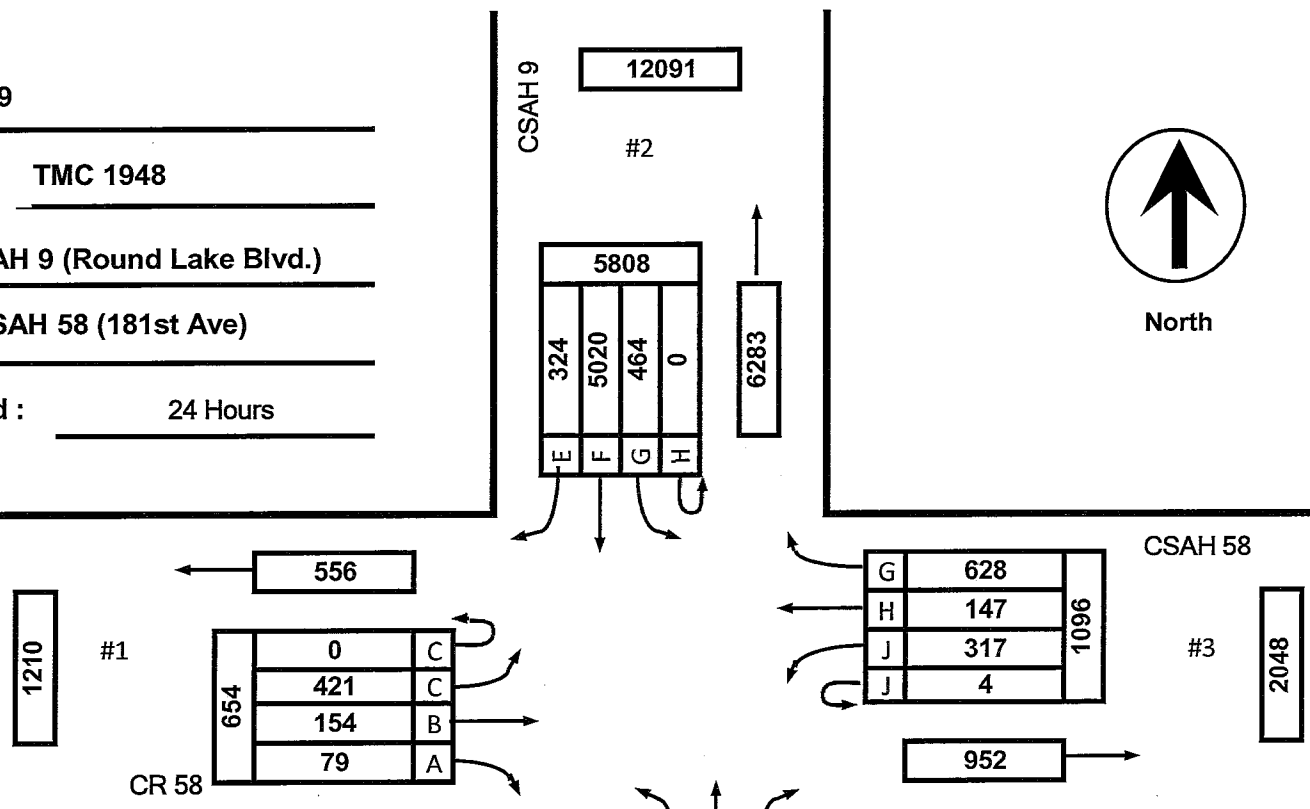
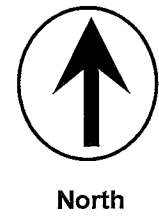


Date : 07/25/19

Count Number : TMC 1948

Location : CSAH 9 (Round Lake Blvd.)
@ CSAH 58 (181st Ave)

Collection Period : 24 Hours



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Date : 07/25/19

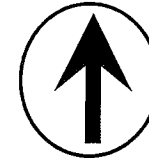
Count Number : TMC 1948

Location : CSAH 9 (Round Lake Blvd.)

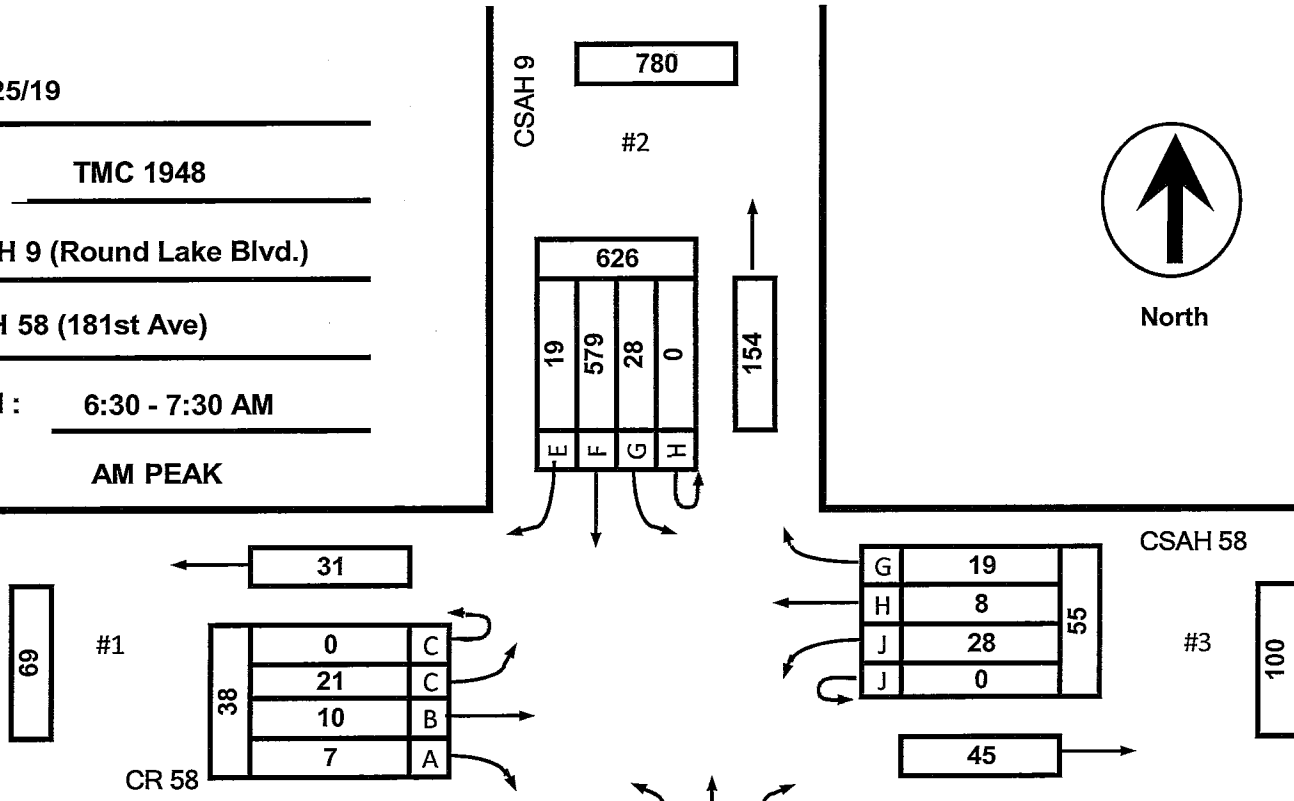
@ CSAH 58 (181st Ave)

Collection Period : 6:30 - 7:30 AM

AM PEAK



North



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

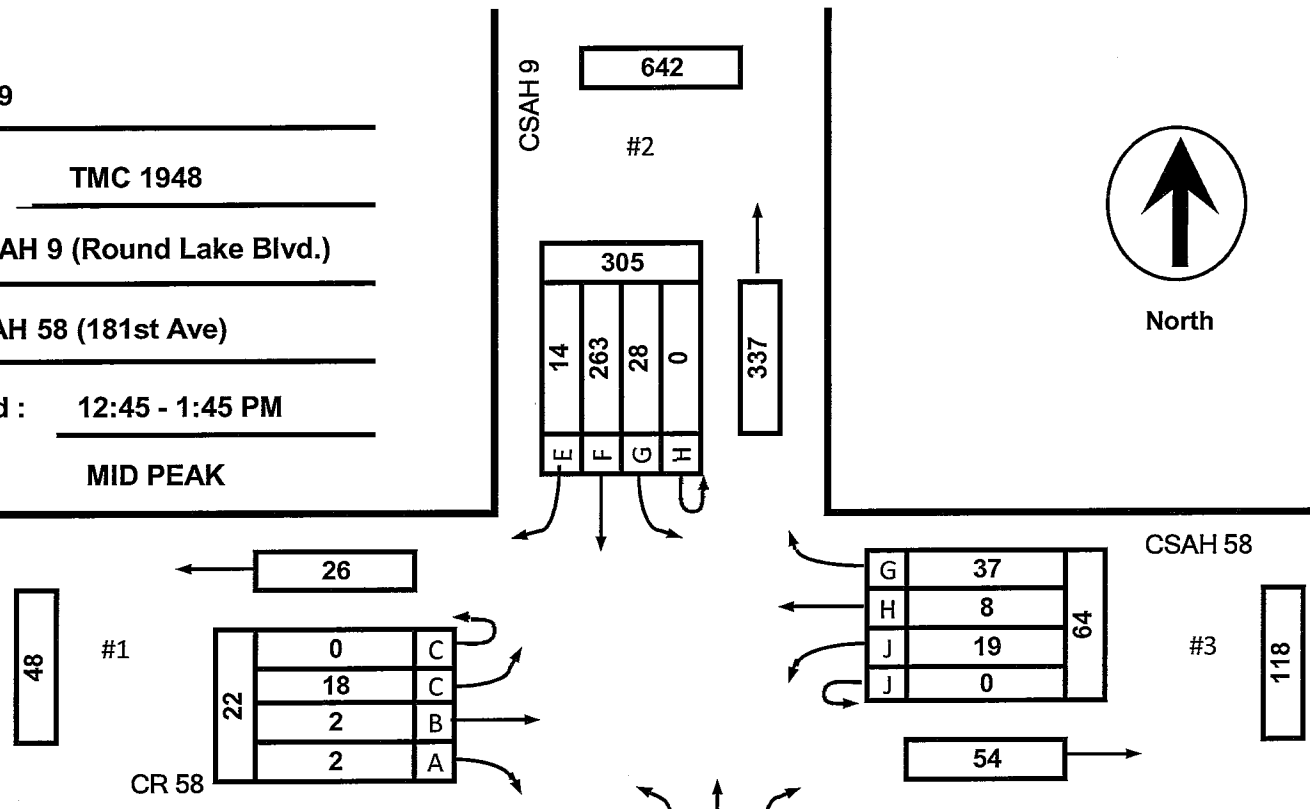
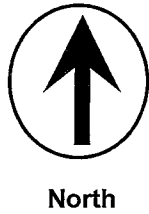
Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Date : 07/25/19

Count Number : TMC 1948

Location : CSAH 9 (Round Lake Blvd.)
@ CSAH 58 (181st Ave)

Collection Period : 12:45 - 1:45 PM
MID PEAK



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

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

Date : 07/25/19

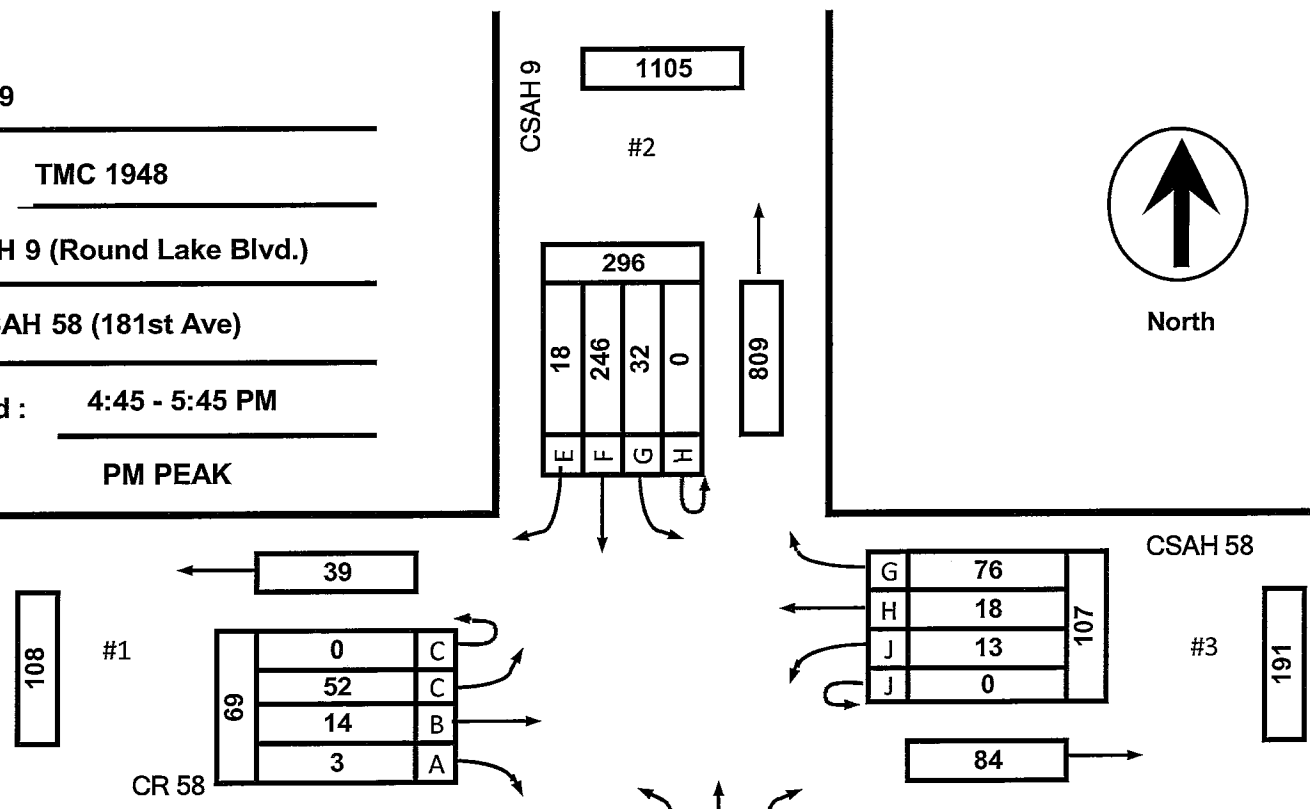
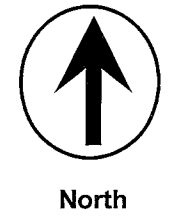
Count Number : TMC 1948

Location : CSAH 9 (Round Lake Blvd.)

@ CSAH 58 (181st Ave)

Collection Period : 4:45 - 5:45 PM

PM PEAK



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

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 1948
 Site Code :
 Start Date : 07/25/2019
 Page No : 1

Weather: Hot & Sunny
 CountCAM 200
 Study Conducted By: Logan/Andrea

Groups Printed- Cars + - Trucks

Start Time	CSAH 9 Southbound						CSAH 58 Westbound						CSAH 9 Northbound						CR 58 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	1	4	1	0	0	6	0	0	0	0	0	0	0	13	0	0	0	0	13	0	0	1	0	0	1	0	20	20
00:15	0	4	0	0	0	4	0	0	0	0	0	0	0	12	0	0	0	0	12	0	0	0	0	0	0	0	16	16
00:30	0	4	0	0	0	4	1	0	0	0	0	1	0	6	0	0	0	0	6	0	0	0	0	0	0	0	11	11
00:45	1	2	0	0	0	3	0	0	0	0	0	0	1	7	0	0	0	0	8	0	0	1	0	0	1	0	12	12
Total	2	14	1	0	0	17	1	0	0	0	0	1	1	38	0	0	0	0	39	0	0	2	0	0	2	0	59	59
01:00	0	3	1	0	0	4	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0	6	6
01:15	0	3	0	0	0	3	0	0	0	0	0	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	10	10
01:30	0	2	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	5	5
01:45	0	2	1	0	0	3	0	0	0	0	0	0	2	4	0	0	0	0	6	0	0	0	0	0	0	0	9	9
Total	0	10	2	0	0	12	0	0	0	0	0	0	2	15	0	0	0	0	17	1	0	0	0	0	1	0	30	30
02:00	0	3	0	0	0	3	1	0	0	0	0	1	0	6	0	0	0	0	6	0	0	0	0	0	0	0	10	10
02:15	0	5	0	0	0	5	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	7	7
02:30	0	2	0	0	0	2	1	0	0	0	0	1	0	7	0	0	0	0	7	0	0	0	0	0	0	0	10	10
02:45	0	4	0	0	0	4	1	1	0	0	0	2	0	6	0	0	0	0	6	0	0	0	0	0	0	0	12	12
Total	0	14	0	0	0	14	3	1	0	0	0	4	0	21	0	0	0	0	21	0	0	0	0	0	0	0	39	39
03:00	0	5	2	0	0	7	0	0	1	0	0	1	0	3	0	0	0	0	3	0	0	0	0	0	0	0	11	11
03:15	0	9	0	0	0	9	0	0	2	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0	13	13
03:30	0	13	0	0	0	13	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	15	15
03:45	0	8	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	9	9
Total	0	35	2	0	0	37	0	0	3	0	0	3	0	8	0	0	0	0	8	0	0	0	0	0	0	0	48	48
04:00	0	20	1	0	0	21	0	1	1	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	24	24
04:15	0	31	1	0	0	32	0	0	1	0	0	1	0	2	0	0	0	0	2	0	0	1	0	0	1	0	36	36
04:30	1	57	2	0	0	60	1	1	1	0	0	3	0	3	0	0	0	0	3	0	0	1	0	0	1	0	67	67
04:45	0	55	3	0	0	58	0	2	2	0	0	4	1	1	0	0	0	0	2	0	1	1	0	0	2	0	66	66
Total	1	163	7	0	0	171	1	4	5	0	0	10	1	7	0	0	0	8	0	1	3	0	0	4	0	193	193	
05:00	1	76	1	0	0	78	1	0	5	0	0	6	2	5	0	0	0	0	7	3	0	0	0	0	3	0	94	94
05:15	2	95	5	0	0	102	2	1	7	0	0	10	1	10	0	0	0	0	11	0	2	0	0	0	2	0	125	125
05:30	1	93	1	0	0	95	2	1	6	0	0	9	2	20	0	0	0	0	22	0	0	1	0	0	1	0	127	127
05:45	2	116	3	0	0	121	4	0	9	0	0	13	0	24	0	0	2	24	0	1	4	0	0	5	2	163	165	
Total	6	380	10	0	0	396	9	2	27	0	0	38	5	59	0	0	2	64	3	3	5	0	0	11	2	509	511	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Hot & Sunny
 CountCAM 200
 Study Conducted By: Logan/Andrea

File Name : TMC 1948
 Site Code :
 Start Date : 07/25/2019
 Page No : 2

Groups Printed- Cars + - Trucks

Start Time	CSAH 9 Southbound						CSAH 58 Westbound						CSAH 9 Northbound						CR 58 Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTm	Peds	App. Total	Right	Thru	Left	UTm	Peds	App. Total	Right	Thru	Left	UTm	Peds	App. Total	Right	Thru	Left	UTm	Peds	App. Total			
06:00	0	143	3	0	0	146	6	1	4	0	0	11	1	20	0	0	0	21	2	0	3	0	0	5	0	183	183
06:15	5	130	4	0	0	139	3	0	7	0	0	10	0	17	0	0	0	17	4	3	4	0	0	11	0	177	177
06:30	6	165	9	0	0	180	4	3	11	0	0	18	0	18	0	0	0	18	2	4	6	0	0	12	0	228	228
06:45	3	142	8	0	0	153	4	1	2	0	0	7	2	30	0	0	1	32	1	3	3	0	0	7	1	199	200
Total	14	580	24	0	0	618	17	5	24	0	0	46	3	85	0	0	1	88	9	10	16	0	0	35	1	787	788
07:00	4	140	7	0	0	151	6	2	10	0	0	18	2	28	2	0	0	32	2	1	7	0	0	10	0	211	211
07:15	6	132	4	0	0	142	5	2	5	0	0	12	3	38	2	0	1	43	2	2	5	0	0	9	1	206	207
07:30	2	117	11	0	0	130	4	1	10	0	0	15	3	43	0	0	0	46	0	1	2	0	0	3	0	194	194
07:45	3	127	7	0	0	137	10	1	3	0	0	14	1	37	1	0	0	39	2	2	8	0	0	12	0	202	202
Total	15	516	29	0	0	560	25	6	28	0	0	59	9	146	5	0	1	160	6	6	22	0	0	34	1	813	814
08:00	5	78	7	0	0	90	4	0	3	0	0	7	5	19	0	0	0	24	0	1	2	0	0	3	0	124	124
08:15	3	75	6	0	0	84	3	3	10	0	0	16	5	41	0	0	0	46	0	2	5	0	0	7	0	153	153
08:30	6	81	6	0	0	93	7	1	6	0	0	14	1	23	2	0	0	26	5	2	2	0	0	9	0	142	142
08:45	4	71	9	0	0	84	9	3	3	0	0	15	2	29	0	0	0	31	2	3	2	0	0	7	0	137	137
Total	18	305	28	0	0	351	23	7	22	0	0	52	13	112	2	0	0	127	7	8	11	0	0	26	0	556	556
09:00	7	64	5	0	0	76	9	1	5	0	0	15	2	28	1	0	0	31	1	2	1	0	0	4	0	126	126
09:15	5	70	5	0	0	80	6	1	4	0	0	11	3	33	1	0	0	37	2	3	6	0	0	11	0	139	139
09:30	5	64	2	0	0	71	7	0	5	0	0	12	1	20	1	0	0	22	0	3	7	0	0	10	0	115	115
09:45	6	76	14	0	0	96	8	2	4	0	0	14	2	33	0	0	0	35	0	1	10	0	0	11	0	156	156
Total	23	274	26	0	0	323	30	4	18	0	0	52	8	114	3	0	0	125	3	9	24	0	0	36	0	536	536
10:00	6	75	11	0	0	92	4	3	3	0	0	10	3	35	0	0	0	38	1	2	1	0	0	4	0	144	144
10:15	4	69	5	0	0	78	5	2	6	0	0	13	0	37	2	0	0	39	1	2	1	0	0	4	0	134	134
10:30	5	78	7	0	0	90	10	2	5	0	0	17	2	40	0	0	0	42	2	2	7	0	0	11	0	160	160
10:45	6	64	3	0	0	73	7	0	3	0	0	10	2	45	0	0	0	47	1	0	5	0	0	6	0	136	136
Total	21	286	26	0	0	333	26	7	17	0	0	50	7	157	2	0	0	166	5	6	14	0	0	25	0	574	574
11:00	2	50	4	0	0	56	6	0	4	0	0	10	4	41	1	0	0	46	2	4	2	0	0	8	0	120	120
11:15	5	71	4	0	0	80	7	2	3	0	0	12	3	48	1	0	0	52	2	3	4	0	0	9	0	153	153
11:30	5	61	7	0	0	73	7	4	7	0	0	18	4	60	1	0	0	65	2	0	7	0	0	9	0	165	165
11:45	5	56	3	0	0	64	6	1	4	0	0	11	3	44	0	0	0	47	0	3	6	0	0	9	0	131	131
Total	17	238	18	0	0	273	26	7	18	0	0	51	14	193	3	0	0	210	6	10	19	0	0	35	0	569	569
12:00	3	61	3	0	0	67	9	3	4	0	0	16	3	53	1	0	0	57	1	1	3	0	0	5	0	145	145
12:15	4	62	7	0	0	73	5	0	1	0	0	6	6	75	4	0	0	85	0	0	5	0	0	5	0	169	169
12:30	6	71	3	0	0	80	2	1	6	0	0	9	6	46	0	0	0	52	0	3	1	0	0	4	0	145	145



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1948
 Site Code :
 Start Date : 07/25/2019
 Page No : 3

Weather: Hot & Sunny
 CountCAM 200
 Study Conducted By: Logan/Andrea

Groups Printed- Cars + - Trucks

Start Time	CSAH 9 Southbound						CSAH 58 Westbound						CSAH 9 Northbound						CR 58 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	4	72	1	0	0	77	10	2	5	0	0	17	8	69	2	0	0	79	1	1	5	0	0	7	0	180	180
Total	17	266	14	0	0	297	26	6	16	0	0	48	23	243	7	0	0	273	2	5	14	0	0	21	0	639	639
13:00	5	67	7	0	0	79	12	0	3	0	0	15	6	78	1	0	0	85	0	0	2	0	0	2	0	181	181
13:15	2	62	15	0	0	79	10	4	5	0	0	19	5	61	0	0	0	66	1	0	3	0	0	4	0	168	168
13:30	3	62	5	0	0	70	5	2	6	0	0	13	5	74	1	0	0	80	0	1	8	0	0	9	0	172	172
13:45	2	60	7	0	0	69	2	0	4	0	0	6	3	75	1	0	0	79	1	4	5	0	0	10	0	164	164
Total	12	251	34	0	0	297	29	6	18	0	0	53	19	288	3	0	0	310	2	5	18	0	0	25	0	685	685
14:00	3	53	7	0	0	63	16	0	3	0	0	19	10	75	3	0	0	88	0	0	5	0	0	5	0	175	175
14:15	9	60	10	0	0	79	11	2	6	0	0	19	6	89	1	0	0	96	2	1	9	0	0	12	0	206	206
14:30	7	61	5	0	0	73	5	2	6	0	0	13	7	106	0	0	0	113	0	1	6	0	0	7	0	206	206
14:45	5	66	9	0	0	80	13	1	4	0	0	18	3	119	1	0	0	123	0	2	12	0	0	14	0	235	235
Total	24	240	31	0	0	295	45	5	19	0	0	69	26	389	5	0	0	420	2	4	32	0	0	38	0	822	822
15:00	8	45	10	0	0	63	16	3	2	1	0	22	8	114	2	0	0	124	0	3	6	0	0	9	0	218	218
15:15	9	71	6	0	0	86	8	2	6	3	0	19	5	127	3	0	0	135	0	5	12	0	0	17	0	257	257
15:30	4	58	9	0	0	71	13	2	6	0	0	21	8	146	4	0	0	158	2	8	8	0	0	18	0	268	268
15:45	3	53	7	0	0	63	16	3	3	0	0	22	14	139	1	0	0	154	2	4	14	0	0	20	0	259	259
Total	24	227	32	0	0	283	53	10	17	4	0	84	35	526	10	0	0	571	4	20	40	0	0	64	0	1002	1002
16:00	4	62	15	0	0	81	14	4	5	0	0	23	9	151	0	0	0	160	2	2	11	0	0	15	0	279	279
16:15	10	60	10	0	0	80	16	3	7	0	0	26	8	135	2	0	0	145	2	6	7	0	0	15	0	266	266
16:30	5	56	8	0	0	69	25	6	4	0	0	35	6	148	0	0	0	154	2	2	18	0	0	22	0	280	280
16:45	6	67	5	0	0	78	19	5	4	0	0	28	7	163	0	0	0	170	2	3	12	0	0	17	0	293	293
Total	25	245	38	0	0	308	74	18	20	0	0	112	30	597	2	0	0	629	8	13	48	0	0	69	0	1118	1118
17:00	4	54	11	0	0	69	19	3	2	0	0	24	10	174	1	0	0	185	0	6	19	0	0	25	0	303	303
17:15	3	54	4	0	0	61	17	7	1	0	0	25	7	177	0	0	0	184	1	3	12	0	0	16	0	286	286
17:30	5	71	12	0	0	88	21	3	6	0	0	30	14	167	2	0	0	183	0	2	9	0	0	11	0	312	312
17:45	12	51	8	0	0	71	26	4	2	0	0	32	5	152	2	0	0	159	1	1	8	0	0	10	0	272	272
Total	24	230	35	0	0	289	83	17	11	0	0	111	36	670	5	0	0	711	2	12	48	0	0	62	0	1173	1173
18:00	1	69	8	0	0	78	17	5	4	0	0	26	7	135	3	0	0	145	0	7	13	0	0	20	0	269	269
18:15	3	50	6	0	0	59	20	2	3	0	0	25	7	108	2	0	0	117	0	3	5	0	0	8	0	209	209
18:30	7	57	4	0	0	68	12	3	4	0	0	19	9	132	3	0	0	144	1	2	6	0	0	9	0	240	240
18:45	11	42	8	0	0	61	12	5	4	0	0	21	4	95	3	0	0	102	1	3	6	0	0	10	0	194	194
Total	22	218	26	0	0	266	61	15	15	0	0	91	27	470	11	0	0	508	2	15	30	0	0	47	0	912	912



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Hot & Sunny
 CountCAM 200
 Study Conducted By: Logan/Andrea

File Name : TMC 1948
 Site Code :
 Start Date : 07/25/2019
 Page No : 4

Groups Printed- Cars + - Trucks

Start Time	CSAH 9 Southbound						CSAH 58 Westbound						CSAH 9 Northbound						CR 58 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	2	44	5	0	0	51	8	6	6	0	0	20	6	103	6	0	2	115	1	0	11	0	0	12	2	198	200	
19:15	10	33	3	0	0	46	8	1	3	0	0	12	4	95	1	0	0	100	1	2	4	0	0	7	0	165	165	
19:30	3	36	7	0	0	46	5	5	2	0	0	12	6	81	1	0	0	88	0	1	12	0	0	13	0	159	159	
19:45	3	36	5	0	0	44	7	2	3	0	0	12	8	77	2	0	0	87	1	2	2	0	0	5	0	148	148	
Total	18	149	20	0	0	187	28	14	14	0	0	56	24	356	10	0	2	390	3	5	29	0	0	37	2	670	672	
20:00	1	32	8	0	0	41	11	1	5	0	0	17	3	72	5	0	0	80	2	3	9	0	0	14	0	152	152	
20:15	6	45	7	0	0	58	9	4	2	0	0	15	3	96	3	0	0	102	1	0	1	0	0	2	0	177	177	
20:30	1	34	1	0	0	36	5	1	1	0	0	7	7	69	1	0	0	77	0	3	3	0	0	6	0	126	126	
20:45	5	32	10	0	0	47	3	2	2	0	0	7	5	71	0	0	0	76	2	1	5	0	0	8	0	138	138	
Total	13	143	26	0	0	182	28	8	10	0	0	46	18	308	9	0	0	335	5	7	18	0	0	30	0	593	593	
21:00	4	43	6	0	0	53	3	1	2	0	0	6	4	61	1	0	0	66	2	3	5	0	0	10	0	135	135	
21:15	4	59	6	0	0	69	7	1	2	0	0	10	4	49	0	0	0	53	0	0	3	0	0	3	0	135	135	
21:30	6	33	7	0	0	46	6	1	3	0	0	10	2	54	1	0	0	57	2	5	6	0	0	13	0	126	126	
21:45	2	22	6	0	0	30	3	1	1	0	0	5	3	51	1	0	0	55	1	3	5	0	0	9	0	99	99	
Total	16	157	25	0	0	198	19	4	8	0	0	31	13	215	3	0	0	231	5	11	19	0	0	35	0	495	495	
22:00	4	15	3	0	0	22	4	0	0	0	0	4	3	40	0	0	0	43	2	2	3	0	0	7	0	76	76	
22:15	0	17	1	0	0	18	5	0	2	0	0	7	2	38	3	0	0	43	2	2	1	0	0	5	0	73	73	
22:30	2	12	1	0	0	15	5	1	0	0	0	6	1	34	0	0	0	35	0	0	1	0	0	1	0	57	57	
22:45	0	13	1	0	0	14	3	0	1	0	0	4	3	19	0	0	0	22	0	0	0	0	0	0	0	40	40	
Total	6	57	6	0	0	69	17	1	3	0	0	21	9	131	3	0	0	143	4	4	5	0	0	13	0	246	246	
23:00	2	5	0	0	0	7	1	0	2	0	0	3	1	34	1	0	0	36	0	0	0	0	0	0	0	0	46	46
23:15	3	5	2	0	0	10	0	0	1	0	0	1	5	21	1	0	0	27	0	0	2	0	0	2	0	40	40	
23:30	1	10	1	0	0	12	3	0	0	0	0	3	0	18	0	0	0	18	0	0	1	0	0	1	0	34	34	
23:45	0	2	1	0	0	3	0	0	1	0	0	1	1	13	0	0	0	14	0	0	1	0	0	1	0	19	19	
Total	6	22	4	0	0	32	4	0	4	0	0	8	7	86	2	0	0	95	0	0	4	0	0	4	0	139	139	
Grand Total	324	5020	464	0	0	5808	628	147	317	4	0	1096	330	5234	85	0	6	5649	79	154	421	0	0	654	6	13207	13213	
Apprch %	5.6	86.4	8	0			57.3	13.4	28.9	0.4			5.8	92.7	1.5	0			12.1	23.5	64.4	0						
Total %	2.5	38	3.5	0		44	4.8	1.1	2.4	0		8.3	2.5	39.6	0.6	0	42.8	0.6	1.2	3.2	0		5	0	100			
Cars +	321	4899	441	0		5661	601	143	307	4		1055	323	5117	85	0	5531	78	149	413	0		640	0	0	12887		
% Cars +	99.1	97.6	95	0		97.5	95.7	97.3	96.8	100	0	96.3	97.9	97.8	100	0	97.8	98.7	96.8	98.1	0	0	97.9	0	0	97.5		
Trucks	3	121	23	0		147	27	4	10	0		41	7	117	0	0	124	1	5	8	0		14	0	0	326		
% Trucks	0.9	2.4	5	0		2.5	4.3	2.7	3.2	0	0	3.7	2.1	2.2	0	0	2.2	1.3	3.2	1.9	0	0	2.1	0	0	2.5		



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Hot & Sunny
 CountCAM 200
 Study Conducted By: Logan/Andrea

File Name : TMC 1948
 Site Code :
 Start Date : 07/25/2019
 Page No : 5

Start Time	CSAH 9 Southbound					CSAH 58 Westbound					CSAH 9 Northbound					CR 58 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 06:30																					
06:30	6	165	9	0	180	4	3	11	0	18	0	18	0	0	18	2	4	6	0	12	228
06:45	3	142	8	0	153	4	1	2	0	7	2	30	0	0	32	1	3	3	0	7	199
07:00	4	140	7	0	151	6	2	10	0	18	2	28	2	0	32	2	1	7	0	10	211
07:15	6	132	4	0	142	5	2	5	0	12	3	38	2	0	43	2	2	5	0	9	206
Total Volume	19	579	28	0	626	19	8	28	0	55	7	114	4	0	125	7	10	21	0	38	844
% App. Total	3	92.5	4.5	0		34.5	14.5	50.9	0		5.6	91.2	3.2	0		18.4	26.3	55.3	0		
PHF	.792	.877	.778	.000	.869	.792	.667	.636	.000	.764	.583	.750	.500	.000	.727	.875	.625	.750	.000	.792	.925

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45																					
12:45	4	72	1	0	77	10	2	5	0	17	8	69	2	0	79	1	1	5	0	7	180
13:00	5	67	7	0	79	12	0	3	0	15	6	78	1	0	85	0	0	2	0	2	181
13:15	2	62	15	0	79	10	4	5	0	19	5	61	0	0	66	1	0	3	0	4	168
13:30	3	62	5	0	70	5	2	6	0	13	5	74	1	0	80	0	1	8	0	9	172
Total Volume	14	263	28	0	305	37	8	19	0	64	24	282	4	0	310	2	2	18	0	22	701
% App. Total	4.6	86.2	9.2	0		57.8	12.5	29.7	0		7.7	91	1.3	0		9.1	9.1	81.8	0		
PHF	.700	.913	.467	.000	.965	.771	.500	.792	.000	.842	.750	.904	.500	.000	.912	.500	.500	.563	.000	.611	.968

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	6	67	5	0	78	19	5	4	0	28	7	163	0	0	170	2	3	12	0	17	293
17:00	4	54	11	0	69	19	3	2	0	24	10	174	1	0	185	0	6	19	0	25	303
17:15	3	54	4	0	61	17	7	1	0	25	7	177	0	0	184	1	3	12	0	16	286
17:30	5	71	12	0	88	21	3	6	0	30	14	167	2	0	183	0	2	9	0	11	312
Total Volume	18	246	32	0	296	76	18	13	0	107	38	681	3	0	722	3	14	52	0	69	1194
% App. Total	6.1	83.1	10.8	0		71	16.8	12.1	0		5.3	94.3	0.4	0		4.3	20.3	75.4	0		
PHF	.750	.866	.667	.000	.841	.905	.643	.542	.000	.892	.679	.962	.375	.000	.976	.375	.583	.684	.000	.690	.957



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Hot & Sunny
 CountCAM 200
 Study Conducted By: Logan/Andrea

File Name : TMC 1948
 Site Code :
 Start Date : 07/25/2019
 Page No : 1

Groups Printed- Trucks

Start Time	CSAH 9 Southbound					CSAH 58 Westbound					CSAH 9 Northbound					CR 58 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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	0	0	1
03:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
05:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
05:45	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4
Total	0	4	0	0	4	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	7
06:00	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
06:15	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
06:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:45	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	5
Total	0	13	0	0	13	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	1	17
07:00	0	3	0	0	3	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	0	7
07:15	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:30	0	2	1	0	3	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	8
07:45	0	2	1	0	3	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	7
Total	0	11	2	0	13	3	0	0	0	3	2	8	0	0	10	0	0	0	0	0	0	26
08:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	1	4
08:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
08:30	0	5	1	0	6	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	8
08:45	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	6
Total	0	8	1	0	9	0	0	0	0	0	0	8	0	0	8	0	2	0	0	2	1	19
09:00	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	1	0	0	0	1	1	5



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1948
 Site Code :
 Start Date : 07/25/2019
 Page No : 3

Weather: Hot & Sunny
 CountCAM 200
 Study Conducted By: Logan/Andrea

Groups Printed- Trucks

Start Time	CSAH 9 Southbound					CSAH 58 Westbound					CSAH 9 Northbound					CR 58 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	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
19:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
19:30	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
19:45	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	13
20:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
20:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
21:00	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
21:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
22:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
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	0	0	0	0	0	0	0	0	0
23:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	3	121	23	0	147	27	4	10	0	41	7	117	0	0	124	1	5	8	0	14	326
Apprch %	2	82.3	15.6	0		65.9	9.8	24.4	0		5.6	94.4	0	0		7.1	35.7	57.1	0		
Total %	0.9	37.1	7.1	0	45.1	8.3	1.2	3.1	0	12.6	2.1	35.9	0	0	38	0.3	1.5	2.5	0	4.3	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 1948

Study Date: 10/14/2019

Page No: 1

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 9

Number of Lanes : 1

Total Approach Volume: 5,649

Southbound: CSAH 9

Number of Lanes : 1

Total Approach Volume: 5,808

Minor Street Approaches

Eastbound: CR 58

Number of Lanes : 1

Total Approach Volume: 654

Westbound: CR 58

Number of Lanes : 1

Total Approach Volume: 1,096

Warrant Summary (Rural Values Apply)

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

Warrant 1A - Minimum Vehicular Volume.....Not Satisfied

Required volumes reached for 2 hours, 8 are needed

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

Required volumes reached for 9 hours, 8 are needed

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

Required 1A volumes reached for 4 hours, 8 are needed

Required 1B volumes reached for 15 hours, 8 are needed

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

Number of hours (5) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

Warrant 3A - Peak Hour Delay.....Not Satisfied

Approach volumes on minor street don't exceed minimums for any hour. Delay data not evaluated.

Warrant 3B - Peak Hour Volumes.....Satisfied

Volumes exceed minimums for at least one hour.

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 1948**

Study Date: **10/14/2019**

Page No: **2**

Warrant 1A - Minimum Volumes

Description

Intended for sites where the volume of intersecting traffic is the principal reason for consideration of a signal installation.

Summary

Only 2 hours 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 = **350**

Veh/Hr Minor = **105**

Time	Major Road CSAH 9				Total	Minor Road CR 58		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:45 - 17:45	722	+	296	=	1018	69	107	Yes
15:45 - 16:45	613	+	293	=	906	72	106	Yes
15:30 - 16:30	617	+	295	=	912	68	92	No
15:15 - 16:15	607	+	301	=	908	70	85	No
15:00 - 16:00	571	+	283	=	854	64	84	No
17:45 - 18:45	565	+	276	=	841	47	102	No
14:45 - 15:45	540	+	300	=	840	58	80	No
14:30 - 15:30	495	+	302	=	797	47	72	No
18:00 - 19:00	508	+	266	=	774	47	91	No
14:15 - 15:15	456	+	295	=	751	42	72	No
06:30 - 07:30	125	+	626	=	751	38	55	No
06:45 - 07:45	153	+	576	=	729	29	52	No
06:15 - 07:15	99	+	623	=	722	40	53	No
07:00 - 08:00	160	+	560	=	720	34	59	No
18:15 - 19:15	478	+	239	=	717	39	85	No
14:00 - 15:00	420	+	295	=	715	38	69	No
06:00 - 07:00	88	+	618	=	706	35	46	No
18:30 - 19:30	461	+	226	=	687	38	72	No
05:45 - 06:45	80	+	586	=	666	33	52	No
13:45 - 14:45	376	+	284	=	660	34	57	No
07:15 - 08:15	152	+	499	=	651	27	48	No
13:30 - 14:30	343	+	281	=	624	36	57	No
12:45 - 13:45	310	+	305	=	615	22	64	No
12:15 - 13:15	301	+	309	=	610	18	47	No
18:45 - 19:45	405		204		609	42	65	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 1948**

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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

9 hours 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 = **525**

Veh/Hr Minor = **53**

Time	Major Road CSAH 9				Total	Minor Road CR 58		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	693	+	277	=	970	80	112	Yes
15:30 - 16:30	617	+	295	=	912	68	92	Yes
17:30 - 18:30	604	+	296	=	900	49	113	Yes
14:30 - 15:30	495	+	302	=	797	47	72	Yes
06:15 - 07:15	99	+	623	=	722	40	53	Yes
18:30 - 19:30	461	+	226	=	687	38	72	Yes
13:30 - 14:30	343	+	281	=	624	36	57	Yes
12:30 - 13:30	282	+	315	=	597	17	60	Yes
19:30 - 20:30	357	+	189	=	546	34	56	Yes
06:00 - 07:00	88	+	618	=	706	35	46	No
05:45 - 06:45	80	+	586	=	666	33	52	No
07:15 - 08:15	152	+	499	=	651	27	48	No
12:15 - 13:15	301	+	309	=	610	18	47	No
07:30 - 08:30	155	+	441	=	596	25	52	No
05:30 - 06:30	84	+	501	=	585	22	43	No
12:00 - 13:00	273	+	297	=	570	21	48	No
05:15 - 06:15	78	+	464	=	542	13	43	No
07:45 - 08:45	135	+	404	=	539	31	51	No
11:30 - 12:30	254	+	277	=	531	28	51	No
11:45 - 12:45	241	+	284	=	525	23	42	No
09:45 - 10:45	154	+	356	=	510	30	54	No
11:15 - 12:15	221	+	284	=	505	32	57	No
10:00 - 11:00	166	+	333	=	499	25	50	No
10:45 - 11:45	210	+	282	=	492	32	50	No
10:30 - 11:30	187	+	299	=	486	34	49	No

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Warrant 1C Combination of Warrants

Description

Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are both met to 80% of their stated values.

Summary

Only 4 hours meet 1A minimums.
15 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 9

Minor Road CR 58

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
17:00 - 18:00	711	+	289	=	1000	62	111	Yes
16:00 - 17:00	629	+	308	=	937	69	112	Yes
15:00 - 16:00	571	+	283	=	854	64	84	Yes
18:00 - 19:00	508	+	266	=	774	47	91	Yes
14:45 - 15:45	540	+	300	=	840	58	80	No
14:30 - 15:30	495	+	302	=	797	47	72	No
14:15 - 15:15	456	+	295	=	751	42	72	No
06:30 - 07:30	125	+	626	=	751	38	55	No
06:45 - 07:45	153	+	576	=	729	29	52	No
06:15 - 07:15	99	+	623	=	722	40	53	No
07:00 - 08:00	160	+	560	=	720	34	59	No
14:00 - 15:00	420		295		715	38	69	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
17:15 - 18:15	671	+	298	=	969	57	113	Yes
16:15 - 17:15	654	+	296	=	950	79	113	Yes
15:15 - 16:15	607	+	301	=	908	70	85	Yes
14:15 - 15:15	456	+	295	=	751	42	72	Yes
06:15 - 07:15	99	+	623	=	722	40	53	Yes
18:15 - 19:15	478	+	239	=	717	39	85	Yes
07:15 - 08:15	152	+	499	=	651	27	48	Yes
12:15 - 13:15	301	+	309	=	610	18	47	Yes
13:15 - 14:15	313	+	281	=	594	28	57	Yes
05:15 - 06:15	78	+	464	=	542	13	43	Yes
19:15 - 20:15	355	+	177	=	532	39	53	Yes
11:15 - 12:15	221		284		505	32	57	Yes

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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.

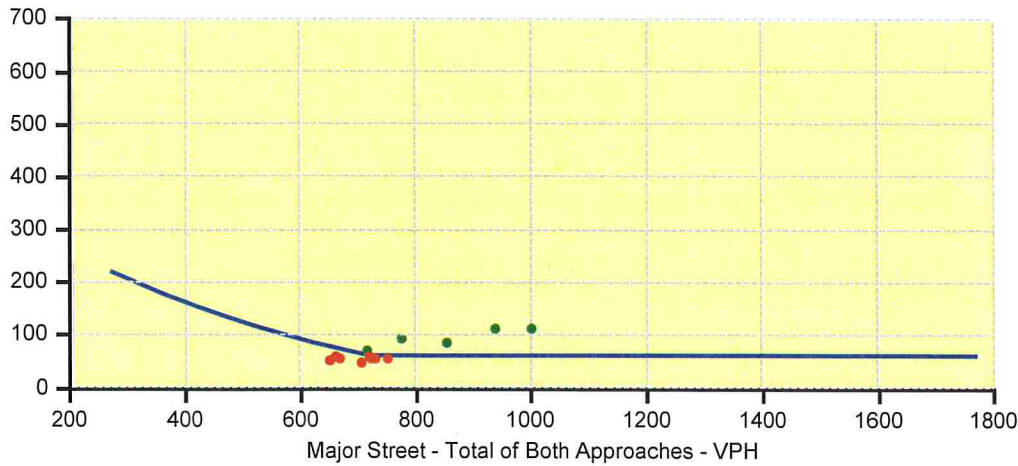
Summary

5 hours 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 9				Total	Minor Road CR 58		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
17:00 - 18:00	711	+	289	=	1000	62	111	Yes
16:00 - 17:00	629	+	308	=	937	69	112	Yes
15:00 - 16:00	571	+	283	=	854	64	84	Yes
18:00 - 19:00	508	+	266	=	774	47	91	Yes
14:00 - 15:00	420	+	295	=	715	38	69	Yes
06:30 - 07:30	125	+	626	=	751	38	55	No
06:45 - 07:45	153	+	576	=	729	29	52	No
06:15 - 07:15	99	+	623	=	722	40	53	No
07:00 - 08:00	160	+	560	=	720	34	59	No
06:00 - 07:00	88	+	618	=	706	35	46	No
05:45 - 06:45	80	+	586	=	666	33	52	No
							57	No



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TRAFFIC SIGNAL WARRANT ANALYSIS

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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

8 hours 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 9				Total	Minor Road CR 58		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:45 - 17:45	722	+	296	=	1018	69	107	Yes
17:00 - 18:00	711	+	289	=	1000	62	111	Yes
16:30 - 17:30	693	+	277	=	970	80	112	Yes
17:15 - 18:15	671	+	298	=	969	57	113	Yes
16:15 - 17:15	654	+	296	=	950	79	113	Yes
16:00 - 17:00	629	+	308	=	937	69	112	Yes
15:45 - 16:45	613	+	293	=	906	72	106	Yes
17:30 - 18:30	604	+	296	=	900	49	113	Yes
15:30 - 16:30	617	+	295	=	912	68	92	No
15:15 - 16:15	607	+	301	=	908	70	85	No
15:00 - 16:00	571	+	283	=	854	64	84	No
							102	No

