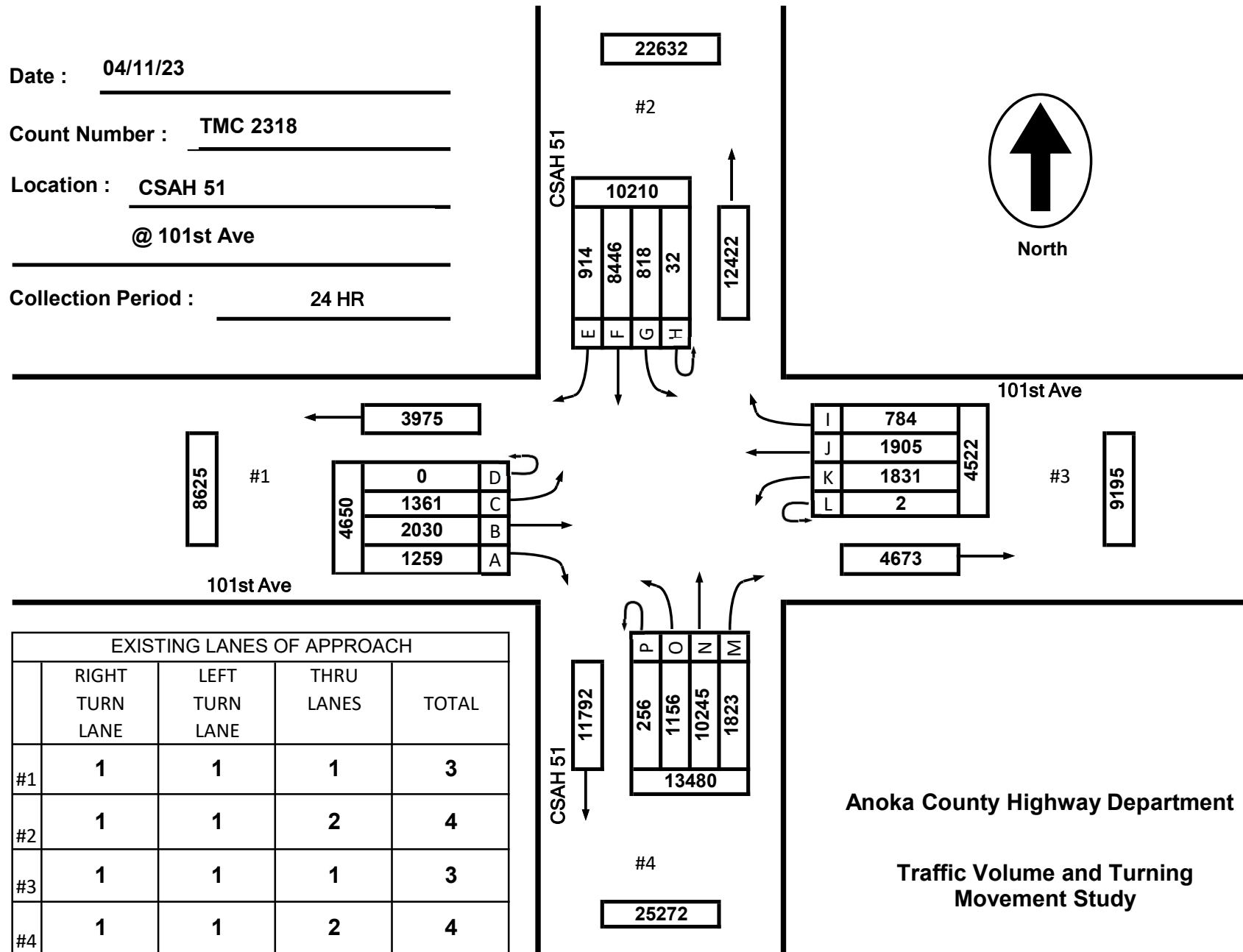


Date : 04/11/23

Count Number : TMC 2318

Location : CSAH 51
@ 101st Ave

Collection Period : 24 HR



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

Anoka County Highway Department

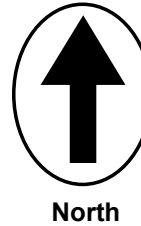
Traffic Volume and Turning Movement Study

Date : 04/11/23

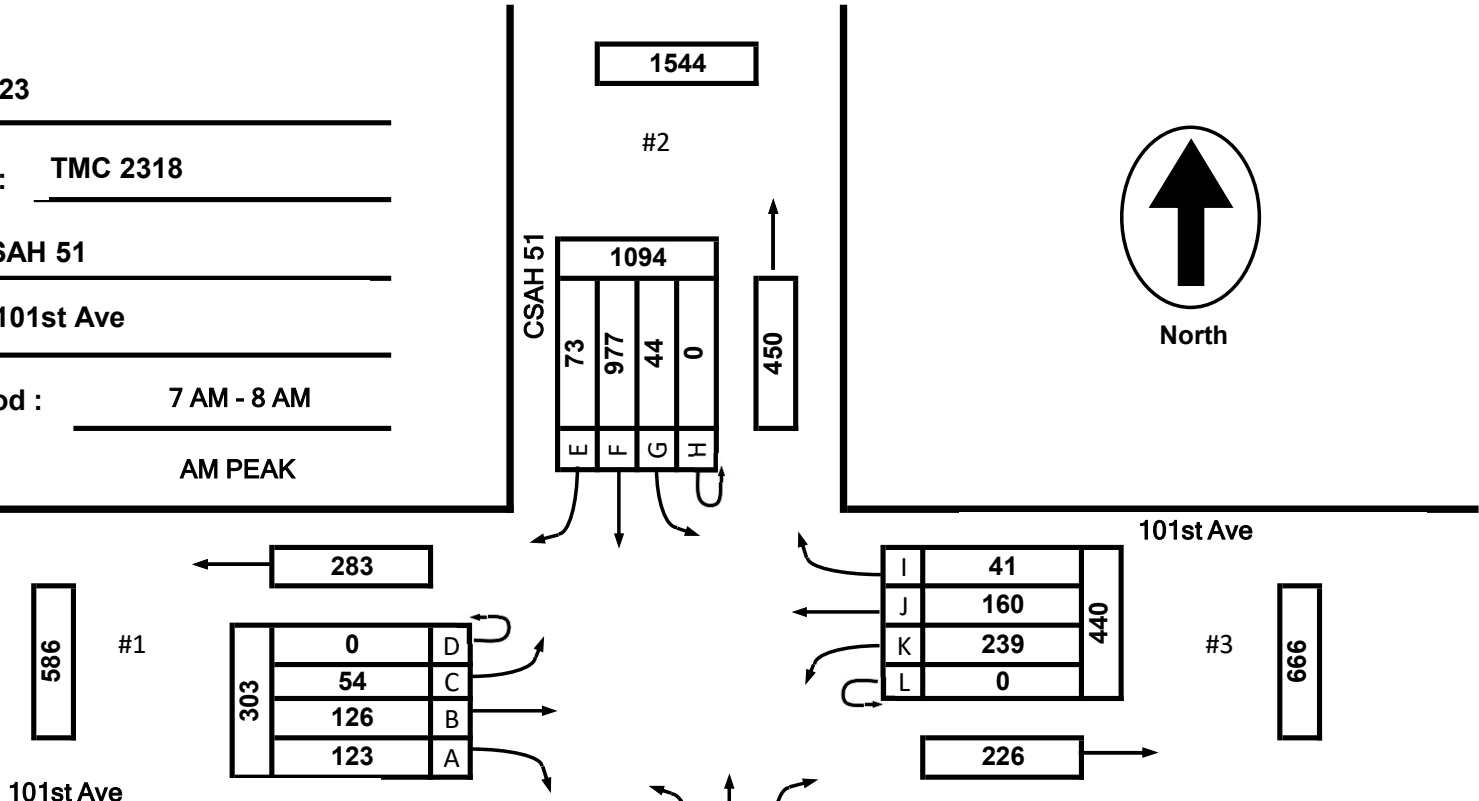
Count Number : TMC 2318

Location : CSAH 51
@ 101st Ave

Collection Period : 7 AM - 8 AM
AM PEAK



North



101st Ave

101st Ave

CSAH 51

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

Anoka County Highway Department

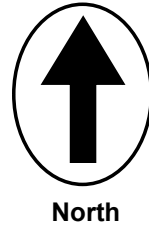
Traffic Volume and Turning Movement Study

Date : 04/11/23

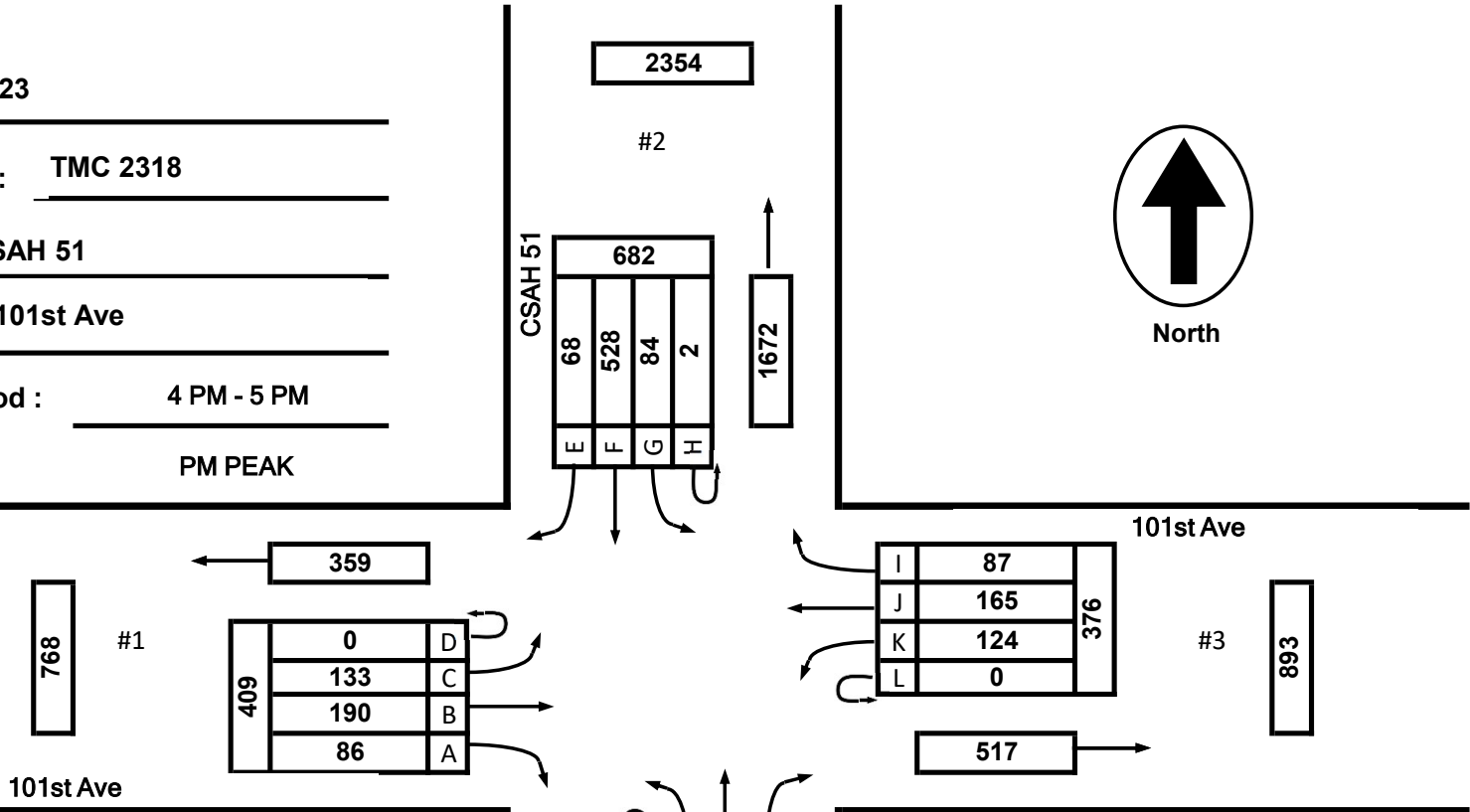
Count Number : TMC 2318

Location : CSAH 51
@ 101st Ave

Collection Period : 4 PM - 5 PM
PM PEAK



North



101st Ave

101st Ave

CSAH 51

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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study

TMC 2318 - CSAH 51 @ 101st 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	3	8	1	0	12	0	2	0	0	0	2	0	4	30	3	0	37	0	2	3	1	0	6	0	57
12:15 AM	0	0	7	0	0	7	0	2	0	0	0	2	0	3	13	3	0	19	0	1	5	2	0	8	0	36
12:30 AM	0	0	4	1	0	5	0	0	3	1	0	4	0	1	16	0	0	17	0	4	1	4	0	9	0	35
12:45 AM	0	1	7	1	0	9	0	1	3	1	0	5	0	2	18	5	0	25	0	1	1	2	0	4	0	43
Hourly Total	0	4	26	3	0	33	0	5	6	2	0	13	0	10	77	11	0	98	0	8	10	9	0	27	0	171
1:00 AM	0	1	12	2	0	15	0	0	3	0	0	3	1	2	14	1	0	18	0	4	1	3	0	8	0	44
1:15 AM	0	0	4	1	0	5	0	1	2	1	0	4	0	1	11	8	0	20	0	2	3	3	0	8	0	37
1:30 AM	0	2	6	1	0	9	0	1	3	1	0	5	1	4	8	4	0	17	0	1	1	1	0	3	0	34
1:45 AM	0	4	4	2	0	10	0	0	2	2	0	4	2	2	12	2	0	18	0	3	2	2	0	7	0	39
Hourly Total	0	7	26	6	0	39	0	2	10	4	0	16	4	9	45	15	0	73	0	10	7	9	0	26	0	154
2:00 AM	0	1	7	0	0	8	0	0	1	1	0	2	0	0	10	2	0	12	0	0	2	2	0	4	0	26
2:15 AM	0	0	3	0	0	3	0	0	0	1	0	1	0	1	16	3	0	20	0	0	2	1	0	3	0	27
2:30 AM	0	0	6	1	0	7	0	0	0	0	0	0	0	1	18	1	0	20	0	2	2	1	0	5	0	32
2:45 AM	0	1	3	1	0	5	0	2	1	0	0	3	1	3	6	2	0	12	0	3	1	0	0	4	0	24
Hourly Total	0	2	19	2	0	23	0	2	2	2	0	6	1	5	50	8	0	64	0	5	7	4	0	16	0	109
3:00 AM	0	0	14	0	0	14	0	1	1	2	0	4	1	0	7	1	0	9	0	1	1	0	0	2	0	29
3:15 AM	0	0	10	2	0	12	0	0	1	1	0	2	0	1	3	1	1	5	0	0	1	0	0	1	0	20
3:30 AM	0	1	18	0	0	19	0	2	0	0	0	2	0	1	5	1	0	7	0	3	1	4	0	8	0	36
3:45 AM	0	0	12	2	0	14	0	2	4	0	0	6	0	0	5	1	0	6	0	0	1	2	0	3	0	29
Hourly Total	0	1	54	4	0	59	0	5	6	3	0	14	1	2	20	4	1	27	0	4	4	6	0	14	0	114
4:00 AM	0	0	21	1	0	22	0	9	6	1	0	16	0	2	6	3	0	11	0	1	2	5	0	8	0	57
4:15 AM	0	1	34	4	0	39	0	10	4	0	0	14	0	0	8	0	0	8	0	0	3	5	0	8	0	69
4:30 AM	0	0	67	4	0	71	0	4	7	0	0	11	1	1	3	0	0	5	0	2	3	3	0	8	0	95
4:45 AM	0	3	54	4	0	61	0	12	9	1	0	22	0	3	10	0	0	13	0	0	3	7	0	10	0	106
Hourly Total	0	4	176	13	0	193	0	35	26	2	0	63	1	6	27	3	0	37	0	3	11	20	0	34	0	327
5:00 AM	0	4	68	11	1	83	0	14	8	1	1	23	0	2	6	1	0	9	0	3	3	14	0	20	0	135
5:15 AM	0	1	107	4	0	112	0	20	10	0	0	30	0	4	10	1	0	15	0	3	6	10	0	19	0	176
5:30 AM	0	2	134	9	1	145	0	26	20	0	0	46	1	7	12	4	0	24	0	4	5	19	0	28	0	243
5:45 AM	0	3	119	7	0	129	0	24	16	2	0	42	0	5	18	3	0	26	0	1	5	15	0	21	0	218
Hourly Total	0	10	428	31	2	469	0	84	54	3	1	141	1	18	46	9	0	74	0	11	19	58	0	88	0	772
6:00 AM	1	5	141	14	0	161	0	31	21	6	0	58	2	6	28	2	0	38	0	5	9	16	0	30	0	287
6:15 AM	0	4	208	16	0	228	0	32	14	3	0	49	5	9	33	9	1	56	0	6	10	26	0	42	0	375
6:30 AM	0	7	217	20	0	244	0	60	29	9	0	98	2	13	54	12	0	81	0	4	19	18	0	41	0	464
6:45 AM	0	9	209	18	0	236	0	43	33	5	1	81	3	10	67	7	1	87	0	9	19	27	0	55	0	459
Hourly Total	1	25	775	68	0	869	0	166	97	23	1	286	12	38	182	30	2	262	0	24	57	87	0	168	0	1585
7:00 AM	0	9	215	13	0	237	0	55	43	9	0	107	3	12	100	9	0	124	0	7	14	26	0	47	0	515
7:15 AM	0	10	251	14	0	275	0	68	42	11	0	121	9	11	75	15	0	110	0	12	24	25	0	61	0	567
7:30 AM	0	15	272	26	0	313	0	62	41	11	0	114	15	12	82	17	0	126	0	16	43	35	0	94	0	647
7:45 AM	0	10	239	20	0	269	0	54	34	10	0	98	7	15	98	15	0	135	0	19	45	37	0	101	0	603
Hourly Total	0	44	977	73	0	1094	0	239	160	41	0	440	34	50	355	56	0	495	0	54	126	123	0	303	0	2332

TMC 2318 - CSAH 51 @ 101st 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	8	153	23	0	184	0	43	28	5	0	76	8	17	82	22	2	129	0	13	22	29	0	64	453
8:15 AM	0	8	161	10	0	179	0	39	27	11	0	77	5	10	69	14	0	98	0	15	32	19	0	66	420
8:30 AM	1	6	180	17	0	204	0	42	18	5	0	65	1	16	79	15	0	111	0	12	23	20	0	55	435
8:45 AM	1	9	158	14	0	182	0	26	30	19	0	75	7	15	96	20	1	138	0	16	37	15	1	68	463
Hourly Total	2	31	652	64	0	749	0	150	103	40	0	293	21	58	326	71	3	476	0	56	114	83	1	253	1771
9:00 AM	0	22	113	11	0	146	0	17	25	10	0	52	4	17	94	16	0	131	0	20	43	14	0	77	406
9:15 AM	0	20	156	12	1	188	0	34	23	12	0	69	14	44	106	16	3	180	0	14	37	21	0	72	509
9:30 AM	0	11	134	9	0	154	0	37	35	11	0	83	4	16	90	16	1	126	0	21	14	14	0	49	412
9:45 AM	1	8	103	12	0	124	0	24	31	11	1	66	1	12	81	11	0	105	0	14	18	25	0	57	352
Hourly Total	1	61	506	44	1	612	0	112	114	44	1	270	23	89	371	59	4	542	0	69	112	74	0	255	1679
10:00 AM	2	6	95	10	0	113	0	29	22	3	0	54	2	10	74	16	0	102	0	17	22	13	0	52	321
10:15 AM	1	10	102	9	0	122	0	20	28	9	0	57	2	13	70	16	0	101	0	14	20	18	0	52	332
10:30 AM	0	13	97	12	0	122	1	28	30	8	2	67	3	12	82	13	0	110	0	12	28	20	0	60	359
10:45 AM	1	3	92	9	0	105	0	21	28	9	1	58	0	10	91	15	0	116	0	13	24	15	1	52	331
Hourly Total	4	32	386	40	0	462	1	98	108	29	3	236	7	45	317	60	0	429	0	56	94	66	1	216	1343
11:00 AM	1	6	84	8	0	99	0	19	27	7	0	53	4	8	82	19	0	113	0	13	25	10	0	48	313
11:15 AM	0	9	85	8	0	102	0	19	24	7	0	50	5	13	103	24	0	145	0	18	20	15	0	53	350
11:30 AM	1	12	96	18	0	127	0	18	33	10	0	61	2	18	91	15	0	126	0	18	29	12	0	59	373
11:45 AM	0	11	93	14	0	118	0	25	23	12	1	60	7	21	114	16	0	158	0	21	29	13	0	63	399
Hourly Total	2	38	358	48	0	446	0	81	107	36	1	224	18	60	390	74	0	542	0	70	103	50	0	223	1435
12:00 PM	0	10	83	8	0	101	0	16	31	10	0	57	1	15	126	20	1	162	0	26	21	17	1	64	384
12:15 PM	1	18	106	9	3	134	0	19	28	12	1	59	4	9	126	21	1	160	0	29	26	12	0	67	420
12:30 PM	0	8	92	14	0	114	0	22	21	16	0	59	3	10	121	25	0	159	0	16	25	15	2	56	388
12:45 PM	2	14	107	9	1	132	1	23	25	10	0	59	4	23	116	29	0	172	0	26	28	22	0	76	439
Hourly Total	3	50	388	40	4	481	1	80	105	48	1	234	12	57	489	95	2	653	0	97	100	66	3	263	1631
1:00 PM	0	15	110	9	1	134	0	17	28	9	0	54	2	13	136	19	0	170	0	15	27	17	0	59	417
1:15 PM	0	7	114	12	0	133	0	23	30	13	0	66	1	11	157	19	0	188	0	25	14	24	0	63	450
1:30 PM	1	6	109	12	0	128	0	19	29	10	1	58	0	13	154	29	0	196	0	15	17	24	0	56	438
1:45 PM	1	0	106	12	1	119	0	27	16	14	1	57	5	13	154	23	0	195	0	19	30	15	0	64	435
Hourly Total	2	28	439	45	2	514	0	86	103	46	2	235	8	50	601	90	0	749	0	74	88	80	0	242	1740
2:00 PM	0	10	118	13	0	141	0	27	24	12	0	63	2	20	155	22	0	199	0	22	34	19	0	75	478
2:15 PM	1	13	121	7	0	142	0	14	29	9	0	52	1	26	191	41	0	259	0	16	29	19	0	64	517
2:30 PM	1	14	129	15	0	159	0	26	29	9	0	64	2	27	209	28	0	266	0	27	28	22	0	77	566
2:45 PM	1	15	88	19	1	123	0	25	26	11	0	62	4	22	259	44	0	329	0	30	42	20	1	92	606
Hourly Total	3	52	456	54	1	565	0	92	108	41	0	241	9	95	814	135	0	1053	0	95	133	80	1	308	2167
3:00 PM	0	12	124	11	0	147	0	23	31	14	0	68	1	16	245	37	0	299	0	24	49	14	0	87	601
3:15 PM	1	15	124	16	0	156	0	31	40	14	0	85	1	37	316	49	0	403	0	37	54	19	1	110	754
3:30 PM	1	33	137	16	2	187	0	16	38	17	0	71	2	25	299	63	1	389	0	35	66	22	1	123	770
3:45 PM	0	11	108	19	0	138	0	19	39	22	2	80	0	16	317	49	1	382	0	44	62	23	0	129	729
Hourly Total	2	71	493	62	2	628	0	89	148	67	2	304	4	94	1177	198	2	1473	0	140	231	78	2	449	2854

TMC 2318 - CSAH 51 @ 101st 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	21	142	13	0	176	0	38	42	19	0	99	14	41	370	69	0	494	0	26	43	25	0	94	863
4:15 PM	1	13	136	15	0	165	0	29	45	27	0	101	13	34	331	54	0	432	0	38	61	24	0	123	821
4:30 PM	0	23	146	24	0	193	0	30	34	21	2	85	6	28	375	60	0	469	0	33	31	22	0	86	833
4:45 PM	1	27	104	16	0	148	0	27	44	20	0	91	4	23	374	60	0	461	0	36	55	15	0	106	806
Hourly Total	2	84	528	68	0	682	0	124	165	87	2	376	37	126	1450	243	0	1856	0	133	190	86	0	409	3323
5:00 PM	1	24	112	13	0	150	0	38	42	25	0	105	5	22	343	59	0	429	0	34	50	13	0	97	781
5:15 PM	2	20	119	11	0	152	0	25	38	20	0	83	6	19	308	57	0	390	0	44	51	17	3	112	737
5:30 PM	0	10	119	21	1	150	0	33	35	15	2	83	8	20	313	43	0	384	0	33	44	24	1	101	718
5:45 PM	0	23	100	16	0	139	0	32	25	17	0	74	5	20	230	51	0	306	0	35	33	13	1	81	600
Hourly Total	3	77	450	61	1	591	0	128	140	77	2	345	24	81	1194	210	0	1509	0	146	178	67	5	391	2836
6:00 PM	2	14	122	16	0	154	0	27	42	21	0	90	7	21	187	43	0	258	0	29	26	12	1	67	569
6:15 PM	1	16	114	13	0	144	0	23	21	18	0	62	3	13	212	29	0	257	0	23	26	19	0	68	531
6:30 PM	0	17	94	11	0	122	0	28	27	21	2	76	2	16	154	24	0	196	0	23	32	15	0	70	464
6:45 PM	1	12	86	15	0	114	0	22	20	14	0	56	3	16	141	27	1	187	0	21	25	13	2	59	416
Hourly Total	4	59	416	55	0	534	0	100	110	74	2	284	15	66	694	123	1	898	0	96	109	59	3	264	1980
7:00 PM	0	22	81	10	0	113	0	19	25	7	0	51	3	13	153	27	6	196	0	16	23	14	7	53	413
7:15 PM	0	9	67	10	0	86	0	15	26	8	2	49	2	8	123	25	1	158	0	15	27	12	1	54	347
7:30 PM	0	13	77	8	0	98	0	14	27	12	1	53	1	15	130	27	0	173	0	18	38	11	1	67	391
7:45 PM	0	15	54	10	0	79	0	15	22	7	0	44	1	14	109	14	0	138	0	15	15	8	0	38	299
Hourly Total	0	59	279	38	0	376	0	63	100	34	3	197	7	50	515	93	7	665	0	64	103	45	9	212	1450
8:00 PM	0	12	62	14	0	88	0	8	18	11	1	37	1	21	115	21	1	158	0	19	24	11	4	54	337
8:15 PM	0	7	70	7	0	84	0	12	17	6	0	35	3	9	119	34	0	165	0	10	24	15	0	49	333
8:30 PM	1	6	73	8	0	88	0	18	13	7	0	38	2	13	97	26	0	138	0	13	22	4	0	39	303
8:45 PM	1	9	58	6	0	74	0	4	14	6	0	24	1	10	84	16	0	111	0	19	31	14	0	64	273
Hourly Total	2	34	263	35	0	334	0	42	62	30	1	134	7	53	415	97	1	572	0	61	101	44	4	206	1246
9:00 PM	0	14	68	10	0	92	0	8	14	17	0	39	1	11	85	12	0	109	0	17	16	13	1	46	286
9:15 PM	0	3	40	4	0	47	0	7	12	7	0	26	1	10	78	15	0	104	0	9	22	9	0	40	217
9:30 PM	0	2	40	9	0	51	0	2	11	2	0	15	2	12	66	11	0	91	0	14	16	7	1	37	194
9:45 PM	1	7	36	6	0	50	0	6	3	5	0	14	2	7	67	14	0	90	0	6	9	4	0	19	173
Hourly Total	1	26	184	29	0	240	0	23	40	31	0	94	6	40	296	52	0	394	0	46	63	33	2	142	870
10:00 PM	0	4	40	9	0	53	0	6	5	6	0	17	2	10	82	15	0	109	0	8	17	6	0	31	210
10:15 PM	0	5	27	6	0	38	0	2	8	5	0	15	0	13	57	18	0	88	0	8	7	2	0	17	158
10:30 PM	0	3	24	2	0	29	0	5	5	2	0	12	0	4	68	6	0	78	0	5	11	5	0	21	140
10:45 PM	0	0	21	4	0	25	0	2	4	2	1	8	1	8	44	7	0	60	0	3	8	7	0	18	111
Hourly Total	0	12	112	21	0	145	0	15	22	15	1	52	3	35	251	46	0	335	0	24	43	20	0	87	619
11:00 PM	0	1	22	4	0	27	0	3	2	3	0	8	1	7	54	11	0	73	0	3	10	2	2	15	123
11:15 PM	0	2	19	2	0	23	0	3	3	0	0	6	0	4	40	10	0	54	0	4	4	2	0	10	93
11:30 PM	0	2	6	3	0	11	0	1	2	2	0	5	0	4	28	12	0	44	0	3	8	3	0	14	74
11:45 PM	0	2	8	1	0	11	0	3	2	0	0	5	0	4	21	8	0	33	0	5	5	5	0	15	64
Hourly Total	0	7	55	10	0	72	0	10	9	5	0	24	1	19	143	41	0	204	0	15	27	12	2	54	354
DAILY TOTAL	32	818	8446	914	13	10210	2	1831	1905	784	23	4522	256	1156	10245	1823	23	13480	0	1361	2030	1259	33	4650	32862
Cars	32	800	8353	897	10	10082	2	1808	1880	778	11	4468	256	1125	10094	1798	15	13273	0	1343	1983	1238	20	4564	32387
Heavy Vehicles	0	18	93	17	3	128	0	23	25	6	12	54	0	31	151	25	8	207	0	18	47	21	13	86	475
Heavy Vehicle %	0.00%	2.20%	1.10%	1.86%	23.08%	1.25%	0.00%	1.26%	1.31%	0.77%	52.17%	1.19%	0.00%	2.68%	1.47%	1.37%	34.78%	1.54%	0.00%	1.32%	2.32%	1.67%	39.39%	1.85%	1.45%

TMC 2318 - CSAH 51 @ 101st 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	9	215	13	0	237	0	55	43	9	0	107	3	12	100	9	0	124	0	7	14	26	0	47	515
7:15 AM	0	10	251	14	0	275	0	68	42	11	0	121	9	11	75	15	0	110	0	12	24	25	0	61	567
7:30 AM	0	15	272	26	0	313	0	62	41	11	0	114	15	12	82	17	0	126	0	16	43	35	0	94	647
7:45 AM	0	10	239	20	0	269	0	54	34	10	0	98	7	15	98	15	0	135	0	19	45	37	0	101	603
Peak Hour Total PHF	0	44	977	73	0	1094	0	239	160	41	0	440	34	50	355	56	0	495	0	54	126	123	0	303	2332
	0.000	0.733	0.898	0.702	0.000	0.874	0.000	0.879	0.930	0.932	0.000	0.909	0.567	0.833	0.888	0.824	0.000	0.917	0.000	0.711	0.700	0.831	0.000	0.750	0.901

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	21	142	13	0	176	0	38	42	19	0	99	14	41	370	69	0	494	0	26	43	25	0	94	863
4:15 PM	1	13	136	15	0	165	0	29	45	27	0	101	13	34	331	54	0	432	0	38	61	24	0	123	821
4:30 PM	0	23	146	24	0	193	0	30	34	21	2	85	6	28	375	60	0	469	0	33	31	22	0	86	833
4:45 PM	1	27	104	16	0	148	0	27	44	20	0	91	4	23	374	60	0	461	0	36	55	15	0	106	806
Peak Hour Total PHF	2	84	528	68	0	682	0	124	165	87	2	376	37	126	1450	243	0	1856	0	133	190	86	0	409	3323
	0.500	0.778	0.904	0.708	0.000	0.883	0.000	0.816	0.917	0.806	0.250	0.931	0.661	0.768	0.967	0.880	0.000	0.939	0.000	0.875	0.779	0.860	0.000	0.831	0.963

Total Vehicles On Leg				22632			
Vehicles Entering Intersection		10210		Vehicles Exiting Intersection		12422	
Southbound							
Cars	897	8353	800	32	10		
Heavy	17	93	18	0	3		
Total	914	8446	818	32	13		



Total Vehicles on Leg 8625	Vehicles Entering Intersection	Eastbound	Cars	Heavy	Total
	4650		20	13	33
			0	0	0
	Vehicles Exiting Intersection		1343	18	1361
	3975		1983	47	2030
	1238	21	1259		



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	Total Vehicles on Leg 9195
778	6	784		4522	
1880	25	1905			
1808	23	1831		Vehicles Exiting Intersection	
2	0	2		4673	
11	12	23			



Cars	15	256	1125	10094	1798
Heavy	8	0	31	151	25
Total	23	256	1156	10245	1823
Northbound					
Vehicles Entering Intersection			13480		
Vehicles Exiting Intersection			11792		
Total Vehicles On Leg			25272		



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	
04/11/2023	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	3	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	1	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	0	0	0	
	5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	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	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	
	6:00	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	
	6:15	0	2	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	0	0	0	1	1	0	0	
	6:30	0	0	2	1	0	0	0	1	2	0	0	0	0	1	1	1	0	0	0	0	2	1	0	0	
	6:45	0	0	4	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	
	7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	1	0	0	
	7:15	0	0	5	0	0	0	0	1	2	0	0	0	0	0	7	0	0	0	0	0	1	1	0	0	
	7:30	0	0	3	1	0	0	0	1	0	0	0	0	0	0	3	1	0	0	0	0	2	1	1	0	0
	7:45	0	0	2	0	0	0	0	2	1	0	0	0	0	0	4	0	0	0	0	5	2	1	0	0	
	8:00	0	0	1	0	0	0	0	0	0	0	0	0	0	2	2	1	0	2	0	1	0	1	0	0	
	8:15	0	0	3	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	
	8:30	0	0	2	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	1	2	0	0	
	8:45	0	1	2	3	0	0	0	0	0	1	0	0	0	1	4	1	0	0	0	0	2	0	0	0	
	9:00	0	3	0	1	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	9	1	0	0	
	9:15	0	1	3	0	0	0	0	2	0	0	0	0	0	0	12	14	1	0	0	0	0	1	0	0	
	9:30	0	1	4	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	
	9:45	0	0	2	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	2	0	0	0	
	10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	
	10:15	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
	10:30	0	0	0	0	0	0	0	0	0	1	1	0	0	0	6	0	0	0	0	0	3	0	0	0	
	10:45	0	0	2	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	1	
	11:00	0	0	3	1	0	0	0	2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	
	11:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	0	1	0	0	
	11:30	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	
	11:45	0	1	3	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	1	0	0	0	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2318

Study Date : 05/02/2023

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 51

Number of Lanes : 2+

Total Approach Volume: 13,480

Southbound: CSAH 51

Number of Lanes :2+

Total Approach Volume: 10,210

Minor Street Approaches

Eastbound: 101st Ave

Number of Lanes :2+

Total Approach Volume: 4,650

Westbound: 101st Ave

Number of Lanes :2+

Total Approach Volume: 4,522

Warrant Summary (Rural Values Apply)

Warrant 1 - Eight Hour Vehicular Volumes.....Satisfied

Warrant 1A - Minimum Vehicular Volume.....Satisfied

Required volumes reached for 17 hours, 8 are needed

Warrant 1B - Interruption of Continuous Traffic.....Satisfied

Required volumes reached for 16 hours, 8 are needed

Warrant 1C - Combination of Warrants.....Satisfied

Required 1A volumes reached for 17 hours, 8 are needed

Required 1B volumes reached for 17 hours, 8 are needed

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

Number of hours (16) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (63) 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 2318

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

17 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **420**
 Veh/Hr Minor = **140**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	1856	+	682	=	2538	409	376	Yes
15:00 - 16:00	1473	+	628	=	2101	449	304	Yes
17:00 - 18:00	1509	+	591	=	2100	391	345	Yes
14:00 - 15:00	1053	+	565	=	1618	308	241	Yes
07:00 - 08:00	495	+	1094	=	1589	303	440	Yes
18:00 - 19:00	898	+	534	=	1432	264	284	Yes
13:00 - 14:00	749	+	514	=	1263	242	235	Yes
08:00 - 09:00	476	+	749	=	1225	253	293	Yes
09:00 - 10:00	542	+	612	=	1154	255	270	Yes
12:00 - 13:00	653	+	481	=	1134	263	234	Yes
06:00 - 07:00	262	+	869	=	1131	168	286	Yes
19:00 - 20:00	665	+	376	=	1041	212	197	Yes
11:00 - 12:00	542	+	446	=	988	223	224	Yes
20:00 - 21:00	572	+	334	=	906	206	134	Yes
10:00 - 11:00	429	+	462	=	891	216	236	Yes
21:00 - 22:00	394	+	240	=	634	142	94	Yes
05:00 - 06:00	74	+	469	=	543	88	141	Yes
22:00 - 23:00	335	+	145	=	480	87	52	No
04:45 - 05:45	61	+	401	=	462	77	121	No
22:15 - 23:15	299	+	119	=	418	71	43	No
22:30 - 23:30	265	+	104	=	369	64	34	No
04:30 - 05:30	42	+	327	=	369	57	86	No
22:45 - 23:45	231	+	86	=	317	57	27	No
04:15 - 05:15	35	+	254	=	289	46	70	No
23:00 - 00:00	204		72		276	54	24	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2318

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

16 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

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

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:15 - 17:15	1791	+	656	=	2447	412	382	Yes
15:15 - 16:15	1668	+	657	=	2325	456	335	Yes
17:15 - 18:15	1338	+	595	=	1933	361	330	Yes
14:15 - 15:15	1153	+	571	=	1724	320	246	Yes
07:15 - 08:15	500	+	1041	=	1541	320	409	Yes
18:15 - 19:15	836	+	493	=	1329	250	245	Yes
13:15 - 14:15	778	+	521	=	1299	258	244	Yes
06:15 - 07:15	348	+	945	=	1293	185	335	Yes
08:15 - 09:15	478	+	711	=	1189	266	269	Yes
12:15 - 13:15	661	+	514	=	1175	258	231	Yes
09:15 - 10:15	513	+	579	=	1092	230	272	Yes
11:15 - 12:15	591	+	448	=	1039	239	228	Yes
19:15 - 20:15	627	+	351	=	978	213	183	Yes
10:15 - 11:15	440	+	448	=	888	212	235	Yes
20:15 - 21:15	523	+	338	=	861	198	136	Yes
05:15 - 06:15	103	+	547	=	650	98	176	Yes
21:15 - 22:15	394	+	201	=	595	127	72	No
21:30 - 22:30	378	+	192	=	570	104	61	No
05:00 - 06:00	74	+	469	=	543	88	141	No
21:45 - 22:45	365	+	170	=	535	88	58	No
22:00 - 23:00	335	+	145	=	480	87	52	No
04:45 - 05:45	61	+	401	=	462	77	121	No
22:15 - 23:15	299	+	119	=	418	71	43	No
22:30 - 23:30	265	+	104	=	369	64	34	No
04:30 - 05:30	42		327		369	57	86	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2318

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

17 hours meet 1A minimums.
17 hours meet 1B minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

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

Veh/Hr Minor = **112 56**

Major Road CSAH 51

Minor Road 101st Ave

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:45 - 16:45	1777	+	672	=	2449	432	365	Yes
16:45 - 17:45	1664	+	600	=	2264	416	362	Yes
14:45 - 15:45	1420	+	613	=	2033	412	286	Yes
17:45 - 18:45	1017	+	559	=	1576	286	302	Yes
06:45 - 07:45	447	+	1061	=	1508	257	423	Yes
13:45 - 14:45	919	+	561	=	1480	280	236	Yes
07:45 - 08:45	473	+	836	=	1309	286	316	Yes
12:45 - 13:45	726	+	527	=	1253	254	237	Yes
08:45 - 09:45	575	+	670	=	1245	266	279	Yes
18:45 - 19:45	714	+	411	=	1125	233	209	Yes
11:45 - 12:45	639	+	467	=	1106	250	235	Yes
05:45 - 06:45	201	+	762	=	963	134	247	Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:00 - 17:00	1856	+	682	=	2538	409	376	Yes
15:00 - 16:00	1473	+	628	=	2101	449	304	Yes
17:00 - 18:00	1509	+	591	=	2100	391	345	Yes
14:00 - 15:00	1053	+	565	=	1618	308	241	Yes
07:00 - 08:00	495	+	1094	=	1589	303	440	Yes
18:00 - 19:00	898	+	534	=	1432	264	284	Yes
13:00 - 14:00	749	+	514	=	1263	242	235	Yes
08:00 - 09:00	476	+	749	=	1225	253	293	Yes
09:00 - 10:00	542	+	612	=	1154	255	270	Yes
12:00 - 13:00	653	+	481	=	1134	263	234	Yes
06:00 - 07:00	262	+	869	=	1131	168	286	Yes
19:00 - 20:00	665	+	376	=	1041	212	197	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2318

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.

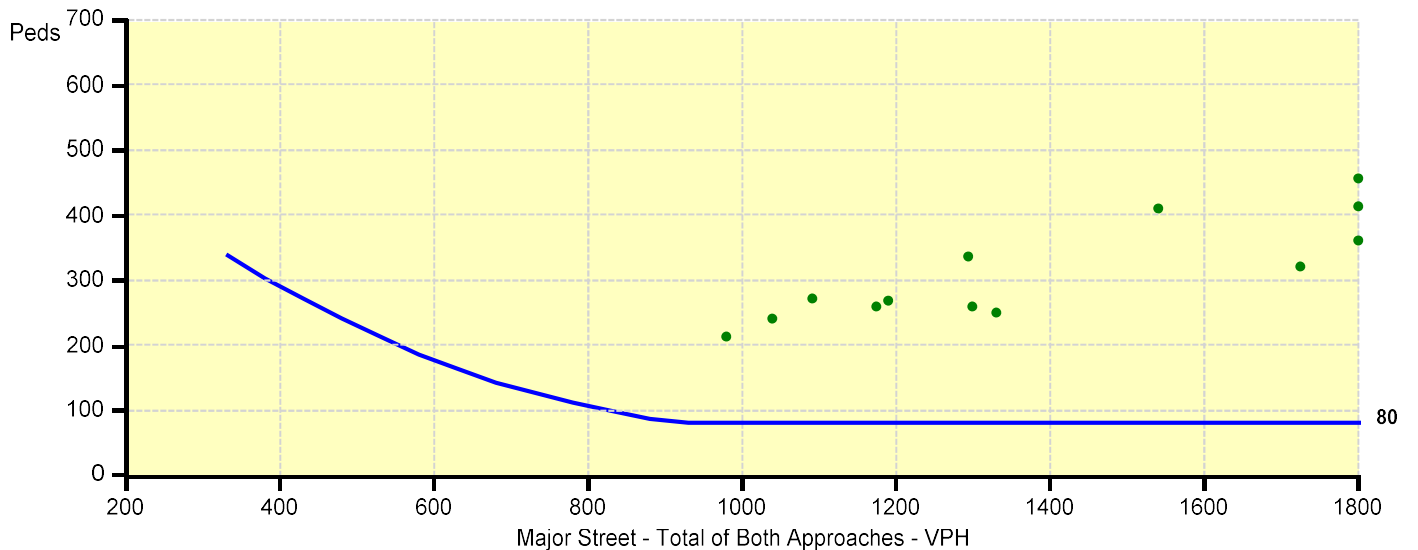
Summary

16 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 51					101st Ave		
16:15 - 17:15	1791	+	656	=	2447	412	382	Yes
15:15 - 16:15	1668	+	657	=	2325	456	335	Yes
17:15 - 18:15	1338	+	595	=	1933	361	330	Yes
14:15 - 15:15	1153	+	571	=	1724	320	246	Yes
07:15 - 08:15	500	+	1041	=	1541	320	409	Yes
18:15 - 19:15	836	+	493	=	1329	250	245	Yes
13:15 - 14:15	778	+	521	=	1299	258	244	Yes
06:15 - 07:15	348	+	945	=	1293	185	335	Yes
08:15 - 09:15	478	+	711	=	1189	266	269	Yes
12:15 - 13:15	661	+	514	=	1175	258	231	Yes
09:15 - 10:15	513	+	579	=	1092	230	272	Yes
11:15 - 12:15	591		448		1039	239	228	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2318

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

59 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 51				Total	Minor Road 101st Ave		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	1856	+	682	=	2538	409	376	Yes
15:45 - 16:45	1777	+	672	=	2449	432	365	Yes
16:15 - 17:15	1791	+	656	=	2447	412	382	Yes
16:30 - 17:30	1749	+	643	=	2392	401	364	Yes
15:30 - 16:30	1697	+	666	=	2363	469	351	Yes
15:15 - 16:15	1668	+	657	=	2325	456	335	Yes
16:45 - 17:45	1664	+	600	=	2264	416	362	Yes
15:00 - 16:00	1473	+	628	=	2101	449	304	Yes
17:00 - 18:00	1509	+	591	=	2100	391	345	Yes
14:45 - 15:45	1420	+	613	=	2033	412	286	Yes
17:15 - 18:15	1338	+	595	=	1933	361	330	Yes
14:30 - 15:30	1297	+	585	=	1882	366	279	Yes

