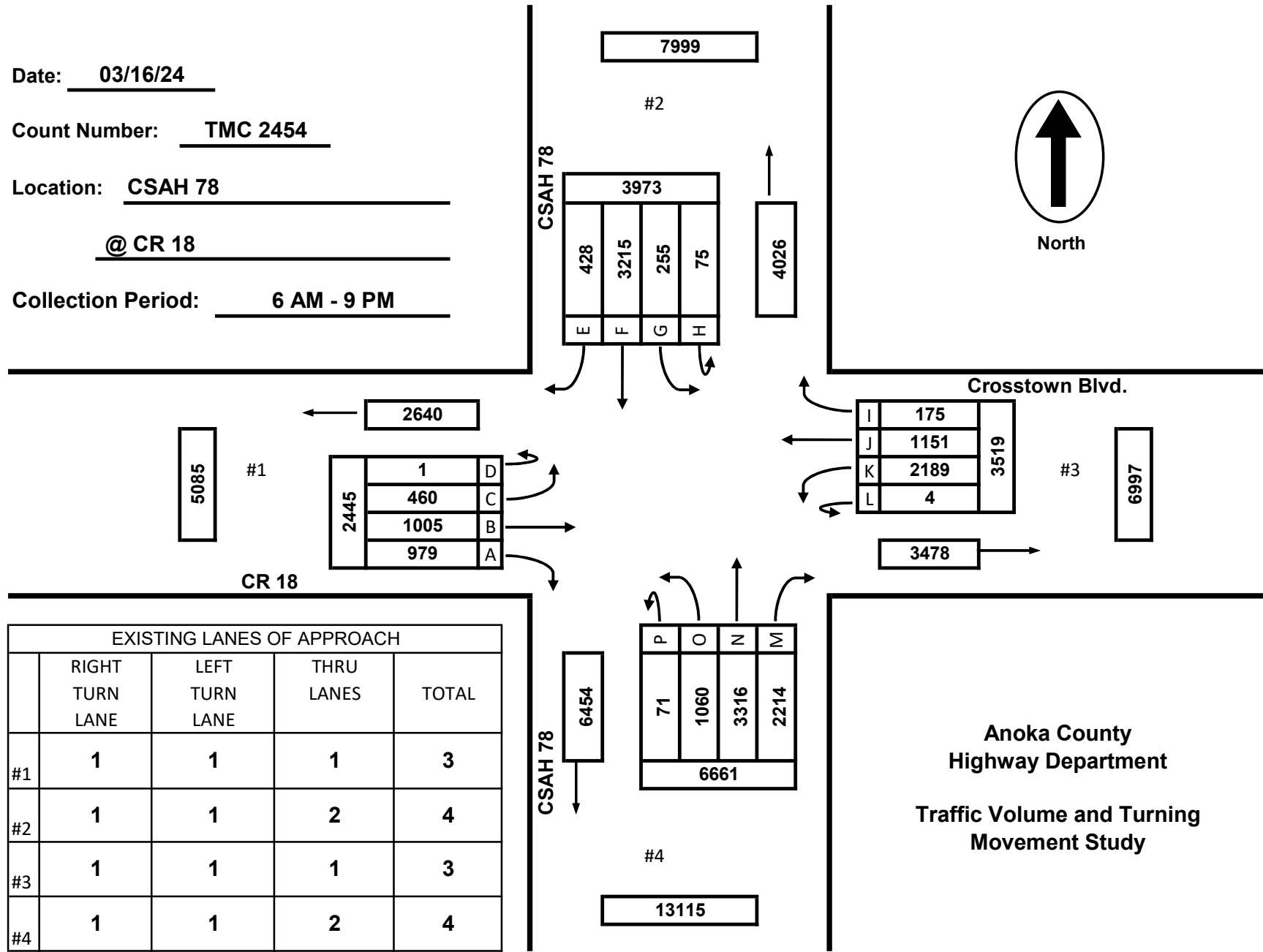
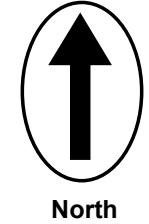


Date: 03/16/24

Count Number: TMC 2454

Location: CSAH 78  
@ CR 18

Collection Period: 6 AM - 9 PM



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

CSAH 78

Anoka County Highway Department  
 Traffic Volume and Turning Movement Study

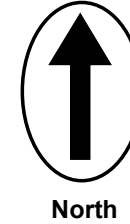
Date: 03/16/24

Count Number: TMC 2454

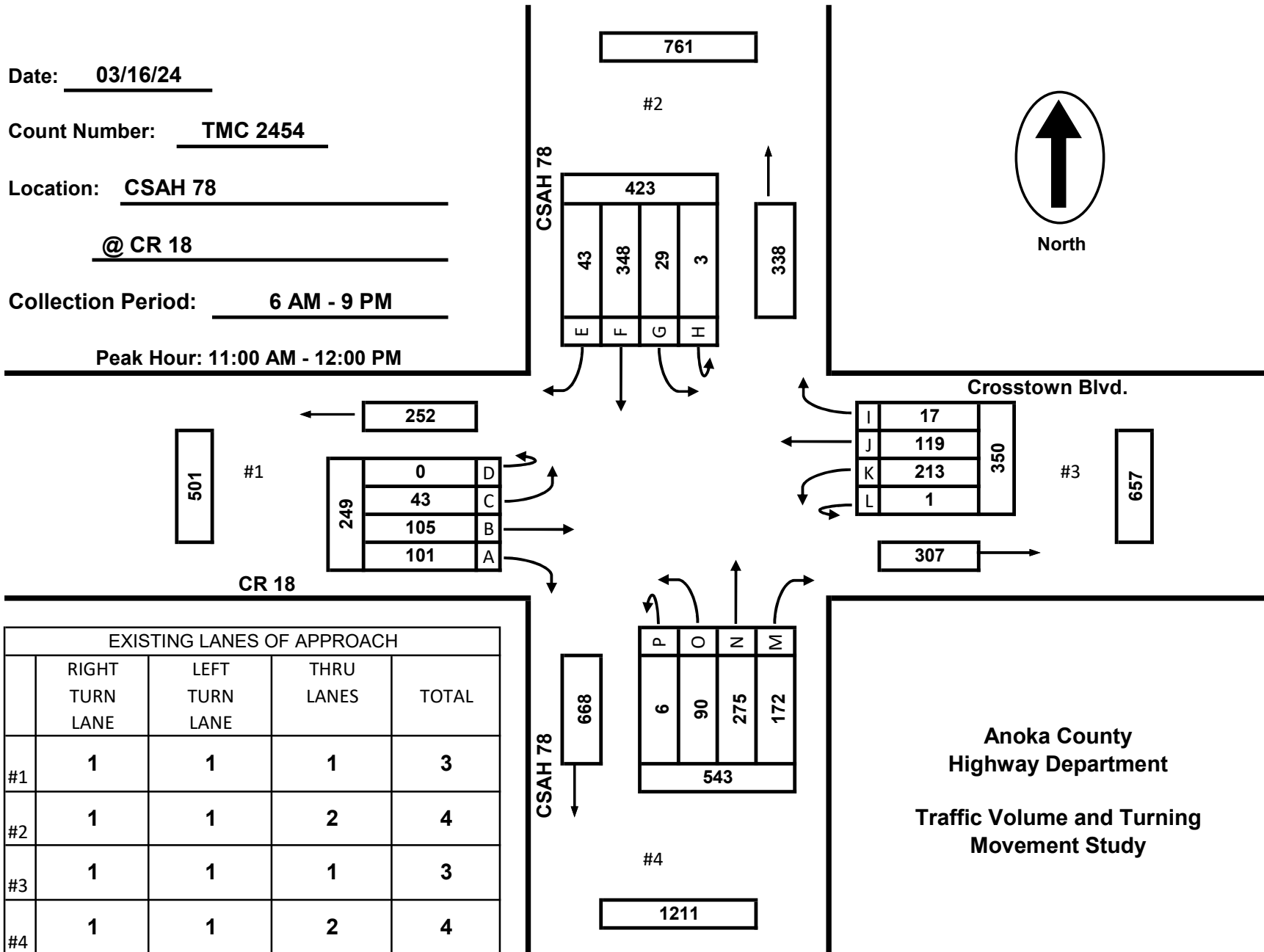
Location: CSAH 78  
@ CR 18

Collection Period: 6 AM - 9 PM

Peak Hour: 11:00 AM - 12:00 PM



North



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

Anoka County  
 Highway Department  
 Traffic Volume and Turning  
 Movement Study

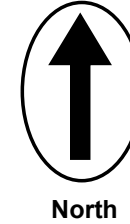
Date: 03/16/24

Count Number: TMC 2454

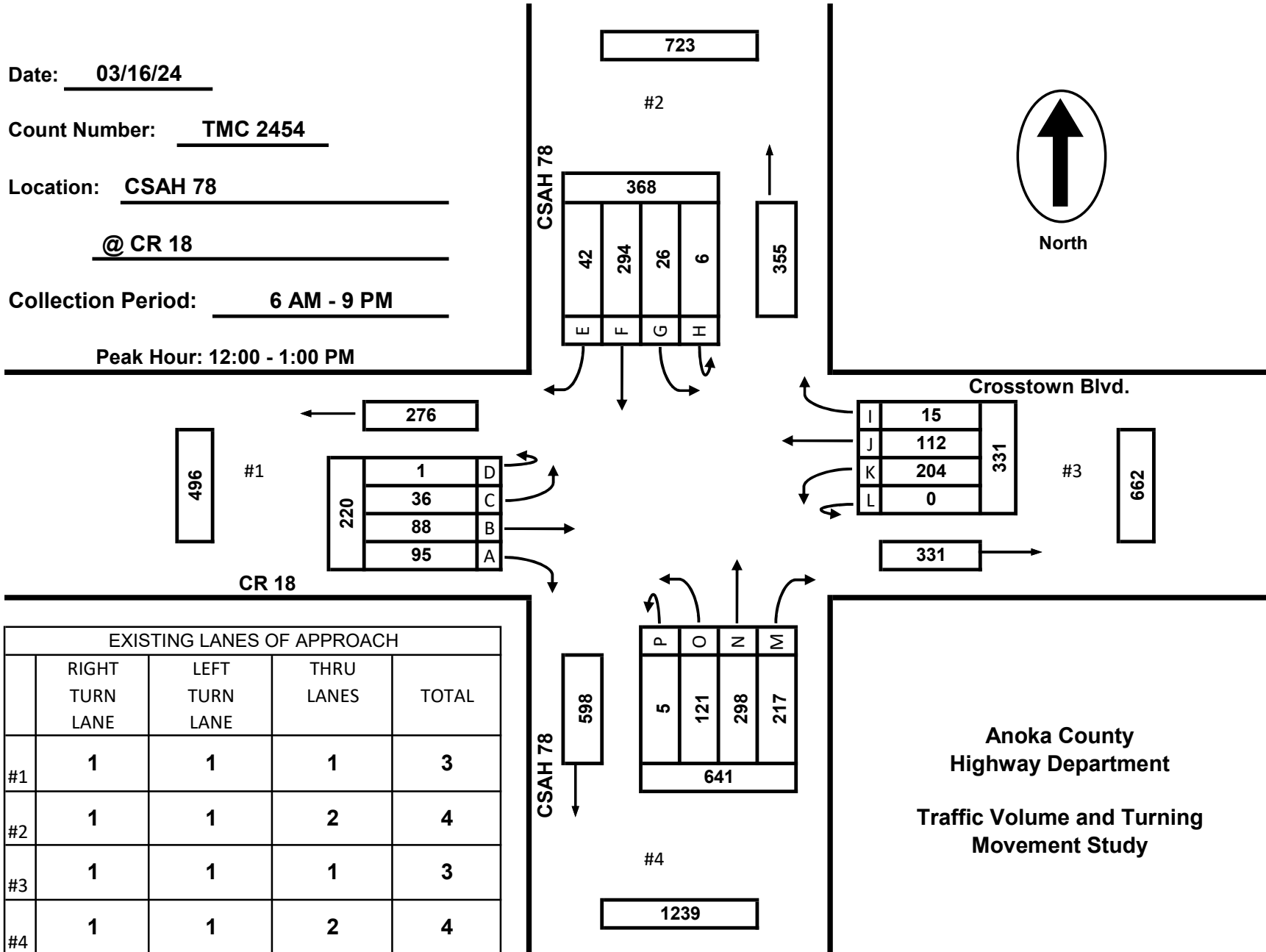
Location: CSAH 78  
@ CR 18

Collection Period: 6 AM - 9 PM

Peak Hour: 12:00 - 1:00 PM



North



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

**Anoka County  
 Highway Department  
 Traffic Volume and Turning  
 Movement Study**

**TMC 2454 - CSAH 78 @ CR 18**  
**Andover MN**  
**Saturday, March 16, 2024**

Time	Southbound CSAH 78						Westbound Crosstown Blvd.						Northbound CSAH 78						Eastbound CR 18						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	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
12:15 AM	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
12:30 AM	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
12:45 AM	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
Hourly Total	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
1:00 AM	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
1:15 AM	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
1:30 AM	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
1:45 AM	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
Hourly Total	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
2:00 AM	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
2:15 AM	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
2:30 AM	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
2:45 AM	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
Hourly Total	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
3:00 AM	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
3:15 AM	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
3:30 AM	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
3:45 AM	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
Hourly Total	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
4:00 AM	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
4:15 AM	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
4:30 AM	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
4:45 AM	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
Hourly Total	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
5:00 AM	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
5:15 AM	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
5:30 AM	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
5:45 AM	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
Hourly Total	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
6:00 AM	0	0	10	2	0	12	0	3	0	0	0	3	1	5	5	1	1	12	0	0	1	7	0	8	35
6:15 AM	0	0	16	1	0	17	0	11	2	0	13	0	1	7	2	0	10	0	1	1	2	0	4	44	
6:30 AM	0	0	16	2	0	18	0	10	2	2	14	0	3	9	5	0	17	0	1	3	4	0	8	57	
6:45 AM	0	0	19	0	0	19	0	14	10	1	25	3	11	17	9	0	40	0	1	2	4	0	7	91	
Hourly Total	0	0	61	5	0	66	0	38	14	3	55	4	20	38	17	1	79	0	3	7	17	0	27	227	
7:00 AM	0	0	18	2	1	20	0	15	7	1	23	0	7	19	6	0	32	0	3	3	6	0	12	87	
7:15 AM	0	1	12	1	0	14	0	11	4	1	16	0	5	12	10	0	27	0	4	7	6	0	17	74	
7:30 AM	0	0	29	1	0	30	0	16	7	1	24	2	6	21	11	0	40	0	1	7	11	0	19	113	
7:45 AM	0	2	28	3	0	33	0	12	13	3	28	0	13	36	14	0	63	0	2	5	7	1	14	138	
Hourly Total	0	3	87	7	1	97	0	54	31	6	91	2	31	88	41	0	162	0	10	22	30	1	62	412	

**TMC 2454 - CSAH 78 @ CR 18**  
**Andover MN**  
**Saturday, March 16, 2024**

Time	Southbound CSAH 78						Westbound Crosstown Blvd.						Northbound CSAH 78						Eastbound CR 18						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
8:00 AM	0	5	35	3	0	43	0	26	7	3	0	36	0	9	39	11	0	59	0	1	9	6	0	16	154
8:15 AM	1	2	33	5	0	41	0	17	11	1	0	29	2	6	26	19	0	53	0	4	11	10	0	25	148
8:30 AM	1	3	57	3	0	64	0	31	17	2	0	50	0	14	36	33	0	83	0	2	13	14	0	29	226
8:45 AM	2	1	39	3	1	45	0	32	20	3	0	55	0	25	41	18	0	84	0	8	5	9	0	22	206
Hourly Total	4	11	164	14	1	193	0	106	55	9	0	170	2	54	142	81	0	279	0	15	38	39	0	92	734
9:00 AM	1	4	59	5	0	69	0	43	20	3	0	66	3	18	59	26	0	106	0	6	8	8	0	22	263
9:15 AM	3	3	48	2	0	56	0	42	21	4	0	67	0	19	58	32	0	109	0	9	10	16	1	35	267
9:30 AM	3	6	62	11	0	82	0	39	22	3	0	64	2	21	38	39	0	100	0	5	8	19	0	32	278
9:45 AM	3	6	58	5	0	72	0	52	26	4	0	82	3	17	56	33	0	109	0	5	14	17	0	36	299
Hourly Total	10	19	227	23	0	279	0	176	89	14	0	279	8	75	211	130	0	424	0	25	40	60	1	125	1107
10:00 AM	1	10	78	11	0	100	0	57	21	3	0	81	1	28	32	34	1	95	0	7	10	28	0	45	321
10:15 AM	5	2	100	8	0	115	0	59	27	3	0	89	1	28	66	34	0	129	0	14	21	38	1	73	406
10:30 AM	1	7	81	13	0	102	0	42	23	2	0	67	0	25	53	34	0	112	0	8	29	25	0	62	343
10:45 AM	2	9	74	10	0	95	0	53	23	5	0	81	2	31	74	29	0	136	0	7	13	22	0	42	354
Hourly Total	9	28	333	42	0	412	0	211	94	13	0	318	4	112	225	131	1	472	0	36	73	113	1	222	1424
11:00 AM	0	6	79	6	0	91	1	60	26	1	0	88	3	23	61	45	0	132	0	6	29	20	0	55	366
11:15 AM	1	9	75	14	1	99	0	51	37	10	0	98	1	24	76	32	0	133	0	13	26	26	0	65	395
11:30 AM	1	9	111	11	0	132	0	49	31	3	0	83	0	22	67	51	0	140	0	7	25	30	0	62	417
11:45 AM	1	5	83	12	0	101	0	53	25	3	0	81	2	21	71	44	0	138	0	17	25	25	0	67	387
Hourly Total	3	29	348	43	1	423	1	213	119	17	0	350	6	90	275	172	0	543	0	43	105	101	0	249	1565
12:00 PM	3	12	65	9	0	89	0	52	23	4	0	79	2	19	69	55	0	145	1	11	20	17	0	49	362
12:15 PM	1	5	71	6	1	83	0	47	30	3	0	80	2	21	75	43	0	141	0	11	21	18	0	50	354
12:30 PM	1	4	68	12	4	85	0	61	32	3	0	96	0	29	80	69	0	178	0	7	21	26	3	54	413
12:45 PM	1	5	90	15	1	111	0	44	27	5	0	76	1	52	74	50	0	177	0	7	26	34	1	67	431
Hourly Total	6	26	294	42	6	368	0	204	112	15	0	331	5	121	298	217	0	641	1	36	88	95	4	220	1560
1:00 PM	4	11	51	11	1	77	0	48	32	3	0	83	2	15	72	45	0	134	0	20	16	27	0	63	357
1:15 PM	1	2	61	12	1	76	0	42	32	2	0	76	6	23	71	42	0	142	0	5	13	19	1	37	331
1:30 PM	1	7	43	5	0	56	0	43	20	3	0	66	2	13	61	53	0	129	0	11	29	17	0	57	308
1:45 PM	1	4	63	8	0	76	0	42	27	2	0	71	1	17	64	57	0	139	0	9	18	20	0	47	333
Hourly Total	7	24	218	36	2	285	0	175	111	10	0	296	11	68	268	197	0	544	0	45	76	83	1	204	1329
2:00 PM	2	5	62	11	1	80	0	41	22	3	2	66	0	18	80	50	1	148	0	8	25	29	0	62	356
2:15 PM	3	4	74	8	1	89	0	45	24	4	0	73	1	26	78	52	0	157	0	9	22	30	1	61	380
2:30 PM	1	10	54	9	2	74	0	49	20	4	1	73	2	17	75	59	0	153	0	6	21	17	1	44	344
2:45 PM	1	1	47	6	0	55	0	54	17	2	0	73	0	24	61	55	2	140	0	5	17	16	1	38	306
Hourly Total	7	20	237	34	4	298	0	189	83	13	3	285	3	85	294	216	3	598	0	28	85	92	3	205	1386
3:00 PM	0	4	50	4	0	58	0	36	16	3	0	55	2	19	72	51	0	144	0	16	23	20	0	59	316
3:15 PM	3	8	84	13	0	108	0	39	25	6	0	70	0	12	74	59	0	145	0	17	25	22	0	64	387
3:30 PM	1	7	55	10	1	73	0	31	36	4	0	71	0	15	54	49	0	118	0	16	33	16	0	65	327
3:45 PM	4	1	66	3	1	74	0	40	22	2	0	64	0	25	73	63	0	161	0	14	21	13	0	48	347
Hourly Total	8	20	255	30	2	313	0	146	99	15	0	260	2	71	273	222	0	568	0	63	102	71	0	236	1377

**TMC 2454 - CSAH 78 @ CR 18**  
**Andover MN**  
**Saturday, March 16, 2024**

Time	Southbound CSAH 78						Westbound Crosstown Blvd.						Northbound CSAH 78						Eastbound CR 18						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:00 PM	5	4	77	7	0	93	0	53	20	2	0	75	1	14	58	53	0	126	0	14	29	23	0	66	360
4:15 PM	0	4	74	10	0	88	0	48	24	7	0	79	3	18	70	57	0	148	0	13	14	13	0	40	355
4:30 PM	0	1	56	8	0	65	0	40	26	4	0	70	2	17	72	34	0	125	0	4	22	15	0	41	301
4:45 PM	1	6	58	9	0	74	0	42	22	5	0	69	2	29	61	47	0	139	0	11	21	17	0	49	331
Hourly Total	6	15	265	34	0	320	0	183	92	18	0	293	8	78	261	191	0	538	0	42	86	68	0	196	1347
5:00 PM	1	4	76	9	1	90	1	44	17	3	0	65	1	18	76	36	0	131	0	5	13	22	0	40	326
5:15 PM	1	5	53	10	1	69	0	50	26	2	0	78	2	17	78	55	0	152	0	9	22	9	0	40	339
5:30 PM	1	3	51	8	0	63	0	50	18	3	0	71	1	17	62	50	0	130	0	7	23	11	0	41	305
5:45 PM	0	3	60	6	0	69	0	35	13	1	0	49	0	24	68	43	0	135	0	8	18	17	1	43	296
Hourly Total	3	15	240	33	2	291	1	179	74	9	0	263	4	76	284	184	0	548	0	29	76	59	1	164	1266
6:00 PM	0	6	53	11	0	70	0	38	21	6	0	65	2	23	64	29	0	118	0	7	18	23	0	48	301
6:15 PM	3	3	46	10	0	62	0	37	20	4	0	61	2	13	82	51	0	148	0	7	21	20	0	48	319
6:30 PM	2	5	50	4	0	61	0	41	22	3	0	66	3	13	61	39	1	116	0	10	15	9	0	34	277
6:45 PM	2	2	35	9	0	48	0	29	18	2	0	49	0	20	58	46	0	124	0	9	17	15	0	41	262
Hourly Total	7	16	184	34	0	241	0	145	81	15	0	241	7	69	265	165	1	506	0	33	71	67	0	171	1159
7:00 PM	0	1	48	7	0	56	0	30	11	0	0	41	1	21	64	39	0	125	0	3	18	10	0	31	253
7:15 PM	0	3	55	6	0	64	1	25	14	1	0	41	1	18	52	61	0	132	0	9	23	29	0	61	298
7:30 PM	3	4	38	9	0	54	0	18	17	2	0	37	1	15	51	21	0	88	0	8	19	12	1	39	218
7:45 PM	1	4	38	9	0	52	0	20	11	6	0	37	1	10	58	27	0	96	0	5	18	7	0	30	215
Hourly Total	4	12	179	31	0	226	1	93	53	9	0	156	4	64	225	148	0	441	0	25	78	58	1	161	984
8:00 PM	1	9	34	10	1	54	1	25	15	1	0	42	0	12	36	30	0	78	0	15	18	6	0	39	213
8:15 PM	0	1	30	4	0	35	0	20	9	3	0	32	0	13	53	22	0	88	0	6	14	1	0	21	176
8:30 PM	0	5	31	2	0	38	0	19	11	2	0	32	1	12	32	23	0	68	0	4	16	11	0	31	169
8:45 PM	0	2	28	4	0	34	0	13	9	3	0	25	0	9	48	27	0	84	0	2	10	8	0	20	163
Hourly Total	1	17	123	20	1	161	1	77	44	9	0	131	1	46	169	102	0	318	0	27	58	26	0	111	721
9:00 PM	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
9:15 PM	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
9:30 PM	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
9:45 PM	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
Hourly Total	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
10:00 PM	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
10:15 PM	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
10:30 PM	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
10:45 PM	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
Hourly Total	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
11:00 PM	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
11:15 PM	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
11:30 PM	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
11:45 PM	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
Hourly Total	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
<b>DAILY TOTAL</b>	<b>75</b>	<b>255</b>	<b>3215</b>	<b>428</b>	<b>20</b>	<b>3973</b>	<b>4</b>	<b>2189</b>	<b>1151</b>	<b>175</b>	<b>4</b>	<b>3519</b>	<b>71</b>	<b>1060</b>	<b>3316</b>	<b>2214</b>	<b>6</b>	<b>6661</b>	<b>1</b>	<b>460</b>	<b>1005</b>	<b>979</b>	<b>13</b>	<b>2445</b>	<b>16598</b>
<b>Cars</b>	75	255	3213	428	16	3971	4	2180	1148	174	1	3506	71	1060	3313	2206	4	6650	1	460	1005	979	11	2445	16572
<b>Heavy Vehicles</b>	0	0	2	0	4	2	0	9	3	1	3	13	0	0	3	8	2	11	0	0	0	0	2	0	26
<b>Heavy Vehicle %</b>	0.00%	0.00%	0.06%	0.00%	20.00%	0.05%	0.00%	0.41%	0.26%	0.57%	75.00%	0.37%	0.00%	0.00%	0.09%	0.36%	33.33%	0.17%	0.00%	0.00%	0.00%	0.00%	15.38%	0.00%	0.16%

TMC 2454 - CSAH 78 @ CR 18

Andover MN

Saturday, March 16, 2024

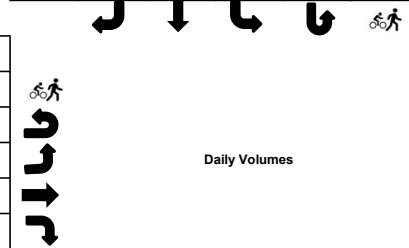
AM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
11:00 AM	0	6	79	6	0	91	1	60	26	1	0	88	3	23	61	45	0	132	0	6	29	20	0	55	366
11:15 AM	1	9	75	14	1	99	0	51	37	10	0	98	1	24	76	32	0	133	0	13	26	26	0	65	395
11:30 AM	1	9	111	11	0	132	0	49	31	3	0	83	0	22	67	51	0	140	0	7	25	30	0	62	417
11:45 AM	1	5	83	12	0	101	0	53	25	3	0	81	2	21	71	44	0	138	0	17	25	25	0	67	387
Peak Hour Total	3	29	348	43	1	423	1	213	119	17	0	350	6	90	275	172	0	543	0	43	105	101	0	249	1565
PHF	0.750	0.806	0.784	0.768	0.250	0.801	0.250	0.888	0.804	0.425	0.000	0.893	0.500	0.938	0.905	0.843	0.000	0.970	0.000	0.632	0.905	0.842	0.000	0.929	0.938

PM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 PM	3	12	65	9	0	89	0	52	23	4	0	79	2	19	69	55	0	145	1	11	20	17	0	49	362
12:15 PM	1	5	71	6	1	83	0	47	30	3	0	80	2	21	75	43	0	141	0	11	21	18	0	50	354
12:30 PM	1	4	68	12	4	85	0	61	32	3	0	96	0	29	80	69	0	178	0	7	21	26	3	54	413
12:45 PM	1	5	90	15	1	111	0	44	27	5	0	76	1	52	74	50	0	177	0	7	26	34	1	67	431
Peak Hour Total	6	26	294	42	6	368	0	204	112	15	0	331	5	121	298	217	0	641	1	36	88	95	4	220	1560
PHF	0.500	0.542	0.817	0.700	0.375	0.829	0.000	0.836	0.875	0.750	0.000	0.862	0.625	0.582	0.931	0.786	0.000	0.900	0.250	0.818	0.846	0.699	0.333	0.821	0.905

Total Vehicles On Leg		7999	
Vehicles Entering Intersection	3973	Vehicles Exiting Intersection	4026
<b>Southbound</b>			
Cars	428	3213	255
Heavy	0	2	0
<b>Total</b>	<b>428</b>	<b>3215</b>	<b>255</b>



Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	Total Vehicles on Leg		
174	1	175				3519	6997
1148	3	1151					
2180	9	2189					
4	0	4					
1	3	4					

Total Vehicles on Leg	Vehicles Entering Intersection	Eastbound	Cars	Heavy	Total
			11	2	13
			1	0	1
			460	0	460
			1005	0	1005
979	0	979			

Cars	Heavy	Total	Northbound	Vehicles Entering Intersection	Vehicles Exiting Intersection		
4	71	1060				13115	6661
2	0	0					
<b>Total</b>	<b>6</b>	<b>71</b>	<b>1060</b>	<b>3316</b>	<b>2214</b>		







# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2454

Study Date : 04/09/2024

## Signal Warrants - Summary

### Major Street Approaches

Northbound: CSAH 78

Number of Lanes : 2+

Total Approach Volume: 13,300

Southbound: CSAH 78

Number of Lanes :2+

Total Approach Volume: 7,942

### Minor Street Approaches

Eastbound: CR 18

Number of Lanes :1

Total Approach Volume: 4,890

Westbound: Crosstown Blvd.

Number of Lanes :1

Total Approach Volume: 7,012

### Warrant Summary (Rural Values Apply)

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

Warrant 1A - Minimum Vehicular Volume.....Satisfied

Required volumes reached for 14 hours, 8 are needed

Warrant 1B - Interruption of Continuous Traffic.....Satisfied

Required volumes reached for 13 hours, 8 are needed

Warrant 1C - Combination of Warrants.....Satisfied

Required 1A volumes reached for 15 hours, 8 are needed

Required 1B volumes reached for 14 hours, 8 are needed

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

Number of hours (14) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (54) volumes exceed minimum >= 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 2454

Study Date : 04/09/2024

## 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

14 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

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

#### Volume Requirements

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

Time	Major Road CSAH 78				Total	Minor Road CR 18		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
11:45 - 12:45	1202	+	716	=	1918	440	670	Yes
10:45 - 11:45	1082	+	834	=	1916	448	696	Yes
13:45 - 14:45	1192	+	636	=	1828	428	564	Yes
12:45 - 13:45	1162	+	640	=	1802	448	600	Yes
15:45 - 16:45	1116	+	640	=	1756	390	576	Yes
16:45 - 17:45	1098	+	592	=	1690	340	566	Yes
14:45 - 15:45	1094	+	586	=	1680	452	536	Yes
09:45 - 10:45	888	+	778	=	1666	432	634	Yes
17:45 - 18:45	1034	+	524	=	1558	346	480	Yes
18:45 - 19:45	938	+	444	=	1382	344	336	Yes
08:45 - 09:45	798	+	504	=	1302	222	504	Yes
19:45 - 20:45	660	+	358	=	1018	242	286	Yes
07:45 - 08:45	514	+	362	=	876	168	284	Yes
06:45 - 07:45	276	+	166	=	442	110	170	Yes
06:30 - 07:30	230	+	142	=	372	88	150	No
06:15 - 07:15	196	+	148	=	344	62	144	No
06:00 - 07:00	156	+	132	=	288	54	108	No
20:45 - 21:45	168	+	68	=	236	40	50	No
05:45 - 06:45	78	+	94	=	172	40	60	No
05:30 - 06:30	44	+	58	=	102	24	32	No
05:15 - 06:15	24	+	24	=	48	16	6	No
00:00 - 01:00	0	+	0	=	0	0	0	No
00:15 - 01:15	0	+	0	=	0	0	0	No
00:30 - 01:30	0	+	0	=	0	0	0	No
00:45 - 01:45	0		0		0	0	0	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2454

Study Date : 04/09/2024

## 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

13 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

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

#### Volume Requirements

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

Time	Major Road CSAH 78				Total	Minor Road CR 18		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
12:30 - 13:30	1260	+	698	=	1958	442	660	Yes
11:30 - 12:30	1126	+	810	=	1936	456	644	Yes
10:30 - 11:30	1026	+	774	=	1800	448	664	Yes
15:30 - 16:30	1102	+	654	=	1756	438	578	Yes
14:30 - 15:30	1164	+	590	=	1754	410	540	Yes
13:30 - 14:30	1144	+	600	=	1744	454	550	Yes
16:30 - 17:30	1088	+	596	=	1684	340	564	Yes
09:30 - 10:30	864	+	738	=	1602	372	628	Yes
17:30 - 18:30	1062	+	528	=	1590	360	490	Yes
18:30 - 19:30	994	+	458	=	1452	334	394	Yes
08:30 - 09:30	764	+	468	=	1232	216	476	Yes
19:30 - 20:30	700	+	390	=	1090	258	296	Yes
07:30 - 08:30	428	+	294	=	722	148	232	Yes
07:15 - 08:15	376	+	240	=	616	132	206	No
07:00 - 08:00	322	+	194	=	516	124	176	No
20:30 - 21:30	304	+	144	=	448	102	114	No
06:45 - 07:45	276	+	166	=	442	110	170	No
06:30 - 07:30	230	+	142	=	372	88	150	No
06:15 - 07:15	196	+	148	=	344	62	144	No
06:00 - 07:00	156	+	132	=	288	54	108	No
20:45 - 21:45	168	+	68	=	236	40	50	No
05:45 - 06:45	78	+	94	=	172	40	60	No
05:30 - 06:30	44	+	58	=	102	24	32	No
05:15 - 06:15	24	+	24	=	48	16	6	No
05:00 - 06:00	0		0		0	0	0	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2454

Study Date : 04/09/2024

## 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

15 hours meet 1A minimums.  
14 hours meet 1B minimums.  
Warrant IS met.

#### Site Data Required

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

#### Volume Requirements

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

Veh/Hr Minor = **84 42**

#### Major Road CSAH 78

#### Minor Road CR 18

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
12:15 - 13:15	1260	+	712	=	1972	468	668	Yes
11:15 - 12:15	1110	+	842	=	1952	486	678	Yes
10:15 - 11:15	1018	+	806	=	1824	464	648	Yes
15:15 - 16:15	1096	+	694	=	1790	486	560	Yes
14:15 - 15:15	1186	+	552	=	1738	404	544	Yes
16:15 - 17:15	1084	+	634	=	1718	340	566	Yes
13:15 - 14:15	1114	+	574	=	1688	406	556	Yes
17:15 - 18:15	1066	+	542	=	1608	344	524	Yes
18:15 - 19:15	1026	+	454	=	1480	308	434	Yes
09:15 - 10:15	824	+	620	=	1444	296	586	Yes
19:15 - 20:15	788	+	448	=	1236	338	314	Yes
08:15 - 09:15	652	+	438	=	1090	196	400	Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
12:00 - 13:00	1280	+	736	=	2016	440	660	Yes
11:00 - 12:00	1086	+	846	=	1932	498	696	Yes
14:00 - 15:00	1194	+	596	=	1790	410	568	Yes
10:00 - 11:00	944	+	824	=	1768	444	632	Yes
15:00 - 16:00	1132	+	624	=	1756	472	518	Yes
16:00 - 17:00	1076	+	640	=	1716	392	586	Yes
17:00 - 18:00	1090	+	582	=	1672	328	526	Yes
13:00 - 14:00	1086	+	568	=	1654	408	590	Yes
18:00 - 19:00	1012	+	482	=	1494	342	480	Yes
09:00 - 10:00	846	+	558	=	1404	250	558	Yes
19:00 - 20:00	882	+	452	=	1334	322	312	Yes
20:00 - 21:00	636	+	322	=	958	222	262	Yes

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2454

Study Date : 04/09/2024

## 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.

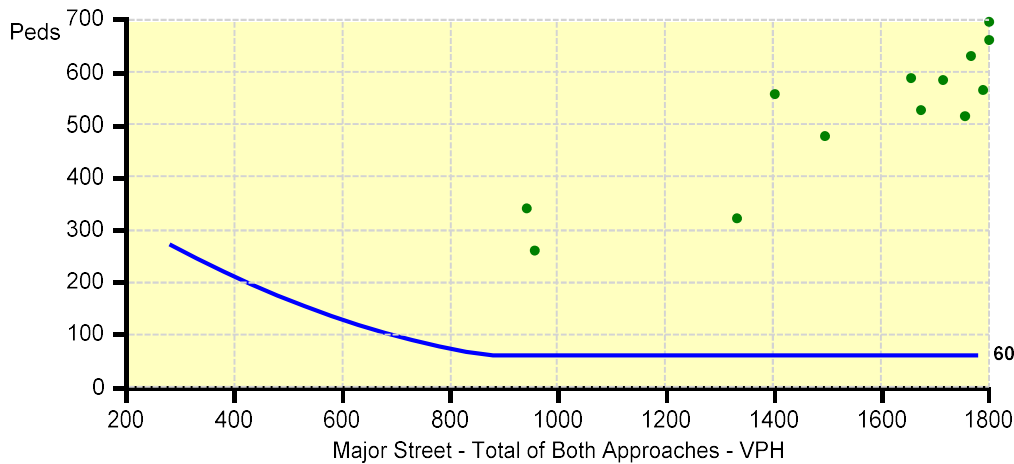
#### Summary

14 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

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

Time	Major Road CSAH 78				Total	Minor Road CR 18		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
12:00 - 13:00	1280	+	736	=	2016	440	660	Yes
11:00 - 12:00	1086	+	846	=	1932	498	696	Yes
14:00 - 15:00	1194	+	596	=	1790	410	568	Yes
10:00 - 11:00	944	+	824	=	1768	444	632	Yes
15:00 - 16:00	1132	+	624	=	1756	472	518	Yes
16:00 - 17:00	1076	+	640	=	1716	392	586	Yes
17:00 - 18:00	1090	+	582	=	1672	328	526	Yes
13:00 - 14:00	1086	+	568	=	1654	408	590	Yes
18:00 - 19:00	1012	+	482	=	1494	342	480	Yes
09:00 - 10:00	846	+	558	=	1404	250	558	Yes
19:00 - 20:00	882	+	452	=	1334	322	312	Yes
							262	Yes



# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2454

Study Date : 04/09/2024

## 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

51 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

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

Time	Major Road CSAH 78				Total	Minor Road CR 18		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
12:00 - 13:00	1280	+	736	=	2016	440	660	Yes
12:15 - 13:15	1260	+	712	=	1972	468	668	Yes
12:30 - 13:30	1260	+	698	=	1958	442	660	Yes
11:15 - 12:15	1110	+	842	=	1952	486	678	Yes
11:30 - 12:30	1126	+	810	=	1936	456	644	Yes
11:00 - 12:00	1086	+	846	=	1932	498	696	Yes
11:45 - 12:45	1202	+	716	=	1918	440	670	Yes
10:45 - 11:45	1082	+	834	=	1916	448	696	Yes
13:45 - 14:45	1192	+	636	=	1828	428	564	Yes
10:15 - 11:15	1018	+	806	=	1824	464	648	Yes
12:45 - 13:45	1162	+	640	=	1802	448	600	Yes
							664	Yes

