07/18/17		2	4	4	3	2	0	0	0	0	0	0	0	0	0	0	0	15	16-25	8	
01:00		0	2	4	4	0	0	0	0	0	0	0	0	0	0	0	0	10	20-29	8	
02:00		1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1	
03:00		2	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	7	26-35	3	
04:00		2	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	10	21-30	8	
05:00		2	8	7	9	3	0	0	0	0	0	0	0	0	0	0	0	29	21-30	16	
06:00		6	20	9	24	14	4	1	0	0	0	0	0	0	0	0	0	78	26-35	38	
07:00		9	40	41	54	15	3	0	0	0	0	0	0	0	0	0	0	162	21-30	95	
08:00		23	66	72	52	10	1	0	0	0	0	0	0	0	0	0	0	224	16-25	138	
09:00		47	64	64	20	3	0	0	0	0	0	0	0	0	0	0	0	198	16-25	128	
10:00		47	86	73	21	11	0	0	0	0	0	0	0	0	0	0	0	238	16-25	159	
11:00		62	105	77	17	7	0	0	0	0	0	0	0	0	0	0	0	268	16-25	182	
12 PM		53	102	89	19	1	1	0	0	0	0	0	0	0	0	0	0	265	16-25	191	
13:00		19	18	23	8	2	0	0	0	0	0	0	0	0	0	0	0	70	16-25	41	
14:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total		275	517	469	235	70	9	1	0	0	0	0	0	0	0	0	0	1576			
Percent		17.4%	32.8%	29.8%	14.9%	4.4%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
AM Peak		11:00	11:00	11:00	07:00	07:00	06:00	06:00										11:00			
Vol.		62	105	77	54	15	4	1										268			
PM Peak		12:00	12:00	12:00	12:00	13:00	12:00	12:00										12:00			
Vol.		53	102	89	19	2	1											265			
Total		697	1193	1085	446	93	11	1	0	0	0	0	0	0	0	0	0	3526			
Percent		19.8%	33.8%	30.8%	12.6%	2.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				

15th Percentile :	11 MPH	
50th Percentile :	19 MPH	
85th Percentile :	25 MPH	
95th Percentile :	29 MPH	
Stats	10 MPH Pace Speed :	16-25 MPH
	Number in Pace :	2278
	Percent in Pace :	64.6%
	Number of Vehicles > 25 MPH :	551
	Percent of Vehicles > 25 MPH :	15.6%
	Mean Speed(Average) :	19 MPH

HallSt  
 Btw Front St and Garland St  
 Count#106

Site Code: 00000001  
 Station ID:

Latitude: 0' 0.0000 South

Start Time	17-Jul-17 Mon	18-Jul-17 Tue	19-Jul-17 Wed	20-Jul-17 Thu	21-Jul-17 Fri	Weekday Average	22-Jul-17 Sat	23-Jul-17 Sun
12:00 AM	*	15	*	*	*	15	*	*
01:00	*	10	*	*	*	10	*	*
02:00	*	2	*	*	*	2	*	*
03:00	*	7	*	*	*	7	*	*
04:00	*	10	*	*	*	10	*	*
05:00	*	29	*	*	*	29	*	*
06:00	*	78	*	*	*	78	*	*
07:00	*	162	*	*	*	162	*	*
08:00	*	224	*	*	*	224	*	*
09:00	*	198	*	*	*	198	*	*
10:00	*	238	*	*	*	238	*	*
11:00	*	268	*	*	*	268	*	*
12:00 PM	*	265	*	*	*	265	*	*
01:00	261	70	*	*	*	166	*	*
02:00	233	*	*	*	*	233	*	*
03:00	263	*	*	*	*	263	*	*
04:00	224	*	*	*	*	224	*	*
05:00	271	*	*	*	*	271	*	*
06:00	188	*	*	*	*	188	*	*
07:00	167	*	*	*	*	167	*	*
08:00	134	*	*	*	*	134	*	*
09:00	96	*	*	*	*	96	*	*
10:00	67	*	*	*	*	67	*	*
11:00	46	*	*	*	*	46	*	*
Total	1950	1576	0	0	0		0	0
Percentage	58.0%	46.9%	0.0%	0.0%	0.0%		0.0%	0.0%
AM Peak	-	11:00	-	-	-	-	-	-
Vol.	-	268	-	-	-	-	-	-
PM Peak	17:00	12:00	-	-	-	-	-	-
Vol.	271	265	-	-	-	-	-	-
Total		1576	0					



## Speed Enforcement Evaluator

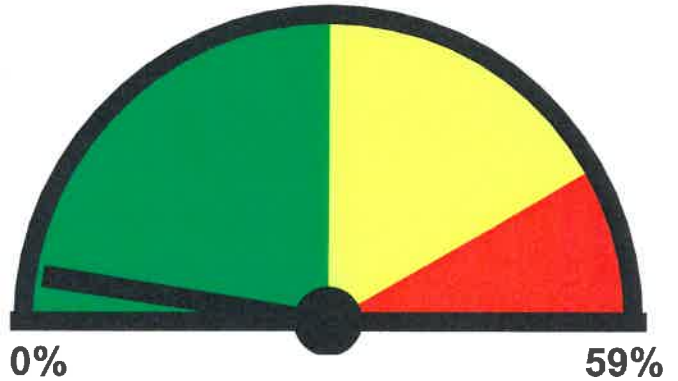
**Location:**  
**Hall St**

**Total Percentage of  
 Enforceable Violations**

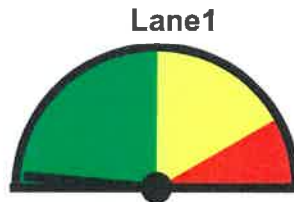
**Closest Cross Street:**  
 Btw Front St and Garland St

**Analysis Dates:**  
 Monday, July 17, 2017  
 Tuesday, July 18, 2017

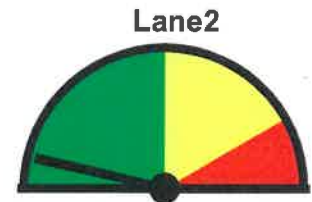
**Equipment Used:**



**0%** **59%**  
**Posted Speed Limit:** 25 MPH  
**Enforcement Tolerance:** 5 MPH  
**Enforcement Limit:** 31 MPH & Up  
**Percentage Above Limit:** 3.0%  
**Enforcement Rating:** **LOW**



**Percent Above Limit: 1.7%**  
**Enforcement Rating: LOW**



**Percent Above Limit: 4.4%**  
**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	61	620	1193	1085	446	93	11	1	0	0	0	0	0

85 percentile = 25

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
0	55	304	673	545	186	27	3	0	0	0	0	0	0

85 percentile = 24

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	6	316	520	540	260	66	8	1	0	0	0	0	0

85 percentile = 26

# Best Times for Enforcement

**Location:**

**Hall St**

**Closest Cross Street:**

Btw Front St and Garland St

**Analysis Dates:**

Monday, July 17, 2017

Tuesday, July 18, 2017

**Sun**

**Mon**

Combined: 4 PM to 6 PM

Lane1: 4 PM to 6 PM

Lane2: 4 PM to 6 PM

**Tue**

Combined: 6 AM to 8 AM

Lane1: 7 AM to 9 AM

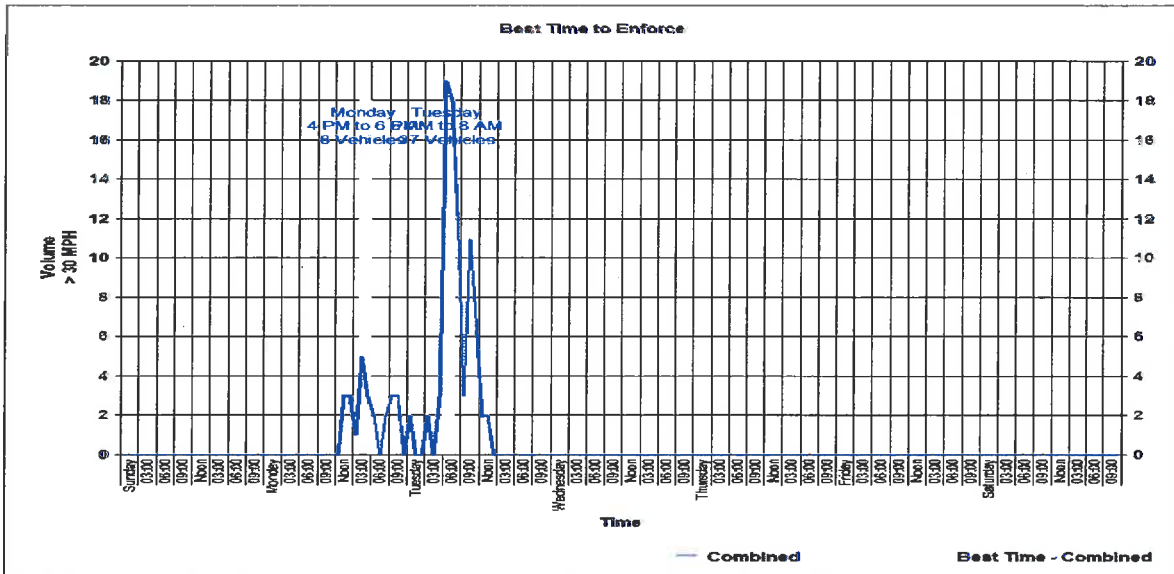
Lane2: 6 AM to 8 AM

**Wed**

**Thu**

**Fri**

**Sat**



Hall St  
Btw Front St and Garland St  
Speed

