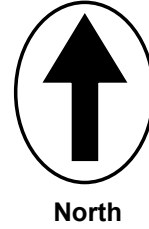


Date : 10/07/21

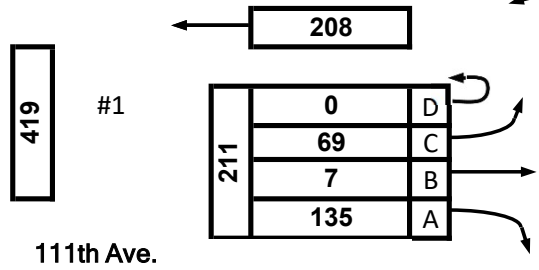
Count Number : TMC 2115

Location : CSAH 51 (University Ave.)  
@ 111th Ave.

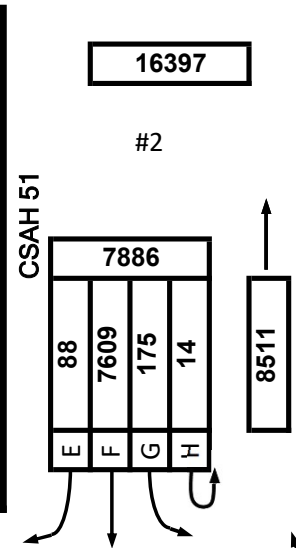
Collection Period : 24 Hours



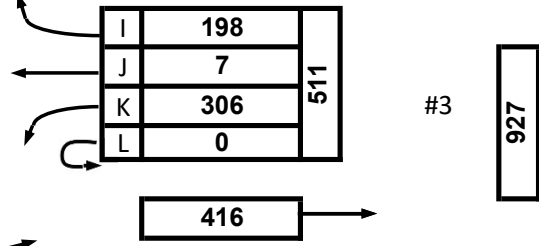
111th Ave.



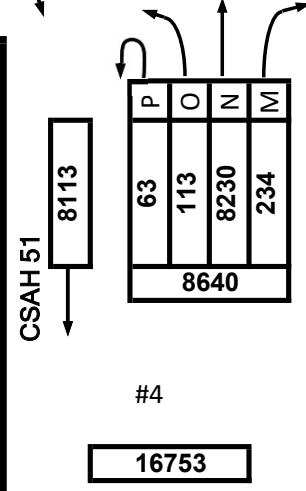
111th Ave.



CSAH 51



#3



CSAH 51

#4

EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	0	0	1	1
#2	1	1	2	4
#3	0	0	1	1
#4	1	1	2	4

Anoka County Highway Department

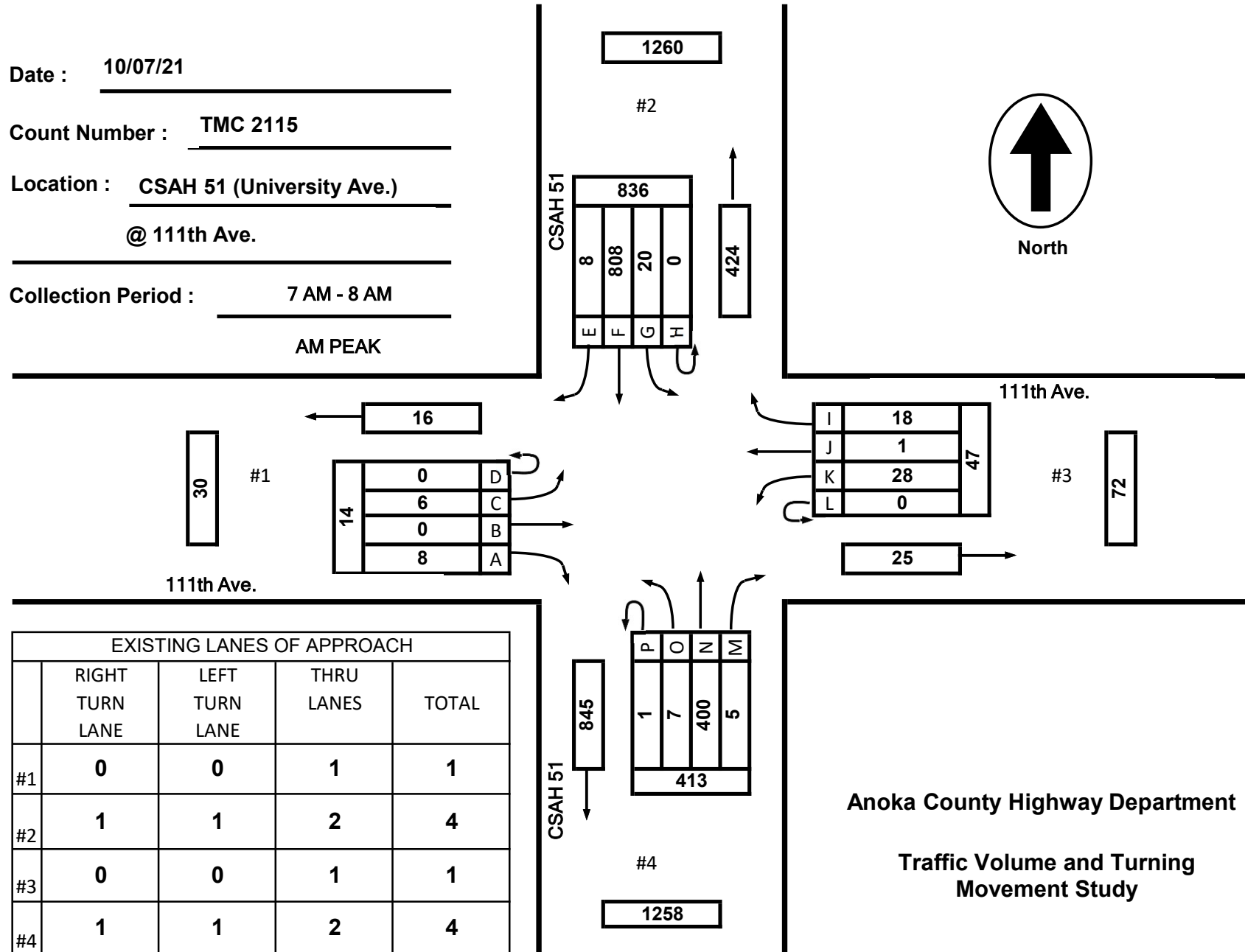
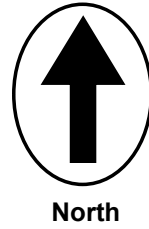
Traffic Volume and Turning Movement Study

Date : 10/07/21

Count Number : TMC 2115

Location : CSAH 51 (University Ave.)  
@ 111th Ave.

Collection Period : 7 AM - 8 AM  
**AM PEAK**



EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	0	0	1	1
#2	1	1	2	4
#3	0	0	1	1
#4	1	1	2	4

Anoka County Highway Department

Traffic Volume and Turning Movement Study

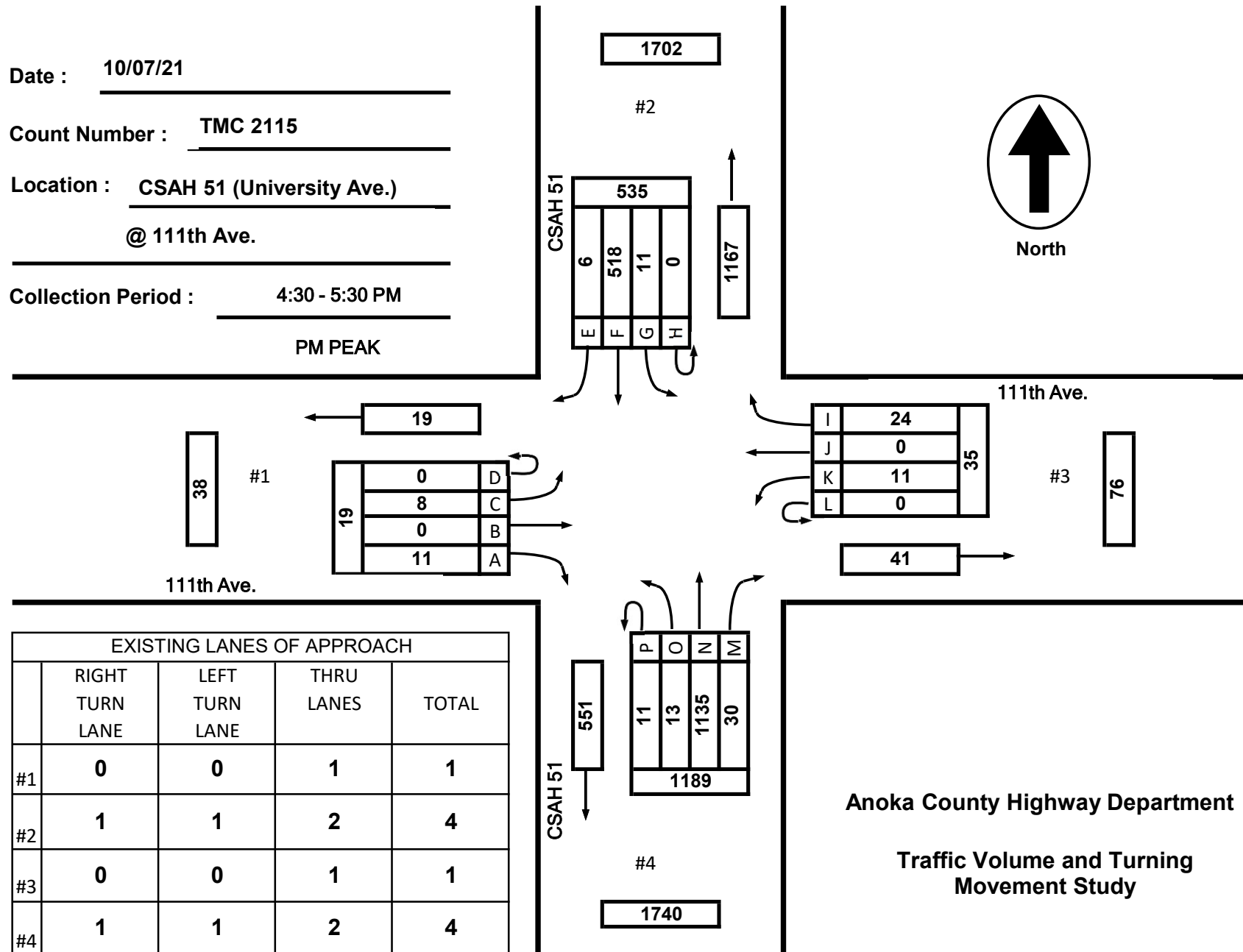
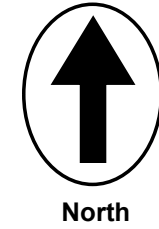
Date : 10/07/21

Count Number : TMC 2115

Location : CSAH 51 (University Ave.)  
@ 111th Ave.

Collection Period : 4:30 - 5:30 PM

PM PEAK



EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	0	0	1	1
#2	1	1	2	4
#3	0	0	1	1
#4	1	1	2	4

Anoka County Highway Department  
 Traffic Volume and Turning Movement Study

**TMC 2115  
Blaine MN  
Thursday, October 7, 2021**

Time	Southbound CSAH 51						Westbound 111th Ave						Northbound CSAH 51						Eastbound 111th Ave						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	0	1	10	0	0	11	0	0	0	0	0	0	0	0	15	2	0	17	0	0	0	1	0	1	29
12:15 AM	0	1	7	0	0	8	0	0	0	1	1	1	0	0	24	0	0	24	0	0	0	0	0	0	33
12:30 AM	1	0	5	0	0	6	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	1	0	1	17
12:45 AM	0	0	7	0	0	7	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	17
Hourly Total	1	2	29	0	0	32	0	0	0	1	1	1	0	0	59	2	0	61	0	0	0	2	0	2	96
1:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	11	2	0	13	0	0	0	0	0	0	15
1:15 AM	1	0	2	0	0	3	0	0	0	0	0	0	1	0	11	0	0	12	0	0	0	0	0	0	15
1:30 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
1:45 AM	0	0	5	0	0	5	0	1	0	1	0	2	2	0	4	1	0	7	0	0	0	0	0	0	14
Hourly Total	1	0	13	0	0	14	0	1	0	1	0	2	3	0	28	3	0	34	0	0	0	0	0	0	50
2:00 AM	0	0	5	0	0	5	0	0	0	0	0	0	1	0	10	0	0	11	0	0	0	0	0	0	16
2:15 AM	0	0	11	0	0	11	0	0	0	0	0	0	0	0	4	2	0	6	0	0	0	0	0	0	17
2:30 AM	0	0	4	0	0	4	0	2	0	0	0	2	0	0	10	0	0	10	0	0	0	0	0	0	16
2:45 AM	0	0	8	0	0	8	0	0	0	1	0	1	0	0	7	1	0	8	0	0	0	0	0	0	17
Hourly Total	0	0	28	0	0	28	0	2	0	1	0	3	1	0	31	3	0	35	0	0	0	0	0	0	66
3:00 AM	0	0	5	0	0	5	0	1	0	0	0	1	0	0	4	0	0	4	0	0	0	0	0	0	10
3:15 AM	0	0	10	0	0	10	0	0	0	0	0	0	0	0	8	1	0	9	0	0	0	0	0	0	19
3:30 AM	0	0	12	0	0	12	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	15
3:45 AM	0	0	9	0	0	9	0	1	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	0	15
Hourly Total	0	0	36	0	0	36	0	3	0	0	0	3	0	0	19	1	0	20	0	0	0	0	0	0	59
4:00 AM	0	0	15	0	0	15	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	18
4:15 AM	0	0	25	0	0	25	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	32
4:30 AM	0	1	44	0	0	45	0	3	0	1	0	4	0	0	8	0	0	8	0	0	0	1	0	1	58
4:45 AM	0	0	40	0	0	40	0	0	0	1	0	1	0	0	5	1	0	6	0	0	0	0	0	0	47
Hourly Total	0	1	124	0	0	125	0	3	0	2	0	5	0	0	22	1	0	23	0	0	0	2	0	2	155
5:00 AM	0	0	46	1	0	47	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	1	0	1	56
5:15 AM	0	0	79	0	0	79	0	4	0	2	0	6	0	0	10	0	0	10	0	0	0	2	0	2	97
5:30 AM	0	1	98	0	0	99	0	2	0	1	0	3	0	0	17	0	0	17	0	0	0	2	0	2	121
5:45 AM	0	2	93	1	0	96	0	5	0	1	0	6	0	1	10	0	0	11	0	1	0	1	0	2	115
Hourly Total	0	3	316	2	0	321	0	11	0	4	0	15	0	1	45	0	0	46	0	1	0	6	0	7	389
6:00 AM	0	3	98	0	0	101	0	5	0	1	0	6	0	0	17	0	0	17	0	0	0	0	0	0	124
6:15 AM	0	1	130	1	0	132	0	8	0	3	0	11	0	1	28	3	0	32	0	0	0	0	0	0	175
6:30 AM	0	1	152	2	0	155	0	10	0	0	0	10	1	1	37	0	0	39	0	0	1	3	0	4	208
6:45 AM	0	1	173	1	0	175	0	8	0	2	1	10	0	3	57	1	0	61	0	1	0	4	0	5	251
Hourly Total	0	6	553	4	0	563	0	31	0	6	1	37	1	5	139	4	0	149	0	1	1	7	0	9	758
7:00 AM	0	4	176	0	0	180	0	4	0	5	0	9	0	2	107	0	0	109	0	1	0	1	0	2	300
7:15 AM	0	4	208	5	0	217	0	8	1	5	0	14	1	2	110	3	0	116	0	2	0	4	0	6	353
7:30 AM	0	5	212	3	0	220	0	8	0	3	0	11	0	2	114	2	0	118	0	1	0	1	0	2	351
7:45 AM	0	7	212	0	0	219	0	8	0	5	0	13	0	1	69	0	0	70	0	2	0	2	0	4	306
Hourly Total	0	20	808	8	0	836	0	28	1	18	0	47	1	7	400	5	0	413	0	6	0	8	0	14	1310

**TMC 2115  
Blaine MN  
Thursday, October 7, 2021**

Time	Southbound CSAH 51						Westbound 111th Ave						Northbound CSAH 51						Eastbound 111th Ave						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
8:00 AM	0	4	162	4	0	170	0	8	0	2	0	10	2	5	74	2	0	83	0	0	0	4	0	4	267
8:15 AM	0	8	131	4	0	143	0	6	0	0	0	6	0	3	72	5	0	80	0	1	1	2	0	4	233
8:30 AM	0	0	111	5	0	116	0	12	0	4	0	16	2	5	59	4	0	70	0	1	0	4	0	5	207
8:45 AM	1	2	101	1	0	105	0	7	0	2	0	9	1	1	59	2	0	63	0	2	0	3	0	5	182
Hourly Total	1	14	505	14	0	534	0	33	0	8	0	41	5	14	264	13	0	296	0	4	1	13	0	18	889
9:00 AM	0	0	106	4	0	110	0	5	0	3	1	8	0	2	57	1	0	60	0	0	1	1	0	2	180
9:15 AM	0	1	109	6	0	116	0	2	1	1	0	4	1	4	76	1	0	82	0	6	0	9	0	15	217
9:30 AM	0	0	108	0	0	108	0	2	0	1	0	3	2	3	61	2	0	68	0	0	0	3	0	3	182
9:45 AM	0	0	88	0	0	88	0	4	0	2	0	6	1	2	74	3	0	80	0	0	1	2	0	3	177
Hourly Total	0	1	411	10	0	422	0	13	1	7	1	21	4	11	268	7	0	290	0	6	2	15	0	23	756
10:00 AM	0	0	76	1	0	77	0	3	0	3	0	6	1	0	68	3	0	72	0	1	0	0	0	1	156
10:15 AM	0	2	98	2	0	102	0	6	0	3	1	9	0	4	70	0	0	74	0	0	0	2	0	2	187
10:30 AM	0	1	82	2	0	85	0	8	0	0	1	8	0	1	69	1	0	71	0	1	0	0	0	1	165
10:45 AM	0	1	79	0	0	80	0	5	0	0	0	5	0	0	81	6	0	87	0	1	0	0	0	1	173
Hourly Total	0	4	335	5	0	344	0	22	0	6	2	28	1	5	288	10	0	304	0	3	0	2	0	5	681
11:00 AM	1	3	78	0	0	82	0	3	0	4	0	7	1	1	78	4	0	84	0	0	0	0	0	0	173
11:15 AM	1	1	68	3	0	73	0	6	0	1	0	7	2	1	84	1	0	88	0	0	0	0	0	0	168
11:30 AM	0	1	80	0	0	81	0	6	0	2	0	8	2	0	70	3	0	75	0	0	1	3	0	4	168
11:45 AM	0	0	74	1	0	75	0	2	1	1	0	4	1	4	79	9	0	93	0	1	0	2	0	3	175
Hourly Total	2	5	300	4	0	311	0	17	1	8	0	26	6	6	311	17	0	340	0	1	1	5	0	7	684
12:00 PM	0	1	66	1	0	68	0	5	0	4	0	9	1	1	84	2	0	88	0	0	0	2	0	2	167
12:15 PM	0	3	80	0	0	83	0	4	0	2	0	6	3	0	79	4	0	86	0	1	0	0	0	1	176
12:30 PM	1	2	91	0	0	94	0	4	0	1	0	5	0	0	81	4	0	85	0	0	0	0	0	0	184
12:45 PM	0	3	70	1	0	74	0	5	0	2	3	7	1	0	101	3	0	105	0	0	1	0	0	1	187
Hourly Total	1	9	307	2	0	319	0	18	0	9	3	27	5	1	345	13	0	364	0	1	1	2	0	4	714
1:00 PM	0	3	100	0	0	103	0	6	0	7	2	13	3	1	83	5	1	92	0	1	0	2	0	3	211
1:15 PM	0	3	107	0	0	110	0	5	0	4	1	9	0	0	123	4	1	127	0	0	0	2	0	2	248
1:30 PM	0	4	133	3	0	140	0	5	0	2	1	7	1	0	116	2	0	119	0	1	0	2	0	3	269
1:45 PM	0	8	152	1	0	161	0	4	0	7	1	11	0	1	131	3	0	135	0	1	0	1	0	2	309
Hourly Total	0	18	492	4	0	514	0	20	0	20	5	40	4	2	453	14	2	473	0	3	0	7	0	10	1037
2:00 PM	0	3	101	0	0	104	0	4	0	5	4	9	2	0	140	2	0	144	0	1	0	1	3	2	259
2:15 PM	0	2	113	0	0	115	0	6	0	8	1	14	1	2	131	5	0	139	0	0	0	1	0	1	269
2:30 PM	0	4	138	2	0	144	0	3	0	2	2	5	1	2	148	7	0	158	0	2	0	4	0	6	313
2:45 PM	0	1	95	0	0	96	0	2	0	3	0	5	1	3	151	4	0	159	0	2	0	0	0	2	262
Hourly Total	0	10	447	2	0	459	0	15	0	18	7	33	5	7	570	18	0	600	0	5	0	6	3	11	1103
3:00 PM	0	2	115	0	0	117	0	3	0	1	0	4	2	2	181	2	0	187	0	1	0	0	0	1	309
3:15 PM	1	8	134	0	0	143	0	4	0	4	1	8	2	2	222	3	0	229	0	0	0	1	0	1	381
3:30 PM	2	5	141	3	1	151	0	5	0	5	2	10	1	5	252	6	0	264	0	3	1	2	0	6	431
3:45 PM	0	1	122	6	0	129	0	6	1	4	0	11	0	6	255	9	0	270	0	1	0	3	0	4	414
Hourly Total	3	16	512	9	1	540	0	18	1	14	3	33	5	15	910	20	0	950	0	5	1	6	0	12	1535

**TMC 2115  
Blaine MN  
Thursday, October 7, 2021**

Time	Southbound CSAH 51						Westbound 111th Ave						Northbound CSAH 51						Eastbound 111th Ave						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:00 PM	2	4	126	3	0	135	0	3	1	3	0	7	1	2	276	4	0	283	0	5	0	9	0	14	439
4:15 PM	0	5	115	3	0	123	0	4	0	3	0	7	0	2	275	4	0	281	0	2	0	3	0	5	416
4:30 PM	0	2	121	2	0	125	0	5	0	4	2	9	3	0	310	10	4	323	0	1	0	3	0	4	461
4:45 PM	0	4	141	2	0	147	0	1	0	4	2	5	3	4	286	5	0	298	0	1	0	4	0	5	455
Hourly Total	2	15	503	10	0	530	0	13	1	14	4	28	7	8	1147	23	4	1185	0	9	0	19	0	28	1771
5:00 PM	0	3	127	1	0	131	0	3	0	8	0	11	2	6	273	7	0	288	0	3	0	2	1	5	435
5:15 PM	0	2	129	1	0	132	0	2	0	8	0	10	3	3	266	8	0	280	0	3	0	2	0	5	427
5:30 PM	0	3	126	2	0	131	0	4	0	2	4	6	0	4	222	7	0	233	0	1	0	4	0	5	375
5:45 PM	0	2	124	0	0	126	0	4	0	6	1	10	1	0	184	3	0	188	0	3	0	0	0	3	327
Hourly Total	0	10	506	4	0	520	0	13	0	24	5	37	6	13	945	25	0	989	0	10	0	8	1	18	1564
6:00 PM	0	3	149	4	1	156	0	5	0	1	0	6	1	1	164	3	1	169	0	2	0	4	1	6	337
6:15 PM	0	3	110	0	0	113	0	6	0	0	2	6	2	0	137	2	1	141	0	0	0	0	0	0	260
6:30 PM	0	4	100	0	0	104	0	3	0	4	0	7	0	2	135	6	0	143	0	1	0	1	0	2	256
6:45 PM	1	2	122	0	0	125	0	6	1	7	0	14	1	1	154	4	0	160	0	3	0	2	0	5	304
Hourly Total	1	12	481	4	1	498	0	20	1	12	2	33	4	4	590	15	2	613	0	6	0	7	1	13	1157
7:00 PM	1	4	90	1	0	96	0	4	0	1	0	5	1	0	133	2	0	136	0	1	0	3	0	4	241
7:15 PM	0	3	72	0	0	75	0	0	0	4	0	4	0	3	122	4	0	129	0	0	0	3	0	3	211
7:30 PM	0	1	82	0	0	83	0	0	0	1	0	1	0	0	108	5	0	113	0	4	0	0	0	4	201
7:45 PM	0	0	70	0	0	70	0	4	0	0	0	4	0	1	110	4	0	115	0	2	0	6	0	8	197
Hourly Total	1	8	314	1	0	324	0	8	0	6	0	14	1	4	473	15	0	493	0	7	0	12	0	19	850
8:00 PM	0	2	86	1	0	89	0	0	0	2	0	2	0	1	104	2	0	107	0	1	0	1	0	2	200
8:15 PM	0	2	61	0	0	63	0	0	0	2	0	2	0	1	91	2	0	94	0	0	0	0	0	0	159
8:30 PM	0	0	36	1	0	37	0	4	0	3	0	7	1	0	72	1	0	74	0	0	0	1	0	1	119
8:45 PM	0	2	70	1	0	73	0	2	0	2	0	4	1	0	84	4	0	89	0	0	0	0	0	0	166
Hourly Total	0	6	253	3	0	262	0	6	0	9	0	15	2	2	351	9	0	364	0	1	0	2	0	3	644
9:00 PM	0	0	61	0	0	61	0	0	0	0	1	0	0	1	83	3	0	87	0	0	0	1	0	1	149
9:15 PM	0	1	46	0	0	47	0	1	0	0	0	1	0	3	59	3	0	65	0	0	0	0	0	0	113
9:30 PM	1	0	35	0	0	36	0	2	0	1	2	3	1	0	43	3	0	47	0	0	0	0	0	0	86
9:45 PM	0	3	30	0	0	33	0	0	0	1	0	1	1	0	51	2	0	54	0	0	0	1	0	1	89
Hourly Total	1	4	172	0	0	177	0	3	0	2	3	5	2	4	236	11	0	253	0	0	0	2	0	2	437
10:00 PM	0	3	38	0	0	41	0	1	0	2	0	3	0	1	67	0	0	68	0	0	0	0	0	0	112
10:15 PM	0	1	31	1	0	33	0	1	0	2	0	3	0	1	74	2	0	77	0	0	0	1	0	1	114
10:30 PM	0	1	21	0	0	22	0	3	0	1	0	4	0	1	36	0	0	37	0	0	0	0	0	0	63
10:45 PM	0	2	23	0	0	25	0	1	1	1	0	3	0	0	31	2	0	33	0	0	0	2	0	2	63
Hourly Total	0	7	113	1	0	121	0	6	1	6	0	13	0	3	208	4	0	215	0	0	0	3	0	3	352
11:00 PM	0	2	13	0	0	15	0	0	0	1	0	1	0	1	39	0	0	40	0	0	0	1	0	1	57
11:15 PM	0	2	12	0	0	14	0	1	0	0	0	1	0	0	36	0	0	36	0	0	0	0	0	0	51
11:30 PM	0	0	17	0	0	17	0	0	0	1	3	1	0	0	32	0	0	32	0	0	0	0	0	0	50
11:45 PM	0	0	9	1	0	10	0	1	0	0	0	1	0	0	21	1	0	22	0	0	0	0	0	0	33
Hourly Total	0	4	51	1	0	56	0	2	0	2	3	4	0	1	128	1	0	130	0	0	0	1	0	1	191
<b>DAILY TOTAL</b>	<b>14</b>	<b>175</b>	<b>7609</b>	<b>88</b>	<b>2</b>	<b>7886</b>	<b>0</b>	<b>306</b>	<b>7</b>	<b>198</b>	<b>40</b>	<b>511</b>	<b>63</b>	<b>113</b>	<b>8230</b>	<b>234</b>	<b>8</b>	<b>8640</b>	<b>0</b>	<b>69</b>	<b>7</b>	<b>135</b>	<b>5</b>	<b>211</b>	<b>17248</b>
<b>Cars</b>	13	171	7463	74	2	7721	0	304	5	195	25	504	63	103	8100	228	6	8494	0	57	7	121	3	185	16904
<b>Heavy Vehicles</b>	1	4	146	14	0	165	0	2	2	3	15	7	0	10	130	6	2	146	0	12	0	14	2	26	344
<b>Heavy Vehicle %</b>	7.14%	2.29%	1.92%	15.91%	0.00%	2.09%	0.00%	0.65%	28.57%	1.52%	37.50%	1.37%	0.00%	8.85%	1.58%	2.56%	25.00%	1.69%	0.00%	17.39%	0.00%	10.37%	40.00%	12.32%	1.99%

**TMC 2115  
Blaine MN  
Thursday, October 7, 2021  
AM Peak Hour**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL												
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total													
7:00 AM	0	4	176	0	0	180	0	4	0	5	0	9	0	2	107	0	0	109	0	1	0	1	0	2	0	2	110	3	0	116	0	2	0	4	0	6	300
7:15 AM	0	4	208	5	0	217	0	8	1	5	0	14	1	2	110	3	0	116	0	2	0	4	0	6	0	1	0	1	0	2	0	2	0	4	0	6	353
7:30 AM	0	5	212	3	0	220	0	8	0	3	0	11	0	2	114	2	0	118	0	1	0	1	0	2	0	2	0	2	0	4	0	1	0	2	0	2	351
7:45 AM	0	7	212	0	0	219	0	8	0	5	0	13	0	1	69	0	0	70	0	2	0	2	0	4	0	2	0	2	0	4	0	2	0	4	0	4	306
Peak Hour Total PHF	0	20	808	8	0	836	0	28	1	18	0	47	1	7	400	5	0	413	0	6	0	8	0	14	0	7.50	0.000	0.500	0.000	0.583	0.000	0.750	0.000	0.500	0.000	0.583	1310

**PM Peak Hour**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL												
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total													
4:30 PM	0	2	121	2	0	125	0	5	0	4	2	9	3	0	310	10	4	323	0	1	0	3	0	4	0	1	0	3	0	5	0	1	0	3	0	4	461
4:45 PM	0	4	141	2	0	147	0	1	0	4	2	5	3	4	286	5	0	298	0	1	0	4	0	5	0	1	0	4	0	5	0	1	0	4	0	5	455
5:00 PM	0	3	127	1	0	131	0	3	0	8	0	11	2	6	273	7	0	288	0	3	0	2	1	5	0	3	0	2	1	5	0	3	0	2	0	5	435
5:15 PM	0	2	129	1	0	132	0	2	0	8	0	10	3	3	266	8	0	280	0	3	0	2	0	5	0	3	0	2	0	5	0	3	0	2	0	5	427
Peak Hour Total PHF	0	11	518	6	0	535	0	11	0	24	4	35	11	13	1135	30	4	1189	0	8	0	11	1	19	0	8	0	11	1	19	0.000	0.667	0.000	0.688	0.250	0.950	1778

Total Vehicles On Leg				16397	
Vehicles Entering Intersection			7886	Vehicles Exiting Intersection 8511	
<b>Southbound</b>					
Cars	74	7463	171	13	2
Heavy	14	146	4	1	0
<b>Total</b>	<b>88</b>	<b>7609</b>	<b>175</b>	<b>14</b>	<b>2</b>



Total Vehicles on Leg 419	Vehicles Entering Intersection 211	Eastbound	Cars	Heavy	Total	
			3	2	5	
	0		0	0		
	57		12	69		
Vehicles Exiting Intersection 208			7	0	7	
			121	14	135	

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 511	Total Vehicles on Leg 927
195	3	198			
5	2	7			
304	2	306			
0	0	0	Vehicles Exiting Intersection 416		
25	15	40			

Cars	6	63	103	8100	228
Heavy	2	0	10	130	6
<b>Total</b>	<b>8</b>	<b>63</b>	<b>113</b>	<b>8230</b>	<b>234</b>
<b>Northbound</b>					
Vehicles Entering Intersection			8640	Vehicles Exiting Intersection 8113	
Total Vehicles On Leg			16753		







# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/05/2021

## Signal Warrants - Summary

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### Major Street Approaches

Northbound: CSAH 51 (University Ave.)

Number of Lanes : 2+

Total Approach Volume: 8,640

Southbound: CSAH 51 (University Ave.)

Number of Lanes :2+

Total Approach Volume: 7,886

### Minor Street Approaches

Eastbound: 111th Ave.

Number of Lanes :1

Total Approach Volume: 211

Westbound: 111th Ave.

Number of Lanes :1

Total Approach Volume: 511

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### Warrant Summary (Rural Values Apply)

**Warrant 1 - Eight Hour Vehicular Volumes.....Not Satisfied**

**Warrant 1A - Minimum Vehicular Volume.....Not Satisfied**

Required volumes reached for 0 hours, 8 are needed

**Warrant 1B - Interruption of Continuous Traffic.....Not Satisfied**

Required volumes reached for 0 hours, 8 are needed

**Warrant 1C - Combination of Warrants.....Not Satisfied**

Required 1A volumes reached for 0 hours, 8 are needed

Required 1B volumes reached for 2 hours, 8 are needed

**Warrant 2 - Four Hour Volumes.....Not Satisfied**

Number of hours (0) volumes exceed minimum < minimum required (4).

**Warrant 3 - Peak Hour.....Not Satisfied**

**Warrant 3A - Peak Hour Delay.....Not Satisfied**

Approach volumes on minor street don't exceed minimums for any one hour period. Delay data not evaluated.

**Warrant 3B - Peak Hour Volumes.....Not Satisfied**

Volumes do not exceed minimums for any one hour period.

**Warrant 4 - Pedestrian Volumes.....Not Evaluated**

**Warrant 5 - School Crossing.....Not Evaluated**

**Warrant 6 - Coordinated Signal System.....Not Evaluated**

**Warrant 7 - Crash Experience.....Not Evaluated**

**Warrant 8 - Roadway Network.....Not Evaluated**

**Warrant 9 - Intersection Near a Grade Crossing.....Not Evaluated**

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/05/2021

## Warrant 1A - Minimum Volumes

#### Description

Intended for sites where the volume of intersecting traffic is the principal reason for consideration of a signal installation.

#### Summary

Only 0 one hour periods meet minimums.  
Warrant is NOT met.

#### Site Data Required

Rural Settings Apply = **True**  
Number of Major Lanes = **2 or more**  
Number of Minor Lanes = **1**

#### Volume Requirements

Rural Factor of 70 % applied  
Veh/Hr Major = **420**  
  
Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	<b>CSAH 51 (University Ave.)</b>					<b>111th Ave.</b>		
16:30 - 17:30	1189	+	535	=	1724	19	35	No
16:15 - 17:15	1190	+	526	=	1716	19	32	No
16:00 - 17:00	1185	+	530	=	1715	28	28	No
15:45 - 16:45	1157	+	512	=	1669	27	34	No
16:45 - 17:45	1099	+	541	=	1640	20	32	No
15:30 - 16:30	1098	+	538	=	1636	29	35	No
15:15 - 16:15	1046	+	558	=	1604	25	36	No
17:00 - 18:00	989	+	520	=	1509	18	37	No
15:00 - 16:00	950	+	540	=	1490	12	33	No
17:15 - 18:15	870	+	545	=	1415	19	32	No
14:45 - 15:45	839	+	507	=	1346	10	27	No
17:30 - 18:30	731	+	526	=	1257	14	28	No
07:00 - 08:00	413	+	836	=	1249	14	47	No
14:30 - 15:30	733	+	500	=	1233	10	22	No
07:15 - 08:15	387	+	826	=	1213	16	48	No
06:45 - 07:45	404	+	792	=	1196	15	44	No
17:45 - 18:45	641	+	499	=	1140	11	29	No
14:15 - 15:15	643	+	472	=	1115	10	28	No
18:00 - 19:00	613	+	498	=	1111	13	33	No
07:30 - 08:30	351	+	752	=	1103	14	40	No
13:45 - 14:45	576	+	524	=	1100	11	39	No
14:00 - 15:00	600	+	459	=	1059	11	33	No
13:30 - 14:30	537	+	520	=	1057	8	41	No
06:30 - 07:30	325	+	727	=	1052	17	43	No
13:15 - 14:15	525		515		1040	9	36	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/05/2021

## Warrant 1B - Interruption of Continuous Traffic

#### Description

Intended for sites where the volume of the major street is so heavy that traffic on the minor street suffers excessive delay or hazard.

#### Summary

Only 0 one hour periods meet minimums.  
Warrant is NOT met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **1**

#### Volume Requirements

Rural Factor of 70 % applied  
 Veh/Hr Major = **630**  
 Veh/Hr Minor = **53**

Time	Major Road				Minor Road		Met?	
	Major NB	+	Major SB	=	Total	Minor EB		Minor WB
16:30 - 17:30	1189	+	535	=	1724	19	35	No
16:15 - 17:15	1190	+	526	=	1716	19	32	No
16:00 - 17:00	1185	+	530	=	1715	28	28	No
15:45 - 16:45	1157	+	512	=	1669	27	34	No
16:45 - 17:45	1099	+	541	=	1640	20	32	No
15:30 - 16:30	1098	+	538	=	1636	29	35	No
15:15 - 16:15	1046	+	558	=	1604	25	36	No
17:00 - 18:00	989	+	520	=	1509	18	37	No
15:00 - 16:00	950	+	540	=	1490	12	33	No
17:15 - 18:15	870	+	545	=	1415	19	32	No
14:45 - 15:45	839	+	507	=	1346	10	27	No
17:30 - 18:30	731	+	526	=	1257	14	28	No
07:00 - 08:00	413	+	836	=	1249	14	47	No
14:30 - 15:30	733	+	500	=	1233	10	22	No
07:15 - 08:15	387	+	826	=	1213	16	48	No
06:45 - 07:45	404	+	792	=	1196	15	44	No
17:45 - 18:45	641	+	499	=	1140	11	29	No
14:15 - 15:15	643	+	472	=	1115	10	28	No
18:00 - 19:00	613	+	498	=	1111	13	33	No
07:30 - 08:30	351	+	752	=	1103	14	40	No
13:45 - 14:45	576	+	524	=	1100	11	39	No
14:00 - 15:00	600	+	459	=	1059	11	33	No
13:30 - 14:30	537	+	520	=	1057	8	41	No
06:30 - 07:30	325	+	727	=	1052	17	43	No
13:15 - 14:15	525		515		1040	9	36	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/05/2021

## Warrant 1C Combination of Warrants

#### Description

Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are both met to 80% of their stated values.

#### Summary

Only 0 hours meet 1A minimums.  
Only 2 hours meet 1B minimums.  
Warrant is NOT met.

#### Site Data Required

Rural Settings Apply = **True**  
Number of Major Lanes = **2 or more**  
Number of Minor Lanes = **1**

#### Volume Requirements

Rural Factor of 70% applied  
Warrant 1A 1B  
Veh/Hr Major = **336 504**

Veh/Hr Minor = **84 42**

#### Major Road CSAH 51 (University Ave.)

#### Minor Road 111th Ave.

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:30 - 17:30	1189	+	535	=	1724	19	35	No
16:15 - 17:15	1190	+	526	=	1716	19	32	No
16:00 - 17:00	1185	+	530	=	1715	28	28	No
15:45 - 16:45	1157	+	512	=	1669	27	34	No
16:45 - 17:45	1099	+	541	=	1640	20	32	No
15:30 - 16:30	1098	+	538	=	1636	29	35	No
15:15 - 16:15	1046	+	558	=	1604	25	36	No
17:00 - 18:00	989	+	520	=	1509	18	37	No
15:00 - 16:00	950	+	540	=	1490	12	33	No
17:15 - 18:15	870	+	545	=	1415	19	32	No
14:45 - 15:45	839	+	507	=	1346	10	27	No
17:30 - 18:30	731		526		1257	14	28	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
06:30 - 07:30	325	+	727	=	1052	17	43	Yes
07:45 - 08:45	303	+	648	=	951	17	45	Yes
16:30 - 17:30	1189	+	535	=	1724	19	35	No
16:15 - 17:15	1190	+	526	=	1716	19	32	No
16:00 - 17:00	1185	+	530	=	1715	28	28	No
15:45 - 16:45	1157	+	512	=	1669	27	34	No
16:45 - 17:45	1099	+	541	=	1640	20	32	No
15:30 - 16:30	1098	+	538	=	1636	29	35	No
15:15 - 16:15	1046	+	558	=	1604	25	36	No
17:00 - 18:00	989	+	520	=	1509	18	37	No
15:00 - 16:00	950	+	540	=	1490	12	33	No
17:15 - 18:15	870		545		1415	19	32	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/05/2021

## Warrant 2 - Four Hour Volumes

#### Description

Intended for sites where the volume of intersecting traffic during any four hours of the day is the principal reason for consideration of a signal installation.

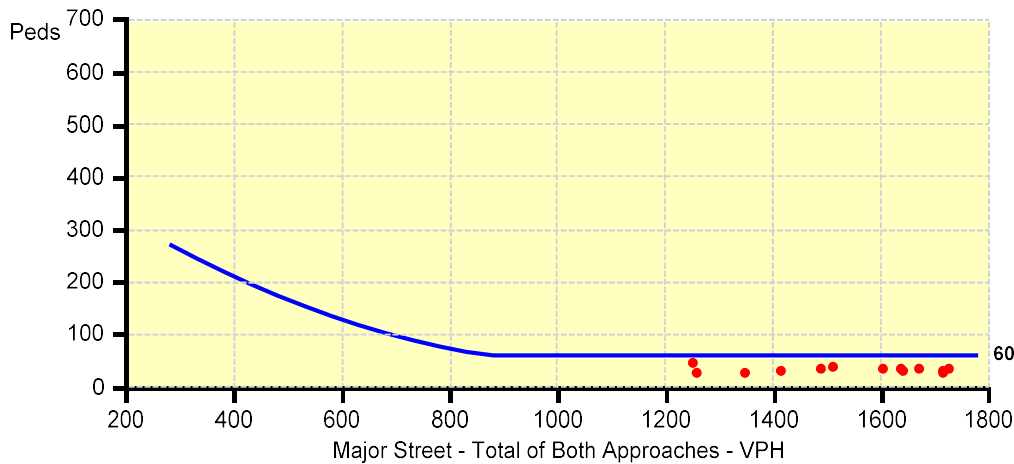
#### Summary

Only 0 one hour periods meet minimums.  
Warrant is NOT met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **1**

Time	Major Road CSAH 51 (University Ave.)				Total	Minor Road 111th Ave.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	1189	+	535	=	1724	19	35	No
16:15 - 17:15	1190	+	526	=	1716	19	32	No
16:00 - 17:00	1185	+	530	=	1715	28	28	No
15:45 - 16:45	1157	+	512	=	1669	27	34	No
16:45 - 17:45	1099	+	541	=	1640	20	32	No
15:30 - 16:30	1098	+	538	=	1636	29	35	No
15:15 - 16:15	1046	+	558	=	1604	25	36	No
17:00 - 18:00	989	+	520	=	1509	18	37	No
15:00 - 16:00	950	+	540	=	1490	12	33	No
17:15 - 18:15	870	+	545	=	1415	19	32	No
14:45 - 15:45	839	+	507	=	1346	10	27	No
						28	28	No



# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/05/2021

## Warrant 3B - Peak Hour Volumes

#### Description

Intended for sites where the volume of intersecting traffic during one hour of the day is the principal reason for consideration of a signal installation.

#### Summary

Only 0 one hour periods meet minimums.  
Warrant is NOT met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **1**

Time	Major Road CSAH 51 (University Ave.)				Total	Minor Road 111th Ave.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	1189	+	535	=	1724	19	35	No
16:15 - 17:15	1190	+	526	=	1716	19	32	No
16:00 - 17:00	1185	+	530	=	1715	28	28	No
15:45 - 16:45	1157	+	512	=	1669	27	34	No
16:45 - 17:45	1099	+	541	=	1640	20	32	No
15:30 - 16:30	1098	+	538	=	1636	29	35	No
15:15 - 16:15	1046	+	558	=	1604	25	36	No
17:00 - 18:00	989	+	520	=	1509	18	37	No
15:00 - 16:00	950	+	540	=	1490	12	33	No
17:15 - 18:15	870	+	545	=	1415	19	32	No
14:45 - 15:45	839	+	507	=	1346	10	27	No
						28	28	No

