Memorandum

The City of Traverse City
Engineering Department

TO: Tim J. Lodge, P.E., City Engineer

FROM: Brogan Beyette, Engineering Intern

DATE: August 2, 2013

SUBJECT: Speed count on Hastings St., N of Carver St.

The City of Traverse City Engineering Department conducted an on-site speed count beginning Tuesday, July 30, 2013 at 11:00am and ending Friday, August 02, 2013 at 10:00am on Hastings St., N of Carver St.

The Jamar Radar Recorder gathered data for each lane of traffic; one lane north bound and one lane south bound. The speeds of each vehicle were recorded in the device and then compiled into TraxPro where the lanes were combined into one report, regardless of direction. The report divided the speeds into groups starting with 1-15 mph and each successive group at 5 mph increments. Each group shows how many vehicles were within that specific range of speed and at what times.

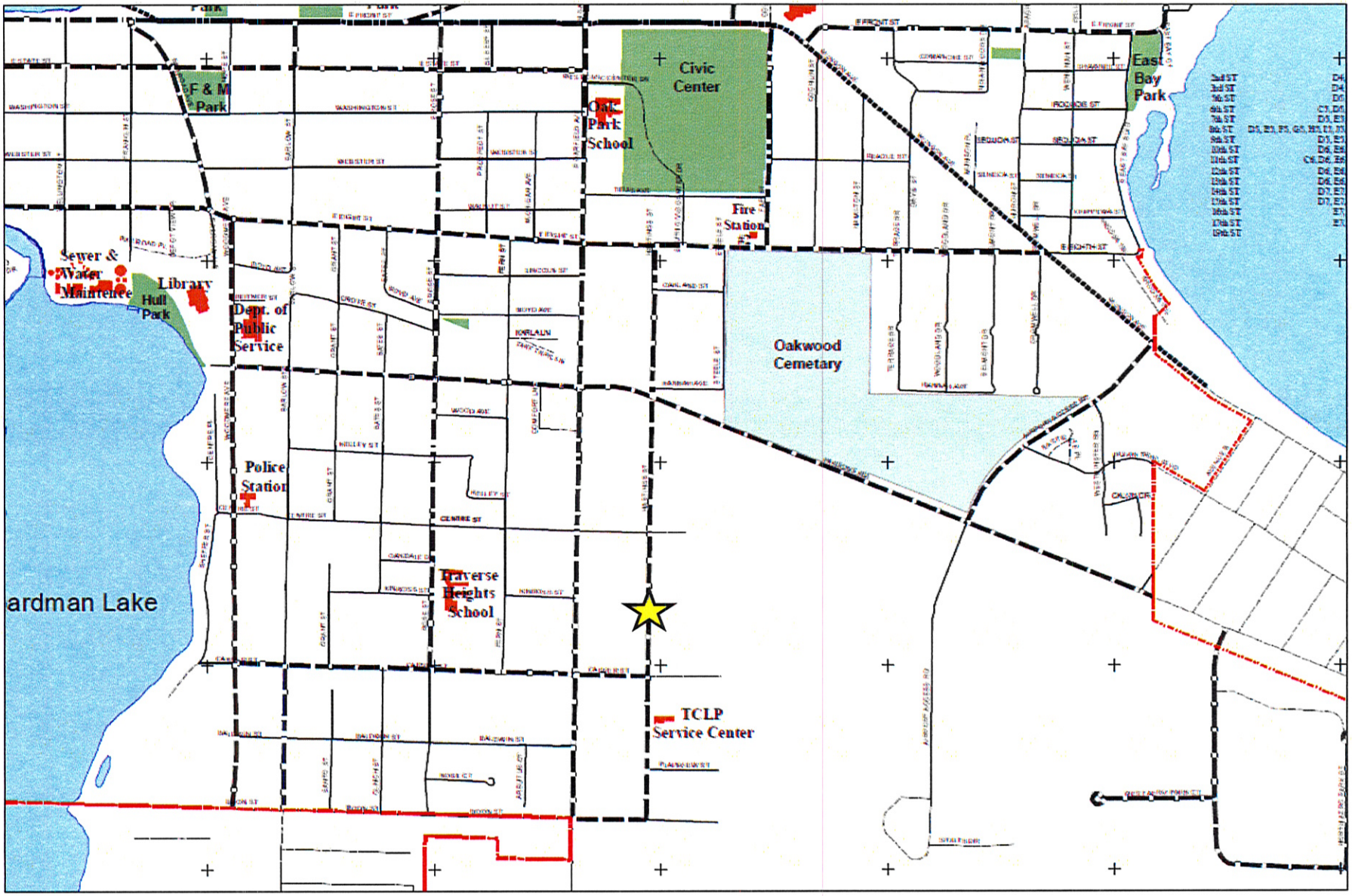
The speed limit of Hastings St. at this location is 25 mph. According to the enclosed detailed speed report, the average speed of the vehicles was 30 mph. 10.8% of the vehicles were at 25 mph and less with 51.5% of all vehicles at 30 mph and less.

Summary:

- Speed Limit: 25 mph
- Average Speed: 30 mph
- Total Number of Vehicles: 19,494
- 24-hr ADT Weekday: 6,664 vehicles
- 15th Percentile: 24 mph
- 50th Percentile: 29 mph
- 85th Percentile: 34 mph
- 95th Percentile: 37 mph

Please note that the Film Festival began July 30, 2013 during this speed count.

Enclosed: Detailed TraxPro Speed Report
Location Map


Civic Center
F & M Park
Oak Park School
Fire Station
East Bay Park
Sewer & Water Maintence
Library
Hull Park
Dept. of Public Service
Oakwood Cemetary
Police Station
Traverse Heights School
ardman Lake
TCLP Service Center

Hastings St
(N of Carver St)
Speed

Site Code: 00000001
Station ID:

Latitude: 0' 0.0000 South

Direction 1, Direction 2

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	85th Percent	95th Percent
07/30/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	**10**	**13**	**50**	**259**	**189**	**29**	**5**	**1**	0	0	0	0	0	0	**556**	33	36
12 PM	7	11	45	**292**	243	39	3	0	0	0	0	0	0	0	**640**	34	36
13:00	9	14	51	245	201	32	2	0	0	0	0	0	0	0	554	33	36
14:00	7	7	**54**	236	223	29	3	0	0	0	0	0	0	0	559	33	36
15:00	**11**	**15**	39	232	223	53	2	0	0	0	0	0	0	0	575	34	37
16:00	6	8	30	236	**253**	48	5	0	0	0	0	0	0	0	586	34	37
17:00	8	9	25	196	249	**62**	**9**	**2**	0	0	0	0	0	0	560	35	38
18:00	2	4	18	87	147	28	4	1	0	0	0	0	0	0	291	35	38
19:00	2	2	18	75	69	15	2	0	0	0	0	0	0	0	183	34	37
20:00	3	2	10	45	65	8	1	1	0	0	0	0	0	0	135	34	36
21:00	2	6	8	45	33	6	2	1	0	0	0	0	0	0	103	34	38
22:00	2	0	3	27	13	7	1	2	0	0	0	0	0	0	55	36	41
23:00	3	0	0	13	8	1	0	1	0	0	0	0	0	0	26	33	37
Total	72	91	351	1988	1916	357	39	9	0	0	0	0	0	0	4823		
Percent	1.5%	1.9%	7.3%	41.2%	39.7%	7.4%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00							11:00		
Vol.	10	13	50	259	189	29	5	1							556		
PM Peak	15:00	15:00	14:00	12:00	16:00	17:00	17:00	17:00							12:00		
Vol.	11	15	54	292	253	62	9	2							640		

Hastings St
(N of Carver St)
Speed

Site Code: 00000001
Station ID:

Latitude: 0' 0.0000 South

Direction 1, Direction 2

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	85th Percent	95th Percent
07/31/13	0	1	2	7	5	2	0	0	0	0	0	0	0	0	17	34	37
01:00	0	0	0	4	3	1	0	0	0	0	0	0	0	0	8	35	37
02:00	0	0	4	5	1	0	0	0	0	0	0	0	0	0	10	29	32
03:00	0	0	0	3	4	1	0	0	0	0	0	0	0	0	8	35	37
04:00	2	0	2	3	5	0	0	**1**	0	0	0	0	0	0	13	34	46
05:00	2	5	6	16	17	3	0	1	0	0	0	0	0	0	50	33	37
06:00	4	3	6	43	64	20	1	0	0	0	0	0	0	0	141	35	38
07:00	5	7	22	132	148	32	3	0	0	0	0	0	0	0	349	34	37
08:00	3	10	20	150	156	35	3	0	0	0	0	0	0	0	377	34	37
09:00	5	5	30	159	152	30	2	0	0	0	0	0	0	0	383	34	37
10:00	**11**	**12**	26	189	148	34	**6**	0	0	0	0	0	0	0	426	34	37
11:00	5	10	**37**	**217**	**193**	**40**	3	0	0	0	0	0	0	0	**505**	34	37
12 PM	9	9	44	263	228	41	2	**1**	0	0	0	0	0	0	597	34	36
13:00	3	6	**53**	198	192	48	7	0	0	0	0	0	0	0	507	34	38
14:00	9	**13**	50	217	171	32	3	0	0	0	0	0	0	0	495	33	36
15:00	**16**	9	50	244	213	49	0	0	0	0	0	0	0	0	581	34	36
16:00	10	7	28	**269**	**277**	**61**	5	0	0	0	0	0	0	0	**657**	34	37
17:00	5	11	27	205	246	50	**9**	0	0	0	0	0	0	0	553	34	38
18:00	7	4	18	97	121	35	6	0	0	0	0	0	0	0	288	35	38
19:00	2	0	17	64	68	18	3	0	0	0	0	0	0	0	172	35	38
20:00	2	4	8	48	55	9	1	0	0	0	0	0	0	0	127	34	36
21:00	0	2	8	35	24	7	2	0	0	0	0	0	0	0	78	34	38
22:00	8	3	5	15	14	5	0	0	0	0	0	0	0	0	50	33	37
23:00	0	1	5	16	9	3	1	0	0	0	0	0	0	0	35	34	38
Total	108	122	468	2599	2514	556	57	3	0	0	0	0	0	0	6427		
Percent	1.7%	1.9%	7.3%	40.4%	39.1%	8.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	10:00	11:00	11:00	11:00	11:00	10:00	04:00							11:00		
Vol.	11	12	37	217	193	40	6	1							505		
PM Peak	15:00	14:00	13:00	16:00	16:00	16:00	17:00	12:00							16:00		
Vol.	16	13	53	269	277	61	9	1							657		

Hastings St
(N of Carver St)
Speed

Site Code: 00000001
Station ID:

Latitude: 0' 0.0000 South

Direction 1, Direction 2

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	85th Percent	95th Percent
08/01/13	0	2	1	8	6	1	0	0	0	0	0	0	0	0	18	33	36
01:00	0	0	2	3	2	0	1	0	0	0	0	0	0	0	8	35	42
02:00	0	0	0	4	3	1	0	0	0	0	0	0	0	0	8	35	37
03:00	0	2	0	5	2	2	0	0	0	0	0	0	0	0	11	35	38
04:00	0	0	2	2	2	3	0	**1**	0	0	0	0	0	0	10	39	47
05:00	7	2	6	19	19	3	1	0	0	**1**	0	0	0	0	58	33	37
06:00	5	1	4	56	53	18	0	0	0	0	0	0	0	0	137	35	38
07:00	3	7	18	152	147	36	3	1	0	0	0	0	0	0	367	34	37
08:00	6	8	29	171	157	**40**	**6**	0	0	0	0	0	0	0	417	34	38
09:00	11	5	25	172	127	27	1	0	0	0	0	0	0	0	368	34	36
10:00	**12**	**18**	**72**	200	147	27	2	1	0	0	0	0	0	0	479	33	36
11:00	9	14	46	**254**	**231**	37	3	0	0	0	0	0	0	0	**594**	34	36
12 PM	6	16	45	**311**	247	43	4	0	0	0	0	0	0	0	**672**	34	36
13:00	6	**19**	37	259	247	31	3	0	0	0	0	0	0	0	602	33	36
14:00	**15**	16	**47**	205	203	**56**	5	0	0	0	0	0	0	0	547	34	37
15:00	10	14	33	246	252	42	6	0	0	0	0	0	0	0	603	34	37
16:00	11	8	28	218	**276**	55	**7**	0	0	0	0	0	0	0	603	34	37
17:00	10	5	16	200	263	51	4	0	0	0	0	0	0	0	549	34	37
18:00	8	3	9	91	114	42	3	**1**	0	0	0	0	0	0	271	35	39
19:00	7	6	8	77	89	33	0	0	0	0	0	0	0	0	220	35	38
20:00	3	5	8	77	49	10	1	0	0	0	0	0	0	0	153	33	36
21:00	5	1	10	51	39	10	1	0	0	0	0	0	0	0	117	34	37
22:00	2	1	4	23	20	3	0	0	0	0	0	0	0	0	53	33	36
23:00	0	2	2	17	9	6	0	0	0	0	0	0	0	0	36	35	38
Total	136	155	452	2821	2704	577	51	4	0	1	0	0	0	0	6901		
Percent	2.0%	2.2%	6.5%	40.9%	39.2%	8.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	10:00	10:00	11:00	11:00	08:00	08:00	04:00		05:00					11:00		
Vol.	12	18	72	254	231	40	6	1		1					594		
PM Peak	14:00	13:00	14:00	12:00	16:00	14:00	16:00	18:00							12:00		
Vol.	15	19	47	311	276	56	7	1							672		

Hastings St
(N of Carver St)
Speed

Site Code: 00000001
Station ID:

Latitude: 0' 0.0000 South

Direction 1, Direction 2

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	85th Percent	95th Percent
08/02/13	1	1	0	8	6	0	0	0	0	0	0	0	0	0	16	32	34
01:00	0	1	0	5	2	1	0	0	0	0	0	0	0	0	9	34	37
02:00	0	1	2	1	4	2	0	0	0	0	0	0	0	0	10	36	38
03:00	1	0	0	6	3	1	0	0	0	0	0	0	0	0	11	33	37
04:00	1	2	1	1	3	1	0	0	0	0	0	0	0	0	9	34	37
05:00	4	2	3	14	24	3	0	0	0	0	0	0	0	0	50	34	36
06:00	1	3	7	50	52	18	2	0	0	0	0	0	0	0	133	35	38
07:00	3	7	20	132	147	25	1	1	0	0	0	0	0	0	336	34	36
08:00	5	10	19	144	155	24	2	**2**	0	0	0	0	0	0	361	34	36
09:00	**17**	**11**	**26**	**167**	**156**	**26**	**5**	0	0	0	0	0	0	0	**408**	34	36
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	33	38	78	528	552	101	10	3	0	0	0	0	0	0	1343		
Percent	2.5%	2.8%	5.8%	39.3%	41.1%	7.5%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	09:00	09:00	09:00	09:00	09:00	08:00							09:00		
Vol.	17	11	26	167	156	26	5	2							408		
PM Peak Vol.																	
Grand Total	349	406	1349	7936	7686	1591	157	19	0	1	0	0	0	0	19494		
Percent	1.8%	2.1%	6.9%	40.7%	39.4%	8.2%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile :	24 MPH
50th Percentile :	29 MPH
85th Percentile :	34 MPH
95th Percentile :	37 MPH

Statistics

10 MPH Pace Speed :	26-35 MPH
Number in Pace :	13760
Percent in Pace :	70.6%
Number of Vehicles > 25 MPH :	17390
Percent of Vehicles > 25 MPH :	89.2%
Mean Speed(Average) :	30 MPH

Statistics

Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	13760
Percent in Pace :	70.6%
Number of Vehicles > 25 MPH :	17390
Percent of Vehicles > 25 MPH :	89.2%