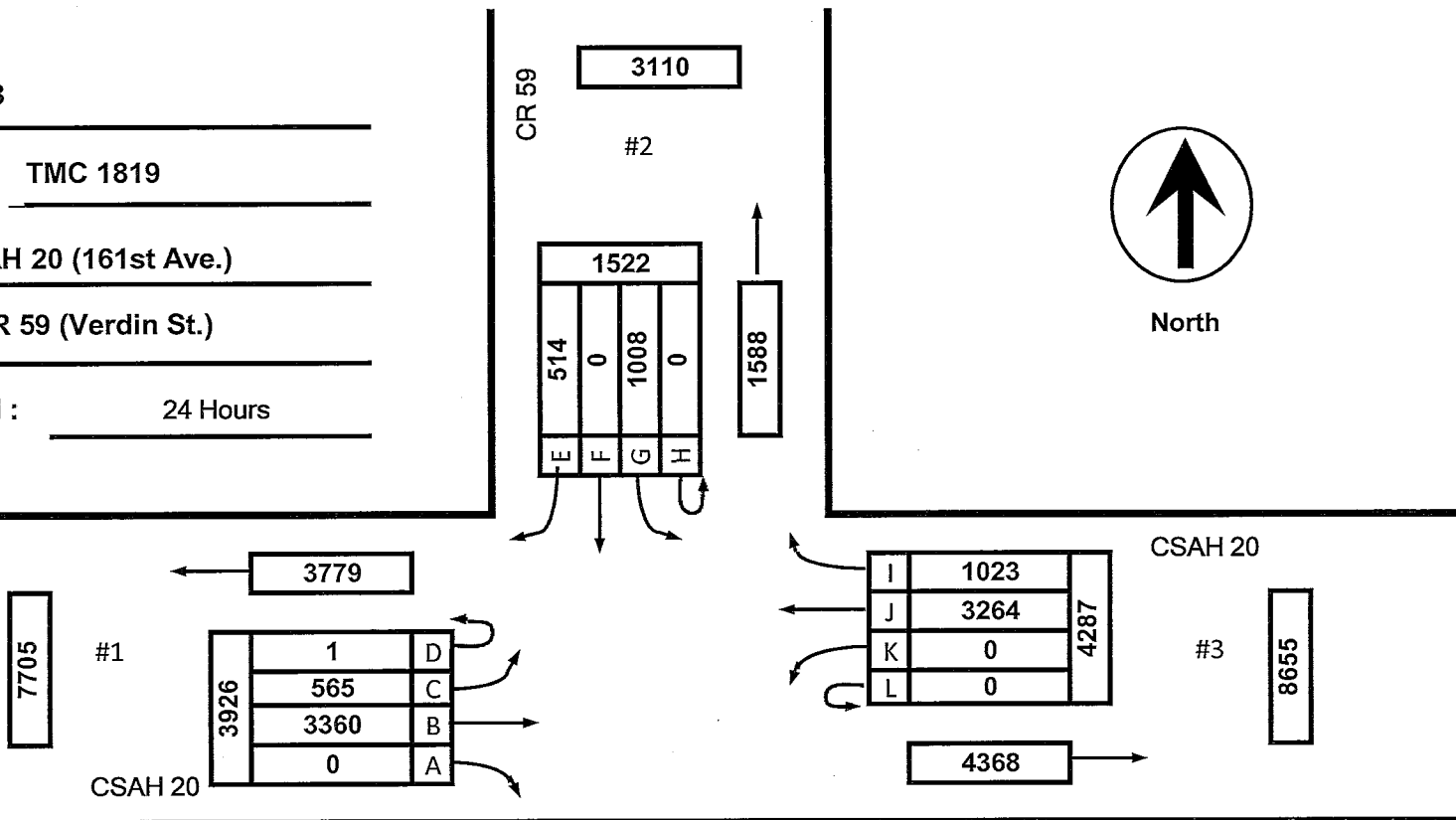


Date : 09/12/18

Count Number : TMC 1819

Location : CSAH 20 (161st Ave.)
@ CR 59 (Verdin St.)

Collection Period : 24 Hours



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Date : 09/12/18

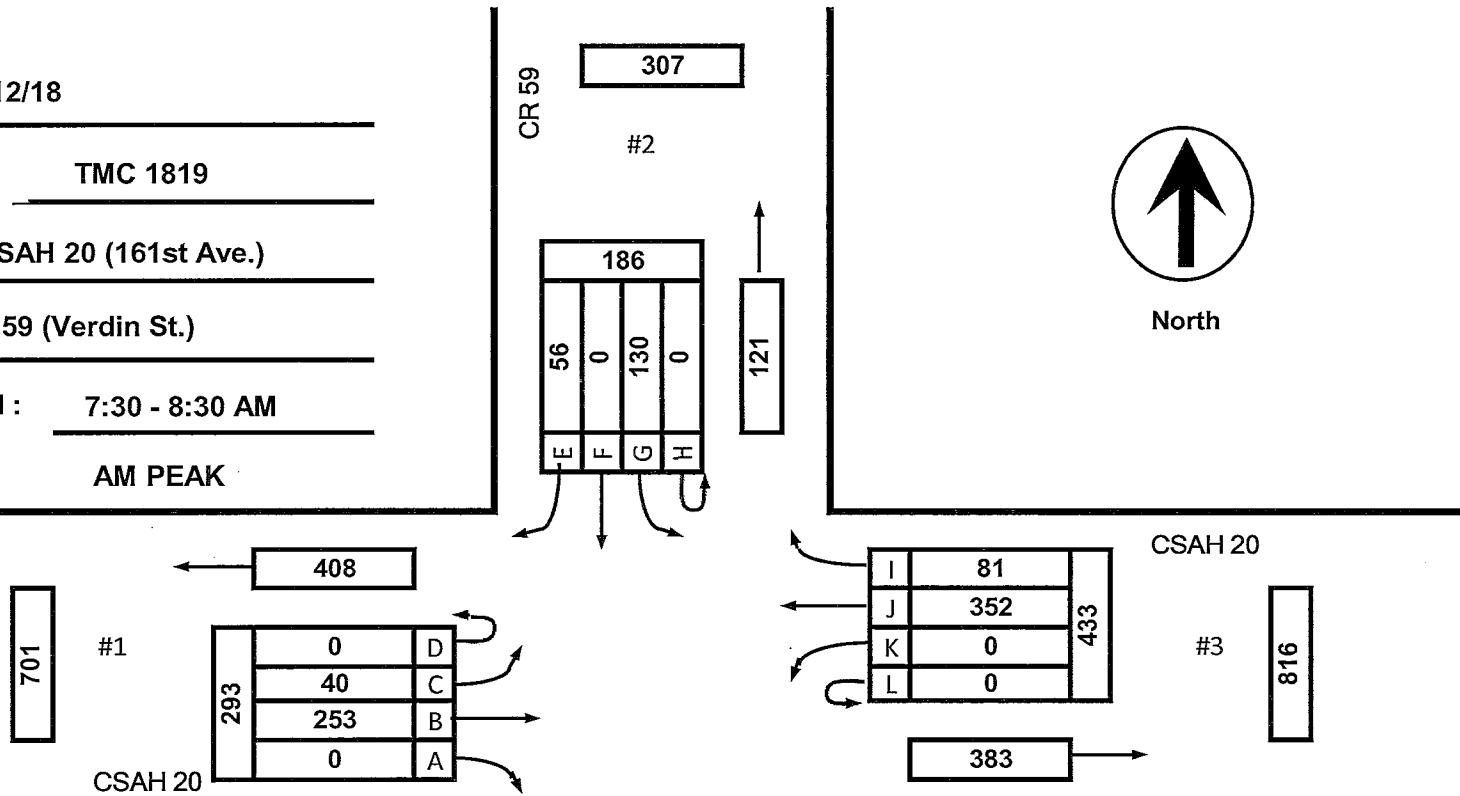
Count Number : TMC 1819

Location : CSAH 20 (161st Ave.)

@ CR 59 (Verdin St.)

Collection Period : 7:30 - 8:30 AM

AM PEAK



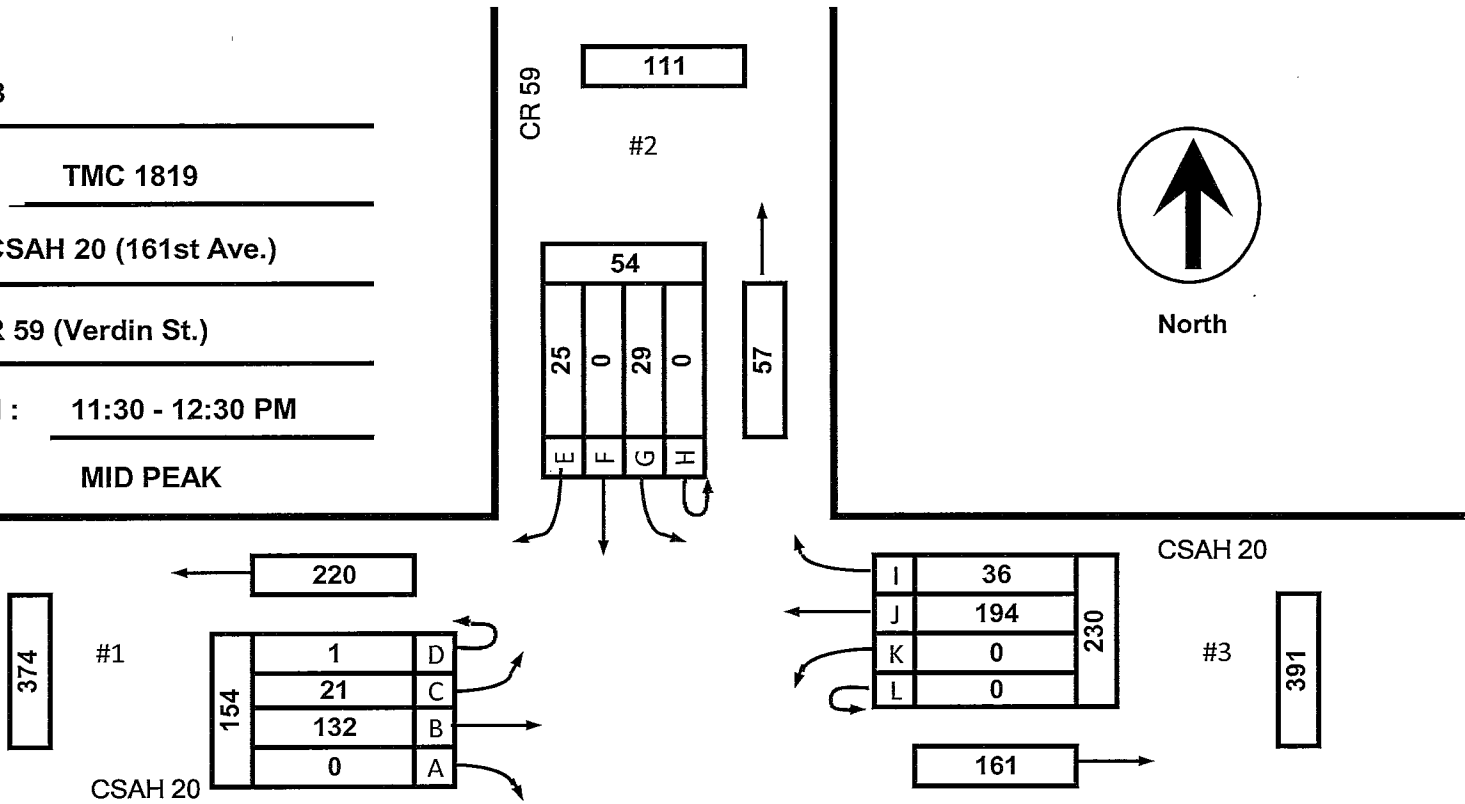
EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	0	0	1	1
#2	0	1	0	1
#3	0	0	1	1
#4	0	0	0	0

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

Date : 09/12/18
 Count Number : TMC 1819
 Location : CSAH 20 (161st Ave.)
@ CR 59 (Verdin St.)
 Collection Period : 11:30 - 12:30 PM
MID PEAK



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

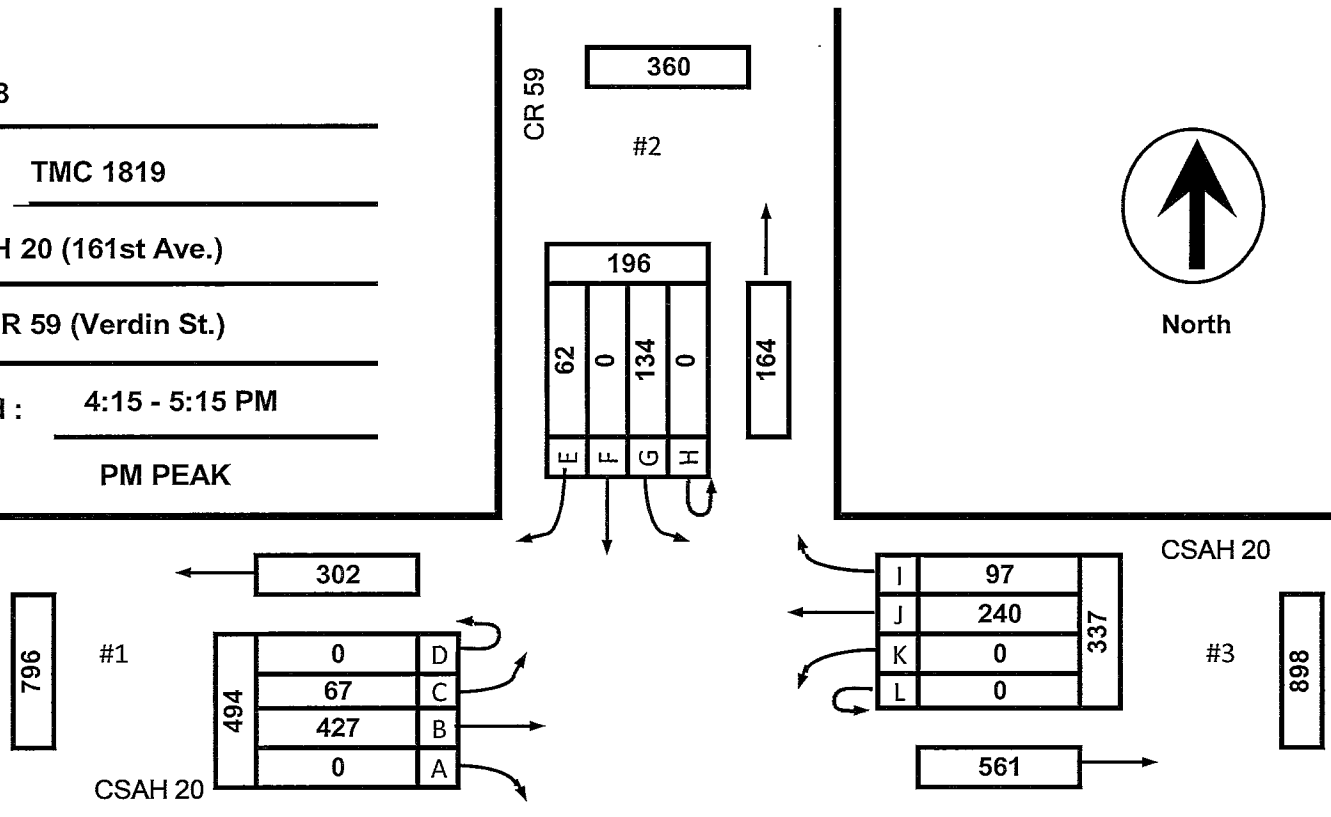
Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Date : 09/12/18

Count Number : TMC 1819

Location : CSAH 20 (161st Ave.)
@ CR 59 (Verdin St.)

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



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

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 1819
 Site Code :
 Start Date : 09/14/2018
 Page No : 1

Weather: Hot and Rainy
 CountCam 200
 Study Conducted By: Andrea

Groups Printed- Cars + - Trucks

Start Time	CR 59 Southbound						CSAH 20 Westbound						Northbound						CSAH 20 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	1	0	0	0	1	0	0	0	2	0	2	0	0	0	0	0	0	0	0	4	0	0	4	0	7	7
00:15	0	0	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	0	0	0	1	5	0	6	0	12	12
00:30	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
00:45	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	1	3	0	4	0	7	7
Total	0	1	0	0	0	1	0	0	6	7	0	13	0	0	0	0	0	0	0	0	2	12	0	14	0	28	28
01:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	4	0	5	0	6	6
01:15	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	0	0	0	3	0	3	0	8	8
01:30	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	1	0	2	0	4	4
01:45	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	0	3	0	5	5
Total	0	1	0	0	0	1	0	0	7	2	0	9	0	0	0	0	0	0	0	0	2	11	0	13	0	23	23
02:00	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	2	2
02:15	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	0	4	4
02:30	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	3	3
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	1	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	3	0	4	0	9	9
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	2
03:15	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	4	0	4	0	6	6
03:30	0	1	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
03:45	0	1	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	3	0	3	0	9	9
Total	0	2	0	0	0	2	0	0	12	0	0	12	0	0	0	0	0	0	0	0	1	8	0	9	0	23	23
04:00	0	0	0	2	0	2	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	1	0	1	0	7	7
04:15	0	2	0	6	0	8	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	1	0	1	0	15	15
04:30	0	3	0	0	0	3	0	0	12	0	0	12	0	0	0	0	0	0	0	0	0	2	0	2	0	17	17
04:45	0	5	0	1	0	6	0	0	11	0	0	11	0	0	0	0	0	0	0	0	0	6	0	6	0	23	23
Total	0	10	0	9	0	19	0	0	33	0	0	33	0	0	0	0	0	0	0	0	0	10	0	10	0	62	62
05:00	0	5	0	2	1	7	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	7	0	7	1	20	21
05:15	0	4	0	5	0	9	0	0	22	1	0	23	0	0	0	0	0	0	0	0	1	7	0	8	0	40	40
05:30	0	4	0	5	0	9	0	0	27	1	0	28	0	0	0	0	0	0	0	0	0	7	0	7	0	44	44
05:45	0	6	0	5	0	11	0	0	32	0	0	32	0	0	0	0	0	0	0	0	0	19	0	19	0	62	62
Total	0	19	0	17	1	36	0	0	87	2	0	89	0	0	0	0	0	0	0	0	1	40	0	41	1	166	167



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1819
 Site Code :
 Start Date : 09/14/2018
 Page No : 2

Weather: Hot and Rainy
 CountCam 200
 Study Conducted By: Andrea

Groups Printed- Cars + - Trucks

Start Time	CR 59 Southbound						CSAH 20 Westbound						Northbound						CSAH 20 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	15	0	10	0	25	0	0	50	0	0	50	0	0	0	0	0	0	0	0	18	0	0	18	0	93	93	
06:15	0	13	0	7	0	20	0	0	40	3	0	43	0	0	0	0	0	0	0	0	29	0	0	29	0	92	92	
06:30	0	15	0	14	0	29	0	0	87	10	0	97	0	0	0	0	0	0	0	0	7	25	0	32	0	158	158	
06:45	0	31	0	6	0	37	0	0	90	4	1	94	0	0	0	0	0	0	0	0	4	45	0	49	1	180	181	
Total	0	74	0	37	0	111	0	0	267	17	1	284	0	0	0	0	0	0	0	0	11	117	0	0	128	1	523	524
07:00	0	19	0	15	0	34	0	0	63	14	0	77	0	0	0	0	0	0	0	0	3	55	0	0	58	0	169	169
07:15	0	26	0	18	0	44	0	0	95	15	0	110	0	0	0	0	0	0	0	0	3	47	0	0	50	0	204	204
07:30	0	30	0	16	0	46	0	0	104	12	0	116	0	0	0	0	0	0	0	0	9	60	0	0	69	0	231	231
07:45	0	26	0	15	0	41	0	0	107	20	0	127	0	0	0	0	0	0	0	0	15	72	0	0	87	0	255	255
Total	0	101	0	64	0	165	0	0	369	61	0	430	0	0	0	0	0	0	0	0	30	234	0	0	264	0	859	859
08:00	0	39	0	18	0	57	0	0	65	17	0	82	0	0	0	0	0	0	0	0	5	67	0	0	72	0	211	211
08:15	0	35	0	7	0	42	0	0	76	32	0	108	0	0	0	0	0	0	0	0	11	54	0	0	65	0	215	215
08:30	0	14	0	11	0	25	0	0	68	21	0	89	0	0	0	0	0	0	0	0	10	39	0	0	49	0	163	163
08:45	0	17	0	6	0	23	0	0	49	12	0	61	0	0	0	0	0	0	0	0	8	45	0	0	53	0	137	137
Total	0	105	0	42	0	147	0	0	258	82	0	340	0	0	0	0	0	0	0	0	34	205	0	0	239	0	726	726
09:00	0	15	0	9	0	24	0	0	36	27	0	63	0	0	0	0	0	0	0	0	11	37	0	0	48	0	135	135
09:15	0	39	0	14	0	53	0	0	44	51	0	95	0	0	0	0	0	0	0	0	24	38	0	0	62	0	210	210
09:30	0	39	0	24	0	63	0	0	45	9	0	54	0	0	0	0	0	0	0	0	7	41	0	0	48	0	165	165
09:45	0	8	0	10	0	18	0	0	35	3	0	38	0	0	0	0	0	0	0	0	3	57	0	0	60	0	116	116
Total	0	101	0	57	0	158	0	0	160	90	0	250	0	0	0	0	0	0	0	0	45	173	0	0	218	0	626	626
10:00	0	6	0	3	0	9	0	0	45	7	0	52	0	0	0	0	0	0	0	0	4	34	0	0	38	0	99	99
10:15	0	8	0	4	0	12	0	0	22	8	0	30	0	0	0	0	0	0	0	0	4	34	0	0	38	0	80	80
10:30	0	10	0	6	0	16	0	0	28	9	0	37	0	0	0	0	0	0	0	0	4	26	0	0	30	0	83	83
10:45	0	10	0	6	0	16	0	0	28	8	0	36	0	0	0	0	0	0	0	0	5	18	0	0	23	0	75	75
Total	0	34	0	19	0	53	0	0	123	32	0	155	0	0	0	0	0	0	0	0	17	112	0	0	129	0	337	337
11:00	0	7	0	7	0	14	0	0	32	7	0	39	0	0	0	0	0	0	0	0	3	34	0	2	37	2	90	92
11:15	0	8	0	2	0	10	0	0	29	1	0	30	0	0	0	0	0	0	0	0	3	22	0	0	25	0	65	65
11:30	0	6	0	5	0	11	0	0	42	11	0	53	0	0	0	0	0	0	0	0	3	34	0	0	37	0	101	101
11:45	0	5	0	7	0	12	0	0	70	8	0	78	0	0	0	0	0	0	0	1	8	38	0	0	47	0	137	137
Total	0	26	0	21	0	47	0	0	173	27	0	200	0	0	0	0	0	0	0	1	17	128	0	2	146	2	393	395
12:00	0	9	0	6	0	15	0	0	42	12	0	54	0	0	0	0	0	0	0	0	3	26	0	0	29	0	98	98
12:15	0	9	0	7	0	16	0	0	40	5	0	45	0	0	0	0	0	0	0	0	7	34	0	0	41	0	102	102
12:30	0	10	0	5	0	15	0	0	30	8	0	38	0	0	0	0	0	0	0	0	4	31	0	0	35	0	88	88



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1819
 Site Code :
 Start Date : 09/14/2018
 Page No : 3

Weather: Hot and Rainy
 CountCam 200
 Study Conducted By: Andrea

Groups Printed- Cars + - Trucks

Start Time	CR 59 Southbound						CSAH 20 Westbound						CSAH 20 Northbound						CSAH 20 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	4	0	5	0	9	0	0	48	8	0	56	0	0	0	0	0	0	0	7	42	0	0	49	0	114	114
Total	0	32	0	23	0	55	0	0	160	33	0	193	0	0	0	0	0	0	0	21	133	0	0	154	0	402	402
13:00	0	11	0	6	0	17	0	0	29	10	0	39	0	0	0	0	0	0	0	6	45	0	0	51	0	107	107
13:15	0	13	0	4	0	17	0	0	25	9	0	34	0	0	0	0	0	0	0	6	41	0	0	47	0	98	98
13:30	0	12	0	8	0	20	0	0	31	7	0	38	0	0	0	0	0	0	0	5	31	0	0	36	0	94	94
13:45	0	9	0	4	0	13	0	0	32	13	0	45	0	0	0	0	0	0	0	7	33	0	0	40	0	98	98
Total	0	45	0	22	0	67	0	0	117	39	0	156	0	0	0	0	0	0	0	24	150	0	0	174	0	397	397
14:00	0	8	0	5	0	13	0	0	36	9	0	45	0	0	0	0	0	0	0	9	42	0	0	51	0	109	109
14:15	0	9	0	11	0	20	0	0	41	7	0	48	0	0	0	0	0	0	0	6	54	0	0	60	0	128	128
14:30	0	7	0	7	0	14	0	0	49	23	0	72	0	0	0	0	0	0	0	14	53	0	0	67	0	153	153
14:45	0	17	0	9	0	26	0	0	49	23	0	72	0	0	0	0	0	0	0	8	44	0	0	52	0	150	150
Total	0	41	0	32	0	73	0	0	175	62	0	237	0	0	0	0	0	0	0	37	193	0	0	230	0	540	540
15:00	0	16	0	4	0	20	0	0	35	19	0	54	0	0	0	0	0	0	0	6	78	0	0	84	0	158	158
15:15	0	16	0	6	0	22	0	0	46	19	0	65	0	0	0	0	0	0	0	14	68	0	0	82	0	169	169
15:30	0	12	0	2	0	14	0	0	46	22	0	68	0	0	0	0	0	0	0	20	76	0	0	96	0	178	178
15:45	0	12	0	8	0	20	0	0	55	48	0	103	0	0	0	0	0	0	0	35	83	0	0	118	0	241	241
Total	0	56	0	20	0	76	0	0	182	108	0	290	0	0	0	0	0	0	0	75	305	0	0	380	0	746	746
16:00	0	22	0	7	0	29	0	0	69	40	0	109	0	0	0	0	0	0	0	16	73	0	0	89	0	227	227
16:15	0	63	0	30	0	93	0	0	60	27	0	87	0	0	0	0	0	0	0	10	99	0	0	109	0	289	289
16:30	0	30	0	10	0	40	0	0	61	19	0	80	0	0	0	0	0	0	0	15	99	0	0	114	0	234	234
16:45	0	18	0	13	0	31	0	0	61	27	0	88	0	0	0	0	0	0	0	22	132	0	0	154	0	273	273
Total	0	133	0	60	0	193	0	0	251	113	0	364	0	0	0	0	0	0	0	63	403	0	0	466	0	1023	1023
17:00	0	23	0	9	1	32	0	0	58	24	0	82	0	0	0	0	0	0	0	20	97	0	0	117	1	231	232
17:15	0	21	0	5	0	26	0	0	61	33	0	94	0	0	0	0	0	0	0	12	92	0	0	104	0	224	224
17:30	0	26	0	6	1	32	0	0	70	22	0	92	0	0	0	0	0	0	0	20	86	0	0	106	1	230	231
17:45	0	24	0	12	0	36	0	0	70	31	0	101	0	0	0	0	0	0	0	8	98	0	0	106	0	243	243
Total	0	94	0	32	2	126	0	0	259	110	0	369	0	0	0	0	0	0	0	60	373	0	0	433	2	928	930
18:00	0	20	0	6	0	26	0	0	70	23	0	93	0	0	0	0	0	0	0	11	84	0	0	95	0	214	214
18:15	0	9	0	2	0	11	0	0	56	23	0	79	0	0	0	0	0	0	0	12	61	0	0	73	0	163	163
18:30	0	14	0	4	0	18	0	0	63	18	0	81	0	0	0	0	0	0	0	13	53	0	0	66	0	165	165
18:45	0	9	0	9	0	18	0	0	43	21	0	64	0	0	0	0	0	0	0	3	44	0	0	47	0	129	129
Total	0	52	0	21	0	73	0	0	232	85	0	317	0	0	0	0	0	0	0	39	242	0	0	281	0	671	671



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1819
 Site Code :
 Start Date : 09/14/2018
 Page No : 4

Weather: Hot and Rainy
 CountCam 200
 Study Conducted By: Andrea

Groups Printed- Cars + - Trucks

Start Time	CR 59 Southbound						CSAH 20 Westbound						Northbound						CSAH 20 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	12	0	5	0	17	0	0	21	17	0	38	0	0	0	0	0	0	0	9	65	0	0	74	0	129	129
19:15	0	9	0	5	0	14	0	0	40	8	0	48	0	0	0	0	0	0	0	9	57	0	0	66	0	128	128
19:30	0	8	0	4	1	12	0	0	44	13	0	57	0	0	0	0	0	0	0	7	44	0	0	51	1	120	121
19:45	0	6	0	3	0	9	0	0	48	19	0	67	0	0	0	0	0	0	0	6	53	0	0	59	0	135	135
Total	0	35	0	17	1	52	0	0	153	57	0	210	0	0	0	0	0	0	0	31	219	0	0	250	1	512	513
20:00	0	7	0	1	0	8	0	0	27	13	0	40	0	0	0	0	0	0	0	5	45	0	0	50	0	98	98
20:15	0	4	0	4	0	8	0	0	39	11	0	50	0	0	0	0	0	0	0	11	33	0	0	44	0	102	102
20:30	0	9	0	2	0	11	0	0	23	13	0	36	0	0	0	0	0	0	0	2	35	0	0	37	0	84	84
20:45	0	4	0	2	0	6	0	0	24	16	0	40	0	0	0	0	0	0	0	11	32	0	0	43	0	89	89
Total	0	24	0	9	0	33	0	0	113	53	0	166	0	0	0	0	0	0	0	29	145	0	0	174	0	373	373
21:00	0	4	0	3	0	7	0	0	16	7	0	23	0	0	0	0	0	0	0	5	25	0	0	30	0	60	60
21:15	0	3	0	1	0	4	0	0	22	6	0	28	0	0	0	0	0	0	0	5	15	0	0	20	0	52	52
21:30	0	2	0	2	0	4	0	0	24	9	0	33	0	0	0	0	0	0	0	4	15	0	0	19	0	56	56
21:45	0	4	0	1	0	5	0	0	8	5	0	13	0	0	0	0	0	0	0	1	19	0	0	20	0	38	38
Total	0	13	0	7	0	20	0	0	70	27	0	97	0	0	0	0	0	0	0	15	74	0	0	89	0	206	206
22:00	0	4	0	2	0	6	0	0	14	1	0	15	0	0	0	0	0	0	0	1	12	0	0	13	0	34	34
22:15	0	1	0	2	0	3	0	0	12	2	0	14	0	0	0	0	0	0	0	4	18	0	0	22	0	39	39
22:30	0	1	0	0	0	1	0	0	5	3	0	8	0	0	0	0	0	0	0	0	11	0	0	11	0	20	20
22:45	0	0	0	1	0	1	0	0	6	4	0	10	0	0	0	0	0	0	0	1	8	0	0	9	0	20	20
Total	0	6	0	5	0	11	0	0	37	10	0	47	0	0	0	0	0	0	0	6	49	0	0	55	0	113	113
23:00	0	0	0	0	0	0	0	0	3	4	0	7	0	0	0	0	0	0	0	1	2	0	0	3	0	10	10
23:15	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	2	9	0	0	11	0	17	17
23:30	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	5	0	0	5	0	7	7
23:45	0	1	0	0	0	1	0	0	7	1	0	8	0	0	0	0	0	0	0	1	5	0	0	6	0	15	15
Total	0	2	0	0	0	2	0	0	16	6	0	22	0	0	0	0	0	0	0	4	21	0	0	25	0	49	49
Grand Total	0	1008	0	514	4	1522	0	0	3264	1023	1	4287	0	0	0	0	0	0	1	565	3360	0	2	3926	7	9735	9742
Apprch %	0	66.2	0	33.8			0	0	76.1	23.9			0	0	0	0			0	14.4	85.6	0					
Total %	0	10.4	0	5.3		15.6	0	0	33.5	10.5		44	0	0	0	0			0	5.8	34.5	0		40.3	0.1	99.9	
Cars +	0	961	0	495		1460	0	0	3171	975		4147	0	0	0	0			0	547	3240	0		3789	0	0	9396
% Cars +	0	95.3	0	96.3	100	95.7	0	0	97.2	95.3	100	96.7	0	0	0	0			0	96.8	96.4	0	100	96.5	0	0	96.4
Trucks	0	47	0	19		66	0	0	93	48		141	0	0	0	0			1	18	120	0		139	0	0	346
% Trucks	0	4.7	0	3.7	0	4.3	0	0	2.8	4.7	0	3.3	0	0	0	0			100	3.2	3.6	0	0	3.5	0	0	3.6



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 1819
 Site Code :
 Start Date : 09/14/2018
 Page No : 5

Weather: Hot and Rainy
 CountCam 200
 Study Conducted By: Andrea

Start Time	CR 59 Southbound					CSAH 20 Westbound					Northbound					CSAH 20 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 07:30																						
07:30	0	30	0	16	46	0	0	104	12	116	0	0	0	0	0	0	9	60	0	69	231	
07:45	0	26	0	15	41	0	0	107	20	127	0	0	0	0	0	0	15	72	0	87	255	
08:00	0	39	0	18	57	0	0	65	17	82	0	0	0	0	0	0	5	67	0	72	211	
08:15	0	35	0	7	42	0	0	76	32	108	0	0	0	0	0	0	11	54	0	65	215	
Total Volume	0	130	0	56	186	0	0	352	81	433	0	0	0	0	0	0	40	253	0	293	912	
% App. Total	0	69.9	0	30.1		0	0	81.3	18.7		0	0	0	0	0	0	13.7	86.3	0			
PHF	.000	.833	.000	.778	.816	.000	.000	.822	.633	.852	.000	.000	.000	.000	.000	.000	.667	.878	.000	.842	.894	
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 11:30																						
11:30	0	6	0	5	11	0	0	42	11	53	0	0	0	0	0	0	3	34	0	37	101	
11:45	0	5	0	7	12	0	0	70	8	78	0	0	0	0	0	0	1	8	38	0	47	137
12:00	0	9	0	6	15	0	0	42	12	54	0	0	0	0	0	0	3	26	0	29	98	
12:15	0	9	0	7	16	0	0	40	5	45	0	0	0	0	0	0	7	34	0	41	102	
Total Volume	0	29	0	25	54	0	0	194	36	230	0	0	0	0	0	0	1	21	132	0	154	438
% App. Total	0	53.7	0	46.3		0	0	84.3	15.7		0	0	0	0	0	0	0.6	13.6	85.7	0		
PHF	.000	.806	.000	.893	.844	.000	.000	.693	.750	.737	.000	.000	.000	.000	.000	.000	.250	.656	.868	.000	.819	.799
Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 16:15																						
16:15	0	63	0	30	93	0	0	60	27	87	0	0	0	0	0	0	10	99	0	109	289	
16:30	0	30	0	10	40	0	0	61	19	80	0	0	0	0	0	0	15	99	0	114	234	
16:45	0	18	0	13	31	0	0	61	27	88	0	0	0	0	0	0	22	132	0	154	273	
17:00	0	23	0	9	32	0	0	58	24	82	0	0	0	0	0	0	20	97	0	117	231	
Total Volume	0	134	0	62	196	0	0	240	97	337	0	0	0	0	0	0	0	67	427	0	494	1027
% App. Total	0	68.4	0	31.6		0	0	71.2	28.8		0	0	0	0	0	0	0	13.6	86.4	0		
PHF	.000	.532	.000	.517	.527	.000	.000	.984	.898	.957	.000	.000	.000	.000	.000	.000	.761	.809	.000	.802	.888	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Hot and Rainy
 CountCam 200
 Study Conducted By: Andrea

File Name : TMC 1819
 Site Code :
 Start Date : 09/14/2018
 Page No : 1

Groups Printed- Trucks

Start Time	CR 59 Southbound					CSAH 20 Westbound					Northbound					CSAH 20 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	0	1	0	0	0	0	0	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0
03:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	1	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	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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
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	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	3	3
05:45	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	2	0	2	0	0	0	0	0	0	0	2	0	2	5	5
06:00	0	1	0	1	2	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	5	5
06:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	9	0	9	11	11
06:30	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	4	4
06:45	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	3	3
Total	0	3	0	1	4	0	0	5	0	5	0	0	0	0	0	0	0	14	0	14	23	23
07:00	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	1	3	0	4	7	7
07:15	0	1	0	0	1	0	0	3	1	4	0	0	0	0	0	0	0	3	0	3	8	8
07:30	0	0	0	0	0	0	0	7	1	8	0	0	0	0	0	0	0	3	0	3	11	11
07:45	0	0	0	1	1	0	0	2	0	2	0	0	0	0	0	0	0	1	0	1	4	4
Total	0	2	0	1	3	0	0	14	2	16	0	0	0	0	0	0	1	10	0	11	30	30
08:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	6	0	6	7	7
08:15	0	1	0	0	1	0	0	4	1	5	0	0	0	0	0	0	0	2	0	2	8	8
08:30	0	1	0	0	1	0	0	4	0	4	0	0	0	0	0	0	1	2	0	3	8	8
08:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	3	3
Total	0	2	0	0	2	0	0	10	1	11	0	0	0	0	0	0	1	12	0	13	26	26
09:00	0	0	0	1	1	0	0	3	2	5	0	0	0	0	0	0	1	3	0	4	10	10



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Hot and Rainy
 CountCam 200
 Study Conducted By: Andrea

File Name : TMC 1819
 Site Code :
 Start Date : 09/14/2018
 Page No : 2

Groups Printed- Trucks

Start Time	CR 59 Southbound					CSAH 20 Westbound					Northbound					CSAH 20 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	3	0	2	5	0	0	3	11	14	0	0	0	0	0	0	3	1	0	4	23
09:30	0	10	0	4	14	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	18
09:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	14	0	7	21	0	0	9	14	23	0	0	0	0	0	0	4	4	0	8	52
10:00	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	5
10:15	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	2	0	2	6
10:30	0	2	0	0	2	0	0	1	2	3	0	0	0	0	0	0	0	1	0	1	6
10:45	0	3	0	0	3	0	0	0	2	2	0	0	0	0	0	0	0	3	0	3	8
Total	0	5	0	1	6	0	0	3	6	9	0	0	0	0	0	0	2	8	0	10	25
11:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	3
11:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
11:30	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	3
11:45	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	4	0	5	10
Total	0	1	0	0	1	0	0	8	1	9	0	0	0	0	0	1	0	8	0	9	19
12:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
12:15	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	6	0	6	8
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
13:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	1	0	1	3
13:30	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	1	2	0	3	6
13:45	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	1	0	1	4
Total	0	2	0	0	2	0	0	6	0	6	0	0	0	0	0	0	1	9	0	10	18
14:00	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	3	5
14:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	3	5
14:30	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1	0	2	4
14:45	0	1	0	1	2	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	6
Total	0	1	0	1	2	0	0	7	3	10	0	0	0	0	0	0	1	7	0	8	20
15:00	0	2	0	0	2	0	0	2	1	3	0	0	0	0	0	0	0	5	0	5	10
15:15	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	3	0	3	5
15:30	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	2	0	2	6
15:45	0	0	0	1	1	0	0	1	6	7	0	0	0	0	0	0	2	0	0	2	10
Total	0	3	0	1	4	0	0	6	9	15	0	0	0	0	0	0	2	10	0	12	31
16:00	0	2	0	1	3	0	0	2	6	8	0	0	0	0	0	0	3	3	0	6	17
16:15	0	9	0	3	12	0	0	0	2	2	0	0	0	0	0	0	0	1	0	1	15
16:30	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	7	0	7	9
16:45	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	1	4	0	5	8
Total	0	12	0	4	16	0	0	6	8	14	0	0	0	0	0	0	4	15	0	19	49
17:00	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	2	0	2	6
17:15	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	4
17:30	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	2	0	2	4
17:45	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	3	5
Total	0	0	0	0	0	0	0	9	3	12	0	0	0	0	0	0	0	7	0	7	19
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	3
18:30	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	1	0	1	3
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	1	3	0	4	8



Anoka County Highway Department
 Traffic Engineering Section
 Traffic Volume and Turning Movement Study

File Name : TMC 1819
 Site Code :
 Start Date : 09/14/2018
 Page No : 3

Weather: Hot and Rainy
 CountCam 200
 Study Conducted By: Andrea

Groups Printed- Trucks

Start Time	CR 59 Southbound					CSAH 20 Westbound					Northbound					CSAH 20 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
19:15	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
19:45	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	1	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	4
20:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	2
20:15	0	0	0	0	0	0	0	0	1	1	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	1	0	1	1
20:45	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	1	1	2	0	0	0	0	0	0	0	2	0	2	4
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
22:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	0	1	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	47	0	19	66	0	0	93	48	141	0	0	0	0	0	1	18	120	0	139	346
Apprch %	0	71.2	0	28.8		0	0	66	34		0	0	0	0		0.7	12.9	86.3	0		
Total %	0	13.6	0	5.5	19.1	0	0	26.9	13.9	40.8	0	0	0	0	0	0.3	5.2	34.7	0	40.2	

ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 1819**
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Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 20
 Number of Lanes : 1

 Total Approach Volume: 3,926

Westbound: CSAH 20
 Number of Lanes : 1

 Total Approach Volume: 4,287

Minor Street Approaches

Northbound:
 Number of Lanes : 1

 Total Approach Volume: 0

Southbound: CR 59
 Number of Lanes : 1

 Total Approach Volume: 1,522

Warrant Summary (Rural Values Apply)

- Warrant 1 - Eight Hour Vehicular Volumes**.....**Not Satisfied**
 - Warrant 1A - Minimum Vehicular Volume**.....**Not Satisfied**
 Required volumes reached for 7 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**.....**Not Satisfied**
 Required 1A volumes reached for 7 hours, 8 are needed
 Required 1B volumes reached for 10 hours, 8 are needed

- Warrant 2 - Four Hour Volumes**.....**Satisfied**
 Number of hours (6) 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 1819
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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 7 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 20				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	489	+	344	=	833	0	129	Yes
15:30 - 16:30	412	+	367	=	779	0	156	Yes
17:30 - 18:30	380	+	365	=	745	0	105	Yes
07:00 - 08:00	264	+	430	=	694	0	165	Yes
08:00 - 09:00	239	+	340	=	579	0	147	Yes
09:00 - 10:00	218	+	250	=	468	0	158	Yes
06:00 - 07:00	128	+	284	=	412	0	111	Yes
15:15 - 16:15	385	+	345	=	730	0	85	No
15:00 - 16:00	380	+	290	=	670	0	76	No
14:45 - 15:45	314	+	259	=	573	0	82	No
14:30 - 15:30	285	+	263	=	548	0	82	No
14:15 - 15:15	263	+	246	=	509	0	80	No
18:30 - 19:30	253	+	231	=	484	0	67	No
14:00 - 15:00	230	+	237	=	467	0	73	No
19:00 - 20:00	250	+	210	=	460	0	52	No
18:45 - 19:45	238	+	207	=	445	0	61	No
19:15 - 20:15	226	+	212	=	438	0	43	No
13:45 - 14:45	218	+	210	=	428	0	60	No
19:30 - 20:30	204	+	214	=	418	0	37	No
11:30 - 12:30	154	+	230	=	384	0	54	No
19:45 - 20:45	190	+	193	=	383	0	36	No
11:45 - 12:45	152	+	215	=	367	0	58	No
13:30 - 14:30	187	+	176	=	363	0	66	No
12:15 - 13:15	176	+	178	=	354	0	57	No
11:15 - 12:15	138	+	215	=	353	0	48	No

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PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

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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

Only 6 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 = **525**

Veh/Hr Minor = **53**

Time	Major Road			=	Total	Minor Road		Met?
	Major EB	+	Major WB			Minor NB	Minor SB	
16:30 - 17:30	489	+	344	=	833	0	129	Yes
15:30 - 16:30	412	+	367	=	779	0	156	Yes
17:30 - 18:30	380	+	365	=	745	0	105	Yes
07:30 - 08:30	293	+	433	=	726	0	186	Yes
06:30 - 07:30	189	+	378	=	567	0	144	Yes
14:30 - 15:30	285	+	263	=	548	0	82	Yes
08:30 - 09:30	212	+	308	=	520	0	125	No
14:15 - 15:15	263	+	246	=	509	0	80	No
18:30 - 19:30	253	+	231	=	484	0	67	No
08:45 - 09:45	211	+	273	=	484	0	163	No
06:15 - 07:15	168	+	311	=	479	0	120	No
09:00 - 10:00	218	+	250	=	468	0	158	No
14:00 - 15:00	230	+	237	=	467	0	73	No
19:00 - 20:00	250	+	210	=	460	0	52	No
09:15 - 10:15	208	+	239	=	447	0	143	No
18:45 - 19:45	238	+	207	=	445	0	61	No
19:15 - 20:15	226	+	212	=	438	0	43	No
13:45 - 14:45	218	+	210	=	428	0	60	No
19:30 - 20:30	204	+	214	=	418	0	37	No
06:00 - 07:00	128	+	284	=	412	0	111	No
11:30 - 12:30	154	+	230	=	384	0	54	No
19:45 - 20:45	190	+	193	=	383	0	36	No
11:45 - 12:45	152	+	215	=	367	0	58	No
13:30 - 14:30	187	+	176	=	363	0	66	No
09:30 - 10:30	184		174		358	0	102	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 7 hours meet 1A minimums.
 10 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 20

Minor Road

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:15 - 17:15	494	+	337	=	831	0	196	Yes
17:15 - 18:15	411	+	380	=	791	0	120	Yes
15:15 - 16:15	385	+	345	=	730	0	85	Yes
07:45 - 08:45	273	+	406	=	679	0	165	Yes
06:45 - 07:45	226	+	397	=	623	0	161	Yes
08:45 - 09:45	211	+	273	=	484	0	163	Yes
05:45 - 06:45	98	+	222	=	320	0	85	Yes
15:00 - 16:00	380	+	290	=	670	0	76	No
14:45 - 15:45	314	+	259	=	573	0	82	No
14:30 - 15:30	285	+	263	=	548	0	82	No
18:15 - 19:15	260	+	262	=	522	0	64	No
14:15 - 15:15	263	+	246	=	509	0	80	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:45 - 17:45	481	+	356	=	837	0	121	Yes
15:45 - 16:45	430	+	379	=	809	0	182	Yes
07:15 - 08:15	278	+	435	=	713	0	188	Yes
17:45 - 18:45	340	+	354	=	694	0	91	Yes
14:45 - 15:45	314	+	259	=	573	0	82	Yes
08:15 - 09:15	215	+	321	=	536	0	114	Yes
06:15 - 07:15	168	+	311	=	479	0	120	Yes
09:15 - 10:15	208	+	239	=	447	0	143	Yes
18:45 - 19:45	238	+	207	=	445	0	61	Yes
13:45 - 14:45	218	+	210	=	428	0	60	Yes
06:00 - 07:00	128	+	284	=	412	0	111	No
11:30 - 12:30	154	+	230	=	384	0	54	No

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TRAFFIC SIGNAL WARRANT ANALYSIS

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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.

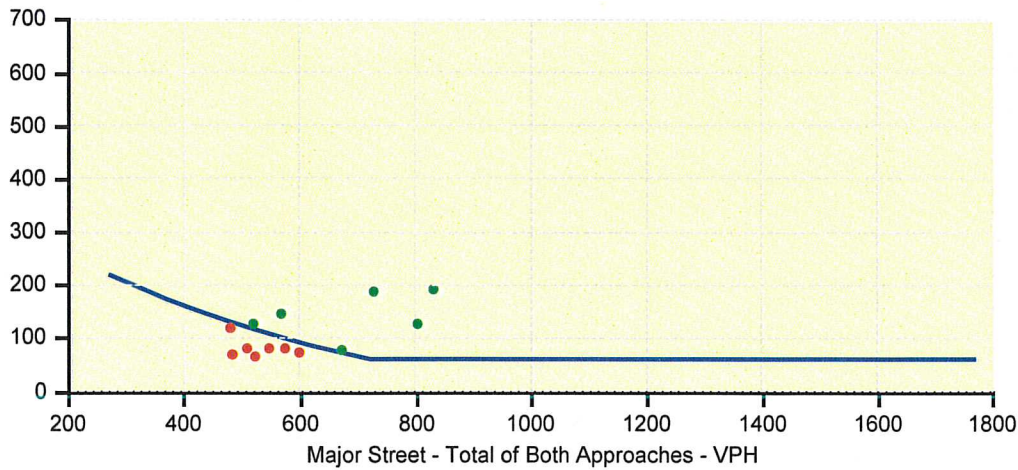
Summary

6 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 20				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:00 - 17:00	466	+	364	=	830	0	193	Yes
17:00 - 18:00	433	+	369	=	802	0	126	Yes
07:30 - 08:30	293	+	433	=	726	0	186	Yes
15:00 - 16:00	380	+	290	=	670	0	76	Yes
06:30 - 07:30	189	+	378	=	567	0	144	Yes
08:30 - 09:30	212	+	308	=	520	0	125	Yes
18:00 - 19:00	281	+	317	=	598	0	73	No
14:45 - 15:45	314	+	259	=	573	0	82	No
14:30 - 15:30	285	+	263	=	548	0	82	No
18:15 - 19:15	260	+	262	=	522	0	64	No
14:15 - 15:15	263	+	246	=	509	0	80	No
							67	No



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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

12 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 20				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:45 - 17:45	481	+	356	=	837	0	121	Yes
16:30 - 17:30	489	+	344	=	833	0	129	Yes
16:15 - 17:15	494	+	337	=	831	0	196	Yes
16:00 - 17:00	466	+	364	=	830	0	193	Yes
15:45 - 16:45	430	+	379	=	809	0	182	Yes
17:00 - 18:00	433	+	369	=	802	0	126	Yes
17:15 - 18:15	411	+	380	=	791	0	120	Yes
15:30 - 16:30	412	+	367	=	779	0	156	Yes
07:30 - 08:30	293	+	433	=	726	0	186	Yes
07:15 - 08:15	278	+	435	=	713	0	188	Yes
07:00 - 08:00	264	+	430	=	694	0	165	Yes
							165	Yes

