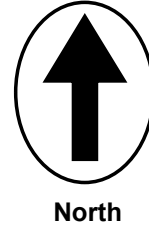


Date : 08/02/22

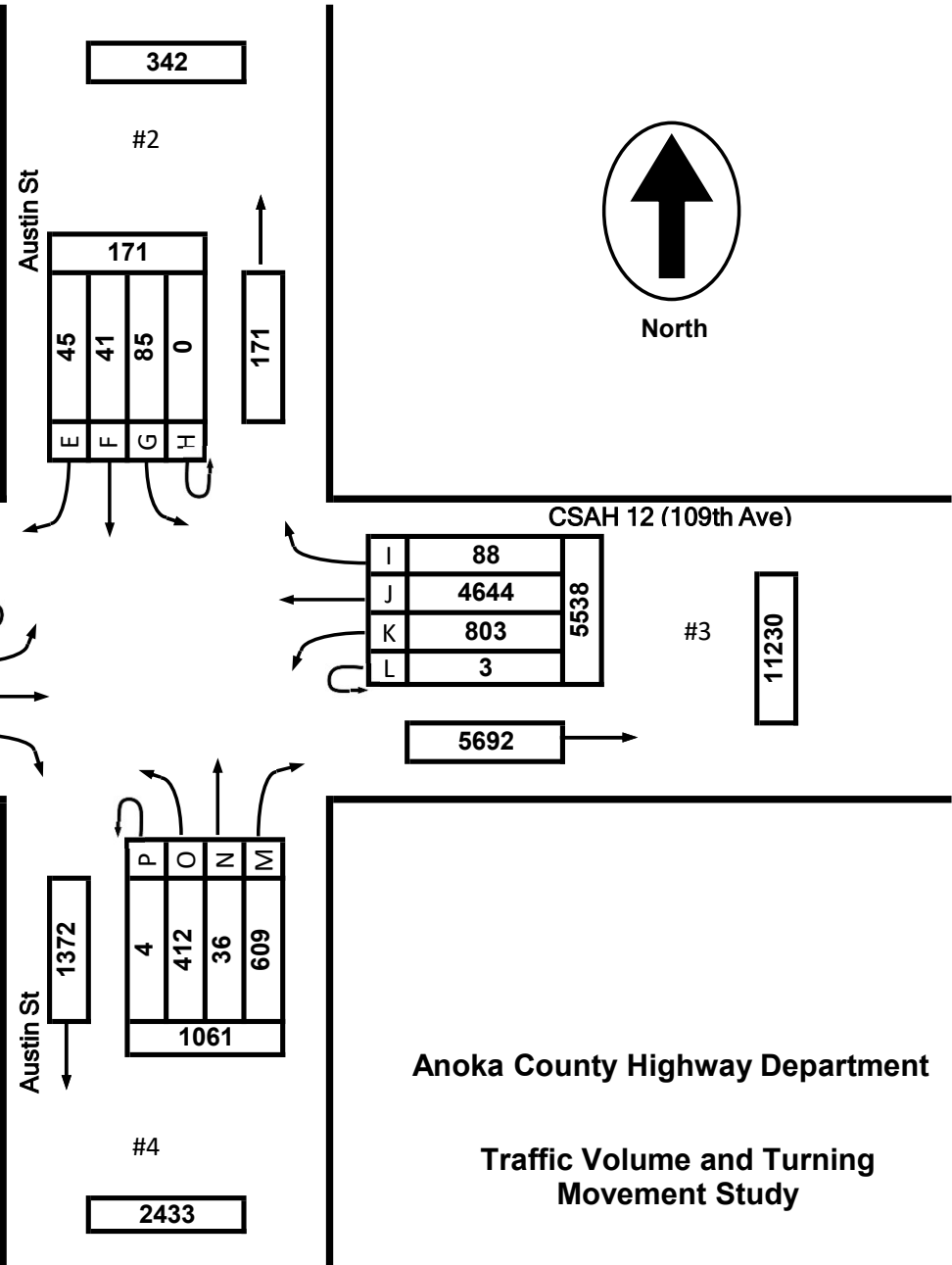
Count Number : TMC 2226

Location : Austin St
@ CSAH 12 (109th Ave)

Collection Period : 24HR



North



10667	#1	5101	
		5566	0
		47	D
		4995	C
		524	B
		524	A

11230	#3	5692	
		5538	88
		4644	J
		803	K
		3	L

1372	#4	2433	
		1061	4
		412	P
		36	O
		609	N
		609	M

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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study

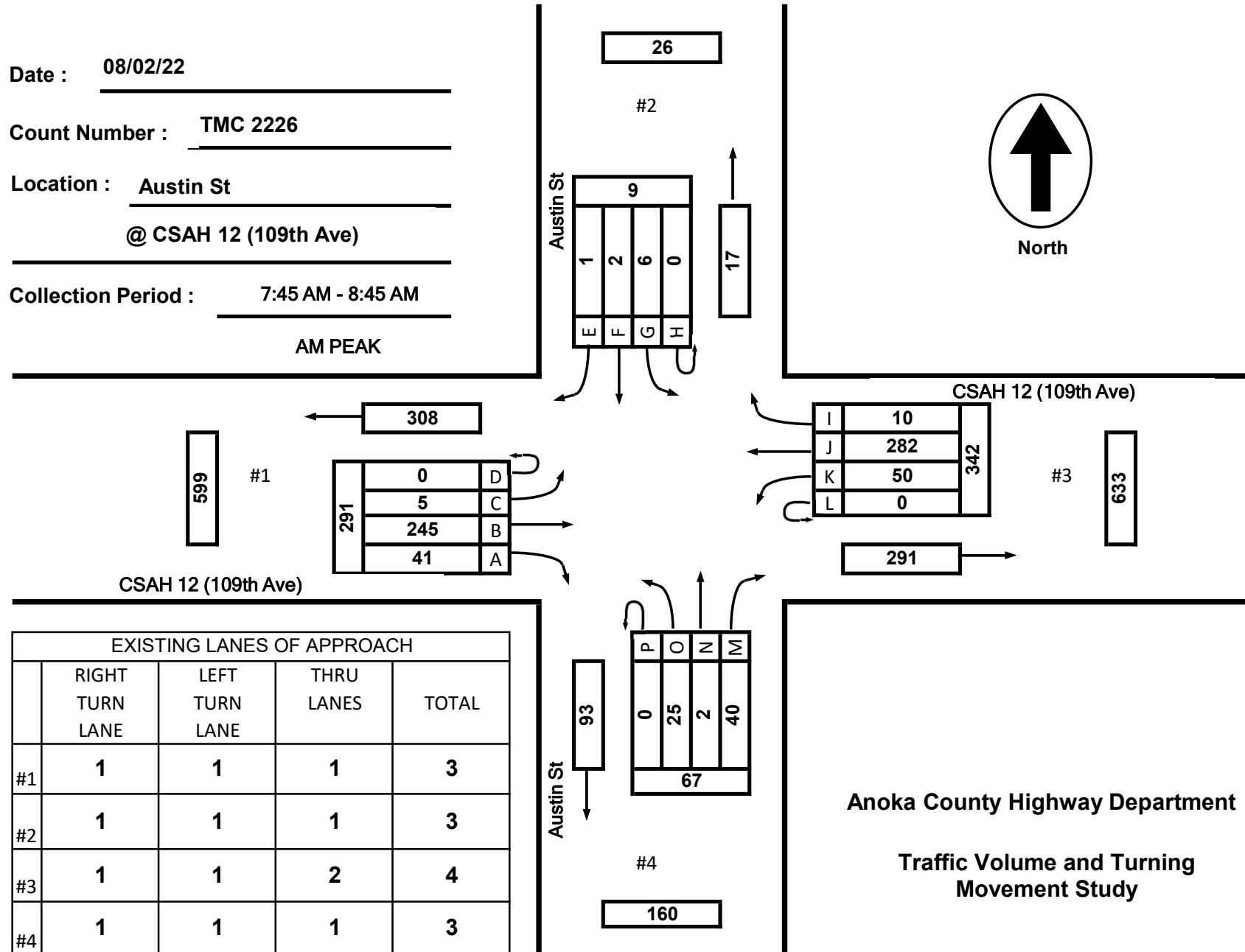
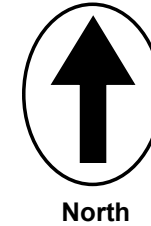
Date : 08/02/22

Count Number : TMC 2226

Location : Austin St
@ CSAH 12 (109th Ave)

Collection Period : 7:45 AM - 8:45 AM

AM PEAK



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

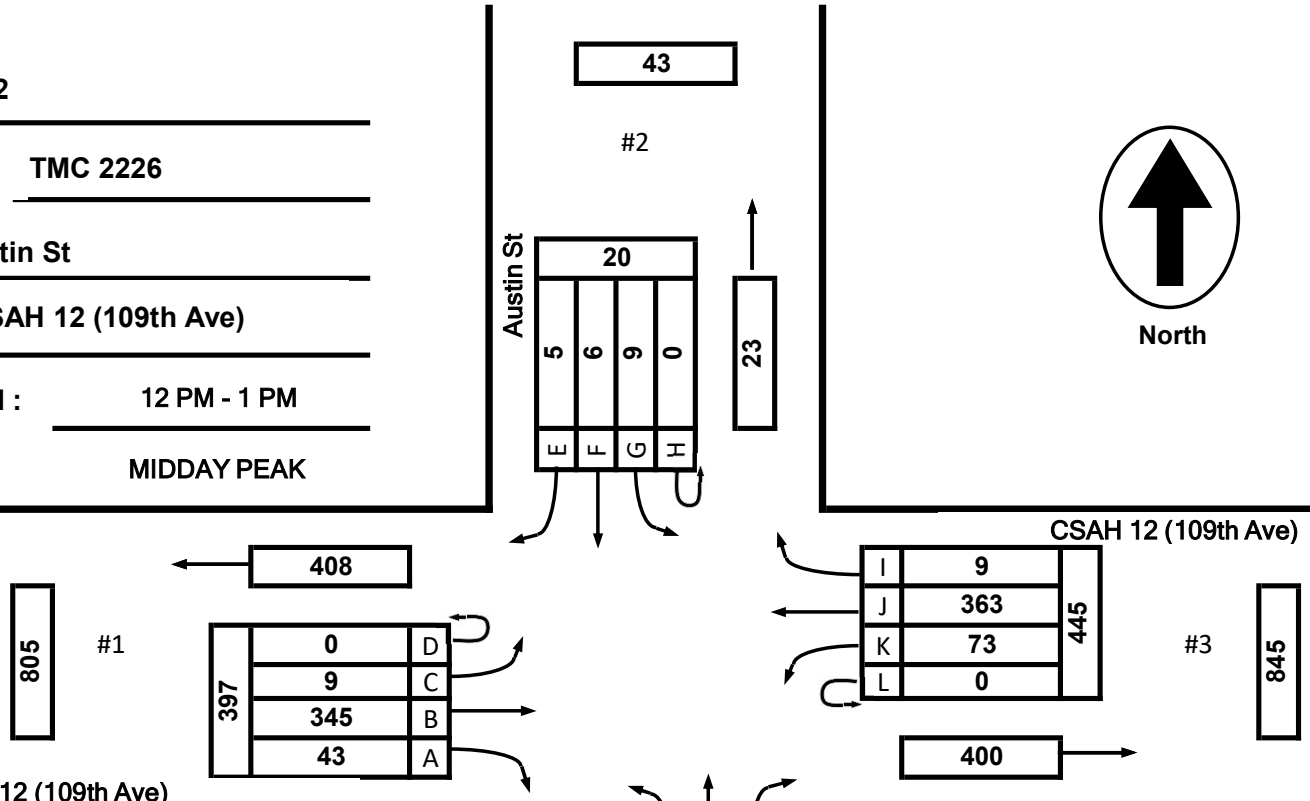
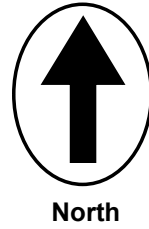
Traffic Volume and Turning Movement Study

Date : 08/02/22

Count Number : TMC 2226

Location : Austin St
@ CSAH 12 (109th Ave)

Collection Period : 12 PM - 1 PM
MIDDAY PEAK



CSAH 12 (109th Ave)

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

Anoka County Highway Department

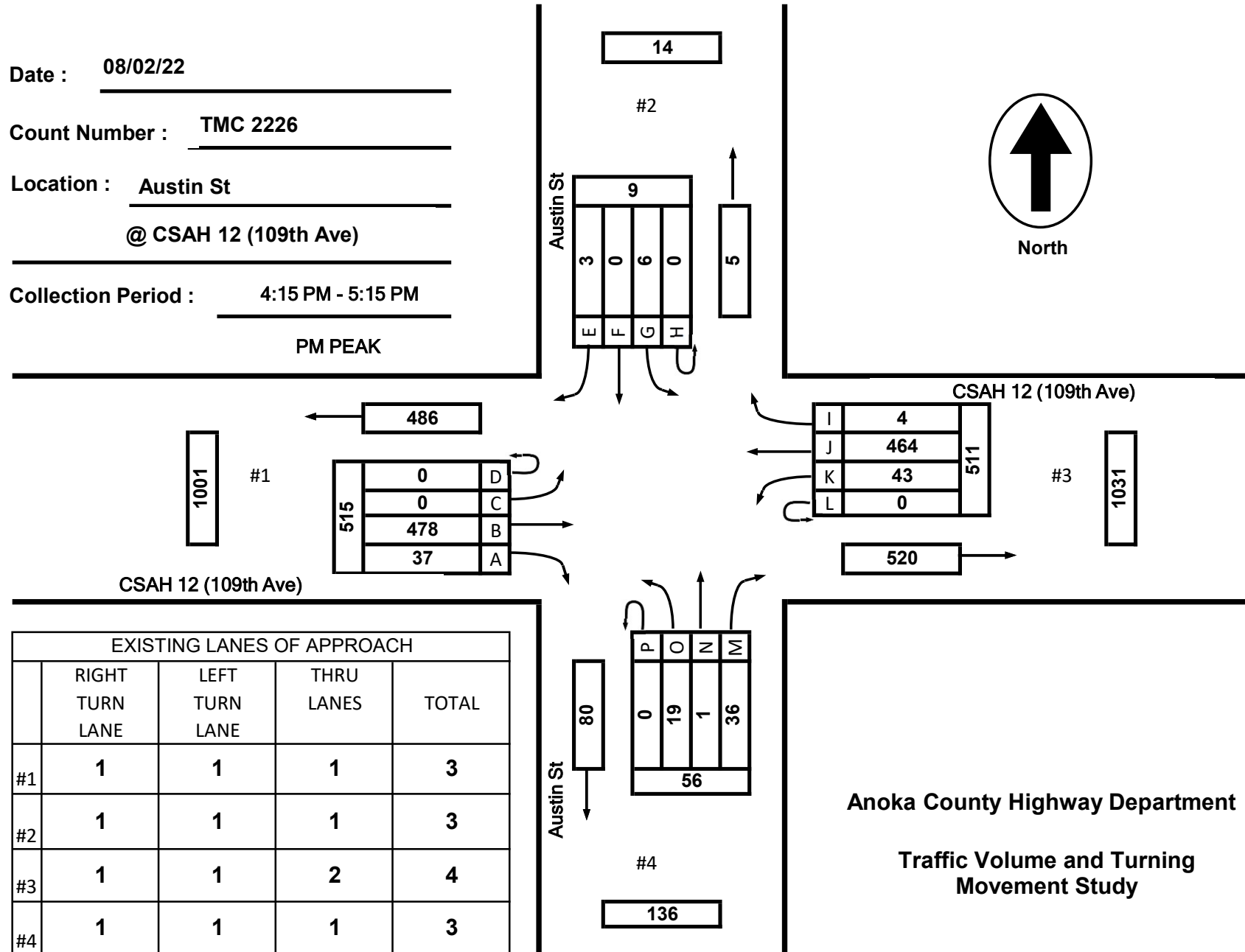
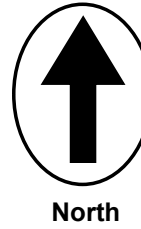
Traffic Volume and Turning Movement Study

Date : 08/02/22

Count Number : TMC 2226

Location : Austin St
@ CSAH 12 (109th Ave)

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



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2226-t
 Site Code :
 Start Date : 08/02/2022
 Page No : 1

Weather: Hot & Sunny
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	Austin St Southbound						CSAH 12 (109th Ave) Westbound						Austin St Northbound						CSAH 12 (109th Ave) 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	0	0	0	0	0	0	0	8	3	0	0	11	2	0	0	0	0	2	0	2	0	0	0	2	0	15	15
00:15	0	0	0	0	0	0	0	4	1	0	0	5	1	0	1	0	0	2	0	5	0	0	0	5	0	12	12
00:30	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	1	3	0	0	0	4	0	8	8
00:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	4	0	0	0	4	0	5	5
Total	0	0	0	0	0	0	0	15	5	0	0	20	4	0	1	0	0	5	1	14	0	0	0	15	0	40	40
01:00	0	0	0	0	0	0	0	3	1	0	0	4	1	0	0	0	0	1	0	5	0	0	0	5	0	10	10
01:15	0	0	0	0	0	0	0	4	4	0	0	8	3	0	0	0	0	3	2	1	0	0	0	3	0	14	14
01:30	0	0	0	0	0	0	0	7	3	0	0	10	0	0	1	0	0	1	0	3	0	0	0	3	0	14	14
01:45	0	0	0	0	0	0	0	3	2	0	0	5	0	0	1	0	0	1	0	2	0	0	0	2	0	8	8
Total	0	0	0	0	0	0	0	17	10	0	0	27	4	0	2	0	0	6	2	11	0	0	0	13	0	46	46
02:00	0	0	0	0	0	0	0	2	2	0	0	4	1	0	0	0	0	1	0	2	0	0	0	2	0	7	7
02:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2	2
02:30	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	4	4
02:45	0	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	0	1	1	1	0	0	0	2	0	5	5
Total	0	0	0	0	0	0	0	5	3	0	0	8	4	0	0	0	0	4	1	5	0	0	0	6	0	18	18
03:00	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2
03:15	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	5	0	7	7
03:30	0	0	0	0	0	0	0	7	1	0	0	8	0	0	0	0	0	0	0	2	0	0	0	2	0	10	10
03:45	0	0	0	0	0	0	0	3	1	0	0	4	1	0	1	0	0	2	0	4	0	0	0	4	0	10	10
Total	0	0	0	0	0	0	0	13	2	0	0	15	1	0	1	0	0	2	0	12	0	0	0	12	0	29	29
04:00	0	0	0	0	0	0	0	4	0	0	0	4	1	0	0	0	0	1	0	3	0	0	0	3	0	8	8
04:15	0	0	0	0	0	0	0	1	1	0	0	2	1	0	0	0	0	1	2	10	0	0	0	12	0	15	15
04:30	0	0	0	0	0	0	0	7	2	0	0	9	1	0	1	0	0	2	0	19	0	0	0	19	0	30	30
04:45	0	0	0	0	0	0	0	11	3	0	0	14	1	0	0	0	0	1	1	10	0	0	0	11	0	26	26
Total	0	0	0	0	0	0	0	23	6	0	0	29	4	0	1	0	0	5	3	42	0	0	0	45	0	79	79
05:00	0	0	0	0	0	0	0	11	2	0	0	13	1	0	2	0	0	3	2	8	0	0	0	10	0	26	26
05:15	1	0	1	0	0	2	0	13	6	0	0	19	2	0	1	0	0	3	8	14	0	0	0	22	0	46	46
05:30	0	0	0	0	0	0	0	15	11	0	0	26	3	0	2	0	0	5	5	23	0	0	0	28	0	59	59
05:45	0	0	0	0	0	0	0	22	11	0	0	33	4	1	3	0	0	8	5	30	0	0	0	35	0	76	76
Total	1	0	1	0	0	2	0	61	30	0	0	91	10	1	8	0	0	19	20	75	0	0	0	95	0	207	207



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2226-t
 Site Code :
 Start Date : 08/02/2022
 Page No : 2

Weather: Hot & Sunny
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	Austin St Southbound						CSAH 12 (109th Ave) Westbound						Austin St Northbound						CSAH 12 (109th Ave) Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
06:00	0	0	0	0	0	0	1	28	11	0	0	40	8	1	3	0	0	12	5	26	0	0	0	31	0	83	83
06:15	2	2	0	0	0	4	7	34	15	0	0	56	8	2	7	0	0	17	9	40	1	0	0	50	0	127	127
06:30	0	0	1	0	0	1	2	56	13	0	0	71	6	3	6	0	0	15	7	65	2	0	0	74	0	161	161
06:45	2	0	0	0	0	2	10	65	18	0	0	93	9	5	7	0	0	21	12	79	0	0	0	91	0	207	207
Total	4	2	1	0	0	7	20	183	57	0	0	260	31	11	23	0	0	65	33	210	3	0	0	246	0	578	578
07:00	2	0	0	0	0	2	4	44	15	0	0	63	6	0	10	1	0	17	7	47	2	0	0	56	0	138	138
07:15	1	0	0	0	0	1	3	51	7	0	0	61	10	0	6	0	0	16	9	61	1	0	0	71	0	149	149
07:30	1	0	0	0	0	1	2	59	7	0	0	68	4	0	3	0	0	7	8	56	3	0	0	67	0	143	143
07:45	0	0	1	0	0	1	2	84	13	0	0	99	10	1	5	0	0	16	7	64	1	0	0	72	0	188	188
Total	4	0	1	0	0	5	11	238	42	0	0	291	30	1	24	1	0	56	31	228	7	0	0	266	0	618	618
08:00	0	1	2	0	0	3	3	55	9	0	0	67	10	1	9	0	0	20	10	59	1	0	0	70	0	160	160
08:15	0	0	3	0	0	3	2	74	11	0	0	87	6	0	7	0	0	13	6	66	0	0	0	72	0	175	175
08:30	1	1	0	0	0	2	3	69	17	0	0	89	14	0	4	0	0	18	18	56	3	0	0	77	0	186	186
08:45	3	1	5	0	0	9	1	65	5	0	0	71	16	0	3	0	0	19	12	61	1	0	0	74	0	173	173
Total	4	3	10	0	0	17	9	263	42	0	0	314	46	1	23	0	0	70	46	242	5	0	0	293	0	694	694
09:00	2	0	2	0	0	4	2	58	23	0	0	83	11	0	5	0	0	16	5	63	1	0	0	69	0	172	172
09:15	0	0	0	0	0	0	2	61	7	0	0	70	9	0	7	0	0	16	7	71	0	0	0	78	0	164	164
09:30	1	0	4	0	0	5	1	60	9	0	0	70	11	1	10	0	0	22	13	69	1	0	0	83	0	180	180
09:45	3	0	1	0	0	4	2	58	14	0	0	74	5	0	11	0	0	16	16	58	1	0	0	75	0	169	169
Total	6	0	7	0	0	13	7	237	53	0	0	297	36	1	33	0	0	70	41	261	3	0	0	305	0	685	685
10:00	0	2	2	0	0	4	1	64	10	0	0	75	6	0	15	1	0	22	7	64	0	0	0	71	0	172	172
10:15	0	0	1	0	0	1	2	59	10	0	0	71	5	0	4	0	0	9	9	60	0	0	0	69	0	150	150
10:30	0	0	2	0	0	2	2	62	9	0	0	73	9	0	2	0	0	11	8	81	0	0	0	89	0	175	175
10:45	2	0	1	0	0	3	1	87	16	0	0	104	6	0	11	0	0	17	3	88	0	0	0	91	0	215	215
Total	2	2	6	0	0	10	6	272	45	0	0	323	26	0	32	1	0	59	27	293	0	0	0	320	0	712	712
11:00	0	5	4	0	0	9	2	69	12	0	0	83	10	2	7	0	0	19	6	76	0	0	0	82	0	193	193
11:15	1	2	2	0	0	5	1	78	13	1	0	93	15	1	5	0	0	21	7	61	0	0	0	68	0	187	187
11:30	0	5	4	0	0	9	2	87	19	0	0	108	11	5	11	0	0	27	11	71	1	0	0	83	0	227	227
11:45	2	1	0	0	0	3	0	72	17	0	0	89	11	4	16	0	0	31	7	75	1	0	0	83	0	206	206
Total	3	13	10	0	0	26	5	306	61	1	0	373	47	12	39	0	0	98	31	283	2	0	0	316	0	813	813
12:00	3	4	3	0	0	10	4	88	21	0	0	113	11	2	11	0	0	24	15	99	3	0	0	117	0	264	264
12:15	2	0	4	0	0	6	3	94	24	0	0	121	12	1	12	0	0	25	12	79	1	0	0	92	0	244	244
12:30	0	0	0	0	0	0	2	87	13	0	0	102	15	1	10	0	0	26	7	82	0	0	0	89	0	217	217



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2226-t
 Site Code :
 Start Date : 08/02/2022
 Page No : 3

Weather: Hot & Sunny
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	Austin St Southbound						CSAH 12 (109th Ave) Westbound						Austin St Northbound						CSAH 12 (109th Ave) 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	0	2	2	0	0	4	0	94	15	0	0	109	8	1	7	0	0	16	9	85	5	0	0	99	0	228	228
Total	5	6	9	0	0	20	9	363	73	0	0	445	46	5	40	0	0	91	43	345	9	0	0	397	0	953	953
13:00	1	1	1	0	0	3	2	63	12	0	0	77	13	0	10	0	0	23	8	86	2	0	0	96	0	199	199
13:15	0	0	2	0	0	2	1	63	8	0	0	72	14	0	6	0	0	20	17	87	0	0	0	104	0	198	198
13:30	0	0	2	0	0	2	1	84	23	1	0	109	19	0	7	0	0	26	6	73	0	0	0	79	0	216	216
13:45	1	0	2	0	0	3	3	71	11	0	0	85	13	0	12	1	0	26	11	86	0	0	0	97	0	211	211
Total	2	1	7	0	0	10	7	281	54	1	0	343	59	0	35	1	0	95	42	332	2	0	0	376	0	824	824
14:00	1	3	2	0	0	6	3	73	13	0	0	89	14	0	7	0	0	21	7	72	0	0	0	79	0	195	195
14:15	1	0	2	0	0	3	1	77	17	0	0	95	10	0	7	0	0	17	12	96	2	0	0	110	0	225	225
14:30	0	0	0	0	0	0	0	75	14	0	0	89	12	0	8	0	0	20	8	105	1	0	0	114	0	223	223
14:45	1	0	0	0	0	1	0	72	14	0	0	86	10	0	6	0	0	16	4	73	0	0	0	77	0	180	180
Total	3	3	4	0	0	10	4	297	58	0	0	359	46	0	28	0	0	74	31	346	3	0	0	380	0	823	823
15:00	0	4	6	0	0	10	0	70	8	0	0	78	12	1	4	0	0	17	9	118	1	0	0	128	0	233	233
15:15	0	4	4	0	0	8	0	93	6	0	0	99	9	0	6	0	0	15	8	94	1	0	0	103	0	225	225
15:30	1	0	4	0	0	5	2	109	12	0	0	123	13	0	9	0	0	22	7	124	0	0	0	131	0	281	281
15:45	0	0	0	0	0	0	0	90	13	0	0	103	7	0	10	0	0	17	6	101	0	0	0	107	0	227	227
Total	1	8	14	0	0	23	2	362	39	0	0	403	41	1	29	0	0	71	30	437	2	0	0	469	0	966	966
16:00	0	2	3	0	0	5	0	90	12	0	0	102	10	0	2	0	0	12	8	99	1	0	0	108	0	227	227
16:15	1	0	1	0	0	2	2	109	12	0	0	123	9	1	4	0	0	14	9	121	0	0	0	130	0	269	269
16:30	1	0	2	0	0	3	1	120	8	0	0	129	8	0	7	0	0	15	12	133	0	0	0	145	0	292	292
16:45	1	0	3	0	0	4	0	118	10	0	0	128	12	0	2	0	0	14	9	109	0	0	0	118	0	264	264
Total	3	2	9	0	0	14	3	437	42	0	0	482	39	1	15	0	0	55	38	462	1	0	0	501	0	1052	1052
17:00	0	0	0	0	0	0	1	117	13	0	0	131	10	0	6	0	0	16	7	115	0	0	0	122	0	269	269
17:15	0	0	0	0	0	0	0	93	12	0	0	105	9	0	1	0	0	10	5	120	1	0	0	126	0	241	241
17:30	2	0	0	0	0	2	0	91	15	0	0	106	11	0	4	0	0	15	7	85	0	0	0	92	0	215	215
17:45	0	0	0	0	0	0	1	86	8	0	0	95	9	0	6	0	0	15	7	87	1	0	0	95	0	205	205
Total	2	0	0	0	0	2	2	387	48	0	0	437	39	0	17	0	0	56	26	407	2	0	0	435	0	930	930
18:00	0	0	2	0	0	2	0	88	6	0	0	94	9	1	7	0	0	17	8	76	0	0	0	84	0	197	197
18:15	0	0	0	0	0	0	0	68	11	0	0	79	6	0	3	0	0	9	0	77	0	0	0	77	0	165	165
18:30	0	0	0	0	0	0	0	70	8	0	0	78	8	0	8	0	0	16	6	69	0	0	0	75	0	169	169
18:45	2	0	1	0	0	3	0	63	10	0	0	73	5	0	3	0	0	8	9	58	2	0	0	69	0	153	153
Total	2	0	3	0	0	5	0	289	35	0	0	324	28	1	21	0	0	50	23	280	2	0	0	305	0	684	684



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2226-t
 Site Code :
 Start Date : 08/02/2022
 Page No : 4

Weather: Hot & Sunny
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	Austin St Southbound						CSAH 12 (109th Ave) Westbound						Austin St Northbound						CSAH 12 (109th Ave) 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	0	0	0	0	0	0	0	56	8	0	0	64	7	0	4	0	0	11	6	71	0	0	0	77	0	152	152
19:15	0	0	0	0	0	0	0	60	9	1	0	70	6	0	5	0	0	11	6	71	0	0	0	77	0	158	158
19:30	0	0	0	0	0	0	0	48	4	0	0	52	8	0	1	0	0	9	5	55	1	0	0	61	0	122	122
19:45	0	0	0	0	0	0	0	56	4	0	0	61	6	0	2	0	0	8	3	57	1	0	0	61	0	130	130
Total	0	0	0	0	0	0	1	220	25	1	0	247	27	0	12	0	0	39	20	254	2	0	0	276	0	562	562
20:00	1	0	1	0	0	2	1	50	4	0	0	55	3	0	3	0	0	6	6	64	0	0	0	70	0	133	133
20:15	1	0	0	0	0	1	0	45	7	0	0	52	4	0	3	0	0	7	2	57	1	0	0	60	0	120	120
20:30	0	0	0	0	0	0	0	43	5	0	0	48	7	0	3	0	0	10	2	49	1	0	0	52	0	110	110
20:45	0	0	0	0	0	0	0	35	1	0	0	36	3	0	1	0	0	4	4	48	0	0	0	52	0	92	92
Total	2	0	1	0	0	3	1	173	17	0	0	191	17	0	10	0	0	27	14	218	2	0	0	234	0	455	455
21:00	0	0	0	0	0	0	0	27	9	0	0	36	3	0	2	0	0	5	4	33	0	0	0	37	0	78	78
21:15	0	0	0	0	0	0	0	31	8	0	0	39	1	0	2	0	0	3	2	45	0	0	0	47	0	89	89
21:30	0	0	0	0	0	0	0	22	4	0	0	26	2	0	4	0	0	6	3	21	1	0	0	25	0	57	57
21:45	0	0	0	0	0	0	0	20	3	0	0	23	1	0	1	0	0	2	3	19	0	0	0	22	0	47	47
Total	0	0	0	0	0	0	0	100	24	0	0	124	7	0	9	0	0	16	12	118	1	0	0	131	0	271	271
22:00	0	0	0	0	0	0	0	22	5	0	0	27	4	0	3	1	0	8	1	22	0	0	0	23	0	58	58
22:15	0	0	1	0	0	1	0	12	5	0	0	17	0	0	1	0	0	1	2	21	0	0	0	23	0	42	42
22:30	0	0	0	0	0	0	0	16	8	0	0	24	2	0	1	0	0	3	3	15	0	0	0	18	0	45	45
22:45	0	0	1	0	0	1	1	11	3	0	0	15	5	0	4	0	0	9	0	17	0	0	0	17	0	42	42
Total	0	0	2	0	0	2	1	61	21	0	0	83	11	0	9	1	0	21	6	75	0	0	0	81	0	187	187
23:00	0	0	0	0	0	0	0	13	2	0	0	15	2	0	0	0	0	2	0	11	0	0	0	11	0	28	28
23:15	1	1	0	0	0	2	0	5	3	0	0	8	0	1	0	0	0	1	1	10	0	0	0	11	0	22	22
23:30	0	0	0	0	0	0	0	18	3	0	0	21	2	0	0	0	0	2	1	15	0	0	0	16	0	39	39
23:45	0	0	0	0	0	0	0	5	3	0	0	8	2	0	0	0	0	2	1	9	1	0	0	11	0	21	21
Total	1	1	0	0	0	2	0	41	11	0	0	52	6	1	0	0	0	7	3	45	1	0	0	49	0	110	110
Grand Total	45	41	85	0	0	171	88	4644	803	3	0	5538	609	36	412	4	0	1061	524	4995	47	0	0	5566	0	12336	12336
Apprch %	26.3	24	49.7	0			1.6	83.9	14.5	0.1			57.4	3.4	38.8	0.4			9.4	89.7	0.8	0			0		
Total %	0.4	0.3	0.7	0		1.4	0.7	37.6	6.5	0		44.9	4.9	0.3	3.3	0		8.6	4.2	40.5	0.4	0		45.1	0	100	
Cars +	40	39	66	0		145	67	4573	776	3		5419	587	33	405	4		1029	511	4893	44	0		5448	0	0	12041
% Cars +	88.9	95.1	77.6	0	0	84.8	76.1	98.5	96.6	100	0	97.9	96.4	91.7	98.3	100	0	97	97.5	98	93.6	0	0	97.9	0	0	97.6
Trucks	5	2	19	0		26	21	71	27	0		119	22	3	7	0		32	13	102	3	0		118	0	0	295
% Trucks	11.1	4.9	22.4	0	0	15.2	23.9	1.5	3.4	0	0	2.1	3.6	8.3	1.7	0	0	3	2.5	2	6.4	0	0	2.1	0	0	2.4



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2226-t
 Site Code :
 Start Date : 08/02/2022
 Page No : 5

Weather: Hot & Sunny
 CountCAM 2
 Study Conducted by: Kevin

Start Time	Austin St Southbound					CSAH 12 (109th Ave) Westbound					Austin St Northbound					CSAH 12 (109th Ave) Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
Peak Hour Analysis From 00:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	0	0	1	0	1	2	84	13	0	99	10	1	5	0	16	7	64	1	0	72	188
08:00	0	1	2	0	3	3	55	9	0	67	10	1	9	0	20	10	59	1	0	70	160
08:15	0	0	3	0	3	2	74	11	0	87	6	0	7	0	13	6	66	0	0	72	175
08:30	1	1	0	0	2	3	69	17	0	89	14	0	4	0	18	18	56	3	0	77	186
Total Volume	1	2	6	0	9	10	282	50	0	342	40	2	25	0	67	41	245	5	0	291	709
% App. Total	11.1	22.2	66.7	0		2.9	82.5	14.6	0		59.7	3	37.3	0		14.1	84.2	1.7	0		
PHF	.250	.500	.500	.000	.750	.833	.839	.735	.000	.864	.714	.500	.694	.000	.838	.569	.928	.417	.000	.945	.943

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00																					
12:00	3	4	3	0	10	4	88	21	0	113	11	2	11	0	24	15	99	3	0	117	264
12:15	2	0	4	0	6	3	94	24	0	121	12	1	12	0	25	12	79	1	0	92	244
12:30	0	0	0	0	0	2	87	13	0	102	15	1	10	0	26	7	82	0	0	89	217
12:45	0	2	2	0	4	0	94	15	0	109	8	1	7	0	16	9	85	5	0	99	228
Total Volume	5	6	9	0	20	9	363	73	0	445	46	5	40	0	91	43	345	9	0	397	953
% App. Total	25	30	45	0		2	81.6	16.4	0		50.5	5.5	44	0		10.8	86.9	2.3	0		
PHF	.417	.375	.563	.000	.500	.563	.965	.760	.000	.919	.767	.625	.833	.000	.875	.717	.871	.450	.000	.848	.902

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	1	0	1	0	2	2	109	12	0	123	9	1	4	0	14	9	121	0	0	130	269
16:30	1	0	2	0	3	1	120	8	0	129	8	0	7	0	15	12	133	0	0	145	292
16:45	1	0	3	0	4	0	118	10	0	128	12	0	2	0	14	9	109	0	0	118	264
17:00	0	0	0	0	0	1	117	13	0	131	10	0	6	0	16	7	115	0	0	122	269
Total Volume	3	0	6	0	9	4	464	43	0	511	39	1	19	0	59	37	478	0	0	515	1094
% App. Total	33.3	0	66.7	0		0.8	90.8	8.4	0		66.1	1.7	32.2	0		7.2	92.8	0	0		
PHF	.750	.000	.500	.000	.563	.500	.967	.827	.000	.975	.813	.250	.679	.000	.922	.771	.898	.000	.000	.888	.937



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2226-t
 Site Code :
 Start Date : 08/02/2022
 Page No : 1

Weather: Hot & Sunny
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	Austin St Southbound					CSAH 12 (109th Ave) Westbound					Austin St Northbound					CSAH 12 (109th Ave) Eastbound					Int. Total	
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total		
00:00	0	0	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	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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
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	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	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:45	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	2	1	0	3	0	1	0	0	1	0	0	0	0	0	0	4
06:00	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	0	2	4
06:15	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	0	2	0	0	0	2	5
06:30	0	0	0	0	0	0	1	2	0	3	2	0	0	0	2	0	0	0	0	0	0	5
06:45	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	3	0	0	0	3	5
Total	0	1	0	0	1	3	3	3	0	9	2	0	0	0	2	0	7	0	0	0	7	19
07:00	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	3	1	0	0	4	7
07:15	1	0	0	0	1	2	3	0	0	5	1	0	0	0	1	0	2	0	0	0	2	9
07:30	0	0	0	0	0	1	1	2	0	4	1	0	0	0	1	0	3	0	0	0	3	8
07:45	0	0	1	0	1	1	1	1	0	3	1	0	0	0	1	0	0	1	0	0	1	6
Total	1	0	1	0	2	5	6	4	0	15	3	0	0	0	3	0	8	2	0	0	10	30
08:00	0	0	1	0	1	1	0	0	0	1	1	0	0	0	1	2	3	0	0	0	5	8
08:15	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	7	0	0	0	0	7	9
08:30	0	0	0	0	0	1	1	0	0	2	1	0	0	0	1	2	2	0	0	0	4	7
08:45	1	0	0	0	1	0	3	1	0	4	2	0	0	0	2	0	1	0	0	0	1	8
Total	1	0	2	0	3	2	5	1	0	8	4	0	0	0	4	4	13	0	0	0	17	32
09:00	1	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	5	0	0	0	5	8



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2226-t
 Site Code :
 Start Date : 08/02/2022
 Page No : 2

Weather: Hot & Sunny
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	Austin St Southbound					CSAH 12 (109th Ave) Westbound					Austin St Northbound					CSAH 12 (109th Ave) Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
09:15	0	0	0	0	0	1	4	1	0	6	0	0	0	0	0	1	3	0	0	4	10
09:30	1	0	1	0	2	0	1	0	0	1	1	0	0	0	1	1	1	1	0	3	7
09:45	0	0	1	0	1	1	1	2	0	4	0	0	1	0	1	1	1	0	0	2	8
Total	2	0	2	0	4	2	7	3	0	12	2	0	1	0	3	3	10	1	0	14	33
10:00	0	0	1	0	1	0	4	1	0	5	1	0	0	0	1	0	2	0	0	2	9
10:15	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	7
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
10:45	0	0	0	0	0	0	3	3	0	6	1	0	1	0	2	0	5	0	0	5	13
Total	0	0	1	0	1	1	9	4	0	14	2	0	1	0	3	0	15	0	0	15	33
11:00	0	0	1	0	1	0	3	3	0	6	1	0	0	0	1	0	0	0	0	0	8
11:15	0	0	2	0	2	0	4	0	0	4	1	0	1	0	2	0	4	0	0	4	12
11:30	0	0	1	0	1	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	9
11:45	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	4
Total	1	0	4	0	5	0	12	4	0	16	2	1	1	0	4	0	8	0	0	8	33
12:00	0	0	1	0	1	3	1	0	0	4	0	0	0	0	0	0	1	0	0	1	6
12:15	0	0	1	0	1	1	2	1	0	4	0	0	0	0	0	0	4	0	0	4	9
12:30	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	1	2	0	0	3	8
12:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3
Total	0	0	2	0	2	4	7	2	0	13	1	0	0	0	1	1	9	0	0	10	26
13:00	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	1	0	0	1	3
13:15	0	0	1	0	1	0	0	1	0	1	1	0	1	0	2	2	3	0	0	5	9
13:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
13:45	0	0	1	0	1	2	2	1	0	5	1	0	1	0	2	0	0	0	0	0	8
Total	0	0	3	0	3	2	2	3	0	7	2	0	3	0	5	2	6	0	0	8	23
14:00	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0	1	3	0	0	4	7
14:15	0	0	1	0	1	0	2	1	0	3	2	0	0	0	2	0	2	0	0	2	8
14:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
14:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	1	2	0	3	1	4	1	0	6	2	0	0	0	2	1	8	0	0	9	20
15:00	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	2	0	0	2	6
15:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
15:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	7	0	0	7	13
16:00	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
16:15	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1	3
16:30	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	3
Total	0	0	1	0	1	1	5	1	0	7	0	0	1	0	1	1	4	0	0	5	14
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	5
18:00	0	0	1	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	3
18:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	1	0	0	1	1	1	0	0	2	0	2	0	0	2	6



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2226-t
 Site Code :
 Start Date : 08/02/2022
 Page No : 3

Weather: Hot & Sunny
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	Austin St Southbound					CSAH 12 (109th Ave) Westbound					Austin St Northbound					CSAH 12 (109th Ave) Eastbound					Int. Total	
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total		
19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
19:45	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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45	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
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15	0	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	0
21:45	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
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15	0	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	0
22:45	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
23:00	0	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	0
23:30	0	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	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	5	2	19	0	26	21	71	27	0	119	22	3	7	0	32	13	102	3	0	118	295	
Apprch %	19.2	7.7	73.1	0		17.6	59.7	22.7	0		68.8	9.4	21.9	0		11	86.4	2.5	0			
Total %	1.7	0.7	6.4	0	8.8	7.1	24.1	9.2	0	40.3	7.5	1	2.4	0	10.8	4.4	34.6	1	0	40		

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/02/2022

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 12 (109th Ave)

Number of Lanes : 2+

Total Approach Volume: 5,566

Westbound: CSAH 12 (109th Ave)

Number of Lanes :2+

Total Approach Volume: 5,538

Minor Street Approaches

Northbound: Austin St

Number of Lanes :1

Total Approach Volume: 1,061

Southbound: Austin St

Number of Lanes :1

Total Approach Volume: 171

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 1 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 13 hours, 8 are needed

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

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

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (3) volumes exceed minimum >= required (1). Delay data not evaluated.

Warrant 3B - Peak Hour Volumes.....Not Satisfied

Volumes do not exceed minimums for any one hour period.

Warrant 4 - Pedestrian Volumes.....Not Evaluated

Warrant 5 - School Crossing.....Not Evaluated

Warrant 6 - Coordinated Signal System.....Not Evaluated

Warrant 7 - Crash Experience.....Not Evaluated

Warrant 8 - Roadway Network.....Not Evaluated

Warrant 9 - Intersection Near a Grade Crossing.....Not Evaluated

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/02/2022

Warrant 1A - Minimum Volumes

Description

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

Summary

Only 1 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **420**
 Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 12 (109th Ave)					Austin St		
11:30 - 12:30	375	+	431	=	806	107	28	Yes
16:15 - 17:15	515	+	511	=	1026	59	9	No
16:30 - 17:30	511	+	493	=	1004	55	7	No
16:00 - 17:00	501	+	482	=	983	55	14	No
15:45 - 16:45	490	+	457	=	947	58	10	No
16:45 - 17:45	458	+	470	=	928	55	6	No
15:30 - 16:30	476	+	451	=	927	65	12	No
15:15 - 16:15	449	+	427	=	876	66	18	No
15:00 - 16:00	469	+	403	=	872	71	23	No
17:00 - 18:00	435	+	437	=	872	56	2	No
14:45 - 15:45	439	+	386	=	825	70	24	No
17:15 - 18:15	397	+	400	=	797	57	4	No
14:15 - 15:15	429	+	348	=	777	70	14	No
14:30 - 15:30	422	+	352	=	774	68	19	No
13:45 - 14:45	400	+	358	=	758	84	12	No
11:15 - 12:15	351	+	403	=	754	103	27	No
12:30 - 13:30	388	+	360	=	748	85	9	No
12:45 - 13:45	378	+	367	=	745	85	11	No
13:30 - 14:30	365	+	378	=	743	90	14	No
14:00 - 15:00	380	+	359	=	739	74	10	No
17:30 - 18:30	348	+	374	=	722	56	4	No
13:00 - 14:00	376	+	343	=	719	95	10	No
13:15 - 14:15	359	+	355	=	714	93	13	No
10:45 - 11:45	324	+	388	=	712	84	26	No
11:00 - 12:00	316		373		689	98	26	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/02/2022

Warrant 1B - Interruption of Continuous Traffic

Description

Intended for sites where the volume of the major street is so heavy that traffic on the minor street suffers excessive delay or hazard.

Summary

9 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **630**
 Veh/Hr Minor = **53**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 12 (109th Ave)					Austin St		
16:00 - 17:00	501	+	482	=	983	55	14	Yes
15:00 - 16:00	469	+	403	=	872	71	23	Yes
17:00 - 18:00	435	+	437	=	872	56	2	Yes
12:00 - 13:00	397	+	445	=	842	91	20	Yes
14:00 - 15:00	380	+	359	=	739	74	10	Yes
13:00 - 14:00	376	+	343	=	719	95	10	Yes
11:00 - 12:00	316	+	373	=	689	98	26	Yes
10:00 - 11:00	320	+	323	=	643	59	10	Yes
07:45 - 08:45	291	+	342	=	633	67	9	Yes
18:00 - 19:00	305	+	324	=	629	50	5	No
09:00 - 10:00	305	+	297	=	602	70	13	No
07:30 - 08:30	281	+	321	=	602	56	8	No
08:45 - 09:45	304	+	294	=	598	73	18	No
09:45 - 10:45	304	+	293	=	597	58	11	No
09:15 - 10:15	307	+	289	=	596	76	13	No
18:15 - 19:15	298	+	294	=	592	44	3	No
09:30 - 10:30	298	+	290	=	588	69	14	No
18:30 - 19:30	298	+	285	=	583	46	3	No
06:30 - 07:30	292	+	288	=	580	69	6	No
07:15 - 08:15	280	+	295	=	575	59	6	No
06:45 - 07:45	285	+	285	=	570	61	6	No
07:00 - 08:00	266	+	291	=	557	56	5	No
06:15 - 07:15	271	+	283	=	554	70	9	No
18:45 - 19:45	284	+	259	=	543	39	3	No
19:00 - 20:00	276		247		523	39	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/02/2022

Warrant 1C Combination of Warrants

Description

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

Summary

Only 4 hours meet 1A minimums.
13 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **336 504**

Veh/Hr Minor = **84 42**

Major Road CSAH 12 (109th Ave)

Minor Road Austin St

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
11:45 - 12:45	381	+	425	=	806	106	19	Yes
13:45 - 14:45	400	+	358	=	758	84	12	Yes
12:45 - 13:45	378	+	367	=	745	85	11	Yes
10:45 - 11:45	324	+	388	=	712	84	26	Yes
16:15 - 17:15	515	+	511	=	1026	59	9	No
16:30 - 17:30	511	+	493	=	1004	55	7	No
16:00 - 17:00	501	+	482	=	983	55	14	No
15:45 - 16:45	490	+	457	=	947	58	10	No
16:45 - 17:45	458	+	470	=	928	55	6	No
15:30 - 16:30	476	+	451	=	927	65	12	No
15:15 - 16:15	449	+	427	=	876	66	18	No
15:00 - 16:00	469	+	403	=	872	71	23	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:00 - 17:00	501	+	482	=	983	55	14	Yes
15:00 - 16:00	469	+	403	=	872	71	23	Yes
17:00 - 18:00	435	+	437	=	872	56	2	Yes
12:00 - 13:00	397	+	445	=	842	91	20	Yes
14:00 - 15:00	380	+	359	=	739	74	10	Yes
13:00 - 14:00	376	+	343	=	719	95	10	Yes
11:00 - 12:00	316	+	373	=	689	98	26	Yes
10:00 - 11:00	320	+	323	=	643	59	10	Yes
18:00 - 19:00	305	+	324	=	629	50	5	Yes
08:00 - 09:00	293	+	314	=	607	70	17	Yes
09:00 - 10:00	305	+	297	=	602	70	13	Yes
07:00 - 08:00	266	+	291	=	557	56	5	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/02/2022

Warrant 2 - Four Hour Volumes

Description

Intended for sites where the volume of intersecting traffic during any four hours of the day is the principal reason for consideration of a signal installation.

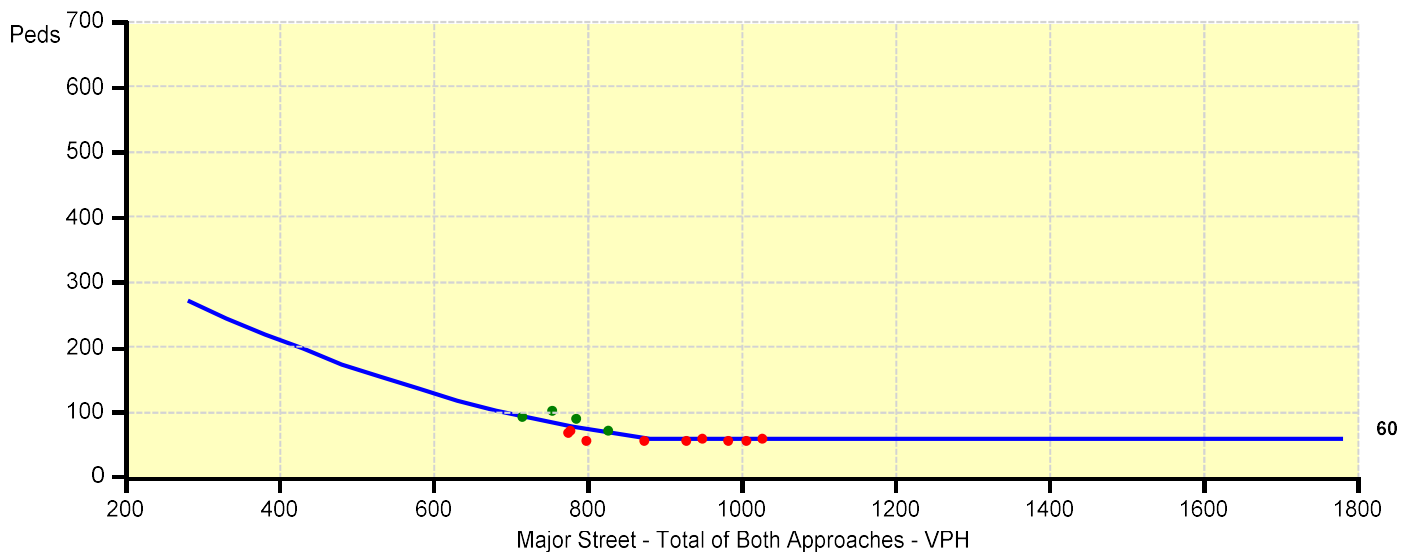
Summary

4 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 12 (109th Ave)				Total	Minor Road Austin St		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
14:45 - 15:45	439	+	386	=	825	70	24	Yes
12:15 - 13:15	376	+	409	=	785	90	13	Yes
11:15 - 12:15	351	+	403	=	754	103	27	Yes
13:15 - 14:15	359	+	355	=	714	93	13	Yes
16:15 - 17:15	515	+	511	=	1026	59	9	No
16:30 - 17:30	511	+	493	=	1004	55	7	No
16:00 - 17:00	501	+	482	=	983	55	14	No
15:45 - 16:45	490	+	457	=	947	58	10	No
16:45 - 17:45	458	+	470	=	928	55	6	No
17:00 - 18:00	435	+	437	=	872	56	2	No
17:15 - 18:15	397	+	400	=	797	57	4	No
14:15 - 15:15	429		348		777	70	14	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/02/2022

Warrant 3B - Peak Hour Volumes

Description

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

Summary

Only 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Time	Major Road CSAH 12 (109th Ave)				Total	Minor Road Austin St		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:15 - 17:15	515	+	511	=	1026	59	9	No
16:30 - 17:30	511	+	493	=	1004	55	7	No
16:00 - 17:00	501	+	482	=	983	55	14	No
15:45 - 16:45	490	+	457	=	947	58	10	No
16:45 - 17:45	458	+	470	=	928	55	6	No
15:30 - 16:30	476	+	451	=	927	65	12	No
15:15 - 16:15	449	+	427	=	876	66	18	No
15:00 - 16:00	469	+	403	=	872	71	23	No
17:00 - 18:00	435	+	437	=	872	56	2	No
12:00 - 13:00	397	+	445	=	842	91	20	No
14:45 - 15:45	439	+	386	=	825	70	24	No
11:45 - 12:45	381	+	425	=	806	106	19	No

