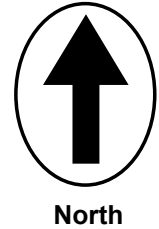


Date : 09/21/23

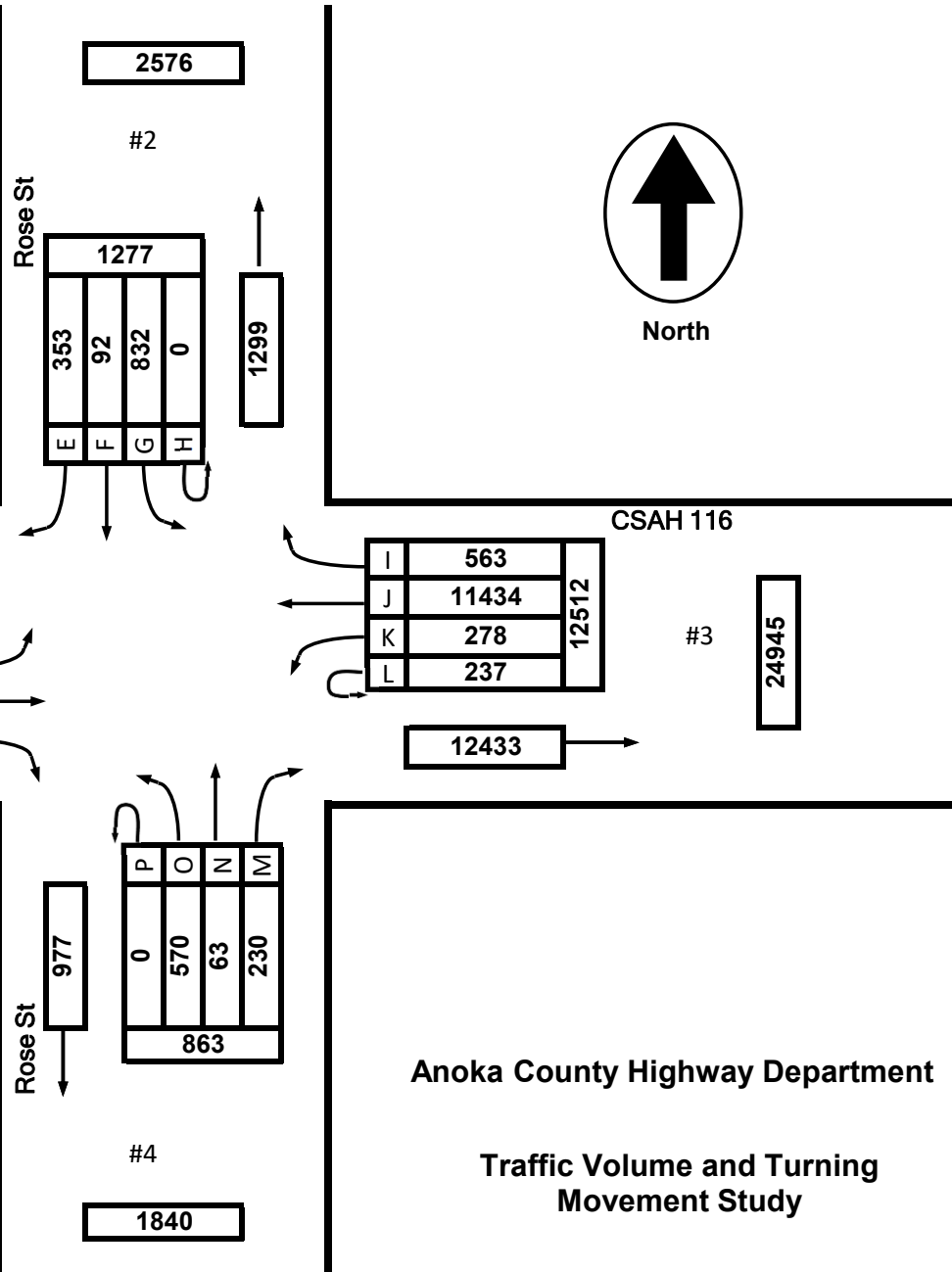
Count Number : TMC 2350

Location : CSAH 116
@ Rose St

Collection Period : 24 HR



North



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

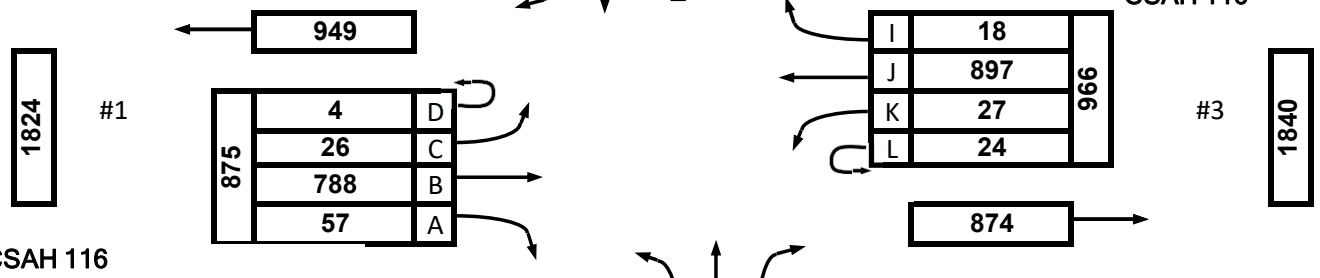
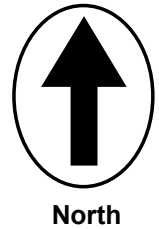
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 09/21/23

Count Number : TMC 2350

Location : CSAH 116
@ Rose St

Collection Period : 7 AM - 8 AM
AM PEAK



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

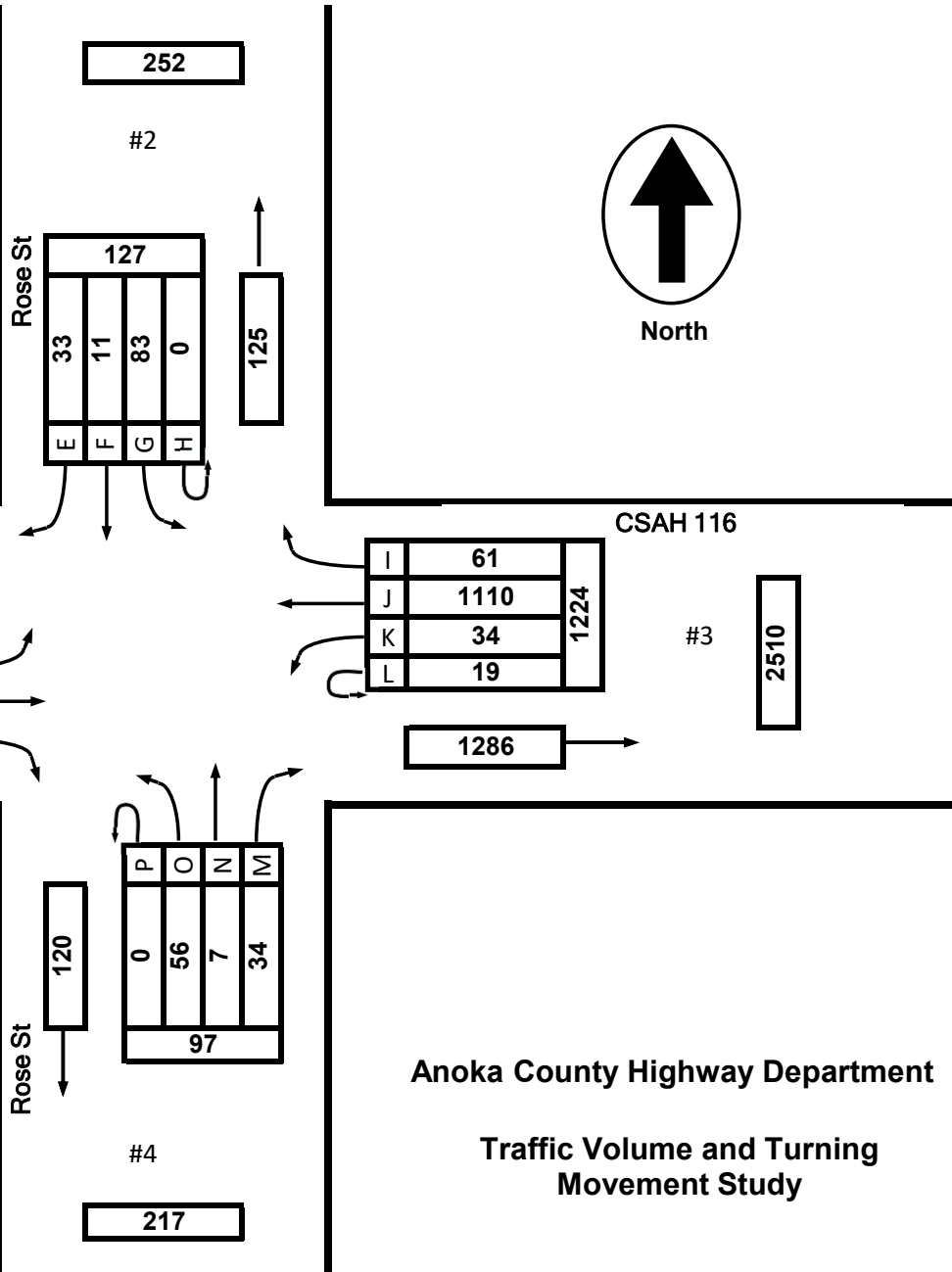
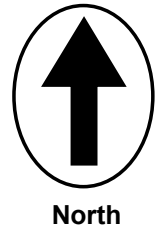
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 09/21/23

Count Number : TMC 2350

Location : CSAH 116
@ Rose St

Collection Period : 4 PM - 5 PM
PM PEAK



CSAH 116

CSAH 116

Rose St

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

**TMC 2350 - CSAH 116 @ Rose St
Thursday, September 21, 2023**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	Rose St						CSAH 116						Rose St						CSAH 116						
	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	9	0	0	9	0	0	0	0	0	0	0	0	11	0	0	11	20
12:15 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	1	9	1	0	11	17
12:30 AM	0	1	0	0	0	1	0	0	2	1	0	3	0	2	0	0	0	2	0	0	5	0	0	5	11
12:45 AM	0	0	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	0	0	2	0	0	0	2	8
Hourly Total	0	1	0	0	0	1	0	3	20	1	0	24	0	2	0	0	0	2	0	1	27	1	0	29	56
1:00 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	4	0	0	4	9
1:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	5	0	0	5	7
1:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0	4	0	0	4	6
1:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	2	0	0	7	0	0	7	10
Hourly Total	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	3	0	3	0	0	20	0	0	20	32
2:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	6	0	0	6	10
2:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	8	2	0	11	12
2:30 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	1	0	0	0	1	0	0	6	0	0	6	12
2:45 AM	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	4	0	0	4	8	
Hourly Total	0	0	0	0	0	0	0	1	13	0	0	14	0	1	0	0	0	1	1	0	24	2	0	27	42
3:00 AM	0	0	0	0	1	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	5	1	0	6	9
3:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	4	0	0	4	7	
3:30 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	1	0	0	0	1	0	0	2	0	0	2	12
3:45 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	1	0	1	0	0	6	1	0	7	16
Hourly Total	0	0	0	0	1	0	0	0	23	0	0	23	0	1	0	1	0	2	0	0	17	2	0	19	44
4:00 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	1	0	0	0	1	0	0	3	1	0	4	12
4:15 AM	0	0	0	0	0	0	0	0	13	0	0	13	0	2	0	0	0	2	0	0	13	0	0	13	28
4:30 AM	0	2	0	0	0	2	0	1	23	1	0	25	0	0	0	0	0	0	0	0	12	0	0	12	39
4:45 AM	0	1	0	0	0	1	0	0	22	1	0	23	0	2	0	0	0	2	0	1	17	2	0	20	46
Hourly Total	0	3	0	0	0	3	0	1	65	2	0	68	0	5	0	0	0	5	0	1	45	3	0	49	125
5:00 AM	0	0	0	0	0	0	0	0	33	0	0	33	0	2	0	0	0	2	0	0	11	0	0	11	46
5:15 AM	0	0	0	0	0	0	0	1	37	0	0	38	0	3	1	0	0	4	0	0	34	1	0	35	77
5:30 AM	0	2	0	0	0	2	0	4	56	0	1	60	0	3	0	1	0	4	1	2	48	1	0	52	118
5:45 AM	0	1	0	1	1	2	0	0	60	0	0	60	0	1	0	2	0	3	0	2	57	1	0	60	125
Hourly Total	0	3	0	1	1	4	0	5	186	0	1	191	0	9	1	3	0	13	1	4	150	3	0	158	366
6:00 AM	0	1	0	1	0	2	0	2	70	3	2	75	0	2	0	0	0	2	0	0	62	0	0	62	141
6:15 AM	0	6	0	0	0	6	0	2	78	0	0	80	0	4	0	3	0	7	0	6	91	4	0	101	194
6:30 AM	0	1	0	0	0	1	0	2	155	1	0	158	0	4	0	1	0	5	1	2	114	2	0	119	283
6:45 AM	0	6	0	2	0	8	2	5	139	6	0	152	0	9	0	1	0	10	0	3	137	11	0	151	321
Hourly Total	0	14	0	3	0	17	2	11	442	10	2	465	0	19	0	5	0	24	1	11	404	17	0	433	939
7:00 AM	0	9	0	0	0	9	1	3	154	2	0	160	0	11	0	4	0	15	0	5	176	13	0	194	378
7:15 AM	0	14	1	3	0	18	7	11	248	3	0	269	0	10	0	5	0	15	0	11	217	17	1	245	547
7:30 AM	0	16	1	2	0	19	13	6	291	11	0	321	0	13	0	3	0	16	0	4	225	13	0	242	598
7:45 AM	0	7	1	0	0	8	3	7	204	2	0	216	0	9	0	4	0	13	4	6	170	14	1	194	431
Hourly Total	0	46	3	5	0	54	24	27	897	18	0	966	0	43	0	16	0	59	4	26	788	57	2	875	1954

**TMC 2350 - CSAH 116 @ Rose St
Thursday, September 21, 2023**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	Rose St						CSAH 116						Rose St						CSAH 116						
	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	9	0	0	0	9	2	6	163	6	0	177	0	7	0	2	0	9	0	14	154	8	0	176	371
8:15 AM	0	8	0	6	0	14	0	3	140	7	0	150	0	13	0	3	0	16	1	5	133	5	0	144	324
8:30 AM	0	9	0	1	1	10	1	3	122	4	0	130	0	7	0	6	0	13	0	6	138	7	0	151	304
8:45 AM	0	8	2	1	0	11	1	7	153	8	0	169	0	12	0	6	0	18	0	10	131	9	0	150	348
Hourly Total	0	34	2	8	1	44	4	19	578	25	0	626	0	39	0	17	0	56	1	35	556	29	0	621	1347
9:00 AM	0	9	0	2	0	11	3	4	117	10	0	134	0	8	2	3	0	13	0	10	115	11	0	136	294
9:15 AM	0	13	3	6	0	22	0	1	138	14	0	153	0	4	1	2	0	7	0	12	144	11	0	167	349
9:30 AM	0	15	0	10	2	25	3	2	127	10	0	142	0	14	1	1	0	16	0	14	135	6	0	155	338
9:45 AM	0	7	4	4	0	15	0	2	159	10	0	171	0	5	0	5	0	10	1	10	156	9	0	176	372
Hourly Total	0	44	7	22	2	73	6	9	541	44	0	600	0	31	4	11	0	46	1	46	550	37	0	634	1353
10:00 AM	0	14	1	5	0	20	2	4	128	9	0	143	0	4	0	2	1	6	0	14	139	7	0	160	329
10:15 AM	0	7	1	8	1	16	0	2	158	8	0	168	0	3	2	0	0	5	0	8	132	8	0	148	337
10:30 AM	0	11	0	4	0	15	2	5	140	10	0	157	0	9	2	4	0	15	1	13	137	8	0	159	346
10:45 AM	0	4	0	7	1	11	1	2	145	7	0	155	0	8	0	0	0	8	1	12	161	7	0	181	355
Hourly Total	0	36	2	24	2	62	5	13	571	34	0	623	0	24	4	6	1	34	2	47	569	30	0	648	1367
11:00 AM	0	10	2	10	0	22	1	2	135	7	0	145	0	11	1	5	0	17	1	18	152	5	0	176	360
11:15 AM	0	9	1	10	0	20	1	4	170	6	0	181	0	9	1	1	0	11	0	19	163	10	0	192	404
11:30 AM	0	11	3	8	1	22	2	4	175	18	0	199	0	4	2	3	0	9	5	14	152	7	0	178	408
11:45 AM	0	8	3	12	2	23	1	2	199	11	0	213	0	10	0	3	0	13	0	11	159	11	0	181	430
Hourly Total	0	38	9	40	3	87	5	12	679	42	0	738	0	34	4	12	0	50	6	62	626	33	0	727	1602
12:00 PM	0	10	5	9	0	24	1	5	182	10	0	198	0	11	1	3	0	15	1	11	177	12	0	201	438
12:15 PM	0	19	1	8	0	28	1	1	147	8	0	157	0	10	1	1	0	12	1	17	159	4	0	181	378
12:30 PM	0	12	1	10	0	23	1	6	128	15	0	150	0	10	0	1	0	11	1	14	177	10	0	202	386
12:45 PM	0	23	2	8	2	33	4	3	150	14	0	171	0	7	1	4	0	12	1	16	183	8	0	208	424
Hourly Total	0	64	9	35	2	108	7	15	607	47	0	676	0	38	3	9	0	50	4	58	696	34	0	792	1626
1:00 PM	0	16	1	5	0	22	4	4	159	10	0	177	0	11	1	2	0	14	2	12	157	9	0	180	393
1:15 PM	0	16	2	9	0	27	4	6	148	15	0	173	0	7	2	1	0	10	2	12	165	11	0	190	400
1:30 PM	0	27	0	12	0	39	6	5	154	18	0	183	0	10	2	1	0	13	1	14	167	9	0	191	426
1:45 PM	0	20	3	5	0	28	1	6	137	12	1	156	0	9	0	3	0	12	1	20	186	12	0	219	415
Hourly Total	0	79	6	31	0	116	15	21	598	55	1	689	0	37	5	7	0	49	6	58	675	41	0	780	1634
2:00 PM	0	20	0	8	1	28	11	4	185	7	0	207	0	9	1	4	0	14	0	15	192	11	0	218	467
2:15 PM	0	25	2	8	0	35	48	3	228	21	0	300	0	11	1	3	0	15	1	20	216	9	0	246	596
2:30 PM	0	24	2	12	0	38	9	4	223	7	0	243	0	8	1	4	0	13	0	16	205	16	0	237	531
2:45 PM	0	15	2	11	0	28	6	4	248	13	0	271	0	12	0	5	0	17	0	16	208	12	0	236	552
Hourly Total	0	84	6	39	1	129	74	15	884	48	0	1021	0	40	3	16	0	59	1	67	821	48	0	937	2146
3:00 PM	0	22	2	4	0	28	8	3	254	16	0	281	0	10	3	6	2	19	2	13	248	8	0	271	599
3:15 PM	0	25	3	12	0	40	7	8	238	11	0	264	0	11	4	11	0	26	2	19	218	15	0	254	584
3:30 PM	0	10	1	11	0	22	12	10	302	9	0	333	0	9	3	4	0	16	1	17	253	16	0	287	658
3:45 PM	0	17	0	9	0	26	9	5	274	21	1	309	0	17	0	6	0	23	2	17	271	14	0	304	662
Hourly Total	0	74	6	36	0	116	36	26	1068	57	1	1187	0	47	10	27	2	84	7	66	990	53	0	1116	2503

**TMC 2350 - CSAH 116 @ Rose St
Thursday, September 21, 2023**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	Rose St						CSAH 116						Rose St						CSAH 116						
	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	14	1	4	1	19	4	8	297	14	0	323	0	10	2	5	0	17	0	13	299	22	0	334	693
4:15 PM	0	28	4	8	0	40	8	8	256	17	1	289	0	12	1	7	0	20	1	11	273	19	0	304	653
4:30 PM	0	18	2	12	3	32	2	11	265	15	0	293	0	21	3	11	0	35	3	16	305	19	1	343	703
4:45 PM	0	23	4	9	3	36	5	7	292	15	0	319	0	13	1	11	0	25	1	17	273	15	0	306	686
Hourly Total	0	83	11	33	7	127	19	34	1110	61	1	1224	0	56	7	34	0	97	5	57	1150	75	1	1287	2735
5:00 PM	0	18	1	12	0	31	5	4	236	10	1	255	0	16	3	4	0	23	2	14	262	14	1	292	601
5:15 PM	0	10	4	4	0	18	4	9	339	6	0	358	0	10	1	8	2	19	0	7	247	14	1	268	663
5:30 PM	0	12	3	2	0	17	2	3	266	12	0	283	0	9	0	3	0	12	1	9	221	15	0	246	558
5:45 PM	0	12	2	6	0	20	3	8	247	11	0	269	0	12	2	2	0	16	2	9	180	13	0	204	509
Hourly Total	0	52	10	24	0	86	14	24	1088	39	1	1165	0	47	6	17	2	70	5	39	910	56	2	1010	2331
6:00 PM	0	13	2	5	1	20	12	0	199	7	1	218	0	19	2	6	0	27	2	10	196	13	0	221	486
6:15 PM	0	11	3	5	1	19	0	5	184	13	2	202	0	11	1	3	0	15	0	8	176	2	0	186	422
6:30 PM	0	10	1	4	3	15	0	0	185	5	3	190	0	2	2	0	0	4	1	9	168	5	0	183	392
6:45 PM	0	11	2	3	2	16	2	3	165	15	0	185	0	4	0	8	0	12	2	8	162	9	0	181	394
Hourly Total	0	45	8	17	7	70	14	8	733	40	6	795	0	36	5	17	0	58	5	35	702	29	0	771	1694
7:00 PM	0	14	2	5	1	21	2	3	161	5	0	171	0	4	3	1	0	8	2	7	150	7	0	166	366
7:15 PM	0	9	2	3	1	14	1	9	158	5	2	173	0	1	1	1	0	3	1	7	155	13	0	176	366
7:30 PM	0	12	2	4	0	18	1	1	127	4	1	133	0	7	1	1	0	9	1	7	174	7	0	189	349
7:45 PM	0	15	2	1	0	18	2	2	131	8	0	143	0	5	0	1	0	6	1	8	115	2	0	126	293
Hourly Total	0	50	8	13	2	71	6	15	577	22	3	620	0	17	5	4	0	26	5	29	594	29	0	657	1374
8:00 PM	0	13	2	6	0	21	2	6	115	3	0	126	0	3	0	1	0	4	0	7	122	2	0	131	282
8:15 PM	0	7	0	3	2	10	2	2	109	1	1	114	0	8	1	4	0	13	0	4	135	5	0	144	281
8:30 PM	0	10	1	2	0	13	0	1	91	6	0	98	0	9	0	0	0	9	0	3	110	6	0	119	239
8:45 PM	0	7	2	2	0	11	0	5	64	2	0	71	0	2	2	3	0	7	1	1	74	1	0	77	166
Hourly Total	0	37	5	13	2	55	4	14	379	12	1	409	0	22	3	8	0	33	1	15	441	14	0	471	968
9:00 PM	0	9	0	2	0	11	0	0	66	2	0	68	0	7	1	1	0	9	1	1	71	2	0	75	163
9:15 PM	0	6	0	2	0	8	0	0	74	0	0	74	0	5	1	3	0	9	0	3	58	1	0	62	153
9:30 PM	0	4	0	0	0	4	1	2	54	0	0	57	0	2	0	2	0	4	0	1	43	1	0	45	110
9:45 PM	0	2	0	3	0	5	0	0	25	1	0	26	0	2	0	5	0	7	0	3	42	1	0	46	84
Hourly Total	0	21	0	7	0	28	1	2	219	3	0	225	0	16	2	11	0	29	1	8	214	5	0	228	510
10:00 PM	0	5	0	0	0	5	0	1	34	2	0	37	0	0	0	2	0	2	0	1	39	1	0	41	85
10:15 PM	0	6	0	2	0	8	0	0	33	0	0	33	0	3	0	3	0	6	1	2	35	2	0	40	87
10:30 PM	0	6	0	0	0	6	1	0	19	0	0	20	0	1	0	0	0	1	0	2	24	2	0	28	55
10:45 PM	0	2	0	0	0	2	0	0	18	0	0	18	0	2	0	0	0	2	0	0	13	1	0	14	36
Hourly Total	0	19	0	2	0	21	1	1	104	2	0	108	0	6	0	5	0	11	1	5	111	6	0	123	263
11:00 PM	0	1	0	0	2	1	0	2	12	0	0	14	0	0	0	0	0	0	0	0	19	1	0	20	35
11:15 PM	0	2	0	0	0	2	0	0	11	1	0	12	0	0	0	0	0	0	0	1	14	0	0	15	29
11:30 PM	0	2	0	0	0	2	0	0	10	0	0	10	0	0	1	0	0	1	0	1	12	2	0	15	28
11:45 PM	0	0	0	0	2	0	0	0	10	0	0	10	0	0	0	1	0	1	0	1	9	0	0	10	21
Hourly Total	0	5	0	0	4	5	0	2	43	1	0	46	0	0	1	1	0	2	0	3	54	3	0	60	113
DAILY TOTAL	0	832	92	353	35	1277	237	278	11434	563	17	12512	0	570	63	230	5	863	58	673	11134	607	5	12472	27124
Cars	0	813	90	344	7	1247	237	267	11171	551	7	12226	0	561	62	227	2	850	58	643	10898	597	2	12196	26519
Heavy Vehicles	0	19	2	9	28	30	0	11	263	12	10	286	0	9	1	3	3	13	0	30	236	10	3	276	605
Heavy Vehicle %	0.00%	2.28%	2.17%	2.55%	80.00%	2.35%	0.00%	3.96%	2.30%	2.13%	58.82%	2.29%	0.00%	1.58%	1.59%	1.30%	60.00%	1.51%	0.00%	4.46%	2.12%	1.65%	60.00%	2.21%	2.23%

**TMC 2350 - CSAH 116 @ Rose St
Thursday, September 21, 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	
7:00 AM	0	9	0	0	0	9	1	3	154	2	0	160	0	11	0	4	0	15	0	5	176	13	0	194	378
7:15 AM	0	14	1	3	0	18	7	11	248	3	0	269	0	10	0	5	0	15	0	11	217	17	1	245	547
7:30 AM	0	16	1	2	0	19	13	6	291	11	0	321	0	13	0	3	0	16	0	4	225	13	0	242	598
7:45 AM	0	7	1	0	0	8	3	7	204	2	0	216	0	9	0	4	0	13	4	6	170	14	1	194	431
Peak Hour Total	0	46	3	5	0	54	24	27	897	18	0	966	0	43	0	16	0	59	4	26	788	57	2	875	1954
PHF	0.000	0.719	0.750	0.417	0.000	0.711	0.462	0.614	0.771	0.409	0.000	0.752	0.000	0.827	0.000	0.800	0.000	0.922	0.250	0.591	0.876	0.838	0.500	0.893	0.817

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	14	1	4	1	19	4	8	297	14	0	323	0	10	2	5	0	17	0	13	299	22	0	334	693
4:15 PM	0	28	4	8	0	40	8	8	256	17	1	289	0	12	1	7	0	20	1	11	273	19	0	304	653
4:30 PM	0	18	2	12	3	32	2	11	265	15	0	293	0	21	3	11	0	35	3	16	305	19	1	343	703
4:45 PM	0	23	4	9	3	36	5	7	292	15	0	319	0	13	1	11	0	25	1	17	273	15	0	306	686
Peak Hour Total	0	83	11	33	7	127	19	34	1110	61	1	1224	0	56	7	34	0	97	5	57	1150	75	1	1287	2735
PHF	0.000	0.741	0.688	0.688	0.583	0.794	0.594	0.773	0.934	0.897	0.250	0.947	0.000	0.667	0.583	0.773	0.000	0.693	0.417	0.838	0.943	0.852	0.250	0.938	0.973

Total Vehicles On Leg				2576	
Vehicles Entering Intersection			1277		
Vehicles Exiting Intersection			1299		
Southbound					
Cars	344	90	813	0	7
Heavy	9	2	19	0	28
Total	353	92	832	0	35



Total Vehicles on Leg 24887	Eastbound	Vehicles Entering Intersection	12472				
		Vehicles Exiting Intersection		Cars	2	3	5
				Heavy	58	0	58
				Cars	643	30	673
				Heavy	10898	236	11134
	Cars	597	10	607			



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	12512	Total Vehicles on Leg 24945
551	12	563		Vehicles Exiting Intersection		
11171	263	11434				
267	11	278				
237	0	237				
7	10	17				



Cars	2	0	561	62	227
Heavy	3	0	9	1	3
Total	5	0	570	63	230
Northbound					
Vehicles Entering Intersection			863		
Vehicles Exiting Intersection			977		
Total Vehicles On Leg			1840		



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
09/21/2023	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	0	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	0	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	1	0	0
	2:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	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	1	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	0	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	1	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	0	0	0
	4:30	0	0	0	0	0	0	0	0	1	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	1	0	0	0
	5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
	5:30	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	5:45	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	6:00	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	6:15	0	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0
	6:30	0	0	0	0	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	1	3	1	0	0
	6:45	0	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	7:00	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0
	7:15	0	0	0	0	0	0	2	11	1	0	0	0	0	0	0	0	0	0	0	4	10	0	0	1
	7:30	0	2	0	1	0	0	3	5	0	0	0	0	1	0	0	0	0	0	0	1	9	0	0	0
	7:45	0	2	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0
	8:00	0	1	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	2	5	0	0	0
	8:15	0	1	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0
	8:30	0	0	0	0	1	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
	8:45	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
	9:00	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0
	9:15	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0
	9:30	0	1	0	1	1	1	0	5	0	0	0	0	0	0	0	0	0	0	0	3	10	0	0	0
	9:45	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0
	10:00	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0
	10:15	0	1	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0
	10:30	0	1	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
	10:45	0	0	0	0	1	0	0	4	1	0	0	0	0	0	0	0	0	0	0	1	5	0	0	0
	11:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
	11:15	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	2	6	0	0	0
	11:30	0	1	0	0	0	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0
	11:45	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
	12:00	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0
	12:15	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2350

Study Date : 09/27/2023

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 116

Number of Lanes : 2+

Total Approach Volume: 12,472

Westbound: CSAH 116

Number of Lanes : 2+

Total Approach Volume: 12,512

Minor Street Approaches

Northbound: Rose St.

Number of Lanes : 1

Total Approach Volume: 863

Southbound: Rose St.

Number of Lanes : 1

Total Approach Volume: 1,277

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 5 hours, 8 are needed

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

Required volumes reached for 14 hours, 8 are needed

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

Required 1A volumes reached for 7 hours, 8 are needed

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

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

Number of hours (12) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (20) 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 2350

Study Date : 09/27/2023

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

Only 5 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 = **1**

Volume Requirements

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

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:00 - 17:00	1287	+	1224	=	2511	97	127	Yes
15:00 - 16:00	1116	+	1187	=	2303	84	116	Yes
14:00 - 15:00	937	+	1021	=	1958	59	129	Yes
13:00 - 14:00	780	+	689	=	1469	49	116	Yes
12:00 - 13:00	792	+	676	=	1468	50	108	Yes
17:00 - 18:00	1010	+	1165	=	2175	70	86	No
17:15 - 18:15	939	+	1128	=	2067	74	75	No
07:00 - 08:00	875	+	966	=	1841	59	54	No
07:15 - 08:15	857	+	983	=	1840	53	54	No
17:30 - 18:30	857	+	972	=	1829	70	76	No
06:45 - 07:45	832	+	902	=	1734	56	54	No
17:45 - 18:45	794	+	879	=	1673	62	74	No
07:30 - 08:30	756	+	864	=	1620	54	50	No
18:00 - 19:00	771	+	795	=	1566	58	70	No
11:15 - 12:15	752	+	791	=	1543	48	89	No
11:30 - 12:30	741	+	767	=	1508	49	97	No
11:45 - 12:45	765	+	718	=	1483	51	98	No
11:00 - 12:00	727	+	738	=	1465	50	87	No
18:15 - 19:15	716	+	748	=	1464	39	71	No
06:30 - 07:30	709	+	739	=	1448	45	36	No
18:30 - 19:30	706	+	719	=	1425	27	66	No
10:45 - 11:45	727	+	680	=	1407	45	75	No
18:45 - 19:45	712	+	662	=	1374	32	69	No
10:30 - 11:30	708	+	638	=	1346	51	68	No
07:45 - 08:45	665		673		1338	51	41	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2350

Study Date : 09/27/2023

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

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 = **630**
 Veh/Hr Minor = **53**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 116					Rose St.		
16:00 - 17:00	1287	+	1224	=	2511	97	127	Yes
15:00 - 16:00	1116	+	1187	=	2303	84	116	Yes
17:00 - 18:00	1010	+	1165	=	2175	70	86	Yes
14:00 - 15:00	937	+	1021	=	1958	59	129	Yes
06:45 - 07:45	832	+	902	=	1734	56	54	Yes
18:00 - 19:00	771	+	795	=	1566	58	70	Yes
13:00 - 14:00	780	+	689	=	1469	49	116	Yes
12:00 - 13:00	792	+	676	=	1468	50	108	Yes
11:00 - 12:00	727	+	738	=	1465	50	87	Yes
19:00 - 20:00	657	+	620	=	1277	26	71	Yes
10:00 - 11:00	648	+	623	=	1271	34	62	Yes
08:00 - 09:00	621	+	626	=	1247	56	44	Yes
09:00 - 10:00	634	+	600	=	1234	46	73	Yes
20:00 - 21:00	471	+	409	=	880	33	55	Yes
06:30 - 07:30	709	+	739	=	1448	45	36	No
07:45 - 08:45	665	+	673	=	1338	51	41	No
06:15 - 07:15	565	+	550	=	1115	37	24	No
06:00 - 07:00	433	+	465	=	898	24	17	No
05:45 - 06:45	342	+	373	=	715	17	11	No
05:30 - 06:30	275	+	275	=	550	16	12	No
21:00 - 22:00	228	+	225	=	453	29	28	No
05:15 - 06:15	209	+	233	=	442	13	6	No
21:15 - 22:15	194	+	194	=	388	22	22	No
05:00 - 06:00	158	+	191	=	349	13	4	No
21:30 - 22:30	172		153		325	19	22	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2350

Study Date : 09/27/2023

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

Only 7 hours meet 1A minimums.
15 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 = **1**

Volume Requirements

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

Veh/Hr Minor = **84 42**

Major Road CSAH 116

Minor Road Rose St.

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:00 - 17:00	1287	+	1224	=	2511	97	127	Yes
15:00 - 16:00	1116	+	1187	=	2303	84	116	Yes
17:00 - 18:00	1010	+	1165	=	2175	70	86	Yes
14:00 - 15:00	937	+	1021	=	1958	59	129	Yes
13:00 - 14:00	780	+	689	=	1469	49	116	Yes
12:00 - 13:00	792	+	676	=	1468	50	108	Yes
11:00 - 12:00	727	+	738	=	1465	50	87	Yes
07:00 - 08:00	875	+	966	=	1841	59	54	No
07:15 - 08:15	857	+	983	=	1840	53	54	No
06:45 - 07:45	832	+	902	=	1734	56	54	No
07:30 - 08:30	756	+	864	=	1620	54	50	No
18:00 - 19:00	771	+	795	=	1566	58	70	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
15:30 - 16:30	1229	+	1254	=	2483	76	107	Yes
16:30 - 17:30	1209	+	1225	=	2434	102	117	Yes
14:30 - 15:30	998	+	1059	=	2057	75	134	Yes
17:30 - 18:30	857	+	972	=	1829	70	76	Yes
13:30 - 14:30	874	+	846	=	1720	54	130	Yes
07:30 - 08:30	756	+	864	=	1620	54	50	Yes
11:30 - 12:30	741	+	767	=	1508	49	97	Yes
12:30 - 13:30	780	+	671	=	1451	47	105	Yes
06:30 - 07:30	709	+	739	=	1448	45	36	Yes
18:30 - 19:30	706	+	719	=	1425	27	66	Yes
10:30 - 11:30	708	+	638	=	1346	51	68	Yes
09:30 - 10:30	639	+	624	=	1263	37	76	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2350

Study Date : 09/27/2023

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.

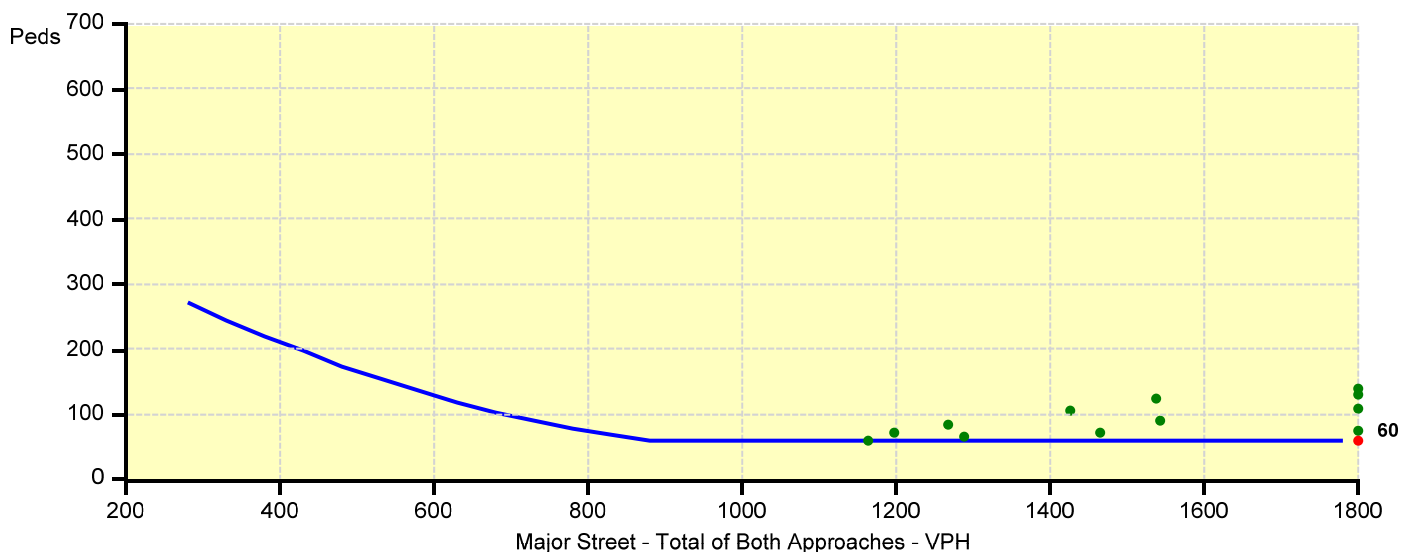
Summary

12 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 116					Minor Road Rose St.		Met?
	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	
15:15 - 16:15	1179	+	1229	=	2408	82	107	Yes
16:15 - 17:15	1245	+	1156	=	2401	103	139	Yes
14:15 - 15:15	990	+	1095	=	2085	64	129	Yes
17:15 - 18:15	939	+	1128	=	2067	74	75	Yes
11:15 - 12:15	752	+	791	=	1543	48	89	Yes
13:15 - 14:15	818	+	719	=	1537	49	122	Yes
18:15 - 19:15	716	+	748	=	1464	39	71	Yes
12:15 - 13:15	771	+	655	=	1426	49	106	Yes
10:15 - 11:15	664	+	625	=	1289	45	64	Yes
09:15 - 10:15	658	+	609	=	1267	39	82	Yes
19:15 - 20:15	622	+	575	=	1197	22	71	Yes
08:15 - 09:15	581		583		1164	60	46	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2350

Study Date : 09/27/2023

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

30 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 116				Total	Minor Road Rose St.		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:00 - 17:00	1287	+	1224	=	2511	97	127	Yes
15:45 - 16:45	1285	+	1214	=	2499	95	117	Yes
15:30 - 16:30	1229	+	1254	=	2483	76	107	Yes
16:30 - 17:30	1209	+	1225	=	2434	102	117	Yes
15:15 - 16:15	1179	+	1229	=	2408	82	107	Yes
16:15 - 17:15	1245	+	1156	=	2401	103	139	Yes
16:45 - 17:45	1112	+	1215	=	2327	79	102	Yes
15:00 - 16:00	1116	+	1187	=	2303	84	116	Yes
14:45 - 15:45	1048	+	1149	=	2197	78	118	Yes
17:00 - 18:00	1010	+	1165	=	2175	70	86	Yes
14:15 - 15:15	990	+	1095	=	2085	64	129	Yes
17:15 - 18:15	939		1128		2067	74	75	Yes

