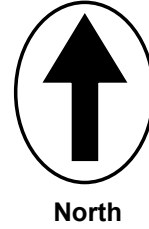


Date : 06/08/22

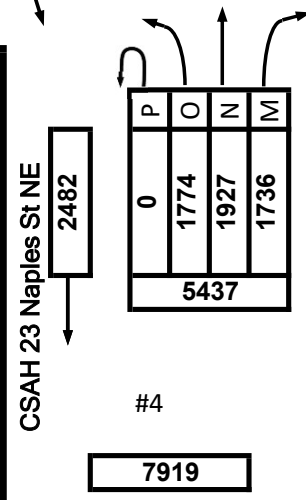
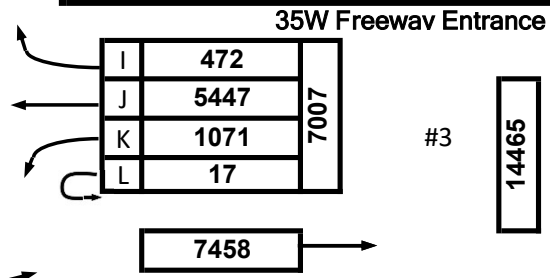
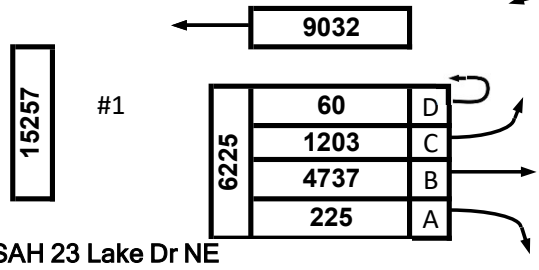
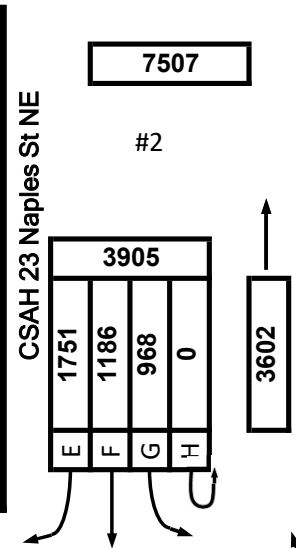
Count Number : TMC 2207

Location : CSAH 23 (Lake Dr.)
@ Naples St.

Collection Period : 24 HR



North



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

Anoka County Highway Department

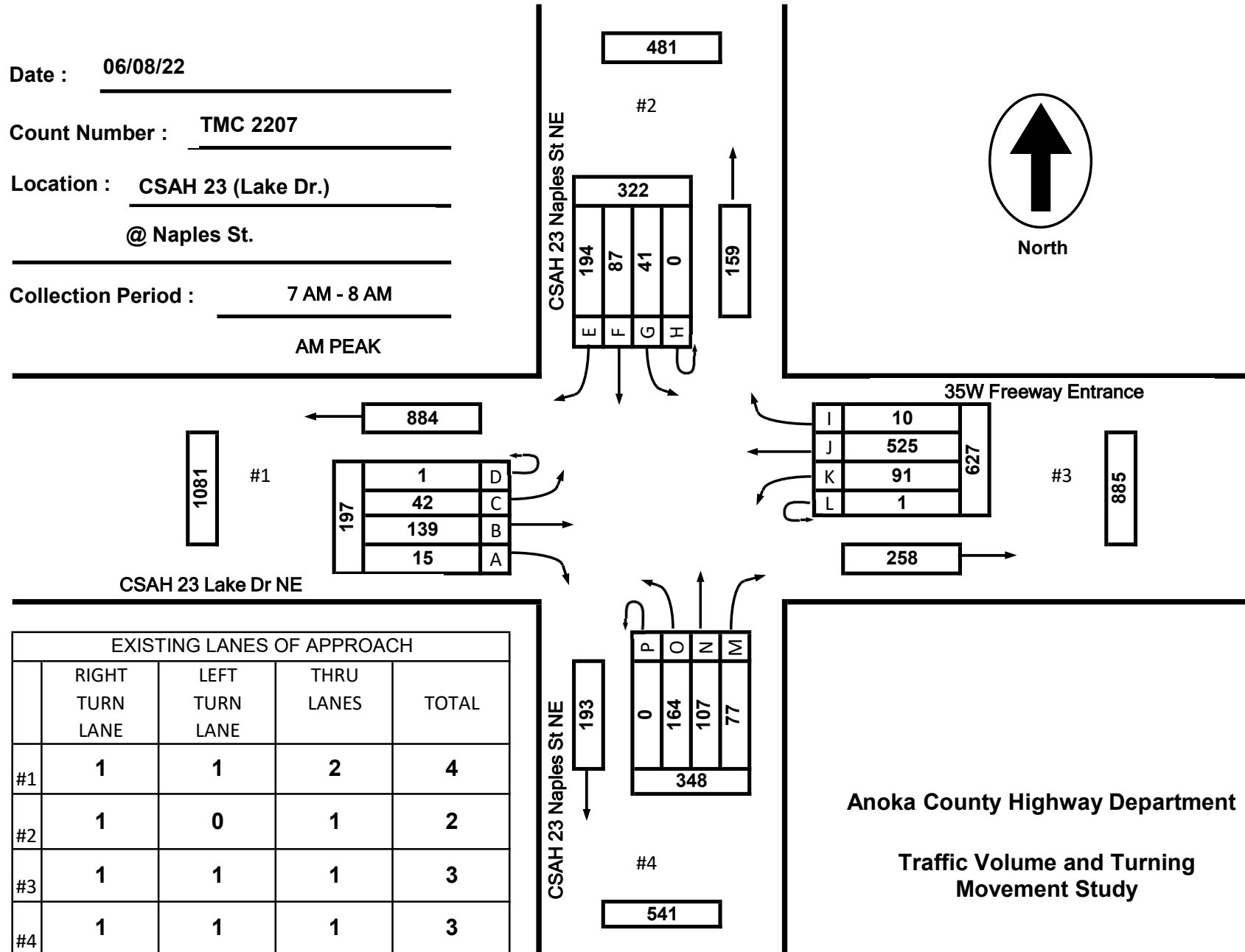
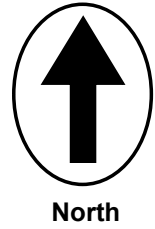
Traffic Volume and Turning Movement Study

Date : 06/08/22

Count Number : TMC 2207

Location : CSAH 23 (Lake Dr.)
@ Naples St.

Collection Period : 7 AM - 8 AM
AM PEAK



Anoka County Highway Department

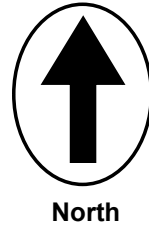
Traffic Volume and Turning Movement Study

Date : 06/08/22

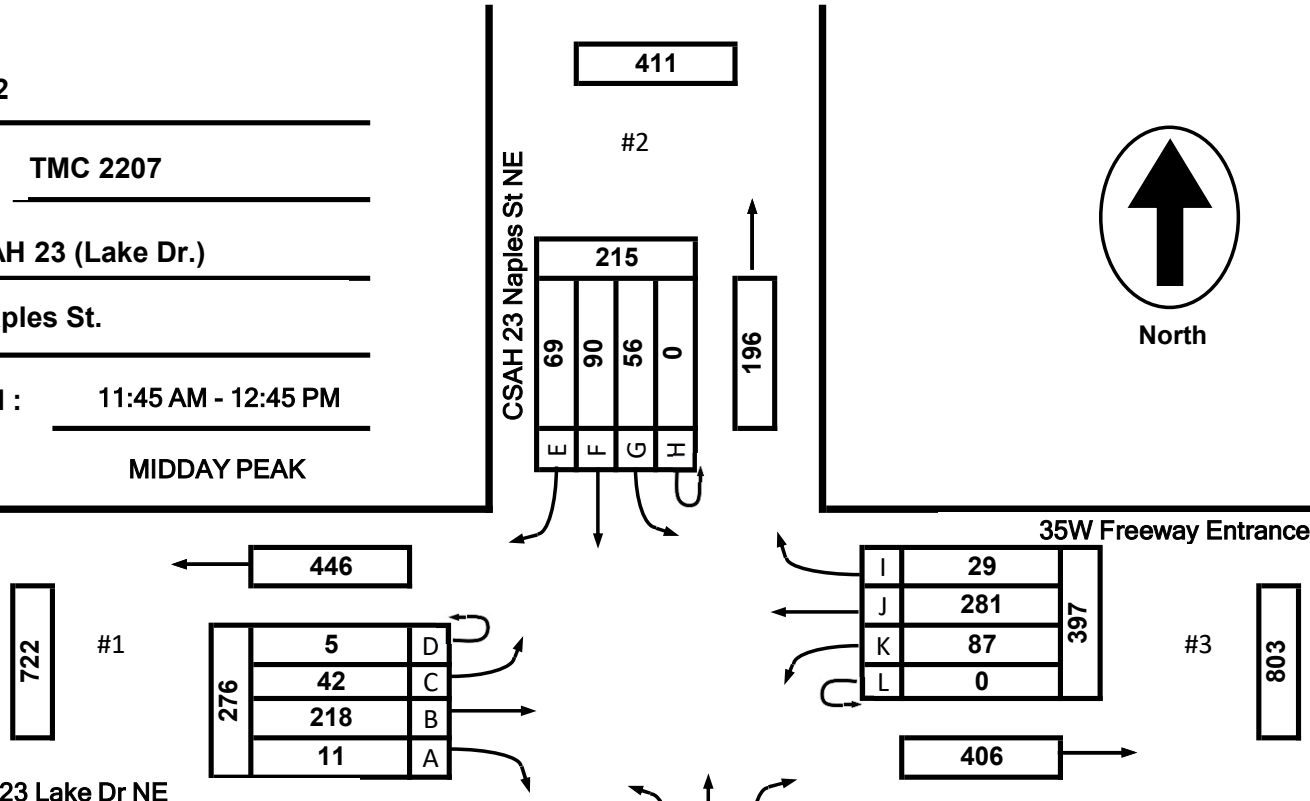
Count Number : TMC 2207

Location : CSAH 23 (Lake Dr.)
@ Naples St.

Collection Period : 11:45 AM - 12:45 PM
MIDDAY PEAK



North



CSAH 23 Lake Dr NE

35W Freeway Entrance

CSAH 23 Naples St NE

EXISTING LANES OF APPROACH

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

Anoka County Highway Department

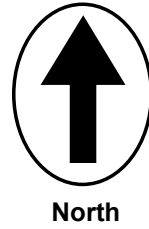
Traffic Volume and Turning Movement Study

Date : 06/08/22

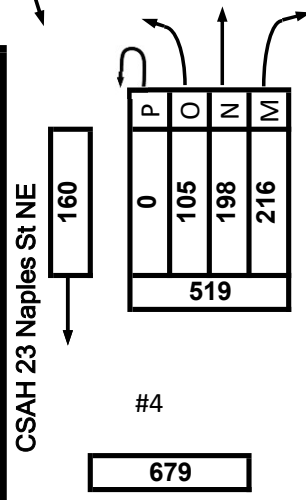
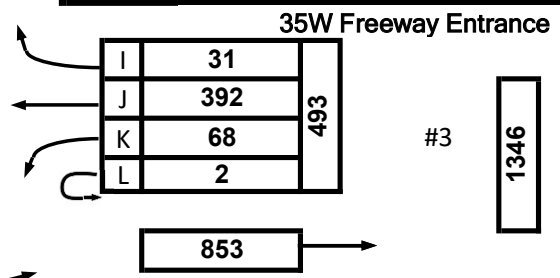
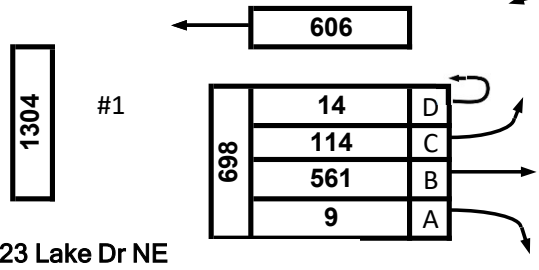
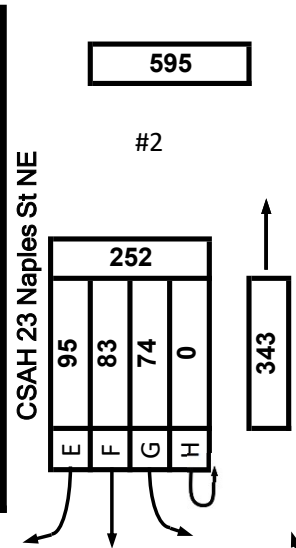
Count Number : TMC 2207

Location : CSAH 23 (Lake Dr.)
@ Naples St.

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



North



CSAH 23 Lake Dr NE

35W Freeway Entrance

CSAH 23 Naples St NE

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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2207
 Site Code :
 Start Date : 06/08/2022
 Page No : 1

Weather: Warm & Cloudy
 CountCAM 2
 Study Conducted By: Kevin

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 Naples St NE Southbound						35W Freeway Entrance Westbound						CSAH 23 Naples St NE Northbound						CSAH 23 Lake Dr NE Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
00:00	6	0	5	0	0	11	1	3	0	0	0	4	3	9	8	0	0	20	0	7	5	0	0	12	0	47	47
00:15	0	0	2	0	0	2	1	6	1	0	0	8	7	9	6	0	0	22	0	7	6	0	0	13	0	45	45
00:30	3	2	2	0	0	7	1	3	2	0	0	6	2	12	3	0	0	17	0	7	6	0	0	13	0	43	43
00:45	6	2	2	0	0	10	1	0	1	0	0	2	4	5	3	0	0	12	1	4	5	0	0	10	0	34	34
Total	15	4	11	0	0	30	4	12	4	0	0	20	16	35	20	0	0	71	1	25	22	0	0	48	0	169	169
01:00	3	3	1	0	0	7	1	6	2	0	0	9	2	5	2	0	0	9	2	10	5	0	0	17	0	42	42
01:15	1	1	3	0	0	5	0	3	0	0	0	3	3	4	5	0	0	12	0	4	4	0	0	8	0	28	28
01:30	3	2	0	0	0	5	1	6	0	0	0	7	1	1	3	0	0	5	1	7	3	0	0	11	0	28	28
01:45	2	0	3	0	0	5	2	2	0	0	0	4	2	0	1	0	0	3	0	2	4	0	0	6	0	18	18
Total	9	6	7	0	0	22	4	17	2	0	0	23	8	10	11	0	0	29	3	23	16	0	0	42	0	116	116
02:00	3	0	3	0	0	6	0	5	0	1	0	6	3	4	1	0	0	8	0	6	1	0	0	7	0	27	27
02:15	4	1	1	0	0	6	0	8	1	0	0	9	1	2	1	0	0	4	0	6	3	0	0	9	0	28	28
02:30	1	2	1	0	0	4	0	5	0	0	0	5	1	3	1	0	0	5	0	4	2	0	0	6	0	20	20
02:45	4	3	0	0	0	7	1	4	0	0	0	5	1	1	3	0	0	5	0	4	1	0	0	5	0	22	22
Total	12	6	5	0	0	23	1	22	1	1	0	25	6	10	6	0	0	22	0	20	7	0	0	27	0	97	97
03:00	3	1	0	0	0	4	1	4	0	0	0	5	0	2	6	0	0	8	0	2	1	0	0	3	0	20	20
03:15	7	1	3	0	0	11	1	2	0	0	0	3	0	1	5	0	0	6	0	0	1	0	0	1	0	21	21
03:30	3	2	2	0	0	7	0	3	1	0	0	4	0	4	7	0	0	11	0	2	2	0	0	4	0	26	26
03:45	13	3	2	0	0	18	2	8	1	0	0	11	3	5	0	0	0	8	1	3	0	0	0	4	0	41	41
Total	26	7	7	0	0	40	4	17	2	0	0	23	3	12	18	0	0	33	1	7	4	0	0	12	0	108	108
04:00	8	3	0	0	0	11	1	7	1	0	0	9	0	0	2	0	0	2	2	4	4	0	0	10	0	32	32
04:15	10	3	2	0	0	15	1	20	5	2	0	28	1	7	2	0	0	10	3	3	1	0	0	7	0	60	60
04:30	18	4	3	0	0	25	2	28	2	0	0	32	1	4	6	0	0	11	1	2	5	0	0	8	0	76	76
04:45	12	13	4	0	0	29	0	25	4	0	0	29	0	5	17	0	0	22	2	7	6	1	0	16	0	96	96
Total	48	23	9	0	0	80	4	80	12	2	0	98	2	16	27	0	0	45	8	16	16	1	0	41	0	264	264
05:00	20	7	10	0	0	37	3	39	8	0	0	50	1	8	12	0	0	21	3	8	4	0	0	15	0	123	123
05:15	24	15	11	0	0	50	0	50	5	0	0	55	1	7	14	0	0	22	1	9	6	0	0	16	0	143	143
05:30	49	27	12	0	0	88	2	95	10	0	0	107	2	15	28	0	0	45	5	17	7	0	0	29	0	269	269
05:45	41	17	15	0	0	73	4	67	6	0	0	77	6	11	25	0	0	42	9	22	8	0	0	39	0	231	231
Total	134	66	48	0	0	248	9	251	29	0	0	289	10	41	79	0	0	130	18	56	25	0	0	99	0	766	766



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2207
 Site Code :
 Start Date : 06/08/2022
 Page No : 2

Weather: Warm & Cloudy
 CountCAM 2
 Study Conducted By: Kevin

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 Naples St NE Southbound						35W Freeway Entrance Westbound						CSAH 23 Naples St NE Northbound						CSAH 23 Lake Dr NE Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
06:00	38	20	11	0	0	69	2	94	10	0	0	106	4	9	30	0	0	43	3	25	11	0	0	39	0	257	257
06:15	47	23	10	0	0	80	0	122	9	0	0	131	4	16	40	0	0	60	5	28	10	0	0	43	0	314	314
06:30	48	31	15	0	0	94	2	148	27	0	0	177	12	23	41	0	0	76	3	36	12	0	0	51	0	398	398
06:45	36	26	8	0	0	70	5	121	17	0	0	143	15	13	34	0	0	62	5	49	10	0	0	64	0	339	339
Total	169	100	44	0	0	313	9	485	63	0	0	557	35	61	145	0	0	241	16	138	43	0	0	197	0	1308	1308
07:00	51	22	9	0	0	82	1	134	16	0	0	151	15	24	35	0	0	74	9	35	5	0	0	49	0	356	356
07:15	45	19	9	0	0	73	5	128	19	0	0	152	8	23	49	0	0	80	3	36	12	0	0	51	0	356	356
07:30	73	28	14	0	0	115	1	143	22	0	0	166	26	34	40	0	0	100	1	39	12	1	0	53	0	434	434
07:45	25	18	9	0	0	52	3	120	34	1	0	158	28	26	40	0	0	94	2	29	13	0	0	44	0	348	348
Total	194	87	41	0	0	322	10	525	91	1	0	627	77	107	164	0	0	348	15	139	42	1	0	197	0	1494	1494
08:00	35	13	8	0	0	56	0	116	20	0	0	136	17	19	45	0	0	81	2	61	13	1	0	77	0	350	350
08:15	24	17	13	0	0	54	2	113	8	0	0	123	14	18	25	0	0	57	2	40	8	2	0	52	0	286	286
08:30	29	19	11	0	0	59	4	95	21	0	0	120	13	22	34	0	0	69	2	41	6	1	0	50	0	298	298
08:45	21	25	13	0	0	59	3	84	11	0	0	98	15	18	34	0	0	67	2	38	8	1	0	49	0	273	273
Total	109	74	45	0	0	228	9	408	60	0	0	477	59	77	138	0	0	274	8	180	35	5	0	228	0	1207	1207
09:00	21	12	16	0	0	49	4	98	15	0	0	117	11	21	24	0	0	56	8	35	15	0	0	58	0	280	280
09:15	24	19	12	0	0	55	2	81	16	0	0	99	17	19	22	0	0	58	6	34	14	0	0	54	0	266	266
09:30	21	13	7	0	0	41	5	81	13	1	0	100	17	20	31	0	0	68	6	50	13	0	0	69	0	278	278
09:45	20	14	11	0	0	45	4	65	10	0	0	79	15	18	16	0	0	49	5	42	10	1	0	58	0	231	231
Total	86	58	46	0	0	190	15	325	54	1	0	395	60	78	93	0	0	231	25	161	52	1	0	239	0	1055	1055
10:00	18	11	10	0	0	39	2	60	8	0	0	70	15	26	29	0	0	70	4	39	9	0	0	52	0	231	231
10:15	28	11	11	0	0	50	6	58	16	0	0	80	21	19	32	0	0	72	4	43	9	0	0	56	0	258	258
10:30	16	12	8	0	0	36	5	70	11	0	0	86	6	18	44	0	0	68	1	44	12	1	0	58	0	248	248
10:45	22	21	10	0	0	53	9	73	17	0	0	99	23	17	30	0	0	70	1	43	11	1	0	56	0	278	278
Total	84	55	39	0	0	178	22	261	52	0	0	335	65	80	135	0	0	280	10	169	41	2	0	222	0	1015	1015
11:00	27	14	8	0	0	49	5	61	13	0	0	79	15	26	27	0	0	68	3	56	12	1	0	72	0	268	268
11:15	17	10	19	0	0	46	10	55	20	0	0	85	17	33	22	0	0	72	0	49	9	2	0	60	0	263	263
11:30	25	24	18	0	0	67	7	62	16	1	0	86	22	27	23	0	0	72	1	48	11	0	0	60	0	285	285
11:45	26	26	14	0	0	66	6	58	16	0	0	80	31	35	26	0	0	92	3	64	13	3	0	83	0	321	321
Total	95	74	59	0	0	228	28	236	65	1	0	330	85	121	98	0	0	304	7	217	45	6	0	275	0	1137	1137
12:00	14	23	18	0	0	55	9	71	18	0	0	98	42	31	21	0	0	94	1	62	9	0	0	72	0	319	319
12:15	13	25	13	0	0	51	4	60	24	0	0	88	37	32	24	0	0	93	3	42	12	0	0	57	0	289	289
12:30	16	16	11	0	0	43	10	92	29	0	0	131	22	27	20	0	0	69	4	50	8	2	0	64	0	307	307



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2207
 Site Code :
 Start Date : 06/08/2022
 Page No : 3

Weather: Warm & Cloudy
 CountCAM 2
 Study Conducted By: Kevin

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 Naples St NE Southbound						35W Freeway Entrance Westbound						CSAH 23 Naples St NE Northbound						CSAH 23 Lake Dr NE Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
12:45	14	12	9	0	0	35	11	63	16	0	0	90	16	17	20	0	0	53	0	69	14	1	0	84	0	262	262
Total	57	76	51	0	0	184	34	286	87	0	0	407	117	107	85	0	0	309	8	223	43	3	0	277	0	1177	1177
13:00	11	12	12	0	0	35	14	79	16	2	0	111	22	28	26	0	0	76	3	56	13	0	0	72	0	294	294
13:15	27	14	16	0	0	57	7	58	18	1	0	84	23	19	11	0	0	53	4	68	12	1	0	85	0	279	279
13:30	23	19	13	0	0	55	1	60	15	0	0	76	25	29	25	0	0	79	2	68	16	1	0	87	0	297	297
13:45	23	14	13	0	0	50	5	55	13	0	0	73	32	22	22	0	0	76	0	78	11	1	0	90	0	289	289
Total	84	59	54	0	0	197	27	252	62	3	0	344	102	98	84	0	0	284	9	270	52	3	0	334	0	1159	1159
14:00	16	13	19	0	0	48	7	49	17	0	0	73	23	29	28	0	0	80	1	81	11	3	0	96	0	297	297
14:15	14	15	14	0	0	43	7	58	12	1	0	78	42	35	16	0	0	93	2	98	17	1	0	118	0	332	332
14:30	20	15	14	0	0	49	6	73	25	0	0	104	40	31	21	0	0	92	4	105	33	0	0	142	0	387	387
14:45	18	9	18	0	0	45	6	71	13	1	0	91	42	33	28	0	0	103	4	104	28	0	0	136	0	375	375
Total	68	52	65	0	0	185	26	251	67	2	0	346	147	128	93	0	0	368	11	388	89	4	0	492	0	1391	1391
15:00	29	10	16	0	0	55	14	74	10	0	0	98	40	53	25	0	0	118	2	99	23	1	0	125	0	396	396
15:15	17	13	6	0	0	36	11	77	16	0	0	104	37	44	27	0	0	108	5	124	31	3	0	163	0	411	411
15:30	33	26	30	0	0	89	15	83	19	0	0	117	43	50	38	0	0	131	4	122	19	2	0	147	0	484	484
15:45	25	20	20	0	0	65	16	85	23	1	0	125	47	52	29	0	0	128	4	130	33	0	0	167	0	485	485
Total	104	69	72	0	0	245	56	319	68	1	0	444	167	199	119	0	0	485	15	475	106	6	0	602	0	1776	1776
16:00	24	10	14	0	0	48	10	88	24	0	0	122	50	59	26	0	0	135	2	126	31	1	0	160	0	465	465
16:15	23	22	22	0	0	67	4	93	20	1	0	118	57	46	18	0	0	121	1	134	31	2	0	168	0	474	474
16:30	20	23	23	0	0	66	8	93	15	1	0	117	46	55	29	0	0	130	2	124	31	4	0	161	0	474	474
16:45	26	22	19	0	0	67	10	91	17	0	0	118	68	37	29	0	0	134	1	141	34	6	0	182	0	501	501
Total	93	77	78	0	0	248	32	365	76	2	0	475	221	197	102	0	0	520	6	525	127	13	0	671	0	1914	1914
17:00	26	16	10	0	0	52	9	115	16	0	0	140	45	60	29	0	0	134	5	162	18	2	0	187	0	513	513
17:15	20	24	18	0	0	62	6	80	25	0	0	111	52	53	24	0	0	129	3	119	32	2	0	156	0	458	458
17:30	19	21	17	0	0	57	13	75	23	0	0	111	55	30	25	0	0	110	5	99	29	1	0	134	0	412	412
17:45	18	15	13	0	0	46	5	83	14	1	0	103	39	33	28	0	0	100	6	119	22	0	0	147	0	396	396
Total	83	76	58	0	0	217	33	353	78	1	0	465	191	176	106	0	0	473	19	499	101	5	0	624	0	1779	1779
18:00	17	14	14	0	0	45	9	76	24	1	0	110	38	26	16	0	0	80	5	94	28	1	0	128	0	363	363
18:15	24	12	14	0	0	50	9	77	17	0	0	103	40	39	23	0	0	102	2	82	14	0	0	98	0	353	353
18:30	17	13	13	0	0	43	8	75	15	0	0	98	31	26	16	0	0	73	2	61	14	0	0	77	0	291	291
18:45	17	11	15	0	0	43	10	57	20	0	0	87	27	17	14	0	0	58	1	78	14	2	0	95	0	283	283
Total	75	50	56	0	0	181	36	285	76	1	0	398	136	108	69	0	0	313	10	315	70	3	0	398	0	1290	1290



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2207
 Site Code :
 Start Date : 06/08/2022
 Page No : 4

Weather: Warm & Cloudy
 CountCAM 2
 Study Conducted By: Kevin

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 Naples St NE Southbound						35W Freeway Entrance Westbound						CSAH 23 Naples St NE Northbound						CSAH 23 Lake Dr NE Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
19:00	19	10	15	0	0	44	14	60	7	0	0	81	23	22	12	0	0	57	3	76	14	0	0	93	0	275	275
19:15	14	6	17	0	0	37	3	49	10	0	0	62	23	13	12	0	0	48	9	64	16	1	0	90	0	237	237
19:30	14	15	16	0	0	45	5	59	15	0	0	79	12	31	11	0	0	54	4	41	10	0	0	55	0	233	233
19:45	8	12	6	0	0	26	7	63	10	0	0	80	19	18	21	0	0	58	2	43	11	1	0	57	0	221	221
Total	55	43	54	0	0	152	29	231	42	0	0	302	77	84	56	0	0	217	18	224	51	2	0	295	0	966	966
20:00	17	12	9	0	0	38	7	59	6	0	0	72	25	22	10	0	0	57	1	62	13	1	0	77	0	244	244
20:15	8	11	12	0	0	31	7	55	12	1	0	75	17	10	12	0	0	39	1	61	18	0	0	80	0	225	225
20:30	14	9	5	0	0	28	7	53	15	0	0	75	18	14	9	0	0	41	2	72	12	1	0	87	0	231	231
20:45	10	13	10	0	0	33	5	52	4	0	0	61	11	14	9	0	0	34	1	60	15	0	1	76	1	204	205
Total	49	45	36	0	0	130	26	219	37	1	0	283	71	60	40	0	0	171	5	255	58	2	1	320	1	904	905
21:00	9	13	15	0	0	37	4	30	4	0	0	38	9	15	10	0	0	34	0	52	16	0	0	68	0	177	177
21:15	12	6	6	0	0	24	6	39	4	0	0	49	10	11	5	0	0	26	1	52	24	0	0	77	0	176	176
21:30	15	8	11	0	0	34	3	22	4	0	0	29	7	14	9	0	0	30	1	55	15	0	0	71	0	164	164
21:45	11	7	5	0	0	23	8	29	8	0	0	45	7	9	7	0	0	23	4	43	18	1	0	66	0	157	157
Total	47	34	37	0	0	118	21	120	20	0	0	161	33	49	31	0	0	113	6	202	73	1	0	282	0	674	674
22:00	12	11	9	0	0	32	2	27	5	0	0	34	7	15	8	0	0	30	2	38	11	0	0	51	0	147	147
22:15	11	7	7	0	0	25	5	20	6	0	0	31	11	14	14	0	0	39	0	34	12	1	0	47	0	142	142
22:30	4	9	4	0	0	17	12	27	1	0	0	40	10	8	6	0	0	24	1	35	17	0	0	53	0	134	134
22:45	5	5	5	0	0	15	3	19	2	0	0	24	3	6	7	0	0	16	0	25	9	0	0	34	0	89	89
Total	32	32	25	0	0	89	22	93	14	0	0	129	31	43	35	0	0	109	3	132	49	1	0	185	0	512	512
23:00	4	4	3	0	0	11	4	10	1	0	0	15	7	9	3	0	0	19	1	24	7	1	0	33	0	78	78
23:15	8	3	9	0	0	20	1	10	4	0	0	15	2	8	3	0	0	13	2	24	10	0	0	36	0	84	84
23:30	3	3	5	0	0	11	5	10	3	0	0	18	5	6	6	0	0	17	0	19	8	0	0	27	0	73	73
23:45	8	3	4	0	0	15	1	4	1	0	0	6	3	7	8	0	0	18	0	11	11	0	0	22	0	61	61
Total	23	13	21	0	0	57	11	34	9	0	0	54	17	30	20	0	0	67	3	78	36	1	0	118	0	296	296
Grand Total	1751	1186	968	0	0	3905	472	5447	1071	17	0	7007	1736	1927	1774	0	0	5437	225	4737	1203	60	1	6225	1	22574	22575
Apprch %	44.8	30.4	24.8	0	0	0	6.7	77.7	15.3	0.2	0	0	31.9	35.4	32.6	0	0	0	3.6	76.1	19.3	1	0	0	0	0	0
Total %	7.8	5.3	4.3	0	0	17.3	2.1	24.1	4.7	0.1	0	31	7.7	8.5	7.9	0	0	24.1	1	21	5.3	0.3	0	27.6	0	100	0
Cars +	1692	1127	906	0	0	3725	455	5300	1049	17	0	6821	1698	1813	1465	0	0	4976	154	4592	1181	57	0	5985	0	0	21507
% Cars +	96.6	95	93.6	0	0	95.4	96.4	97.3	97.9	100	0	97.3	97.8	94.1	82.6	0	0	91.5	68.4	96.9	98.2	95	100	96.1	0	0	95.3
Trucks	59	59	62	0	0	180	17	147	22	0	0	186	38	114	309	0	0	461	71	145	22	3	0	241	0	0	1068
% Trucks	3.4	5	6.4	0	0	4.6	3.6	2.7	2.1	0	0	2.7	2.2	5.9	17.4	0	0	8.5	31.6	3.1	1.8	5	0	3.9	0	0	4.7



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2207
 Site Code :
 Start Date : 06/08/2022
 Page No : 5

Weather: Warm & Cloudy
 CountCAM 2
 Study Conducted By: Kevin

Start Time	CSAH 23 Naples St NE Southbound					35W Freeway Entrance Westbound					CSAH 23 Naples St NE Northbound					CSAH 23 Lake Dr NE Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
Peak Hour Analysis From 00:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	51	22	9	0	82	1	134	16	0	151	15	24	35	0	74	9	35	5	0	49	356
07:15	45	19	9	0	73	5	128	19	0	152	8	23	49	0	80	3	36	12	0	51	356
07:30	73	28	14	0	115	1	143	22	0	166	26	34	40	0	100	1	39	12	1	53	434
07:45	25	18	9	0	52	3	120	34	1	158	28	26	40	0	94	2	29	13	0	44	348
Total Volume	194	87	41	0	322	10	525	91	1	627	77	107	164	0	348	15	139	42	1	197	1494
% App. Total	60.2	27	12.7	0		1.6	83.7	14.5	0.2		22.1	30.7	47.1	0		7.6	70.6	21.3	0.5		
PHF	.664	.777	.732	.000	.700	.500	.918	.669	.250	.944	.688	.787	.837	.000	.870	.417	.891	.808	.250	.929	.861

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45																					
11:45	26	26	14	0	66	6	58	16	0	80	31	35	26	0	92	3	64	13	3	83	321
12:00	14	23	18	0	55	9	71	18	0	98	42	31	21	0	94	1	62	9	0	72	319
12:15	13	25	13	0	51	4	60	24	0	88	37	32	24	0	93	3	42	12	0	57	289
12:30	16	16	11	0	43	10	92	29	0	131	22	27	20	0	69	4	50	8	2	64	307
Total Volume	69	90	56	0	215	29	281	87	0	397	132	125	91	0	348	11	218	42	5	276	1236
% App. Total	32.1	41.9	26	0		7.3	70.8	21.9	0		37.9	35.9	26.1	0		4	79	15.2	1.8		
PHF	.663	.865	.778	.000	.814	.725	.764	.750	.000	.758	.786	.893	.875	.000	.926	.688	.852	.808	.417	.831	.963

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	23	22	22	0	67	4	93	20	1	118	57	46	18	0	121	1	134	31	2	168	474
16:30	20	23	23	0	66	8	93	15	1	117	46	55	29	0	130	2	124	31	4	161	474
16:45	26	22	19	0	67	10	91	17	0	118	68	37	29	0	134	1	141	34	6	182	501
17:00	26	16	10	0	52	9	115	16	0	140	45	60	29	0	134	5	162	18	2	187	513
Total Volume	95	83	74	0	252	31	392	68	2	493	216	198	105	0	519	9	561	114	14	698	1962
% App. Total	37.7	32.9	29.4	0		6.3	79.5	13.8	0.4		41.6	38.2	20.2	0		1.3	80.4	16.3	2		
PHF	.913	.902	.804	.000	.940	.775	.852	.850	.500	.880	.794	.825	.905	.000	.968	.450	.866	.838	.583	.933	.956



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2207
 Site Code :
 Start Date : 06/08/2022
 Page No : 1

Weather: Warm & Cloudy
 CountCAM 2
 Study Conducted By: Kevin

Groups Printed- Trucks

Start Time	CSAH 23 Naples St NE Southbound					35W Freeway Entrance Westbound					CSAH 23 Naples St NE Northbound					CSAH 23 Lake Dr NE Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
00:00	0	0	1	0	1	0	0	0	0	0	0	1	5	0	6	0	0	0	0	0	7
00:15	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	4
00:30	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	3
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	1	0	0	1	0	3	9	0	12	0	0	0	0	0	14
01:00	0	1	0	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	3
01:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	3
01:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	6	0	6	1	0	0	0	1	8
02:00	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
02:15	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
02:30	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	3
02:45	0	0	0	0	0	1	1	0	0	2	0	0	1	0	1	0	0	0	0	0	3
Total	1	0	0	0	1	1	4	0	0	5	0	1	3	0	4	0	0	0	0	0	10
03:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
03:15	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	4
03:30	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	6	0	6	0	0	0	0	0	7
04:00	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
04:15	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	1	0	0	0	1	4
04:30	1	0	0	0	1	1	0	1	0	2	0	0	3	0	3	1	1	0	0	2	8
04:45	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	1	0	0	1	2	7
Total	1	1	0	0	2	1	2	1	0	4	1	0	9	0	10	3	1	0	1	5	21
05:00	1	0	0	0	1	1	0	0	0	1	0	0	1	0	1	1	0	0	0	1	4
05:15	0	0	0	0	0	0	3	0	0	3	0	1	2	0	3	0	1	0	0	1	7
05:30	1	0	0	0	1	0	5	0	0	5	0	1	2	0	3	1	1	0	0	2	11
05:45	1	0	2	0	3	1	4	0	0	5	0	2	4	0	6	0	2	0	0	2	16
Total	3	0	2	0	5	2	12	0	0	14	0	4	9	0	13	2	4	0	0	6	38
06:00	2	1	0	0	3	0	3	0	0	3	0	3	3	0	6	0	3	3	0	6	18
06:15	3	0	0	0	3	0	5	0	0	5	1	1	6	0	8	1	0	1	0	2	18
06:30	1	1	1	0	3	0	2	0	0	2	0	1	5	0	6	1	0	1	0	2	13
06:45	0	4	0	0	4	0	2	0	0	2	1	2	4	0	7	1	2	0	0	3	16
Total	6	6	1	0	13	0	12	0	0	12	2	7	18	0	27	3	5	5	0	13	65
07:00	2	1	0	0	3	0	4	1	0	5	0	1	4	0	5	3	3	0	0	6	19
07:15	4	2	0	0	6	0	2	0	0	2	0	2	3	0	5	2	3	0	0	5	18
07:30	2	1	1	0	4	0	2	0	0	2	1	6	8	0	15	0	0	0	0	0	21
07:45	3	0	2	0	5	0	0	0	0	0	1	2	8	0	11	0	1	0	0	1	17
Total	11	4	3	0	18	0	8	1	0	9	2	11	23	0	36	5	7	0	0	12	75
08:00	3	1	0	0	4	0	3	0	0	3	1	1	10	0	12	1	7	0	0	8	27
08:15	0	0	0	0	0	0	4	0	0	4	0	1	4	0	5	0	2	0	0	2	11
08:30	2	4	1	0	7	1	2	1	0	4	0	3	4	0	7	1	4	1	0	6	24
08:45	1	2	1	0	4	0	3	2	0	5	0	4	5	0	9	0	2	0	0	2	20
Total	6	7	2	0	15	1	12	3	0	16	1	9	23	0	33	2	15	1	0	18	82
09:00	1	1	2	0	4	0	3	1	0	4	1	2	4	0	7	1	3	1	0	5	20



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2207
 Site Code :
 Start Date : 06/08/2022
 Page No : 2

Weather: Warm & Cloudy
 CountCAM 2
 Study Conducted By: Kevin

Groups Printed- Trucks

Start Time	CSAH 23 Naples St NE Southbound					35W Freeway Entrance Westbound					CSAH 23 Naples St NE Northbound					CSAH 23 Lake Dr NE Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
09:15	0	2	0	0	2	0	4	0	0	4	1	2	6	0	9	1	0	0	0	1	16
09:30	1	2	1	0	4	1	6	0	0	7	2	4	7	0	13	2	1	1	0	4	28
09:45	1	1	1	0	3	0	2	0	0	2	2	1	4	0	7	2	3	1	0	6	18
Total	3	6	4	0	13	1	15	1	0	17	6	9	21	0	36	6	7	3	0	16	82
10:00	0	0	0	0	0	0	1	0	0	1	2	3	9	0	14	1	1	0	0	2	17
10:15	3	1	1	0	5	1	2	1	0	4	1	3	8	0	12	2	4	0	0	6	27
10:30	1	2	0	0	3	0	1	0	0	1	0	3	15	0	18	0	3	0	0	3	25
10:45	5	1	1	0	7	1	2	0	0	3	1	3	9	0	13	0	1	0	0	1	24
Total	9	4	2	0	15	2	6	1	0	9	4	12	41	0	57	3	9	0	0	12	93
11:00	0	1	0	0	1	1	2	1	0	4	1	1	7	0	9	1	2	0	0	3	17
11:15	0	1	1	0	2	1	1	1	0	3	0	1	2	0	3	0	2	0	0	2	10
11:30	1	0	1	0	2	0	2	0	0	2	1	1	3	0	5	1	1	0	0	2	11
11:45	2	0	0	0	2	0	1	0	0	1	1	2	9	0	12	0	1	1	0	2	17
Total	3	2	2	0	7	2	6	2	0	10	3	5	21	0	29	2	6	1	0	9	55
12:00	1	0	4	0	5	0	3	1	0	4	0	2	4	0	6	1	3	1	0	5	20
12:15	0	1	1	0	2	0	0	0	0	0	2	2	2	0	6	0	2	1	0	3	11
12:30	2	1	2	0	5	1	3	0	0	4	0	1	5	0	6	1	2	1	0	4	19
12:45	2	1	1	0	4	0	1	0	0	1	0	2	3	0	5	0	2	0	0	2	12
Total	5	3	8	0	16	1	7	1	0	9	2	7	14	0	23	2	9	3	0	14	62
13:00	0	0	1	0	1	0	3	0	0	3	1	2	4	0	7	0	3	0	0	3	14
13:15	0	0	0	0	0	1	2	1	0	4	1	4	1	0	6	0	4	0	0	4	14
13:30	0	1	2	0	3	0	3	1	0	4	1	1	6	0	8	0	4	0	0	4	19
13:45	0	0	1	0	1	1	2	2	0	5	2	1	2	0	5	0	4	0	0	4	15
Total	0	1	4	0	5	2	10	4	0	16	5	8	13	0	26	0	15	0	0	15	62
14:00	1	1	1	0	3	0	2	0	0	2	1	4	4	0	9	0	7	0	0	7	21
14:15	0	0	5	0	5	0	4	0	0	4	0	2	4	0	6	1	5	0	0	6	21
14:30	2	2	2	0	6	0	2	2	0	4	2	5	1	0	8	2	4	0	0	6	24
14:45	0	0	2	0	2	0	3	1	0	4	1	2	4	0	7	0	3	0	0	3	16
Total	3	3	10	0	16	0	11	3	0	14	4	13	13	0	30	3	19	0	0	22	82
15:00	3	1	1	0	5	0	4	0	0	4	1	4	2	0	7	0	5	0	0	5	21
15:15	0	0	2	0	2	1	4	1	0	6	1	1	0	0	2	0	5	2	0	7	17
15:30	1	4	5	0	10	1	1	1	0	3	0	1	2	0	3	1	4	0	0	5	21
15:45	1	0	4	0	5	0	1	0	0	1	1	1	4	0	6	1	3	0	0	4	16
Total	5	5	12	0	22	2	10	2	0	14	3	7	8	0	18	2	17	2	0	21	75
16:00	1	2	3	0	6	0	0	1	0	1	0	2	1	0	3	1	1	0	0	2	12
16:15	1	4	4	0	9	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	13
16:30	0	4	1	0	5	1	3	1	0	5	0	3	2	0	5	2	1	1	0	4	19
16:45	0	1	0	0	1	0	1	0	0	1	0	2	3	0	5	0	0	0	2	2	9
Total	2	11	8	0	21	1	4	2	0	7	0	7	6	0	13	4	5	1	2	12	53
17:00	0	0	0	0	0	1	1	0	0	2	0	1	2	0	3	4	2	1	0	7	12
17:15	0	0	0	0	0	0	1	0	0	1	0	1	2	0	3	3	0	0	0	3	7
17:30	0	0	1	0	1	0	0	0	0	0	0	1	1	0	2	4	1	3	0	8	11
17:45	0	0	2	0	2	0	4	0	0	4	1	1	2	0	4	6	4	0	0	10	20
Total	0	0	3	0	3	1	6	0	0	7	1	4	7	0	12	17	7	4	0	28	50
18:00	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	3	3	1	0	7	11
18:15	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	1	2	0	0	3	6
18:30	1	1	0	0	2	0	1	1	0	2	0	1	2	0	3	1	3	1	0	5	12
18:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3
Total	1	2	0	0	3	0	5	1	0	6	0	2	4	0	6	6	9	2	0	17	32



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2207
 Site Code :
 Start Date : 06/08/2022
 Page No : 3

Weather: Warm & Cloudy
 CountCAM 2
 Study Conducted By: Kevin

Groups Printed- Trucks

Start Time	CSAH 23 Naples St NE Southbound					35W Freeway Entrance Westbound					CSAH 23 Naples St NE Northbound					CSAH 23 Lake Dr NE Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
19:00	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	2	3	0	0	5	9
19:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5	1	0	0	6	7
19:30	0	1	0	0	1	0	1	0	0	1	0	0	2	0	2	1	0	0	0	1	5
19:45	0	2	0	0	2	0	1	0	0	1	0	1	2	0	3	0	1	0	0	1	7
Total	0	3	0	0	3	0	4	0	0	4	1	1	6	0	8	8	5	0	0	13	28
20:00	0	0	0	0	0	0	2	0	0	2	2	1	2	0	5	1	0	0	0	1	8
20:15	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	0	1	5
20:30	0	0	0	0	0	0	4	0	0	4	0	0	2	0	2	0	0	0	0	0	6
20:45	0	0	0	0	0	0	2	0	0	2	0	1	3	0	4	1	0	0	0	1	7
Total	0	0	0	0	0	0	8	0	0	8	2	2	11	0	15	2	1	0	0	3	26
21:00	0	0	0	0	0	0	0	0	0	0	0	1	4	0	5	0	0	0	0	0	5
21:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	0	1	4
21:30	0	0	0	0	0	0	1	0	0	1	0	0	5	0	5	0	1	0	0	1	7
21:45	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	4
Total	0	0	0	0	0	0	1	0	0	1	0	1	16	0	17	0	2	0	0	2	20
22:00	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3
22:15	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	5
22:30	0	0	0	0	0	0	1	0	0	1	1	0	3	0	4	0	0	0	0	0	5
22:45	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3
Total	0	0	0	0	0	0	1	0	0	1	1	0	14	0	15	0	0	0	0	0	16
23:00	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	3
23:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	0	1	3
23:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	0	1	3
23:45	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3
Total	0	0	0	0	0	0	1	0	0	1	0	1	8	0	9	0	2	0	0	2	12
Grand Total	59	59	62	0	180	17	147	22	0	186	38	114	309	0	461	71	145	22	3	241	1068
Apprch %	32.8	32.8	34.4	0		9.1	79	11.8	0		8.2	24.7	67	0		29.5	60.2	9.1	1.2		
Total %	5.5	5.5	5.8	0	16.9	1.6	13.8	2.1	0	17.4	3.6	10.7	28.9	0	43.2	6.6	13.6	2.1	0.3	22.6	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/08/2022

Signal Warrants - Summary

Major Street Approaches

Eastbound: 35W Freeway Entrance

Number of Lanes : 2+

Total Approach Volume: 6,225

Westbound: CSAH 23 Lake Dr NE

Number of Lanes :2+

Total Approach Volume: 7,007

Minor Street Approaches

Northbound: CSAH 23 Naples St NE

Number of Lanes :1

Total Approach Volume: 5,437

Southbound: CSAH 23 Naples St NE

Number of Lanes :1

Total Approach Volume: 3,905

Warrant Summary (Urban Values Apply)

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

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

Required volumes reached for 13 hours, 8 are needed

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

Required volumes reached for 4 hours, 8 are needed

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

Required 1A volumes reached for 16 hours, 8 are needed

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

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

Number of hours (11) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (61) 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:

Study Date : 06/08/2022

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

13 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **False**
 Number of Major Lanes = **2 or more**
 Number of Minor Lanes = **1**

Volume Requirements

Veh/Hr Major = **600**

Veh/Hr Minor = **150**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	35W Freeway Entrance					CSAH 23 Naples St NE		
16:00 - 17:00	671	+	475	=	1146	520	248	Yes
17:00 - 18:00	624	+	465	=	1089	473	217	Yes
15:00 - 16:00	602	+	444	=	1046	485	245	Yes
14:00 - 15:00	492	+	346	=	838	368	185	Yes
06:45 - 07:45	217	+	612	=	829	316	340	Yes
18:00 - 19:00	398	+	398	=	796	313	181	Yes
07:45 - 08:45	223	+	537	=	760	301	221	Yes
12:00 - 13:00	277	+	407	=	684	309	184	Yes
13:00 - 14:00	334	+	344	=	678	284	197	Yes
05:45 - 06:45	172	+	491	=	663	221	316	Yes
08:45 - 09:45	230	+	414	=	644	249	204	Yes
11:00 - 12:00	275	+	330	=	605	304	228	Yes
19:45 - 20:45	301	+	302	=	603	195	123	Yes
19:00 - 20:00	295	+	302	=	597	217	152	No
10:45 - 11:45	248	+	349	=	597	282	215	No
10:30 - 11:30	246	+	349	=	595	278	184	No
10:15 - 11:15	242	+	344	=	586	278	188	No
19:30 - 20:30	269	+	306	=	575	208	140	No
19:15 - 20:15	279	+	293	=	572	217	146	No
05:30 - 06:30	150	+	421	=	571	190	310	No
10:00 - 11:00	222	+	335	=	557	280	178	No
09:45 - 10:45	224	+	315	=	539	259	170	No
20:45 - 21:45	292	+	177	=	469	124	128	No
05:15 - 06:15	123	+	345	=	468	152	280	No
21:00 - 22:00	282		161		443	113	118	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/08/2022

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

Site Data Required

Rural Settings Apply = **False**
 Number of Major Lanes = **2 or more**
 Number of Minor Lanes = **1**

Volume Requirements

Veh/Hr Major = **900**

Veh/Hr Minor = **75**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	35W Freeway Entrance					CSAH 23 Naples St NE		
16:30 - 17:30	686	+	486	=	1172	527	247	Yes
15:30 - 16:30	642	+	482	=	1124	515	269	Yes
14:30 - 15:30	566	+	397	=	963	421	185	Yes
17:30 - 18:30	507	+	427	=	934	392	198	Yes
14:15 - 15:15	521	+	371	=	892	406	192	No
14:00 - 15:00	492	+	346	=	838	368	185	No
06:30 - 07:30	215	+	623	=	838	292	319	No
07:15 - 08:15	225	+	612	=	837	355	296	No
06:45 - 07:45	217	+	612	=	829	316	340	No
07:00 - 08:00	197	+	627	=	824	348	322	No
07:30 - 08:30	226	+	583	=	809	332	277	No
06:15 - 07:15	207	+	602	=	809	272	326	No
13:45 - 14:45	446	+	328	=	774	341	190	No
07:45 - 08:45	223	+	537	=	760	301	221	No
06:00 - 07:00	197	+	557	=	754	241	313	No
12:30 - 13:30	305	+	416	=	721	251	170	No
08:00 - 09:00	228	+	477	=	705	274	228	No
12:15 - 13:15	277	+	420	=	697	291	164	No
13:30 - 14:30	391	+	300	=	691	328	196	No
12:45 - 13:45	328	+	361	=	689	261	182	No
12:00 - 13:00	277	+	407	=	684	309	184	No
18:30 - 19:30	355	+	328	=	683	236	167	No
13:00 - 14:00	334	+	344	=	678	284	197	No
11:45 - 12:45	276	+	397	=	673	348	215	No
08:15 - 09:15	209		458		667	249	221	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/08/2022

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

16 hours meet 1A minimums.
8 hours meet 1B minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **False**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Volume Requirements

Warrant 1A 1B
Veh/Hr Major = **480 720**

Veh/Hr Minor = **120 60**

Major Road 35W Freeway Entrance

Minor Road CSAH 23 Naples St NE

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:30 - 17:30	686	+	486	=	1172	527	247	Yes
15:30 - 16:30	642	+	482	=	1124	515	269	Yes
14:30 - 15:30	566	+	397	=	963	421	185	Yes
17:30 - 18:30	507	+	427	=	934	392	198	Yes
06:30 - 07:30	215	+	623	=	838	292	319	Yes
07:30 - 08:30	226	+	583	=	809	332	277	Yes
12:30 - 13:30	305	+	416	=	721	251	170	Yes
13:30 - 14:30	391	+	300	=	691	328	196	Yes
18:30 - 19:30	355	+	328	=	683	236	167	Yes
08:30 - 09:30	211	+	434	=	645	250	222	Yes
11:30 - 12:30	272	+	352	=	624	351	239	Yes
10:30 - 11:30	246	+	349	=	595	278	184	Yes

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:45 - 17:45	659	+	480	=	1139	507	238	Yes
15:45 - 16:45	656	+	482	=	1138	514	246	Yes
14:45 - 15:45	571	+	410	=	981	460	225	Yes
17:45 - 18:45	450	+	414	=	864	355	184	Yes
07:00 - 08:00	197	+	627	=	824	348	322	Yes
13:45 - 14:45	446	+	328	=	774	341	190	Yes
06:00 - 07:00	197	+	557	=	754	241	313	Yes
12:30 - 13:30	305	+	416	=	721	251	170	Yes
08:00 - 09:00	228	+	477	=	705	274	228	No
12:15 - 13:15	277	+	420	=	697	291	164	No
13:30 - 14:30	391	+	300	=	691	328	196	No
12:00 - 13:00	277	+	407	=	684	309	184	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/08/2022

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.

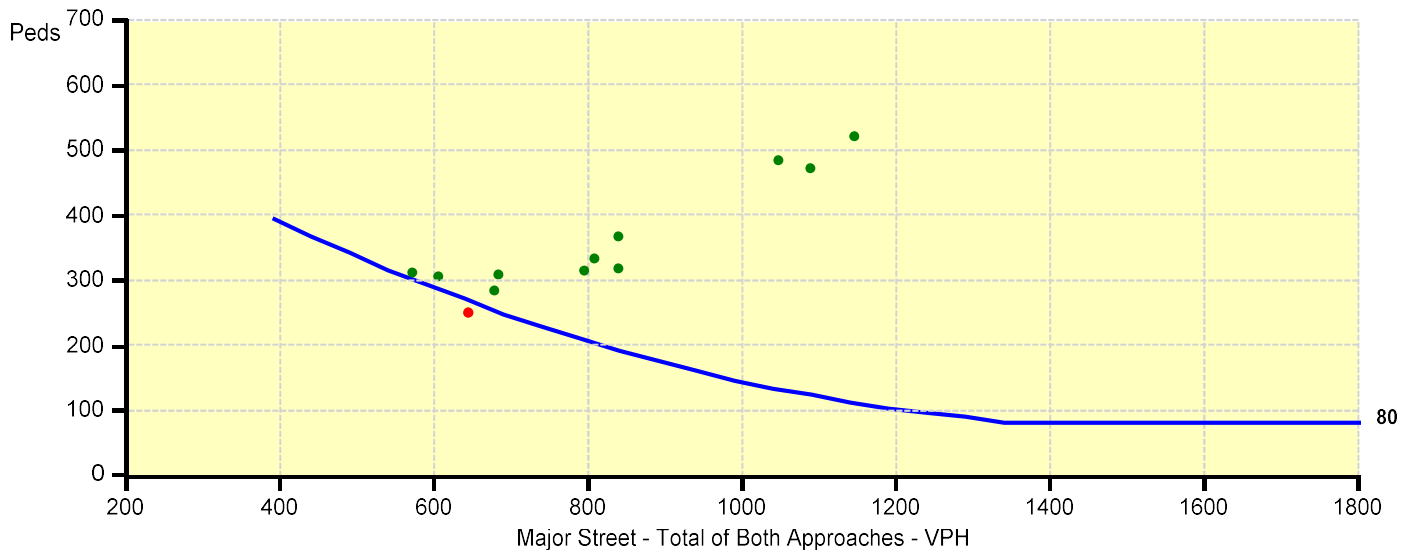
Summary

11 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **False**
 Number of Major Lanes = **2 or more**
 Number of Minor Lanes = **1**

Time	Major Road 35W Freeway Entrance				Total	Minor Road CSAH 23 Naples St NE		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:00 - 17:00	671	+	475	=	1146	520	248	Yes
17:00 - 18:00	624	+	465	=	1089	473	217	Yes
15:00 - 16:00	602	+	444	=	1046	485	245	Yes
14:00 - 15:00	492	+	346	=	838	368	185	Yes
06:30 - 07:30	215	+	623	=	838	292	319	Yes
07:30 - 08:30	226	+	583	=	809	332	277	Yes
18:00 - 19:00	398	+	398	=	796	313	181	Yes
12:00 - 13:00	277	+	407	=	684	309	184	Yes
13:00 - 14:00	334	+	344	=	678	284	197	Yes
11:00 - 12:00	275	+	330	=	605	304	228	Yes
05:30 - 06:30	150	+	421	=	571	190	310	Yes
08:30 - 09:30	211	+	434	=	645	250	222	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/08/2022

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

17 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **False**
 Number of Major Lanes = **2 or more**
 Number of Minor Lanes = **1**

Time	Major Road 35W Freeway Entrance				Total	Minor Road CSAH 23 Naples St NE		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:15 - 17:15	698	+	493	=	1191	519	252	Yes
16:30 - 17:30	686	+	486	=	1172	527	247	Yes
16:00 - 17:00	671	+	475	=	1146	520	248	Yes
16:45 - 17:45	659	+	480	=	1139	507	238	Yes
15:45 - 16:45	656	+	482	=	1138	514	246	Yes
15:30 - 16:30	642	+	482	=	1124	515	269	Yes
15:15 - 16:15	637	+	468	=	1105	502	238	Yes
17:00 - 18:00	624	+	465	=	1089	473	217	Yes
15:00 - 16:00	602	+	444	=	1046	485	245	Yes
17:15 - 18:15	565	+	435	=	1000	419	210	Yes
14:45 - 15:45	571	+	410	=	981	460	225	Yes
14:30 - 15:30	566	+	397	=	963	421	185	Yes

