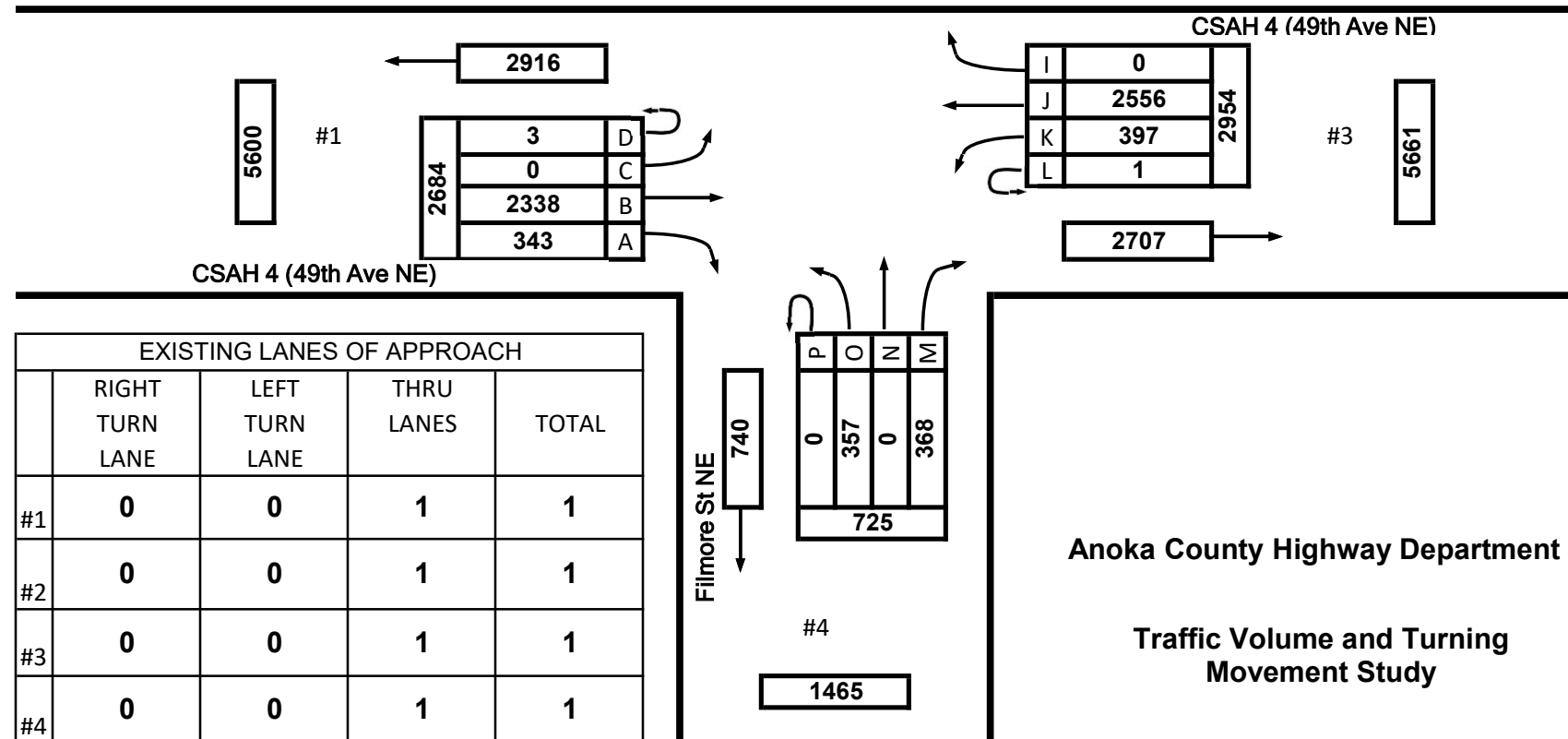
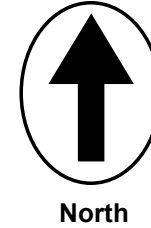


Date : 11/01/22

Count Number : TMC 2273

Location : CSAH 4 (49th Ave NE)
@ Filmore St NE

Collection Period : 24 HR



Anoka County Highway Department

Traffic Volume and Turning Movement Study

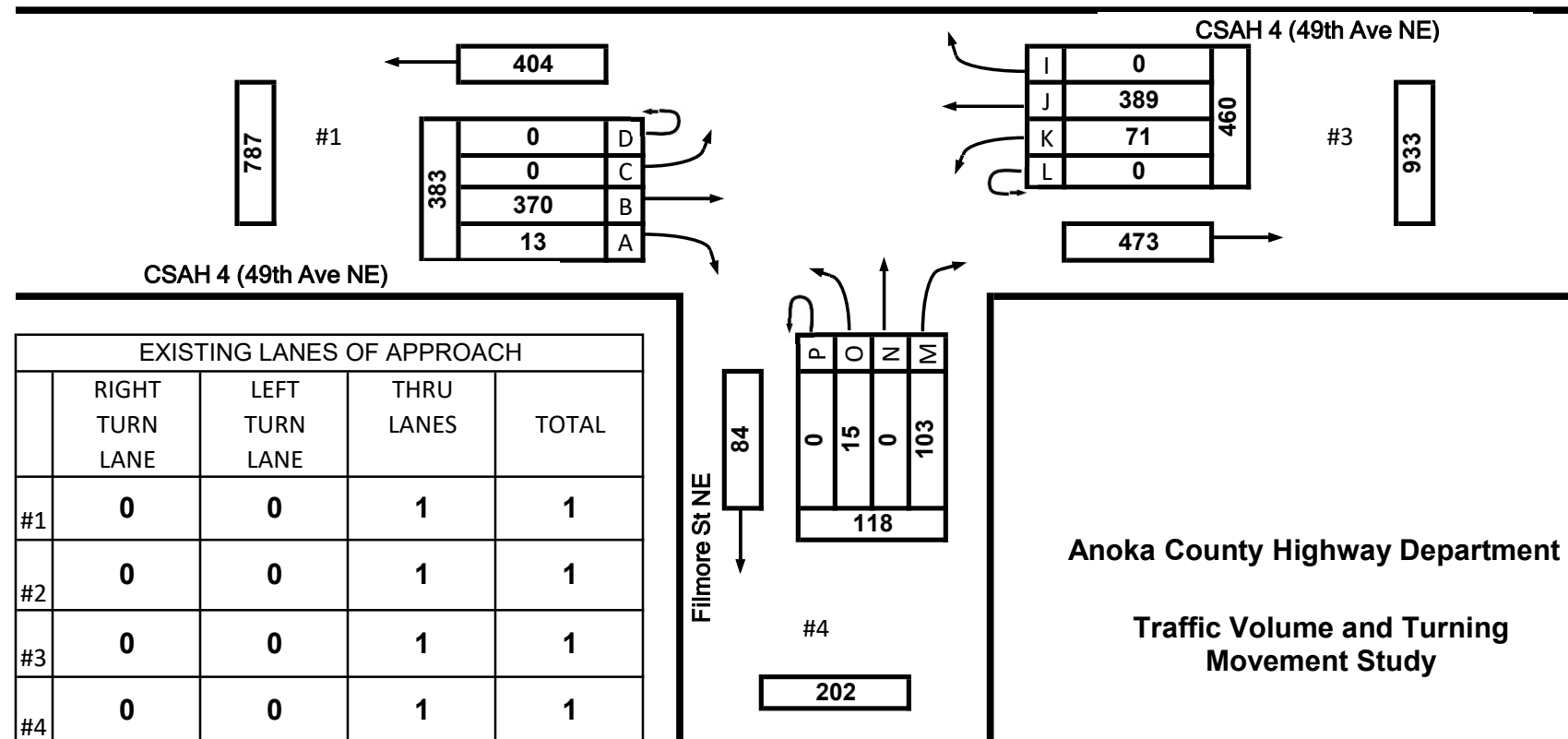
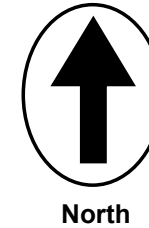
Date : 11/01/22

Count Number : TMC 2273

Location : CSAH 4 (49th Ave NE)
@ Filmore St NE

Collection Period : 7 AM - 8 AM

AM PEAK



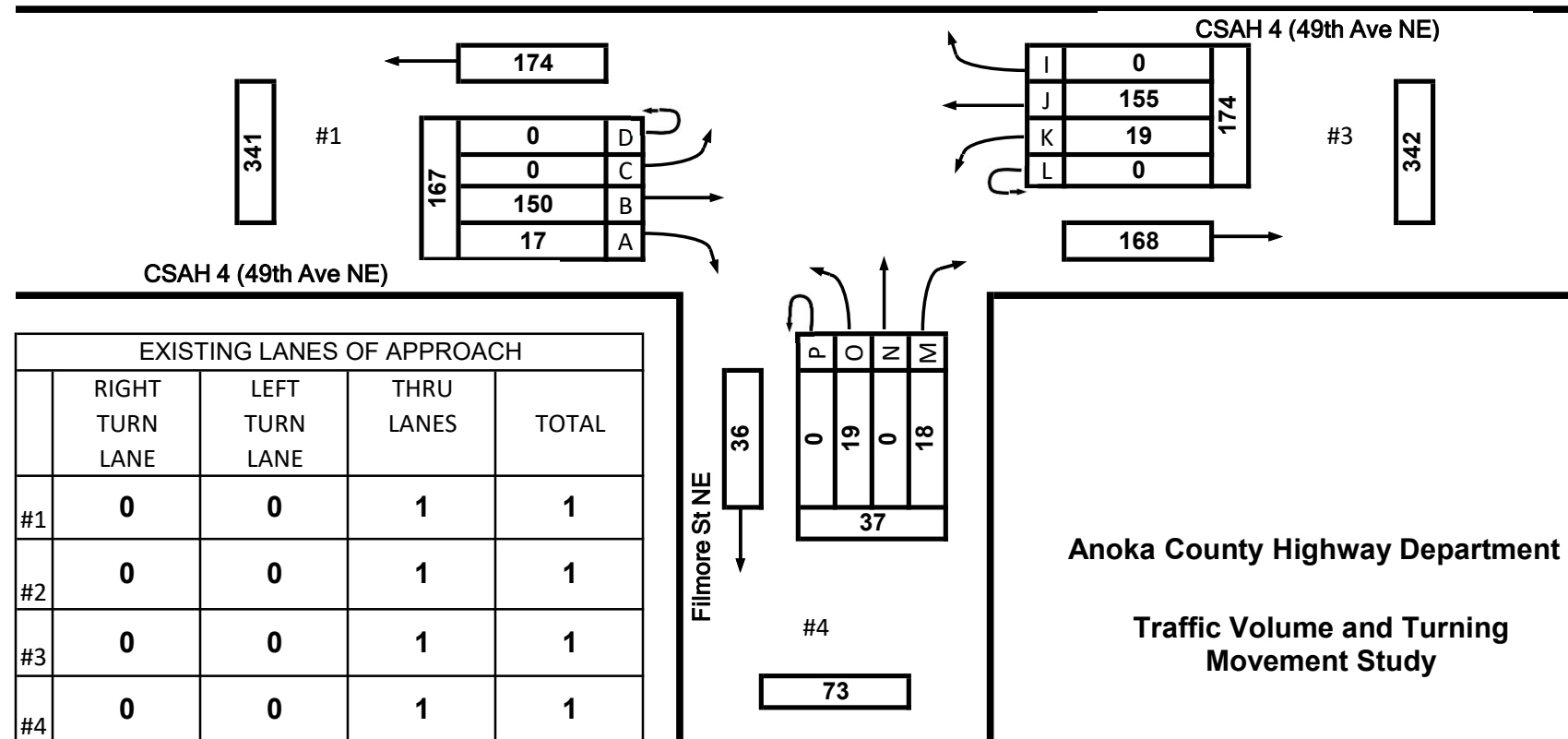
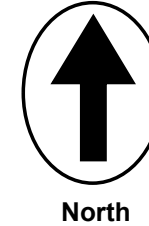
Date : 11/01/22

Count Number : TMC 2273

Location : CSAH 4 (49th Ave NE)
@ Filmore St NE

Collection Period : 11:45 AM - 12:45 PM

MIDDAY PEAK





Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2273-t
 Site Code :
 Start Date : 11/01/2022
 Page No : 1

Weather: Cold & Sunny
 CountCAM 3
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	Southbound						CSAH 4 (49th Ave NE) Westbound						Filmore St NE Northbound						CSAH 4 (49th Ave NE) 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	1	2	0	0	3	1	0	1	0	0	2	1	1	0	0	0	2	0	7	7
00:15	0	0	0	0	0	0	0	3	0	0	0	3	1	0	0	0	0	1	0	3	0	0	0	3	0	7	7
00:30	0	0	0	0	0	0	0	3	0	0	0	3	1	0	1	0	0	2	0	1	0	0	0	1	0	6	6
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	6	0	6	6
Total	0	0	0	0	0	0	0	7	2	0	0	9	3	0	2	0	0	5	4	8	0	0	0	12	0	26	26
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	2	0	3	3
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	4	0	4	4
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	2	2
01:45	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	5	5
Total	0	0	0	0	0	0	0	4	0	0	0	4	0	0	1	0	0	1	2	7	0	0	0	9	0	14	14
02:00	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	3	3
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
02:45	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	0	0	0	0	1	0	0	0	1	0	6	6
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
03:30	0	0	0	0	0	0	0	2	1	0	0	3	0	0	2	0	0	2	0	0	0	0	0	0	0	5	5
03:45	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	2	2
Total	0	0	0	0	0	0	0	6	1	0	0	7	0	0	2	0	0	2	1	0	0	0	0	1	0	10	10
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	1	1	0	0	0	2	0	5	5
04:30	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
04:45	0	0	0	0	0	0	0	4	0	0	0	4	1	0	2	0	0	3	0	3	0	0	0	3	0	10	10
Total	0	0	0	0	0	0	0	10	0	0	0	10	1	0	2	0	0	3	1	4	0	0	0	5	0	18	18
05:00	0	0	0	0	0	0	0	6	0	0	0	6	0	0	1	0	0	1	1	1	0	0	0	2	0	9	9
05:15	0	0	0	0	0	0	0	6	0	0	0	6	0	0	1	0	0	1	0	4	0	0	0	4	0	11	11
05:30	0	0	0	0	0	0	0	12	0	0	0	12	1	0	2	0	0	3	0	5	0	0	0	5	0	20	20
05:45	0	0	0	0	0	0	0	8	0	0	0	8	1	0	5	0	0	6	0	2	0	0	0	2	0	16	16
Total	0	0	0	0	0	0	0	32	0	0	0	32	2	0	9	0	0	11	1	12	0	0	0	13	0	56	56



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2273-t
 Site Code :
 Start Date : 11/01/2022
 Page No : 2

Weather: Cold & Sunny
 CountCAM 3
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	Southbound						CSAH 4 (49th Ave NE) Westbound						Filmore St NE Northbound						CSAH 4 (49th Ave NE) 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	0	5	0	0	0	5	1	0	7	0	0	8	2	3	0	0	0	5	0	18	18
06:15	0	0	0	0	0	0	0	9	3	0	0	12	1	0	6	0	0	7	2	6	0	0	0	8	0	27	27
06:30	0	0	0	0	0	0	0	11	2	0	0	13	2	0	6	0	0	8	4	25	0	0	0	29	0	50	50
06:45	0	0	0	0	0	0	0	20	0	0	0	20	4	0	5	0	0	9	1	17	0	0	0	18	0	47	47
Total	0	0	0	0	0	0	0	45	5	0	0	50	8	0	24	0	0	32	9	51	0	0	0	60	0	142	142
07:00	0	0	0	0	0	0	0	26	3	0	0	29	2	0	10	0	0	12	1	37	0	0	0	38	0	79	79
07:15	0	0	0	0	0	0	0	40	9	0	0	49	15	0	4	0	0	19	1	58	0	0	0	59	0	127	127
07:30	0	0	0	0	0	0	0	82	16	0	0	98	27	0	3	0	2	30	2	73	0	0	1	75	3	203	206
07:45	0	0	0	0	0	0	0	97	22	0	0	119	34	0	5	0	14	39	3	110	0	0	0	113	14	271	285
Total	0	0	0	0	0	0	0	245	50	0	0	295	78	0	22	0	16	100	7	278	0	0	1	285	17	680	697
08:00	0	0	0	0	0	0	0	110	19	0	0	129	21	0	6	0	14	27	4	111	0	0	1	115	15	271	286
08:15	0	0	0	0	0	0	0	100	14	0	2	114	21	0	1	0	8	22	4	76	0	0	0	80	10	216	226
08:30	0	0	0	0	0	0	0	38	5	0	0	43	8	0	6	0	4	14	2	22	0	0	0	24	4	81	85
08:45	0	0	0	0	0	0	0	27	1	0	0	28	3	0	6	0	2	9	3	29	0	0	0	32	2	69	71
Total	0	0	0	0	0	0	0	275	39	0	2	314	53	0	19	0	28	72	13	238	0	0	1	251	31	637	668
09:00	0	0	0	0	0	0	0	17	3	0	0	20	6	0	5	0	2	11	4	12	0	0	0	16	2	47	49
09:15	0	0	0	0	0	0	0	24	5	0	0	29	3	0	6	0	0	9	2	20	0	0	0	22	0	60	60
09:30	0	0	0	0	0	0	0	23	7	0	0	30	4	0	11	0	0	15	4	21	0	0	0	25	0	70	70
09:45	0	0	0	0	0	0	0	27	3	0	0	30	2	0	4	0	4	6	3	19	0	0	0	22	4	58	62
Total	0	0	0	0	0	0	0	91	18	0	0	109	15	0	26	0	6	41	13	72	0	0	0	85	6	235	241
10:00	0	0	0	0	0	0	0	19	3	0	0	22	0	0	3	0	5	3	1	21	0	0	0	22	5	47	52
10:15	0	0	0	0	0	0	0	32	4	0	0	36	4	0	3	0	1	7	2	21	0	0	0	23	1	66	67
10:30	0	0	0	0	0	0	0	27	3	0	0	30	3	0	5	0	1	8	6	19	0	0	0	25	1	63	64
10:45	0	0	0	0	0	0	0	19	3	0	0	22	4	0	11	0	3	15	5	28	0	0	0	33	3	70	73
Total	0	0	0	0	0	0	0	97	13	0	0	110	11	0	22	0	10	33	14	89	0	0	0	103	10	246	256
11:00	0	0	0	0	0	0	0	29	1	0	0	30	3	0	4	0	0	7	6	23	0	0	0	29	0	66	66
11:15	0	0	0	0	0	0	0	33	2	0	0	35	4	0	5	0	0	9	3	27	0	0	0	30	0	74	74
11:30	0	0	0	0	0	0	0	45	6	0	0	51	10	0	6	0	1	16	7	46	0	1	0	54	1	121	122
11:45	0	0	0	0	0	0	0	49	0	0	0	49	2	0	8	0	2	10	4	47	0	0	0	51	2	110	112
Total	0	0	0	0	0	0	0	156	9	0	0	165	19	0	23	0	3	42	20	143	0	1	0	164	3	371	374
12:00	0	0	0	0	0	0	0	29	6	0	0	35	4	0	3	0	1	7	3	24	0	0	0	27	1	69	70
12:15	0	0	0	0	0	0	0	32	7	0	0	39	2	0	2	0	2	4	3	33	0	0	0	36	2	79	81
12:30	0	0	0	0	0	0	0	39	7	0	0	46	4	0	4	0	0	8	5	35	0	0	0	40	0	94	94



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2273-t
 Site Code :
 Start Date : 11/01/2022
 Page No : 3

Weather: Cold & Sunny
 CountCAM 3
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	Southbound						CSAH 4 (49th Ave NE) Westbound						Filmore St NE Northbound						CSAH 4 (49th Ave NE) 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	0	0	0	0	0	0	33	9	0	1	42	2	0	3	0	2	5	5	41	0	0	0	46	3	93	96
Total	0	0	0	0	0	0	0	133	29	0	1	162	12	0	12	0	5	24	16	133	0	0	0	149	6	335	341
13:00	0	0	0	0	0	0	0	28	2	0	0	30	1	0	5	0	0	6	3	22	0	0	0	25	0	61	61
13:15	0	0	0	0	0	0	0	28	2	0	0	30	0	0	4	0	0	4	4	27	0	0	0	31	0	65	65
13:30	0	0	0	0	0	0	0	44	6	0	0	50	5	0	3	0	9	8	9	32	0	0	0	41	9	99	108
13:45	0	0	0	0	0	0	0	34	6	0	1	40	10	0	5	0	3	15	4	37	0	0	0	41	4	96	100
Total	0	0	0	0	0	0	0	134	16	0	1	150	16	0	17	0	12	33	20	118	0	0	0	138	13	321	334
14:00	0	0	0	0	0	0	0	44	3	0	0	47	18	0	5	0	1	23	4	75	0	0	0	79	1	149	150
14:15	0	0	0	0	0	0	0	78	27	0	0	105	13	0	7	0	0	20	8	56	0	0	0	64	0	189	189
14:30	0	0	0	0	0	0	0	76	21	1	0	98	6	0	4	0	1	10	7	41	0	0	0	48	1	156	157
14:45	0	0	0	0	0	0	0	48	6	0	1	54	5	0	10	0	1	15	11	49	0	0	0	60	2	129	131
Total	0	0	0	0	0	0	0	246	57	1	1	304	42	0	26	0	3	68	30	221	0	0	0	251	4	623	627
15:00	0	0	0	0	0	0	0	70	19	0	0	89	8	0	5	0	68	13	10	70	0	0	0	80	68	182	250
15:15	0	0	0	0	0	0	0	106	34	0	0	140	7	0	11	0	51	18	9	56	0	0	0	65	51	223	274
15:30	0	0	0	0	0	0	0	73	6	0	0	79	2	0	9	0	23	11	12	45	0	0	0	57	23	147	170
15:45	0	0	0	0	0	0	0	52	5	0	0	57	4	0	5	0	9	9	5	50	0	0	0	55	9	121	130
Total	0	0	0	0	0	0	0	301	64	0	0	365	21	0	30	0	151	51	36	221	0	0	0	257	151	673	824
16:00	0	0	0	0	0	0	0	59	2	0	0	61	8	0	5	0	3	13	6	41	0	0	0	47	3	121	124
16:15	0	0	0	0	0	0	0	34	6	0	2	40	8	0	9	0	13	17	5	45	0	0	0	50	15	107	122
16:30	0	0	0	0	0	0	0	56	3	0	1	59	7	0	11	0	9	18	10	46	0	0	0	56	10	133	143
16:45	0	0	0	0	0	0	0	41	2	0	0	43	1	0	7	0	6	8	10	60	0	1	0	71	6	122	128
Total	0	0	0	0	0	0	0	190	13	0	3	203	24	0	32	0	31	56	31	192	0	1	0	224	34	483	517
17:00	0	0	0	0	0	0	0	58	3	0	0	61	11	0	8	0	1	19	9	48	0	0	0	57	1	137	138
17:15	0	0	0	0	0	0	0	66	9	0	1	75	2	0	2	0	11	4	4	58	0	0	1	62	13	141	154
17:30	0	0	0	0	0	0	0	64	10	0	1	74	6	0	4	0	10	10	8	45	0	0	0	53	11	137	148
17:45	0	0	0	0	0	0	0	64	9	0	0	73	5	0	5	0	2	10	15	40	0	0	1	55	3	138	141
Total	0	0	0	0	0	0	0	252	31	0	2	283	24	0	19	0	24	43	36	191	0	0	2	227	28	553	581
18:00	0	0	0	0	0	0	0	49	4	0	0	53	2	0	10	0	3	12	12	40	0	0	0	52	3	117	120
18:15	0	0	0	0	0	0	0	40	5	0	0	45	4	0	5	0	3	9	9	43	0	0	0	52	3	106	109
18:30	0	0	0	0	0	0	0	34	2	0	0	36	2	0	6	0	0	8	3	29	0	1	0	33	0	77	77
18:45	0	0	0	0	0	0	0	15	2	0	0	17	1	0	5	0	2	6	3	18	0	0	0	21	2	44	46
Total	0	0	0	0	0	0	0	138	13	0	0	151	9	0	26	0	8	35	27	130	0	1	0	158	8	344	352



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2273-t
 Site Code :
 Start Date : 11/01/2022
 Page No : 4

Weather: Cold & Sunny
 CountCAM 3
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	Southbound						CSAH 4 (49th Ave NE) Westbound						Filmore St NE Northbound						CSAH 4 (49th Ave NE) 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	23	4	0	0	27	4	0	7	0	0	11	6	17	0	0	0	23	0	61	61
19:15	0	0	0	0	0	0	0	11	1	0	0	12	1	0	3	0	0	4	4	18	0	0	0	22	0	38	38
19:30	0	0	0	0	0	0	0	15	0	0	0	15	2	0	7	0	0	9	8	25	0	0	0	33	0	57	57
19:45	0	0	0	0	0	0	0	25	5	0	0	30	3	0	0	0	0	3	6	23	0	0	0	29	0	62	62
Total	0	0	0	0	0	0	0	74	10	0	0	84	10	0	17	0	0	27	24	83	0	0	0	107	0	218	218
20:00	0	0	0	0	0	0	0	16	2	0	0	18	2	0	2	0	0	4	2	22	0	0	0	24	0	46	46
20:15	0	0	0	0	0	0	0	10	1	0	0	11	3	0	2	0	0	5	4	15	0	0	0	19	0	35	35
20:30	0	0	0	0	0	0	0	16	1	0	0	17	1	0	0	0	0	1	2	16	0	0	0	18	0	36	36
20:45	0	0	0	0	0	0	0	8	3	0	0	11	3	0	6	0	0	9	4	17	0	0	0	21	0	41	41
Total	0	0	0	0	0	0	0	50	7	0	0	57	9	0	10	0	0	19	12	70	0	0	0	82	0	158	158
21:00	0	0	0	0	0	0	0	4	1	0	0	5	3	0	2	0	0	5	3	7	0	0	0	10	0	20	20
21:15	0	0	0	0	0	0	0	6	2	0	0	8	2	0	1	0	0	3	4	6	0	0	0	10	0	21	21
21:30	0	0	0	0	0	0	0	6	6	0	0	12	2	0	1	0	0	3	1	8	0	0	0	9	0	24	24
21:45	0	0	0	0	0	0	0	7	3	0	0	10	1	0	2	0	0	3	4	12	0	0	0	16	0	29	29
Total	0	0	0	0	0	0	0	23	12	0	0	35	8	0	6	0	0	14	12	33	0	0	0	45	0	94	94
22:00	0	0	0	0	0	0	0	7	1	0	0	8	0	0	1	0	0	1	4	12	0	0	0	16	0	25	25
22:15	0	0	0	0	0	0	0	11	2	0	0	13	1	0	0	0	0	1	3	3	0	0	0	6	0	20	20
22:30	0	0	0	0	0	0	0	3	0	0	0	3	0	0	4	0	0	4	4	13	0	0	0	17	0	24	24
22:45	0	0	0	0	0	0	0	3	0	0	0	3	1	0	2	0	0	3	0	2	0	0	0	2	0	8	8
Total	0	0	0	0	0	0	0	24	3	0	0	27	2	0	7	0	0	9	11	30	0	0	0	41	0	77	77
23:00	0	0	0	0	0	0	0	6	1	0	0	7	1	0	0	0	0	1	1	6	0	0	0	7	0	15	15
23:15	0	0	0	0	0	0	0	7	2	0	0	9	0	0	1	0	0	1	0	4	0	0	0	4	0	14	14
23:30	0	0	0	0	0	0	0	3	0	0	0	3	0	0	1	0	0	1	2	3	0	0	0	5	0	9	9
23:45	0	0	0	0	0	0	0	4	0	0	0	4	0	0	1	0	0	1	0	0	0	0	0	0	0	5	5
Total	0	0	0	0	0	0	0	20	3	0	0	23	1	0	3	0	0	4	3	13	0	0	0	16	0	43	43
Grand Total	0	0	0	0	0	0	0	2556	397	1	10	2954	368	0	357	0	297	725	343	2338	0	3	4	2684	311	6363	6674
Apprch %	0	0	0	0	0	0	0	86.5	13.4	0	0	50.8	0	49.2	0	0	0	12.8	87.1	0	0.1	0	42.2	4.7	95.3	0	0
Total %	0	0	0	0	0	0	0	40.2	6.2	0	0	46.4	5.8	0	5.6	0	11.4	5.4	36.7	0	0	0	42.2	4.7	95.3	0	0
Cars +	0	0	0	0	0	0	0	2479	368	1	10	2858	352	0	352	0	1001	329	2277	0	3	4	2613	0	0	6472	
% Cars +	0	0	0	0	0	0	0	97	92.7	100	100	96.4	95.7	0	98.6	0	100	97.9	95.9	97.4	0	100	100	97.2	0	0	97
Trucks	0	0	0	0	0	0	0	77	29	0	0	106	16	0	5	0	21	14	61	0	0	0	75	0	0	202	
% Trucks	0	0	0	0	0	0	0	3	7.3	0	0	3.6	4.3	0	1.4	0	2.1	4.1	2.6	0	0	0	2.8	0	0	3	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2273-t
 Site Code :
 Start Date : 11/01/2022
 Page No : 5

Weather: Cold & Sunny
 CountCAM 3
 Study Conducted by: Kevin

Start Time	Southbound					CSAH 4 (49th Ave NE) Westbound					Filmore St NE Northbound					CSAH 4 (49th Ave NE) 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 07:30																					
07:30	0	0	0	0	0	0	82	16	0	98	27	0	3	0	30	2	73	0	0	75	203
07:45	0	0	0	0	0	0	97	22	0	119	34	0	5	0	39	3	110	0	0	113	271
08:00	0	0	0	0	0	0	110	19	0	129	21	0	6	0	27	4	111	0	0	115	271
08:15	0	0	0	0	0	0	100	14	0	114	21	0	1	0	22	4	76	0	0	80	216
Total Volume	0	0	0	0	0	0	389	71	0	460	103	0	15	0	118	13	370	0	0	383	961
% App. Total	0	0	0	0	0	0	84.6	15.4	0		87.3	0	12.7	0		3.4	96.6	0	0		
PHF	.000	.000	.000	.000	.000	.000	.884	.807	.000	.891	.757	.000	.625	.000	.756	.813	.833	.000	.000	.833	.887

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30																					
11:30	0	0	0	0	0	0	45	6	0	51	10	0	6	0	16	7	46	0	1	54	121
11:45	0	0	0	0	0	0	49	0	0	49	2	0	8	0	10	4	47	0	0	51	110
12:00	0	0	0	0	0	0	29	6	0	35	4	0	3	0	7	3	24	0	0	27	69
12:15	0	0	0	0	0	0	32	7	0	39	2	0	2	0	4	3	33	0	0	36	79
Total Volume	0	0	0	0	0	0	155	19	0	174	18	0	19	0	37	17	150	0	1	168	379
% App. Total	0	0	0	0	0	0	89.1	10.9	0		48.6	0	51.4	0		10.1	89.3	0	0.6		
PHF	.000	.000	.000	.000	.000	.000	.791	.679	.000	.853	.450	.000	.594	.000	.578	.607	.798	.000	.250	.778	.783

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 14:30																					
14:30	0	0	0	0	0	0	76	21	1	98	6	0	4	0	10	7	41	0	0	48	156
14:45	0	0	0	0	0	0	48	6	0	54	5	0	10	0	15	11	49	0	0	60	129
15:00	0	0	0	0	0	0	70	19	0	89	8	0	5	0	13	10	70	0	0	80	182
15:15	0	0	0	0	0	0	106	34	0	140	7	0	11	0	18	9	56	0	0	65	223
Total Volume	0	0	0	0	0	0	300	80	1	381	26	0	30	0	56	37	216	0	0	253	690
% App. Total	0	0	0	0	0	0	78.7	21	0.3		46.4	0	53.6	0		14.6	85.4	0	0		
PHF	.000	.000	.000	.000	.000	.000	.708	.588	.250	.680	.813	.000	.682	.000	.778	.841	.771	.000	.000	.791	.774



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2273-t
 Site Code :
 Start Date : 11/01/2022
 Page No : 1

Weather: Cold & Sunny
 CountCAM 3
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	Southbound					CSAH 4 (49th Ave NE) Westbound					Filmore St NE Northbound					CSAH 4 (49th Ave NE) 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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	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	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	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	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	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
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
06:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	2	0	0	0	3	4	4
06:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	1	1	0	0	2	4	4	4
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	2	5	0	0	7	10	7	10
07:00	0	0	0	0	0	0	2	1	0	3	0	0	0	0	1	0	0	0	1	4	4	4
07:15	0	0	0	0	0	0	3	3	0	6	5	0	1	0	6	5	0	0	5	17	5	17
07:30	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	2	0	2
07:45	0	0	0	0	0	0	2	2	0	4	2	0	0	0	2	5	0	0	5	11	5	11
Total	0	0	0	0	0	0	8	7	0	15	7	0	1	0	8	10	0	0	11	34	11	34
08:00	0	0	0	0	0	0	14	0	0	14	0	0	0	0	1	2	0	0	3	17	0	17
08:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4	0	0	4	6	0	6
08:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	2	0	2
08:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	2	0	2
Total	0	0	0	0	0	0	18	0	0	18	0	0	0	0	2	7	0	0	9	27	0	27
09:00	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2273-t
 Site Code :
 Start Date : 11/01/2022
 Page No : 3

Weather: Cold & Sunny
 CountCAM 3
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	Southbound					CSAH 4 (49th Ave NE) Westbound					Filmore St NE Northbound					CSAH 4 (49th Ave NE) 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	77	29	0	106	16	0	5	0	21	14	61	0	0	75	202	
Apprch %	0	0	0	0	0	0	72.6	27.4	0	76.2	76.2	0	23.8	0	18.7	81.3	0	0	0	0	0	
Total %	0	0	0	0	0	0	38.1	14.4	0	52.5	7.9	0	2.5	0	10.4	6.9	30.2	0	0	37.1	0	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/01/2022

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 4 (49th Ave NE)

Number of Lanes : 1

Total Approach Volume: 2,684

Westbound: CSAH 4 (49th Ave NE)

Number of Lanes : 1

Total Approach Volume: 2,954

Minor Street Approaches

Northbound: Filmore St NE

Number of Lanes : 1

Total Approach Volume: 725

Southbound: Filmore St NE

Number of Lanes : 2+

Total Approach Volume: 0

Warrant Summary (Urban Values Apply)

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

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

Required volumes reached for 0 hours, 8 are needed

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

Required volumes reached for 1 hours, 8 are needed

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

Required 1A volumes reached for 0 hours, 8 are needed

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

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

Number of hours (0) 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 : 11/01/2022

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

Site Data Required

Rural Settings Apply = **False**
 Number of Major Lanes = **1**
 Number of Minor Lanes = **Mixed**

Volume Requirements

Veh/Hr Major = **500**

Veh/Hr Minor = **150 200**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 4 (49th Ave NE)					Filmore St NE		
07:30 - 08:30	383	+	460	=	843	118	0	No
07:15 - 08:15	362	+	395	=	757	115	0	No
07:45 - 08:45	332	+	405	=	737	102	0	No
14:30 - 15:30	253	+	381	=	634	56	0	No
14:45 - 15:45	262	+	362	=	624	57	0	No
15:00 - 16:00	257	+	365	=	622	51	0	No
14:15 - 15:15	252	+	346	=	598	58	0	No
07:00 - 08:00	285	+	295	=	580	100	0	No
08:00 - 09:00	251	+	314	=	565	72	0	No
15:15 - 16:15	224	+	337	=	561	51	0	No
14:00 - 15:00	251	+	304	=	555	68	0	No
13:45 - 14:45	232	+	290	=	522	68	0	No
17:00 - 18:00	227	+	283	=	510	43	0	No
17:15 - 18:15	222	+	275	=	497	36	0	No
16:45 - 17:45	243	+	253	=	496	41	0	No
16:30 - 17:30	246	+	238	=	484	49	0	No
13:30 - 14:30	225	+	242	=	467	66	0	No
17:30 - 18:30	212	+	245	=	457	41	0	No
15:30 - 16:30	209	+	237	=	446	50	0	No
16:15 - 17:15	234	+	203	=	437	62	0	No
16:00 - 17:00	224	+	203	=	427	56	0	No
15:45 - 16:45	208	+	217	=	425	57	0	No
17:45 - 18:45	192	+	207	=	399	39	0	No
06:45 - 07:45	190	+	196	=	386	70	0	No
13:15 - 14:15	192		167		359	50	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/01/2022

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

Site Data Required

Rural Settings Apply = **False**
 Number of Major Lanes = **1**
 Number of Minor Lanes = **Mixed**

Volume Requirements

Veh/Hr Major = **750**

Veh/Hr Minor = **75 100**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 4 (49th Ave NE)					Filmore St NE		
07:15 - 08:15	362	+	395	=	757	115	0	Yes
14:30 - 15:30	253	+	381	=	634	56	0	No
14:45 - 15:45	262	+	362	=	624	57	0	No
15:00 - 16:00	257	+	365	=	622	51	0	No
14:15 - 15:15	252	+	346	=	598	58	0	No
07:00 - 08:00	285	+	295	=	580	100	0	No
15:15 - 16:15	224	+	337	=	561	51	0	No
14:00 - 15:00	251	+	304	=	555	68	0	No
13:45 - 14:45	232	+	290	=	522	68	0	No
17:00 - 18:00	227	+	283	=	510	43	0	No
17:15 - 18:15	222	+	275	=	497	36	0	No
16:45 - 17:45	243	+	253	=	496	41	0	No
16:30 - 17:30	246	+	238	=	484	49	0	No
13:30 - 14:30	225	+	242	=	467	66	0	No
17:30 - 18:30	212	+	245	=	457	41	0	No
15:30 - 16:30	209	+	237	=	446	50	0	No
16:15 - 17:15	234	+	203	=	437	62	0	No
16:00 - 17:00	224	+	203	=	427	56	0	No
15:45 - 16:45	208	+	217	=	425	57	0	No
17:45 - 18:45	192	+	207	=	399	39	0	No
06:45 - 07:45	190	+	196	=	386	70	0	No
13:15 - 14:15	192	+	167	=	359	50	0	No
08:15 - 09:15	152	+	205	=	357	56	0	No
11:30 - 12:30	168	+	174	=	342	37	0	No
11:15 - 12:15	162		170		332	42	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/01/2022

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

Only 0 hours meet 1A minimums.
Only 1 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

Rural Settings Apply = **False**
Number of Major Lanes = **1**
Number of Minor Lanes = **Mixed**

Volume Requirements

Warrant 1A 1B
Veh/Hr Major = **400** **600**
Veh/Hr Minor NB = **120** **60**
Veh/Hr Minor SB = **160** **80**

Major Road CSAH 4 (49th Ave NE)

Minor Road Filmore St NE

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
07:30 - 08:30	383	+	460	=	843	118	0	No
07:15 - 08:15	362	+	395	=	757	115	0	No
07:45 - 08:45	332	+	405	=	737	102	0	No
14:30 - 15:30	253	+	381	=	634	56	0	No
14:45 - 15:45	262	+	362	=	624	57	0	No
15:00 - 16:00	257	+	365	=	622	51	0	No
14:15 - 15:15	252	+	346	=	598	58	0	No
07:00 - 08:00	285	+	295	=	580	100	0	No
08:00 - 09:00	251	+	314	=	565	72	0	No
15:15 - 16:15	224	+	337	=	561	51	0	No
14:00 - 15:00	251	+	304	=	555	68	0	No
13:45 - 14:45	232	+	290	=	522	68	0	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
07:15 - 08:15	362	+	395	=	757	115	0	Yes
14:30 - 15:30	253	+	381	=	634	56	0	No
14:45 - 15:45	262	+	362	=	624	57	0	No
15:00 - 16:00	257	+	365	=	622	51	0	No
14:15 - 15:15	252	+	346	=	598	58	0	No
07:00 - 08:00	285	+	295	=	580	100	0	No
15:15 - 16:15	224	+	337	=	561	51	0	No
14:00 - 15:00	251	+	304	=	555	68	0	No
13:45 - 14:45	232	+	290	=	522	68	0	No
17:00 - 18:00	227	+	283	=	510	43	0	No
17:15 - 18:15	222	+	275	=	497	36	0	No
16:45 - 17:45	243	+	253	=	496	41	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/01/2022

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.

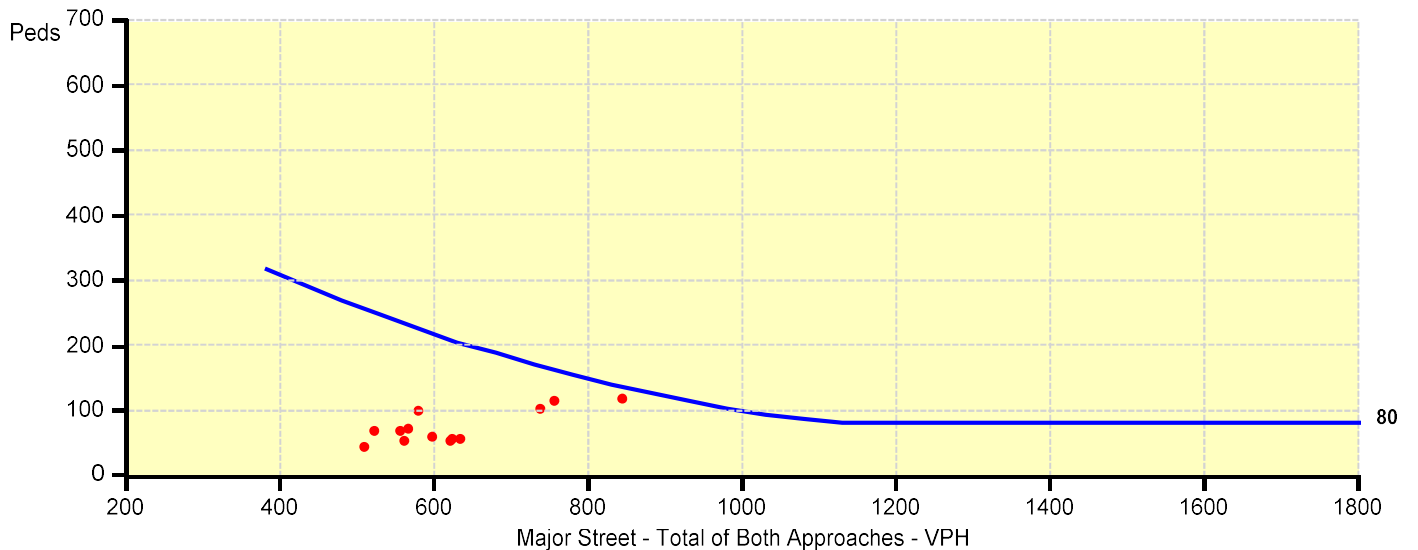
Summary

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

Site Data Required

Rural Settings Apply = **False**
 Number of Major Lanes = **1**
 Number of Minor Lanes = **Mixed**

Time	Major Road CSAH 4 (49th Ave NE)				Total	Minor Road Filmore St NE		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
07:30 - 08:30	383	+	460	=	843	118	0	No
07:15 - 08:15	362	+	395	=	757	115	0	No
07:45 - 08:45	332	+	405	=	737	102	0	No
14:30 - 15:30	253	+	381	=	634	56	0	No
14:45 - 15:45	262	+	362	=	624	57	0	No
15:00 - 16:00	257	+	365	=	622	51	0	No
14:15 - 15:15	252	+	346	=	598	58	0	No
07:00 - 08:00	285	+	295	=	580	100	0	No
08:00 - 09:00	251	+	314	=	565	72	0	No
15:15 - 16:15	224	+	337	=	561	51	0	No
14:00 - 15:00	251	+	304	=	555	68	0	No
13:45 - 14:45	232		290		522	68	0	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 11/01/2022

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

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

Site Data Required

Rural Settings Apply = **False**
 Number of Major Lanes = **1**
 Number of Minor Lanes = **Mixed**

Time	Major Road CSAH 4 (49th Ave NE)				Total	Minor Road Filmore St NE		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
07:30 - 08:30	383	+	460	=	843	118	0	No
07:15 - 08:15	362	+	395	=	757	115	0	No
07:45 - 08:45	332	+	405	=	737	102	0	No
14:30 - 15:30	253	+	381	=	634	56	0	No
14:45 - 15:45	262	+	362	=	624	57	0	No
15:00 - 16:00	257	+	365	=	622	51	0	No
14:15 - 15:15	252	+	346	=	598	58	0	No
07:00 - 08:00	285	+	295	=	580	100	0	No
08:00 - 09:00	251	+	314	=	565	72	0	No
15:15 - 16:15	224	+	337	=	561	51	0	No
14:00 - 15:00	251	+	304	=	555	68	0	No
13:45 - 14:45	232		290		522	68	0	No

