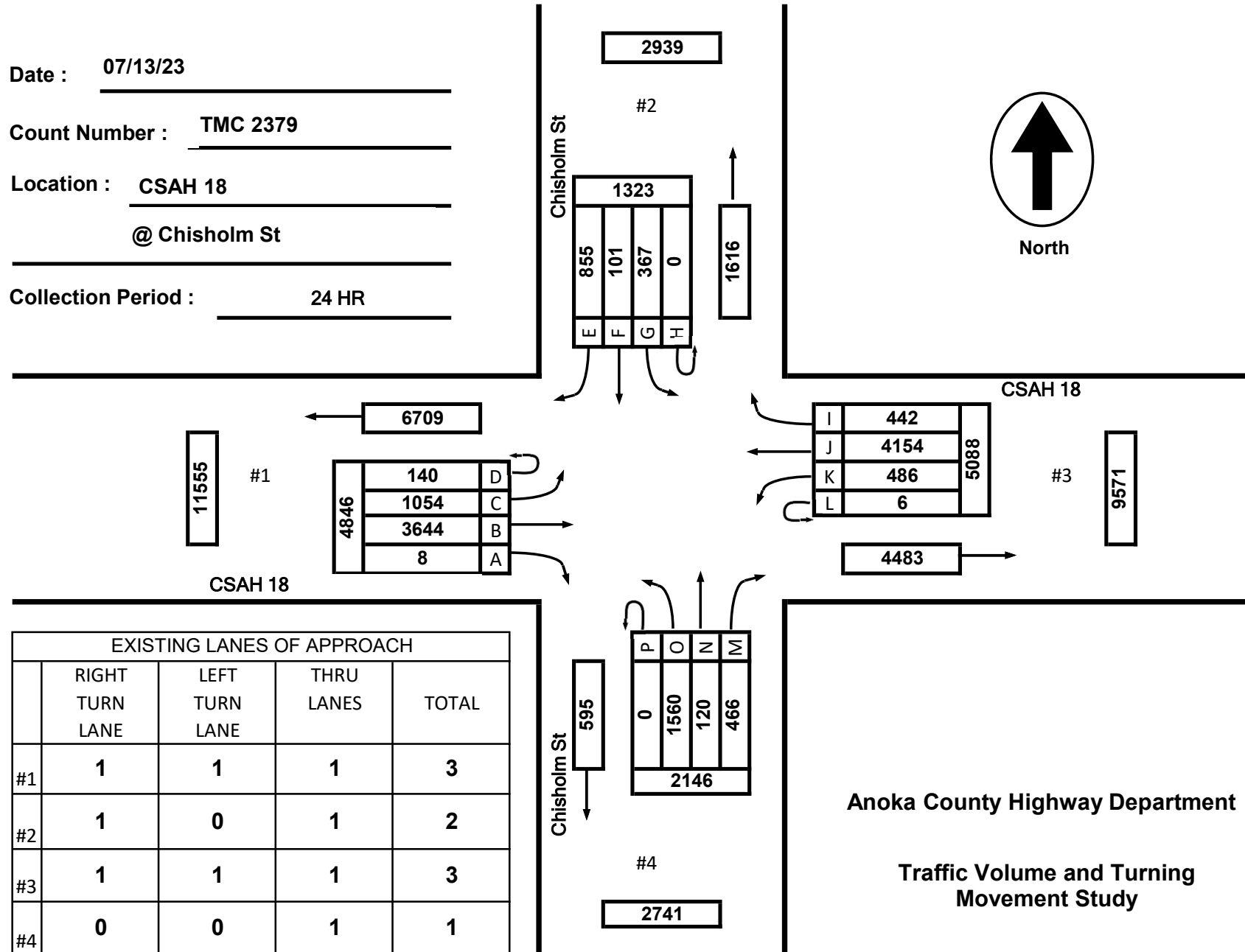


Date : 07/13/23

Count Number : TMC 2379

Location : CSAH 18  
@ Chisholm St

Collection Period : 24 HR



Anoka County Highway Department

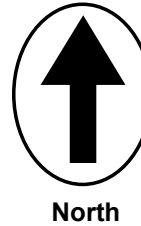
Traffic Volume and Turning Movement Study

Date : 07/13/23

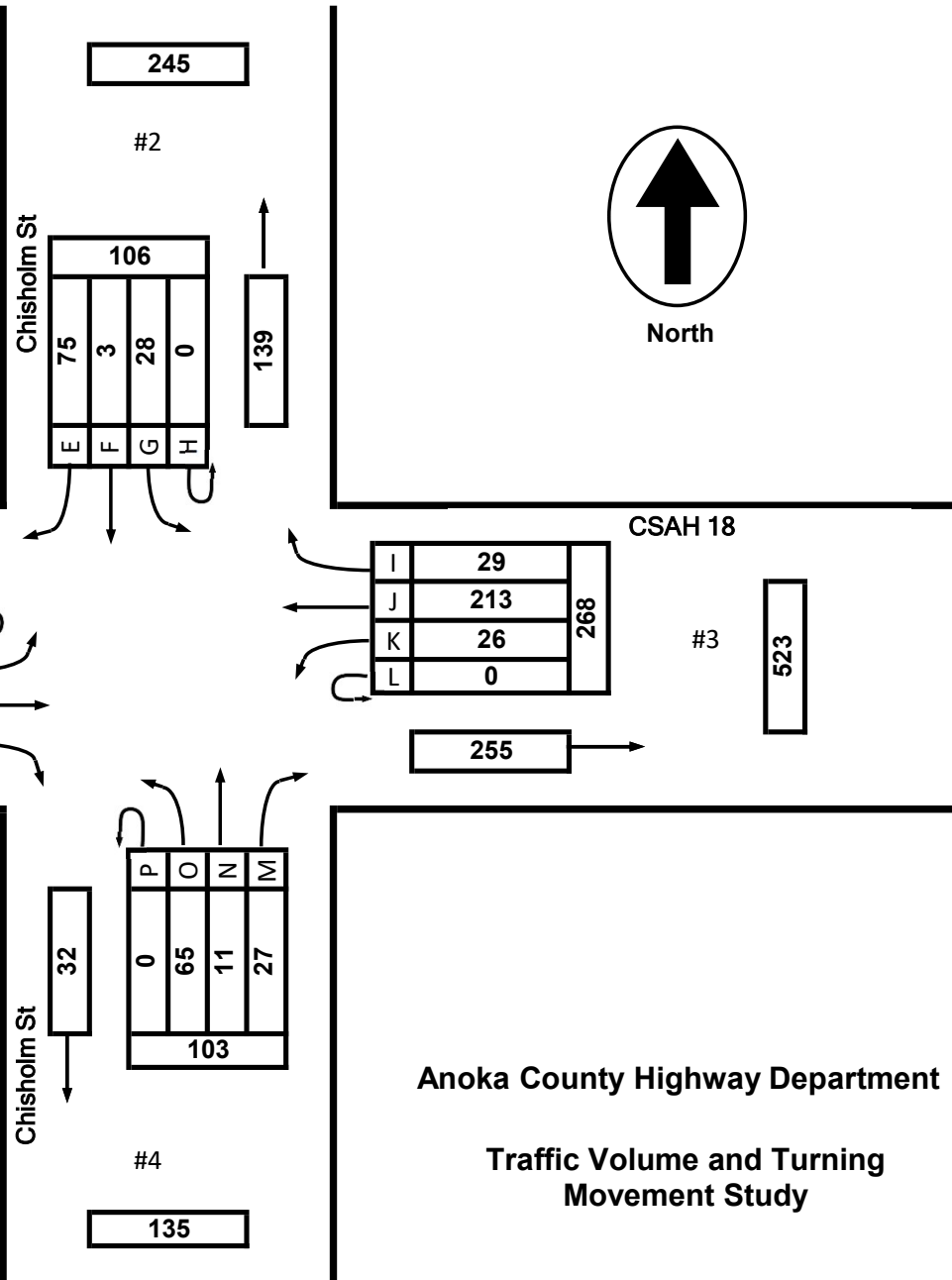
Count Number : TMC 2379

Location : CSAH 18  
@ Chisholm St

Collection Period : 11 AM - 12 PM  
**AM PEAK**



North



CSAH 18

CSAH 18

Chisholm St

Chisholm St

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

Anoka County Highway Department

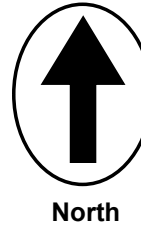
Traffic Volume and Turning Movement Study

Date : 07/13/23

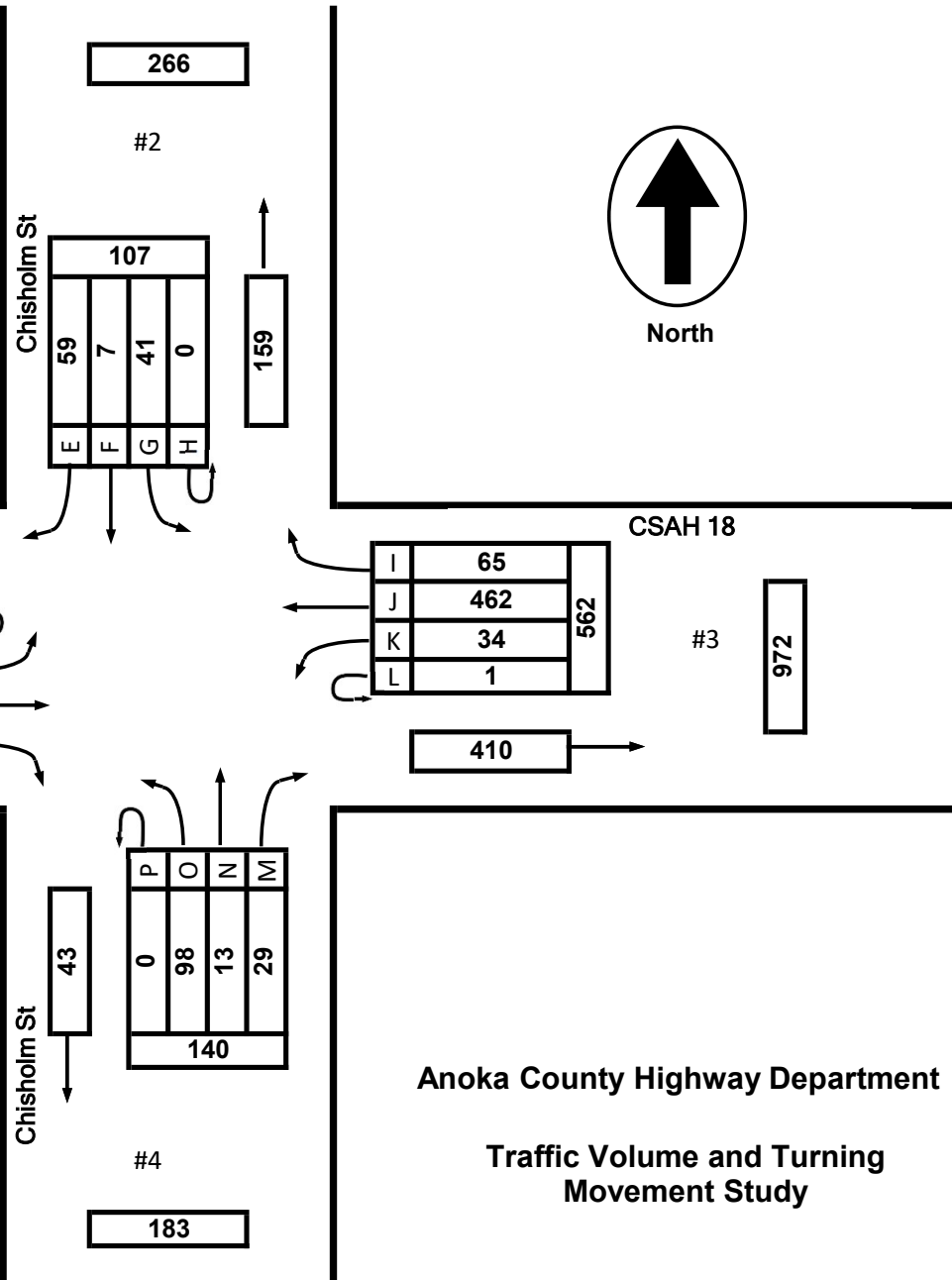
Count Number : TMC 2379

Location : CSAH 18  
@ Chisholm St

Collection Period : 4:30 PM - 5:30 PM  
**PM PEAK**



North



CSAH 18

CSAH 18

Chisholm St

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

TMC 2379 - CSAH 18 @ Chisholm St

0 0

Thursday, July 13, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						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	1	2	3	0	6	0	0	5	0	0	5	0	7	0	0	0	7	0	1	9	0	0	10	0	0	0	0	0	0	28
12:15 AM	0	0	1	0	0	1	0	0	3	0	0	3	0	5	0	1	0	6	1	0	7	0	0	8	0	0	0	0	0	0	18
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	4	0	0	1	0	0	1	0	0	0	0	0	0	5
12:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	1	0	0	2	0	0	2	0	0	0	0	0	0	5
Hourly Total	0	1	3	3	0	7	0	0	10	0	0	10	0	15	0	3	0	18	1	1	19	0	0	21	0	0	0	0	0	0	56
1:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	3	0	0	0	3	0	1	2	0	0	3	0	0	0	0	0	0	9
1:15 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	3	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	6
1:30 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	6
1:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	4	0	1	0	5	0	0	4	0	0	4	0	0	0	0	0	0	10
Hourly Total	0	0	0	2	0	2	0	0	6	0	0	6	0	13	0	2	0	15	0	1	7	0	0	8	0	0	0	0	0	0	31
2:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	5
2:15 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	5
2:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	3	0	0	0	3	0	0	8	0	0	8	0	0	0	0	0	0	13
2:45 AM	0	0	0	0	0	0	0	0	2	1	0	3	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hourly Total	0	0	0	0	0	0	0	1	5	1	0	7	0	9	0	0	0	9	0	0	11	0	0	11	0	0	0	0	0	0	27
3:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	6
3:15 AM	0	0	0	0	0	0	0	1	1	0	0	2	0	5	0	0	0	5	2	1	1	0	0	4	0	0	0	0	0	0	11
3:30 AM	0	0	0	0	0	0	0	2	1	0	0	3	0	5	0	0	0	5	0	0	2	0	0	2	0	0	0	0	0	0	10
3:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	6	0	0	0	6	0	0	2	0	0	2	0	0	0	0	0	0	9
Hourly Total	0	0	0	0	0	0	0	5	2	0	0	7	0	20	0	1	0	21	2	1	5	0	0	8	0	0	0	0	0	0	36
4:00 AM	0	0	0	0	0	0	0	2	9	0	0	11	0	9	0	1	0	10	0	0	2	0	0	2	0	0	0	0	0	0	23
4:15 AM	0	0	0	0	0	0	0	2	6	0	0	8	0	5	0	1	0	6	0	0	6	0	0	6	0	0	0	0	0	0	20
4:30 AM	0	0	0	0	0	0	0	1	10	0	0	11	0	13	0	2	0	15	1	1	4	0	0	6	0	0	0	0	0	0	32
4:45 AM	0	0	0	0	0	0	0	3	12	1	0	16	0	6	0	0	0	6	0	1	16	0	0	17	0	0	0	0	0	0	39
Hourly Total	0	0	0	0	0	0	0	8	37	1	0	46	0	33	0	4	0	37	1	2	28	0	0	31	0	0	0	0	0	0	114
5:00 AM	0	0	1	1	0	2	0	3	21	0	0	24	0	14	0	1	0	15	0	0	11	0	0	11	0	0	0	0	0	0	52
5:15 AM	0	1	0	0	0	1	0	7	24	0	0	31	0	11	0	4	0	15	1	3	25	0	0	29	0	0	0	0	0	0	76
5:30 AM	0	0	0	0	0	0	0	4	39	0	0	43	0	13	1	10	0	24	2	0	24	0	0	26	0	0	0	0	0	0	93
5:45 AM	0	1	0	1	0	2	0	6	31	0	0	37	0	20	0	1	0	21	2	2	30	0	0	34	0	0	0	0	0	0	94
Hourly Total	0	2	1	2	0	5	0	20	115	0	0	135	0	58	1	16	0	75	5	5	90	0	0	100	0	0	0	0	0	0	315
6:00 AM	0	0	1	1	0	2	0	8	40	0	0	48	0	18	1	7	0	26	1	3	31	0	0	35	0	0	0	0	0	0	111
6:15 AM	0	1	0	3	0	4	0	10	47	2	0	59	0	32	0	4	0	36	3	1	44	0	0	48	0	0	0	0	0	0	147
6:30 AM	0	0	0	3	0	3	0	5	57	0	0	62	0	15	1	9	0	25	1	4	51	0	0	56	0	0	0	0	0	0	146
6:45 AM	0	1	0	2	0	3	0	8	63	2	0	73	0	22	0	10	0	32	0	1	44	0	0	45	0	0	0	0	0	0	153
Hourly Total	0	2	1	9	0	12	0	31	207	4	0	242	0	87	2	30	0	119	5	9	170	0	0	184	0	0	0	0	0	0	557
7:00 AM	0	1	0	3	0	4	0	8	62	1	0	71	0	28	1	9	0	38	2	3	50	0	0	55	0	0	0	0	0	0	168
7:15 AM	0	1	0	3	0	4	0	11	73	1	0	85	0	28	3	5	0	36	1	4	58	0	0	63	0	0	0	0	0	0	188
7:30 AM	0	1	0	4	0	5	0	9	62	1	0	72	0	24	0	11	0	35	0	3	60	0	0	63	0	0	0	0	0	0	175
7:45 AM	0	1	0	3	0	4	0	12	48	2	0	62	0	37	1	4	0	42	2	8	54	0	0	64	0	0	0	0	0	0	172
Hourly Total	0	4	0	13	0	17	0	40	245	5	0	290	0	117	5	29	0	151	5	18	222	0	0	245	0	0	0	0	0	0	703

TMC 2379 - CSAH 18 @ Chisholm St

0 0

Thursday, July 13, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						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	2	0	3	0	5	0	10	54	3	0	67	0	26	1	9	0	36	1	12	52	0	0	65	173
8:15 AM	0	0	0	3	0	3	0	8	66	4	0	78	0	24	3	10	0	37	0	7	47	0	0	54	172
8:30 AM	0	1	1	7	0	9	0	5	51	4	0	60	0	29	0	4	0	33	2	17	42	0	0	61	163
8:45 AM	0	0	2	13	0	15	0	7	50	8	0	65	0	20	1	6	0	27	1	18	39	1	0	59	166
Hourly Total	0	3	3	26	0	32	0	30	221	19	0	270	0	99	5	29	0	133	4	54	180	1	0	239	674
9:00 AM	0	1	2	8	0	11	0	13	62	2	0	77	0	14	3	10	0	27	0	13	40	0	0	53	168
9:15 AM	0	5	2	9	0	16	0	9	55	4	0	68	0	24	0	7	0	31	3	16	37	0	0	56	171
9:30 AM	0	2	2	11	0	15	0	6	43	2	0	51	0	21	0	0	0	21	3	11	44	0	0	58	145
9:45 AM	0	1	0	16	0	17	0	5	47	3	0	55	0	21	3	6	0	30	1	14	43	0	0	58	160
Hourly Total	0	9	6	44	0	59	0	33	207	11	0	251	0	80	6	23	0	109	7	54	164	0	0	225	644
10:00 AM	0	4	1	9	0	14	0	8	56	5	0	69	0	25	1	7	0	33	4	18	31	0	0	53	169
10:15 AM	0	5	1	11	0	17	0	7	43	9	0	59	0	16	0	7	0	23	3	11	35	0	0	49	148
10:30 AM	0	5	3	14	0	22	0	8	64	6	0	78	0	22	2	7	0	31	3	18	45	0	0	66	197
10:45 AM	0	3	1	10	0	14	0	4	45	8	0	57	0	20	1	5	0	26	1	18	46	0	0	65	162
Hourly Total	0	17	6	44	0	67	0	27	208	28	0	263	0	83	4	26	0	113	11	65	157	0	0	233	676
11:00 AM	0	11	0	19	0	30	0	6	47	7	0	60	0	15	4	8	0	27	3	17	41	0	0	61	178
11:15 AM	0	7	1	16	0	24	0	5	69	8	0	82	0	17	1	6	0	24	1	31	57	2	0	91	221
11:30 AM	0	3	1	16	0	20	0	4	49	3	0	56	0	16	3	8	0	27	1	25	52	1	0	79	182
11:45 AM	0	7	1	24	0	32	0	11	48	11	0	70	0	17	3	5	0	25	0	26	50	0	0	76	203
Hourly Total	0	28	3	75	0	106	0	26	213	29	0	268	0	65	11	27	0	103	5	99	200	3	0	307	784
12:00 PM	0	4	2	26	0	32	0	8	52	11	0	71	0	24	4	7	0	35	2	39	41	0	0	82	220
12:15 PM	0	5	3	21	0	29	0	11	54	15	0	80	0	36	3	9	0	48	2	30	48	0	0	80	237
12:30 PM	0	11	1	27	0	39	0	6	53	7	0	66	0	23	1	9	0	33	5	33	56	1	0	95	233
12:45 PM	0	6	1	27	0	34	0	8	61	7	0	76	0	25	1	8	0	34	3	17	39	0	0	59	203
Hourly Total	0	26	7	101	0	134	0	33	220	40	0	293	0	108	9	33	0	150	12	119	184	1	0	316	893
1:00 PM	0	8	2	25	0	35	0	3	54	10	0	67	0	17	3	4	0	24	0	22	66	0	0	88	214
1:15 PM	0	5	1	14	0	20	0	3	43	4	0	50	0	18	2	4	0	24	4	13	35	0	0	52	146
1:30 PM	0	6	1	14	0	21	0	6	62	0	0	68	0	21	2	5	0	28	3	29	63	0	0	95	212
1:45 PM	0	9	1	17	0	27	0	7	63	10	0	80	0	21	2	10	0	33	2	15	61	0	0	78	218
Hourly Total	0	28	5	70	0	103	0	19	222	24	0	265	0	77	9	23	0	109	9	79	225	0	0	313	790
2:00 PM	0	6	0	17	0	23	0	11	56	8	0	75	0	28	1	8	0	37	1	21	62	0	0	84	219
2:15 PM	0	4	1	17	0	22	0	3	53	7	0	63	0	19	2	5	0	26	2	24	58	0	0	84	195
2:30 PM	0	9	1	21	0	31	0	6	76	5	0	87	0	22	1	12	0	35	0	22	50	1	0	73	226
2:45 PM	0	4	4	16	0	24	0	7	64	9	0	80	0	20	3	4	0	27	5	22	68	0	0	95	226
Hourly Total	0	23	6	71	0	100	0	27	249	29	0	305	0	89	7	29	0	125	8	89	238	1	0	336	866
3:00 PM	0	6	3	19	0	28	0	4	85	13	0	102	0	32	3	8	0	43	2	18	56	0	0	76	249
3:15 PM	0	7	3	15	0	25	0	2	95	9	0	106	0	23	1	7	0	31	2	18	57	0	3	77	239
3:30 PM	0	5	0	17	0	22	0	12	102	6	0	120	0	20	3	9	0	32	4	21	75	0	0	100	274
3:45 PM	0	7	2	15	0	24	0	10	119	9	0	138	0	21	3	8	0	32	5	27	78	0	0	110	304
Hourly Total	0	25	8	66	0	99	0	28	401	37	0	466	0	96	10	32	0	138	13	84	266	0	3	363	1066

**TMC 2379 - CSAH 18 @ Chisholm St**  
**0 0**

**Thursday, July 13, 2023**

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						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	0	7	2	20	0	29	0	8	106	6	1	120	0	24	4	8	0	36	4	20	94	0	0	118	303
4:15 PM	0	5	2	14	0	21	0	16	109	9	0	134	0	27	0	7	0	34	4	19	70	0	0	93	282
4:30 PM	0	10	3	15	0	28	0	5	116	13	0	134	0	25	3	3	0	31	4	20	99	1	0	124	317
4:45 PM	0	13	3	10	0	26	1	8	110	13	0	132	0	24	0	9	0	33	1	26	81	1	0	109	300
Hourly Total	0	35	10	59	0	104	1	37	441	41	1	520	0	100	7	27	0	134	13	85	344	2	0	444	1202
5:00 PM	0	12	1	14	0	27	0	13	116	22	0	151	0	30	3	6	0	39	7	16	90	0	0	113	330
5:15 PM	0	6	0	20	0	26	0	8	120	17	0	145	0	19	7	11	0	37	1	19	69	0	0	89	297
5:30 PM	0	5	1	18	0	24	1	7	86	11	0	105	0	19	2	7	0	28	3	25	95	0	0	123	280
5:45 PM	0	10	0	13	0	23	2	6	95	11	0	114	0	22	2	11	0	35	3	26	73	0	0	102	274
Hourly Total	0	33	2	65	0	100	3	34	417	61	0	515	0	90	14	35	0	139	14	86	327	0	0	427	1181
6:00 PM	0	13	3	14	0	30	0	9	85	14	0	108	0	28	1	9	0	38	2	20	84	0	0	106	282
6:15 PM	0	10	3	15	0	28	0	11	65	15	0	91	0	22	3	4	0	29	2	25	56	0	0	83	231
6:30 PM	0	7	3	19	0	29	0	4	50	9	0	63	0	21	2	6	0	29	0	11	71	0	0	82	203
6:45 PM	0	8	3	12	0	23	0	4	60	15	0	79	0	18	5	6	0	29	3	17	67	0	0	87	218
Hourly Total	0	38	12	60	0	110	0	28	260	53	0	341	0	89	11	25	0	125	7	73	278	0	0	358	934
7:00 PM	0	9	2	12	0	23	1	10	42	10	0	63	0	16	0	6	0	22	0	18	47	0	0	65	173
7:15 PM	0	15	1	9	0	25	0	5	34	2	0	41	0	16	1	6	0	23	1	15	45	0	0	61	150
7:30 PM	0	6	2	12	0	20	0	4	39	11	0	54	0	15	3	6	0	24	1	11	44	0	0	56	154
7:45 PM	0	9	3	12	0	24	0	4	28	4	0	36	0	18	0	4	0	22	1	14	36	0	0	51	133
Hourly Total	0	39	8	45	0	92	1	23	143	27	0	194	0	65	4	22	0	91	3	58	172	0	0	233	610
8:00 PM	0	10	2	11	0	23	0	6	43	6	0	55	0	22	1	3	0	26	1	15	33	0	0	49	153
8:15 PM	0	9	1	15	0	25	0	4	69	5	0	78	0	21	3	4	0	28	4	12	54	0	0	70	201
8:30 PM	0	6	1	20	0	27	0	5	36	4	0	45	0	15	1	6	0	22	1	8	43	0	0	52	146
8:45 PM	0	6	2	13	0	21	0	2	17	1	0	20	0	12	2	4	0	18	1	10	37	0	0	48	107
Hourly Total	0	31	6	59	0	96	0	17	165	16	0	198	0	70	7	17	0	94	7	45	167	0	0	219	607
9:00 PM	0	6	2	11	0	19	0	9	23	4	0	36	0	12	1	6	0	19	1	6	34	0	0	41	115
9:15 PM	0	7	1	5	0	13	0	2	29	3	0	34	0	8	3	4	0	15	0	6	22	0	0	28	90
9:30 PM	0	0	2	6	0	8	0	2	20	3	0	25	0	11	0	4	0	15	1	1	25	0	0	27	75
9:45 PM	0	1	2	6	0	9	0	0	15	3	0	18	0	8	3	4	0	15	0	3	21	0	0	24	66
Hourly Total	0	14	7	28	0	49	0	13	87	13	0	113	0	39	7	18	0	64	2	16	102	0	0	120	346
10:00 PM	0	1	1	2	0	4	0	0	7	0	0	7	0	7	0	3	0	10	2	3	19	0	0	24	45
10:15 PM	0	1	0	0	0	1	0	0	13	0	0	13	0	14	0	3	0	17	0	0	19	0	0	19	50
10:30 PM	0	4	1	1	0	6	0	2	15	1	0	18	0	5	1	4	0	10	0	1	14	0	0	15	49
10:45 PM	0	0	0	2	0	2	0	1	8	0	0	9	0	6	0	3	0	9	0	1	13	0	0	14	34
Hourly Total	0	6	2	5	0	13	0	3	43	1	0	47	0	32	1	13	0	46	2	5	65	0	0	72	178
11:00 PM	0	1	4	3	0	8	0	1	7	1	0	9	0	8	0	0	0	8	0	1	8	0	0	9	34
11:15 PM	0	0	0	4	0	4	0	1	11	1	0	13	0	9	0	1	0	10	3	2	8	0	0	13	40
11:30 PM	0	1	0	1	0	2	1	1	3	0	0	5	0	7	0	1	0	8	1	2	3	0	0	6	21
11:45 PM	0	1	1	0	0	2	0	0	9	0	0	9	0	2	0	0	0	2	0	1	4	0	0	5	18
Hourly Total	0	3	5	8	0	16	1	3	30	2	0	36	0	26	0	2	0	28	4	6	23	0	0	33	113
<b>DAILY TOTAL</b>	<b>0</b>	<b>367</b>	<b>101</b>	<b>855</b>	<b>0</b>	<b>1323</b>	<b>6</b>	<b>486</b>	<b>4154</b>	<b>442</b>	<b>1</b>	<b>5088</b>	<b>0</b>	<b>1560</b>	<b>120</b>	<b>466</b>	<b>0</b>	<b>2146</b>	<b>140</b>	<b>1054</b>	<b>3644</b>	<b>8</b>	<b>3</b>	<b>4846</b>	<b>13403</b>
<b>Cars</b>	0	365	101	846	0	1312	6	474	4018	440	0	4938	0	1519	119	451	0	2089	140	1044	3550	5	0	4739	13078
<b>Heavy Vehicles</b>	0	2	0	9	0	11	0	12	136	2	1	150	0	41	1	15	0	57	0	10	94	3	3	107	325
<b>Heavy Vehicle %</b>	0.00%	0.54%	0.00%	1.05%	0.00%	0.83%	0.00%	2.47%	3.27%	0.45%	100.00%	2.95%	0.00%	2.63%	0.83%	3.22%	0.00%	2.66%	0.00%	0.95%	2.58%	37.50%	100.00%	2.21%	2.42%

**TMC 2379 - CSAH 18 @ Chisholm St**  
0 0

**Thursday, July 13, 2023**

**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	11	0	19	0	30	0	6	47	7	0	60	0	15	4	8	0	27	3	17	41	0	0	61	178
11:15 AM	0	7	1	16	0	24	0	5	69	8	0	82	0	17	1	6	0	24	1	31	57	2	0	91	221
11:30 AM	0	3	1	16	0	20	0	4	49	3	0	56	0	16	3	8	0	27	1	25	52	1	0	79	182
11:45 AM	0	7	1	24	0	32	0	11	48	11	0	70	0	17	3	5	0	25	0	26	50	0	0	76	203
Peak Hour Total PHF	0	28	3	75	0	106	0	26	213	29	0	268	0	65	11	27	0	103	5	99	200	3	0	307	784
	0.000	0.636	0.750	0.781	0.000	0.828	0.000	0.591	0.772	0.659	0.000	0.817	0.000	0.956	0.688	0.844	0.000	0.954	0.417	0.798	0.877	0.375	0.000	0.843	0.887

**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	
4:30 PM	0	10	3	15	0	28	0	5	116	13	0	134	0	25	3	3	0	31	4	20	99	1	0	124	317
4:45 PM	0	13	3	10	0	26	1	8	110	13	0	132	0	24	0	9	0	33	1	26	81	1	0	109	300
5:00 PM	0	12	1	14	0	27	0	13	116	22	0	151	0	30	3	6	0	39	7	16	90	0	0	113	330
5:15 PM	0	6	0	20	0	26	0	8	120	17	0	145	0	19	7	11	0	37	1	19	69	0	0	89	297
Peak Hour Total PHF	0	41	7	59	0	107	1	34	462	65	0	562	0	98	13	29	0	140	13	81	339	2	0	435	1244
	0.000	0.788	0.583	0.738	0.000	0.955	0.250	0.654	0.963	0.739	0.000	0.930	0.000	0.817	0.464	0.659	0.000	0.897	0.464	0.779	0.856	0.500	0.000	0.877	0.942

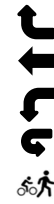
Total Vehicles On Leg				2939	
Vehicles Entering Intersection		1323	Vehicles Exiting Intersection		1616
<b>Southbound</b>					
Cars	846	101	365	0	0
Heavy	9	0	2	0	0
<b>Total</b>	<b>855</b>	<b>101</b>	<b>367</b>	<b>0</b>	<b>0</b>



Total Vehicles on Leg 11555	Vehicles Entering Intersection 4846	Eastbound	Cars	Heavy	Total	
			0	3	3	
	140		0	140		
	1044		10	1054		
	Vehicles Exiting Intersection 6709		3550	94	3644	
		5	3	8		

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 5088	Total Vehicles on Leg 9571
440	2	442			
4018	136	4154			
474	12	486			
Vehicles Exiting Intersection 4483	6	6			
	0	1	1		



Cars	0	0	1519	119	451	
Heavy	0	0	41	1	15	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1560</b>	<b>120</b>	<b>466</b>	
<b>Northbound</b>						
Vehicles Entering Intersection			2146	Vehicles Exiting Intersection		595
Total Vehicles On Leg			2741			

# Heavy Vehicles

Date	Time	Southbound						Westbound						Northbound						Eastbound					
		U Turns	Left Turns	Straight Through	Right Turns	EB Bicycles in Crosswalk	WB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	NB Bicycles in Crosswalk	SB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	EB Bicycles in Crosswalk	WB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	NB Bicycles in Crosswalk	SB Bicycles in Crosswalk
07/13/2023	0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:45	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45	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	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	2:45	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	3:30	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	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	4:30	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	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	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30	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	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	6:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0
	6:15	0	1	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	5	0	0
	6:30	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
	7:00	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	3	0	0
	7:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
	7:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	5	0	0
	7:45	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0
	8:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
	8:15	0	0	0	0	0	0	0	0	6	0	0	0	0	0	3	0	0	0	0	0	0	3	0	0
	8:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	2	0	0
	8:45	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0
	9:00	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	2	0	0	0	0	1	0	0
	9:15	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
	9:30	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0
	10:00	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
	10:15	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
	10:30	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0
	10:45	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
	11:00	0	0	0	0	0	0	0	0	5	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
	11:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	2	1	0
	11:30	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
	11:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	1	1	0	0





# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2379

Study Date : 07/21/2023

## Signal Warrants - Summary

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### Major Street Approaches

#### Eastbound: CSAH 18

Number of Lanes : 1

Total Approach Volume: 4,846

#### Westbound: CSAH 18

Number of Lanes : 1

Total Approach Volume: 5,088

### Minor Street Approaches

#### Northbound: Chisholm St

Number of Lanes : 1

Total Approach Volume: 2,146

#### Southbound: Chisholm St

Number of Lanes : 1

Total Approach Volume: 1,323

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### Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 13 hours, 8 are needed

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

Required volumes reached for 10 hours, 8 are needed

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

Required 1A volumes reached for 16 hours, 8 are needed

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

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

Number of hours (10) volumes exceed minimum >= minimum required (4).

**Warrant 3 - Peak Hour.....Satisfied**

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

Number of one hour periods (25) 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 2379

Study Date : 07/21/2023

## 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

13 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**

#### Volume Requirements

Rural Factor of 70 % applied  
Veh/Hr Major = **350**  
  
Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:00 - 17:00	444	+	520	=	964	134	104	Yes
17:00 - 18:00	427	+	515	=	942	139	100	Yes
15:00 - 16:00	363	+	466	=	829	138	99	Yes
18:00 - 19:00	358	+	341	=	699	125	110	Yes
14:00 - 15:00	336	+	305	=	641	125	100	Yes
12:00 - 13:00	316	+	293	=	609	150	134	Yes
13:00 - 14:00	313	+	265	=	578	109	103	Yes
11:00 - 12:00	307	+	268	=	575	103	106	Yes
06:45 - 07:45	226	+	301	=	527	141	16	Yes
07:45 - 08:45	244	+	267	=	511	148	21	Yes
08:45 - 09:45	226	+	261	=	487	106	57	Yes
09:45 - 10:45	226	+	261	=	487	117	70	Yes
05:45 - 06:45	173	+	206	=	379	108	11	Yes
10:45 - 11:45	296	+	255	=	551	104	88	No
19:30 - 20:30	226	+	223	=	449	100	92	No
19:45 - 20:45	222	+	214	=	436	98	99	No
19:00 - 20:00	233	+	194	=	427	91	92	No
20:00 - 21:00	219	+	198	=	417	94	96	No
19:15 - 20:15	217	+	186	=	403	95	92	No
20:15 - 21:15	211	+	179	=	390	87	92	No
05:30 - 06:30	143	+	187	=	330	107	8	No
20:30 - 21:30	169	+	135	=	304	74	80	No
05:15 - 06:15	124	+	159	=	283	86	5	No
20:45 - 21:45	144	+	115	=	259	67	61	No
05:00 - 06:00	100		135		235	75	5	No

# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2379

Study Date : 07/21/2023

## 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

10 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**

#### Volume Requirements

Rural Factor of 70 % applied  
 Veh/Hr Major = **525**  
 Veh/Hr Minor = **52**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	<b>CSAH 18</b>					<b>Chisholm St</b>		
16:30 - 17:30	435	+	562	=	997	140	107	Yes
15:30 - 16:30	421	+	512	=	933	134	96	Yes
17:30 - 18:30	414	+	418	=	832	130	105	Yes
14:30 - 15:30	321	+	375	=	696	136	108	Yes
13:30 - 14:30	341	+	286	=	627	124	93	Yes
11:30 - 12:30	317	+	277	=	594	135	113	Yes
10:30 - 11:30	283	+	277	=	560	108	90	Yes
12:30 - 13:30	294	+	259	=	553	115	128	Yes
18:30 - 19:30	295	+	246	=	541	103	100	Yes
06:45 - 07:45	226	+	301	=	527	141	16	Yes
07:45 - 08:45	244	+	267	=	511	148	21	No
06:30 - 07:30	219	+	291	=	510	131	14	No
08:00 - 09:00	239	+	270	=	509	133	32	No
08:15 - 09:15	227	+	280	=	507	124	38	No
08:30 - 09:30	229	+	270	=	499	118	51	No
10:00 - 11:00	233	+	263	=	496	113	67	No
10:15 - 11:15	241	+	254	=	495	107	83	No
09:45 - 10:45	226	+	261	=	487	117	70	No
08:45 - 09:45	226	+	261	=	487	106	57	No
09:00 - 10:00	225	+	251	=	476	109	59	No
06:15 - 07:15	204	+	265	=	469	131	14	No
09:15 - 10:15	225	+	243	=	468	115	62	No
09:30 - 10:30	218	+	234	=	452	107	63	No
19:30 - 20:30	226	+	223	=	449	100	92	No
19:45 - 20:45	222		214		436	98	99	No

# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2379

Study Date : 07/21/2023

## 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

16 hours meet 1A minimums.  
14 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 18

#### Minor Road Chisholm St

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:15 - 17:15	439	+	551	=	990	137	102	Yes
17:15 - 18:15	420	+	472	=	892	138	103	Yes
15:15 - 16:15	405	+	484	=	889	131	100	Yes
14:15 - 15:15	328	+	332	=	660	131	105	Yes
18:15 - 19:15	317	+	296	=	613	109	103	Yes
12:15 - 13:15	322	+	289	=	611	139	137	Yes
11:15 - 12:15	328	+	279	=	607	111	108	Yes
13:15 - 14:15	309	+	273	=	582	122	91	Yes
07:15 - 08:15	255	+	286	=	541	149	18	Yes
08:15 - 09:15	227	+	280	=	507	124	38	Yes
10:15 - 11:15	241	+	254	=	495	107	83	Yes
06:15 - 07:15	204		265		469	131	14	Yes

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:00 - 17:00	444	+	520	=	964	134	104	Yes
17:00 - 18:00	427	+	515	=	942	139	100	Yes
15:00 - 16:00	363	+	466	=	829	138	99	Yes
18:00 - 19:00	358	+	341	=	699	125	110	Yes
14:00 - 15:00	336	+	305	=	641	125	100	Yes
12:00 - 13:00	316	+	293	=	609	150	134	Yes
13:00 - 14:00	313	+	265	=	578	109	103	Yes
11:00 - 12:00	307	+	268	=	575	103	106	Yes
07:00 - 08:00	245	+	290	=	535	151	17	Yes
08:00 - 09:00	239	+	270	=	509	133	32	Yes
10:00 - 11:00	233	+	263	=	496	113	67	Yes
09:00 - 10:00	225		251		476	109	59	Yes

# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2379

Study Date : 07/21/2023

## 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.

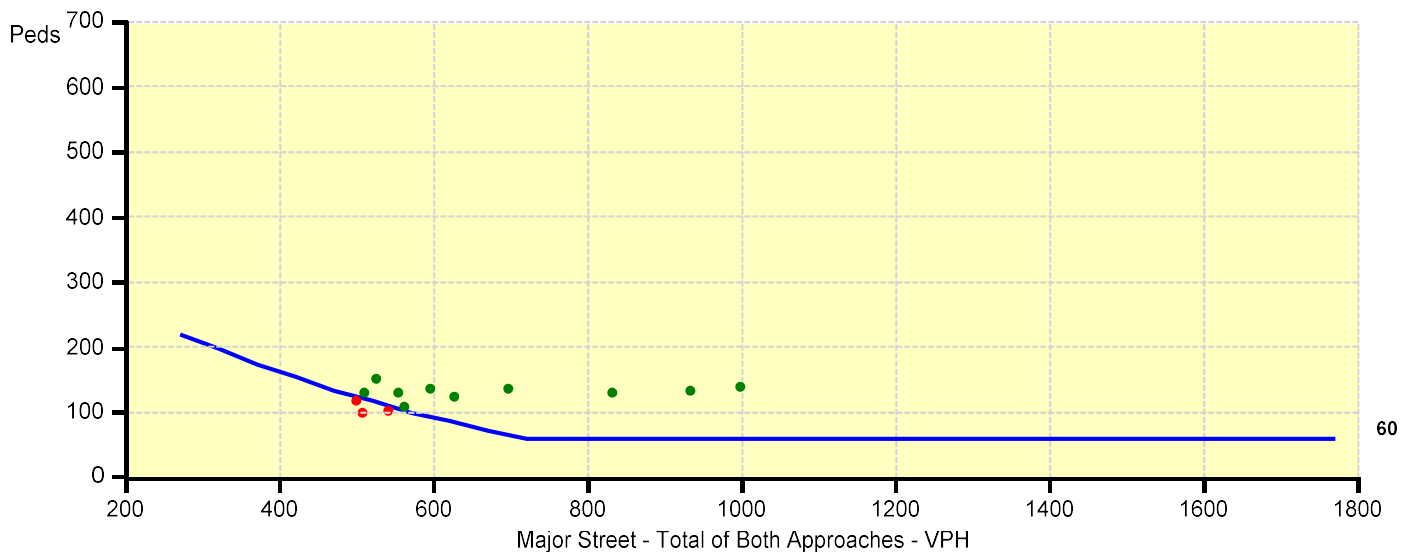
#### Summary

10 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 18				Total	Minor Road Chisholm St		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	435	+	562	=	997	140	107	Yes
15:30 - 16:30	421	+	512	=	933	134	96	Yes
17:30 - 18:30	414	+	418	=	832	130	105	Yes
14:30 - 15:30	321	+	375	=	696	136	108	Yes
13:30 - 14:30	341	+	286	=	627	124	93	Yes
11:30 - 12:30	317	+	277	=	594	135	113	Yes
10:30 - 11:30	283	+	277	=	560	108	90	Yes
12:30 - 13:30	294	+	259	=	553	115	128	Yes
07:30 - 08:30	246	+	279	=	525	150	17	Yes
06:30 - 07:30	219	+	291	=	510	131	14	Yes
18:30 - 19:30	295	+	246	=	541	103	100	No
18:45 - 19:45	269	+	237	=	506	98	91	No



# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2379

Study Date : 07/21/2023

## 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

13 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 18				Total	Minor Road Chisholm St		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	435	+	562	=	997	140	107	Yes
16:15 - 17:15	439	+	551	=	990	137	102	Yes
15:45 - 16:45	445	+	526	=	971	133	102	Yes
16:45 - 17:45	434	+	533	=	967	137	103	Yes
16:00 - 17:00	444	+	520	=	964	134	104	Yes
17:00 - 18:00	427	+	515	=	942	139	100	Yes
15:30 - 16:30	421	+	512	=	933	134	96	Yes
17:15 - 18:15	420	+	472	=	892	138	103	Yes
15:15 - 16:15	405	+	484	=	889	131	100	Yes
17:30 - 18:30	414	+	418	=	832	130	105	Yes
15:00 - 16:00	363	+	466	=	829	138	99	Yes
14:45 - 15:45	348	+	408	=	756	133	99	Yes

