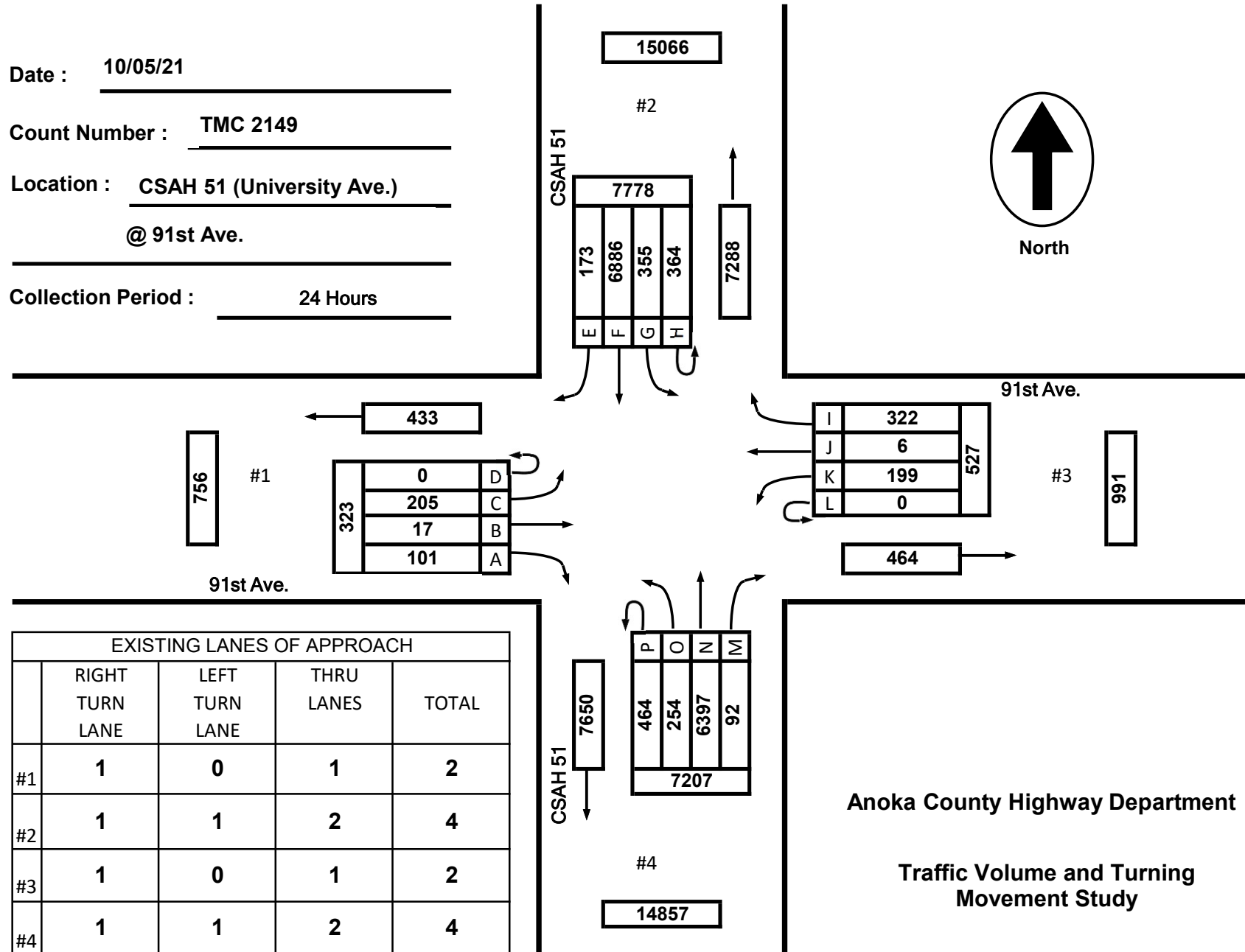


Date : 10/05/21

Count Number : TMC 2149

Location : CSAH 51 (University Ave.)
@ 91st Ave.

Collection Period : 24 Hours



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

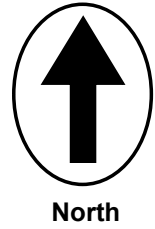
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 10/05/21

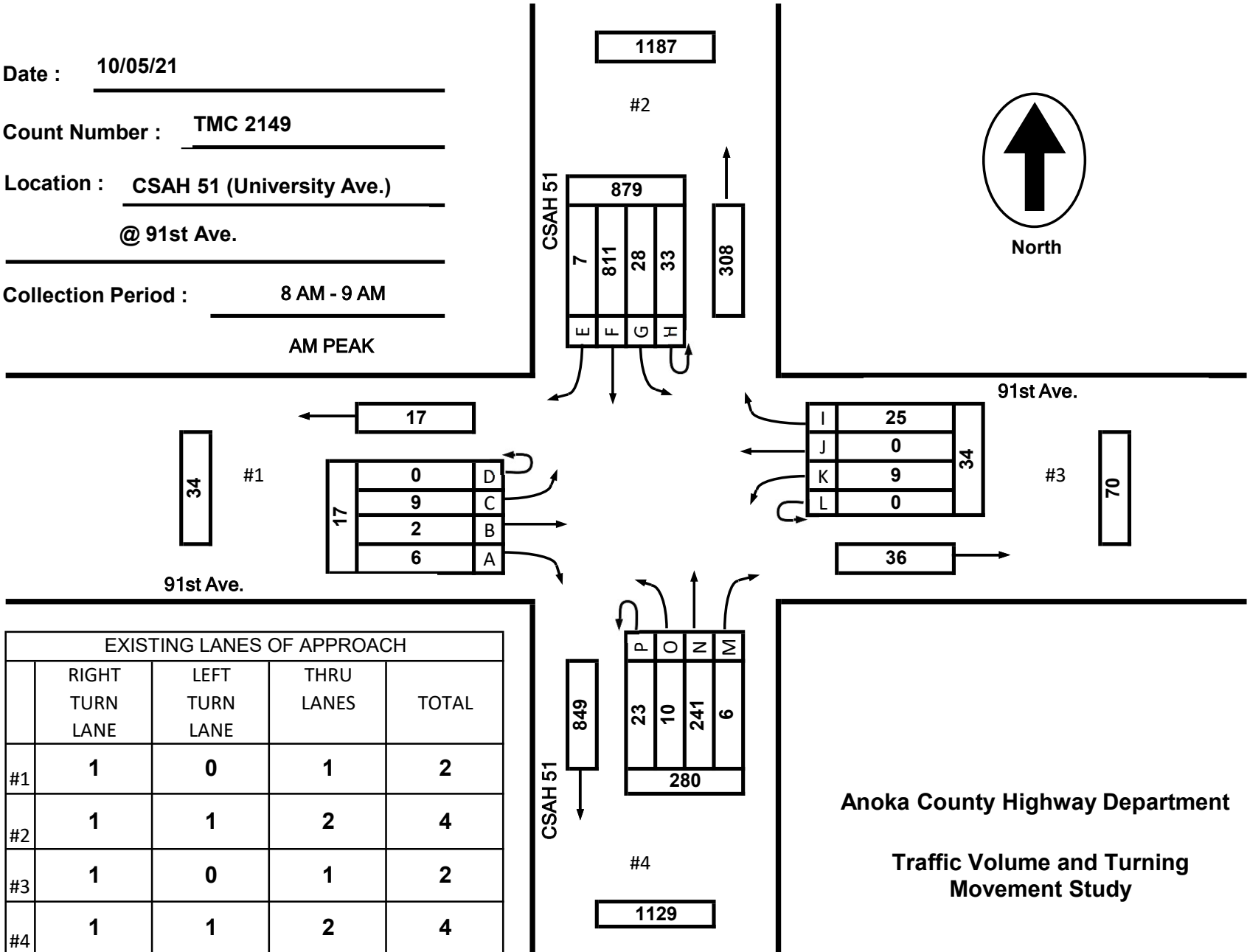
Count Number : TMC 2149

Location : CSAH 51 (University Ave.)
@ 91st Ave.

Collection Period : 8 AM - 9 AM
AM PEAK



North



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

Anoka County Highway Department
Traffic Volume and Turning Movement Study

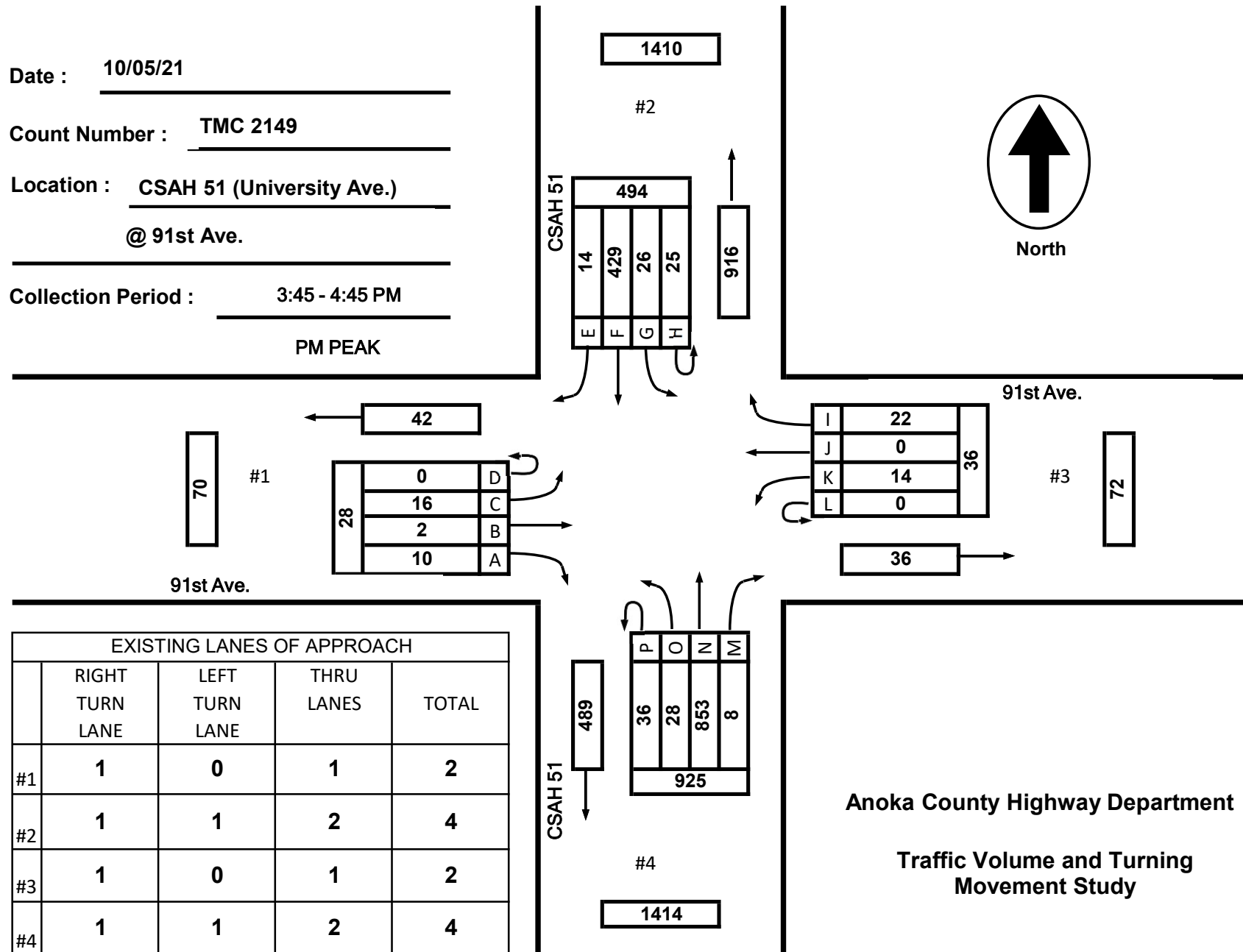
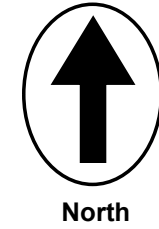
Date : 10/05/21

Count Number : TMC 2149

Location : CSAH 51 (University Ave.)
@ 91st Ave.

Collection Period : 3:45 - 4:45 PM

PM PEAK



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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study

**CSAH 51 (University Ave.) @ 91st Ave.
Blaine MN
Tuesday, October 5, 2021**

Time	Southbound CSAH 51						Westbound 91st Ave						Northbound CSAH 51						Eastbound 91st 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	2	1	0	0	3	0	0	0	0	0	0	1	2	11	0	0	14	0	1	0	0	0	1	18
12:15 AM	1	2	2	1	0	6	0	0	0	0	0	0	0	0	7	2	0	9	0	0	0	0	0	0	15
12:30 AM	0	2	5	0	0	7	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	10
12:45 AM	1	0	4	0	0	5	0	1	0	0	0	1	0	0	4	0	0	4	0	1	0	0	0	1	11
Hourly Total	2	6	12	1	0	21	0	1	0	0	0	1	1	2	25	2	0	30	0	2	0	0	0	2	54
1:00 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	1	0	1	17
1:15 AM	0	0	4	2	0	6	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	0	1	10
1:30 AM	2	0	4	1	0	7	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	10
1:45 AM	0	0	2	0	0	2	0	0	1	0	0	1	0	0	6	0	0	6	0	1	0	0	0	1	10
Hourly Total	2	0	14	3	0	19	0	0	1	0	0	1	0	0	23	0	0	23	0	3	0	1	0	4	47
2:00 AM	0	1	2	0	0	3	0	0	0	0	0	0	0	1	8	1	0	10	0	0	0	0	0	0	13
2:15 AM	3	0	2	0	0	5	0	0	0	0	0	0	0	0	7	0	0	7	0	1	0	0	0	1	13
2:30 AM	2	0	3	1	0	6	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	10
2:45 AM	0	0	4	1	0	5	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	8
Hourly Total	5	1	11	2	0	19	0	1	0	0	0	1	0	1	21	1	0	23	0	1	0	0	0	1	44
3:00 AM	1	0	7	0	0	8	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	11
3:15 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	8
3:30 AM	0	0	5	0	0	5	0	1	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	0	11
3:45 AM	1	0	9	0	0	10	0	0	0	0	0	0	0	1	4	0	0	5	0	1	0	0	0	1	16
Hourly Total	2	0	26	0	0	28	0	1	0	0	1	1	0	1	14	1	0	16	0	1	0	0	0	1	46
4:00 AM	0	0	10	0	0	10	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	17
4:15 AM	0	0	14	0	0	14	0	0	0	1	0	1	0	0	4	0	0	4	0	0	0	0	0	0	19
4:30 AM	0	2	28	0	0	30	0	1	0	1	0	2	0	0	5	0	0	5	0	1	0	0	0	1	38
4:45 AM	0	0	44	1	0	45	0	1	0	2	0	3	1	0	3	0	0	4	0	0	0	0	0	0	52
Hourly Total	0	2	96	1	0	99	0	2	0	4	0	6	1	0	19	0	0	20	0	1	0	0	0	1	126
5:00 AM	1	0	20	0	0	21	0	2	0	1	0	3	2	1	7	0	0	10	0	1	0	0	0	1	35
5:15 AM	2	0	45	1	0	48	0	2	0	1	0	3	1	1	3	0	0	5	0	2	0	1	0	3	59
5:30 AM	0	1	68	0	0	69	0	1	0	3	0	4	1	1	10	0	0	12	0	2	2	0	0	4	89
5:45 AM	2	3	65	0	0	70	0	5	0	0	0	5	0	0	6	0	0	6	0	1	1	0	0	2	83
Hourly Total	5	4	198	1	0	208	0	10	0	5	0	15	4	3	26	0	0	33	0	6	3	1	0	10	266
6:00 AM	2	2	57	2	0	63	0	4	0	4	0	8	3	0	18	1	0	22	0	1	0	1	0	2	95
6:15 AM	1	0	58	1	0	60	0	1	0	2	0	3	3	1	32	1	0	37	0	2	0	0	0	2	102
6:30 AM	0	3	98	0	0	101	0	1	0	2	0	3	1	1	31	0	0	33	0	3	0	1	0	4	141
6:45 AM	0	2	120	0	0	122	0	8	0	3	0	11	0	2	40	1	0	43	0	2	0	1	0	3	179
Hourly Total	3	7	333	3	0	346	0	14	0	11	0	25	7	4	121	3	0	135	0	8	0	3	0	11	517
7:00 AM	5	2	133	2	0	142	0	4	0	7	1	11	2	3	35	1	0	41	0	4	0	2	0	6	200
7:15 AM	4	15	167	0	0	186	0	7	0	10	0	17	2	1	39	1	0	43	0	0	0	0	0	0	246
7:30 AM	6	11	206	0	0	223	0	5	1	17	1	23	5	0	49	1	2	55	0	4	0	1	0	5	306
7:45 AM	2	5	213	3	1	223	0	3	0	10	0	13	3	1	77	0	0	81	0	2	0	2	0	4	321
Hourly Total	17	33	719	5	1	774	0	19	1	44	2	64	12	5	200	3	2	220	0	10	0	5	0	15	1073

**CSAH 51 (University Ave.) @ 91st Ave.
Blaine MN
Tuesday, October 5, 2021**

Time	Southbound CSAH 51						Westbound 91st Ave						Northbound CSAH 51						Eastbound 91st 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	10	7	181	2	0	200	0	1	0	6	0	7	2	0	51	2	0	55	0	2	0	2	0	4	266
8:15 AM	8	8	184	3	0	203	0	5	0	4	1	9	10	1	75	0	0	86	0	2	0	1	0	3	301
8:30 AM	8	7	223	1	0	239	0	1	0	10	0	11	5	3	57	2	0	67	0	2	2	0	0	4	321
8:45 AM	7	6	223	1	0	237	0	2	0	5	0	7	6	6	58	2	0	72	0	3	0	3	0	6	322
Hourly Total	33	28	811	7	0	879	0	9	0	25	1	34	23	10	241	6	0	280	0	9	2	6	0	17	1210
9:00 AM	8	2	147	4	4	161	0	2	0	1	0	3	6	4	66	1	0	77	0	3	0	3	0	6	247
9:15 AM	4	3	127	1	0	135	0	3	0	0	1	3	1	3	50	0	1	54	0	4	0	0	0	4	196
9:30 AM	4	3	90	2	0	99	0	3	0	6	2	9	7	4	59	0	2	70	0	4	0	4	0	8	186
9:45 AM	7	0	113	2	1	122	0	2	0	3	2	5	6	3	67	2	0	78	0	2	0	2	0	4	209
Hourly Total	23	8	477	9	5	517	0	10	0	10	5	20	20	14	242	3	3	279	0	13	0	9	0	22	838
10:00 AM	4	5	86	2	0	97	0	2	0	8	0	10	6	0	68	0	0	74	0	2	0	2	0	4	185
10:15 AM	3	0	107	1	1	111	0	3	0	6	1	9	4	7	59	0	0	70	0	2	0	2	0	4	194
10:30 AM	5	0	91	5	0	101	0	4	0	5	0	9	6	10	62	0	0	78	0	4	0	1	0	5	193
10:45 AM	4	2	89	0	0	95	0	3	0	3	2	6	6	3	87	2	0	98	0	3	0	2	0	5	204
Hourly Total	16	7	373	8	1	404	0	12	0	22	3	34	22	20	276	2	0	320	0	11	0	7	0	18	776
11:00 AM	4	1	91	1	0	97	0	0	0	2	1	2	15	2	87	0	0	104	0	3	0	2	0	5	208
11:15 AM	4	5	95	1	0	105	0	3	0	1	1	4	19	2	73	2	1	96	0	0	0	4	0	4	209
11:30 AM	5	7	92	2	0	106	0	3	0	3	0	6	10	5	88	2	0	105	0	2	0	0	0	2	219
11:45 AM	6	0	98	2	0	106	0	1	0	4	0	5	11	5	85	0	0	101	0	1	1	1	0	3	215
Hourly Total	19	13	376	6	0	414	0	7	0	10	2	17	55	14	333	4	1	406	0	6	1	7	0	14	851
12:00 PM	6	5	92	0	0	103	0	8	0	4	0	12	10	4	98	2	0	114	0	3	0	1	0	4	233
12:15 PM	7	3	96	2	0	108	0	2	0	3	0	5	9	1	83	1	0	94	0	4	0	2	0	6	213
12:30 PM	4	3	98	3	0	108	0	5	0	6	1	11	7	3	89	0	0	99	0	6	0	3	0	9	227
12:45 PM	2	3	121	5	0	131	0	2	0	4	1	6	13	2	101	1	1	117	0	4	0	2	0	6	260
Hourly Total	19	14	407	10	0	450	0	17	0	17	2	34	39	10	371	4	1	424	0	17	0	8	0	25	933
1:00 PM	3	1	112	3	0	119	0	4	0	3	0	7	10	5	81	3	0	99	0	7	0	3	0	10	235
1:15 PM	7	8	94	1	0	110	0	1	0	2	0	3	12	4	103	5	0	124	0	2	0	0	0	2	239
1:30 PM	3	1	84	4	0	92	0	3	0	10	0	13	13	4	91	3	0	111	0	2	0	1	0	3	219
1:45 PM	5	5	110	2	0	122	0	3	0	5	0	8	5	6	98	1	0	110	0	7	0	1	0	8	248
Hourly Total	18	15	400	10	0	443	0	11	0	20	0	31	40	19	373	12	0	444	0	18	0	5	0	23	941
2:00 PM	4	15	89	5	0	113	0	2	0	2	0	4	10	3	107	1	0	121	0	4	1	1	0	6	244
2:15 PM	7	11	93	6	0	117	0	3	0	11	1	14	8	4	114	2	0	128	0	5	0	2	0	7	266
2:30 PM	7	6	105	2	0	120	0	3	0	10	0	13	10	5	143	0	0	158	0	5	1	1	0	7	298
2:45 PM	5	9	109	4	0	127	0	7	0	6	0	13	14	4	136	1	0	155	0	4	0	2	0	6	301
Hourly Total	23	41	396	17	0	477	0	15	0	29	1	44	42	16	500	4	0	562	0	18	2	6	0	26	1109
3:00 PM	4	10	103	3	0	120	0	3	1	9	1	13	20	3	153	0	0	176	0	5	1	1	0	7	316
3:15 PM	5	11	89	7	0	112	0	5	0	12	2	17	4	3	180	1	0	188	0	2	0	1	0	3	320
3:30 PM	7	9	106	3	0	125	0	3	0	11	2	14	12	8	199	1	1	220	0	2	1	1	0	4	363
3:45 PM	5	10	101	1	0	117	0	3	0	7	2	10	11	2	210	3	0	226	0	4	0	3	0	7	360
Hourly Total	21	40	399	14	0	474	0	14	1	39	7	54	47	16	742	5	1	810	0	13	2	6	0	21	1359

**CSAH 51 (University Ave.) @ 91st Ave.
Blaine MN
Tuesday, October 5, 2021**

Time	Southbound CSAH 51						Westbound 91st Ave						Northbound CSAH 51						Eastbound 91st 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	4	9	121	2	0	136	0	6	0	1	0	7	5	11	239	4	0	259	0	5	0	2	0	7	409
4:15 PM	6	2	108	8	0	124	0	2	0	7	1	9	14	7	186	1	0	208	0	2	2	3	0	7	348
4:30 PM	10	5	99	3	0	117	0	3	0	7	2	10	6	8	218	0	1	232	0	5	0	2	0	7	366
4:45 PM	6	11	114	3	0	134	0	1	0	8	0	9	7	5	188	1	0	201	0	5	0	2	0	7	351
Hourly Total	26	27	442	16	0	511	0	12	0	23	3	35	32	31	831	6	1	900	0	17	2	9	0	28	1474
5:00 PM	7	5	112	3	0	127	0	5	0	2	3	7	9	1	182	2	0	194	0	1	1	2	0	4	332
5:15 PM	13	10	108	5	0	136	0	4	0	2	0	6	5	6	173	2	2	186	0	8	0	1	0	9	337
5:30 PM	12	6	115	7	0	140	0	2	2	2	1	6	3	7	147	1	0	158	0	5	0	2	0	7	311
5:45 PM	7	9	97	3	0	116	0	3	0	5	1	8	7	3	142	4	0	156	0	7	0	2	0	9	289
Hourly Total	39	30	432	18	0	519	0	14	2	11	5	27	24	17	644	9	2	694	0	21	1	7	0	29	1269
6:00 PM	8	5	111	4	0	128	0	5	0	1	2	6	6	6	118	2	0	132	0	0	0	1	0	1	267
6:15 PM	9	7	83	3	0	102	0	7	0	5	2	12	4	3	115	2	0	124	0	2	0	2	0	4	242
6:30 PM	5	9	90	4	0	108	0	2	0	4	0	6	15	6	93	2	0	116	0	2	0	2	0	4	234
6:45 PM	6	6	92	2	0	106	0	2	0	7	0	9	13	4	117	2	0	136	0	3	0	2	0	5	256
Hourly Total	28	27	376	13	0	444	0	16	0	17	4	33	38	19	443	8	0	508	0	7	0	7	0	14	999
7:00 PM	3	4	70	0	0	77	0	2	0	5	0	7	6	9	110	3	1	128	0	2	0	0	0	2	214
7:15 PM	8	6	64	4	0	82	0	0	0	4	0	4	3	4	94	0	0	101	0	1	0	1	0	2	189
7:30 PM	6	0	55	5	0	66	0	0	0	2	0	2	2	8	71	4	0	85	0	3	1	1	0	5	158
7:45 PM	5	5	46	1	0	57	0	1	0	5	0	6	7	4	69	1	0	81	0	1	0	3	0	4	148
Hourly Total	22	15	235	10	0	282	0	3	0	16	0	19	18	25	344	8	1	395	0	7	1	5	0	13	709
8:00 PM	6	1	44	3	0	54	0	0	0	2	0	2	6	4	78	0	0	88	0	1	1	1	0	3	147
8:15 PM	8	6	43	1	0	58	0	2	0	4	0	6	3	2	66	1	0	72	0	2	1	0	0	3	139
8:30 PM	5	4	41	3	0	53	0	3	0	1	0	4	7	2	58	3	0	70	0	1	0	3	0	4	131
8:45 PM	1	5	33	2	0	41	0	0	0	1	0	1	0	2	61	1	0	64	0	2	0	2	0	4	110
Hourly Total	20	16	161	9	0	206	0	5	0	8	0	13	16	10	263	5	0	294	0	6	2	6	0	14	527
9:00 PM	2	5	31	0	0	38	0	1	0	2	2	3	4	3	50	2	0	59	0	2	0	0	0	2	102
9:15 PM	0	1	19	1	0	21	0	0	0	3	0	3	1	1	41	2	0	45	0	2	0	0	0	2	71
9:30 PM	3	1	34	1	0	39	0	1	0	1	0	2	4	2	38	0	0	44	0	1	0	0	0	1	86
9:45 PM	2	4	13	2	0	21	0	1	0	1	0	2	3	1	31	0	0	35	0	1	0	0	0	1	59
Hourly Total	7	11	97	4	0	119	0	3	0	7	2	10	12	7	160	4	0	183	0	6	0	0	0	6	318
10:00 PM	2	1	17	0	0	20	0	3	0	0	0	3	2	1	26	1	0	30	0	0	0	0	0	0	53
10:15 PM	1	0	21	1	0	23	0	0	0	0	0	0	1	4	34	0	0	39	0	0	0	1	0	1	63
10:30 PM	2	3	12	0	0	17	0	0	0	3	0	3	1	0	28	0	0	29	0	0	0	0	0	0	49
10:45 PM	3	0	10	2	0	15	0	0	0	0	0	0	3	1	26	0	0	30	0	2	0	1	0	3	48
Hourly Total	8	4	60	3	0	75	0	3	0	3	0	6	7	6	114	1	0	128	0	2	0	2	0	4	213
11:00 PM	2	1	16	0	0	19	0	0	0	0	0	0	4	0	32	1	0	37	0	0	0	0	0	0	56
11:15 PM	1	1	9	2	0	13	0	0	1	1	0	2	0	2	15	0	0	17	0	0	1	0	0	1	33
11:30 PM	1	2	4	1	0	8	0	0	0	0	0	0	0	1	13	0	0	14	0	1	0	1	0	2	24
11:45 PM	2	2	6	0	0	10	0	0	0	0	0	0	0	1	11	0	0	12	0	1	0	0	0	1	23
Hourly Total	6	6	35	3	0	50	0	0	1	1	0	2	4	4	71	1	0	80	0	2	1	1	0	4	136
DAILY TOTAL	364	355	6886	173	7	7778	0	199	6	322	38	527	464	254	6397	92	12	7207	0	205	17	101	0	323	15835
Cars	363	325	6695	161	6	7544	0	195	6	298	20	499	462	250	6273	88	11	7073	0	197	15	96	0	308	15424
Heavy Vehicles	1	30	191	12	1	234	0	4	0	24	18	28	2	4	124	4	1	134	0	8	2	5	0	15	411
Heavy Vehicle %	0.27%	8.45%	2.77%	6.94%	14.29%	3.01%	0.00%	2.01%	0.00%	7.45%	47.37%	5.31%	0.43%	1.57%	1.94%	4.35%	8.33%	1.86%	0.00%	3.90%	11.76%	4.95%	0.00%	4.64%	2.60%

**CSAH 51 (University Ave.) @ 91st Ave.
Blaine MN
Tuesday, October 5, 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							
8:00 AM	10	7	181	2	0	200	0	1	0	6	0	7	2	0	51	2	0	55	0	2	0	2	0	4	0	2	0	2	0	4	266
8:15 AM	8	8	184	3	0	203	0	5	0	4	1	9	10	1	75	0	0	86	0	2	0	1	0	3	0	2	0	1	0	3	301
8:30 AM	8	7	223	1	0	239	0	1	0	10	0	11	5	3	57	2	0	67	0	2	2	0	0	4	0	2	2	0	0	4	321
8:45 AM	7	6	223	1	0	237	0	2	0	5	0	7	6	6	58	2	0	72	0	3	0	3	0	6	0	3	0	3	0	6	322
Peak Hour Total	33	28	811	7	0	879	0	9	0	25	1	34	23	10	241	6	0	280	0	9	2	6	0	17	0	9	2	6	0	17	1210
PHF	0.825	0.875	0.909	0.583	0.000	0.919	0.000	0.450	0.000	0.625	0.250	0.773	0.575	0.417	0.803	0.750	0.000	0.814	0.000	0.750	0.250	0.500	0.000	0.708	0.000	0.750	0.250	0.500	0.000	0.708	0.939

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	5	10	101	1	0	117	0	3	0	7	2	10	11	2	210	3	0	226	0	4	0	3	0	7	0	4	0	3	0	7	360
4:00 PM	4	9	121	2	0	136	0	6	0	1	0	7	5	11	239	4	0	259	0	5	0	2	0	7	0	5	0	2	0	7	409
4:15 PM	6	2	108	8	0	124	0	2	0	7	1	9	14	7	186	1	0	208	0	2	2	3	0	7	0	2	2	3	0	7	348
4:30 PM	10	5	99	3	0	117	0	3	0	7	2	10	6	8	218	0	1	232	0	5	0	2	0	7	0	5	0	2	0	7	366
Peak Hour Total	25	26	429	14	0	494	0	14	0	22	5	36	36	28	853	8	1	925	0	16	2	10	0	28	0	16	2	10	0	28	1483
PHF	0.625	0.650	0.886	0.438	0.000	0.908	0.000	0.583	0.000	0.786	0.625	0.900	0.643	0.636	0.892	0.500	0.250	0.893	0.000	0.800	0.250	0.833	0.000	1.000	0.000	0.800	0.250	0.833	0.000	1.000	0.906

Total Vehicles On Leg					15066	
Vehicles Entering Intersection			7778	Vehicles Exiting Intersection		7288
Southbound						
Cars	161	6695	325	363	6	
Heavy	12	191	30	1	1	
Total	173	6886	355	364	7	



Total Vehicles on Leg 756	Vehicles Entering Intersection 323	Eastbound	Cars	Heavy	Total
			0	0	0
	0		0	0	
	197		8	205	
Vehicles Exiting Intersection 433					
		15	2	17	
			96	5	101

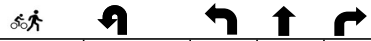


Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 527	Total Vehicles on Leg 991
298	24	322			
6	0	6			
195	4	199			
0	0	0		Vehicles Exiting Intersection 464	
20	18	38			



Cars	11	462	250	6273	88	
Heavy	1	2	4	124	4	
Total	12	464	254	6397	92	
Northbound						
Vehicles Entering Intersection			7207	Vehicles Exiting Intersection		7650
Total Vehicles On Leg			14857			



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2149

Study Date : 10/27/2021

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 51 (University Ave.)

Number of Lanes : 2+

Total Approach Volume: 7,207

Southbound: CSAH 51 (University Ave.)

Number of Lanes :2+

Total Approach Volume: 7,778

Minor Street Approaches

Eastbound: 91st Ave.

Number of Lanes :1

Total Approach Volume: 323

Westbound: 91st Ave.

Number of Lanes :1

Total Approach Volume: 527

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 2 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 4 hours, 8 are needed

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

Number of hours (1) 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 2149

Study Date : 10/27/2021

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	
	CSAH 51 (University Ave.)					91st Ave.		
15:45 - 16:45	925	+	494	=	1419	28	36	No
15:30 - 16:30	913	+	502	=	1415	25	40	No
16:00 - 17:00	900	+	511	=	1411	28	35	No
15:15 - 16:15	893	+	490	=	1383	21	48	No
16:15 - 17:15	835	+	502	=	1337	25	35	No
16:30 - 17:30	813	+	514	=	1327	27	32	No
15:00 - 16:00	810	+	474	=	1284	21	54	No
16:45 - 17:45	739	+	537	=	1276	27	28	No
14:45 - 15:45	739	+	484	=	1223	20	57	No
17:00 - 18:00	694	+	519	=	1213	29	27	No
08:00 - 09:00	280	+	879	=	1159	17	34	No
14:30 - 15:30	677	+	479	=	1156	23	56	No
07:45 - 08:45	289	+	865	=	1154	15	40	No
17:15 - 18:15	632	+	520	=	1152	26	26	No
08:15 - 09:15	302	+	840	=	1142	19	30	No
07:30 - 08:30	277	+	849	=	1126	16	52	No
14:15 - 15:15	617	+	484	=	1101	27	53	No
07:15 - 08:15	234	+	832	=	1066	13	60	No
17:30 - 18:30	570	+	486	=	1056	21	32	No
08:30 - 09:30	270	+	772	=	1042	20	24	No
14:00 - 15:00	562	+	477	=	1039	26	44	No
07:00 - 08:00	220	+	774	=	994	15	64	No
13:45 - 14:45	517	+	472	=	989	28	39	No
17:45 - 18:45	528	+	454	=	982	18	32	No
18:00 - 19:00	508		444		952	14	33	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2149

Study Date : 10/27/2021

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 2 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	
	CSAH 51 (University Ave.)					91st Ave.		
14:15 - 15:15	617	+	484	=	1101	27	53	Yes
06:45 - 07:45	182	+	673	=	855	14	62	Yes
15:45 - 16:45	925	+	494	=	1419	28	36	No
15:30 - 16:30	913	+	502	=	1415	25	40	No
16:00 - 17:00	900	+	511	=	1411	28	35	No
15:15 - 16:15	893	+	490	=	1383	21	48	No
16:15 - 17:15	835	+	502	=	1337	25	35	No
16:30 - 17:30	813	+	514	=	1327	27	32	No
16:45 - 17:45	739	+	537	=	1276	27	28	No
17:00 - 18:00	694	+	519	=	1213	29	27	No
08:00 - 09:00	280	+	879	=	1159	17	34	No
07:45 - 08:45	289	+	865	=	1154	15	40	No
17:15 - 18:15	632	+	520	=	1152	26	26	No
08:15 - 09:15	302	+	840	=	1142	19	30	No
17:30 - 18:30	570	+	486	=	1056	21	32	No
08:30 - 09:30	270	+	772	=	1042	20	24	No
14:00 - 15:00	562	+	477	=	1039	26	44	No
13:45 - 14:45	517	+	472	=	989	28	39	No
17:45 - 18:45	528	+	454	=	982	18	32	No
18:00 - 19:00	508	+	444	=	952	14	33	No
13:30 - 14:30	470	+	444	=	914	24	39	No
12:30 - 13:30	439	+	468	=	907	27	27	No
08:45 - 09:45	273	+	632	=	905	24	22	No
13:15 - 14:15	466	+	437	=	903	19	28	No
12:45 - 13:45	451		452		903	21	29	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2149

Study Date : 10/27/2021

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 4 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 91st Ave.

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:45 - 16:45	925	+	494	=	1419	28	36	No
15:30 - 16:30	913	+	502	=	1415	25	40	No
16:00 - 17:00	900	+	511	=	1411	28	35	No
15:15 - 16:15	893	+	490	=	1383	21	48	No
16:15 - 17:15	835	+	502	=	1337	25	35	No
16:30 - 17:30	813	+	514	=	1327	27	32	No
15:00 - 16:00	810	+	474	=	1284	21	54	No
16:45 - 17:45	739	+	537	=	1276	27	28	No
14:45 - 15:45	739	+	484	=	1223	20	57	No
17:00 - 18:00	694	+	519	=	1213	29	27	No
08:00 - 09:00	280	+	879	=	1159	17	34	No
14:30 - 15:30	677	+	479	=	1156	23	56	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
15:00 - 16:00	810	+	474	=	1284	21	54	Yes
07:30 - 08:30	277	+	849	=	1126	16	52	Yes
14:00 - 15:00	562	+	477	=	1039	26	44	Yes
06:30 - 07:30	160	+	551	=	711	13	42	Yes
16:00 - 17:00	900	+	511	=	1411	28	35	No
16:15 - 17:15	835	+	502	=	1337	25	35	No
16:30 - 17:30	813	+	514	=	1327	27	32	No
16:45 - 17:45	739	+	537	=	1276	27	28	No
17:00 - 18:00	694	+	519	=	1213	29	27	No
17:15 - 18:15	632	+	520	=	1152	26	26	No
17:30 - 18:30	570	+	486	=	1056	21	32	No
08:30 - 09:30	270	+	772	=	1042	20	24	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2149

Study Date : 10/27/2021

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.

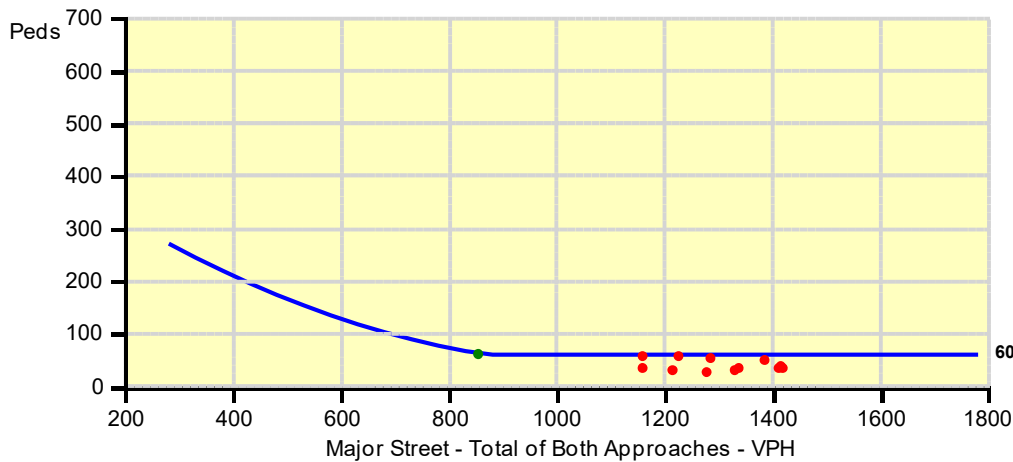
Summary

Only 1 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 91st Ave.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
06:45 - 07:45	182	+	673	=	855	14	62	Yes
15:45 - 16:45	925	+	494	=	1419	28	36	No
15:30 - 16:30	913	+	502	=	1415	25	40	No
16:00 - 17:00	900	+	511	=	1411	28	35	No
15:15 - 16:15	893	+	490	=	1383	21	48	No
16:15 - 17:15	835	+	502	=	1337	25	35	No
16:30 - 17:30	813	+	514	=	1327	27	32	No
15:00 - 16:00	810	+	474	=	1284	21	54	No
16:45 - 17:45	739	+	537	=	1276	27	28	No
14:45 - 15:45	739	+	484	=	1223	20	57	No
17:00 - 18:00	694	+	519	=	1213	29	27	No
							34	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2149

Study Date : 10/27/2021

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 91st Ave.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:45 - 16:45	925	+	494	=	1419	28	36	No
15:30 - 16:30	913	+	502	=	1415	25	40	No
16:00 - 17:00	900	+	511	=	1411	28	35	No
15:15 - 16:15	893	+	490	=	1383	21	48	No
16:15 - 17:15	835	+	502	=	1337	25	35	No
16:30 - 17:30	813	+	514	=	1327	27	32	No
15:00 - 16:00	810	+	474	=	1284	21	54	No
16:45 - 17:45	739	+	537	=	1276	27	28	No
14:45 - 15:45	739	+	484	=	1223	20	57	No
17:00 - 18:00	694	+	519	=	1213	29	27	No
08:00 - 09:00	280	+	879	=	1159	17	34	No
							56	No

