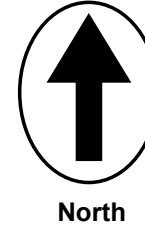
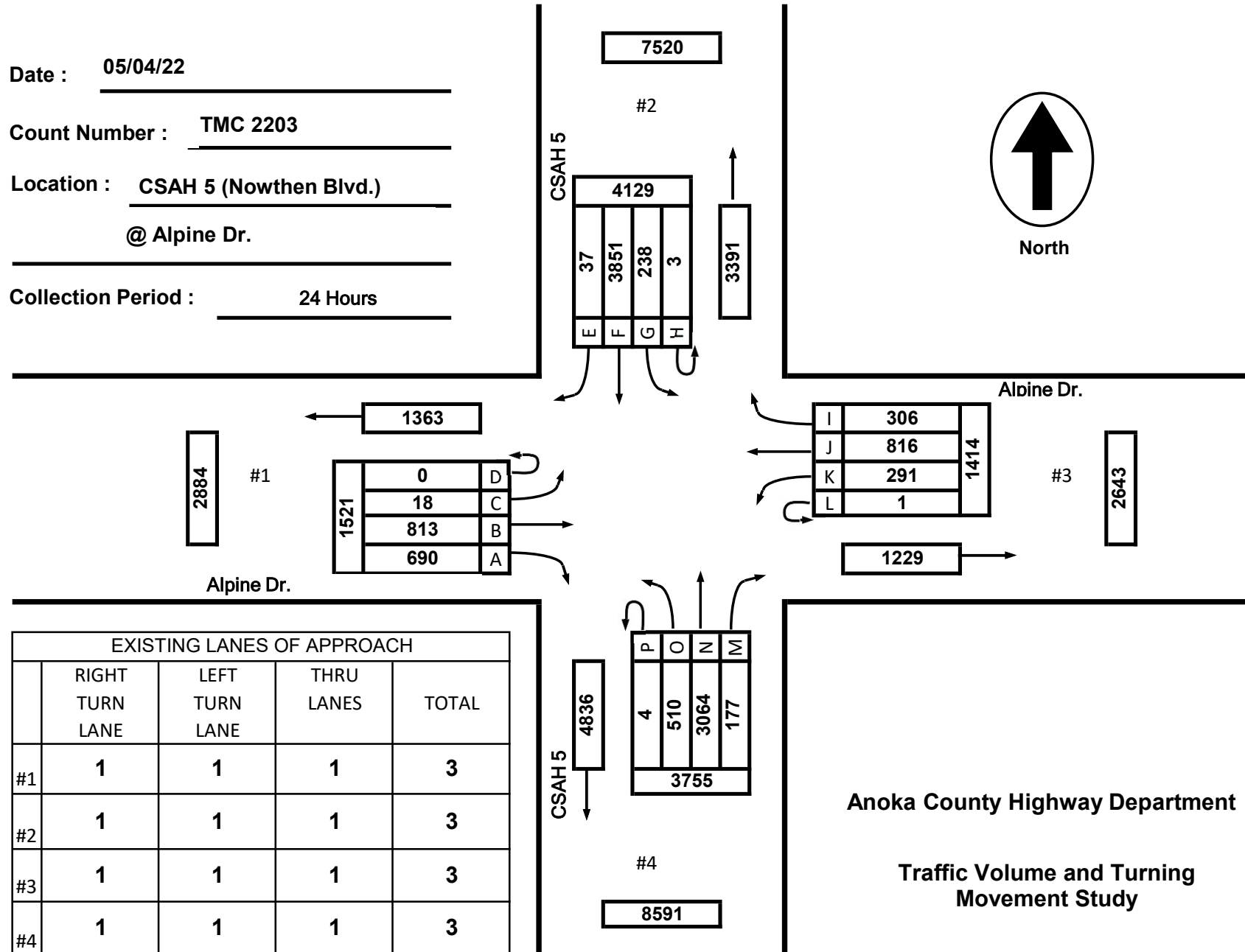


Date : 05/04/22

Count Number : TMC 2203

Location : CSAH 5 (Nowthen Blvd.)
@ Alpine Dr.

Collection Period : 24 Hours



Anoka County Highway Department

Traffic Volume and Turning Movement Study

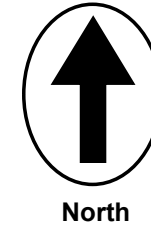
Date : 05/04/22

Count Number : TMC 2203

Location : CSAH 5 (Nowthen Blvd.)
@ Alpine Dr.

Collection Period : 6:45 AM - 7:45 AM

AM PEAK



Alpine Dr.

Alpine Dr.

CSAH 5

CSAH 5

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	1	3
#4	1	1	1	3

668

#2

559			
7	538	14	0
E	F	G	H

109

197

#1

90		0	D
		2	C
		25	B
		63	A

107

I	16	184
J	83	
K	85	
L	0	

#3

232

48

P	O	N	N
0	17	91	9
117			

686

#4

803

Anoka County Highway Department

Traffic Volume and Turning Movement Study

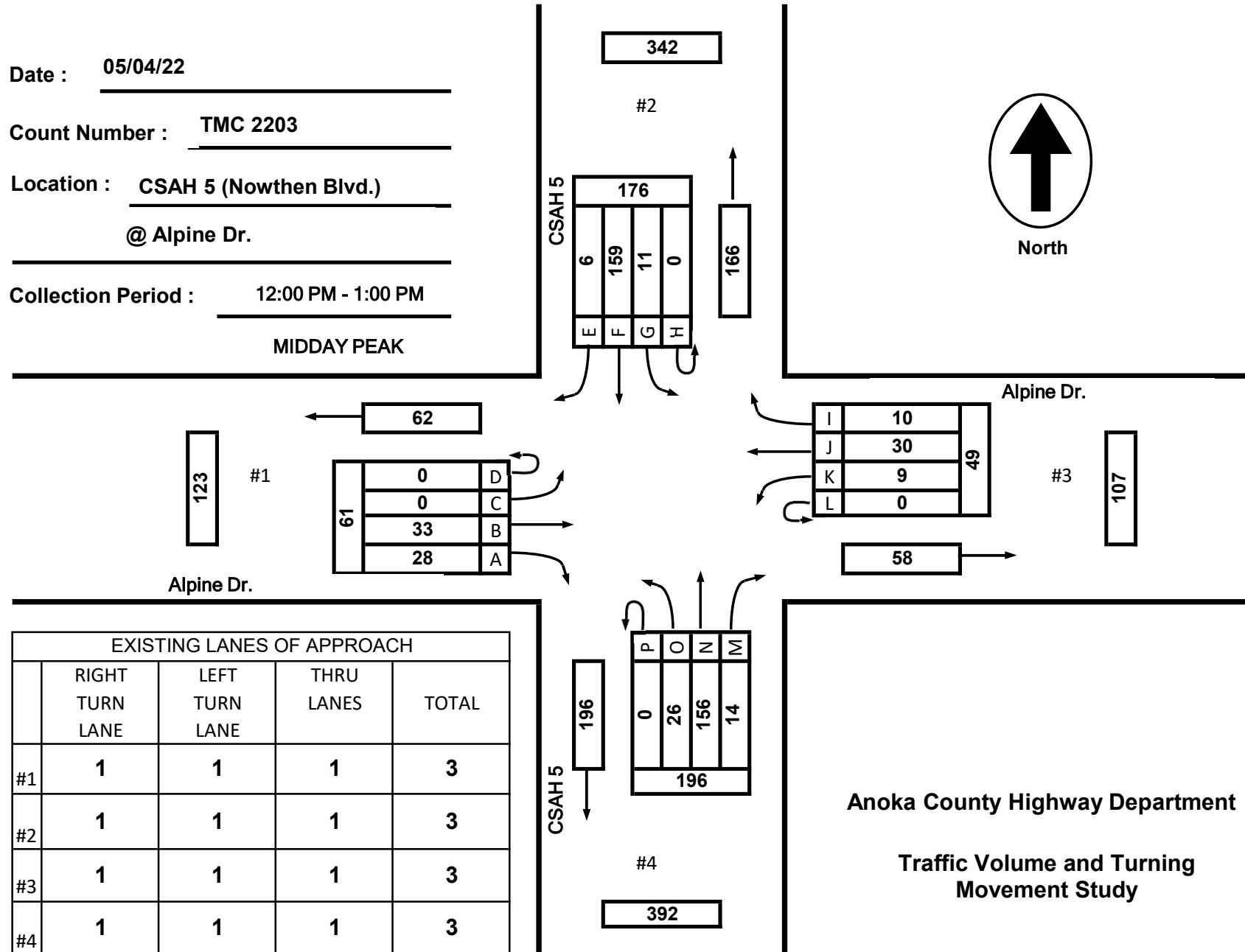
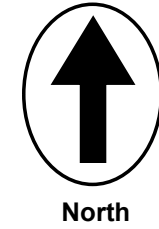
Date : 05/04/22

Count Number : TMC 2203

Location : CSAH 5 (Nowthen Blvd.)
@ Alpine Dr.

Collection Period : 12:00 PM - 1:00 PM

MIDDAY 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	1	3
#4	1	1	1	3

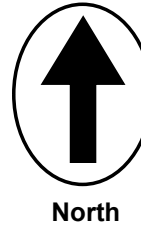
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 05/04/22

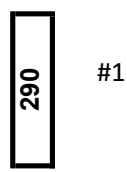
Count Number : TMC 2203

Location : CSAH 5 (Nowthen Blvd.)
@ Alpine Dr.

Collection Period : 4 PM - 5 PM
PM PEAK

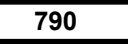
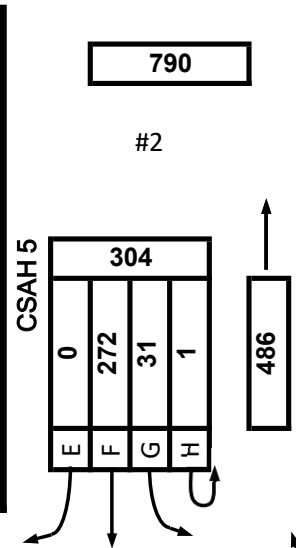
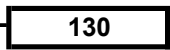
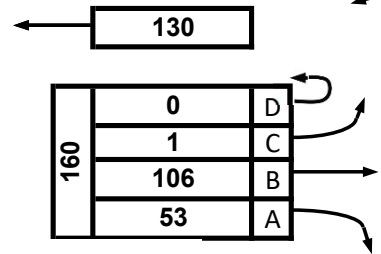


North

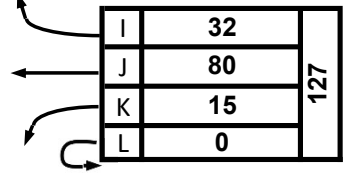


#1

Alpine Dr.

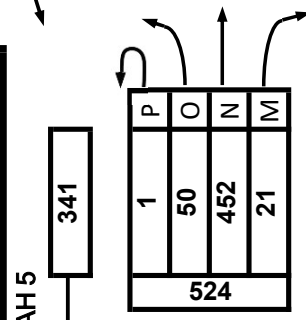
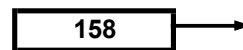


#2



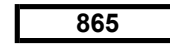
Alpine Dr.

#3



CSAH 5

#4



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	1	3
#4	1	1	1	3

Anoka County Highway Department
 Traffic Volume and Turning Movement Study



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2203-t
 Site Code :
 Start Date : 05/04/2022
 Page No : 1

Weather: Cool & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 5 Southbound						Alpine Dr Westbound						CSAH 5 Northbound						Alpine Dr 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	0	3	0	0	3	0	0	0	0	0	0	0	1	1	0	0	2	0	0	1	1	0	2	0	7	7
00:15	0	0	2	0	0	2	0	0	0	0	0	0	0	1	3	0	0	4	0	0	1	0	0	1	0	7	7
00:30	0	0	2	0	0	2	0	0	0	0	0	0	0	0	4	0	0	4	0	0	1	1	0	2	0	8	8
00:45	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	2	0	0	2	0	0	2	0	5	5
Total	0	0	8	0	0	8	0	0	0	0	0	0	0	2	9	1	0	12	0	0	5	2	0	7	0	27	27
01:00	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	3	3
01:15	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	4	4
01:30	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	2
01:45	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	0	0	2	0	5	5
Total	0	0	5	0	0	5	0	0	0	0	0	0	0	0	6	0	0	6	0	0	3	0	0	3	0	14	14
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
02:15	0	0	1	0	0	1	0	0	0	0	0	0	0	1	4	0	0	5	0	0	1	0	0	1	0	7	7
02:30	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	0	0	1	0	0	1	0	6	6
02:45	0	0	3	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4	4
Total	0	0	5	0	0	5	0	0	0	0	0	0	0	1	9	0	0	10	0	0	4	0	0	4	0	19	19
03:00	0	0	3	0	0	3	0	0	1	1	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	7	7
03:15	0	0	3	0	0	3	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	5	5
03:30	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	1	0	5	5
03:45	0	0	8	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9
Total	0	0	16	0	0	16	0	0	3	1	0	4	0	0	4	0	0	4	0	0	1	1	0	2	0	26	26
04:00	0	0	9	0	0	9	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	2	0	3	0	14	14
04:15	0	0	13	0	0	13	0	1	2	0	0	3	0	0	1	0	0	1	0	0	0	1	0	1	0	18	18
04:30	0	0	14	0	0	14	0	0	2	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	17	17
04:45	0	0	28	0	0	28	0	0	7	0	0	7	0	0	1	0	0	1	0	0	0	0	1	0	1	36	37
Total	0	0	64	0	0	64	0	1	12	0	0	13	0	1	3	0	0	4	0	0	1	3	1	4	1	85	86
05:00	0	1	29	0	2	30	0	1	5	0	0	6	0	0	3	1	0	4	0	0	1	3	0	4	2	44	46
05:15	0	0	42	0	0	42	0	2	8	0	0	10	0	1	2	1	1	4	0	0	0	0	0	0	1	56	57
05:30	0	2	58	0	0	60	0	0	18	0	0	18	0	1	6	1	0	8	0	0	2	6	0	8	0	94	94
05:45	0	2	54	1	0	57	0	0	14	1	0	15	0	0	9	0	0	9	0	0	1	6	0	7	0	88	88
Total	0	5	183	1	2	189	0	3	45	1	0	49	0	2	20	3	1	25	0	0	4	15	0	19	3	282	285



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Cool & Sunny
 CountCAM 2
 Study Conducted By: Sam

File Name : TMC 2203-t
 Site Code :
 Start Date : 05/04/2022
 Page No : 2

Groups Printed- Cars + - Trucks

Start Time	CSAH 5 Southbound						Alpine Dr Westbound						CSAH 5 Northbound						Alpine Dr 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	1	93	0	0	94	0	1	12	2	0	15	0	2	7	0	0	9	0	0	3	8	0	11	0	129	129
06:15	0	1	132	0	0	133	0	4	9	4	0	17	0	1	11	0	0	12	0	0	4	9	0	13	0	175	175
06:30	0	0	135	0	0	135	0	9	12	4	0	25	0	4	15	1	0	20	0	0	3	15	0	18	0	198	198
06:45	0	1	124	2	0	127	0	15	14	2	0	31	0	5	24	1	0	30	0	0	7	21	0	28	0	216	216
Total	0	3	484	2	0	489	0	29	47	12	0	88	0	12	57	2	0	71	0	0	17	53	0	70	0	718	718
07:00	0	5	155	1	0	161	0	21	19	5	0	45	0	4	12	4	0	20	0	0	9	11	0	20	0	246	246
07:15	0	5	144	3	0	152	0	34	23	2	0	59	0	2	25	2	0	29	0	2	6	19	1	27	1	267	268
07:30	0	3	115	1	0	119	0	15	27	7	0	49	0	6	30	2	0	38	0	0	3	12	0	15	0	221	221
07:45	0	1	90	1	0	92	0	7	25	7	0	39	0	4	32	0	0	36	0	1	5	20	0	26	0	193	193
Total	0	14	504	6	0	524	0	77	94	21	0	192	0	16	99	8	0	123	0	3	23	62	1	88	1	927	928
08:00	0	4	99	2	0	105	0	8	10	4	0	22	0	7	22	1	0	30	0	0	16	11	0	27	0	184	184
08:15	0	1	90	0	0	91	0	3	12	4	0	19	0	2	41	2	0	45	0	0	4	14	0	18	0	173	173
08:30	0	2	63	0	0	65	0	6	11	4	0	21	0	2	35	2	1	39	0	0	6	10	0	16	1	141	142
08:45	0	1	67	1	0	69	0	9	9	6	0	24	0	3	31	2	0	36	0	0	9	21	0	30	0	159	159
Total	0	8	319	3	0	330	0	26	42	18	0	86	0	14	129	7	1	150	0	0	35	56	0	91	1	657	658
09:00	0	1	61	0	0	62	0	6	10	9	0	25	0	6	23	3	0	32	0	0	5	34	1	39	1	158	159
09:15	0	5	85	0	0	90	0	7	7	5	0	19	0	12	20	3	1	35	0	0	8	19	0	27	1	171	172
09:30	0	3	62	0	0	65	0	2	5	3	0	10	0	9	19	1	0	29	0	0	5	9	0	14	0	118	118
09:45	0	8	47	0	0	55	0	2	10	0	0	12	0	8	23	0	0	31	0	0	7	4	1	11	1	109	110
Total	0	17	255	0	0	272	0	17	32	17	0	66	0	35	85	7	1	127	0	0	25	66	2	91	3	556	559
10:00	0	1	40	0	0	41	0	0	2	1	0	3	0	2	25	0	1	27	0	1	3	8	1	12	2	83	85
10:15	0	1	57	0	0	58	0	3	8	5	0	16	0	9	28	2	0	39	0	0	11	11	0	22	0	135	135
10:30	0	2	43	0	0	45	1	1	3	4	0	9	0	3	26	1	0	30	0	1	7	10	0	18	0	102	102
10:45	0	1	36	0	0	37	0	6	9	2	0	17	0	6	21	4	0	31	0	0	7	7	0	14	0	99	99
Total	0	5	176	0	0	181	1	10	22	12	0	45	0	20	100	7	1	127	0	2	28	36	1	66	2	419	421
11:00	0	1	48	0	0	49	0	2	10	4	0	16	0	4	30	5	0	39	0	0	5	6	1	11	1	115	116
11:15	0	3	37	0	1	40	0	3	2	6	1	11	0	9	32	1	0	42	0	1	7	11	0	19	2	112	114
11:30	0	2	44	1	1	47	0	1	9	2	1	12	0	7	30	1	2	38	0	1	8	7	3	16	7	113	120
11:45	0	3	38	0	0	41	0	4	11	2	0	17	0	8	37	2	1	47	0	1	6	13	1	20	2	125	127
Total	0	9	167	1	2	177	0	10	32	14	2	56	0	28	129	9	3	166	0	3	26	37	5	66	12	465	477
12:00	0	3	38	2	0	43	0	3	2	2	0	7	0	10	29	6	0	45	0	0	10	8	2	18	2	113	115



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2203-t
 Site Code :
 Start Date : 05/04/2022
 Page No : 3

Weather: Cool & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 5 Southbound						Alpine Dr Westbound						CSAH 5 Northbound						Alpine Dr 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			
12:15	0	2	46	0	1	48	0	1	7	2	0	10	0	2	45	4	5	51	0	0	4	5	1	9	7	118	125
12:30	0	4	43	1	1	48	0	2	11	3	0	16	0	5	32	2	2	39	0	0	7	8	2	15	5	118	123
12:45	0	2	32	3	0	37	0	3	10	3	0	16	0	9	50	2	0	61	0	0	12	7	0	19	0	133	133
Total	0	11	159	6	2	176	0	9	30	10	0	49	0	26	156	14	7	196	0	0	33	28	5	61	14	482	496
13:00	0	2	27	0	2	29	0	3	6	3	3	12	0	7	38	4	1	49	0	0	8	7	1	15	7	105	112
13:15	0	1	27	0	0	28	0	0	9	5	0	14	0	6	36	2	0	44	0	0	9	11	1	20	1	106	107
13:30	0	1	40	1	0	42	0	2	12	2	0	16	0	3	50	1	0	54	0	0	11	12	0	23	0	135	135
13:45	0	3	30	1	0	34	0	1	11	3	0	15	1	3	55	2	0	61	0	2	12	7	0	21	0	131	131
Total	0	7	124	2	2	133	0	6	38	13	3	57	1	19	179	9	1	208	0	2	40	37	2	79	8	477	485
14:00	0	1	45	0	0	46	0	0	9	5	0	14	0	7	46	3	0	56	0	0	11	8	0	19	0	135	135
14:15	0	4	52	0	0	56	0	6	15	6	0	27	0	7	59	3	0	69	0	0	5	3	1	8	1	160	161
14:30	0	3	43	1	0	47	0	2	24	11	1	37	0	14	59	2	0	75	0	0	12	7	0	19	1	178	179
14:45	0	5	38	0	0	43	0	5	14	3	0	22	0	15	69	1	0	85	0	0	16	8	0	24	0	174	174
Total	0	13	178	1	0	192	0	13	62	25	1	100	0	43	233	9	0	285	0	0	44	26	1	70	2	647	649
15:00	0	4	41	0	0	45	0	7	15	3	0	25	0	17	69	0	0	86	0	0	29	8	0	37	0	193	193
15:15	0	3	49	1	0	53	0	3	14	5	0	22	0	11	80	6	0	97	0	1	21	15	0	37	0	209	209
15:30	1	2	48	0	0	51	0	8	14	7	0	29	0	10	96	6	1	112	0	1	25	18	1	44	2	236	238
15:45	0	3	43	1	0	47	0	8	13	9	0	30	1	13	77	4	0	95	0	0	25	18	0	43	0	215	215
Total	1	12	181	2	0	196	0	26	56	24	0	106	1	51	322	16	1	390	0	2	100	59	1	161	2	853	855
16:00	1	14	65	0	0	80	0	4	10	10	0	24	0	11	118	10	1	139	0	0	23	14	1	37	2	280	282
16:15	0	6	81	0	0	87	0	4	14	6	0	24	1	14	109	1	0	125	0	0	34	12	0	46	0	282	282
16:30	0	8	54	0	0	62	0	4	26	3	0	33	0	13	110	3	0	126	0	0	28	10	1	38	1	259	260
16:45	0	3	72	0	1	75	0	3	30	13	1	46	0	12	115	7	0	134	0	1	21	17	0	39	2	294	296
Total	1	31	272	0	1	304	0	15	80	32	1	127	1	50	452	21	1	524	0	1	106	53	2	160	5	1115	1120
17:00	0	8	67	0	0	75	0	4	19	14	0	37	0	21	83	5	0	109	0	0	39	16	0	55	0	276	276
17:15	0	7	63	0	3	70	0	6	17	10	2	33	0	13	100	6	4	119	0	0	20	15	1	35	10	257	267
17:30	0	7	71	0	1	78	0	3	17	8	0	28	0	16	75	3	1	94	0	0	24	14	1	38	3	238	241
17:45	0	10	46	1	1	57	0	3	17	8	0	28	0	25	79	5	1	109	0	0	15	4	2	19	4	213	217
Total	0	32	247	1	5	280	0	16	70	40	2	126	0	75	337	19	6	431	0	0	98	49	4	147	17	984	1001
18:00	1	7	66	0	0	74	0	5	16	4	0	25	0	14	68	4	2	86	0	1	25	16	2	42	4	227	231
18:15	0	6	51	1	0	58	0	0	13	12	1	25	0	10	60	5	0	75	0	0	21	8	3	29	4	187	191



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2203-t
 Site Code :
 Start Date : 05/04/2022
 Page No : 4

Weather: Cool & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 5 Southbound						Alpine Dr Westbound						CSAH 5 Northbound						Alpine Dr 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			
18:30	0	8	47	0	1	55	0	1	18	4	0	23	0	6	59	3	8	68	0	0	12	6	4	18	13	164	177
18:45	0	6	48	1	0	55	0	3	16	6	0	25	0	8	42	2	1	52	0	0	13	6	3	19	4	151	155
Total	1	27	212	2	1	242	0	9	63	26	1	98	0	38	229	14	11	281	0	1	71	36	12	108	25	729	754
19:00	0	8	43	0	1	51	0	3	10	3	0	16	0	4	46	4	1	54	0	2	16	6	0	24	2	145	147
19:15	0	2	36	1	0	39	0	3	6	0	0	9	0	6	59	4	0	69	0	0	10	13	5	23	5	140	145
19:30	0	5	23	2	0	30	0	2	10	7	0	19	0	7	42	1	0	50	0	0	17	5	1	22	1	121	122
19:45	0	3	25	3	0	31	0	1	13	5	0	19	0	7	38	1	0	46	0	1	13	3	1	17	1	113	114
Total	0	18	127	6	1	151	0	9	39	15	0	63	0	24	185	10	1	219	0	3	56	27	7	86	9	519	528
20:00	0	5	27	1	0	33	0	2	8	10	1	20	0	12	41	3	0	56	0	0	12	5	2	17	3	126	129
20:15	0	0	17	2	1	19	0	1	7	1	2	9	1	6	46	2	0	55	0	0	11	10	4	21	7	104	111
20:30	0	5	23	0	0	28	0	3	4	2	0	9	0	4	33	3	1	40	0	0	18	11	3	29	4	106	110
20:45	0	4	23	1	2	28	0	1	8	4	1	13	0	5	35	1	0	41	0	0	17	3	1	20	4	102	106
Total	0	14	90	4	3	108	0	7	27	17	4	51	1	27	155	9	1	192	0	0	58	29	10	87	18	438	456
21:00	0	2	13	0	0	15	0	1	2	1	0	4	0	2	32	4	0	38	0	1	9	5	0	15	0	72	72
21:15	0	2	13	0	0	15	0	1	5	2	0	8	0	4	26	3	0	33	0	0	5	3	0	8	0	64	64
21:30	0	2	10	0	0	12	0	1	2	1	0	4	0	9	25	1	0	35	0	0	2	0	0	2	0	53	53
21:45	0	4	6	0	0	10	0	1	4	0	0	5	0	3	11	1	0	15	0	0	3	1	0	4	0	34	34
Total	0	10	42	0	0	52	0	4	13	4	0	21	0	18	94	9	0	121	0	1	19	9	0	29	0	223	223
22:00	0	0	6	0	0	6	0	2	4	2	0	8	0	3	20	0	0	23	0	0	3	2	0	5	0	42	42
22:15	0	0	9	0	0	9	0	1	1	1	0	3	0	2	18	0	0	20	0	0	2	0	0	2	0	34	34
22:30	0	1	9	0	0	10	0	0	1	0	0	1	0	1	8	0	0	9	0	0	2	0	0	2	0	22	22
22:45	0	0	4	0	0	4	0	0	1	1	0	2	0	0	6	1	0	7	0	0	6	1	0	7	0	20	20
Total	0	1	28	0	0	29	0	3	7	4	0	14	0	6	52	1	0	59	0	0	13	3	0	16	0	118	118
23:00	0	0	1	0	0	1	0	0	1	0	0	1	0	1	8	1	0	10	0	0	2	1	0	3	0	15	15
23:15	0	1	1	0	0	2	0	0	1	0	0	1	0	1	6	0	0	7	0	0	1	2	0	3	0	13	13
23:30	0	0	1	0	0	1	0	1	0	0	0	1	0	0	3	1	0	4	0	0	0	0	0	0	0	6	6
23:45	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	5	5
Total	0	1	5	0	0	6	0	1	2	0	0	3	0	2	20	2	0	24	0	0	3	3	0	6	0	39	39
Grand Total	3	238	3851	37	19	4129	1	291	816	306	14	1414	4	510	3064	177	36	3755	0	18	813	690	54	1521	123	10819	10942
Apprch %	0.1	5.8	93.3	0.9			0.1	20.6	57.7	21.6			0.1	13.6	81.6	4.7			0	1.2	53.5	45.4					
Total %	0	2.2	35.6	0.3		38.2	0	2.7	7.5	2.8		13.1	0	4.7	28.3	1.6		34.7	0	0.2	7.5	6.4		14.1	1.1	98.9	
Cars +	3	226	3617	34		3899	1	276	770	285		1346	4	494	2879	171		3584	0	17	783	658		1512	0	0	10341
% Cars +	100	95	93.9	91.9	100	94	100	94.8	94.4	93.1	100	94.3	100	96.9	94	96.6	100	94.5	0	94.4	96.3	95.4	100	96	0	0	94.5
Trucks	0	12	234	3		249	0	15	46	21		82	0	16	185	6		207	0	1	30	32		63	0	0	601
% Trucks	0	5	6.1	8.1	0	6	0	5.2	5.6	6.9	0	5.7	0	3.1	6	3.4	0	5.5	0	5.6	3.7	4.6	0	4	0	0	5.5

Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Start Time	CSAH 5 Southbound					Alpine Dr Westbound					CSAH 5 Northbound					Alpine Dr Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
Peak Hour Analysis From 00:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:45																					
06:45	0	1	124	2	127	0	15	14	2	31	0	5	24	1	30	0	0	7	21	28	216
07:00	0	5	155	1	161	0	21	19	5	45	0	4	12	4	20	0	0	9	11	20	246
07:15	0	5	144	3	152	0	34	23	2	59	0	2	25	2	29	0	2	6	19	27	267
07:30	0	3	115	1	119	0	15	27	7	49	0	6	30	2	38	0	0	3	12	15	221
Total Volume	0	14	538	7	559	0	85	83	16	184	0	17	91	9	117	0	2	25	63	90	950
% App. Total	0	2.5	96.2	1.3		0	46.2	45.1	8.7		0	14.5	77.8	7.7		0	2.2	27.8	70		
PHF	.000	.700	.868	.583	.868	.000	.625	.769	.571	.780	.000	.708	.758	.563	.770	.000	.250	.694	.750	.804	.890

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00																					
12:00	0	3	38	2	43	0	3	2	2	7	0	10	29	6	45	0	0	10	8	18	113
12:15	0	2	46	0	48	0	1	7	2	10	0	2	45	4	51	0	0	4	5	9	118
12:30	0	4	43	1	48	0	2	11	3	16	0	5	32	2	39	0	0	7	8	15	118
12:45	0	2	32	3	37	0	3	10	3	16	0	9	50	2	61	0	0	12	7	19	133
Total Volume	0	11	159	6	176	0	9	30	10	49	0	26	156	14	196	0	0	33	28	61	482
% App. Total	0	6.2	90.3	3.4		0	18.4	61.2	20.4		0	13.3	79.6	7.1		0	0	54.1	45.9		
PHF	.000	.688	.864	.500	.917	.000	.750	.682	.833	.766	.000	.650	.780	.583	.803	.000	.000	.688	.875	.803	.906

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	1	14	65	0	80	0	4	10	10	24	0	11	118	10	139	0	0	23	14	37	280
16:15	0	6	81	0	87	0	4	14	6	24	1	14	109	1	125	0	0	34	12	46	282
16:30	0	8	54	0	62	0	4	26	3	33	0	13	110	3	126	0	0	28	10	38	259
16:45	0	3	72	0	75	0	3	30	13	46	0	12	115	7	134	0	1	21	17	39	294
Total Volume	1	31	272	0	304	0	15	80	32	127	1	50	452	21	524	0	1	106	53	160	1115
% App. Total	0.3	10.2	89.5	0		0	11.8	63	25.2		0.2	9.5	86.3	4		0	0.6	66.2	33.1		
PHF	.250	.554	.840	.000	.874	.000	.938	.667	.615	.690	.250	.893	.958	.525	.942	.000	.250	.779	.779	.870	.948



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2203-t
 Site Code :
 Start Date : 05/04/2022
 Page No : 1

Weather: Cool & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Trucks

Start Time	CSAH 5 Southbound					Alpine Dr Westbound					CSAH 5 Northbound					Alpine Dr 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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	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	0	1	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	0	1	0	1	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	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
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	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
06:00	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	9
06:15	0	0	14	0	14	0	0	0	0	0	0	0	1	0	1	0	0	3	0	3	3	18
06:30	0	0	3	0	3	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	5
06:45	0	1	15	0	16	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	17
Total	0	1	40	0	41	0	0	0	1	1	0	1	2	0	3	0	0	4	0	4	4	49
07:00	0	0	14	0	14	0	1	1	1	3	0	0	1	0	1	0	0	0	1	1	1	19
07:15	0	1	12	2	15	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	17
07:30	0	1	6	0	7	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	0	10
07:45	0	0	8	0	8	0	0	2	0	2	0	0	3	0	3	0	0	1	3	4	4	17
Total	0	2	40	2	44	0	3	3	1	7	0	1	6	0	7	0	0	1	4	5	5	63
08:00	0	0	9	0	9	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	11
08:15	0	0	5	0	5	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1	7
08:30	0	0	6	0	6	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	10
08:45	0	0	8	0	8	0	1	1	2	4	0	0	3	0	3	0	0	3	0	3	3	18
Total	0	0	28	0	28	0	1	2	2	5	0	1	8	0	9	0	0	3	1	4	4	46



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2203-t

Site Code :

Start Date : 05/04/2022

Page No : 2

Weather: Cool & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Trucks

Start Time	CSAH 5 Southbound					Alpine Dr Westbound					CSAH 5 Northbound					Alpine Dr 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	
09:00	0	1	1	0	2	0	1	2	2	5	0	0	1	0	1	0	0	0	6	6	14
09:15	0	2	18	0	20	0	0	0	1	1	0	1	1	0	2	0	0	1	1	2	25
09:30	0	1	2	0	3	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1	7
09:45	0	0	1	0	1	0	0	0	0	0	0	0	4	0	4	0	0	1	1	2	7
Total	0	4	22	0	26	0	1	4	3	8	0	1	7	0	8	0	0	3	8	11	53
10:00	0	0	1	0	1	0	0	0	1	1	0	0	2	0	2	0	0	0	0	0	4
10:15	0	0	3	0	3	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	6
10:30	0	0	4	0	4	0	0	0	0	0	0	0	4	0	4	0	0	1	0	1	9
10:45	0	0	6	0	6	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	10
Total	0	0	14	0	14	0	0	0	1	1	0	1	11	1	13	0	0	1	0	1	29
11:00	0	0	6	0	6	0	0	1	0	1	0	0	4	0	4	0	0	0	1	1	12
11:15	0	0	7	0	7	0	0	0	0	0	0	1	3	0	4	0	0	1	0	1	12
11:30	0	0	5	0	5	0	0	0	0	0	0	0	2	0	2	0	0	1	1	2	9
11:45	0	0	2	0	2	0	0	2	1	3	0	0	5	1	6	0	0	0	1	1	12
Total	0	0	20	0	20	0	0	3	1	4	0	1	14	1	16	0	0	2	3	5	45
12:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	0	1	3
12:15	0	0	5	0	5	0	0	2	0	2	0	0	5	1	6	0	0	1	0	1	14
12:30	0	0	3	0	3	0	0	2	0	2	0	1	2	0	3	0	0	1	0	1	9
12:45	0	0	1	0	1	0	0	1	0	1	0	0	4	0	4	0	0	1	1	2	8
Total	0	0	9	0	9	0	0	5	0	5	0	1	13	1	15	0	0	4	1	5	34
13:00	0	0	3	0	3	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	8
13:15	0	1	2	0	3	0	0	0	0	0	0	0	5	0	5	0	0	1	0	1	9
13:30	0	0	3	0	3	0	0	2	0	2	0	0	3	0	3	0	0	0	1	1	9
13:45	0	0	4	0	4	0	0	1	0	1	0	1	6	0	7	0	0	0	1	1	13
Total	0	1	12	0	13	0	0	3	0	3	0	1	19	0	20	0	0	1	2	3	39
14:00	0	0	2	0	2	0	0	0	0	0	0	1	4	1	6	0	0	0	1	1	9
14:15	0	0	3	0	3	0	1	1	0	2	0	0	4	0	4	0	0	1	0	1	10
14:30	0	0	5	0	5	0	0	2	0	2	0	0	6	0	6	0	0	1	1	2	15
14:45	0	1	2	0	3	0	0	3	2	5	0	1	2	0	3	0	0	0	0	0	11
Total	0	1	12	0	13	0	1	6	2	9	0	2	16	1	19	0	0	2	2	4	45
15:00	0	1	3	0	4	0	0	2	0	2	0	0	1	0	1	0	0	0	1	1	8
15:15	0	0	0	0	0	0	1	1	2	4	0	2	6	0	8	0	0	0	1	1	13
15:30	0	1	1	0	2	0	3	2	2	7	0	0	10	0	10	0	1	1	1	3	22
15:45	0	0	2	0	2	0	4	2	0	6	0	0	2	0	2	0	0	3	2	5	15
Total	0	2	6	0	8	0	8	7	4	19	0	2	19	0	21	0	1	4	5	10	58
16:00	0	0	2	0	2	0	0	2	1	3	0	3	4	0	7	0	0	0	0	0	12
16:15	0	0	2	0	2	0	0	1	0	1	0	0	6	0	6	0	0	2	1	3	12
16:30	0	0	0	0	0	0	1	3	1	5	0	0	6	0	6	0	0	0	2	2	13
16:45	0	0	5	0	5	0	0	3	0	3	0	0	8	0	8	0	0	0	2	2	18
Total	0	0	9	0	9	0	1	9	2	12	0	3	24	0	27	0	0	2	5	7	55
17:00	0	0	1	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3
17:15	0	0	1	0	1	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	4
17:30	0	0	2	0	2	0	0	2	2	4	0	0	3	1	4	0	0	0	1	1	11
17:45	0	0	1	0	1	0	0	1	0	1	0	0	4	0	4	0	0	1	0	1	7
Total	0	0	5	0	5	0	0	4	2	6	0	1	10	1	12	0	0	1	1	2	25
18:00	0	0	4	0	4	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	6
18:15	0	0	1	0	1	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	4



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2203-t

Site Code :

Start Date : 05/04/2022

Page No : 3

Weather: Cool & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Trucks

Start Time	CSAH 5 Southbound					Alpine Dr Westbound					CSAH 5 Northbound					Alpine Dr 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	
18:30	0	0	2	0	2	0	0	0	0	0	0	0	9	0	9	0	0	0	0	0	0
18:45	0	0	2	0	2	0	0	0	0	0	0	0	7	0	7	0	0	0	0	0	0
Total	0	0	9	0	9	0	0	0	0	0	0	0	20	0	20	0	0	1	0	1	1
19:00	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
19:30	0	0	0	1	1	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	1	1	0	0	6	1	7	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	0	1	1	0	0	4	0	4	0	0	0	0	0	0
20:15	0	0	1	0	1	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	2	0	2	0	0	0	0	0	0
20:45	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Total	0	1	1	0	2	0	0	0	1	1	0	0	7	0	7	0	0	0	0	0	10
21:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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
21:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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	2	0	2	0	0	0	0	0	2
22:00	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
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	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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	12	234	3	249	0	15	46	21	82	0	16	185	6	207	0	1	30	32	63	601
Apprch %	0	4.8	94	1.2		0	18.3	56.1	25.6		0	7.7	89.4	2.9		0	1.6	47.6	50.8		
Total %	0	2	38.9	0.5	41.4	0	2.5	7.7	3.5	13.6	0	2.7	30.8	1	34.4	0	0.2	5	5.3	10.5	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2203

Study Date : 06/01/2022

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 5

Number of Lanes : 1

Total Approach Volume: 3,755

Southbound: CSAH 5

Number of Lanes : 1

Total Approach Volume: 4,129

Minor Street Approaches

Eastbound: Alpine Dr

Number of Lanes : 1

Total Approach Volume: 1,521

Westbound: Alpine Dr

Number of Lanes : 1

Total Approach Volume: 1,414

Warrant Summary (Rural Values Apply)

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

Required 1A volumes reached for 11 hours, 8 are needed

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

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

Number of hours (6) volumes exceed minimum \geq minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (17) volumes exceed minimum \geq required (1). Delay data not evaluated.

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

Volumes exceed minimums for at least one hour period.

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

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

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

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

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

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

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2203

Study Date : 06/01/2022

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

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **350**

Veh/Hr Minor = **105**

Time	Major Road CSAH 5				Total	Minor Road Alpine Dr		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:15 - 17:15	494	+	299	=	793	178	140	Yes
17:15 - 18:15	408	+	279	=	687	134	114	Yes
15:15 - 16:15	443	+	231	=	674	161	105	Yes
06:15 - 07:15	82	+	556	=	638	79	118	Yes
07:15 - 08:15	133	+	468	=	601	95	169	Yes
14:15 - 15:15	315	+	191	=	506	88	111	Yes
08:30 - 09:30	142	+	286	=	428	112	89	Yes
06:00 - 07:00	71	+	489	=	560	70	88	No
14:00 - 15:00	285	+	192	=	477	70	100	No
05:45 - 06:45	50	+	419	=	469	49	72	No
18:15 - 19:15	249	+	219	=	468	90	89	No
13:45 - 14:45	261	+	183	=	444	67	93	No
18:30 - 19:30	243	+	200	=	443	84	73	No
08:15 - 09:15	152	+	287	=	439	103	89	No
13:30 - 14:30	240	+	178	=	418	71	72	No
18:45 - 19:45	225	+	175	=	400	88	69	No
05:30 - 06:30	38	+	344	=	382	39	65	No
12:00 - 13:00	196	+	176	=	372	61	49	No
19:00 - 20:00	219	+	151	=	370	86	63	No
13:15 - 14:15	215	+	150	=	365	83	59	No
12:15 - 13:15	200	+	162	=	362	58	54	No
11:45 - 12:45	182	+	180	=	362	62	50	No
11:30 - 12:30	181	+	179	=	360	63	46	No
19:15 - 20:15	221	+	133	=	354	79	67	No
09:30 - 10:30	126		219		345	59	41	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2203

Study Date : 06/01/2022

Warrant 1B - Interruption of Continuous Traffic

Description

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

Summary

Only 6 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **525**

Veh/Hr Minor = **52**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	488	+	282	=	770	167	149	Yes
15:30 - 16:30	471	+	265	=	736	170	107	Yes
07:00 - 08:00	123	+	524	=	647	88	192	Yes
17:30 - 18:30	364	+	267	=	631	128	106	Yes
06:00 - 07:00	71	+	489	=	560	70	88	Yes
14:30 - 15:30	343	+	188	=	531	117	106	Yes
14:15 - 15:15	315	+	191	=	506	88	111	No
08:00 - 09:00	150	+	330	=	480	91	86	No
14:00 - 15:00	285	+	192	=	477	70	100	No
05:45 - 06:45	50	+	419	=	469	49	72	No
13:45 - 14:45	261	+	183	=	444	67	93	No
18:30 - 19:30	243	+	200	=	443	84	73	No
08:15 - 09:15	152	+	287	=	439	103	89	No
08:30 - 09:30	142	+	286	=	428	112	89	No
13:30 - 14:30	240	+	178	=	418	71	72	No
08:45 - 09:45	132	+	286	=	418	110	78	No
18:45 - 19:45	225	+	175	=	400	88	69	No
09:00 - 10:00	127	+	272	=	399	91	66	No
05:30 - 06:30	38	+	344	=	382	39	65	No
09:15 - 10:15	122	+	251	=	373	64	44	No
12:00 - 13:00	196	+	176	=	372	61	49	No
19:00 - 20:00	219	+	151	=	370	86	63	No
13:15 - 14:15	215	+	150	=	365	83	59	No
12:15 - 13:15	200	+	162	=	362	58	54	No
11:45 - 12:45	182		180		362	62	50	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2203

Study Date : 06/01/2022

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

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

Site Data Required

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

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **280 420**

Veh/Hr Minor = **84 42**

Major Road CSAH 5

Minor Road Alpine Dr

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:45 - 16:45	485	+	276	=	761	164	111	Yes
16:45 - 17:45	456	+	298	=	754	167	144	Yes
07:00 - 08:00	123	+	524	=	647	88	192	Yes
17:45 - 18:45	338	+	244	=	582	108	101	Yes
14:45 - 15:45	380	+	192	=	572	142	98	Yes
06:00 - 07:00	71	+	489	=	560	70	88	Yes
08:00 - 09:00	150	+	330	=	480	91	86	Yes
13:45 - 14:45	261	+	183	=	444	67	93	Yes
18:45 - 19:45	225	+	175	=	400	88	69	Yes
09:00 - 10:00	127	+	272	=	399	91	66	Yes
19:45 - 20:45	197	+	111	=	308	84	57	Yes
05:45 - 06:45	50	+	419	=	469	49	72	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
15:45 - 16:45	485	+	276	=	761	164	111	Yes
16:45 - 17:45	456	+	298	=	754	167	144	Yes
06:45 - 07:45	117	+	559	=	676	90	184	Yes
17:45 - 18:45	338	+	244	=	582	108	101	Yes
14:45 - 15:45	380	+	192	=	572	142	98	Yes
07:45 - 08:45	150	+	353	=	503	87	101	Yes
05:45 - 06:45	50	+	419	=	469	49	72	Yes
13:45 - 14:45	261	+	183	=	444	67	93	Yes
08:45 - 09:45	132	+	286	=	418	110	78	No
13:30 - 14:30	240	+	178	=	418	71	72	No
18:45 - 19:45	225	+	175	=	400	88	69	No
09:00 - 10:00	127	+	272	=	399	91	66	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2203

Study Date : 06/01/2022

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.

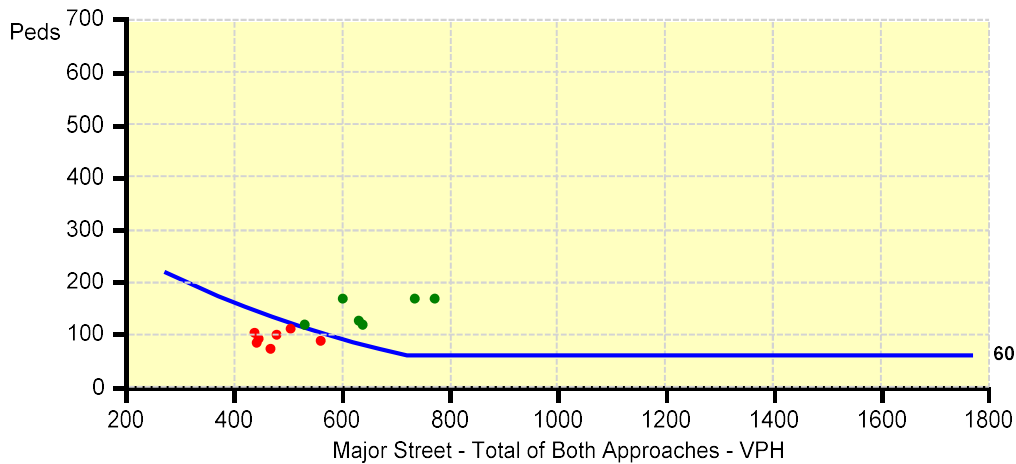
Summary

6 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 5				Total	Minor Road Alpine Dr		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	488	+	282	=	770	167	149	Yes
15:30 - 16:30	471	+	265	=	736	170	107	Yes
06:15 - 07:15	82	+	556	=	638	79	118	Yes
17:30 - 18:30	364	+	267	=	631	128	106	Yes
07:15 - 08:15	133	+	468	=	601	95	169	Yes
14:30 - 15:30	343	+	188	=	531	117	106	Yes
06:00 - 07:00	71	+	489	=	560	70	88	No
14:15 - 15:15	315	+	191	=	506	88	111	No
14:00 - 15:00	285	+	192	=	477	70	100	No
05:45 - 06:45	50	+	419	=	469	49	72	No
13:45 - 14:45	261	+	183	=	444	67	93	No
							73	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2203

Study Date : 06/01/2022

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

11 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 5				=	Total	Minor Road Alpine Dr		Met?
	Major NB	+	Major SB				Minor EB	Minor WB	
16:00 - 17:00	524	+	304	=	828	160	127	Yes	
16:15 - 17:15	494	+	299	=	793	178	140	Yes	
16:30 - 17:30	488	+	282	=	770	167	149	Yes	
15:45 - 16:45	485	+	276	=	761	164	111	Yes	
16:45 - 17:45	456	+	298	=	754	167	144	Yes	
15:30 - 16:30	471	+	265	=	736	170	107	Yes	
17:00 - 18:00	431	+	280	=	711	147	126	Yes	
06:45 - 07:45	117	+	559	=	676	90	184	Yes	
15:15 - 16:15	443	+	231	=	674	161	105	Yes	
06:30 - 07:30	99	+	575	=	674	93	160	Yes	
07:00 - 08:00	123	+	524	=	647	88	192	Yes	
							114	No	

