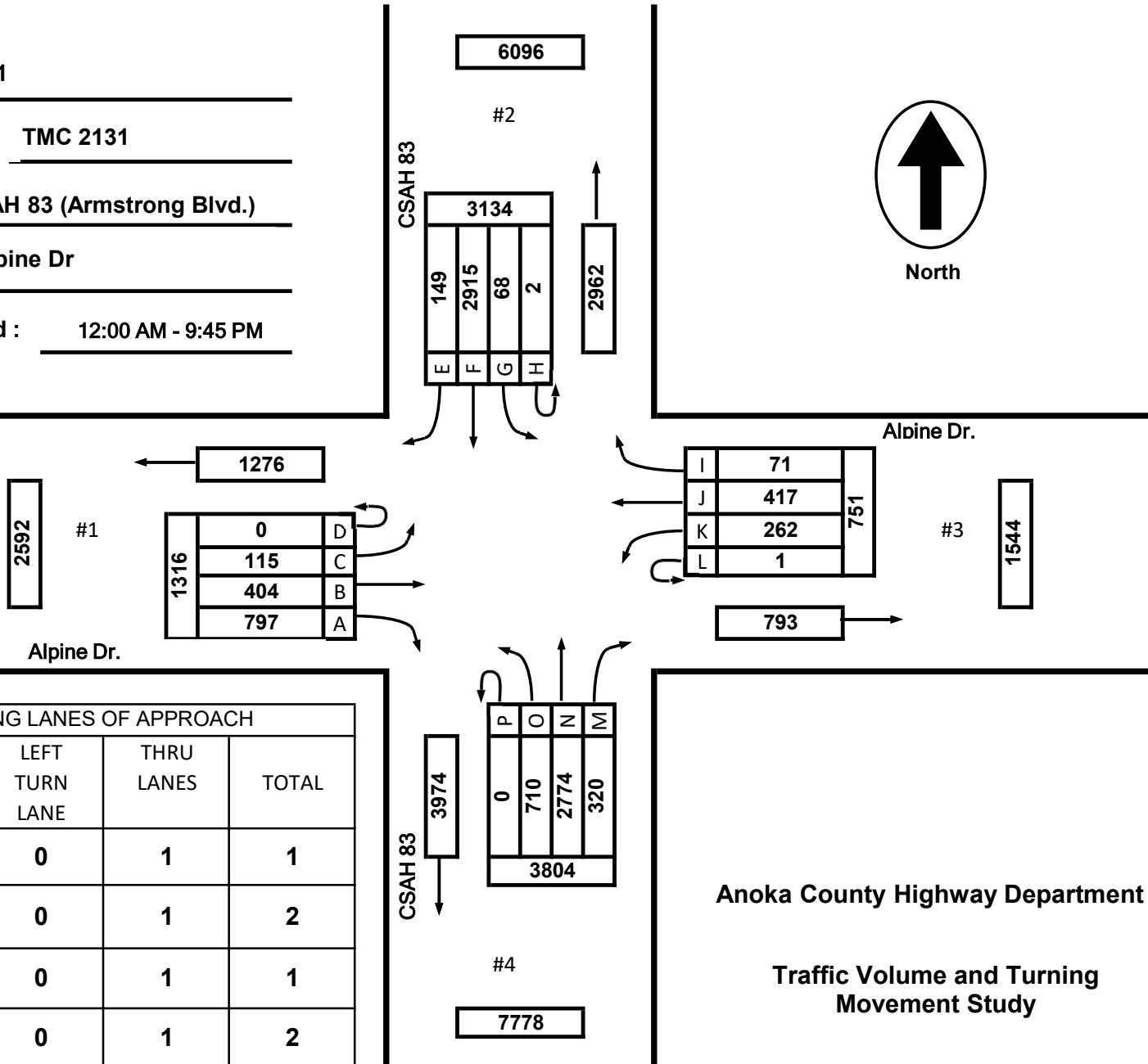


Date : 07/28/21

Count Number : TMC 2131

Location : CSAH 83 (Armstrong Blvd.)
@ Alpine Dr

Collection Period : 12:00 AM - 9:45 PM



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

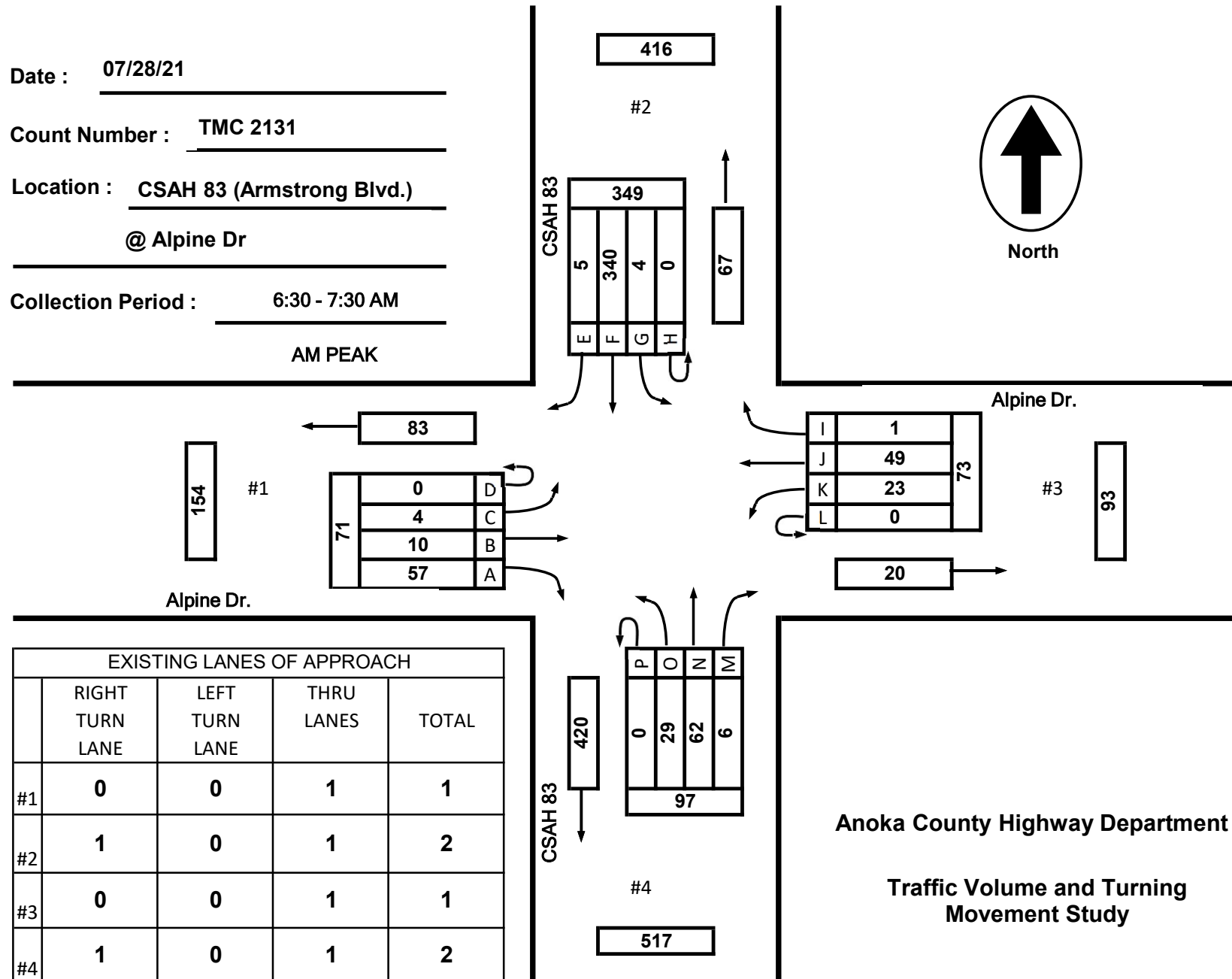
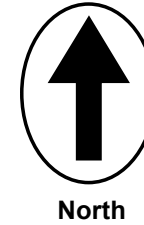
Date : 07/28/21

Count Number : TMC 2131

Location : CSAH 83 (Armstrong Blvd.)
@ Alpine Dr

Collection Period : 6:30 - 7:30 AM

AM PEAK



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

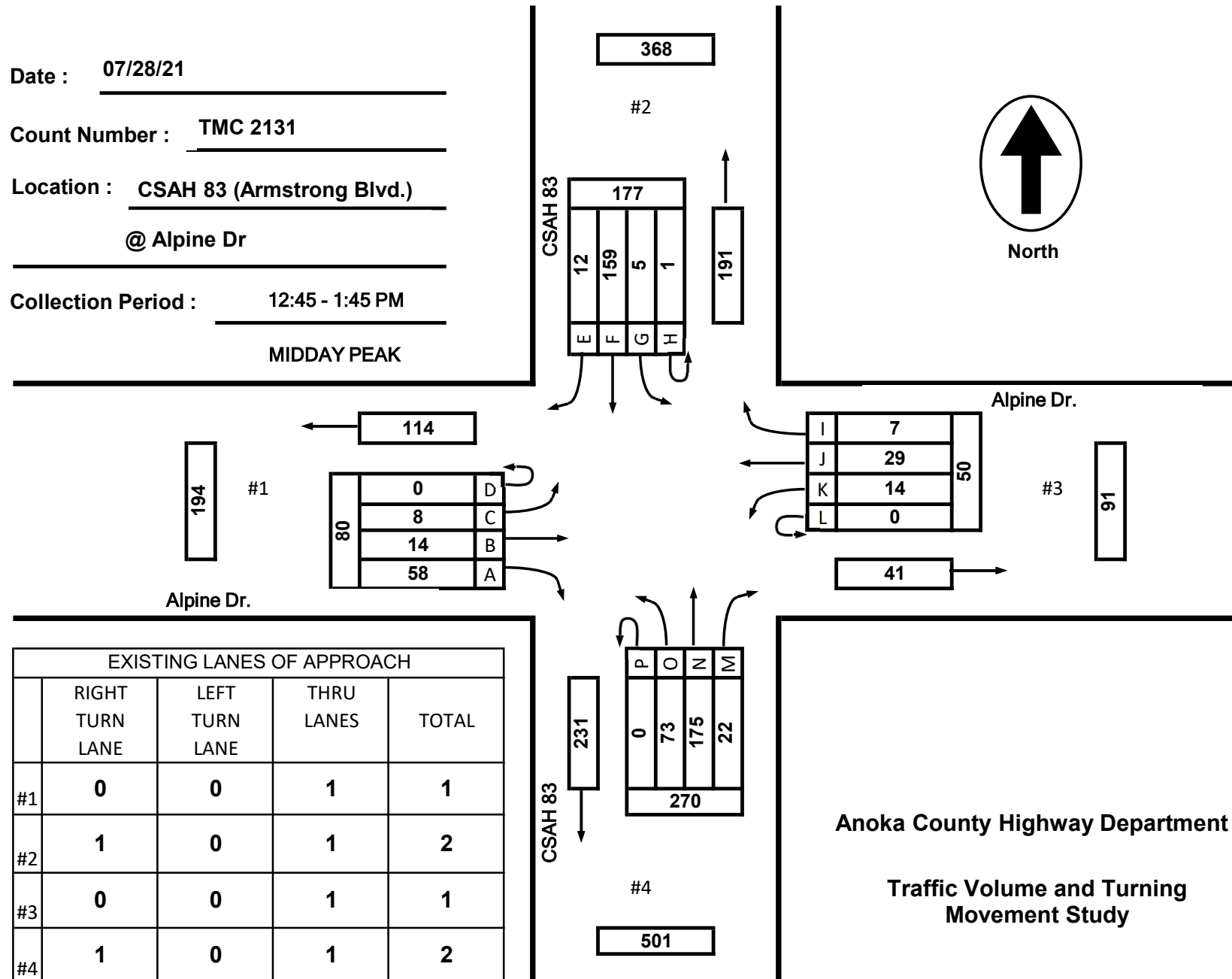
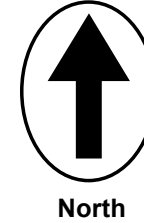
Date : 07/28/21

Count Number : TMC 2131

Location : CSAH 83 (Armstrong Blvd.)
@ Alpine Dr

Collection Period : 12:45 - 1:45 PM

MIDDAY PEAK



Anoka County Highway Department

Traffic Volume and Turning Movement Study

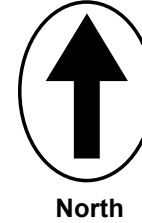
Date : 07/28/21

Count Number : TMC 2131

Location : CSAH 83 (Armstrong Blvd.)
@ Alpine Dr

Collection Period : 4:30 - 5:30 PM

PM PEAK



261

#1

0	D
11	C
60	B
68	A

Alpine Dr.

656

#2

11	191	7	0
E	F	G	H

CSAH 83

209

447

Alpine Dr.

12	76		
32			
32			
0			
I	J	K	L

#3

206

130

291

CSAH 83

0	79	424	63
P	O	N	M

#4

857

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2131
 Site Code :
 Start Date : 07/29/2021
 Page No : 1

Weather: Hot & Cloudy
 CountCAM 2
 Study Conducted By: Will & Matt

Groups Printed- Cars + - Trucks

Start Time	CSAH 83 (Armstrong Blvd.) Southbound						Alpine Dr. Westbound						CSAH 83 (Armstrong Blvd.) 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	1	2	0	0	3	0	0	2	0	0	2	0	0	9	0	0	9	0	0	1	0	0	1	0	15	15
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	0	5	5
00:30	0	0	2	0	0	2	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	9	9
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	0	8	8
Total	0	1	4	0	0	5	0	0	2	0	0	2	0	2	27	0	0	29	0	0	1	0	0	1	0	37	37
01:00	0	0	1	0	0	1	0	0	1	0	0	1	0	0	3	0	0	3	0	0	0	1	0	1	0	6	6
01:15	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
01:30	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	1	0	1	0	7	7
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	1	0	1	0	5	5
Total	0	0	5	0	0	5	0	0	1	0	0	1	0	0	14	0	0	14	0	0	1	3	0	4	0	24	24
02:00	0	0	3	0	0	3	0	1	1	0	0	2	0	0	3	0	0	3	0	0	0	0	0	0	0	8	8
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
02:30	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	3
02:45	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	3
Total	0	0	7	0	0	7	0	1	1	0	0	2	0	1	5	0	0	6	0	0	0	0	0	0	0	15	15
03:00	0	0	3	0	0	3	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	5	5
03:15	0	1	2	0	0	3	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	1	0	1	0	6	6
03:30	0	0	12	0	0	12	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	13	13
03:45	0	0	4	0	0	4	0	0	1	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	7	7
Total	0	1	21	0	0	22	0	0	1	1	0	2	0	2	4	0	0	6	0	0	0	1	0	1	0	31	31
04:00	0	0	8	0	0	8	0	1	1	0	0	2	0	0	2	0	0	2	0	0	0	1	0	1	0	13	13
04:15	0	0	17	1	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	21	21
04:30	0	0	25	1	0	26	0	1	1	0	0	2	0	0	1	0	0	1	0	1	0	3	0	4	0	33	33
04:45	0	0	22	2	0	24	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	4	0	4	0	30	30
Total	0	0	72	4	0	76	0	2	3	0	0	5	0	0	4	0	0	4	0	1	0	11	0	12	0	97	97
05:00	0	0	42	1	0	43	0	2	0	0	0	2	0	0	3	0	0	3	0	0	1	1	0	2	0	50	50
05:15	0	0	38	1	0	39	0	3	1	0	0	4	0	0	5	0	0	5	0	0	0	8	0	8	0	56	56
05:30	0	0	56	2	0	58	0	2	3	0	0	5	0	0	3	0	0	3	0	0	3	13	0	16	0	82	82
05:45	0	0	70	5	0	75	0	2	3	0	0	5	0	3	5	0	0	8	0	0	1	6	0	7	0	95	95
Total	0	0	206	9	0	215	0	9	7	0	0	16	0	3	16	0	0	19	0	0	5	28	0	33	0	283	283



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2131
 Site Code :
 Start Date : 07/29/2021
 Page No : 2

Weather: Hot & Cloudy
 CountCAM 2
 Study Conducted By: Will & Matt

Groups Printed- Cars + - Trucks

Start Time	CSAH 83 (Armstrong Blvd.) Southbound						Alpine Dr. Westbound						CSAH 83 (Armstrong Blvd.) 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	58	1	0	60	0	3	7	0	0	10	0	1	9	0	0	10	0	0	3	8	1	11	1	91	92
06:15	0	0	87	4	0	91	0	2	7	1	0	10	0	1	6	0	0	7	0	1	5	6	1	12	1	120	121
06:30	0	1	91	0	0	92	0	5	14	0	0	19	0	8	18	5	0	31	0	2	1	14	0	17	0	159	159
06:45	0	1	81	1	0	83	0	8	13	0	0	21	0	2	17	1	0	20	0	1	3	9	1	13	1	137	138
Total	0	3	317	6	0	326	0	18	41	1	0	60	0	12	50	6	0	68	0	4	12	37	3	53	3	507	510
07:00	0	1	70	3	0	74	0	6	12	0	0	18	0	13	14	0	0	27	0	0	2	17	0	19	0	138	138
07:15	0	1	98	1	0	100	0	4	10	1	0	15	0	6	13	0	0	19	0	1	4	17	1	22	1	156	157
07:30	0	0	78	2	0	80	0	11	13	0	0	24	0	7	15	2	0	24	0	0	4	19	2	23	2	151	153
07:45	0	2	71	3	0	76	0	4	9	2	0	15	0	4	23	0	0	27	0	0	3	11	0	14	0	132	132
Total	0	4	317	9	0	330	0	25	44	3	0	72	0	30	65	2	0	97	0	1	13	64	3	78	3	577	580
08:00	0	2	57	3	0	62	0	9	7	1	0	17	0	2	12	1	0	15	0	0	7	15	0	22	0	116	116
08:15	0	0	49	2	0	51	0	5	3	1	0	9	0	7	19	3	0	29	0	0	1	17	0	18	0	107	107
08:30	0	1	52	1	0	54	0	5	9	2	0	16	0	6	16	1	0	23	0	0	3	19	0	22	0	115	115
08:45	0	2	41	0	0	43	0	3	5	0	0	8	0	6	19	4	0	29	0	0	2	10	2	12	2	92	94
Total	0	5	199	6	0	210	0	22	24	4	0	50	0	21	66	9	0	96	0	0	13	61	2	74	2	430	432
09:00	0	2	49	1	0	52	0	8	5	0	0	13	0	8	23	3	0	34	0	0	3	11	0	14	0	113	113
09:15	0	1	32	1	0	34	0	4	5	0	0	9	0	10	29	0	0	39	0	1	4	18	0	23	0	105	105
09:30	0	1	45	1	0	47	0	4	1	1	0	6	0	2	20	4	0	26	0	2	5	10	1	17	1	96	97
09:45	0	0	47	1	0	48	0	2	5	1	0	8	0	12	25	3	0	40	0	1	1	15	0	17	0	113	113
Total	0	4	173	4	0	181	0	18	16	2	0	36	0	32	97	10	0	139	0	4	13	54	1	71	1	427	428
10:00	0	3	40	2	0	45	0	3	9	1	0	13	0	14	25	2	0	41	0	1	2	12	0	15	0	114	114
10:15	0	1	42	4	0	47	0	3	4	0	0	7	0	8	28	5	0	41	0	3	3	6	0	12	0	107	107
10:30	0	0	25	1	0	26	0	1	0	2	0	3	0	10	29	8	0	47	0	3	4	9	0	16	0	92	92
10:45	0	2	31	2	0	35	0	0	9	0	0	9	0	22	27	1	0	50	0	0	9	12	0	21	0	115	115
Total	0	6	138	9	0	153	0	7	22	3	0	32	0	54	109	16	0	179	0	7	18	39	0	64	0	428	428
11:00	0	0	52	2	0	54	0	0	5	0	0	5	0	8	28	3	0	39	0	1	2	11	0	14	0	112	112
11:15	0	1	37	2	0	40	0	2	0	0	1	2	0	16	30	2	0	48	0	1	4	10	0	15	1	105	106
11:30	0	0	36	3	0	39	0	0	2	0	0	2	0	6	22	3	0	31	0	4	5	17	0	26	0	98	98
11:45	0	0	35	2	1	37	0	12	5	3	0	20	0	13	33	5	0	51	0	1	5	12	0	18	1	126	127
Total	0	1	160	9	1	170	0	14	12	3	1	29	0	43	113	13	0	169	0	7	16	50	0	73	2	441	443
12:00	0	1	27	7	0	35	0	2	8	0	0	10	0	14	30	5	0	49	0	2	12	19	0	33	0	127	127



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2131
 Site Code :
 Start Date : 07/29/2021
 Page No : 3

Weather: Hot & Cloudy
 CountCAM 2
 Study Conducted By: Will & Matt

Groups Printed- Cars + - Trucks

Start Time	CSAH 83 (Armstrong Blvd.) Southbound						Alpine Dr. Westbound						CSAH 83 (Armstrong Blvd.) 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	37	3	0	42	0	5	3	0	0	8	0	17	34	4	0	55	0	1	4	14	1	19	1	124	125
12:30	0	0	45	3	0	48	0	2	9	0	0	11	0	7	36	6	0	49	0	4	1	14	1	19	1	127	128
12:45	1	0	35	7	0	43	0	4	5	2	0	11	0	21	48	5	0	74	0	1	4	17	0	22	0	150	150
Total	1	3	144	20	0	168	0	13	25	2	0	40	0	59	148	20	0	227	0	8	21	64	2	93	2	528	530
13:00	0	0	44	0	0	44	0	6	7	3	0	16	0	14	37	4	0	55	0	3	4	22	0	29	0	144	144
13:15	0	1	51	2	0	54	0	2	8	0	0	10	0	19	50	7	0	76	0	2	2	11	1	15	1	155	156
13:30	0	4	29	3	0	36	0	2	9	2	0	13	0	19	40	6	0	65	0	2	4	8	0	14	0	128	128
13:45	0	0	35	0	0	35	0	3	2	1	0	6	0	18	41	6	0	65	0	2	8	13	1	23	1	129	130
Total	0	5	159	5	0	169	0	13	26	6	0	45	0	70	168	23	0	261	0	9	18	54	2	81	2	556	558
14:00	0	4	46	0	0	50	0	6	13	0	0	19	0	11	52	4	0	67	0	1	6	20	0	27	0	163	163
14:15	1	0	38	4	0	43	0	1	8	2	0	11	0	14	38	2	0	54	0	3	8	15	0	26	0	134	134
14:30	0	1	54	3	0	58	0	4	6	0	0	10	0	12	60	3	0	75	0	8	5	15	0	28	0	171	171
14:45	0	0	39	3	0	42	0	4	5	1	0	10	0	13	65	5	0	83	0	2	8	9	0	19	0	154	154
Total	1	5	177	10	0	193	0	15	32	3	0	50	0	50	215	14	0	279	0	14	27	59	0	100	0	622	622
15:00	0	1	31	0	0	32	0	3	4	1	0	8	0	16	69	4	0	89	0	3	17	16	1	36	1	165	166
15:15	0	1	38	1	0	40	0	2	6	1	0	9	0	19	67	4	0	90	0	2	11	20	1	33	1	172	173
15:30	0	1	24	2	0	27	0	1	6	3	0	10	0	17	89	10	0	116	0	3	7	8	0	18	0	171	171
15:45	0	2	40	4	0	46	0	5	10	0	0	15	0	21	78	12	0	111	0	3	10	9	0	22	0	194	194
Total	0	5	133	7	0	145	0	11	26	5	0	42	0	73	303	30	0	406	0	11	45	53	2	109	2	702	704
16:00	0	1	43	0	0	44	0	5	11	3	0	19	0	14	107	9	0	130	0	6	13	15	1	34	1	227	228
16:15	0	2	36	5	0	43	0	3	6	1	0	10	0	15	90	9	0	114	0	2	8	13	0	23	0	190	190
16:30	0	1	41	4	0	46	0	10	8	5	0	23	0	23	98	19	0	140	0	3	15	23	0	41	0	250	250
16:45	0	3	53	1	0	57	0	8	11	1	0	20	0	9	117	12	0	138	0	3	15	21	0	39	0	254	254
Total	0	7	173	10	0	190	0	26	36	10	0	72	0	61	412	49	0	522	0	14	51	72	1	137	1	921	922
17:00	0	1	45	5	0	51	0	9	3	5	0	17	0	27	113	19	0	159	0	3	15	12	0	30	0	257	257
17:15	0	2	52	1	0	55	0	5	10	1	0	16	0	20	96	13	0	129	0	2	15	12	0	29	0	229	229
17:30	0	2	42	0	0	44	0	7	8	1	0	16	0	15	96	11	0	122	0	1	9	17	2	27	2	209	211
17:45	0	3	36	5	2	44	0	4	10	5	0	19	0	19	71	8	0	98	0	6	11	11	0	28	2	189	191
Total	0	8	175	11	2	194	0	25	31	12	0	68	0	81	376	51	0	508	0	12	50	52	2	114	4	884	888
18:00	0	1	30	2	0	33	1	2	4	1	0	8	0	15	68	7	0	90	0	2	10	13	1	25	1	156	157
18:15	0	2	32	3	0	37	0	4	9	1	0	14	0	9	60	12	0	81	0	1	12	9	0	22	0	154	154



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2131
 Site Code :
 Start Date : 07/29/2021
 Page No : 4

Weather: Hot & Cloudy
 CountCAM 2
 Study Conducted By: Will & Matt

Groups Printed- Cars + - Trucks

Start Time	CSAH 83 (Armstrong Blvd.) Southbound						Alpine Dr. Westbound						CSAH 83 (Armstrong Blvd.) 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	0	34	0	3	34	0	6	9	2	0	17	0	11	50	8	3	69	0	1	6	8	1	15	7	135	142
18:45	0	1	24	3	0	28	0	2	5	2	0	9	0	8	44	6	0	58	0	1	8	6	0	15	0	110	110
Total	0	4	120	8	3	132	1	14	27	6	0	48	0	43	222	33	3	298	0	5	36	36	2	77	8	555	563
19:00	0	0	25	2	0	27	0	2	3	0	0	5	0	11	50	5	0	66	0	1	5	5	4	11	4	109	113
19:15	0	0	21	1	0	22	0	3	3	1	0	7	0	5	43	2	0	50	0	1	4	3	1	8	1	87	88
19:30	0	0	25	3	1	28	0	3	8	1	0	12	0	5	33	3	0	41	0	2	7	8	1	17	2	98	100
19:45	0	1	24	0	0	25	0	1	3	3	0	7	0	6	40	5	0	51	0	2	5	8	1	15	1	98	99
Total	0	1	95	6	1	102	0	9	17	5	0	31	0	27	166	15	0	208	0	6	21	24	7	51	8	392	400
20:00	0	1	13	2	0	16	0	3	3	0	0	6	0	7	29	4	0	40	0	1	11	3	0	15	0	77	77
20:15	0	1	24	2	0	27	0	3	4	0	0	7	0	12	37	4	0	53	0	6	7	6	0	19	0	106	106
20:30	0	1	19	2	0	22	0	4	3	0	0	7	0	6	40	7	0	53	0	1	8	3	0	12	0	94	94
20:45	0	1	25	3	0	29	0	3	4	0	1	7	0	4	23	3	0	30	0	2	3	3	0	8	1	74	75
Total	0	4	81	9	0	94	0	13	14	0	1	27	0	29	129	18	0	176	0	10	29	15	0	54	1	351	352
21:00	0	0	16	3	1	19	0	2	6	3	0	11	0	9	18	3	0	30	0	0	3	8	0	11	1	71	72
21:15	0	0	12	3	0	15	0	5	2	1	0	8	0	1	24	4	0	29	0	1	8	9	0	18	0	70	70
21:30	0	1	11	1	0	13	0	0	1	1	0	2	0	7	23	4	0	34	0	1	3	3	0	7	0	56	56
Grand Total	2	68	2915	149	8	3134	1	262	417	71	2	751	0	710	2774	320	3	3804	0	115	404	797	27	1316	40	9005	9045
Apprch %	0.1	2.2	93	4.8			0.1	34.9	55.5	9.5			0	18.7	72.9	8.4			0	8.7	30.7	60.6					
Total %	0	0.8	32.4	1.7		34.8	0	2.9	4.6	0.8		8.3	0	7.9	30.8	3.6		42.2	0	1.3	4.5	8.9		14.6	0.4	99.6	
Cars +	2	66	2845	140		3061	1	260	409	68		740	0	570	2694	312		3579	0	111	389	670		1197	0	0	8577
% Cars +	100	97.1	97.6	94	100	97.4	100	99.2	98.1	95.8	100	98.3	0	80.3	97.1	97.5	100	94	0	96.5	96.3	84.1	100	89.1	0	0	94.8
Trucks	0	2	70	9		81	0	2	8	3		13	0	140	80	8		228	0	4	15	127		146	0	0	468
% Trucks	0	2.9	2.4	6	0	2.6	0	0.8	1.9	4.2	0	1.7	0	19.7	2.9	2.5	0	6	0	3.5	3.7	15.9	0	10.9	0	0	5.2



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2131
 Site Code :
 Start Date : 07/29/2021
 Page No : 5

Weather: Hot & Cloudy
 CountCAM 2
 Study Conducted By: Will & Matt

Start Time	CSAH 83 (Armstrong Blvd.) Southbound					Alpine Dr. Westbound					CSAH 83 (Armstrong Blvd.) 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 06:30																					
06:30	0	1	91	0	92	0	5	14	0	19	0	8	18	5	31	0	2	1	14	17	159
06:45	0	1	81	1	83	0	8	13	0	21	0	2	17	1	20	0	1	3	9	13	137
07:00	0	1	70	3	74	0	6	12	0	18	0	13	14	0	27	0	0	2	17	19	138
07:15	0	1	98	1	100	0	4	10	1	15	0	6	13	0	19	0	1	4	17	22	156
Total Volume	0	4	340	5	349	0	23	49	1	73	0	29	62	6	97	0	4	10	57	71	590
% App. Total	0	1.1	97.4	1.4		0	31.5	67.1	1.4		0	29.9	63.9	6.2		0	5.6	14.1	80.3		
PHF	.000	1.00	.867	.417	.873	.000	.719	.875	.250	.869	.000	.558	.861	.300	.782	.000	.500	.625	.838	.807	.928

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45																					
12:45	1	0	35	7	43	0	4	5	2	11	0	21	48	5	74	0	1	4	17	22	150
13:00	0	0	44	0	44	0	6	7	3	16	0	14	37	4	55	0	3	4	22	29	144
13:15	0	1	51	2	54	0	2	8	0	10	0	19	50	7	76	0	2	2	11	15	155
13:30	0	4	29	3	36	0	2	9	2	13	0	19	40	6	65	0	2	4	8	14	128
Total Volume	1	5	159	12	177	0	14	29	7	50	0	73	175	22	270	0	8	14	58	80	577
% App. Total	0.6	2.8	89.8	6.8		0	28	58	14		0	27	64.8	8.1		0	10	17.5	72.5		
PHF	.250	.313	.779	.429	.819	.000	.583	.806	.583	.781	.000	.869	.875	.786	.888	.000	.667	.875	.659	.690	.931

Peak Hour Analysis From 14:00 to 21:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	1	41	4	46	0	10	8	5	23	0	23	98	19	140	0	3	15	23	41	250
16:45	0	3	53	1	57	0	8	11	1	20	0	9	117	12	138	0	3	15	21	39	254
17:00	0	1	45	5	51	0	9	3	5	17	0	27	113	19	159	0	3	15	12	30	257
17:15	0	2	52	1	55	0	5	10	1	16	0	20	96	13	129	0	2	15	12	29	229
Total Volume	0	7	191	11	209	0	32	32	12	76	0	79	424	63	566	0	11	60	68	139	990
% App. Total	0	3.3	91.4	5.3		0	42.1	42.1	15.8		0	14	74.9	11.1		0	7.9	43.2	48.9		
PHF	.000	.583	.901	.550	.917	.000	.800	.727	.600	.826	.000	.731	.906	.829	.890	.000	.917	1.00	.739	.848	.963



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2131
 Site Code :
 Start Date : 07/29/2021
 Page No : 1

Weather: Hot & Cloudy
 CountCAM 2
 Study Conducted By: Will & Matt

Groups Printed- Trucks

Start Time	CSAH 83 (Armstrong Blvd.) Southbound					Alpine Dr. Westbound					CSAH 83 (Armstrong Blvd.) 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	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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	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	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
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
06:00	0	0	2	0	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3
06:15	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30	0	0	1	0	1	0	0	1	0	1	0	3	0	1	4	0	0	0	0	0	0	6
06:45	0	0	2	0	2	0	0	0	0	0	1	4	0	5	0	0	1	1	2	2	9	
Total	0	0	5	1	6	0	0	1	0	1	0	4	5	1	10	0	0	1	1	2	19	
07:00	0	0	1	0	1	0	0	0	0	0	3	2	0	5	0	0	0	1	1	1	7	
07:15	0	0	1	1	2	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1	4	
07:30	0	0	2	0	2	0	0	0	0	0	4	2	0	6	0	0	0	3	3	3	11	
07:45	0	0	3	1	4	0	0	1	0	1	1	3	0	4	0	0	0	5	5	5	14	
Total	0	0	7	2	9	0	0	1	0	1	0	9	7	0	16	0	0	0	10	10	36	
08:00	0	0	0	1	1	0	0	0	1	1	0	3	0	3	0	0	1	1	2	2	7	
08:15	0	0	0	1	1	0	0	0	0	0	2	0	0	2	0	0	0	3	3	3	6	
08:30	0	0	1	0	1	0	0	1	0	1	0	3	0	3	0	0	0	5	5	5	10	
08:45	0	0	2	0	2	0	0	0	0	0	0	1	1	2	0	0	0	1	1	1	5	
Total	0	0	3	2	5	0	0	1	1	2	0	5	4	1	10	0	0	1	10	11	28	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2131
 Site Code :
 Start Date : 07/29/2021
 Page No : 2

Weather: Hot & Cloudy
 CountCAM 2
 Study Conducted By: Will & Matt

Groups Printed- Trucks

Start Time	CSAH 83 (Armstrong Blvd.) Southbound					Alpine Dr. Westbound					CSAH 83 (Armstrong Blvd.) 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	0	1	0	1	0	0	0	0	0	0	5	2	0	7	0	0	0	3	3	11
09:15	0	0	1	0	1	0	0	0	0	0	0	2	1	0	3	0	0	0	7	7	11
09:30	0	1	2	0	3	0	0	0	0	0	0	1	3	0	4	0	0	1	1	2	9
09:45	0	0	1	1	2	0	0	0	0	0	0	6	2	0	8	0	0	0	2	2	12
Total	0	1	5	1	7	0	0	0	0	0	0	14	8	0	22	0	0	1	13	14	43
10:00	0	0	2	1	3	0	0	1	0	1	0	6	3	0	9	0	0	0	4	4	17
10:15	0	0	2	0	2	0	0	0	0	0	0	2	2	1	5	0	1	0	1	2	9
10:30	0	0	1	0	1	0	1	0	0	1	0	3	2	0	5	0	0	0	3	3	10
10:45	0	0	0	0	0	0	0	0	0	0	0	4	2	0	6	0	0	0	5	5	11
Total	0	0	5	1	6	0	1	1	0	2	0	15	9	1	25	0	1	0	13	14	47
11:00	0	0	3	0	3	0	0	1	0	1	0	2	1	0	3	0	0	0	3	3	10
11:15	0	0	1	0	1	0	0	0	0	0	0	10	2	0	12	0	1	1	2	4	17
11:30	0	0	3	0	3	0	0	0	0	0	0	2	3	0	5	0	0	0	5	5	13
11:45	0	0	0	1	1	0	0	0	0	0	0	5	2	0	7	0	0	0	1	1	9
Total	0	0	7	1	8	0	0	1	0	1	0	19	8	0	27	0	1	1	11	13	49
12:00	0	0	2	1	3	0	0	0	0	0	0	5	0	0	5	0	0	5	3	8	16
12:15	0	0	2	0	2	0	0	0	0	0	0	3	2	0	5	0	0	1	4	5	12
12:30	0	0	2	0	2	0	0	0	0	0	0	2	3	0	5	0	0	0	1	1	8
12:45	0	0	4	0	4	0	0	0	0	0	0	7	4	0	11	0	0	0	5	5	20
Total	0	0	10	1	11	0	0	0	0	0	0	17	9	0	26	0	0	6	13	19	56
13:00	0	0	4	0	4	0	0	0	2	2	0	3	3	1	7	0	0	0	4	4	17
13:15	0	0	2	0	2	0	1	0	0	1	0	3	3	0	6	0	0	0	2	2	11
13:30	0	0	1	0	1	0	0	0	0	0	0	5	2	0	7	0	0	2	2	4	12
13:45	0	0	2	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	4	4	11
Total	0	0	9	0	9	0	1	0	2	3	0	16	8	1	25	0	0	2	12	14	51
14:00	0	0	1	0	1	0	0	0	0	0	0	2	5	0	7	0	0	0	4	4	12
14:15	0	0	1	0	1	0	0	0	0	0	0	2	1	0	3	0	1	0	3	4	8
14:30	0	0	6	0	6	0	0	0	0	0	0	4	1	0	5	0	1	0	2	3	14
14:45	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	2	2	5
Total	0	0	10	0	10	0	0	0	0	0	0	9	7	0	16	0	2	0	11	13	39
15:00	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5	0	0	0	4	4	9
15:15	0	0	2	0	2	0	0	1	0	1	0	3	3	0	6	0	0	0	3	3	12
15:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	3	3	5
15:45	0	0	1	0	1	0	0	0	0	0	0	4	1	0	5	0	0	0	2	2	8
Total	0	0	3	0	3	0	0	1	0	1	0	12	6	0	18	0	0	0	12	12	34
16:00	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0	0	0	1	1	5
16:15	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	3	3	7
16:30	0	0	3	0	3	0	0	0	0	0	0	4	0	0	4	0	0	1	2	3	10
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4
Total	0	0	3	0	3	0	0	0	0	0	0	9	3	0	12	0	0	1	10	11	26
17:00	0	0	0	0	0	0	0	0	0	0	0	4	2	1	7	0	0	0	1	1	8
17:15	0	0	1	0	1	0	0	0	0	0	0	4	1	0	5	0	0	0	3	3	9
17:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	2	3
17:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	3	4	5
Total	0	0	1	0	1	0	0	1	0	1	0	8	4	1	13	0	0	1	9	10	25
18:00	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4	0	0	1	0	1	5
18:15	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Hot & Cloudy
 CountCAM 2
 Study Conducted By: Will & Matt

File Name : TMC 2131
 Site Code :
 Start Date : 07/29/2021
 Page No : 3

Groups Printed- Trucks

Start Time	CSAH 83 (Armstrong Blvd.) Southbound					Alpine Dr. Westbound					CSAH 83 (Armstrong Blvd.) 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	0	0	0	0	0	0	0	0	0	0	1	0	1	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	0	0	0	0	0	2	2	2	6	0	0	1	0	1	8
19:00	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
19:30	0	0	1	0	1	0	0	0	0	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	1	1	0	0	0	0	0	1
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
20:00	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	1	0	0	1	0	0	0	0	0	1
20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	1	0	0	1	0	0	0	1	1	2
21:00	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
21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	70	9	81	0	2	8	3	13	0	140	80	8	228	0	4	15	127	146	468
Apprch %	0	2.5	86.4	11.1		0	15.4	61.5	23.1		0	61.4	35.1	3.5		0	2.7	10.3	87		
Total %	0	0.4	15	1.9	17.3	0	0.4	1.7	0.6	2.8	0	29.9	17.1	1.7	48.7	0	0.9	3.2	27.1	31.2	

ANOKA COUNTY HIGHWAY DEPARTMENT

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2131

Study Date: 08/10/2021

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Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 83 (Armstrong Blvd.)

Number of Lanes : 1

Total Approach Volume: 3,804

Southbound: CSAH 83 (Armstrong Blvd.)

Number of Lanes : 1

Total Approach Volume: 3,134

Minor Street Approaches

Eastbound: Alpine Dr.

Number of Lanes : 1

Total Approach Volume: 1,316

Westbound: Alpine Dr.

Number of Lanes : 1

Total Approach Volume: 751

Warrant Summary (Rural Values Apply)

Warrant 1 - Eight Hour Vehicular Volumes.....Not Satisfied

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

Required volumes reached for 4 hours, 8 are needed

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

Required volumes reached for 3 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 7 hours, 8 are needed

Warrant 2 - Four Hour Volumes.....Not Satisfied

Number of hours (3) 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 DEPARTMENT

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TRAFFIC SIGNAL WARRANT ANALYSIS

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Study Date: **08/10/2021**

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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 4 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				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 83 (Armstrong Blvd.)					Alpine Dr.		
16:15 - 17:15	551	+	197	=	748	133	70	Yes
17:15 - 18:15	439	+	176	=	615	109	59	Yes
15:15 - 16:15	447	+	157	=	604	107	53	Yes
14:15 - 15:15	301	+	175	=	476	109	39	Yes
14:00 - 15:00	279	+	193	=	472	100	50	No
13:15 - 14:15	273	+	175	=	448	79	48	No
12:45 - 13:45	270	+	177	=	447	80	50	No
13:45 - 14:45	261	+	186	=	447	104	46	No
06:30 - 07:30	97	+	349	=	446	71	73	No
12:30 - 13:30	254	+	189	=	443	85	48	No
13:00 - 14:00	261	+	169	=	430	81	45	No
07:00 - 08:00	97	+	330	=	427	78	72	No
06:45 - 07:45	90	+	337	=	427	77	78	No
06:15 - 07:15	85	+	340	=	425	61	68	No
13:30 - 14:30	251	+	164	=	415	90	49	No
12:15 - 13:15	233	+	177	=	410	89	46	No
07:15 - 08:15	85	+	318	=	403	81	71	No
18:15 - 19:15	274	+	126	=	400	63	45	No
12:00 - 13:00	227	+	168	=	395	93	40	No
06:00 - 07:00	68	+	326	=	394	53	60	No
05:45 - 06:45	56	+	318	=	374	47	44	No
11:45 - 12:45	204	+	162	=	366	89	49	No
07:30 - 08:30	95	+	269	=	364	77	65	No
18:30 - 19:30	243	+	111	=	354	49	38	No
11:30 - 12:30	186		153		339	96	40	No

ANOKA COUNTY HIGHWAY DEPARTMENT

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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 3 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 NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	522	+	190	=	712	137	72	Yes
17:00 - 18:00	508	+	194	=	702	114	68	Yes
15:00 - 16:00	406	+	145	=	551	109	42	Yes
14:45 - 15:45	378	+	141	=	519	106	37	No
14:30 - 15:30	337	+	172	=	509	116	37	No
14:15 - 15:15	301	+	175	=	476	109	39	No
14:00 - 15:00	279	+	193	=	472	100	50	No
13:15 - 14:15	273	+	175	=	448	79	48	No
12:45 - 13:45	270	+	177	=	447	80	50	No
13:45 - 14:45	261	+	186	=	447	104	46	No
06:30 - 07:30	97	+	349	=	446	71	73	No
12:30 - 13:30	254	+	189	=	443	85	48	No
18:00 - 19:00	298	+	132	=	430	77	48	No
13:00 - 14:00	261	+	169	=	430	81	45	No
07:00 - 08:00	97	+	330	=	427	78	72	No
06:45 - 07:45	90	+	337	=	427	77	78	No
06:15 - 07:15	85	+	340	=	425	61	68	No
13:30 - 14:30	251	+	164	=	415	90	49	No
12:15 - 13:15	233	+	177	=	410	89	46	No
07:15 - 08:15	85	+	318	=	403	81	71	No
18:15 - 19:15	274	+	126	=	400	63	45	No
12:00 - 13:00	227	+	168	=	395	93	40	No
06:00 - 07:00	68	+	326	=	394	53	60	No
05:45 - 06:45	56	+	318	=	374	47	44	No
11:45 - 12:45	204		162		366	89	49	No

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Warrant 1C Combination of Warrants

Description

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

Summary

Only 7 hours meet 1A minimums.
Only 7 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 83 (Armstrong Blvd.)

Minor Road Alpine Dr.

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:30 - 17:30	566	+	209	=	775	139	76	Yes
15:30 - 16:30	471	+	160	=	631	97	54	Yes
17:30 - 18:30	391	+	158	=	549	102	57	Yes
14:30 - 15:30	337	+	172	=	509	116	37	Yes
13:30 - 14:30	251	+	164	=	415	90	49	Yes
12:15 - 13:15	233	+	177	=	410	89	46	Yes
11:15 - 12:15	179	+	151	=	330	92	34	Yes
13:15 - 14:15	273	+	175	=	448	79	48	No
06:30 - 07:30	97	+	349	=	446	71	73	No
07:00 - 08:00	97	+	330	=	427	78	72	No
06:45 - 07:45	90	+	337	=	427	77	78	No
06:15 - 07:15	85	+	340	=	425	61	68	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:45 - 17:45	548	+	207	=	755	125	69	Yes
15:45 - 16:45	495	+	179	=	674	120	67	Yes
14:45 - 15:45	378	+	141	=	519	106	37	Yes
17:45 - 18:45	338	+	148	=	486	90	58	Yes
13:45 - 14:45	261	+	186	=	447	104	46	Yes
12:30 - 13:30	254	+	189	=	443	85	48	Yes
06:15 - 07:15	85	+	340	=	425	61	68	Yes
13:30 - 14:30	251	+	164	=	415	90	49	No
12:15 - 13:15	233	+	177	=	410	89	46	No
07:15 - 08:15	85	+	318	=	403	81	71	No
12:00 - 13:00	227	+	168	=	395	93	40	No
06:00 - 07:00	68	+	326	=	394	53	60	No

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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.

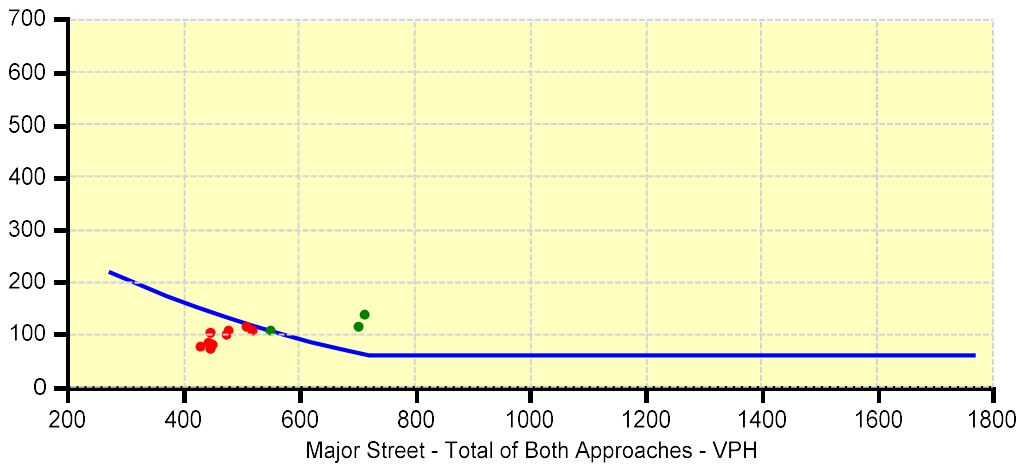
Summary

Only 3 hours meet minimums.
Warrant is NOT met.

Site Data Required

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

Time	Major Road CSAH 83 (Armstrong Blvd.)				Total	Minor Road Alpine Dr.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	522	+	190	=	712	137	72	Yes
17:00 - 18:00	508	+	194	=	702	114	68	Yes
15:00 - 16:00	406	+	145	=	551	109	42	Yes
14:45 - 15:45	378	+	141	=	519	106	37	No
14:30 - 15:30	337	+	172	=	509	116	37	No
14:15 - 15:15	301	+	175	=	476	109	39	No
14:00 - 15:00	279	+	193	=	472	100	50	No
13:15 - 14:15	273	+	175	=	448	79	48	No
12:45 - 13:45	270	+	177	=	447	80	50	No
13:45 - 14:45	261	+	186	=	447	104	46	No
06:30 - 07:30	97	+	349	=	446	71	73	No
							48	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

2 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 83 (Armstrong Blvd.)				Total	Minor Road Alpine Dr.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	566	+	209	=	775	139	76	Yes
16:15 - 17:15	551	+	197	=	748	133	70	Yes
16:45 - 17:45	548	+	207	=	755	125	69	No
16:00 - 17:00	522	+	190	=	712	137	72	No
17:00 - 18:00	508	+	194	=	702	114	68	No
15:45 - 16:45	495	+	179	=	674	120	67	No
15:30 - 16:30	471	+	160	=	631	97	54	No
17:15 - 18:15	439	+	176	=	615	109	59	No
15:15 - 16:15	447	+	157	=	604	107	53	No
15:00 - 16:00	406	+	145	=	551	109	42	No
17:30 - 18:30	391	+	158	=	549	102	57	No
							37	No

