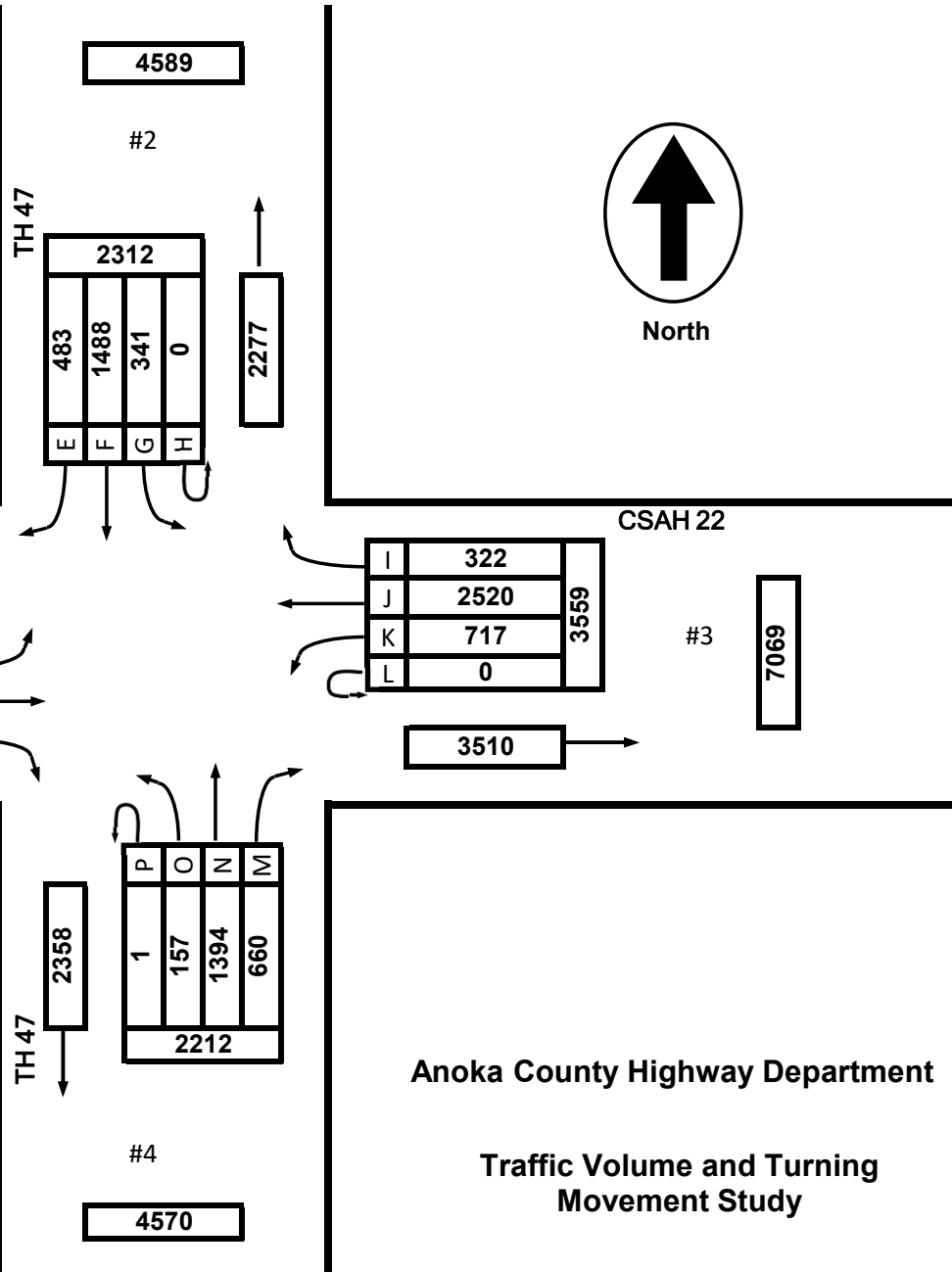
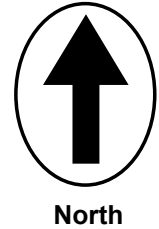


Date : 11/08/23

Count Number : TMC 2385

Location : CSAH 22
@ TH 47

Collection Period : 24 HR



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

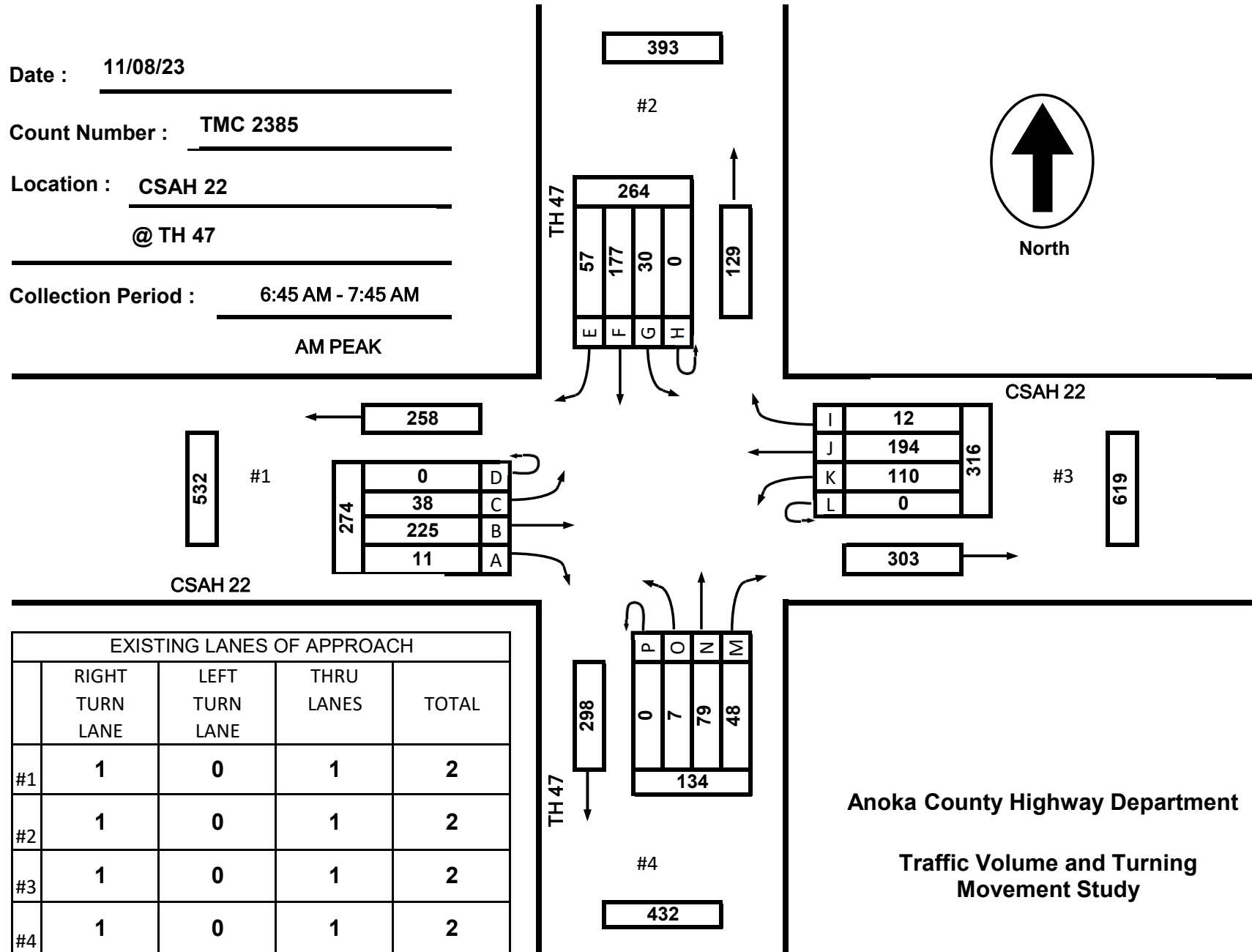
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 11/08/23

Count Number : TMC 2385

Location : CSAH 22
@ TH 47

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



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

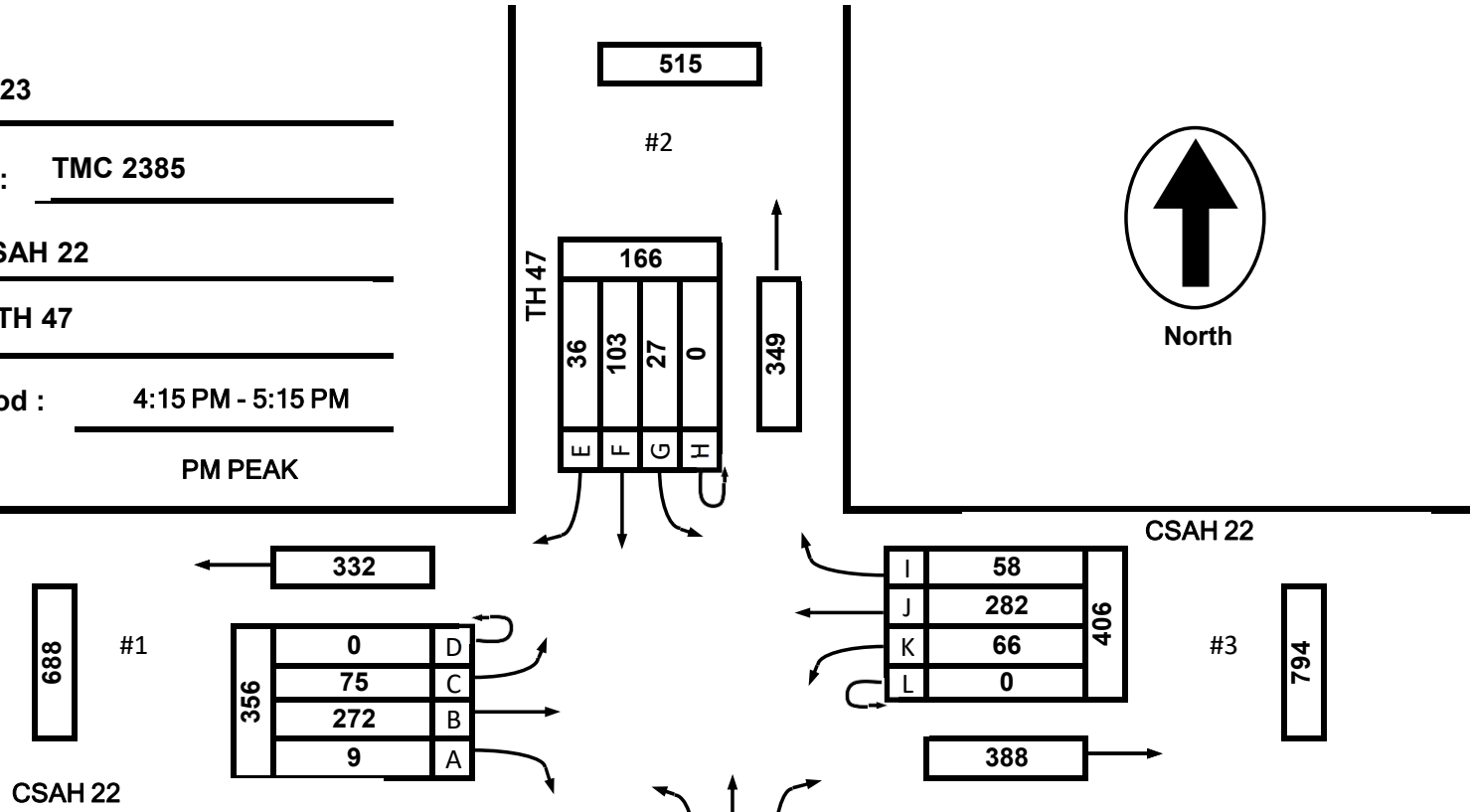
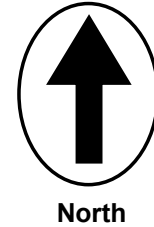
Traffic Volume and Turning Movement Study

Date : 11/08/23

Count Number : TMC 2385

Location : CSAH 22
@ TH 47

Collection Period : 4:15 PM - 5:15 PM
 PM PEAK



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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study

TMC 2385 - CSAH 22 @ TH 47
Wednesday, November 8, 2023

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL	
	TH 47						CSAH 22						TH 47						CSAH 22							
	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	1	0	1	0	0	0	0	0	0	0	0	1	2	0	3	0	0	3	0	0	0	3	7
12:15 AM	0	0	2	0	0	2	0	0	0	1	0	1	0	0	3	0	0	3	0	1	0	0	0	0	1	7
12:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3
12:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	0	0	4	1	0	5	0	0	0	2	0	2	0	0	4	2	0	6	0	2	3	0	0	0	5	18
1:00 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	0	0	1	0	2	0	0	0	0	2	5
1:15 AM	0	0	0	0	0	0	0	1	2	0	0	3	0	0	2	0	0	2	0	1	1	0	0	0	2	7
1:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	2	0	0	0	2	4
1:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	3
Hourly Total	0	0	0	0	0	0	0	1	5	1	0	7	0	0	4	0	0	4	0	3	5	0	0	0	8	19
2:00 AM	0	1	2	1	0	4	0	0	0	0	0	0	0	0	2	1	0	3	0	0	1	0	0	0	1	8
2:15 AM	0	0	2	0	0	2	0	0	1	1	0	2	0	0	0	4	0	4	0	0	0	0	0	0	0	8
2:30 AM	0	1	3	1	0	5	0	0	1	0	0	1	0	0	3	0	0	3	0	0	0	0	0	0	0	9
2:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	3
Hourly Total	0	2	7	3	0	12	0	0	2	1	0	3	0	0	5	6	0	11	0	0	2	0	0	0	2	28
3:00 AM	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	0	1	1	0	0	0	2	5
3:15 AM	0	0	6	0	0	6	0	1	3	1	0	5	0	0	1	0	0	1	0	0	1	0	0	0	1	13
3:30 AM	0	0	2	2	0	4	0	0	1	1	0	2	0	0	0	0	0	0	0	1	3	0	0	0	4	10
3:45 AM	0	1	5	0	0	6	0	0	4	0	0	4	0	0	3	0	0	3	0	0	0	0	0	0	0	13
Hourly Total	0	1	14	2	0	17	0	1	9	2	0	12	0	0	4	1	0	5	0	2	5	0	0	0	7	41
4:00 AM	0	0	11	4	0	15	0	2	9	0	0	11	0	0	0	1	0	1	0	2	0	0	0	0	2	29
4:15 AM	0	2	14	4	0	20	0	2	12	0	0	14	0	0	1	3	0	4	0	3	7	0	0	0	10	48
4:30 AM	0	2	17	2	0	21	0	5	20	1	0	26	0	0	0	2	0	2	0	1	4	0	0	0	5	54
4:45 AM	0	0	23	9	0	32	0	2	15	0	0	17	0	0	3	1	0	4	0	0	6	0	0	0	6	59
Hourly Total	0	4	65	19	0	88	0	11	56	1	0	68	0	0	4	7	0	11	0	6	17	0	0	0	23	190
5:00 AM	0	2	23	5	0	30	0	3	17	0	0	20	0	0	2	0	0	2	0	0	18	0	0	0	18	70
5:15 AM	0	4	40	12	0	56	0	7	37	1	0	45	0	0	3	1	0	4	0	1	7	0	0	0	8	113
5:30 AM	0	5	57	10	0	72	0	12	33	0	0	45	0	0	5	7	0	12	0	3	15	1	0	0	19	148
5:45 AM	0	2	53	8	0	63	0	13	34	1	0	48	0	3	1	6	0	10	0	7	26	1	0	0	34	155
Hourly Total	0	13	173	35	0	221	0	35	121	2	0	158	0	3	11	14	0	28	0	11	66	2	0	0	79	486
6:00 AM	0	4	36	9	0	49	0	5	41	0	0	46	0	0	3	9	0	12	0	3	15	0	0	0	18	125
6:15 AM	0	4	42	16	0	62	0	12	42	0	0	54	0	1	3	6	0	10	0	4	25	1	0	0	30	156
6:30 AM	0	8	56	16	0	80	0	22	51	2	0	75	0	0	5	6	0	11	0	7	50	0	0	0	57	223
6:45 AM	0	10	42	13	0	65	0	23	50	4	0	77	0	0	17	9	0	26	0	12	49	2	0	0	63	231
Hourly Total	0	26	176	54	0	256	0	62	184	6	0	252	0	1	28	30	0	59	0	26	139	3	0	0	168	735
7:00 AM	0	7	33	12	0	52	0	23	44	3	0	70	0	3	11	15	0	29	0	11	57	2	0	0	70	221
7:15 AM	0	7	49	20	0	76	0	25	42	3	0	70	0	0	25	10	0	35	0	6	56	3	0	0	65	246
7:30 AM	0	6	53	12	0	71	0	39	58	2	0	99	0	4	26	14	0	44	0	9	63	4	0	0	76	290
7:45 AM	0	4	27	7	0	38	0	25	41	9	0	75	0	2	20	11	0	33	0	8	47	3	0	0	58	204
Hourly Total	0	24	162	51	0	237	0	112	185	17	0	314	0	9	82	50	0	141	0	34	223	12	0	0	269	961

**TMC 2385 - CSAH 22 @ TH 47
Wednesday, November 8, 2023**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	TH 47						CSAH 22						TH 47						CSAH 22						
	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	5	38	6	0	49	0	11	56	3	0	70	0	3	11	14	0	28	0	6	47	5	0	58	205
8:15 AM	0	6	33	9	0	48	0	6	28	1	0	35	0	1	10	9	0	20	0	11	47	6	0	64	167
8:30 AM	0	5	30	6	0	41	0	13	36	4	0	53	0	4	6	13	0	23	0	11	40	5	0	56	173
8:45 AM	0	6	21	5	0	32	0	6	38	3	0	47	0	1	14	6	0	21	1	3	35	4	0	43	143
Hourly Total	0	22	122	26	0	170	0	36	158	11	0	205	0	9	41	42	0	92	1	31	169	20	0	221	688
9:00 AM	0	5	21	9	0	35	0	11	19	6	0	36	0	1	8	4	0	13	0	3	26	2	0	31	115
9:15 AM	0	3	19	4	0	26	0	8	43	4	0	55	0	3	17	12	0	32	0	5	30	2	0	37	150
9:30 AM	0	9	15	1	0	25	0	10	31	2	0	43	0	4	10	2	0	16	0	4	25	10	0	39	123
9:45 AM	0	5	18	3	0	26	0	6	27	5	0	38	0	4	20	15	0	39	0	2	33	6	0	41	144
Hourly Total	0	22	73	17	0	112	0	35	120	17	0	172	0	12	55	33	0	100	0	14	114	20	0	148	532
10:00 AM	0	9	14	4	0	27	0	3	27	1	0	31	0	1	12	6	0	19	0	6	26	3	0	35	112
10:15 AM	0	7	10	9	0	26	0	3	30	2	0	35	0	2	13	3	0	18	0	4	33	5	0	42	121
10:30 AM	0	4	20	4	0	28	0	8	32	6	0	46	0	2	12	4	0	18	0	8	28	3	0	39	131
10:45 AM	0	5	12	7	0	24	0	4	28	5	0	37	1	4	13	6	0	24	0	9	27	4	0	40	125
Hourly Total	0	25	56	24	0	105	0	18	117	14	0	149	1	9	50	19	0	79	0	27	114	15	0	156	489
11:00 AM	0	1	8	6	0	15	0	9	26	5	0	40	0	3	13	9	0	25	0	5	28	3	0	36	116
11:15 AM	0	5	8	3	0	16	0	11	33	5	0	49	0	2	12	3	0	17	0	4	26	3	0	33	115
11:30 AM	0	4	6	5	0	15	0	9	28	4	0	41	0	2	15	6	0	23	0	10	28	8	0	46	125
11:45 AM	0	4	14	7	0	25	0	6	24	6	0	36	0	4	16	6	0	26	0	3	28	3	0	34	121
Hourly Total	0	14	36	21	0	71	0	35	111	20	0	166	0	11	56	24	0	91	0	22	110	17	0	149	477
12:00 PM	0	12	18	5	0	35	0	7	26	5	0	38	0	4	17	11	0	32	0	10	22	2	0	34	139
12:15 PM	0	3	19	11	0	33	0	10	33	2	0	45	0	5	18	6	0	29	0	2	32	4	0	38	145
12:30 PM	0	8	15	3	0	26	0	8	25	10	0	43	0	5	19	5	0	29	0	4	26	4	0	34	132
12:45 PM	0	3	25	7	0	35	0	6	26	4	0	36	0	2	8	8	0	18	0	9	32	2	0	43	132
Hourly Total	0	26	77	26	0	129	0	31	110	21	0	162	0	16	62	30	0	108	0	25	112	12	0	149	548
1:00 PM	0	10	13	2	0	25	0	3	26	4	0	33	0	5	13	4	0	22	0	11	34	2	0	47	127
1:15 PM	0	4	12	11	0	27	0	6	36	6	0	48	0	5	19	3	0	27	0	7	32	2	0	41	143
1:30 PM	0	4	18	4	0	26	0	3	38	4	0	45	0	5	15	8	0	28	0	6	31	1	0	38	137
1:45 PM	0	3	15	6	0	24	0	9	31	6	0	46	0	2	23	8	0	33	0	7	44	1	0	52	155
Hourly Total	0	21	58	23	0	102	0	21	131	20	0	172	0	17	70	23	0	110	0	31	141	6	0	178	562
2:00 PM	0	2	18	8	0	28	0	8	31	6	0	45	0	7	31	5	0	43	0	11	37	3	0	51	167
2:15 PM	0	8	10	6	0	24	0	13	36	2	0	51	0	2	35	10	0	47	0	9	35	1	0	45	167
2:30 PM	0	11	21	9	0	41	0	7	35	10	0	52	0	4	34	16	0	54	0	15	47	4	0	66	213
2:45 PM	0	4	14	3	0	21	0	25	58	3	0	86	0	4	35	9	0	48	0	7	50	1	0	58	213
Hourly Total	0	25	63	26	0	114	0	53	160	21	0	234	0	17	135	40	0	192	0	42	169	9	0	220	760
3:00 PM	0	6	22	12	0	40	0	14	42	10	0	66	0	5	42	9	0	56	0	12	60	3	0	75	237
3:15 PM	0	4	25	8	0	37	0	14	67	4	0	85	0	1	50	18	0	69	0	18	47	2	0	67	258
3:30 PM	0	4	14	8	0	26	0	12	58	7	0	77	0	3	52	22	0	77	0	10	62	2	0	74	254
3:45 PM	0	5	24	6	0	35	0	14	62	9	0	85	0	5	68	32	0	105	0	16	62	2	0	80	305
Hourly Total	0	19	85	34	0	138	0	54	229	30	0	313	0	14	212	81	0	307	0	56	231	9	0	296	1054

TMC 2385 - CSAH 22 @ TH 47
Wednesday, November 8, 2023

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	TH 47						CSAH 22						TH 47						CSAH 22						
	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	6	21	10	0	37	0	14	41	10	0	65	0	2	46	18	0	66	0	14	63	2	0	79	247
4:15 PM	0	6	25	13	0	44	0	15	67	15	0	97	0	6	57	22	0	85	0	20	66	1	0	87	313
4:30 PM	0	9	28	13	0	50	0	14	88	9	0	111	0	3	45	21	0	69	0	15	64	1	0	80	310
4:45 PM	0	4	25	3	0	32	0	29	74	16	0	119	0	2	72	25	0	99	0	25	69	3	0	97	347
Hourly Total	0	25	99	39	0	163	0	72	270	50	0	392	0	13	220	86	0	319	0	74	262	7	0	343	1217
5:00 PM	0	8	25	7	0	40	0	8	53	18	0	79	0	3	42	21	0	66	0	15	73	4	0	92	277
5:15 PM	0	5	20	8	0	33	0	13	72	6	0	91	0	0	52	23	0	75	0	24	77	5	0	106	305
5:30 PM	0	9	23	11	0	43	0	16	58	10	0	84	0	1	34	13	0	48	0	10	54	3	0	67	242
5:45 PM	0	6	17	3	0	26	0	11	46	10	0	67	0	4	23	14	0	41	0	11	44	0	0	55	189
Hourly Total	0	28	85	29	0	142	0	48	229	44	0	321	0	8	151	71	0	230	0	60	248	12	0	320	1013
6:00 PM	0	4	22	9	0	35	0	9	51	3	0	63	0	1	26	6	0	33	0	11	38	1	0	50	181
6:15 PM	0	9	8	4	0	21	0	14	47	8	0	69	0	3	21	16	0	40	0	7	44	0	0	51	181
6:30 PM	0	2	13	4	0	19	0	4	33	3	0	40	0	1	19	9	0	29	0	8	28	1	0	37	125
6:45 PM	0	2	4	3	0	9	0	6	21	2	0	29	0	1	10	7	0	18	0	3	33	1	0	37	93
Hourly Total	0	17	47	20	0	84	0	33	152	16	0	201	0	6	76	38	0	120	0	29	143	3	0	175	580
7:00 PM	0	1	6	8	0	15	0	6	27	2	0	35	0	2	9	2	0	13	0	7	22	0	0	29	92
7:15 PM	0	4	6	6	0	16	0	5	19	3	0	27	0	0	11	10	0	21	0	6	23	1	0	30	94
7:30 PM	0	2	5	3	0	10	0	1	14	1	0	16	0	1	11	8	0	20	0	5	18	0	0	23	69
7:45 PM	0	2	10	1	0	13	0	10	18	3	0	31	0	3	11	7	0	21	0	5	17	0	0	22	87
Hourly Total	0	9	27	18	0	54	0	22	78	9	0	109	0	6	42	27	0	75	0	23	80	1	0	104	342
8:00 PM	0	3	8	2	0	13	0	1	7	5	0	13	0	0	10	1	0	11	0	5	20	1	0	26	63
8:15 PM	0	1	4	1	0	6	0	4	15	0	0	19	0	0	8	8	0	16	0	9	28	0	0	37	78
8:30 PM	0	4	8	2	0	14	0	7	14	4	0	25	0	1	7	4	0	12	0	3	23	1	0	27	78
8:45 PM	0	7	11	3	0	21	0	2	3	2	0	7	0	0	8	4	0	12	0	4	13	1	0	18	58
Hourly Total	0	15	31	8	0	54	0	14	39	11	0	64	0	1	33	17	0	51	0	21	84	3	0	108	277
9:00 PM	0	0	7	0	0	7	0	7	6	0	0	13	0	0	8	7	0	15	0	5	21	0	0	26	61
9:15 PM	0	0	3	2	0	5	0	4	12	0	0	16	0	1	10	2	0	13	0	0	15	1	0	16	50
9:30 PM	0	0	5	1	0	6	0	1	5	1	0	7	0	0	9	1	0	10	0	3	2	0	0	5	28
9:45 PM	0	0	2	1	0	3	0	2	7	1	0	10	0	2	2	0	0	4	0	1	4	0	0	5	22
Hourly Total	0	0	17	4	0	21	0	14	30	2	0	46	0	3	29	10	0	42	0	9	42	1	0	52	161
10:00 PM	0	2	2	0	0	4	0	3	1	1	0	5	0	1	2	1	0	4	0	2	7	0	0	9	22
10:15 PM	0	0	3	0	0	3	0	3	9	0	0	12	0	1	6	5	0	12	0	5	6	0	0	11	38
10:30 PM	0	0	1	1	0	2	0	1	4	2	0	7	0	0	4	0	0	4	0	1	3	0	0	4	17
10:45 PM	0	1	0	0	0	1	0	1	3	0	0	4	0	0	1	1	0	2	0	2	2	0	0	4	11
Hourly Total	0	3	6	1	0	10	0	8	17	3	0	28	0	2	13	7	0	22	0	10	18	0	0	28	88
11:00 PM	0	0	1	1	0	2	0	0	3	0	0	3	0	0	1	1	0	2	0	2	3	0	0	5	12
11:15 PM	0	0	1	1	0	2	0	1	2	1	0	4	0	0	3	0	0	3	0	0	4	0	0	4	13
11:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	1	0	2	0	0	3	0	0	3	7
11:45 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	0	1	2	0	0	3	8
Hourly Total	0	0	5	2	0	7	0	1	7	1	0	9	0	0	7	2	0	9	0	3	12	0	0	15	40
DAILY TOTAL	0	341	1488	483	0	2312	0	717	2520	322	0	3559	1	157	1394	660	0	2212	1	561	2509	152	0	3223	11306
Cars	0	324	1463	470	0	2257	0	687	2272	307	0	3266	1	99	1353	637	0	2090	1	532	2249	82	0	2864	10477
Heavy Vehicles	0	17	25	13	0	55	0	30	248	15	0	293	0	58	41	23	0	122	0	29	260	70	0	359	829
Heavy Vehicle %	0.00%	4.99%	1.68%	2.69%	0.00%	2.38%	0.00%	4.18%	9.84%	4.66%	0.00%	8.23%	0.00%	36.94%	2.94%	3.48%	0.00%	5.52%	0.00%	5.17%	10.36%	46.05%	0.00%	11.14%	7.33%

**TMC 2385 - CSAH 22 @ TH 47
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	10	42	13	0	65	0	23	50	4	0	77	0	0	17	9	0	26	0	12	49	2	0	63	
7:00 AM	0	7	33	12	0	52	0	23	44	3	0	70	0	3	11	15	0	29	0	11	57	2	0	70	
7:15 AM	0	7	49	20	0	76	0	25	42	3	0	70	0	0	25	10	0	35	0	6	56	3	0	65	
7:30 AM	0	6	53	12	0	71	0	39	58	2	0	99	0	4	26	14	0	44	0	9	63	4	0	76	
Peak Hour Total	0	30	177	57	0	264	0	110	194	12	0	316	0	7	79	48	0	134	0	38	225	11	0	274	
PHF	0.000	0.750	0.835	0.713	0.000	0.868	0.000	0.705	0.836	0.750	0.000	0.798	0.000	0.438	0.760	0.800	0.000	0.761	0.000	0.792	0.893	0.688	0.000	0.901	0.852

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	
4:15 PM	0	6	25	13	0	44	0	15	67	15	0	97	0	6	57	22	0	85	0	20	66	1	0	87	
4:30 PM	0	9	28	13	0	50	0	14	88	9	0	111	0	3	45	21	0	69	0	15	64	1	0	80	
4:45 PM	0	4	25	3	0	32	0	29	74	16	0	119	0	2	72	25	0	99	0	25	69	3	0	97	
5:00 PM	0	8	25	7	0	40	0	8	53	18	0	79	0	3	42	21	0	66	0	15	73	4	0	92	
Peak Hour Total	0	27	103	36	0	166	0	66	282	58	0	406	0	14	216	89	0	319	0	75	272	9	0	356	
PHF	0.000	0.750	0.920	0.692	0.000	0.830	0.000	0.569	0.801	0.806	0.000	0.853	0.000	0.583	0.750	0.890	0.000	0.806	0.000	0.750	0.932	0.563	0.000	0.918	0.898

Total Vehicles On Leg				4589	
Vehicles Entering Intersection			2312	Vehicles Exiting Intersection 2277	
Southbound					
Cars	470	1463	324	0	0
Heavy	13	25	17	0	0
Total	483	1488	341	0	0



Total Vehicles on Leg 6384	Vehicles Entering Intersection 3223	Eastbound	Cars	Heavy	Total	
			0	0	0	
			1	0	1	
	Vehicles Exiting Intersection 3161		532	29	561	
	2249		260	2509		
		82	70	152		



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 3559	Total Vehicles on Leg 7069
307	15	322			
2272	248	2520			
687	30	717			
0	0	0			
0	0	0		Vehicles Exiting Intersection 3510	



Cars	0	1	99	1353	637
Heavy	0	0	58	41	23
Total	0	1	157	1394	660
Northbound					
Vehicles Entering Intersection			2212	Vehicles Exiting Intersection 2358	
Total Vehicles On Leg			4570		

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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15	0	1	0	0	0	0	0	0	3	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	6	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	1	0	0	0
	5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0
	5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
	5:45	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	6:00	0	2	0	0	0	0	0	1	4	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0
	6:15	0	1	2	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0
	6:30	0	0	1	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0
	6:45	0	0	1	0	0	0	0	0	5	0	0	0	0	0	2	0	0	0	0	0	4	0	0	0
	7:00	0	1	1	1	0	0	0	1	5	0	0	0	0	0	2	2	0	0	0	0	6	0	0	0
	7:15	0	1	0	0	0	0	0	1	4	0	0	0	0	0	2	0	0	0	0	0	9	1	0	0
	7:30	0	0	0	1	0	0	0	0	3	0	0	0	0	3	1	2	0	0	0	1	7	3	0	0
	7:45	0	0	0	0	0	0	0	1	9	1	0	0	0	0	1	0	0	0	0	1	4	2	0	0
	8:00	0	0	0	0	0	0	0	0	7	0	0	0	0	2	0	1	0	0	0	0	5	3	0	0
	8:15	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	1	0	0	0	2	8	3	0	0
	8:30	0	0	1	0	0	0	0	0	3	1	0	0	0	2	0	0	0	0	0	1	13	4	0	0
	8:45	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	7	4	0	0
	9:00	0	1	1	2	0	0	0	0	6	0	0	0	0	1	0	0	0	0	0	0	4	2	0	0
	9:15	0	0	1	0	0	0	0	1	14	0	0	0	0	1	1	2	0	0	0	0	6	2	0	0
	9:30	0	1	0	0	0	0	0	0	6	0	0	0	0	2	1	0	0	0	0	1	1	4	0	0
	9:45	0	1	1	1	0	0	0	1	3	1	0	0	0	1	0	0	0	0	0	0	7	4	0	0
	10:00	0	1	1	0	0	0	0	0	2	0	0	0	0	1	0	1	0	0	0	0	7	2	0	0
	10:15	0	0	0	0	0	0	0	2	10	0	0	0	0	2	1	0	0	0	0	0	8	4	0	0
	10:30	0	0	0	0	0	0	0	0	8	0	0	0	0	1	0	0	0	0	0	1	1	3	0	0
	10:45	0	0	1	0	0	0	0	0	7	0	0	0	0	1	1	0	0	0	0	2	6	3	0	0
	11:00	0	0	0	0	0	0	0	1	4	0	0	0	0	1	0	0	0	0	0	0	9	2	0	0
	11:15	0	1	0	0	0	0	0	0	4	0	0	0	0	2	0	1	0	0	0	1	5	1	0	0
	11:30	0	0	1	0	0	0	0	1	7	0	0	0	0	2	1	0	0	0	0	0	9	2	0	0
	11:45	0	1	0	0	0	0	0	1	6	0	0	0	0	2	1	1	0	0	0	0	2	2	0	0

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2385

Study Date : 11/15/2023

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 22

Number of Lanes : 1

Total Approach Volume: 3,223

Westbound: CSAH 22

Number of Lanes : 1

Total Approach Volume: 3,559

Minor Street Approaches

Northbound: TH 47

Number of Lanes : 1

Total Approach Volume: 2,212

Southbound: TH 47

Number of Lanes : 1

Total Approach Volume: 2,312

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 9 hours, 8 are needed

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

Required volumes reached for 5 hours, 8 are needed

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

Required 1A volumes reached for 13 hours, 8 are needed

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

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

Number of hours (7) volumes exceed minimum \geq minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (19) volumes exceed minimum \geq 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 2385

Study Date : 11/15/2023

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

9 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**

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	
	CSAH 22					TH 47		
16:00 - 17:00	343	+	392	=	735	319	163	Yes
17:00 - 18:00	320	+	321	=	641	230	142	Yes
15:00 - 16:00	296	+	313	=	609	307	138	Yes
06:45 - 07:45	274	+	316	=	590	134	264	Yes
07:45 - 08:45	236	+	233	=	469	104	176	Yes
14:00 - 15:00	220	+	234	=	454	192	114	Yes
18:00 - 19:00	175	+	201	=	376	120	84	Yes
05:45 - 06:45	139	+	223	=	362	43	254	Yes
13:00 - 14:00	178	+	172	=	350	110	102	Yes
12:45 - 13:45	169	+	162	=	331	95	113	No
08:45 - 09:45	150	+	181	=	331	82	118	No
12:30 - 13:30	165	+	160	=	325	96	113	No
10:45 - 11:45	155	+	167	=	322	89	70	No
09:00 - 10:00	148	+	172	=	320	100	112	No
10:30 - 11:30	148	+	172	=	320	84	83	No
12:15 - 13:15	162	+	157	=	319	98	119	No
09:15 - 10:15	152	+	167	=	319	106	104	No
10:15 - 11:15	157	+	158	=	315	85	93	No
11:00 - 12:00	149	+	166	=	315	91	71	No
11:30 - 12:30	152	+	160	=	312	110	108	No
12:00 - 13:00	149	+	162	=	311	108	129	No
11:15 - 12:15	147	+	164	=	311	98	91	No
09:45 - 10:45	157	+	150	=	307	94	107	No
10:00 - 11:00	156	+	149	=	305	79	105	No
09:30 - 10:30	157		147		304	92	104	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2385

Study Date : 11/15/2023

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 5 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	
16:30 - 17:30	375	+	400	=	775	309	155	Yes
15:30 - 16:30	320	+	324	=	644	333	142	Yes
14:30 - 15:30	266	+	289	=	555	227	139	Yes
06:30 - 07:30	255	+	292	=	547	101	273	Yes
07:30 - 08:30	256	+	279	=	535	125	206	Yes
17:30 - 18:30	223	+	283	=	506	162	125	No
14:15 - 15:15	244	+	255	=	499	205	126	No
06:15 - 07:15	220	+	276	=	496	76	259	No
14:00 - 15:00	220	+	234	=	454	192	114	No
17:45 - 18:45	193	+	239	=	432	143	101	No
06:00 - 07:00	168	+	252	=	420	59	256	No
13:45 - 14:45	214	+	194	=	408	177	117	No
18:00 - 19:00	175	+	201	=	376	120	84	No
13:30 - 14:30	186	+	187	=	373	151	102	No
13:15 - 14:15	182	+	184	=	366	131	105	No
05:45 - 06:45	139	+	223	=	362	43	254	No
08:30 - 09:30	167	+	191	=	358	89	134	No
13:00 - 14:00	178	+	172	=	350	110	102	No
12:45 - 13:45	169	+	162	=	331	95	113	No
08:45 - 09:45	150	+	181	=	331	82	118	No
18:15 - 19:15	154	+	173	=	327	100	64	No
12:30 - 13:30	165	+	160	=	325	96	113	No
10:45 - 11:45	155	+	167	=	322	89	70	No
09:00 - 10:00	148	+	172	=	320	100	112	No
10:30 - 11:30	148		172		320	84	83	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2385

Study Date : 11/15/2023

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

13 hours meet 1A minimums.
Only 7 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 22

Minor Road TH 47

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:30 - 17:30	375	+	400	=	775	309	155	Yes
15:30 - 16:30	320	+	324	=	644	333	142	Yes
14:30 - 15:30	266	+	289	=	555	227	139	Yes
06:30 - 07:30	255	+	292	=	547	101	273	Yes
07:30 - 08:30	256	+	279	=	535	125	206	Yes
17:30 - 18:30	223	+	283	=	506	162	125	Yes
13:30 - 14:30	186	+	187	=	373	151	102	Yes
08:30 - 09:30	167	+	191	=	358	89	134	Yes
12:30 - 13:30	165	+	160	=	325	96	113	Yes
10:30 - 11:30	148	+	172	=	320	84	83	Yes
11:30 - 12:30	152	+	160	=	312	110	108	Yes
09:30 - 10:30	157	+	147	=	304	92	104	Yes

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:00 - 17:00	343	+	392	=	735	319	163	Yes
17:00 - 18:00	320	+	321	=	641	230	142	Yes
15:00 - 16:00	296	+	313	=	609	307	138	Yes
07:00 - 08:00	269	+	314	=	583	141	237	Yes
14:00 - 15:00	220	+	234	=	454	192	114	Yes
08:00 - 09:00	221	+	205	=	426	92	170	Yes
06:00 - 07:00	168	+	252	=	420	59	256	Yes
13:45 - 14:45	214	+	194	=	408	177	117	No
18:00 - 19:00	175	+	201	=	376	120	84	No
13:30 - 14:30	186	+	187	=	373	151	102	No
13:15 - 14:15	182	+	184	=	366	131	105	No
05:45 - 06:45	139	+	223	=	362	43	254	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2385

Study Date : 11/15/2023

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.

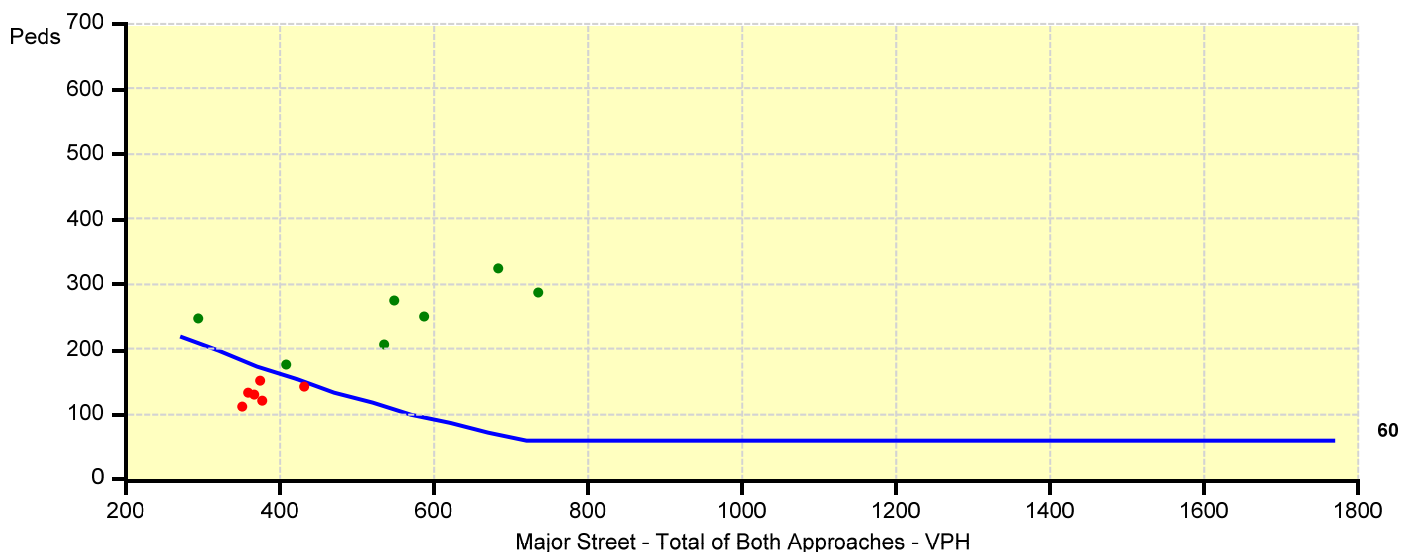
Summary

7 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 22				Total	Minor Road TH 47		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:45 - 17:45	362	+	373	=	735	288	148	Yes
15:45 - 16:45	326	+	358	=	684	325	166	Yes
14:45 - 15:45	274	+	314	=	588	250	124	Yes
06:30 - 07:30	255	+	292	=	547	101	273	Yes
07:30 - 08:30	256	+	279	=	535	125	206	Yes
13:45 - 14:45	214	+	194	=	408	177	117	Yes
05:30 - 06:30	101	+	193	=	294	44	246	Yes
17:45 - 18:45	193	+	239	=	432	143	101	No
18:00 - 19:00	175	+	201	=	376	120	84	No
13:30 - 14:30	186	+	187	=	373	151	102	No
13:15 - 14:15	182	+	184	=	366	131	105	No
08:30 - 09:30	167	+	191	=	358	89	134	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2385

Study Date : 11/15/2023

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

18 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 22				Total	Minor Road TH 47		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	375	+	400	=	775	309	155	Yes
16:15 - 17:15	356	+	406	=	762	319	166	Yes
16:45 - 17:45	362	+	373	=	735	288	148	Yes
16:00 - 17:00	343	+	392	=	735	319	163	Yes
15:45 - 16:45	326	+	358	=	684	325	166	Yes
15:30 - 16:30	320	+	324	=	644	333	142	Yes
17:00 - 18:00	320	+	321	=	641	230	142	Yes
15:15 - 16:15	300	+	312	=	612	317	135	Yes
15:00 - 16:00	296	+	313	=	609	307	138	Yes
06:45 - 07:45	274	+	316	=	590	134	264	Yes
14:45 - 15:45	274	+	314	=	588	250	124	Yes
17:15 - 18:15	278	+	305	=	583	197	137	Yes

