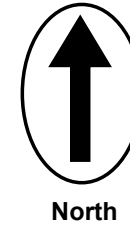


Date: 09/12/24

Count Number: TMC 2407

Location: CSASH 1  
@ Xavis St NW

Collection Period: 24 HR



North

1252

#2

Xavis St NW

691			
151	20	520	0
E	F	G	H

561

CSAH 1

I	409	12761
J	11870	
K	438	
L	44	

#3

24596

11835

CSAH 1

11279	8	D
	123	C
	10652	B
	496	A

#1

23754

12475

P	O	Z	M
0	446	29	619
1094			

#4

2048

954

Xavis St NW

Anoka County  
Highway Department

Traffic Volume and Turning  
Movement Study

EXISTING LANES OF APPROACH

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

Date: 09/12/24

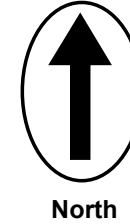
Count Number: TMC 2407

Location: CSASH 1

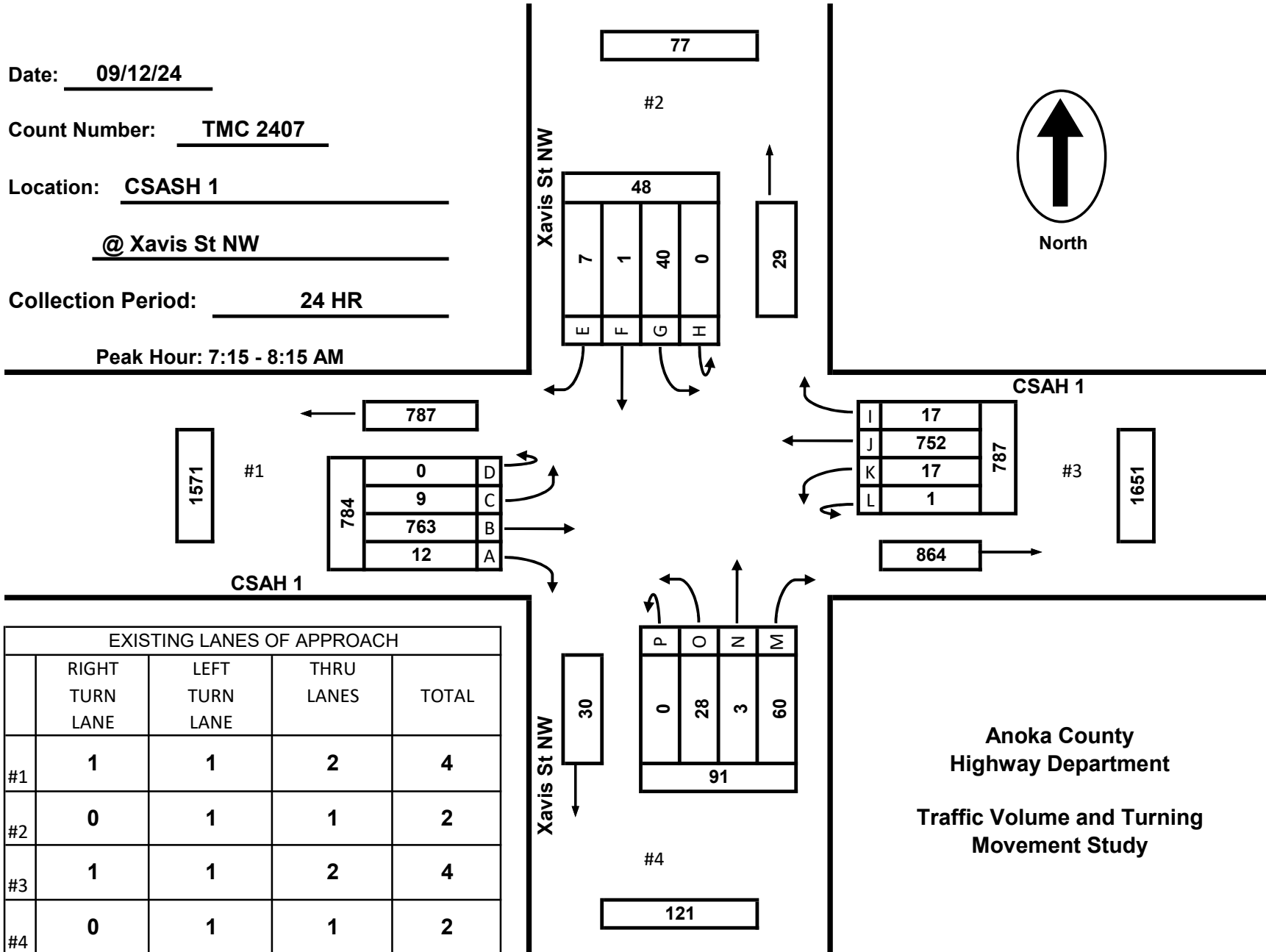
@ Xavis St NW

Collection Period: 24 HR

Peak Hour: 7:15 - 8:15 AM



North



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

Anoka County  
Highway Department  
Traffic Volume and Turning  
Movement Study

Date: 09/12/24

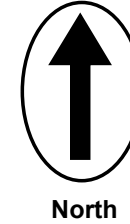
Count Number: TMC 2407

Location: CSASH 1

@ Xavis St NW

Collection Period: 24 HR

Peak Hour: 4:00 - 5:00 PM



North

155

#2

Xavis St NW

96			
15	3	78	0
E	F	G	H

59

CSAH 1

I	45	1490
J	1400	
K	40	
L	5	

#3

2396

906

2281

#1

1446

835	0	D
	10	C
	775	B
	50	A

CSAH 1

P	O	N	M
0	31	4	48
83			

#4

93

Xavis St NW

176

Anoka County  
Highway Department  
Traffic Volume and Turning  
Movement Study

EXISTING LANES OF APPROACH

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

**TMC 2407 - CSASH 1 @ Xavis St NW**  
**Coon Rapids MN**  
**Thursday, September 12, 2024**

Time	Southbound Xavis St NW						Westbound CSAH 1						Northbound Xavis St NW						Eastbound CSAH 1						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	0	0	0	1	1	1	10	0	0	12	0	0	0	3	0	3	0	0	22	1	0	23	39
12:15 AM	0	1	0	2	0	3	0	2	19	2	0	23	0	0	0	1	0	1	0	0	7	0	0	7	34
12:30 AM	0	0	0	0	0	0	0	4	18	0	0	22	0	0	0	3	0	3	0	0	13	0	0	13	38
12:45 AM	0	0	0	0	0	0	0	1	13	0	0	14	0	0	0	2	0	2	0	0	9	2	0	11	27
Hourly Total	0	2	0	2	0	4	1	8	60	2	0	71	0	0	0	9	0	9	0	0	51	3	0	54	138
1:00 AM	0	0	1	0	0	1	0	1	7	0	0	8	0	0	0	1	0	1	0	1	10	1	0	12	22
1:15 AM	0	1	0	1	0	2	0	0	15	0	0	15	0	0	1	0	0	1	0	0	10	0	0	10	28
1:30 AM	0	0	0	0	1	0	0	2	5	1	0	8	0	0	0	0	0	0	0	0	9	1	0	10	18
1:45 AM	0	0	0	0	0	0	0	1	10	0	0	11	0	0	0	0	1	0	0	0	9	0	0	9	20
Hourly Total	0	1	1	1	1	3	0	4	37	1	0	42	0	0	1	1	1	2	0	1	38	2	0	41	88
2:00 AM	0	0	0	1	0	1	0	0	10	1	0	11	0	0	0	1	0	1	0	0	3	0	0	3	16
2:15 AM	0	0	0	0	0	0	0	1	6	1	0	8	0	0	0	0	0	0	0	0	8	0	0	8	16
2:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	8	0	0	8	11
2:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0	3	0	0	3	5
Hourly Total	0	0	0	1	0	1	0	1	20	2	0	23	0	0	0	2	0	2	0	0	22	0	0	22	48
3:00 AM	0	1	0	0	0	1	0	1	7	0	0	8	0	0	0	1	0	1	0	0	8	0	0	8	18
3:15 AM	0	0	0	0	0	0	1	1	6	1	0	9	0	0	0	1	0	1	0	0	10	0	0	10	20
3:30 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	3	0	3	0	0	14	0	0	14	25
3:45 AM	0	0	0	0	0	0	0	1	5	0	0	6	0	1	0	1	0	2	0	0	16	0	0	16	24
Hourly Total	0	1	0	0	0	1	1	3	26	1	0	31	0	1	0	6	0	7	0	0	48	0	0	48	87
4:00 AM	0	2	0	0	0	2	0	0	9	0	0	9	0	1	0	2	0	3	0	0	12	0	0	12	26
4:15 AM	0	0	0	0	0	0	0	0	15	0	0	15	0	1	0	3	0	4	0	0	30	0	0	30	49
4:30 AM	0	3	0	0	0	3	0	1	11	0	0	12	0	1	0	2	0	3	0	0	38	0	0	38	56
4:45 AM	0	2	0	0	0	2	0	0	21	0	0	21	0	1	0	4	0	5	0	0	27	0	0	27	55
Hourly Total	0	7	0	0	0	7	0	1	56	0	0	57	0	4	0	11	0	15	0	0	107	0	0	107	186
5:00 AM	0	2	0	0	0	2	0	0	19	1	0	20	0	1	0	9	0	10	0	0	46	0	0	46	78
5:15 AM	0	1	0	0	0	1	0	0	25	1	0	26	0	4	0	7	0	11	0	0	62	1	0	63	101
5:30 AM	0	3	0	1	2	4	0	0	34	0	0	34	0	2	0	13	0	15	0	1	97	0	0	98	151
5:45 AM	0	2	0	0	0	2	1	1	44	1	0	47	0	6	0	8	0	14	0	0	83	0	0	83	146
Hourly Total	0	8	0	1	2	9	1	1	122	3	0	127	0	13	0	37	0	50	0	1	288	1	0	290	476
6:00 AM	0	4	0	0	0	4	1	0	48	2	0	51	0	2	0	6	0	8	0	0	88	1	0	89	152
6:15 AM	0	8	0	0	0	8	0	1	68	3	0	72	0	4	0	10	0	14	0	0	121	1	0	122	216
6:30 AM	0	8	0	0	0	8	0	0	84	2	0	86	0	6	0	9	1	15	0	0	154	5	0	159	268
6:45 AM	0	6	1	2	0	9	0	5	96	4	0	105	0	13	0	9	0	22	0	0	143	1	0	144	280
Hourly Total	0	26	1	2	0	29	1	6	296	11	0	314	0	25	0	34	1	59	0	0	506	8	0	514	916
7:00 AM	0	6	0	0	0	6	0	4	97	7	0	108	0	8	1	13	0	22	0	0	188	3	0	191	327
7:15 AM	0	12	0	1	0	13	0	4	139	1	0	144	0	7	1	13	0	21	0	0	209	3	0	212	390
7:30 AM	0	9	0	3	0	12	0	7	210	6	0	223	0	6	1	18	0	25	0	3	205	1	0	209	469
7:45 AM	0	14	1	2	0	17	0	4	233	5	0	242	0	10	0	11	0	21	0	4	190	2	0	196	476
Hourly Total	0	41	1	6	0	48	0	19	679	19	0	717	0	31	3	55	0	89	0	7	792	9	0	808	1662

**TMC 2407 - CSASH 1 @ Xavis St NW**  
**Coon Rapids MN**  
**Thursday, September 12, 2024**

Time	Southbound Xavis St NW						Westbound CSAH 1						Northbound Xavis St NW						Eastbound CSAH 1						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	0	1	0	6	1	2	170	5	0	178	0	5	1	18	0	24	0	2	159	6	0	167	375
8:15 AM	0	11	0	1	0	12	0	3	120	6	0	129	0	9	1	5	0	15	0	4	162	4	0	170	326
8:30 AM	0	9	3	1	0	13	0	5	138	4	0	147	0	11	1	11	0	23	0	1	157	4	0	162	345
8:45 AM	0	6	0	0	0	6	2	4	158	2	0	166	0	3	0	10	0	13	0	1	141	5	0	147	332
Hourly Total	0	31	3	3	0	37	3	14	586	17	0	620	0	28	3	44	0	75	0	8	619	19	0	646	1378
9:00 AM	0	14	0	1	0	15	0	2	155	6	0	163	0	3	1	16	0	20	0	2	131	3	0	136	334
9:15 AM	0	19	1	1	0	21	0	4	186	2	0	192	0	5	0	5	0	10	0	2	141	6	0	149	372
9:30 AM	0	8	0	0	0	8	0	6	169	2	0	177	0	5	0	11	0	16	0	3	146	5	0	154	355
9:45 AM	0	3	0	0	0	3	2	6	165	6	0	179	0	7	0	4	4	11	0	0	134	4	0	138	331
Hourly Total	0	44	1	2	0	47	2	18	675	16	0	711	0	20	1	36	4	57	0	7	552	18	0	577	1392
10:00 AM	0	10	0	1	0	11	0	7	171	4	0	182	0	5	0	3	0	8	1	1	140	5	0	147	348
10:15 AM	0	6	0	1	0	7	1	5	133	1	0	140	0	5	1	9	0	15	0	4	135	6	0	145	307
10:30 AM	0	7	0	2	0	9	0	5	164	3	0	172	0	3	0	2	1	5	0	1	131	6	0	138	324
10:45 AM	0	3	0	1	0	4	0	3	188	8	0	199	0	9	0	4	1	13	0	2	188	6	0	196	412
Hourly Total	0	26	0	5	0	31	1	20	656	16	0	693	0	22	1	18	2	41	1	8	594	23	0	626	1391
11:00 AM	0	4	1	2	1	7	0	4	172	4	0	180	0	7	1	5	0	13	1	4	160	8	0	173	373
11:15 AM	0	2	1	2	0	5	0	5	148	3	0	156	0	2	0	8	0	10	0	3	154	7	0	164	335
11:30 AM	0	5	0	0	0	5	0	2	165	4	0	171	0	5	0	10	0	15	0	4	148	10	0	162	353
11:45 AM	0	8	0	5	0	13	0	5	194	7	0	206	0	4	0	7	1	11	0	7	143	1	0	151	381
Hourly Total	0	19	2	9	1	30	0	16	679	18	0	713	0	18	1	30	1	49	1	18	605	26	0	650	1442
12:00 PM	0	7	0	2	0	9	1	6	172	2	0	181	0	5	0	4	0	9	0	3	160	6	0	169	368
12:15 PM	0	6	0	3	0	9	2	6	176	8	0	192	0	12	1	8	0	21	0	0	185	12	0	197	419
12:30 PM	0	7	0	3	0	10	0	2	143	3	0	148	0	8	0	15	0	23	0	1	169	8	0	178	359
12:45 PM	0	4	0	2	0	6	0	9	169	11	0	189	0	9	0	7	0	16	0	1	155	7	0	163	374
Hourly Total	0	24	0	10	0	34	3	23	660	24	0	710	0	34	1	34	0	69	0	5	669	33	0	707	1520
1:00 PM	0	5	0	2	1	7	1	7	141	6	0	155	0	7	0	7	0	14	0	1	176	7	1	184	360
1:15 PM	0	9	0	3	0	12	0	8	180	5	0	193	0	7	1	4	1	12	0	2	141	10	0	153	370
1:30 PM	0	5	0	5	0	10	3	4	192	7	0	206	0	11	0	8	4	19	0	2	173	7	0	182	417
1:45 PM	0	4	0	2	0	6	2	13	213	6	0	234	0	6	0	11	0	17	0	0	225	5	0	230	487
Hourly Total	0	23	0	12	1	35	6	32	726	24	0	788	0	31	1	30	5	62	0	5	715	29	1	749	1634
2:00 PM	0	4	1	3	0	8	1	7	173	10	0	191	0	2	0	11	0	13	0	1	200	10	0	211	423
2:15 PM	0	5	0	4	0	9	0	2	222	6	0	230	0	5	0	11	0	16	0	3	187	8	0	198	453
2:30 PM	0	5	0	3	0	8	0	5	216	2	0	223	0	9	0	4	0	13	0	1	175	9	1	185	429
2:45 PM	0	2	0	2	0	4	2	14	241	4	0	261	0	5	0	8	0	13	2	1	179	12	0	194	472
Hourly Total	0	16	1	12	0	29	3	28	852	22	0	905	0	21	0	34	0	55	2	6	741	39	1	788	1777
3:00 PM	0	4	0	0	0	4	0	6	278	5	0	289	0	9	0	8	0	17	1	2	166	14	1	183	493
3:15 PM	0	8	0	2	0	10	2	14	267	3	0	286	0	4	0	8	0	12	0	1	213	7	0	221	529
3:30 PM	0	3	1	2	2	6	0	8	326	7	1	341	0	11	1	5	1	17	1	1	229	8	1	239	603
3:45 PM	0	12	0	1	2	13	0	7	290	7	0	304	0	16	1	5	2	22	0	2	216	13	1	231	570
Hourly Total	0	27	1	5	4	33	2	35	1161	22	1	1220	0	40	2	26	3	68	2	6	824	42	3	874	2195

**TMC 2407 - CSASH 1 @ Xavis St NW**  
**Coon Rapids MN**  
**Thursday, September 12, 2024**

Time	Southbound Xavis St NW						Westbound CSAH 1						Northbound Xavis St NW						Eastbound CSAH 1						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	43	3	4	2	50	2	7	317	11	0	337	0	6	1	13	1	20	0	3	224	11	1	238	645
4:15 PM	0	17	0	1	1	18	2	16	355	8	0	381	0	8	0	11	1	19	0	4	198	13	0	215	633
4:30 PM	0	9	0	6	0	15	1	6	332	11	0	350	0	9	0	14	0	23	0	1	190	15	1	206	594
4:45 PM	0	9	0	4	0	13	0	11	396	15	1	422	0	8	3	10	0	21	0	2	163	11	0	176	632
Hourly Total	0	78	3	15	3	96	5	40	1400	45	1	1490	0	31	4	48	2	83	0	10	775	50	2	835	2504
5:00 PM	0	8	1	3	0	12	2	12	330	14	0	358	0	15	0	17	0	32	0	3	209	14	0	226	628
5:15 PM	0	11	0	0	0	11	1	13	306	13	0	333	0	11	0	9	0	20	0	1	165	11	1	177	541
5:30 PM	0	11	0	5	0	16	0	10	266	20	1	296	0	10	0	4	0	14	0	4	167	11	0	182	508
5:45 PM	0	6	0	12	0	18	0	8	242	9	0	259	0	6	1	7	0	14	1	3	161	10	0	175	466
Hourly Total	0	36	1	20	0	57	3	43	1144	56	1	1246	0	42	1	37	0	80	1	11	702	46	1	760	2143
6:00 PM	0	4	0	2	0	6	3	9	232	13	1	257	0	6	1	7	0	14	0	3	158	14	0	175	452
6:15 PM	0	8	0	3	0	11	1	9	153	6	0	169	0	7	0	16	0	23	0	4	153	12	0	169	372
6:30 PM	0	6	0	2	0	8	2	8	151	12	0	173	0	14	0	26	0	40	0	0	117	10	1	127	348
6:45 PM	0	11	1	4	0	16	1	4	146	10	0	161	0	12	0	8	0	20	0	3	118	10	0	131	328
Hourly Total	0	29	1	11	0	41	7	30	682	41	1	760	0	39	1	57	0	97	0	10	546	46	1	602	1500
7:00 PM	0	3	0	2	1	5	0	5	132	7	0	144	0	4	0	5	1	9	0	2	124	6	0	132	290
7:15 PM	0	14	1	5	0	20	0	9	113	9	0	131	0	5	1	8	0	14	0	1	130	15	0	146	311
7:30 PM	0	4	1	0	0	5	2	5	122	4	0	133	0	2	1	7	1	10	0	4	113	15	0	132	280
7:45 PM	0	9	0	2	0	11	0	3	104	3	0	110	0	5	1	6	1	12	0	0	113	5	0	118	251
Hourly Total	0	30	2	9	1	41	2	22	471	23	0	518	0	16	3	26	3	45	0	7	480	41	0	528	1132
8:00 PM	0	9	0	7	0	16	0	8	103	7	0	118	0	4	3	6	0	13	0	1	119	7	0	127	274
8:15 PM	0	8	0	1	0	9	0	9	101	4	0	114	0	3	1	6	0	10	1	2	117	10	0	130	263
8:30 PM	0	3	0	2	0	5	0	6	91	6	0	103	0	2	0	1	0	3	0	1	110	10	0	121	232
8:45 PM	0	10	0	4	0	14	1	4	76	5	0	86	0	1	0	4	0	5	0	1	89	2	0	92	197
Hourly Total	0	30	0	14	0	44	1	27	371	22	0	421	0	10	4	17	0	31	1	5	435	29	0	470	966
9:00 PM	0	3	0	0	0	3	0	6	80	2	0	88	0	6	0	3	0	9	0	1	78	7	0	86	186
9:15 PM	0	3	1	0	0	4	1	3	62	2	0	68	0	2	0	6	0	8	0	1	69	4	0	74	154
9:30 PM	0	6	0	1	1	7	1	8	51	5	0	65	0	3	1	3	0	7	0	0	69	5	0	74	153
9:45 PM	0	3	0	1	0	4	0	7	47	2	0	56	0	2	0	2	0	4	0	1	60	7	0	68	132
Hourly Total	0	15	1	2	1	18	2	24	240	11	0	277	0	13	1	14	0	28	0	3	276	23	0	302	625
10:00 PM	0	0	0	3	0	3	0	6	45	2	0	53	0	1	1	2	0	4	0	1	63	0	0	64	124
10:15 PM	0	2	0	3	0	5	0	3	56	4	0	63	0	0	0	0	1	0	0	2	57	0	0	59	127
10:30 PM	0	1	1	0	0	2	0	4	30	3	0	37	0	1	0	1	0	2	0	0	28	2	0	30	71
10:45 PM	0	0	0	1	0	1	0	2	44	2	0	48	0	2	0	3	0	5	0	0	26	2	0	28	82
Hourly Total	0	3	1	7	0	11	0	15	175	11	0	201	0	4	1	6	1	11	0	3	174	4	0	181	404
11:00 PM	0	0	0	0	0	0	0	1	32	1	0	34	0	1	0	2	0	3	0	1	37	2	0	40	77
11:15 PM	0	0	0	1	0	1	0	4	26	0	0	30	0	2	0	2	0	4	0	0	19	0	0	19	54
11:30 PM	0	1	0	1	0	2	0	2	19	1	0	22	0	0	0	3	0	3	0	1	23	1	0	25	52
11:45 PM	0	2	0	0	0	2	0	1	19	0	0	20	0	0	0	0	0	0	0	0	14	2	0	16	38
Hourly Total	0	3	0	2	0	5	0	8	96	2	0	106	0	3	0	7	0	10	0	2	93	5	0	100	221
<b>DAILY TOTAL</b>	<b>0</b>	<b>520</b>	<b>20</b>	<b>151</b>	<b>14</b>	<b>691</b>	<b>44</b>	<b>438</b>	<b>11870</b>	<b>409</b>	<b>4</b>	<b>12761</b>	<b>0</b>	<b>446</b>	<b>29</b>	<b>619</b>	<b>23</b>	<b>1094</b>	<b>8</b>	<b>123</b>	<b>10652</b>	<b>496</b>	<b>9</b>	<b>11279</b>	<b>25825</b>
<b>Cars</b>	0	504	19	150	7	673	44	428	11661	400	3	12533	0	434	26	606	11	1066	8	117	10485	486	4	11096	25368
<b>Heavy Vehicles</b>	0	16	1	1	7	18	0	10	209	9	1	228	0	12	3	13	12	28	0	6	167	10	5	183	457
<b>Heavy Vehicle %</b>	0.00%	3.08%	5.00%	0.66%	50.00%	2.60%	0.00%	2.28%	1.76%	2.20%	25.00%	1.79%	0.00%	2.69%	10.34%	2.10%	52.17%	2.56%	0.00%	4.88%	1.57%	2.02%	55.56%	1.62%	1.77%

**TMC 2407 - CSASH 1 @ Xavis St NW**  
**Coon Rapids MN**  
**Thursday, September 12, 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	
7:15 AM	0	12	0	1	0	13	0	4	139	1	0	144	0	7	1	13	0	21	0	0	209	3	0	212	390
7:30 AM	0	9	0	3	0	12	0	7	210	6	0	223	0	6	1	18	0	25	0	3	205	1	0	209	469
7:45 AM	0	14	1	2	0	17	0	4	233	5	0	242	0	10	0	11	0	21	0	4	190	2	0	196	476
8:00 AM	0	5	0	1	0	6	1	2	170	5	0	178	0	5	1	18	0	24	0	2	159	6	0	167	375
Peak Hour Total PHF	0.000	0.714	0.250	0.583	0.000	0.706	0.250	0.607	0.807	0.708	0.000	0.813	0.000	0.700	0.750	0.833	0.000	0.910	0.000	0.563	0.913	0.500	0.000	0.925	1710 0.898

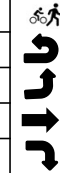
**PM Peak Hour**

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	
4:00 PM	0	43	3	4	2	50	2	7	317	11	0	337	0	6	1	13	1	20	0	3	224	11	1	238	645
4:15 PM	0	17	0	1	1	18	2	16	355	8	0	381	0	8	0	11	1	19	0	4	198	13	0	215	633
4:30 PM	0	9	0	6	0	15	1	6	332	11	0	350	0	9	0	14	0	23	0	1	190	15	1	206	594
4:45 PM	0	9	0	4	0	13	0	11	396	15	1	422	0	8	3	10	0	21	0	2	163	11	0	176	632
Peak Hour Total PHF	0.000	0.453	0.250	0.625	0.375	0.480	0.625	0.625	0.884	0.750	0.250	0.883	0.000	0.861	0.333	0.857	0.500	0.902	0.000	0.625	0.865	0.833	0.500	0.877	2504 0.971

Total Vehicles On Leg				1252			
Vehicles Entering Intersection				691			
Vehicles Exiting Intersection				561			
<b>Southbound</b>							
Cars	150	19	504	0	7		
Heavy	1	1	16	0	7		
<b>Total</b>	<b>151</b>	<b>20</b>	<b>520</b>	<b>0</b>	<b>14</b>		



Total Vehicles on Leg 23754	Eastbound	Vehicles Entering Intersection	11279
		Cars	4
		Heavy	5
		<b>Total</b>	<b>9</b>
		Vehicles Exiting Intersection	12475
Cars	8		
Heavy	0		
<b>Total</b>	<b>8</b>		
Cars	117		
Heavy	6		
<b>Total</b>	<b>123</b>		
Cars	10485		
Heavy	167		
<b>Total</b>	<b>10652</b>		
Cars	486		
Heavy	10		
<b>Total</b>	<b>496</b>		

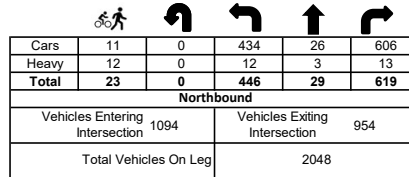


Daily Volumes

Cars	400	9	<b>409</b>
Heavy	209	10	<b>438</b>
<b>Total</b>	<b>11661</b>	<b>209</b>	<b>11870</b>
Cars	428	10	<b>438</b>
Heavy	44	0	<b>44</b>
<b>Total</b>	<b>44</b>	<b>0</b>	<b>44</b>
Cars	3	1	<b>4</b>
Heavy			
<b>Total</b>	<b>3</b>	<b>1</b>	<b>4</b>



Cars	11	0	434	26	606
Heavy	12	0	12	3	13
<b>Total</b>	<b>23</b>	<b>0</b>	<b>446</b>	<b>29</b>	<b>619</b>
<b>Northbound</b>					
Vehicles Entering Intersection			1094		
Vehicles Exiting Intersection			954		
Total Vehicles On Leg			2048		







# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 09/19/2024

## Signal Warrants - Summary

### Major Street Approaches

**Eastbound: CSAH 1**

Number of Lanes : 2+

Total Approach Volume: 11,279

**Westbound: CSAH 1**

Number of Lanes :2+

Total Approach Volume: 12,761

### Minor Street Approaches

**Northbound: Xavis St NW**

Number of Lanes :2+

Total Approach Volume: 1,094

**Southbound: Xavis St NW**

Number of Lanes :2+

Total Approach Volume: 691

### Warrant Summary (Rural 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 7 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 11 hours, 8 are needed

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

Number of hours (5) volumes exceed minimum >= minimum required (4).

**Warrant 3 - Peak Hour.....Not Satisfied**

**Warrant 3A - Peak Hour Delay.....Not Satisfied**

Approach volumes on minor street don't exceed minimums for any one hour period. 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 : 09/19/2024

## 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

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

#### Site Data Required

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

#### Volume Requirements

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

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:15 - 17:15	823	+	1511	=	2334	95	58	Yes
15:15 - 16:15	929	+	1268	=	2197	71	79	Yes
07:15 - 08:15	784	+	787	=	1571	91	48	Yes
17:45 - 18:45	646	+	858	=	1504	91	43	Yes
12:15 - 13:15	722	+	684	=	1406	74	32	Yes
08:15 - 09:15	615	+	605	=	1220	71	46	Yes
06:15 - 07:15	616	+	371	=	987	73	31	Yes
15:00 - 16:00	874	+	1220	=	2094	68	33	No
14:45 - 15:45	837	+	1177	=	2014	59	24	No
17:15 - 18:15	709	+	1145	=	1854	62	51	No
14:30 - 15:30	783	+	1059	=	1842	55	26	No
14:15 - 15:15	760	+	1003	=	1763	59	25	No
13:45 - 14:45	824	+	878	=	1702	59	31	No
14:00 - 15:00	788	+	905	=	1693	55	29	No
13:30 - 14:30	821	+	861	=	1682	65	33	No
17:30 - 18:30	701	+	981	=	1682	65	51	No
13:15 - 14:15	776	+	824	=	1600	61	36	No
11:30 - 12:30	679	+	750	=	1429	56	36	No
11:45 - 12:45	695	+	727	=	1422	64	41	No
12:00 - 13:00	707	+	710	=	1417	69	34	No
10:45 - 11:45	695	+	706	=	1401	51	21	No
10:30 - 11:30	671	+	707	=	1378	41	25	No
11:00 - 12:00	650	+	713	=	1363	49	30	No
11:15 - 12:15	646	+	714	=	1360	45	32	No
10:15 - 11:15	652		691		1343	46	27	No

# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 09/19/2024

## 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

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

#### Site Data Required

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

#### Volume Requirements

Rural Factor of 70% applied  
 Warrant 1A 1B  
 Veh/Hr Major = **336 504**  
 Veh/Hr Minor = **112 56**

#### Major Road CSAH 1

#### Minor Road Xavis St NW

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:15 - 17:15	823	+	1511	=	2334	95	58	No
16:00 - 17:00	835	+	1490	=	2325	83	96	No
15:30 - 16:30	923	+	1363	=	2286	78	87	No
15:45 - 16:45	890	+	1372	=	2262	84	96	No
16:30 - 17:30	785	+	1463	=	2248	96	51	No
15:15 - 16:15	929	+	1268	=	2197	71	79	No
16:45 - 17:45	761	+	1409	=	2170	87	52	No
15:00 - 16:00	874	+	1220	=	2094	68	33	No
14:45 - 15:45	837	+	1177	=	2014	59	24	No
17:00 - 18:00	760	+	1246	=	2006	80	57	No
17:15 - 18:15	709	+	1145	=	1854	62	51	No
14:30 - 15:30	783	+	1059	=	1842	55	26	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
15:45 - 16:45	890	+	1372	=	2262	84	96	Yes
16:45 - 17:45	761	+	1409	=	2170	87	52	Yes
14:45 - 15:45	837	+	1177	=	2014	59	24	Yes
13:30 - 14:30	821	+	861	=	1682	65	33	Yes
07:00 - 08:00	808	+	717	=	1525	89	48	Yes
17:45 - 18:45	646	+	858	=	1504	91	43	Yes
11:30 - 12:30	679	+	750	=	1429	56	36	Yes
12:30 - 13:30	678	+	685	=	1363	65	35	Yes
09:00 - 10:00	577	+	711	=	1288	57	47	Yes
08:00 - 09:00	646	+	620	=	1266	75	37	Yes
06:00 - 07:00	514	+	314	=	828	59	29	Yes
14:30 - 15:30	783	+	1059	=	1842	55	26	No

# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 09/19/2024

## 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.

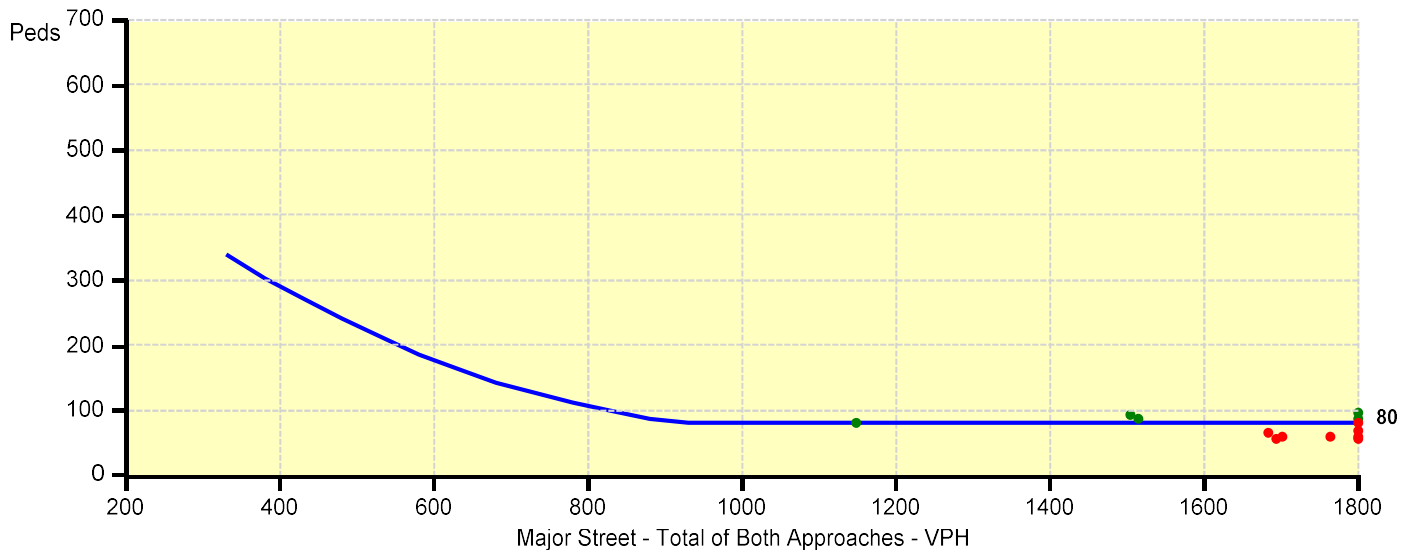
#### Summary

5 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 = **2 or more**

Time	Major Road CSAH 1				Total	Minor Road Xavis St NW		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
15:30 - 16:30	923	+	1363	=	2286	78	87	Yes
16:30 - 17:30	785	+	1463	=	2248	96	51	Yes
07:30 - 08:30	742	+	772	=	1514	85	47	Yes
17:45 - 18:45	646	+	858	=	1504	91	43	Yes
06:30 - 07:30	706	+	443	=	1149	80	36	Yes
15:15 - 16:15	929	+	1268	=	2197	71	79	No
15:00 - 16:00	874	+	1220	=	2094	68	33	No
14:45 - 15:45	837	+	1177	=	2014	59	24	No
14:30 - 15:30	783	+	1059	=	1842	55	26	No
14:15 - 15:15	760	+	1003	=	1763	59	25	No
13:45 - 14:45	824	+	878	=	1702	59	31	No
14:00 - 15:00	788	+	905	=	1693	55	29	No



# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 09/19/2024

## 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.

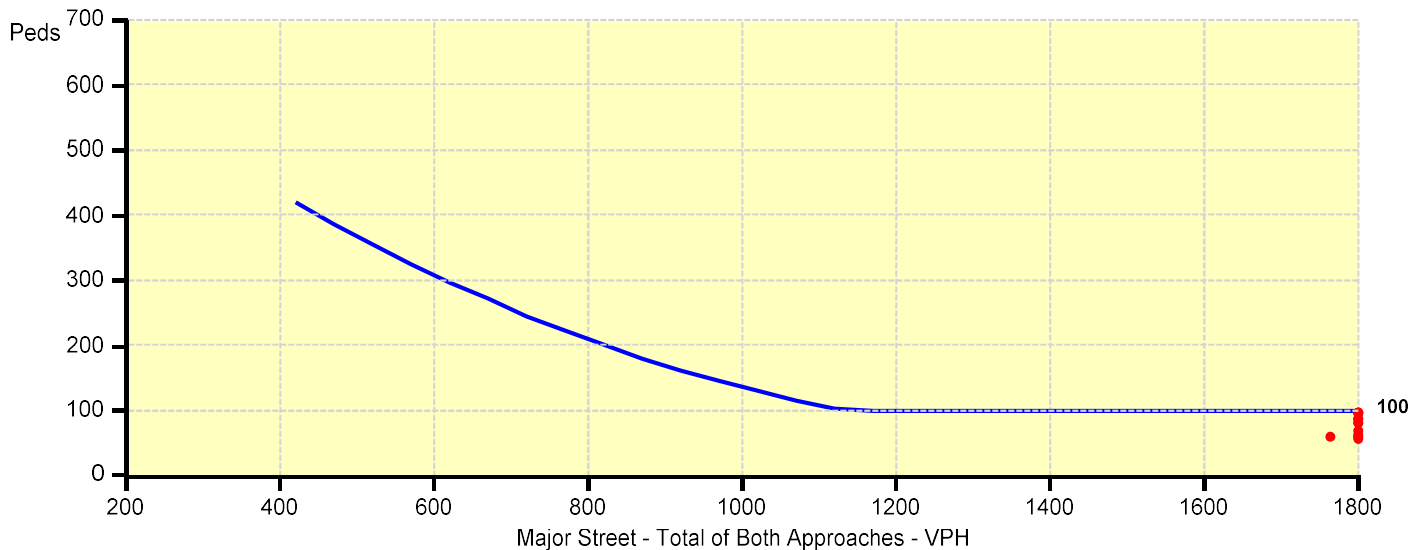
#### Summary

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

#### Site Data Required

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

Time	Major Road CSAH 1				Total	Minor Road Xavis St NW		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:15 - 17:15	823	+	1511	=	2334	95	58	No
16:00 - 17:00	835	+	1490	=	2325	83	96	No
15:30 - 16:30	923	+	1363	=	2286	78	87	No
15:45 - 16:45	890	+	1372	=	2262	84	96	No
16:30 - 17:30	785	+	1463	=	2248	96	51	No
15:15 - 16:15	929	+	1268	=	2197	71	79	No
16:45 - 17:45	761	+	1409	=	2170	87	52	No
15:00 - 16:00	874	+	1220	=	2094	68	33	No
14:45 - 15:45	837	+	1177	=	2014	59	24	No
17:00 - 18:00	760	+	1246	=	2006	80	57	No
17:15 - 18:15	709	+	1145	=	1854	62	51	No
14:30 - 15:30	783	+	1059	=	1842	55	26	No



# ANOKA COUNTY HIGHWAY

## PC - WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2407

Study Date : 09/19/2024

## Multiway Stop Warrants - Summary

### Major Street Approaches

**Eastbound: CSAH 1**

Number of Lanes : 2+  
Total Approach Volume: 11,279

**Westbound: CSAH 1**

Number of Lanes :2+  
Total Approach Volume: 12,761

### Minor Street Approaches

**Northbound: Xavis St NW**

Number of Lanes :2+  
Total Approach Volume: 1,094

**Southbound: Xavis St NW**

Number of Lanes :2+  
Total Approach Volume: 691

### Warrant Summary (Rural Values Apply)

<b>Criteria A - Interim Measure</b> .....	<b>Not Evaluated</b>
If traffic signals are justified, stop signs can be installed as an interim measure.	
<b>Criteria B - Crash Experience</b> .....	<b>Not Satisfied</b>
Number of crashes (-1) is less than minimum required (5).	
<b>Criteria C - Minimum Volumes and Delays</b> .....	<b>Not Satisfied</b>
Average of 8 highest hours is less than volume criteria.	
<b>Criteria D - 80% of Volumes, Delays, and Crashes</b> .....	<b>Not Satisfied</b>
Number of crashes (-1) is less than minimum required (4). Average of 8 highest hours is less than volume criteria.	

### Criteria C Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
16:00 - 17:00	2325	1738.4	183	126.4	210	140	No
15:00 - 16:00	2094		107				
17:00 - 18:00	2006		140				
13:45 - 14:45	1702		90				
07:15 - 08:15	1571		139				
11:45 - 12:45	1422		109				
12:45 - 13:45	1425		101				
18:00 - 19:00	1362		142				
10:45 - 11:45	1401		75				
09:15 - 10:15	1318		99				
08:15 - 09:15	1220		120				
19:00 - 20:00	1046		93				

### Criteria D Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
16:00 - 17:00	2325	1738.4	183	126.4	240	160	No
15:00 - 16:00	2094		107				
17:00 - 18:00	2006		140				
13:45 - 14:45	1702		90				
07:15 - 08:15	1571		139				
11:45 - 12:45	1422		109				
12:45 - 13:45	1425		101				
18:00 - 19:00	1362		142				
10:45 - 11:45	1401		75				
09:15 - 10:15	1318		99				
08:15 - 09:15	1220		120				
19:00 - 20:00	1046		93				