

Date : 04/11/23

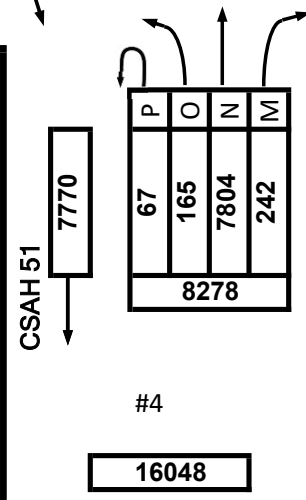
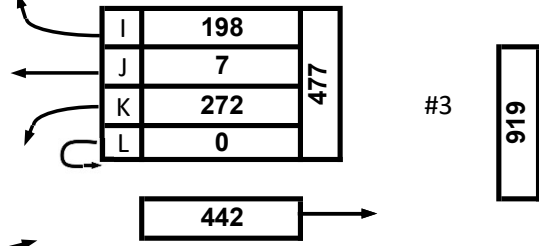
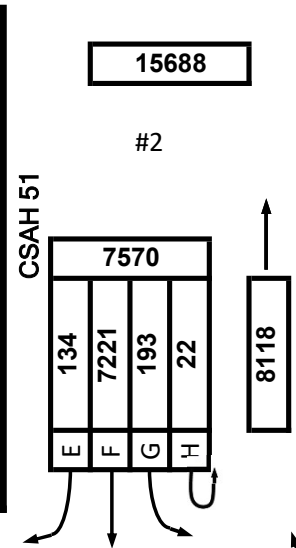
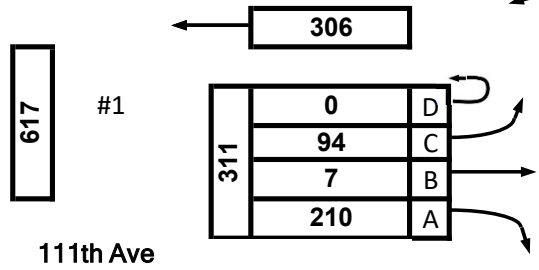
Count Number : TMC 2314

Location : CSAH 51
@ 111th Ave

Collection Period : 24 HR



111th Ave



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

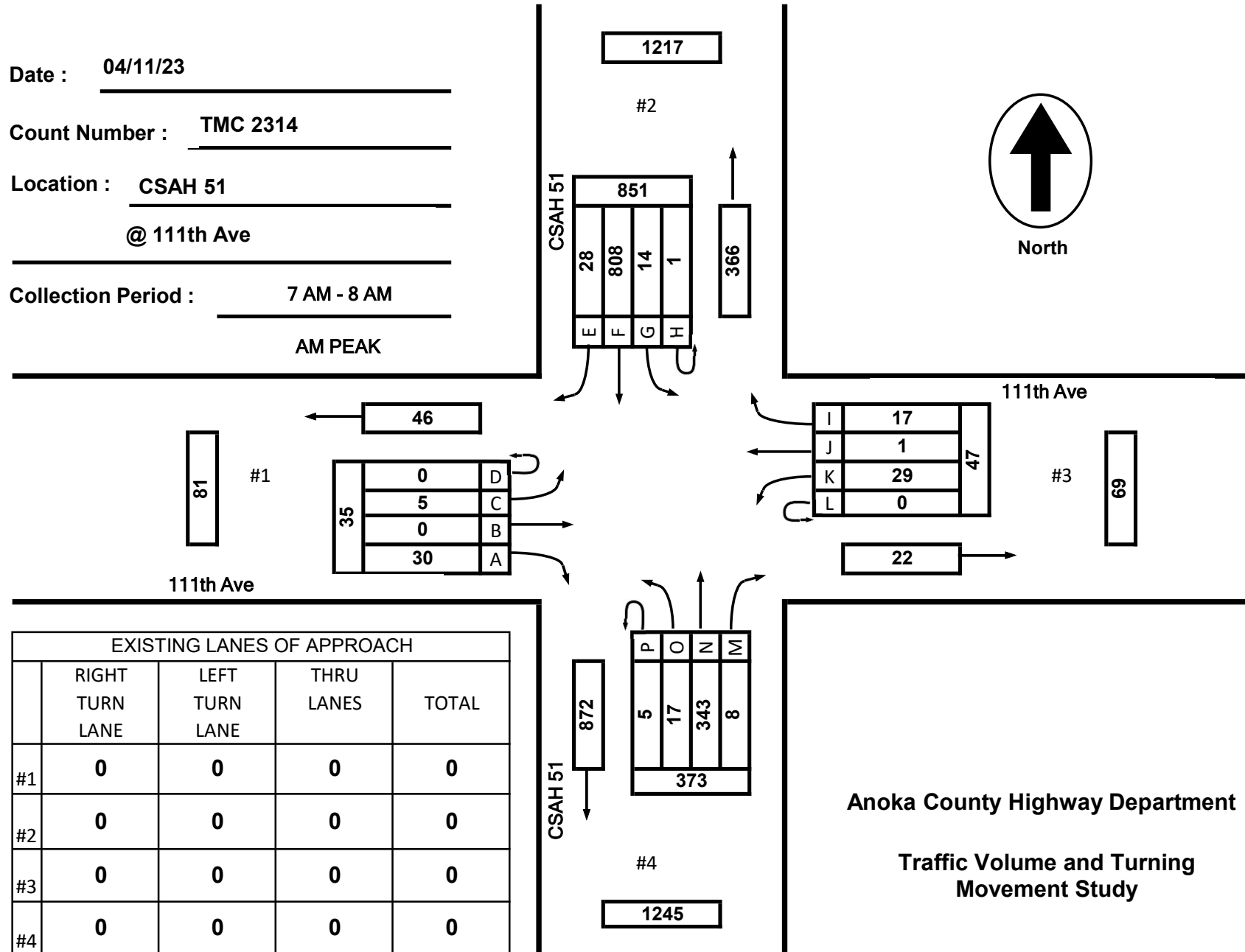
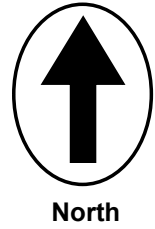
Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Date : 04/11/23

Count Number : TMC 2314

Location : CSAH 51
@ 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	0	0
#2	0	0	0	0
#3	0	0	0	0
#4	0	0	0	0

Anoka County Highway Department

Traffic Volume and Turning Movement Study

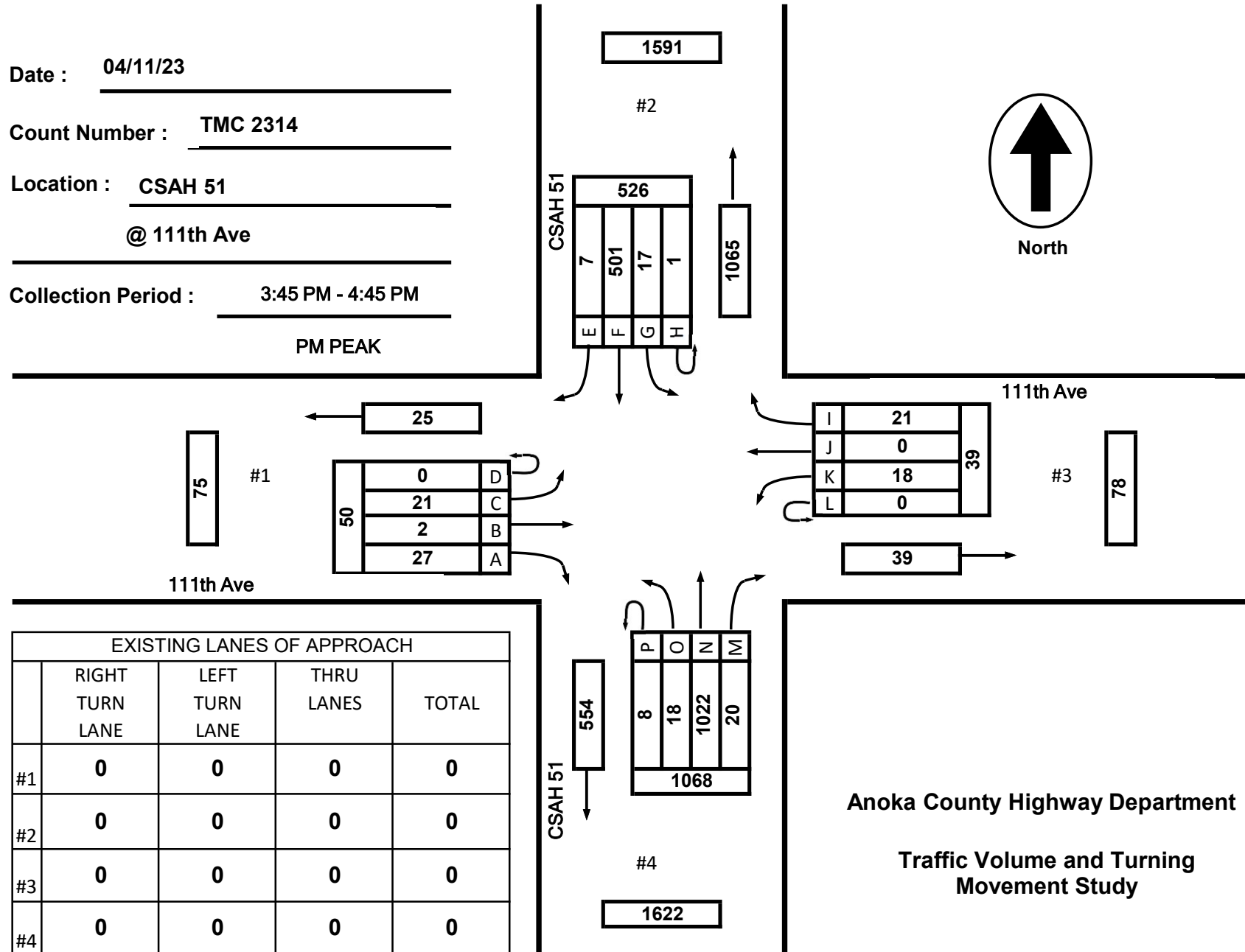
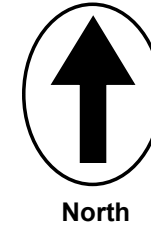
Date : 04/11/23

Count Number : TMC 2314

Location : CSAH 51
@ 111th Ave

Collection Period : 3:45 PM - 4:45 PM

PM PEAK



Anoka County Highway Department

Traffic Volume and Turning Movement Study

TMC 2314 - CSAH 51 @ 111th Ave

0 0

Tuesday, April 11, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						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	0	10	0	0	10	0	0	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	31
12:15 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	16	0	0	16	0	0	0	2	0	2	0	0	0	0	0	2	24
12:30 AM	0	0	3	0	0	3	0	1	0	0	0	1	1	0	11	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	16
12:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	14
Hourly Total	0	0	23	0	0	23	0	1	0	0	0	1	1	0	57	1	0	59	0	0	0	2	0	2	0	0	0	0	0	2	85
1:00 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	12	1	0	13	0	0	0	0	0	0	0	0	0	0	0	0	17
1:15 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	17	1	0	18	0	0	0	0	0	0	0	0	0	0	0	0	21
1:30 AM	0	0	9	0	0	9	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	16
1:45 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	12
Hourly Total	0	0	21	0	0	21	0	0	0	0	0	0	0	0	43	2	0	45	0	0	0	0	0	0	0	0	0	0	0	0	66
2:00 AM	0	0	4	0	0	4	0	0	0	0	0	0	1	0	7	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	12
2:15 AM	0	0	2	0	0	2	0	1	0	0	0	1	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	10
2:30 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	20
2:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	9
Hourly Total	0	0	15	0	0	15	0	1	0	0	0	1	1	0	33	1	0	35	0	0	0	0	0	0	0	0	0	0	0	0	51
3:00 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	12
3:15 AM	0	0	7	0	0	7	0	0	0	0	1	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	15
3:30 AM	0	0	13	0	0	13	0	2	0	0	0	2	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	21
3:45 AM	0	0	10	0	0	10	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	12
Hourly Total	0	0	36	0	0	36	0	2	0	0	1	2	0	0	22	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	60
4:00 AM	0	0	21	0	0	21	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	27
4:15 AM	0	0	35	0	0	35	0	2	0	1	1	3	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	43
4:30 AM	0	0	37	0	0	37	0	2	0	2	0	4	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	48
4:45 AM	0	0	39	0	0	39	0	3	0	1	0	4	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	47
Hourly Total	0	0	132	0	0	132	0	7	0	4	1	11	0	0	22	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	165
5:00 AM	0	0	52	0	0	52	0	0	0	1	0	1	0	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	64
5:15 AM	0	0	76	0	0	76	0	1	0	0	0	1	0	0	14	1	0	15	0	1	0	0	0	1	0	0	0	0	0	1	93
5:30 AM	0	1	90	0	0	91	0	4	0	0	0	4	0	1	17	0	0	18	0	0	0	1	0	1	0	0	0	0	0	1	114
5:45 AM	0	1	86	0	0	87	0	4	0	1	0	5	0	0	19	0	0	19	0	0	0	1	0	1	0	0	0	0	0	1	112
Hourly Total	0	2	304	0	0	306	0	9	0	2	0	11	0	1	61	1	0	63	0	1	0	2	0	3	0	0	0	0	0	3	383
6:00 AM	0	2	103	3	0	108	0	8	0	2	0	10	0	3	16	2	0	21	0	1	0	2	0	3	0	0	0	0	0	3	142
6:15 AM	0	0	142	1	0	143	0	10	0	5	0	15	1	1	24	2	0	28	0	0	0	1	0	1	0	0	0	0	0	1	187
6:30 AM	0	1	166	4	0	171	0	8	0	2	1	10	2	1	45	1	0	49	0	1	0	4	0	5	0	0	0	0	0	5	235
6:45 AM	0	1	157	2	1	160	0	7	0	3	2	10	1	2	67	1	0	71	0	0	0	3	0	3	0	0	0	0	0	3	244
Hourly Total	0	4	568	10	1	582	0	33	0	12	3	45	4	7	152	6	0	169	0	2	0	10	0	12	0	0	0	0	0	12	808
7:00 AM	0	0	152	4	0	156	0	6	1	4	0	11	0	7	112	3	0	122	0	0	0	7	0	7	0	0	0	0	0	7	296
7:15 AM	1	4	234	11	0	250	0	9	0	5	0	14	0	2	92	1	0	95	0	2	0	10	0	12	0	0	0	0	0	12	371
7:30 AM	0	7	232	5	0	244	0	9	0	4	0	13	2	4	71	2	0	79	0	3	0	3	0	6	0	0	0	0	0	6	342
7:45 AM	0	3	190	8	0	201	0	5	0	4	0	9	3	4	68	2	0	77	0	0	0	10	0	10	0	0	0	0	0	10	297
Hourly Total	1	14	808	28	0	851	0	29	1	17	0	47	5	17	343	8	0	373	0	5	0	30	0	35	0	0	0	0	0	35	1306

TMC 2314 - CSAH 51 @ 111th Ave

0 0

Tuesday, April 11, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						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	6	149	8	0	163	0	6	0	7	0	13	3	3	66	1	0	73	0	2	0	8	1	10	259
8:15 AM	0	4	138	6	0	148	0	6	0	2	0	8	2	5	65	4	0	76	0	0	1	8	1	9	241
8:30 AM	1	2	134	2	0	139	0	4	1	4	1	9	0	2	54	0	0	56	0	1	0	4	0	5	209
8:45 AM	0	1	110	3	0	114	0	4	0	3	1	7	0	4	64	0	0	68	0	0	0	5	0	5	194
Hourly Total	1	13	531	19	0	564	0	20	1	16	2	37	5	14	249	5	0	273	0	3	1	25	2	29	903
9:00 AM	0	0	112	8	0	120	0	8	0	2	0	10	0	5	61	4	0	70	0	3	0	4	0	7	207
9:15 AM	0	1	114	7	0	122	0	4	0	1	0	5	2	4	91	2	0	99	0	8	0	5	0	13	239
9:30 AM	1	2	108	1	1	112	0	6	0	3	0	9	0	1	69	2	0	72	0	2	0	3	0	5	198
9:45 AM	1	0	72	1	0	74	0	3	0	1	0	4	1	3	56	0	0	60	0	0	0	2	0	2	140
Hourly Total	2	3	406	17	1	428	0	21	0	7	0	28	3	13	277	8	0	301	0	13	0	14	0	27	784
10:00 AM	1	1	74	0	0	76	0	4	0	1	2	5	1	1	56	4	0	62	0	1	0	1	0	2	145
10:15 AM	0	1	88	0	0	89	0	3	0	1	0	4	0	0	50	5	0	55	0	1	0	1	0	2	150
10:30 AM	1	0	82	1	0	84	0	3	0	3	3	6	2	0	54	1	0	57	0	0	0	1	0	1	148
10:45 AM	0	0	68	0	0	68	0	5	0	2	0	7	2	0	63	2	0	67	0	0	0	0	0	0	142
Hourly Total	2	2	312	1	0	317	0	15	0	7	5	22	5	1	223	12	0	241	0	2	0	3	0	5	585
11:00 AM	0	2	63	0	0	65	0	4	0	1	0	5	0	0	70	2	0	72	0	0	0	1	0	1	143
11:15 AM	1	2	79	1	0	83	0	5	0	3	1	8	1	0	67	3	1	71	0	0	0	1	0	1	163
11:30 AM	0	2	69	1	0	72	0	3	0	1	1	4	0	1	82	6	0	89	0	0	0	2	0	2	167
11:45 AM	0	4	75	1	0	80	0	0	0	5	0	5	0	0	66	2	0	68	0	0	0	3	0	3	156
Hourly Total	1	10	286	3	0	300	0	12	0	10	2	22	1	1	285	13	1	300	0	0	0	7	0	7	629
12:00 PM	0	1	73	0	0	74	0	3	0	2	0	5	0	1	75	0	0	76	0	0	0	2	1	2	157
12:15 PM	1	2	87	0	0	90	0	2	0	3	1	5	0	3	112	5	0	120	0	2	0	1	0	3	218
12:30 PM	0	3	93	0	0	96	0	3	0	3	0	6	0	0	78	1	0	79	0	0	0	0	0	0	181
12:45 PM	0	3	78	0	0	81	0	6	0	4	1	10	0	1	114	5	0	120	0	0	1	2	1	3	214
Hourly Total	1	9	331	0	0	341	0	14	0	12	2	26	0	5	379	11	0	395	0	2	1	5	2	8	770
1:00 PM	0	2	85	1	0	88	0	1	0	0	0	1	1	1	87	4	0	93	0	0	0	2	0	2	184
1:15 PM	2	5	103	2	0	112	0	1	0	2	1	3	2	3	110	5	0	120	0	1	0	2	0	3	238
1:30 PM	1	2	85	2	0	90	0	2	0	3	1	5	0	0	107	1	0	108	0	0	0	2	1	2	205
1:45 PM	0	3	93	1	0	97	0	0	0	4	3	4	0	1	91	3	0	95	0	0	0	0	0	0	196
Hourly Total	3	12	366	6	0	387	0	4	0	9	5	13	3	5	395	13	0	416	0	1	0	6	1	7	823
2:00 PM	0	3	86	1	0	90	0	1	0	3	2	4	0	3	106	2	0	111	0	1	0	4	0	5	210
2:15 PM	0	4	108	0	0	112	0	7	0	5	0	12	2	2	143	4	0	151	0	0	0	1	0	1	276
2:30 PM	0	9	155	2	0	166	0	3	0	2	4	5	2	0	154	2	1	158	0	1	0	2	0	3	332
2:45 PM	2	2	103	1	0	108	0	4	0	5	0	9	0	0	179	9	1	188	0	0	0	4	1	4	309
Hourly Total	2	18	452	4	0	476	0	15	0	15	6	30	4	5	582	17	2	608	0	2	0	11	1	13	1127
3:00 PM	1	7	100	1	0	109	0	3	0	1	0	4	3	0	153	7	0	163	0	1	0	1	0	2	278
3:15 PM	0	10	118	3	0	131	0	6	0	2	2	8	2	1	207	9	0	219	0	0	0	2	0	2	360
3:30 PM	0	2	145	3	0	150	0	8	1	4	5	13	0	5	235	8	0	248	0	0	0	3	0	3	414
3:45 PM	1	3	110	3	0	117	0	6	0	5	2	11	1	6	243	4	0	254	0	2	0	8	2	10	392
Hourly Total	2	22	473	10	0	507	0	23	1	12	9	36	6	12	838	28	0	884	0	3	0	14	2	17	1444

TMC 2314 - CSAH 51 @ 111th Ave

0 0

Tuesday, April 11, 2023

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	
4:00 PM	0	5	144	0	0	149	0	4	0	5	5	9	5	3	227	6	0	241	0	12	0	10	1	22	421
4:15 PM	0	6	122	2	0	130	0	4	0	6	6	10	1	7	272	4	0	284	0	4	2	6	0	12	436
4:30 PM	0	3	125	2	0	130	0	4	0	5	0	9	1	2	280	6	1	289	0	3	0	3	0	6	434
4:45 PM	1	5	97	3	0	106	0	4	1	3	6	8	2	7	251	3	0	263	0	6	0	4	0	10	387
Hourly Total	1	19	488	7	0	515	0	16	1	19	17	36	9	19	1030	19	1	1077	0	25	2	23	1	50	1678
5:00 PM	0	7	119	1	0	127	0	3	1	9	8	13	4	4	242	10	2	260	0	4	1	3	0	8	408
5:15 PM	1	4	119	2	0	126	0	4	0	4	2	8	2	3	239	9	6	253	0	3	0	2	2	5	392
5:30 PM	0	2	124	2	0	128	0	3	0	3	1	6	0	4	238	8	0	250	0	3	0	2	0	5	389
5:45 PM	0	5	94	1	0	100	0	5	0	3	0	8	2	2	191	5	0	200	0	1	0	5	0	6	314
Hourly Total	1	18	456	6	0	481	0	15	1	19	11	35	8	13	910	32	8	963	0	11	1	12	2	24	1503
6:00 PM	0	1	105	1	0	107	0	4	0	1	2	5	0	3	163	9	1	175	0	0	0	2	0	2	289
6:15 PM	0	1	110	1	0	112	0	2	0	2	4	4	1	1	141	3	0	146	0	0	0	2	0	2	264
6:30 PM	0	2	92	1	0	95	0	3	0	2	0	5	2	7	147	3	2	159	0	1	0	1	0	2	261
6:45 PM	3	6	93	1	0	103	0	3	0	6	5	9	1	6	121	5	0	133	0	0	0	1	4	1	246
Hourly Total	3	10	400	4	0	417	0	12	0	11	11	23	4	17	572	20	3	613	0	1	0	6	4	7	1060
7:00 PM	0	0	73	5	2	78	0	1	0	3	7	4	1	9	86	2	0	98	0	0	0	1	0	1	181
7:15 PM	0	2	73	3	0	78	0	0	0	2	1	2	0	1	82	4	2	87	0	5	0	3	1	8	175
7:30 PM	0	3	66	0	4	69	0	1	0	2	0	3	0	5	107	4	0	116	0	0	0	3	7	3	191
7:45 PM	0	6	59	5	0	70	0	3	0	1	3	4	0	5	115	1	0	121	0	1	0	1	0	2	197
Hourly Total	0	11	271	13	6	295	0	5	0	8	11	13	1	20	390	11	2	422	0	6	0	8	8	14	744
8:00 PM	0	3	61	1	0	65	0	1	0	1	2	2	1	4	81	3	0	89	0	8	0	11	0	19	175
8:15 PM	1	1	56	0	0	58	0	1	0	4	0	5	0	0	94	2	1	96	0	1	0	0	0	1	160
8:30 PM	0	2	64	2	0	68	0	2	0	3	2	5	1	3	85	3	0	92	0	2	0	0	0	2	167
8:45 PM	0	2	60	0	0	62	0	5	0	0	0	5	1	0	91	2	0	94	0	4	0	13	0	17	178
Hourly Total	1	8	241	3	0	253	0	9	0	8	4	17	3	7	351	10	1	371	0	15	0	24	0	39	680
9:00 PM	0	5	59	2	0	66	0	2	0	3	2	5	0	1	96	0	0	97	0	1	0	3	0	4	172
9:15 PM	0	5	36	0	0	41	0	0	0	1	0	1	0	1	68	3	0	72	0	0	1	3	0	4	118
9:30 PM	0	2	43	0	0	45	0	3	0	0	3	3	1	0	55	5	0	61	0	0	0	0	0	0	109
9:45 PM	0	1	31	1	0	33	0	1	1	2	1	4	0	0	52	2	0	54	0	0	0	0	0	0	91
Hourly Total	0	13	169	3	0	185	0	6	1	6	6	13	1	2	271	10	0	284	0	1	1	6	0	8	490
10:00 PM	1	0	22	0	0	23	0	1	0	1	0	2	0	1	69	4	0	74	0	1	0	1	0	2	101
10:15 PM	0	1	22	0	0	23	0	1	0	0	0	1	1	1	62	1	0	65	0	0	1	0	0	1	90
10:30 PM	0	1	24	0	0	25	0	0	1	1	1	2	1	2	43	5	0	51	0	0	0	1	0	1	79
10:45 PM	0	2	21	0	0	23	0	1	0	0	0	1	1	1	34	0	0	36	0	0	0	0	0	0	60
Hourly Total	1	4	89	0	0	94	0	3	1	2	1	6	3	5	208	10	0	226	0	1	1	2	0	4	330
11:00 PM	0	0	14	0	0	14	0	0	0	1	0	1	0	1	39	1	0	41	0	0	0	0	0	0	56
11:15 PM	0	0	13	0	0	13	0	0	0	1	0	1	0	0	30	2	0	32	0	0	0	0	0	0	46
11:30 PM	0	1	10	0	0	11	0	0	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	0	37
11:45 PM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	16	1	0	17	0	0	0	0	0	0	23
Hourly Total	0	1	43	0	0	44	0	0	0	2	0	2	0	1	111	4	0	116	0	0	0	0	0	0	162
DAILY TOTAL	22	193	7221	134	8	7570	0	272	7	198	97	477	67	165	7804	242	18	8278	0	94	7	210	23	311	16636
Cars	22	188	7099	122	5	7431	0	269	6	190	48	465	67	155	7675	240	9	8137	0	80	7	201	14	288	16321
Heavy Vehicles	0	5	122	12	3	139	0	3	1	8	49	12	0	10	129	2	9	141	0	14	0	9	9	23	315
Heavy Vehicle %	0.00%	2.59%	1.69%	8.96%	37.50%	1.84%	0.00%	1.10%	14.29%	4.04%	50.52%	2.52%	0.00%	6.06%	1.65%	0.83%	50.00%	1.70%	0.00%	14.89%	0.00%	4.29%	39.13%	7.40%	1.89%

TMC 2314 - CSAH 51 @ 111th Ave

0 0

Tuesday, April 11, 2023

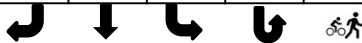
AM Peak Hour

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	0	152	4	0	156	0	6	1	4	0	11	0	7	112	3	0	122	0	0	0	7	0	7	0	0	0	7	0	7	296
7:15 AM	1	4	234	11	0	250	0	9	0	5	0	14	0	2	92	1	0	95	0	2	0	10	0	12	0	2	0	10	0	12	371
7:30 AM	0	7	232	5	0	244	0	9	0	4	0	13	2	4	71	2	0	79	0	3	0	3	0	6	0	3	0	3	0	6	342
7:45 AM	0	3	190	8	0	201	0	5	0	4	0	9	3	4	68	2	0	77	0	0	0	10	0	10	0	0	0	10	0	10	297
Peak Hour Total	1	14	808	28	0	851	0	29	1	17	0	47	5	17	343	8	0	373	0	5	0	30	0	35	0	5	0	30	0	35	1306
PHF	0.250	0.500	0.863	0.636	0.000	0.851	0.000	0.806	0.250	0.850	0.000	0.839	0.417	0.607	0.766	0.667	0.000	0.764	0.000	0.417	0.000	0.750	0.000	0.729	0.000	0.417	0.000	0.750	0.000	0.729	0.880

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							
3:45 PM	1	3	110	3	0	117	0	6	0	5	2	11	1	6	243	4	0	254	0	2	0	8	2	10	0	2	0	8	2	10	392
4:00 PM	0	5	144	0	0	149	0	4	0	5	5	9	5	3	227	6	0	241	0	12	0	10	1	22	0	12	0	10	1	22	421
4:15 PM	0	6	122	2	0	130	0	4	0	6	6	10	1	7	272	4	0	284	0	4	2	6	0	12	0	4	2	6	0	12	436
4:30 PM	0	3	125	2	0	130	0	4	0	5	0	9	1	2	280	6	1	289	0	3	0	3	0	6	0	3	0	3	0	6	434
Peak Hour Total	1	17	501	7	0	526	0	18	0	21	13	39	8	18	1022	20	1	1068	0	21	2	27	3	50	0	21	2	27	3	50	1683
PHF	0.250	0.708	0.870	0.583	0.000	0.883	0.000	0.750	0.000	0.875	0.542	0.886	0.400	0.643	0.913	0.833	0.250	0.924	0.000	0.438	0.250	0.675	0.375	0.568	0.000	0.438	0.250	0.675	0.375	0.568	0.965

Total Vehicles On Leg				15688			
Vehicles Entering Intersection				7570			
Vehicles Exiting Intersection				8118			
Southbound							
Cars	122	7099	188	22	5		
Heavy	12	122	5	0	3		
Total	134	7221	193	22	8		



Total Vehicles on Leg 617	Vehicles Entering Intersection	Eastbound	Cars	Heavy	Total	
	311		14	9	23	
			0	0	0	
	Vehicles Exiting Intersection		80	14	94	
	306		7	0	7	
	201	9	210			

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	Total Vehicles on Leg 919
190	8	198		477	
6	1	7			
269	3	272		Vehicles Exiting Intersection	
0	0	0		442	
48	49	97			



Cars	9	67	155	7675	240
Heavy	9	0	10	129	2
Total	18	67	165	7804	242
Northbound					
Vehicles Entering Intersection			8278		
Vehicles Exiting Intersection			7770		
Total Vehicles On Leg			16048		

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2314

Study Date : 05/02/2023

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 51

Number of Lanes : 2+

Total Approach Volume: 8,278

Southbound: CSAH 51

Number of Lanes :2+

Total Approach Volume: 7,570

Minor Street Approaches

Eastbound: 111th Ave

Number of Lanes :1

Total Approach Volume: 311

Westbound: 111th Ave

Number of Lanes :1

Total Approach Volume: 477

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 3 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: TMC 2314

Study Date : 05/02/2023

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	
15:45 - 16:45	1068	+	526	=	1594	50	39	No
16:00 - 17:00	1077	+	515	=	1592	50	36	No
16:15 - 17:15	1096	+	493	=	1589	36	40	No
15:30 - 16:30	1027	+	546	=	1573	47	43	No
16:30 - 17:30	1065	+	489	=	1554	29	38	No
16:45 - 17:45	1026	+	487	=	1513	28	35	No
15:15 - 16:15	962	+	547	=	1509	37	41	No
17:00 - 18:00	963	+	481	=	1444	24	35	No
15:00 - 16:00	884	+	507	=	1391	17	36	No
17:15 - 18:15	878	+	461	=	1339	18	27	No
14:45 - 15:45	818	+	498	=	1316	11	34	No
14:30 - 15:30	728	+	514	=	1242	11	26	No
07:00 - 08:00	373	+	851	=	1224	35	47	No
17:30 - 18:30	771	+	447	=	1218	15	23	No
07:15 - 08:15	324	+	858	=	1182	38	49	No
06:45 - 07:45	367	+	810	=	1177	28	48	No
14:15 - 15:15	660	+	495	=	1155	10	30	No
17:45 - 18:45	680	+	414	=	1094	12	22	No
14:00 - 15:00	608	+	476	=	1084	13	30	No
06:30 - 07:30	337	+	737	=	1074	27	45	No
07:30 - 08:30	305	+	756	=	1061	35	43	No
18:00 - 19:00	613	+	417	=	1030	7	23	No
13:45 - 14:45	515	+	465	=	980	9	25	No
07:45 - 08:45	282	+	651	=	933	34	39	No
18:15 - 19:15	536		388		924	6	22	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2314

Study Date : 05/02/2023

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				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:45 - 16:45	1068	+	526	=	1594	50	39	No
16:00 - 17:00	1077	+	515	=	1592	50	36	No
16:15 - 17:15	1096	+	493	=	1589	36	40	No
15:30 - 16:30	1027	+	546	=	1573	47	43	No
16:30 - 17:30	1065	+	489	=	1554	29	38	No
16:45 - 17:45	1026	+	487	=	1513	28	35	No
15:15 - 16:15	962	+	547	=	1509	37	41	No
17:00 - 18:00	963	+	481	=	1444	24	35	No
15:00 - 16:00	884	+	507	=	1391	17	36	No
17:15 - 18:15	878	+	461	=	1339	18	27	No
14:45 - 15:45	818	+	498	=	1316	11	34	No
14:30 - 15:30	728	+	514	=	1242	11	26	No
07:00 - 08:00	373	+	851	=	1224	35	47	No
17:30 - 18:30	771	+	447	=	1218	15	23	No
07:15 - 08:15	324	+	858	=	1182	38	49	No
06:45 - 07:45	367	+	810	=	1177	28	48	No
14:15 - 15:15	660	+	495	=	1155	10	30	No
17:45 - 18:45	680	+	414	=	1094	12	22	No
14:00 - 15:00	608	+	476	=	1084	13	30	No
06:30 - 07:30	337	+	737	=	1074	27	45	No
07:30 - 08:30	305	+	756	=	1061	35	43	No
18:00 - 19:00	613	+	417	=	1030	7	23	No
13:45 - 14:45	515	+	465	=	980	9	25	No
07:45 - 08:45	282	+	651	=	933	34	39	No
18:15 - 19:15	536		388		924	6	22	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2314

Study Date : 05/02/2023

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 3 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

Minor Road 111th Ave

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:45 - 16:45	1068	+	526	=	1594	50	39	No
16:00 - 17:00	1077	+	515	=	1592	50	36	No
16:15 - 17:15	1096	+	493	=	1589	36	40	No
15:30 - 16:30	1027	+	546	=	1573	47	43	No
16:30 - 17:30	1065	+	489	=	1554	29	38	No
16:45 - 17:45	1026	+	487	=	1513	28	35	No
15:15 - 16:15	962	+	547	=	1509	37	41	No
17:00 - 18:00	963	+	481	=	1444	24	35	No
15:00 - 16:00	884	+	507	=	1391	17	36	No
17:15 - 18:15	878	+	461	=	1339	18	27	No
14:45 - 15:45	818	+	498	=	1316	11	34	No
14:30 - 15:30	728	+	514	=	1242	11	26	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
15:30 - 16:30	1027	+	546	=	1573	47	43	Yes
07:00 - 08:00	373	+	851	=	1224	35	47	Yes
06:00 - 07:00	169	+	582	=	751	12	45	Yes
16:30 - 17:30	1065	+	489	=	1554	29	38	No
16:45 - 17:45	1026	+	487	=	1513	28	35	No
15:15 - 16:15	962	+	547	=	1509	37	41	No
17:00 - 18:00	963	+	481	=	1444	24	35	No
15:00 - 16:00	884	+	507	=	1391	17	36	No
17:15 - 18:15	878	+	461	=	1339	18	27	No
14:45 - 15:45	818	+	498	=	1316	11	34	No
14:30 - 15:30	728	+	514	=	1242	11	26	No
17:30 - 18:30	771	+	447	=	1218	15	23	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2314

Study Date : 05/02/2023

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.

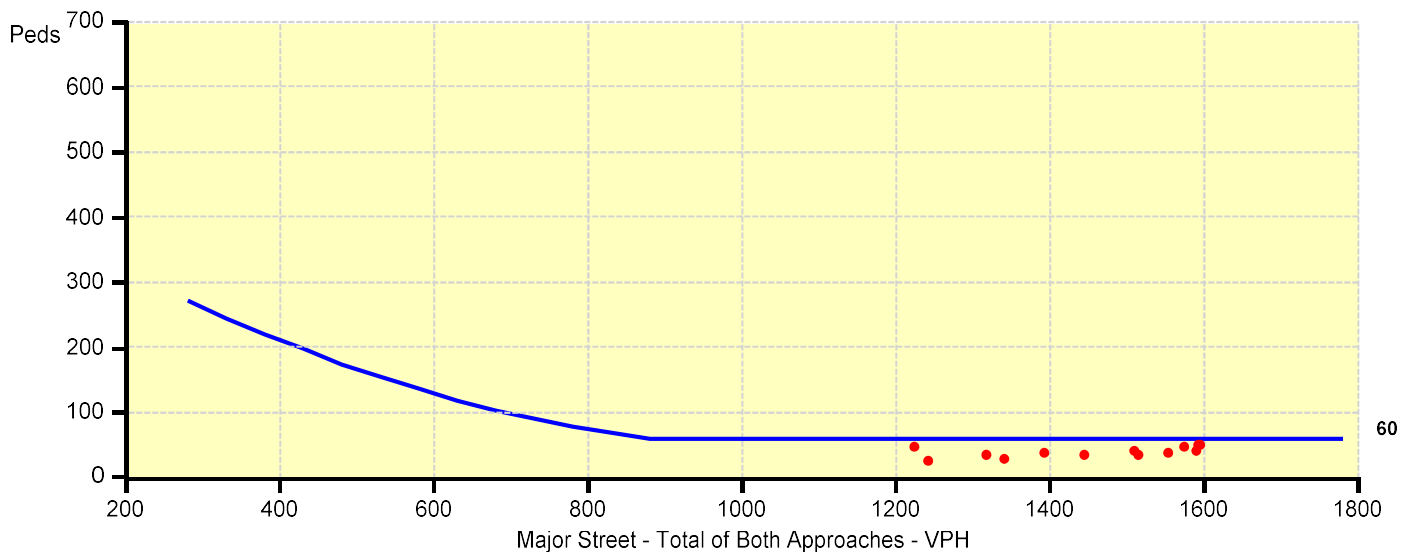
Summary

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				Total	Minor Road 111th Ave		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:45 - 16:45	1068	+	526	=	1594	50	39	No
16:00 - 17:00	1077	+	515	=	1592	50	36	No
16:15 - 17:15	1096	+	493	=	1589	36	40	No
15:30 - 16:30	1027	+	546	=	1573	47	43	No
16:30 - 17:30	1065	+	489	=	1554	29	38	No
16:45 - 17:45	1026	+	487	=	1513	28	35	No
15:15 - 16:15	962	+	547	=	1509	37	41	No
17:00 - 18:00	963	+	481	=	1444	24	35	No
15:00 - 16:00	884	+	507	=	1391	17	36	No
17:15 - 18:15	878	+	461	=	1339	18	27	No
14:45 - 15:45	818	+	498	=	1316	11	34	No
14:30 - 15:30	728		514		1242	11	26	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2314

Study Date : 05/02/2023

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				Total	Minor Road 111th Ave		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:45 - 16:45	1068	+	526	=	1594	50	39	No
16:00 - 17:00	1077	+	515	=	1592	50	36	No
16:15 - 17:15	1096	+	493	=	1589	36	40	No
15:30 - 16:30	1027	+	546	=	1573	47	43	No
16:30 - 17:30	1065	+	489	=	1554	29	38	No
16:45 - 17:45	1026	+	487	=	1513	28	35	No
15:15 - 16:15	962	+	547	=	1509	37	41	No
17:00 - 18:00	963	+	481	=	1444	24	35	No
15:00 - 16:00	884	+	507	=	1391	17	36	No
17:15 - 18:15	878	+	461	=	1339	18	27	No
14:45 - 15:45	818	+	498	=	1316	11	34	No
14:30 - 15:30	728		514		1242	11	26	No

