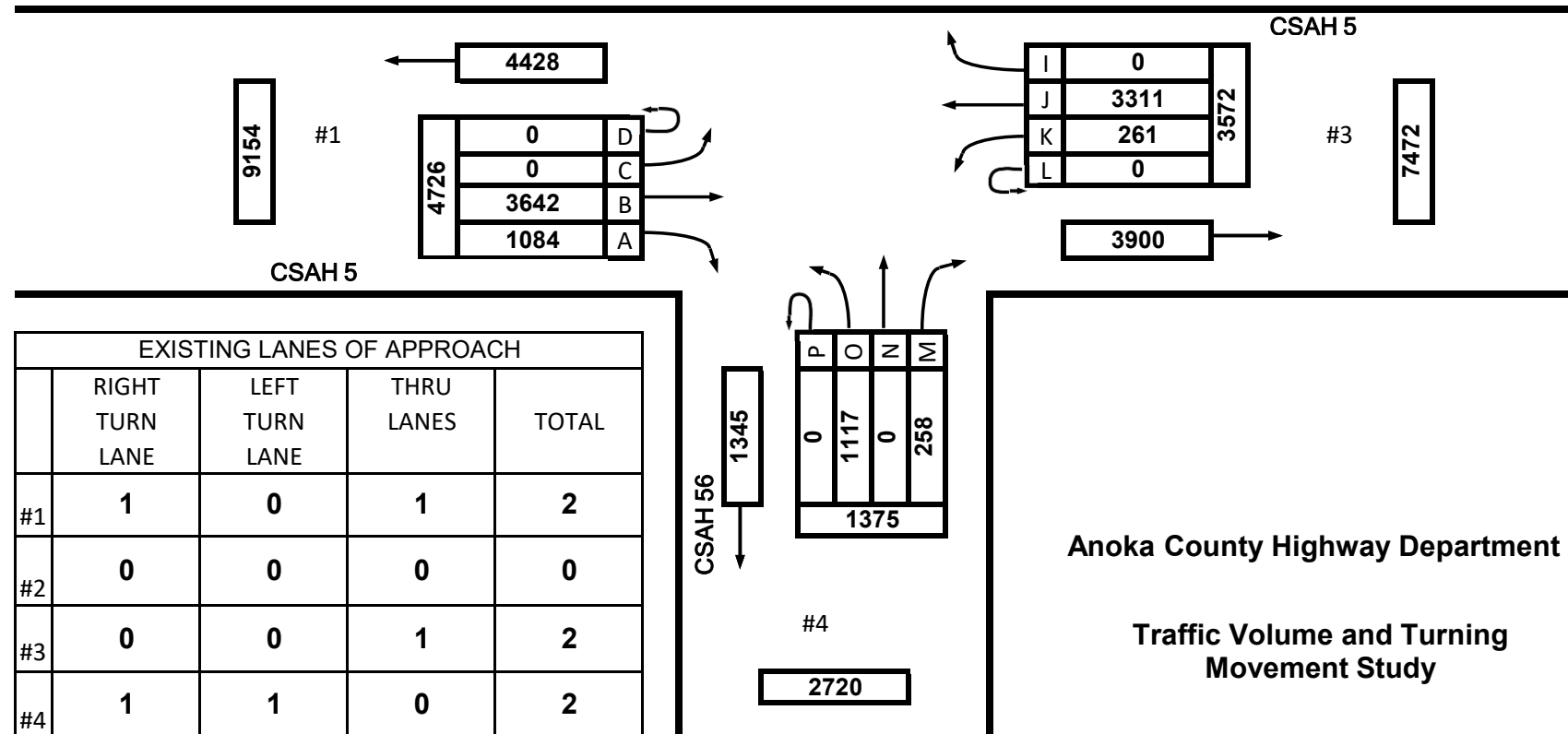
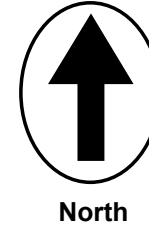


Date : 11/08/23

Count Number : TMC 2388

Location : CSAH 5
@ CSAH 56

Collection Period : 24 HR

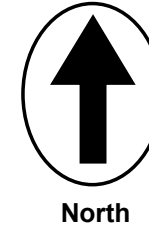


Date : 11/08/23

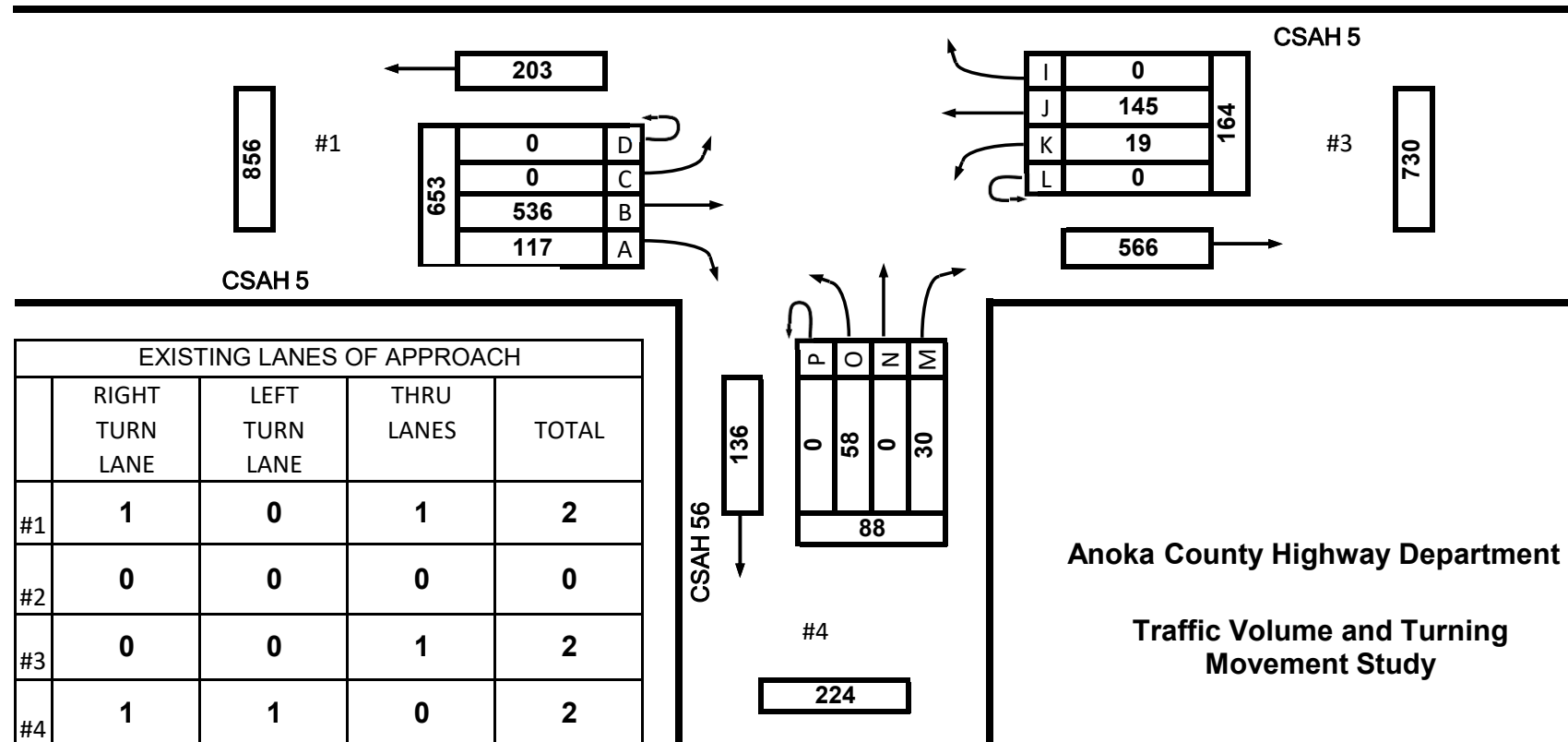
Count Number : TMC 2388

Location : CSAH 5
@ CSAH 56

Collection Period : 6:45 AM - 7:45 AM



AM PEAK



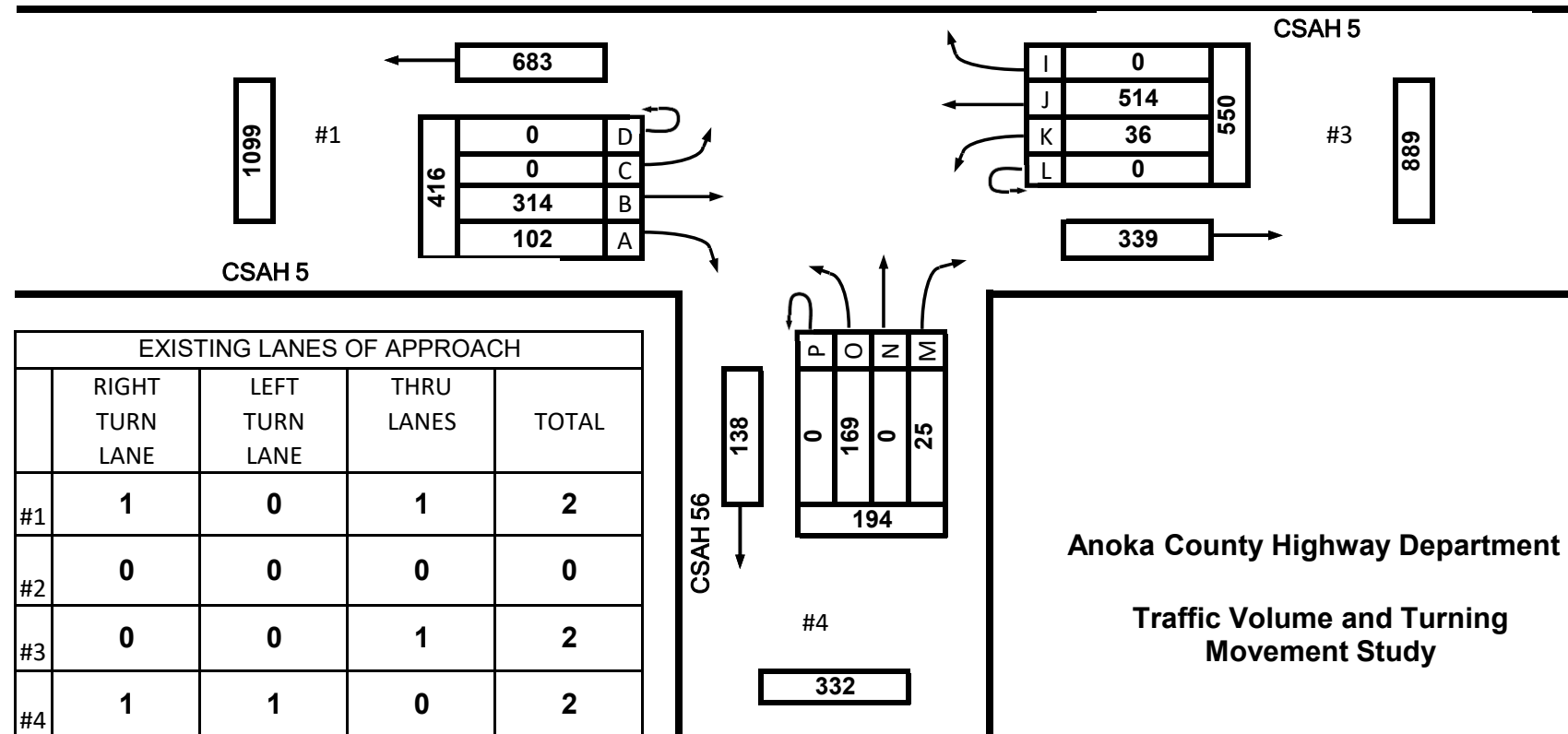
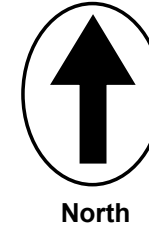
Date : 11/08/23

Count Number : TMC 2388

Location : CSAH 5
@ CSAH 56

Collection Period : 4:00 PM - 5:00 PM

PM PEAK



Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

**TMC 2388 - CSAH 5 @ CSAH 56
Ramsey MN
Wednesday, November 8, 2023**

Time	Southbound 0						Westbound CSAH 5						Northbound CSAH 56						Eastbound CSAH 5						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	0	0	0	0	0	0	5	0	0	5	0	1	0	1	0	0	2	0	0	1	0	0	1	8
12:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	0	1	0	0	3	0	0	3	6
12:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	2	5
12:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Hourly Total	0	0	0	0	0	0	0	0	11	0	0	11	0	1	0	2	0	3	0	0	7	0	0	7	21	
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	1	0	3	4	
1:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
1:30 AM	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	2	1	0	3	5	
1:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Hourly Total	0	0	0	0	0	0	0	1	5	0	0	6	0	1	0	0	0	1	0	0	4	2	0	6	13	
2:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	1	0	1	4	4
2:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	1	0	1	0	0	2	1	0	3	9	
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
2:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	0	0	3	1	0	4	7	
Hourly Total	0	0	0	0	0	0	0	0	10	0	0	10	0	1	0	1	0	2	0	0	6	3	0	9	21	
3:00 AM	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
3:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	2	2	0	4	6	
3:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	5	1	0	6	7	
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	6	0	0	6	7	
Hourly Total	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	0	2	0	0	13	3	0	16	20	
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	8	0	0	8	9	
4:15 AM	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	1	0	1	0	0	20	1	0	21	25	
4:30 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	3	0	0	0	3	0	0	30	4	0	34	41	
4:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	3	0	4	0	0	23	0	0	23	28	
Hourly Total	0	0	0	0	0	0	0	1	7	0	0	8	0	5	0	4	0	9	0	0	81	5	0	86	103	
5:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	4	0	0	0	4	0	0	36	5	0	41	48	
5:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	1	0	1	0	0	39	12	0	51	57	
5:30 AM	0	0	0	0	0	0	0	2	17	0	0	19	0	6	0	3	0	9	0	0	56	14	0	70	98	
5:45 AM	0	0	0	0	0	0	0	1	17	0	0	18	0	7	0	3	0	10	0	0	69	21	0	90	118	
Hourly Total	0	0	0	0	0	0	0	3	42	0	0	45	0	17	0	7	0	24	0	0	200	52	0	252	321	
6:00 AM	0	0	0	0	0	0	0	0	15	0	0	15	0	2	0	3	0	5	0	0	78	13	0	91	111	
6:15 AM	0	0	0	0	0	0	0	2	22	0	0	24	0	6	0	5	0	11	0	0	123	19	0	142	177	
6:30 AM	0	0	0	0	0	0	0	2	24	0	0	26	0	8	0	6	0	14	0	0	122	37	0	159	199	
6:45 AM	0	0	0	0	0	0	0	5	32	0	0	37	0	16	0	3	0	19	0	0	133	28	0	161	217	
Hourly Total	0	0	0	0	0	0	0	9	93	0	0	102	0	32	0	17	0	49	0	0	456	97	0	553	704	
7:00 AM	0	0	0	0	0	0	0	2	33	0	0	35	0	13	0	9	0	22	0	0	158	24	0	182	239	
7:15 AM	0	0	0	0	0	0	0	5	44	0	0	49	0	14	0	8	0	22	0	0	132	30	0	162	233	
7:30 AM	0	0	0	0	0	0	0	7	36	0	0	43	0	15	0	10	0	25	0	0	113	35	0	148	216	
7:45 AM	0	0	0	0	0	0	0	8	33	0	0	41	0	21	0	8	0	29	0	0	102	39	0	141	211	
Hourly Total	0	0	0	0	0	0	0	22	146	0	0	168	0	63	0	35	0	98	0	0	505	128	0	633	899	

**TMC 2388 - CSAH 5 @ CSAH 56
Ramsey MN
Wednesday, November 8, 2023**

Time	Southbound						Westbound CSAH 5						Northbound CSAH 56						Eastbound CSAH 5						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	0	0	0	0	0	0	2	48	0	0	50	0	21	0	5	0	26	0	0	84	19	0	103	179
8:15 AM	0	0	0	0	0	0	0	2	34	0	0	36	0	8	0	4	0	12	0	0	72	14	0	86	134
8:30 AM	0	0	0	0	0	0	0	2	30	0	0	32	0	19	0	3	0	22	0	0	68	16	0	84	138
8:45 AM	0	0	0	0	0	0	0	1	33	0	0	34	0	11	0	2	0	13	0	0	55	15	0	70	117
Hourly Total	0	0	0	0	0	0	0	7	145	0	0	152	0	59	0	14	0	73	0	0	279	64	0	343	568
9:00 AM	0	0	0	0	0	0	0	3	53	0	0	56	0	26	0	1	0	27	0	0	88	20	0	88	171
9:15 AM	0	0	0	0	0	0	0	1	37	0	0	38	0	14	0	3	0	17	0	0	116	31	0	147	202
9:30 AM	0	0	0	0	0	0	0	3	25	0	0	28	0	12	0	2	0	14	0	0	40	7	0	47	89
9:45 AM	0	0	0	0	0	0	0	7	20	0	0	27	0	8	0	0	0	8	0	0	39	8	0	47	82
Hourly Total	0	0	0	0	0	0	0	14	135	0	0	149	0	60	0	6	0	66	0	0	263	66	0	329	544
10:00 AM	0	0	0	0	0	0	0	1	24	0	0	25	0	14	0	7	0	21	0	0	42	8	0	50	96
10:15 AM	0	0	0	0	0	0	0	7	30	0	0	37	0	8	0	3	0	11	0	0	37	7	0	44	92
10:30 AM	0	0	0	0	0	0	0	2	22	0	0	24	0	10	0	7	0	17	0	0	39	9	0	48	89
10:45 AM	0	0	0	0	0	0	0	1	30	0	0	31	0	11	0	4	0	15	0	0	36	13	0	49	95
Hourly Total	0	0	0	0	0	0	0	11	106	0	0	117	0	43	0	21	0	64	0	0	154	37	0	191	372
11:00 AM	0	0	0	0	0	0	0	2	32	0	0	34	0	9	0	0	0	9	0	0	33	14	0	47	90
11:15 AM	0	0	0	0	0	0	0	3	45	0	0	48	0	18	0	1	0	19	0	0	36	12	0	48	115
11:30 AM	0	0	0	0	0	0	0	3	22	0	0	25	0	15	0	4	0	19	0	0	50	10	0	60	104
11:45 AM	0	0	0	0	0	0	0	4	47	0	0	51	0	13	0	1	0	14	0	0	34	11	0	45	110
Hourly Total	0	0	0	0	0	0	0	12	146	0	0	158	0	55	0	6	0	61	0	0	153	47	0	200	419
12:00 PM	0	0	0	0	0	0	0	5	39	0	0	44	0	13	0	6	0	19	0	0	44	11	0	55	118
12:15 PM	0	0	0	0	0	0	0	5	45	0	0	50	0	11	0	2	0	13	0	0	33	11	0	44	107
12:30 PM	0	0	0	0	0	0	0	7	50	0	0	57	0	18	0	4	0	22	0	0	34	20	0	54	133
12:45 PM	0	0	0	0	0	0	0	3	35	0	0	38	0	25	0	2	0	27	0	0	35	15	0	50	115
Hourly Total	0	0	0	0	0	0	0	20	169	0	0	189	0	67	0	14	0	81	0	0	146	57	0	203	473
1:00 PM	0	0	0	0	0	0	0	4	39	0	0	43	0	6	0	2	0	8	0	0	21	6	0	27	78
1:15 PM	0	0	0	0	0	0	0	2	38	0	0	40	0	13	0	2	0	15	0	0	32	6	0	38	93
1:30 PM	0	0	0	0	0	0	0	3	37	0	0	40	0	13	0	4	0	17	0	0	36	9	0	45	102
1:45 PM	0	0	0	0	0	0	0	1	38	0	0	39	0	14	0	4	0	18	0	0	33	18	0	51	108
Hourly Total	0	0	0	0	0	0	0	10	152	0	0	162	0	46	0	12	0	58	0	0	122	39	0	161	381
2:00 PM	0	0	0	0	0	0	0	6	46	0	0	52	0	20	0	4	0	24	0	0	43	13	0	56	132
2:15 PM	0	0	0	0	0	0	0	5	56	0	0	61	0	13	0	4	0	17	0	0	30	12	0	42	120
2:30 PM	0	0	0	0	0	0	0	4	71	0	0	75	0	22	0	3	0	25	0	0	36	10	0	46	146
2:45 PM	0	0	0	0	0	0	0	3	74	0	0	77	0	25	0	1	0	26	0	0	37	25	0	62	165
Hourly Total	0	0	0	0	0	0	0	18	247	0	0	265	0	80	0	12	0	92	0	0	146	60	0	206	563
3:00 PM	0	0	0	0	0	0	0	8	99	0	0	107	0	27	0	1	0	28	0	0	34	15	0	49	184
3:15 PM	0	0	0	0	0	0	0	5	96	0	0	101	0	43	0	4	0	47	0	0	39	18	0	57	205
3:30 PM	0	0	0	0	0	0	0	9	115	0	0	124	0	44	0	4	0	48	0	0	49	22	0	71	243
3:45 PM	0	0	0	0	0	0	0	5	131	0	0	136	0	31	0	5	0	36	0	0	54	17	0	71	243
Hourly Total	0	0	0	0	0	0	0	27	441	0	0	468	0	145	0	14	0	159	0	0	176	72	0	248	875

TMC 2388 - CSAH 5 @ CSAH 56
Ramsey MN
Wednesday, November 8, 2023

Time	Southbound						Westbound CSAH 5						Northbound CSAH 56						Eastbound CSAH 5						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	0	0	0	0	0	0	9	113	0	0	122	0	45	0	7	0	52	0	0	115	22	0	137	311
4:15 PM	0	0	0	0	0	0	0	9	117	0	0	126	0	30	0	3	0	33	0	0	75	23	0	98	257
4:30 PM	0	0	0	0	0	0	0	6	162	0	0	168	0	52	0	6	0	58	0	0	59	28	0	87	313
4:45 PM	0	0	0	0	0	0	0	12	122	0	0	134	0	42	0	9	0	51	0	0	65	29	0	94	279
Hourly Total	0	0	0	0	0	0	0	36	514	0	0	550	0	169	0	25	0	194	0	0	314	102	0	416	1160
5:00 PM	0	0	0	0	0	0	0	9	94	0	0	103	0	32	0	6	0	38	0	0	69	34	0	103	244
5:15 PM	0	0	0	0	0	0	0	7	90	0	0	97	0	26	0	5	0	31	0	0	60	23	0	83	211
5:30 PM	0	0	0	0	0	0	0	7	84	0	0	91	0	9	0	6	0	15	0	0	54	24	0	78	184
5:45 PM	0	0	0	0	0	0	0	10	77	0	0	87	0	19	0	2	0	21	0	0	53	15	0	68	176
Hourly Total	0	0	0	0	0	0	0	33	345	0	0	378	0	86	0	19	0	105	0	0	236	96	0	332	815
6:00 PM	0	0	0	0	0	0	0	0	69	0	0	69	0	26	0	6	0	32	0	0	41	14	0	55	156
6:15 PM	0	0	0	0	0	0	0	5	47	0	0	52	0	15	0	2	0	17	0	0	40	22	0	62	131
6:30 PM	0	0	0	0	0	0	0	2	52	0	0	54	0	16	0	2	0	18	0	0	35	8	0	43	115
6:45 PM	0	0	0	0	0	0	0	1	41	0	0	42	0	11	0	4	0	15	0	0	28	11	0	39	96
Hourly Total	0	0	0	0	0	0	0	8	209	0	0	217	0	68	0	14	0	82	0	0	144	55	0	199	498
7:00 PM	0	0	0	0	0	0	0	2	26	0	0	28	0	11	0	1	0	12	0	0	22	12	0	34	74
7:15 PM	0	0	0	0	0	0	0	3	27	0	0	30	0	8	0	1	0	9	0	0	37	9	0	46	85
7:30 PM	0	0	0	0	0	0	0	4	38	0	0	42	0	9	0	1	0	10	0	0	10	8	0	18	70
7:45 PM	0	0	0	0	0	0	0	3	26	0	0	29	0	7	0	1	0	8	0	0	10	10	0	20	57
Hourly Total	0	0	0	0	0	0	0	12	117	0	0	129	0	35	0	4	0	39	0	0	79	39	0	118	286
8:00 PM	0	0	0	0	0	0	0	2	23	0	0	25	0	15	0	1	0	16	0	0	21	8	0	29	70
8:15 PM	0	0	0	0	0	0	0	0	28	0	0	28	0	12	0	4	0	16	0	0	19	6	0	25	69
8:30 PM	0	0	0	0	0	0	0	0	35	0	0	35	0	6	0	1	0	7	0	0	26	16	0	42	84
8:45 PM	0	0	0	0	0	0	0	1	32	0	0	33	0	8	0	3	0	11	0	0	15	8	0	23	67
Hourly Total	0	0	0	0	0	0	0	3	118	0	0	121	0	41	0	9	0	50	0	0	81	38	0	119	290
9:00 PM	0	0	0	0	0	0	0	4	16	0	0	20	0	15	0	3	0	18	0	0	19	1	0	20	58
9:15 PM	0	0	0	0	0	0	0	5	22	0	0	27	0	5	0	6	0	11	0	0	6	8	0	14	52
9:30 PM	0	0	0	0	0	0	0	0	26	0	0	26	0	2	0	3	0	5	0	0	10	4	0	14	45
9:45 PM	0	0	0	0	0	0	0	3	18	0	0	21	0	4	0	3	0	7	0	0	7	3	0	10	38
Hourly Total	0	0	0	0	0	0	0	12	82	0	0	94	0	26	0	15	0	41	0	0	42	16	0	58	193
10:00 PM	0	0	0	0	0	0	0	0	16	0	0	16	0	6	0	3	0	9	0	0	9	0	0	9	34
10:15 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	2	0	0	0	2	0	0	4	1	0	5	15
10:30 PM	0	0	0	0	0	0	0	0	13	0	0	13	0	3	0	0	0	3	0	0	7	3	0	10	26
10:45 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	3	0	0	0	3	0	0	4	2	0	6	19
Hourly Total	0	0	0	0	0	0	0	0	47	0	0	47	0	14	0	3	0	17	0	0	24	6	0	30	94
11:00 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	2	0	2	0	4	0	0	5	0	0	5	17
11:15 PM	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	1	0	1	0	0	2	0	0	2	8
11:30 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	2	0	0	2	10
11:45 PM	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5
Hourly Total	0	0	0	0	0	0	0	2	22	0	0	24	0	2	0	3	0	5	0	0	11	0	0	11	40
DAILY TOTAL	0	0	0	0	0	0	0	261	3311	0	0	3572	0	1117	0	258	0	1375	0	0	3642	1084	0	4726	9673
Cars	0	0	0	0	0	0	0	253	3168	0	0	3421	0	1078	0	248	0	1326	0	0	3467	1055	0	4522	9269
Heavy Vehicles	0	0	0	0	0	0	0	8	143	0	0	151	0	39	0	10	0	49	0	0	175	29	0	204	404
Heavy Vehicle %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.07%	4.32%	0.00%	0.00%	4.23%	0.00%	3.49%	0.00%	3.88%	0.00%	3.56%	0.00%	0.00%	4.81%	2.68%	0.00%	4.32%	4.18%

**TMC 2388 - CSAH 5 @ CSAH 56
Ramsey MN
Wednesday, November 8, 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							
6:45 AM	0	0	0	0	0	0	0	5	32	0	0	37	0	16	0	3	0	19	0	0	133	28	0	161	0	0	133	28	0	161	217
7:00 AM	0	0	0	0	0	0	0	2	33	0	0	35	0	13	0	9	0	22	0	0	158	24	0	182	0	0	158	24	0	182	239
7:15 AM	0	0	0	0	0	0	0	5	44	0	0	49	0	14	0	8	0	22	0	0	132	30	0	162	0	0	132	30	0	162	233
7:30 AM	0	0	0	0	0	0	0	7	36	0	0	43	0	15	0	10	0	25	0	0	113	35	0	148	0	0	113	35	0	148	216
Peak Hour Total	0	0	0	0	0	0	0	19	145	0	0	164	0	58	0	30	0	88	0	0	536	117	0	653	0	0	536	117	0	653	905
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.679	0.824	0.000	0.000	0.837	0.000	0.906	0.000	0.750	0.000	0.880	0.000	0.000	0.848	0.836	0.000	0.897	0.000	0.000	0.848	0.836	0.000	0.897	0.947

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							
4:00 PM	0	0	0	0	0	0	0	9	113	0	0	122	0	45	0	7	0	52	0	0	115	22	0	137	0	0	115	22	0	137	311
4:15 PM	0	0	0	0	0	0	0	9	117	0	0	126	0	30	0	3	0	33	0	0	75	23	0	98	0	0	75	23	0	98	257
4:30 PM	0	0	0	0	0	0	0	6	162	0	0	168	0	52	0	6	0	58	0	0	59	28	0	87	0	0	59	28	0	87	313
4:45 PM	0	0	0	0	0	0	0	12	122	0	0	134	0	42	0	9	0	51	0	0	65	29	0	94	0	0	65	29	0	94	279
Peak Hour Total	0	0	0	0	0	0	0	36	514	0	0	550	0	169	0	25	0	194	0	0	314	102	0	416	0	0	314	102	0	416	1160
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.793	0.000	0.000	0.818	0.000	0.813	0.000	0.694	0.000	0.836	0.000	0.000	0.683	0.879	0.000	0.759	0.000	0.000	0.683	0.879	0.000	0.759	0.927

Total Vehicles On Leg				0			
Vehicles Entering Intersection		0		Vehicles Exiting Intersection		0	
Southbound							
Cars	0	0	0	0	0		
Heavy	0	0	0	0	0		
Total	0	0	0	0	0		



Total Vehicles on Leg 9154	Eastbound	Vehicles Entering Intersection	4726		
		Cars	0	0	0
		Heavy	0	0	0
		Total	0	0	0
		Vehicles Exiting Intersection	4428		
		Cars	3467	175	3642
		Heavy	1055	29	1084
		Total	3467	175	3642



Daily Volumes

Cars	0	0	0	Westbound	Vehicles Entering Intersection	3572		Total Vehicles on Leg 7472
Heavy	0	0	0		Vehicles Exiting Intersection	3900		
Total	0	0	0					
3168	143	3311						
253	8	261						
0	0	0						
0	0	0						



Cars	0	0	1078	0	248
Heavy	0	0	39	0	10
Total	0	0	1117	0	258
Northbound					
Vehicles Entering Intersection			1375		
Vehicles Exiting Intersection			1345		
Total Vehicles On Leg			2720		



Heavy Vehicles

Date	Time	Southbound						Westbound						Northbound						Eastbound						
		U Turns	Left Turns	Straight Through	Right Turns	EB Bicycles in Crosswalk	WB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	NB Bicycles in Crosswalk	SB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	EB Bicycles in Crosswalk	WB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	NB Bicycles in Crosswalk	SB Bicycles in Crosswalk	
11/8/2023	0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	5:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
	5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	6:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0
	6:15	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0
	6:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	1	0	0	0	0	5	0	0	0
	6:45	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	10	2	0	0
	7:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	7	1	0	0
	7:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	6	1	0	0
7:30	0	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	1	0	0	0	0	4	2	0	0	
7:45	0	0	0	0	0	0	0	0	0	5	0	0	0	0	2	0	0	0	0	0	0	4	1	0	0	
8:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0	
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	2	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	
9:00	0	0	0	0	0	0	0	0	0	7	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	16	2	0	0	
9:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
9:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	
10:00	0	0	0	0	0	0	0	0	1	5	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	
10:15	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	
10:30	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	
11:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	
11:15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	
11:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	4	0	0	0	
11:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	2	0	0	0	0	0	0	4	2	0	0	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2388

Study Date : 11/16/2023

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 5

Number of Lanes : 1

Total Approach Volume: 4,726

Westbound: CSAH 5

Number of Lanes : 1

Total Approach Volume: 3,572

Minor Street Approaches

Northbound: CSAH 56

Number of Lanes : 1

Total Approach Volume: 1,375

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 3 hours, 8 are needed

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

Required volumes reached for 7 hours, 8 are needed

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

Required 1A volumes reached for 7 hours, 8 are needed

Required 1B volumes reached for 9 hours, 8 are needed

Warrant 2 - Four Hour Volumes.....Satisfied

Number of hours (5) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

Warrant 3A - Peak Hour Delay.....Satisfied

Number of one hour periods (12) volumes exceed minimum >= required (1). Delay data not evaluated.

Warrant 3B - Peak Hour Volumes.....Satisfied

Volumes exceed minimums for at least 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 2388

Study Date : 11/16/2023

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 3 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **350**

Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
15:30 - 16:30	377	+	508	=	885	169	0	Yes
16:30 - 17:30	367	+	502	=	869	178	0	Yes
14:30 - 15:30	214	+	360	=	574	126	0	Yes
06:45 - 07:45	653	+	164	=	817	88	0	No
06:30 - 07:30	664	+	147	=	811	77	0	No
07:00 - 08:00	633	+	168	=	801	98	0	No
06:15 - 07:15	644	+	122	=	766	66	0	No
07:15 - 08:15	554	+	183	=	737	102	0	No
06:00 - 07:00	553	+	102	=	655	49	0	No
07:30 - 08:30	478	+	170	=	648	92	0	No
07:45 - 08:45	414	+	159	=	573	89	0	No
05:45 - 06:45	482	+	83	=	565	40	0	No
17:30 - 18:30	263	+	299	=	562	85	0	No
08:30 - 09:30	389	+	160	=	549	79	0	No
14:15 - 15:15	199	+	320	=	519	96	0	No
08:45 - 09:45	352	+	156	=	508	71	0	No
08:00 - 09:00	343	+	152	=	495	73	0	No
17:45 - 18:45	228	+	262	=	490	88	0	No
08:15 - 09:15	328	+	158	=	486	74	0	No
09:00 - 10:00	329	+	149	=	478	66	0	No
14:00 - 15:00	206	+	265	=	471	92	0	No
05:30 - 06:30	393	+	76	=	469	35	0	No
13:45 - 14:45	195	+	227	=	422	84	0	No
18:00 - 19:00	199	+	217	=	416	82	0	No
09:15 - 10:15	291		118		409	60	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2388

Study Date : 11/16/2023

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 7 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **525**
 Veh/Hr Minor = **52**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
15:30 - 16:30	377	+	508	=	885	169	0	Yes
16:30 - 17:30	367	+	502	=	869	178	0	Yes
06:15 - 07:15	644	+	122	=	766	66	0	Yes
07:15 - 08:15	554	+	183	=	737	102	0	Yes
14:30 - 15:30	214	+	360	=	574	126	0	Yes
17:30 - 18:30	263	+	299	=	562	85	0	Yes
08:30 - 09:30	389	+	160	=	549	79	0	Yes
06:00 - 07:00	553	+	102	=	655	49	0	No
05:45 - 06:45	482	+	83	=	565	40	0	No
14:15 - 15:15	199	+	320	=	519	96	0	No
08:15 - 09:15	328	+	158	=	486	74	0	No
14:00 - 15:00	206	+	265	=	471	92	0	No
05:30 - 06:30	393	+	76	=	469	35	0	No
13:45 - 14:45	195	+	227	=	422	84	0	No
11:45 - 12:45	198	+	202	=	400	68	0	No
12:00 - 13:00	203	+	189	=	392	81	0	No
13:30 - 14:30	194	+	192	=	386	76	0	No
11:15 - 12:15	208	+	168	=	376	71	0	No
11:30 - 12:30	204	+	170	=	374	65	0	No
12:15 - 13:15	175	+	188	=	363	70	0	No
13:15 - 14:15	190	+	171	=	361	74	0	No
05:15 - 06:15	302	+	57	=	359	25	0	No
11:00 - 12:00	200	+	158	=	358	61	0	No
12:30 - 13:30	169	+	178	=	347	72	0	No
10:45 - 11:45	204		138		342	62	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2388

Study Date : 11/16/2023

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 7 hours meet 1A minimums.
9 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **280 420**

Veh/Hr Minor = **84 42**

Major Road CSAH 5

Minor Road CSAH 56

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
15:45 - 16:45	393	+	552	=	945	179	0	Yes
06:45 - 07:45	653	+	164	=	817	88	0	Yes
16:45 - 17:45	358	+	425	=	783	135	0	Yes
14:45 - 15:45	239	+	409	=	648	149	0	Yes
07:45 - 08:45	414	+	159	=	573	89	0	Yes
17:45 - 18:45	228	+	262	=	490	88	0	Yes
13:45 - 14:45	195	+	227	=	422	84	0	Yes
06:30 - 07:30	664	+	147	=	811	77	0	No
06:15 - 07:15	644	+	122	=	766	66	0	No
06:00 - 07:00	553	+	102	=	655	49	0	No
05:45 - 06:45	482	+	83	=	565	40	0	No
08:45 - 09:45	352	+	156	=	508	71	0	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
15:45 - 16:45	393	+	552	=	945	179	0	Yes
07:00 - 08:00	633	+	168	=	801	98	0	Yes
16:45 - 17:45	358	+	425	=	783	135	0	Yes
06:00 - 07:00	553	+	102	=	655	49	0	Yes
14:45 - 15:45	239	+	409	=	648	149	0	Yes
08:00 - 09:00	343	+	152	=	495	73	0	Yes
17:45 - 18:45	228	+	262	=	490	88	0	Yes
09:00 - 10:00	329	+	149	=	478	66	0	Yes
13:45 - 14:45	195	+	227	=	422	84	0	Yes
05:45 - 06:45	482	+	83	=	565	40	0	No
05:30 - 06:30	393	+	76	=	469	35	0	No
11:45 - 12:45	198	+	202	=	400	68	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2388

Study Date : 11/16/2023

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.

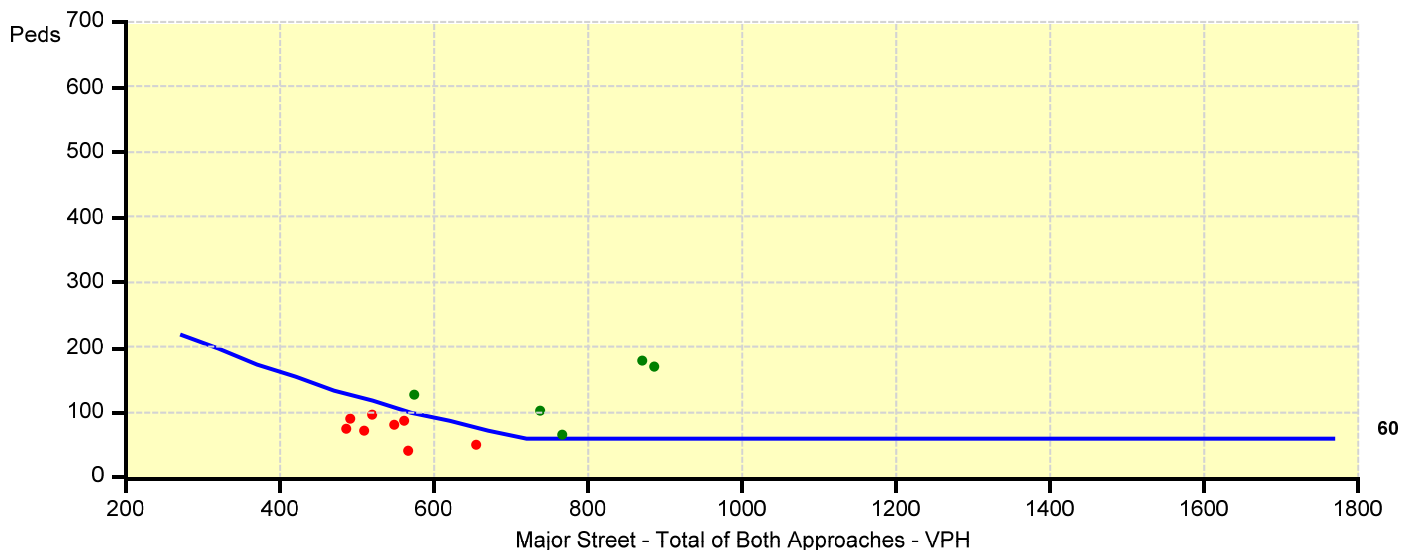
Summary

5 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 5				Total	Minor Road CSAH 56		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
15:30 - 16:30	377	+	508	=	885	169	0	Yes
16:30 - 17:30	367	+	502	=	869	178	0	Yes
06:15 - 07:15	644	+	122	=	766	66	0	Yes
07:15 - 08:15	554	+	183	=	737	102	0	Yes
14:30 - 15:30	214	+	360	=	574	126	0	Yes
06:00 - 07:00	553	+	102	=	655	49	0	No
05:45 - 06:45	482	+	83	=	565	40	0	No
17:30 - 18:30	263	+	299	=	562	85	0	No
08:30 - 09:30	389	+	160	=	549	79	0	No
14:15 - 15:15	199	+	320	=	519	96	0	No
08:45 - 09:45	352	+	156	=	508	71	0	No
17:45 - 18:45	228	+	262	=	490	88	0	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2388

Study Date : 11/16/2023

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

8 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 5				Total	Minor Road CSAH 56		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:00 - 17:00	416	+	550	=	966	194	0	Yes
15:45 - 16:45	393	+	552	=	945	179	0	Yes
16:15 - 17:15	382	+	531	=	913	180	0	Yes
15:30 - 16:30	377	+	508	=	885	169	0	Yes
16:30 - 17:30	367	+	502	=	869	178	0	Yes
15:15 - 16:15	336	+	483	=	819	183	0	Yes
16:45 - 17:45	358	+	425	=	783	135	0	Yes
15:00 - 16:00	248	+	468	=	716	159	0	Yes
06:45 - 07:45	653	+	164	=	817	88	0	No
06:30 - 07:30	664	+	147	=	811	77	0	No
07:00 - 08:00	633	+	168	=	801	98	0	No
06:15 - 07:15	644	+	122	=	766	66	0	No

