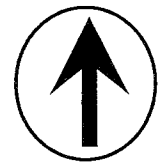
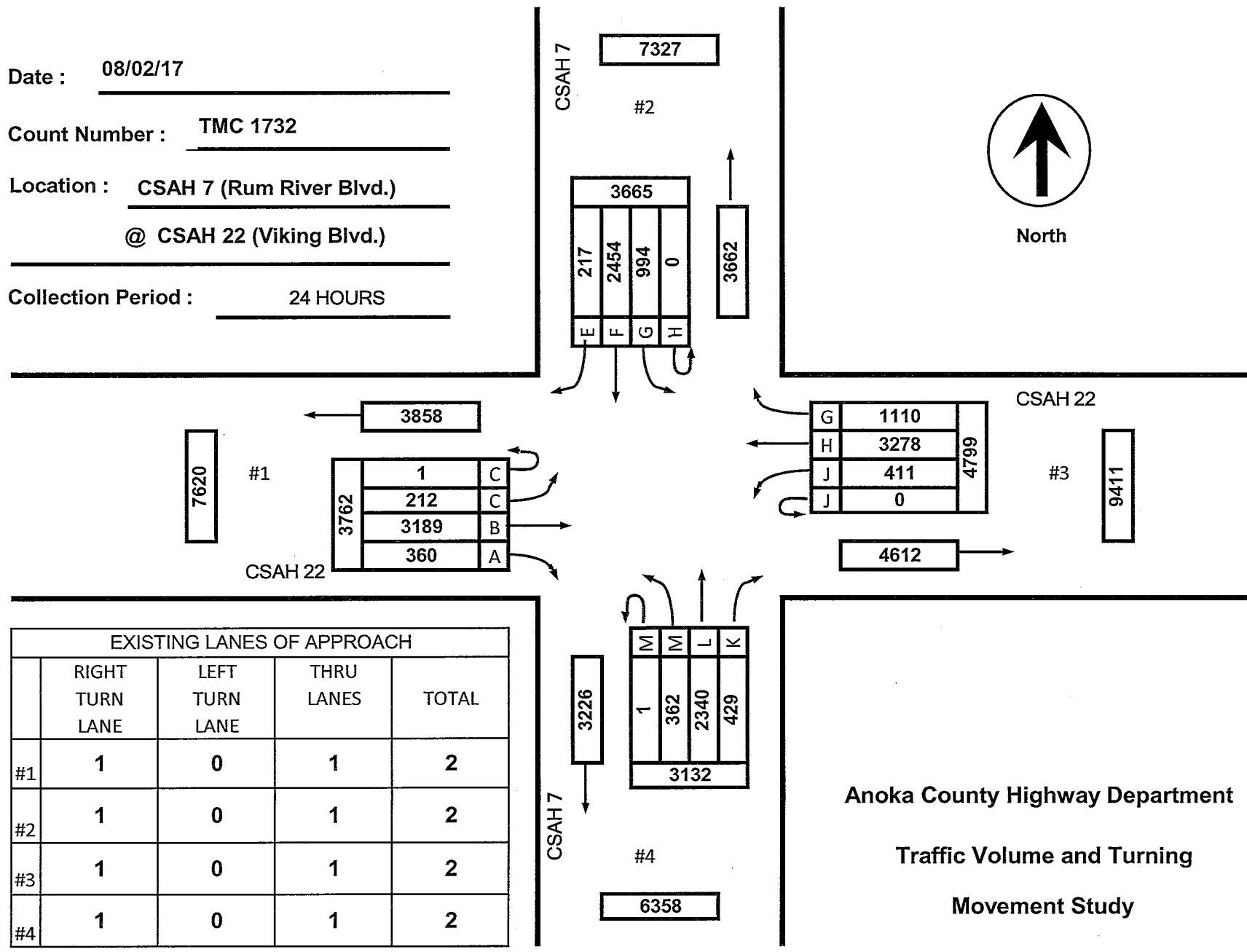


Date : 08/02/17

Count Number : TMC 1732

Location : CSAH 7 (Rum River Blvd.)
@ CSAH 22 (Viking Blvd.)

Collection Period : 24 HOURS



North

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

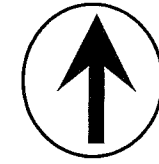
Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Date : 08/02/17

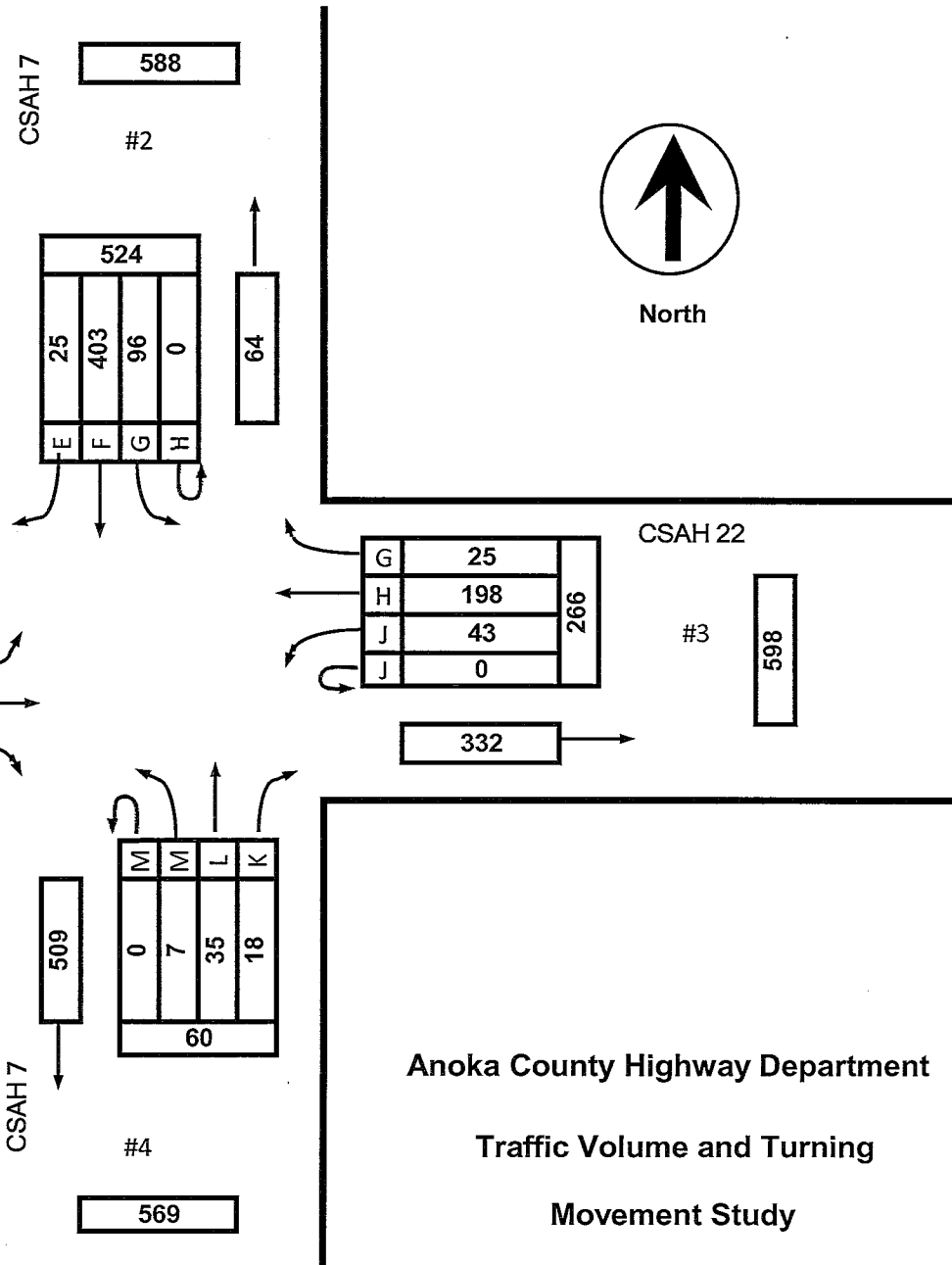
Count Number : TMC 1732

Location : CSAH 7 (Rum River
@ CSAH 22 (Viking Blvd.)

Collection Period : 6:15 - 7:15 AM
AM PEAK



North



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 : 08/02/17

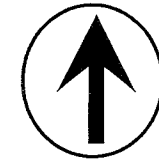
Count Number : TMC 1732

Location : CSAH 7 (Rum River Blvd.)

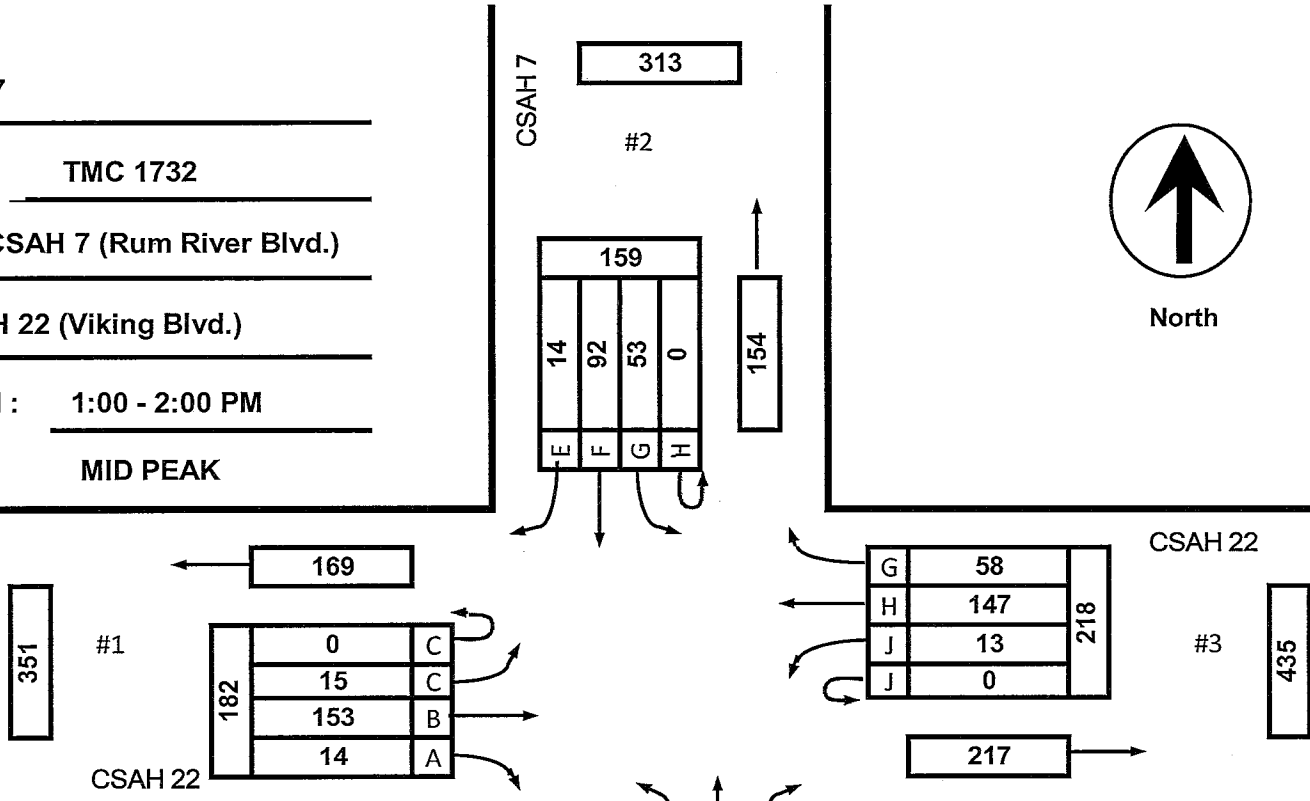
@ CSAH 22 (Viking Blvd.)

Collection Period : 1:00 - 2:00 PM

MID PEAK



North



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 : 08/02/17

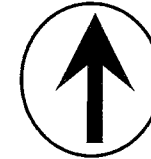
Count Number : TMC 1732

Location : CSAH 7 (Rum River Blvd.)

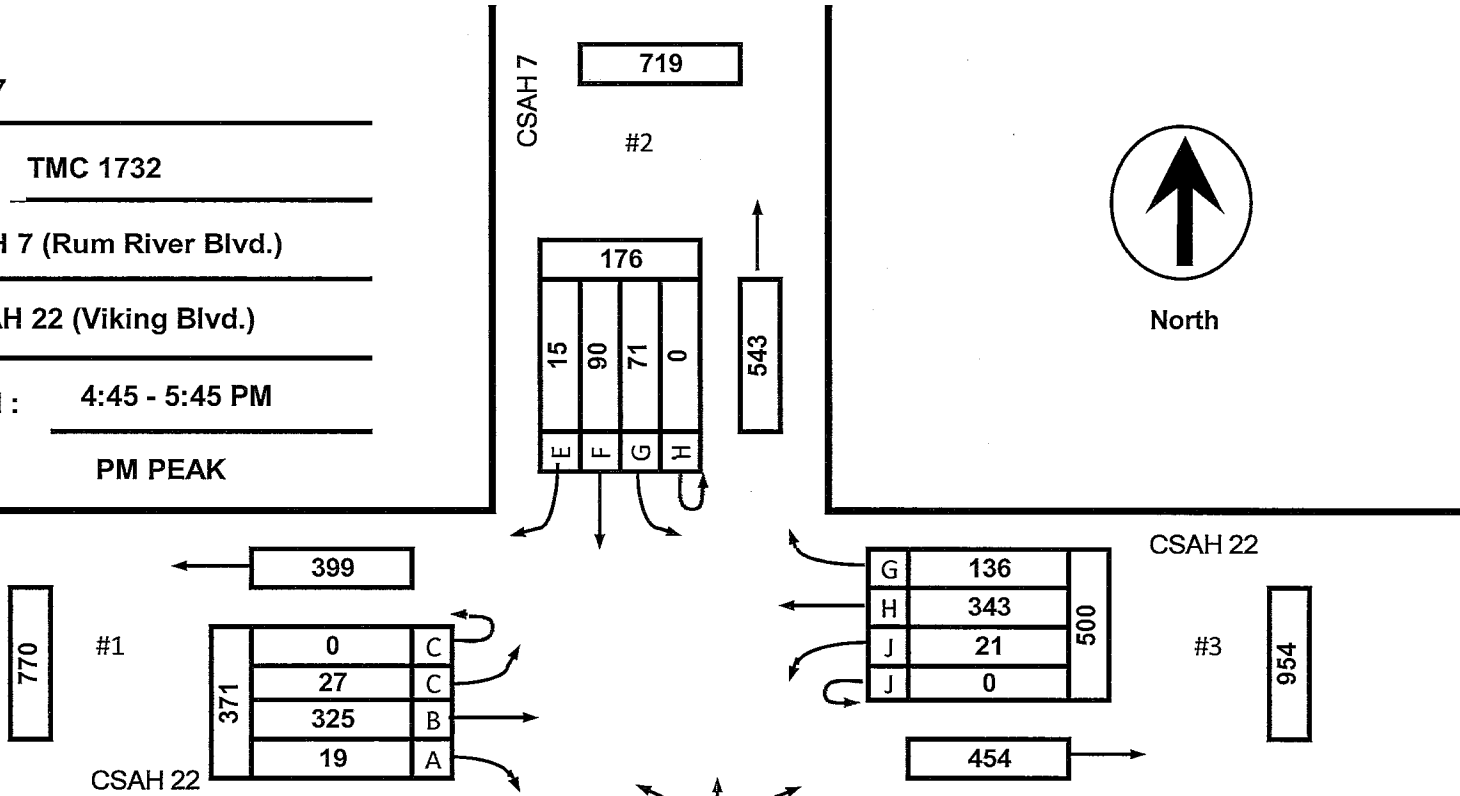
@ CSAH 22 (Viking Blvd.)

Collection Period : 4:45 - 5:45 PM

PM PEAK



North

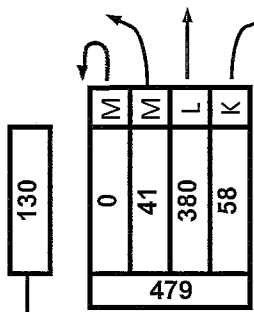


CSAH 22

CSAH 22

CSAH 7

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



#4

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 1732
 Site Code :
 Start Date : 08/02/2017
 Page No : 1

Weather: Hot and Cloudy
 CountCAM 200
 Study Conducted By: Andrea

Groups Printed- Cars + - Trucks

Start Time	CSAH 7 Southbound						CSAH 22 Westbound						CSAH 7 Northbound						CSAH 22 Eastbound						Exclu. Total	Inclu. Total	Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total			
00:00	0	3	0	0	0	3	0	1	4	5	0	10	0	0	5	1	0	6	0	0	6	0	0	6	0	25	25
00:15	0	1	3	0	0	4	0	0	4	3	0	7	0	0	14	0	0	14	0	1	3	1	0	5	0	30	30
00:30	0	2	1	0	0	3	0	0	4	1	0	5	0	1	2	1	0	4	0	0	1	0	0	1	0	13	13
00:45	0	2	0	0	0	2	0	1	4	0	0	5	0	0	5	0	0	5	0	0	2	0	0	2	0	14	14
Total	0	8	4	0	0	12	0	2	16	9	0	27	0	1	26	2	0	29	0	1	12	1	0	14	0	82	82
01:00	0	0	1	0	0	1	0	0	2	0	0	2	1	0	3	0	0	4	0	0	1	0	0	1	0	8	8
01:15	0	2	2	0	0	4	0	1	1	3	0	5	0	0	9	0	0	9	0	0	1	0	0	1	0	19	19
01:30	0	1	0	0	0	1	0	0	1	1	0	2	0	0	2	1	0	3	0	0	1	0	0	1	0	7	7
01:45	0	0	0	0	0	0	0	0	1	1	0	2	0	0	4	0	0	4	0	1	2	0	0	3	0	9	9
Total	0	3	3	0	0	6	0	1	5	5	0	11	1	0	18	1	0	20	0	1	5	0	0	6	0	43	43
02:00	0	0	0	0	0	0	0	0	2	1	0	3	0	1	1	0	0	2	0	1	1	1	0	3	0	8	8
02:15	0	0	3	0	0	3	0	0	1	1	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	7	7
02:30	0	1	3	0	0	4	0	0	3	0	0	3	0	1	3	0	0	4	0	1	0	0	0	1	0	12	12
02:45	0	1	1	0	0	2	0	0	1	0	0	1	0	1	2	0	0	3	0	0	2	0	0	2	0	8	8
Total	0	2	7	0	0	9	0	0	7	2	0	9	0	3	7	0	0	10	0	2	4	1	0	7	0	35	35
03:00	0	0	4	0	0	4	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	6	6
03:15	0	2	9	0	0	11	0	0	1	1	0	2	0	0	1	0	0	1	0	0	2	0	0	2	0	16	16
03:30	0	2	13	1	0	16	0	1	4	1	0	6	0	0	1	0	0	1	0	0	3	0	0	3	0	26	26
03:45	0	3	8	0	0	11	0	0	5	2	0	7	0	1	0	1	0	2	0	0	3	4	0	7	0	27	27
Total	0	7	34	1	0	42	0	1	11	4	0	16	0	2	2	1	0	5	0	0	8	4	0	12	0	75	75
04:00	0	2	15	0	0	17	0	0	6	0	0	6	0	1	0	0	0	1	0	1	2	2	0	5	0	29	29
04:15	0	3	27	3	0	33	0	2	8	1	0	11	0	0	3	2	0	5	0	0	4	1	0	5	0	54	54
04:30	0	9	24	0	0	33	0	1	11	1	0	13	0	0	1	1	0	2	0	0	4	2	0	6	0	54	54
04:45	0	7	41	2	0	50	0	1	7	1	0	9	0	0	2	1	0	3	0	0	7	3	0	10	0	72	72
Total	0	21	107	5	0	133	0	4	32	3	0	39	0	1	6	4	0	11	0	1	17	8	0	26	0	209	209
05:00	0	14	49	2	0	65	0	2	24	0	0	26	0	3	4	1	0	8	0	0	7	7	0	14	0	113	113
05:15	0	14	82	4	0	100	0	0	33	2	0	35	0	0	13	1	0	14	0	0	19	6	0	25	0	174	174
05:30	0	15	72	5	0	92	0	4	41	1	0	46	0	2	8	1	0	11	0	0	37	9	0	46	0	195	195
05:45	0	20	80	3	0	103	0	3	46	5	0	54	0	0	6	2	0	8	0	0	24	11	0	35	0	200	200
Total	0	63	283	14	0	360	0	9	144	8	0	161	0	5	31	5	0	41	0	0	87	33	0	120	0	682	682



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1732
 Site Code :
 Start Date : 08/02/2017
 Page No : 2

Weather: Hot and Cloudy
 CountCAM 200
 Study Conducted By: Andrea

Groups Printed- Cars + - Trucks

Start Time	CSAH 7 Southbound						CSAH 22 Westbound						CSAH 7 Northbound						CSAH 22 Eastbound						Exclu. Total	Inclu. Total	Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total			
06:00	0	13	102	8	0	123	0	5	34	1	0	40	0	2	8	2	0	12	0	0	29	10	0	39	0	214	214
06:15	0	20	122	4	0	146	0	16	45	12	0	73	0	1	9	3	0	13	0	1	47	16	0	64	0	296	296
06:30	0	24	116	11	0	151	0	9	63	4	0	76	0	0	6	2	0	8	0	0	65	21	0	86	0	321	321
06:45	0	27	95	5	0	127	0	8	55	4	0	67	0	2	5	8	0	15	0	2	56	11	0	69	0	278	278
Total	0	84	435	28	0	547	0	38	197	21	0	256	0	5	28	15	0	48	0	3	197	58	0	258	0	1109	1109
07:00	0	25	70	5	0	100	0	10	35	5	0	50	0	4	15	5	0	24	0	1	50	15	0	66	0	240	240
07:15	0	24	91	5	0	120	0	13	52	2	0	67	0	2	8	3	0	13	0	3	46	14	0	63	0	263	263
07:30	0	17	95	4	0	116	0	7	59	5	0	71	0	2	10	5	0	17	0	2	52	10	0	64	0	268	268
07:45	0	21	80	5	0	106	0	8	61	7	0	76	0	4	14	3	0	21	0	0	71	10	0	81	0	284	284
Total	0	87	336	19	0	442	0	38	207	19	0	264	0	12	47	16	0	75	0	6	219	49	0	274	0	1055	1055
08:00	0	16	40	1	0	57	0	13	46	10	0	69	0	2	11	2	0	15	0	0	45	8	0	53	0	194	194
08:15	0	18	46	3	0	67	0	4	49	7	0	60	0	4	13	4	0	21	0	2	49	8	0	59	0	207	207
08:30	0	14	45	3	0	62	0	9	53	6	0	68	0	3	8	3	0	14	0	1	51	4	0	56	0	200	200
08:45	0	9	37	2	0	48	0	10	55	8	0	73	0	2	14	3	0	19	0	2	45	5	0	52	0	192	192
Total	0	57	168	9	0	234	0	36	203	31	0	270	0	11	46	12	0	69	0	5	190	25	0	220	0	793	793
09:00	0	12	23	4	0	39	0	4	32	4	0	40	0	2	6	2	0	10	0	3	33	4	0	40	0	129	129
09:15	0	10	32	9	0	51	0	10	39	14	0	63	0	5	9	5	0	19	0	1	40	3	0	44	0	177	177
09:30	0	16	34	3	0	53	0	8	42	8	0	58	0	3	12	3	0	18	0	2	38	9	0	49	0	178	178
09:45	0	14	32	0	0	46	0	5	35	6	0	46	0	1	13	3	0	17	1	1	31	6	0	39	0	148	148
Total	0	52	121	16	0	189	0	27	148	32	0	207	0	11	40	13	0	64	1	7	142	22	0	172	0	632	632
10:00	0	20	31	5	0	56	0	5	36	7	0	48	0	3	8	6	0	17	0	6	27	3	0	36	0	157	157
10:15	0	11	21	6	0	38	0	2	34	6	0	42	0	2	13	3	0	18	0	0	37	4	0	41	0	139	139
10:30	0	16	27	5	0	48	0	8	36	9	0	53	0	2	16	7	0	25	0	4	35	5	0	44	0	170	170
10:45	0	13	17	0	1	30	0	10	29	12	0	51	0	3	8	5	0	16	0	1	45	4	0	50	1	147	148
Total	0	60	96	16	1	172	0	25	135	34	0	194	0	10	45	21	0	76	0	11	144	16	0	171	1	613	614
11:00	0	13	16	0	0	29	0	6	30	5	0	41	0	5	18	0	0	23	0	2	33	7	0	42	0	135	135
11:15	0	9	13	2	0	24	0	6	37	12	0	55	0	5	17	9	0	31	0	4	30	0	0	34	0	144	144
11:30	0	12	23	3	0	38	0	4	34	18	0	56	0	5	18	4	0	27	0	6	32	1	0	39	0	160	160
11:45	0	15	20	3	0	38	0	3	36	8	0	47	0	4	15	6	0	25	0	2	41	3	0	46	0	156	156
Total	0	49	72	8	0	129	0	19	137	43	0	199	0	19	68	19	0	106	0	14	136	11	0	161	0	595	595
12:00	0	8	24	2	0	34	0	3	36	14	0	53	0	3	9	4	0	16	0	0	27	4	0	31	0	134	134
12:15	0	14	19	3	0	36	0	3	29	9	0	41	0	0	23	5	0	28	0	2	44	6	0	52	0	157	157
12:30	0	14	17	1	0	32	0	5	39	19	0	63	0	2	12	8	0	22	0	1	30	3	0	34	0	151	151



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1732
 Site Code :
 Start Date : 08/02/2017
 Page No : 3

Weather: Hot and Cloudy
 CountCAM 200
 Study Conducted By: Andrea

Groups Printed- Cars + - Trucks

Start Time	CSAH 7 Southbound						CSAH 22 Westbound						CSAH 7 Northbound						CSAH 22 Eastbound						Exclu. Total	Inclu. Total	Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total			
12:45	0	14	21	2	0	37	0	3	33	13	0	49	0	3	27	5	0	35	0	2	43	3	0	48	0	169	169
Total	0	50	81	8	0	139	0	14	137	55	0	206	0	8	71	22	0	101	0	5	144	16	0	165	0	611	611
13:00	0	10	23	1	0	34	0	3	39	15	0	57	0	1	14	3	0	18	0	4	33	5	0	42	0	151	151
13:15	0	15	26	3	0	44	0	1	42	11	0	54	0	2	14	1	0	17	0	2	42	3	0	47	0	162	162
13:30	0	16	23	8	0	47	0	5	33	15	0	53	0	3	20	3	0	26	0	4	40	3	0	47	0	173	173
13:45	0	12	20	2	0	34	0	4	33	17	0	54	0	2	33	4	0	39	0	5	38	3	0	46	0	173	173
Total	0	53	92	14	0	159	0	13	147	58	0	218	0	8	81	11	0	100	0	15	153	14	0	182	0	659	659
14:00	0	11	28	3	0	42	0	5	51	10	0	66	0	5	24	4	0	33	0	1	37	3	0	41	0	182	182
14:15	0	9	20	6	0	35	0	5	34	20	0	59	0	6	33	5	0	44	0	2	42	2	0	46	0	184	184
14:30	0	6	36	6	0	48	0	3	54	17	0	74	0	5	36	8	0	49	0	7	53	1	0	61	0	232	232
14:45	0	15	15	2	0	32	0	9	49	15	0	73	0	6	54	10	0	70	0	6	40	1	0	47	0	222	222
Total	0	41	99	17	0	157	0	22	188	62	0	272	0	22	147	27	0	196	0	16	172	7	0	195	0	820	820
15:00	0	18	22	5	0	45	0	6	47	25	0	78	0	9	63	11	0	83	0	9	48	4	0	61	0	267	267
15:15	0	28	21	1	0	50	0	6	60	34	0	100	0	14	69	12	0	95	0	4	50	3	0	57	0	302	302
15:30	0	9	13	1	0	23	0	2	57	40	0	99	0	9	75	8	0	92	0	5	63	2	0	70	0	284	284
15:45	0	13	16	1	0	30	0	4	75	35	0	114	0	17	74	11	0	102	0	5	73	0	0	78	0	324	324
Total	0	68	72	8	0	148	0	18	239	134	0	391	0	49	281	42	0	372	0	23	234	9	0	266	0	1177	1177
16:00	0	16	23	2	0	41	0	8	71	25	0	104	0	19	79	14	0	112	0	4	71	4	0	79	0	336	336
16:15	0	10	23	5	0	38	0	5	92	36	0	133	0	5	85	11	0	101	0	3	77	2	0	82	0	354	354
16:30	0	16	27	4	0	47	0	7	74	40	0	121	0	18	94	16	0	128	0	2	75	7	0	84	0	380	380
16:45	0	16	19	2	0	37	0	5	79	39	0	123	0	13	93	21	0	127	0	6	88	4	0	98	0	385	385
Total	0	58	92	13	0	163	0	25	316	140	0	481	0	55	351	62	0	468	0	15	311	17	0	343	0	1455	1455
17:00	0	17	18	4	0	39	0	1	90	35	0	126	0	13	102	10	0	125	0	5	77	5	0	87	0	377	377
17:15	0	14	26	6	0	46	0	6	95	30	0	131	0	11	95	13	0	119	0	6	76	5	0	87	0	383	383
17:30	0	24	27	3	0	54	0	9	79	32	1	120	0	4	90	14	0	108	0	10	84	5	0	99	1	381	382
17:45	0	14	28	2	0	44	0	4	73	38	0	115	0	10	87	14	0	111	0	9	88	7	0	104	0	374	374
Total	0	69	99	15	0	183	0	20	337	135	1	492	0	38	374	51	0	463	0	30	325	22	0	377	1	1515	1516
18:00	0	15	22	6	0	43	0	6	67	29	0	102	0	11	54	9	0	74	0	5	66	3	1	74	1	293	294
18:15	0	25	31	1	0	57	0	8	52	26	0	86	0	14	76	8	0	98	0	4	51	5	0	60	0	301	301
18:30	0	12	27	4	0	43	0	8	55	25	0	88	0	7	58	9	0	74	0	6	46	7	0	59	0	264	264
18:45	0	17	18	2	0	37	0	6	39	21	0	66	0	11	40	6	1	57	0	3	55	6	0	64	1	224	225
Total	0	69	98	13	0	180	0	28	213	101	0	342	0	43	228	32	1	303	0	18	218	21	1	257	2	1082	1084



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1732
 Site Code :
 Start Date : 08/02/2017
 Page No : 4

Weather: Hot and Cloudy
 CountCAM 200
 Study Conducted By: Andrea

Groups Printed- Cars + - Trucks

Start Time	CSAH 7 Southbound						CSAH 22 Westbound						CSAH 7 Northbound						CSAH 22 Eastbound						Exclu. Total	Inclu. Total	Int. Total	
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total				
19:00	0	7	16	3	0	26	0	5	36	17	0	58	0	8	35	8	0	51	0	5	45	0	0	50	0	185	185	
19:15	0	8	13	2	0	23	0	6	43	9	0	58	0	8	36	13	0	57	0	3	45	3	0	51	0	189	189	
19:30	0	3	10	0	1	13	0	3	40	19	0	62	0	5	37	6	0	48	0	3	33	4	0	40	1	163	164	
19:45	0	10	5	1	0	16	0	6	29	8	0	43	0	4	35	5	0	44	0	2	27	1	0	30	0	133	133	
Total	0	28	44	6	1	78	0	20	148	53	0	221	0	25	143	32	0	200	0	13	150	8	0	171	1	670	671	
20:00	0	7	12	1	0	20	0	3	35	22	0	60	0	3	35	4	0	42	0	2	38	1	0	41	0	163	163	
20:15	0	6	13	1	0	20	0	7	26	16	0	49	0	8	31	3	0	42	0	1	37	3	0	41	0	152	152	
20:30	0	8	16	1	0	25	0	5	34	14	0	53	0	5	33	8	0	46	0	0	26	1	0	27	0	151	151	
20:45	0	7	10	0	0	17	0	10	23	8	0	41	0	1	11	4	0	16	0	4	32	2	0	38	0	112	112	
Total	0	28	51	3	0	82	0	25	118	60	0	203	0	17	110	19	0	146	0	7	133	7	0	147	0	578	578	
21:00	0	9	9	1	0	19	0	9	38	18	0	65	0	4	27	6	0	37	0	2	27	1	0	30	0	151	151	
21:15	0	8	7	0	0	15	0	3	30	12	0	45	0	5	18	5	0	28	0	3	26	2	0	31	0	119	119	
21:30	0	0	5	0	0	5	0	4	30	15	0	49	0	1	22	2	0	25	0	5	20	2	0	27	0	106	106	
21:45	0	1	8	0	0	9	0	0	21	8	0	29	0	1	20	2	0	23	0	3	27	2	0	32	0	93	93	
Total	0	18	29	1	0	48	0	16	119	53	0	188	0	11	87	15	0	113	0	13	100	7	0	120	0	469	469	
22:00	0	6	7	2	0	15	0	2	15	7	0	24	0	3	18	0	0	21	0	2	11	3	0	16	0	76	76	
22:15	0	5	9	0	0	14	0	1	15	11	0	27	0	0	22	2	0	24	0	0	15	0	0	15	0	80	80	
22:30	0	4	5	0	0	9	0	0	7	7	0	14	0	1	14	1	0	16	0	2	15	0	0	17	0	56	56	
22:45	0	2	4	0	0	6	0	2	12	10	0	24	0	0	5	2	0	7	0	0	12	1	0	13	0	50	50	
Total	0	17	25	2	0	44	0	5	49	35	0	89	0	4	59	5	0	68	0	4	53	4	0	61	0	262	262	
23:00	0	0	2	0	0	2	0	2	11	2	0	15	0	1	6	0	0	7	0	1	3	0	0	4	0	28	28	
23:15	0	0	2	0	0	2	0	0	7	4	0	11	0	0	13	1	0	14	0	0	12	0	0	12	0	39	39	
23:30	0	1	0	0	0	1	0	1	4	3	0	8	0	1	11	0	0	12	0	1	11	0	0	12	0	33	33	
23:45	0	1	2	1	0	4	0	2	3	4	0	9	0	0	14	1	0	15	0	0	9	0	0	9	0	37	37	
Total	0	2	6	1	0	9	0	5	25	13	0	43	0	2	44	2	0	48	0	2	35	0	0	37	0	137	137	
Grand Total	0	994	2454	217	2	3665	0	411	3278	1110	1	4799	1	362	2340	429	1	3132	1	212	3189	360	1	3762	5	15358	15363	
Apprch %	0	27.1	67	5.9			0	8.6	68.3	23.1			0	11.6	74.7	13.7			0	5.6	84.8	9.6						
Total %	0	6.5	16	1.4		23.9	0	2.7	21.3	7.2		31.2	0	2.4	15.2	2.8		20.4	0	1.4	20.8	2.3		24.5	0	100		
Cars +	0	947	2398	208		3555	0	399	2937	1064		4401	1	349	2266	411		3028	1	199	2873	345		3419	0	0	14403	
% Cars +	0	95.3	97.7	95.9	100	96.9	0	97.1	89.6	95.9	100	91.7	100	96.4	96.8	95.8	100	96.6	100	93.9	90.1	95.8	100	90.9	0	0	93.8	
Trucks	0	47	56	9		112	0	12	341	46		399	0	13	74	18		105	0	13	316	15		344	0	0	960	
% Trucks	0	4.7	2.3	4.1	0	3.1	0	2.9	10.4	4.1	0	8.3	0	3.6	3.2	4.2	0	3.4	0	6.1	9.9	4.2	0	9.1	0	0	6.2	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1732
 Site Code :
 Start Date : 08/02/2017
 Page No : 5

Weather: Hot and Cloudy
 CountCAM 200
 Study Conducted By: Andrea

Start Time	CSAH 7 Southbound					CSAH 22 Westbound					CSAH 7 Northbound					CSAH 22 Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
Peak Hour Analysis From 00:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:15																					
06:15	0	20	122	4	146	0	16	45	12	73	0	1	9	3	13	0	1	47	16	64	296
06:30	0	24	116	11	151	0	9	63	4	76	0	0	6	2	8	0	0	65	21	86	321
06:45	0	27	95	5	127	0	8	55	4	67	0	2	5	8	15	0	2	56	11	69	278
07:00	0	25	70	5	100	0	10	35	5	50	0	4	15	5	24	0	1	50	15	66	240
Total Volume	0	96	403	25	524	0	43	198	25	266	0	7	35	18	60	0	4	218	63	285	1135
% App. Total	0	18.3	76.9	4.8		0	16.2	74.4	9.4		0	11.7	58.3	30		0	1.4	76.5	22.1		
PHF	.000	.889	.826	.568	.868	.000	.672	.786	.521	.875	.000	.438	.583	.563	.625	.000	.500	.838	.750	.828	.884
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 13:00																					
13:00	0	10	23	1	34	0	3	39	15	57	0	1	14	3	18	0	4	33	5	42	151
13:15	0	15	26	3	44	0	1	42	11	54	0	2	14	1	17	0	2	42	3	47	162
13:30	0	16	23	8	47	0	5	33	15	53	0	3	20	3	26	0	4	40	3	47	173
13:45	0	12	20	2	34	0	4	33	17	54	0	2	33	4	39	0	5	38	3	46	173
Total Volume	0	53	92	14	159	0	13	147	58	218	0	8	81	11	100	0	15	153	14	182	659
% App. Total	0	33.3	57.9	8.8		0	6	67.4	26.6		0	8	81	11		0	8.2	84.1	7.7		
PHF	.000	.828	.885	.438	.846	.000	.650	.875	.853	.956	.000	.667	.614	.688	.641	.000	.750	.911	.700	.968	.952
Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	16	19	2	37	0	5	79	39	123	0	13	93	21	127	0	6	88	4	98	385
17:00	0	17	18	4	39	0	1	90	35	126	0	13	102	10	125	0	5	77	5	87	377
17:15	0	14	26	6	46	0	6	95	30	131	0	11	95	13	119	0	6	76	5	87	383
17:30	0	24	27	3	54	0	9	79	32	120	0	4	90	14	108	0	10	84	5	99	381
Total Volume	0	71	90	15	176	0	21	343	136	500	0	41	380	58	479	0	27	325	19	371	1526
% App. Total	0	40.3	51.1	8.5		0	4.2	68.6	27.2		0	8.6	79.3	12.1		0	7.3	87.6	5.1		
PHF	.000	.740	.833	.625	.815	.000	.583	.903	.872	.954	.000	.788	.931	.690	.943	.000	.675	.923	.950	.937	.991



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1732
 Site Code :
 Start Date : 08/02/2017
 Page No : 1

Weather: Hot and Cloudy
 CountCAM 200
 Study Conducted By: Andrea

Groups Printed- Trucks

Start Time	CSAH 7 Southbound					CSAH 22 Westbound					CSAH 7 Northbound					CSAH 22 Eastbound					Int. Total	
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total		
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
Total	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	1	3
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
03:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	1	2
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	2	3
04:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
04:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3
Total	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	2	5
05:00	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2
05:15	0	0	1	0	1	0	0	3	0	3	0	0	0	0	0	0	0	4	0	4	4	8
05:30	0	0	3	0	3	0	0	3	0	3	0	0	0	0	0	0	0	5	0	5	5	11
05:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	2	3
Total	0	0	4	0	4	0	0	9	0	9	0	0	0	0	0	0	0	11	0	11	11	24
06:00	0	0	5	0	5	0	0	3	0	3	0	0	0	0	0	0	0	8	0	8	8	16
06:15	0	1	3	0	4	0	0	3	1	4	0	0	0	0	0	0	0	8	0	8	8	16
06:30	0	0	6	0	6	0	0	6	0	6	0	0	0	0	0	0	0	10	0	10	10	22
06:45	0	2	1	0	3	0	1	7	0	8	0	0	0	0	0	0	0	10	0	10	10	21
Total	0	3	15	0	18	0	1	19	1	21	0	0	0	0	0	0	0	36	0	36	36	75
07:00	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	9	0	9	9	14
07:15	0	0	0	0	0	0	0	4	0	4	0	0	1	0	1	0	2	7	0	9	9	14
07:30	0	2	1	0	3	0	0	10	0	10	0	1	1	0	2	0	0	6	0	6	6	21
07:45	0	0	2	0	2	0	0	10	2	12	0	0	1	0	1	0	0	6	2	8	8	23
Total	0	2	3	0	5	0	0	29	2	31	0	1	3	0	4	0	2	28	2	32	32	72
08:00	0	0	1	0	1	0	1	8	4	13	0	1	0	0	1	0	0	8	0	8	8	23
08:15	0	2	0	1	3	0	0	7	0	7	0	0	2	0	2	0	0	8	0	8	8	20
08:30	0	3	1	0	4	0	0	6	3	9	0	0	0	0	0	0	0	10	0	10	10	23
08:45	0	0	0	0	0	0	1	7	1	9	0	0	1	1	2	0	0	5	0	5	5	16
Total	0	5	2	1	8	0	2	28	8	38	0	1	3	1	5	0	0	31	0	31	31	82
09:00	0	1	1	0	2	0	0	4	0	4	0	0	1	0	1	0	1	5	0	6	6	13



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Hot and Cloudy
 CountCAM 200
 Study Conducted By: Andrea

File Name : TMC 1732
 Site Code :
 Start Date : 08/02/2017
 Page No : 2

Groups Printed- Trucks

Start Time	CSAH 7 Southbound					CSAH 22 Westbound					CSAH 7 Northbound					CSAH 22 Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
09:15	0	1	2	1	4	0	0	5	1	6	0	1	2	0	3	0	1	5	0	6	
09:30	0	2	0	0	2	0	0	7	1	8	0	0	0	0	0	0	2	5	1	8	
09:45	0	0	2	0	2	0	0	3	0	3	0	0	1	0	1	0	0	3	1	4	
Total	0	4	5	1	10	0	0	19	2	21	0	1	4	0	5	0	4	18	2	24	60
10:00	0	2	0	0	2	0	0	6	0	6	0	2	0	1	3	0	1	4	0	5	
10:15	0	2	1	1	4	0	0	4	2	6	0	0	2	1	3	0	0	8	0	8	
10:30	0	1	0	0	1	0	2	5	2	9	0	0	2	1	3	0	1	5	0	6	
10:45	0	2	1	0	3	0	0	4	2	6	0	0	1	0	1	0	0	5	2	7	
Total	0	7	2	1	10	0	2	19	6	27	0	2	5	3	10	0	2	22	2	26	73
11:00	0	1	0	0	1	0	0	5	0	5	0	0	0	0	0	0	0	6	0	6	
11:15	0	1	1	0	2	0	1	5	1	7	0	0	2	1	3	0	1	2	0	3	
11:30	0	0	1	0	1	0	0	6	1	7	0	0	1	1	2	0	2	6	1	9	
11:45	0	2	1	0	3	0	0	4	2	6	0	0	0	1	1	0	0	4	0	4	
Total	0	4	3	0	7	0	1	20	4	25	0	0	3	3	6	0	3	18	1	22	60
12:00	0	0	1	0	1	0	0	5	0	5	0	0	1	0	1	0	0	7	1	8	
12:15	0	1	1	0	2	0	0	1	1	2	0	0	1	0	1	0	0	2	0	2	
12:30	0	0	0	1	1	0	0	7	2	9	0	1	2	1	4	0	0	5	0	5	
12:45	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	3	0	3	
Total	0	1	2	1	4	0	0	16	3	19	0	1	4	1	6	0	0	17	1	18	47
13:00	0	0	1	0	1	0	0	7	1	8	0	0	2	1	3	0	1	4	1	6	
13:15	0	3	2	0	5	0	0	4	0	4	0	0	0	0	0	0	0	9	1	10	
13:30	0	1	1	0	2	0	1	4	0	5	0	0	2	0	2	0	0	3	1	4	
13:45	0	0	1	1	2	0	0	9	0	9	0	1	1	0	2	0	0	8	0	8	
Total	0	4	5	1	10	0	1	24	1	26	0	1	5	1	7	0	1	24	3	28	71
14:00	0	1	1	0	2	0	0	5	1	6	0	1	2	2	5	0	0	2	0	2	
14:15	0	0	0	1	1	0	0	5	1	6	0	0	1	1	2	0	0	3	0	3	
14:30	0	1	0	1	2	0	1	4	1	6	0	0	1	0	1	0	0	3	1	4	
14:45	0	3	0	0	3	0	1	11	0	12	0	0	2	1	3	0	0	7	0	7	
Total	0	5	1	2	8	0	2	25	3	30	0	1	6	4	11	0	0	15	1	16	65
15:00	0	4	3	0	7	0	1	2	1	4	0	0	1	0	1	0	0	6	1	7	
15:15	0	1	0	0	1	0	0	8	1	9	0	1	1	0	2	0	0	1	1	2	
15:30	0	0	1	0	1	0	0	7	1	8	0	1	3	0	4	0	0	10	0	10	
15:45	0	0	2	0	2	0	0	10	0	10	0	1	1	0	2	0	0	9	0	9	
Total	0	5	6	0	11	0	1	27	3	31	0	3	6	0	9	0	0	26	2	28	79
16:00	0	0	1	0	1	0	0	11	1	12	0	0	3	1	4	0	0	6	0	6	
16:15	0	1	0	0	1	0	0	10	0	10	0	0	2	1	3	0	0	6	0	6	
16:30	0	1	0	1	2	0	0	9	1	10	0	1	2	1	4	0	0	4	0	4	
16:45	0	0	1	0	1	0	0	5	2	7	0	0	5	0	5	0	0	4	0	4	
Total	0	2	2	1	5	0	0	35	4	39	0	1	12	3	16	0	0	20	0	20	80
17:00	0	0	0	0	0	0	0	10	2	12	0	0	1	0	1	0	0	3	0	3	
17:15	0	1	0	0	1	0	0	6	0	6	0	0	4	0	4	0	0	6	0	6	
17:30	0	0	0	0	0	0	1	4	0	5	0	0	2	0	2	0	0	7	0	7	
17:45	0	0	2	0	2	0	0	4	1	5	0	0	1	1	2	0	0	6	0	6	
Total	0	1	2	0	3	0	1	24	3	28	0	0	8	1	9	0	0	22	0	22	62
18:00	0	0	1	0	1	0	0	6	2	8	0	0	0	0	0	0	0	1	0	1	
18:15	0	0	0	0	0	0	0	8	0	8	0	0	3	1	4	0	0	5	0	5	
18:30	0	1	0	0	1	0	0	1	0	1	0	0	3	0	3	0	0	3	0	3	
18:45	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	3	1	4	
Total	0	1	1	0	2	0	0	16	3	19	0	0	6	1	7	0	0	12	1	13	41



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1732
 Site Code :
 Start Date : 08/02/2017
 Page No : 3

Weather: Hot and Cloudy
 CountCAM 200
 Study Conducted By: Andrea

Groups Printed- Trucks

Start Time	CSAH 7 Southbound					CSAH 22 Westbound					CSAH 7 Northbound					CSAH 22 Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
19:00	0	1	0	0	1	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	0
19:15	0	2	0	1	3	0	0	3	0	3	0	0	1	0	1	0	0	2	0	2	2
19:30	0	0	0	0	0	0	0	4	0	4	0	1	0	0	1	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	1	0	1	1
Total	0	3	0	1	4	0	0	12	0	12	0	1	2	0	3	0	0	3	0	3	22
20:00	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	3
20:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	2
20:30	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
20:45	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	3
Total	0	0	1	0	1	0	0	5	0	5	0	0	1	0	1	0	0	3	0	3	10
21:00	0	0	0	0	0	0	1	2	0	3	0	0	3	0	3	0	0	1	0	1	7
21:15	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	2	0	2	5
21:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
21:45	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	0	1	8	0	9	0	0	3	0	3	0	0	4	0	4	16
22:00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	2
22:15	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	3
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	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	0	2	2	4	0	0	0	0	0	0	1	0	0	1	5
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	0	1	3
23:30	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
23:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	1	2	0	0	2	0	2	0	0	1	0	1	5
Grand Total	0	47	56	9	112	0	12	341	46	399	0	13	74	18	105	0	13	316	15	344	960
Approch %	0	42	50	8		0	3	85.5	11.5		0	12.4	70.5	17.1		0	3.8	91.9	4.4		
Total %	0	4.9	5.8	0.9	11.7	0	1.2	35.5	4.8	41.6	0	1.4	7.7	1.9	10.9	0	1.4	32.9	1.6	35.8	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 1732

Study Date : 06/08/2018

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 22

Number of Lanes : 1

Total Approach Volume: 3,761

Westbound: CSAH 22

Number of Lanes : 1

Total Approach Volume: 4,799

Minor Street Approaches

Northbound: CSAH 7

Number of Lanes : 1

Total Approach Volume: 3,131

Southbound: CSAH 7

Number of Lanes : 1

Total Approach Volume: 3,665

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 15 hours, 8 are needed

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

Required volumes reached for 6 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 9 hours, 8 are needed

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

Number of hours (12) volumes exceed minimum \geq minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (29) 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 1732

Study Date : 06/08/2018

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

15 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 CSAH 22			=	Total	Minor Road CSAH 7		Met?
	Major EB	+	Major WB			Minor NB	Minor SB	
16:30 - 17:30	356	+	501	=	857	499	169	Yes
17:30 - 18:30	337	+	423	=	760	391	198	Yes
15:30 - 16:30	309	+	450	=	759	407	132	Yes
14:30 - 15:30	226	+	325	=	551	297	175	Yes
06:30 - 07:30	284	+	260	=	544	60	498	Yes
07:30 - 08:30	257	+	276	=	533	74	346	Yes
18:30 - 19:30	224	+	270	=	494	239	129	Yes
08:30 - 09:30	192	+	244	=	436	62	200	Yes
13:30 - 14:30	180	+	232	=	412	142	158	Yes
05:30 - 06:30	184	+	213	=	397	44	464	Yes
12:30 - 13:30	171	+	223	=	394	92	147	Yes
10:30 - 11:30	170	+	200	=	370	95	131	Yes
19:30 - 20:30	152	+	214	=	366	176	69	Yes
11:30 - 12:30	168	+	197	=	365	96	146	Yes
09:30 - 10:30	164	+	194	=	358	70	193	Yes
20:30 - 21:30	126	+	204	=	330	127	76	No
20:45 - 21:45	126	+	200	=	326	106	56	No
05:15 - 06:15	145	+	175	=	320	45	418	No
21:00 - 22:00	120	+	188	=	308	113	48	No
05:00 - 06:00	120	+	161	=	281	41	360	No
21:15 - 22:15	106	+	147	=	253	97	44	No
21:30 - 22:30	90	+	129	=	219	93	43	No
04:45 - 05:45	95	+	116	=	211	36	307	No
21:45 - 22:45	80	+	94	=	174	84	47	No
22:00 - 23:00	61	+	89	=	150	68	44	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 1732

Study Date : 06/08/2018

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 6 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 CSAH 22			=	Total	Minor Road CSAH 7		Met?
	Major EB	+	Major WB			Minor NB	Minor SB	
16:30 - 17:30	356	+	501	=	857	499	169	Yes
17:30 - 18:30	337	+	423	=	760	391	198	Yes
15:30 - 16:30	309	+	450	=	759	407	132	Yes
06:15 - 07:15	285	+	266	=	551	60	524	Yes
14:30 - 15:30	226	+	325	=	551	297	175	Yes
07:15 - 08:15	261	+	283	=	544	66	399	Yes
06:00 - 07:00	258	+	256	=	514	48	547	No
14:15 - 15:15	215	+	284	=	499	246	160	No
18:30 - 19:30	224	+	270	=	494	239	129	No
05:45 - 06:45	224	+	243	=	467	41	523	No
14:00 - 15:00	195	+	272	=	467	196	157	No
18:45 - 19:45	205	+	244	=	449	213	99	No
08:15 - 09:15	207	+	241	=	448	64	216	No
13:45 - 14:45	194	+	253	=	447	165	159	No
08:30 - 09:30	192	+	244	=	436	62	200	No
08:45 - 09:45	185	+	234	=	419	66	191	No
13:30 - 14:30	180	+	232	=	412	142	158	No
13:15 - 14:15	181	+	227	=	408	115	167	No
13:00 - 14:00	182	+	218	=	400	100	159	No
05:30 - 06:30	184	+	213	=	397	44	464	No
12:45 - 13:45	184	+	213	=	397	96	162	No
12:30 - 13:30	171	+	223	=	394	92	147	No
19:00 - 20:00	171	+	221	=	392	200	78	No
12:15 - 13:15	176	+	210	=	386	103	139	No
19:15 - 20:15	162	+	223	=	385	191	72	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 1732

Study Date : 06/08/2018

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.
9 hours meet 1B 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
Warrant 1A 1B
Veh/Hr Major = **280 420**

Veh/Hr Minor = **84 42**

Major Road CSAH 22

Minor Road CSAH 7

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
17:00 - 18:00	377	+	492	=	869	463	183	Yes
16:00 - 17:00	343	+	481	=	824	468	163	Yes
15:00 - 16:00	266	+	391	=	657	372	148	Yes
18:00 - 19:00	257	+	342	=	599	303	180	Yes
07:00 - 08:00	274	+	264	=	538	75	442	Yes
06:00 - 07:00	258	+	256	=	514	48	547	Yes
08:00 - 09:00	220	+	270	=	490	69	234	Yes
14:00 - 15:00	195	+	272	=	467	196	157	Yes
13:00 - 14:00	182	+	218	=	400	100	159	Yes
19:00 - 20:00	171	+	221	=	392	200	78	Yes
09:00 - 10:00	171	+	207	=	378	64	189	Yes
12:00 - 13:00	165	+	206	=	371	101	139	Yes

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:45 - 17:45	371	+	500	=	871	479	176	Yes
15:45 - 16:45	323	+	472	=	795	443	156	Yes
17:45 - 18:45	297	+	391	=	688	357	187	Yes
14:45 - 15:45	235	+	350	=	585	340	150	Yes
07:45 - 08:45	249	+	273	=	522	71	292	Yes
06:45 - 07:45	262	+	255	=	517	69	463	Yes
05:45 - 06:45	224	+	243	=	467	41	523	Yes
18:45 - 19:45	205	+	244	=	449	213	99	Yes
13:45 - 14:45	194	+	253	=	447	165	159	Yes
08:45 - 09:45	185	+	234	=	419	66	191	No
13:30 - 14:30	180	+	232	=	412	142	158	No
13:15 - 14:15	181	+	227	=	408	115	167	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 1732

Study Date : 06/08/2018

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.

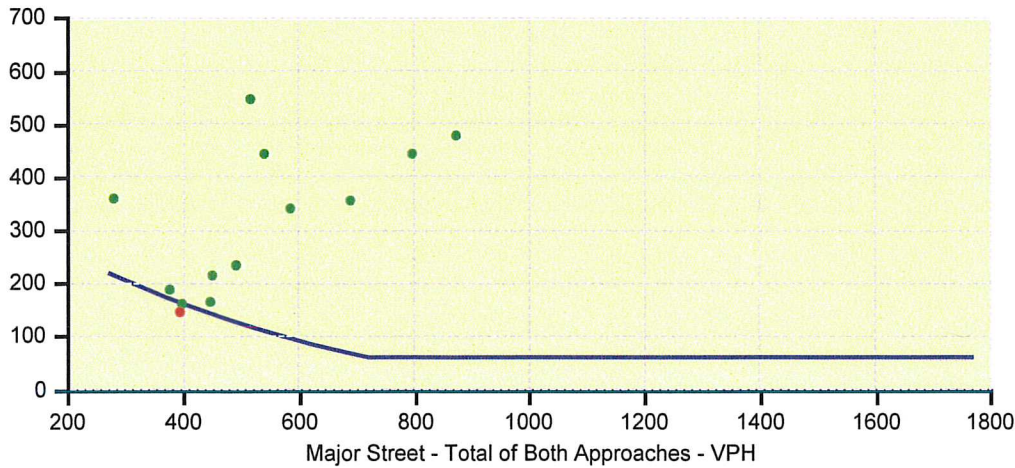
Summary

12 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 CSAH 7		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:45 - 17:45	371	+	500	=	871	479	176	Yes
15:45 - 16:45	323	+	472	=	795	443	156	Yes
17:45 - 18:45	297	+	391	=	688	357	187	Yes
14:45 - 15:45	235	+	350	=	585	340	150	Yes
07:00 - 08:00	274	+	264	=	538	75	442	Yes
06:00 - 07:00	258	+	256	=	514	48	547	Yes
08:00 - 09:00	220	+	270	=	490	69	234	Yes
18:45 - 19:45	205	+	244	=	449	213	99	Yes
13:45 - 14:45	194	+	253	=	447	165	159	Yes
12:45 - 13:45	184	+	213	=	397	96	162	Yes
09:00 - 10:00	171	+	207	=	378	64	189	Yes
							360	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 1732

Study Date : 06/08/2018

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.

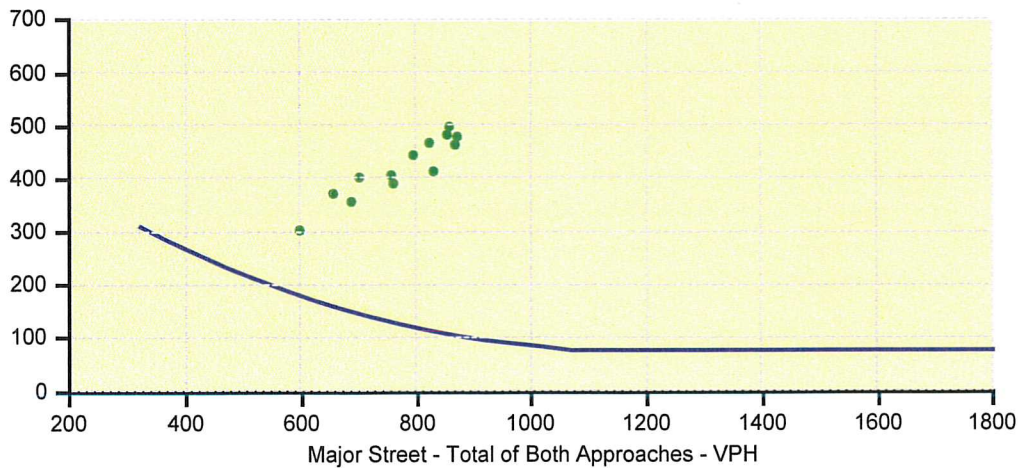
Summary

31 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 CSAH 7		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:45 - 17:45	371	+	500	=	871	479	176	Yes
17:00 - 18:00	377	+	492	=	869	463	183	Yes
16:30 - 17:30	356	+	501	=	857	499	169	Yes
16:15 - 17:15	351	+	503	=	854	481	161	Yes
17:15 - 18:15	364	+	468	=	832	412	187	Yes
16:00 - 17:00	343	+	481	=	824	468	163	Yes
15:45 - 16:45	323	+	472	=	795	443	156	Yes
17:30 - 18:30	337	+	423	=	760	391	198	Yes
15:30 - 16:30	309	+	450	=	759	407	132	Yes
15:15 - 16:15	284	+	417	=	701	401	144	Yes
17:45 - 18:45	297	+	391	=	688	357	187	Yes
							148	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 1732
 Study Date : 06/08/2018

Multiway Stop Warrants - Summary

Major Street Approaches

Eastbound: CSAH 22
 Number of Lanes : 1
 Total Approach Volume: 3,761

Westbound: CSAH 22
 Number of Lanes : 1
 Total Approach Volume: 4,799

Minor Street Approaches

Northbound: CSAH 7
 Number of Lanes : 1
 Total Approach Volume: 3,131

Southbound: CSAH 7
 Number of Lanes : 1
 Total Approach Volume: 3,665

Warrant Summary (Rural Values Apply)

Criteria A - Interim Measure If traffic signals are justified, stop signs can be installed as an interim measure.	Not Evaluated
Criteria B - Crash Experience Number of crashes (-1) is less than minimum required (5).	Not Satisfied
Criteria C - Minimum Volumes and Delays Average Delay Per Vehicle (-01.0) meets or exceeds minimum required (30). Average of 8 highest hours meets or exceeds volume criteria.	Satisfied
Criteria D - 80% of Volumes, Delays, and Crashes Average Delay Per Vehicle (-01.0) meets or exceeds minimum required (30). Number of crashes (-1) is less than minimum required (4). Average of 8 highest hours meets or exceeds volume criteria.	Not Satisfied

Criteria C Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
16:45 - 17:45	871	832.8	655	628.8	210	140	Yes
16:30 - 17:30	857		668				
17:00 - 18:00	869		646				
16:15 - 17:15	854		642				
16:00 - 17:00	824		631				
17:15 - 18:15	832		599				
15:45 - 16:45	795		599				
17:30 - 18:30	760		590				
15:30 - 16:30	759		539				
15:15 - 16:15	701		545				
17:45 - 18:45	688		545				
15:00 - 16:00	657		520				

Criteria D Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
16:45 - 17:45	871	832.8	655	628.8	240	160	Yes
16:30 - 17:30	857		668				
17:00 - 18:00	869		646				
16:15 - 17:15	854		642				
16:00 - 17:00	824		631				
17:15 - 18:15	832		599				
15:45 - 16:45	795		599				
17:30 - 18:30	760		590				
15:30 - 16:30	759		539				
15:15 - 16:15	701		545				
17:45 - 18:45	688		545				
15:00 - 16:00	657		520				