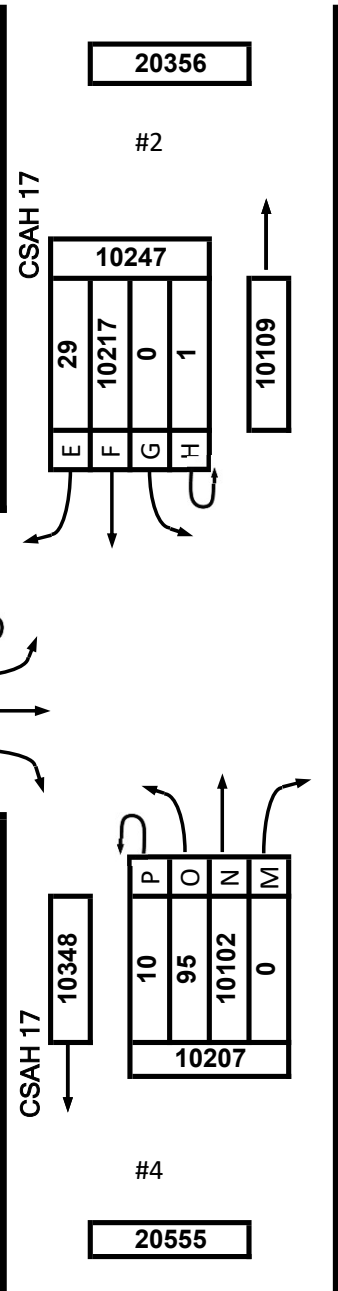


Date : 08/22/23

Count Number : TMC 2360

Location : CSAH 17
@ 114th Ave

Collection Period : 24 HR



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

Anoka County Highway Department

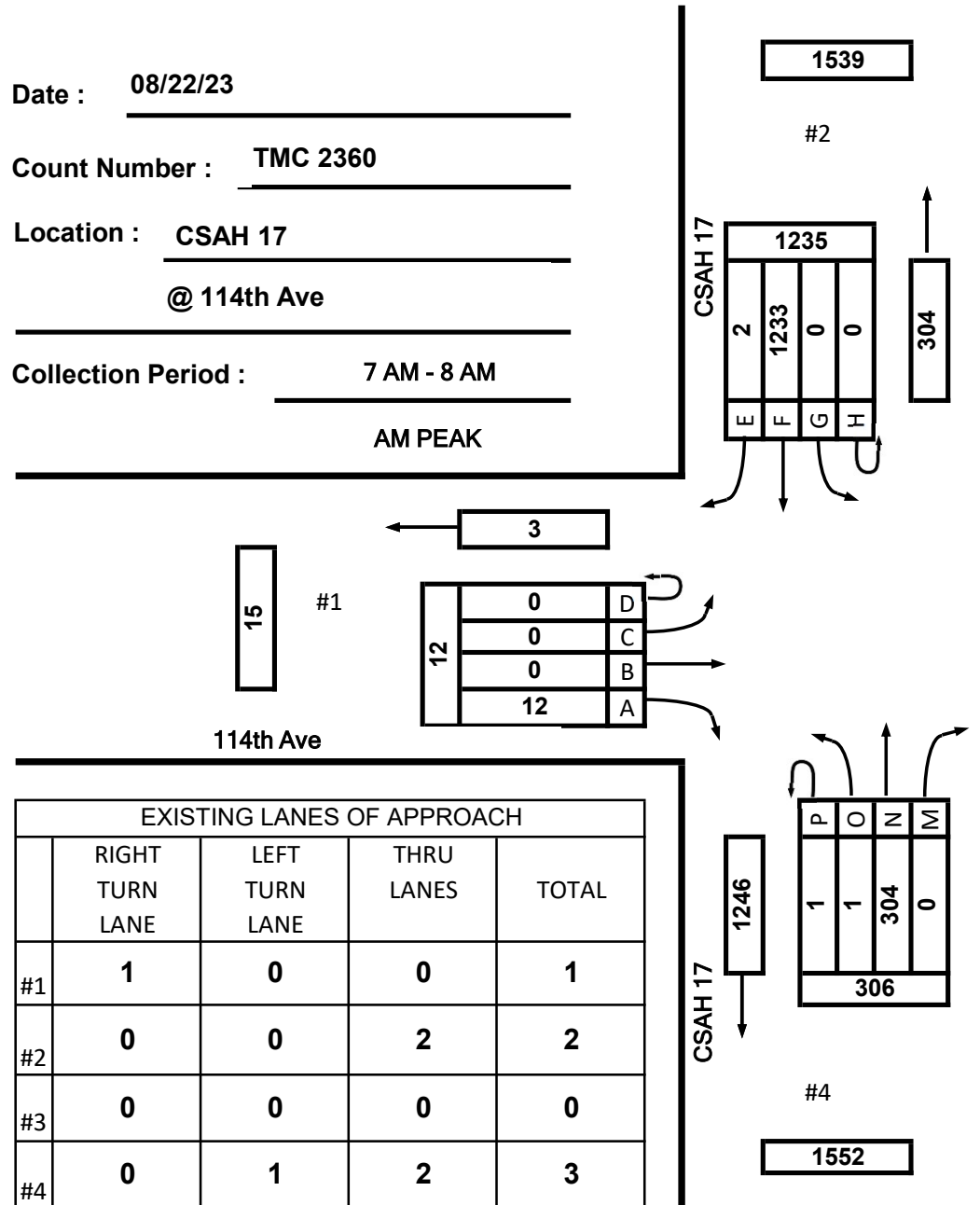
Traffic Volume and Turning Movement Study

Date : 08/22/23

Count Number : TMC 2360

Location : CSAH 17
@ 114th Ave

Collection Period : 7 AM - 8 AM
AM PEAK



Anoka County Highway Department

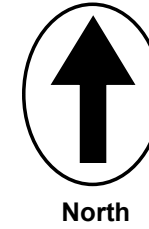
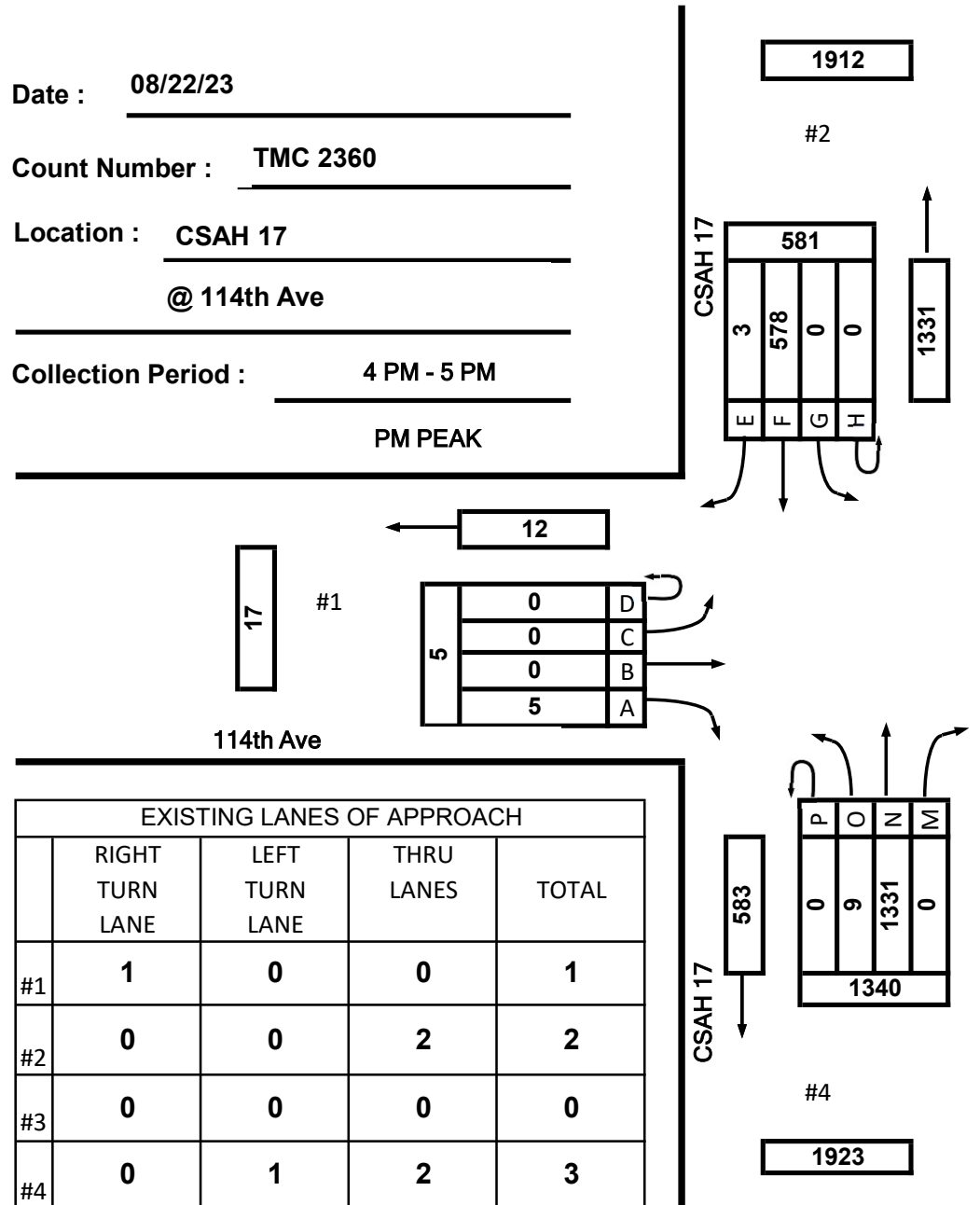
Traffic Volume and Turning Movement Study

Date : 08/22/23

Count Number : TMC 2360

Location : CSAH 17
@ 114th Ave

Collection Period : 4 PM - 5 PM
PM PEAK



Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

TMC 2360 - CSAH 17 @ 114th Ave

0 0

Tuesday, August 22, 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	0	4	0	0	4	0	0	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	22
12:15 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	18
12:30 AM	0	0	9	0	0	9	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	17
12:45 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	17
Hourly Total	0	0	21	0	0	21	0	0	0	0	0	0	0	0	53	0	0	53	0	0	0	0	0	0	74
1:00 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	14
1:15 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	13
1:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	8
1:45 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	11
Hourly Total	0	0	13	0	0	13	0	0	0	0	0	0	0	0	33	0	0	33	0	0	0	0	0	0	46
2:00 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	1	0	1	9
2:15 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	9
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	8
2:45 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	9
Hourly Total	0	0	15	0	0	15	0	0	0	0	0	0	0	0	19	0	0	19	0	0	0	1	0	1	35
3:00 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	10
3:15 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	12
3:30 AM	0	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
3:45 AM	0	0	14	0	0	14	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	17
Hourly Total	0	0	37	0	0	37	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	51
4:00 AM	0	0	21	0	0	21	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	27
4:15 AM	0	0	30	0	0	30	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	35
4:30 AM	0	0	42	0	0	42	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	47
4:45 AM	0	0	65	0	0	65	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	74
Hourly Total	0	0	158	0	0	158	0	0	0	0	0	0	0	1	24	0	0	25	0	0	0	0	0	0	183
5:00 AM	0	0	66	0	0	66	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	69
5:15 AM	0	0	122	0	0	122	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	136
5:30 AM	0	0	144	0	0	144	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	158
5:45 AM	0	0	137	0	0	137	0	0	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	0	163
Hourly Total	0	0	469	0	0	469	0	0	0	0	0	0	0	0	57	0	0	57	0	0	0	0	0	0	526
6:00 AM	0	0	161	0	0	161	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	188
6:15 AM	0	0	210	1	0	211	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	2	1	2	258
6:30 AM	0	0	244	0	0	244	0	0	0	0	0	0	0	0	51	0	0	51	0	0	0	3	1	3	298
6:45 AM	0	0	287	0	0	287	0	0	0	0	0	0	1	1	70	0	0	72	0	0	0	0	1	0	359
Hourly Total	0	0	902	1	0	903	0	0	0	0	0	0	1	1	193	0	0	195	0	0	0	5	3	5	1103
7:00 AM	0	0	275	1	0	276	0	0	0	0	0	0	0	0	76	0	0	76	0	0	0	5	2	5	357
7:15 AM	0	0	328	0	0	328	0	0	0	0	0	0	0	0	73	0	0	73	0	0	0	4	0	4	405
7:30 AM	0	0	350	0	0	350	0	0	0	0	0	0	1	0	66	0	0	67	0	0	0	1	0	1	418
7:45 AM	0	0	280	1	0	281	0	0	0	0	0	0	0	1	89	0	0	90	0	0	0	2	0	2	373
Hourly Total	0	0	1233	2	0	1235	0	0	0	0	0	0	1	1	304	0	0	306	0	0	0	12	2	12	1553

TMC 2360 - CSAH 17 @ 114th Ave

0 0

Tuesday, August 22, 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	0	251	0	0	251	0	0	0	0	0	0	0	1	68	0	0	69	0	0	0	4	1	4	324
8:15 AM	0	0	241	0	0	241	0	0	0	0	0	0	0	0	77	0	0	77	0	0	0	3	0	3	321
8:30 AM	0	0	206	0	0	206	0	0	0	0	0	0	0	1	90	0	0	91	0	1	0	0	1	1	298
8:45 AM	0	0	183	1	0	184	0	0	0	0	0	0	2	1	81	0	0	84	0	0	0	2	0	2	270
Hourly Total	0	0	881	1	0	882	0	0	0	0	0	0	2	3	316	0	0	321	0	1	0	9	2	10	1213
9:00 AM	0	0	151	1	0	152	0	0	0	0	0	0	0	1	90	0	0	91	0	0	0	2	1	2	245
9:15 AM	0	0	161	0	0	161	0	0	0	0	0	0	0	1	73	0	0	74	0	0	0	1	0	1	236
9:30 AM	0	0	197	1	0	198	0	0	0	0	0	0	0	1	102	0	0	103	0	0	0	1	0	1	302
9:45 AM	0	0	168	0	0	168	0	0	0	0	0	0	1	0	100	0	0	101	0	0	0	1	0	1	270
Hourly Total	0	0	677	2	0	679	0	0	0	0	0	0	1	3	365	0	0	369	0	0	0	5	1	5	1053
10:00 AM	0	0	151	1	0	152	0	0	0	0	0	0	0	1	95	0	0	96	0	1	0	1	0	2	250
10:15 AM	0	0	172	0	0	172	0	0	0	0	0	0	0	1	102	0	0	103	0	0	0	2	1	2	277
10:30 AM	0	0	149	0	0	149	0	0	0	0	0	0	1	0	115	0	0	116	0	0	0	1	1	1	266
10:45 AM	0	0	141	1	0	142	0	0	0	0	0	0	0	1	103	0	0	104	0	0	0	4	2	4	250
Hourly Total	0	0	613	2	0	615	0	0	0	0	0	0	1	3	415	0	0	419	0	1	0	8	4	9	1043
11:00 AM	0	0	183	1	0	184	0	0	0	0	0	0	0	2	104	0	0	106	0	0	0	3	1	3	293
11:15 AM	0	0	131	0	0	131	0	0	0	0	0	0	0	2	125	0	0	127	0	0	0	3	1	3	261
11:30 AM	0	0	162	0	0	162	0	0	0	0	0	0	0	1	122	0	0	123	0	0	0	0	1	0	285
11:45 AM	0	0	143	1	0	144	0	0	0	0	0	0	0	1	133	0	0	134	0	1	0	0	1	1	279
Hourly Total	0	0	619	2	0	621	0	0	0	0	0	0	0	6	484	0	0	490	0	1	0	6	4	7	1118
12:00 PM	0	0	168	1	0	169	0	0	0	0	0	0	0	2	134	0	0	136	0	0	0	6	0	6	311
12:15 PM	0	0	148	0	0	148	0	0	0	0	0	0	0	1	146	0	0	147	0	0	0	5	0	5	300
12:30 PM	1	0	126	0	0	127	0	0	0	0	0	0	0	1	137	0	0	138	0	0	0	1	0	1	266
12:45 PM	0	0	129	0	0	129	0	0	0	0	0	0	0	3	152	0	0	155	0	1	0	0	0	1	285
Hourly Total	1	0	571	1	0	573	0	0	0	0	0	0	0	7	569	0	0	576	0	1	0	12	0	13	1162
1:00 PM	0	0	118	0	0	118	0	0	0	0	0	0	1	1	161	0	0	163	0	0	0	4	0	4	285
1:15 PM	0	0	139	1	0	140	0	0	0	0	0	0	0	1	157	0	0	158	0	0	0	1	0	1	299
1:30 PM	0	0	140	1	0	141	0	0	0	0	0	0	0	0	140	0	0	140	0	0	0	1	0	1	282
1:45 PM	0	0	131	0	0	131	0	0	0	0	0	0	0	0	154	0	0	154	0	0	0	1	1	1	286
Hourly Total	0	0	528	2	0	530	0	0	0	0	0	0	1	2	612	0	0	615	0	0	0	7	1	7	1152
2:00 PM	0	0	140	1	0	141	0	0	0	0	0	0	0	2	168	0	0	170	0	2	0	4	0	6	317
2:15 PM	0	0	143	2	0	145	0	0	0	0	0	0	0	3	230	0	0	233	0	0	0	1	1	1	379
2:30 PM	0	0	125	1	0	126	0	0	0	0	0	0	0	1	191	0	0	192	0	0	0	1	0	1	319
2:45 PM	0	0	131	0	0	131	0	0	0	0	0	0	0	1	221	0	0	222	0	0	0	2	1	2	355
Hourly Total	0	0	539	4	0	543	0	0	0	0	0	0	0	7	810	0	0	817	0	2	0	8	2	10	1370
3:00 PM	0	0	130	0	0	130	0	0	0	0	0	0	0	3	230	0	0	233	0	0	0	0	0	0	363
3:15 PM	0	0	130	2	0	132	0	0	0	0	0	0	0	3	252	0	0	255	0	0	0	4	0	4	391
3:30 PM	0	0	126	0	0	126	0	0	0	0	0	0	0	2	300	0	0	302	0	0	0	2	0	2	430
3:45 PM	0	0	126	0	0	126	0	0	0	0	0	0	0	2	271	0	0	273	0	0	0	2	0	2	401
Hourly Total	0	0	512	2	0	514	0	0	0	0	0	0	0	10	1053	0	0	1063	0	0	0	8	0	8	1585

TMC 2360 - CSAH 17 @ 114th Ave

0 0

Tuesday, August 22, 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	0	140	0	0	140	0	0	0	0	0	0	0	0	306	0	0	0	0	0	0	1	0	1	447
4:15 PM	0	0	145	1	0	146	0	0	0	0	0	0	0	4	325	0	0	0	0	0	0	1	0	1	476
4:30 PM	0	0	156	1	0	157	0	0	0	0	0	0	0	2	350	0	0	0	0	0	0	1	0	1	510
4:45 PM	0	0	137	1	0	138	0	0	0	0	0	0	0	3	350	0	0	0	0	0	0	2	0	2	493
Hourly Total	0	0	578	3	0	581	0	0	0	0	0	0	0	9	1331	0	0	0	0	0	0	5	0	5	1926
5:00 PM	0	0	127	1	0	128	0	0	0	0	0	0	0	2	296	0	0	0	0	0	0	2	1	2	428
5:15 PM	0	0	142	0	0	142	0	0	0	0	0	0	1	3	337	0	0	0	0	0	0	1	0	1	484
5:30 PM	0	0	128	0	0	128	0	0	0	0	0	0	1	1	294	0	0	0	0	0	0	2	1	2	426
5:45 PM	0	0	109	0	0	109	0	0	0	0	0	0	1	1	271	0	0	0	0	0	0	0	0	0	382
Hourly Total	0	0	506	1	0	507	0	0	0	0	0	0	3	7	1198	0	0	0	0	0	0	5	2	5	1720
6:00 PM	0	0	118	0	0	118	0	0	0	0	0	0	0	3	194	0	0	0	0	0	0	3	1	3	318
6:15 PM	0	0	121	1	0	122	0	0	0	0	0	0	0	0	187	0	0	0	0	0	0	4	1	4	313
6:30 PM	0	0	111	0	0	111	0	0	0	0	0	0	0	3	152	0	0	0	0	0	0	1	0	1	267
6:45 PM	0	0	96	1	0	97	0	0	0	0	0	0	0	2	132	0	0	0	0	0	0	2	0	2	233
Hourly Total	0	0	446	2	0	448	0	0	0	0	0	0	0	8	665	0	0	0	0	0	0	10	2	10	1131
7:00 PM	0	0	88	1	0	89	0	0	0	0	0	0	0	2	143	0	0	0	0	0	0	1	0	1	235
7:15 PM	0	0	95	0	0	95	0	0	0	0	0	0	0	1	99	0	0	0	0	0	0	5	0	5	200
7:30 PM	0	0	88	1	0	89	0	0	0	0	0	0	0	1	156	0	0	0	0	0	0	2	0	2	248
7:45 PM	0	0	64	1	0	65	0	0	0	0	0	0	0	0	121	0	0	0	0	0	0	1	0	1	187
Hourly Total	0	0	335	3	0	338	0	0	0	0	0	0	0	4	519	0	0	0	0	0	0	9	0	9	870
8:00 PM	0	0	64	0	0	64	0	0	0	0	0	0	0	4	136	0	0	0	0	0	0	0	0	0	204
8:15 PM	0	0	66	1	0	67	0	0	0	0	0	0	0	3	126	0	0	0	0	0	0	2	0	2	198
8:30 PM	0	0	69	0	0	69	0	0	0	0	0	0	0	2	125	0	0	0	0	0	0	1	0	1	197
8:45 PM	0	0	62	0	0	62	0	0	0	0	0	0	0	6	85	0	0	0	0	0	0	2	0	2	155
Hourly Total	0	0	261	1	0	262	0	0	0	0	0	0	0	15	472	0	0	0	0	0	0	5	0	5	754
9:00 PM	0	0	55	0	0	55	0	0	0	0	0	0	0	3	92	0	0	0	0	0	0	1	0	1	151
9:15 PM	0	0	31	0	0	31	0	0	0	0	0	0	0	2	76	0	0	0	0	0	0	1	0	1	110
9:30 PM	0	0	43	0	0	43	0	0	0	0	0	0	0	1	53	0	0	0	0	0	0	1	0	1	98
9:45 PM	0	0	32	0	0	32	0	0	0	0	0	0	0	0	65	0	0	0	0	0	0	0	0	0	97
Hourly Total	0	0	161	0	0	161	0	0	0	0	0	0	0	6	286	0	0	0	0	0	0	3	0	3	456
10:00 PM	0	0	28	0	0	28	0	0	0	0	0	0	0	0	52	0	0	0	0	0	0	2	0	2	82
10:15 PM	0	0	25	0	0	25	0	0	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	83
10:30 PM	0	0	27	0	0	27	0	0	0	0	0	0	0	1	35	0	0	0	0	0	0	0	0	0	63
10:45 PM	0	0	23	0	0	23	0	0	0	0	0	0	0	1	29	0	0	0	0	0	0	0	0	0	53
Hourly Total	0	0	103	0	0	103	0	0	0	0	0	0	0	2	174	0	0	0	0	0	0	2	0	2	281
11:00 PM	0	0	15	0	0	15	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	1	0	1	53
11:15 PM	0	0	10	0	0	10	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	50
11:30 PM	0	0	12	0	0	12	0	0	0	0	0	0	0	0	39	0	0	0	0	0	0	0	0	0	51
11:45 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	22
Hourly Total	0	0	39	0	0	39	0	0	0	0	0	0	0	0	136	0	0	0	0	0	0	1	0	1	176
DAILY TOTAL	1	0	10217	29	0	10247	0	0	0	0	0	0	10	95	10102	0	0	0	0	0	121	23	127	20581	
Cars	1	0	9882	29	0	9912	0	0	0	0	0	0	10	95	9942	0	0	0	0	0	6	9	126	20085	
Heavy Vehicles	0	0	335	0	0	335	0	0	0	0	0	0	0	0	160	0	0	0	0	0	0	1	14	1	496
Heavy Vehicle %	0.00%	0.00%	3.28%	0.00%	0.00%	3.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.83%	60.87%	0.79%	2.41%	

TMC 2360 - CSAH 17 @ 114th Ave

0 0

Tuesday, August 22, 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	0	275	1	0	276	0	0	0	0	0	0	0	0	76	0	0	76	0	0	0	5	2	5	357
7:15 AM	0	0	328	0	0	328	0	0	0	0	0	0	0	0	73	0	0	73	0	0	0	4	0	4	405
7:30 AM	0	0	350	0	0	350	0	0	0	0	0	0	1	0	66	0	0	67	0	0	0	1	0	1	418
7:45 AM	0	0	280	1	0	281	0	0	0	0	0	0	0	1	89	0	0	90	0	0	0	2	0	2	373
Peak Hour Total PHF	0	0	1233	2	0	1235	0	0	0	0	0	0	1	1	304	0	0	306	0	0	0	12	2	12	1553
	0.000	0.000	0.881	0.500	0.000	0.882	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.854	0.000	0.000	0.850	0.000	0.000	0.000	0.600	0.250	0.600	0.929

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	0	140	0	0	140	0	0	0	0	0	0	0	0	306	0	0	306	0	0	0	1	0	1	447
4:15 PM	0	0	145	1	0	146	0	0	0	0	0	0	0	4	325	0	0	329	0	0	0	1	0	1	476
4:30 PM	0	0	156	1	0	157	0	0	0	0	0	0	0	2	350	0	0	352	0	0	0	1	0	1	510
4:45 PM	0	0	137	1	0	138	0	0	0	0	0	0	0	3	350	0	0	353	0	0	0	2	0	2	493
Peak Hour Total PHF	0	0	578	3	0	581	0	0	0	0	0	0	0	9	1331	0	0	1340	0	0	0	5	0	5	1926
	0.000	0.000	0.926	0.750	0.000	0.925	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.563	0.951	0.000	0.000	0.949	0.000	0.000	0.000	0.625	0.000	0.625	0.944

Total Vehicles On Leg				20356			
Vehicles Entering Intersection		10247		Vehicles Exiting Intersection		10109	
Southbound							
Cars	29	9882	0	1	0	0	0
Heavy	0	335	0	0	0	0	0
Total	29	10217	0	1	0	0	0



Total Vehicles on Leg 251	Vehicles Entering Intersection 127	Eastbound	Cars	9	14	23
			Heavy	0	0	0
			Total	6	0	6
	Vehicles Exiting Intersection 124		Cars	0	0	0
			Heavy	120	1	121



Daily Volumes

Total Vehicles on Leg 0	Westbound	Cars	0	0	0	
		Heavy	0	0	0	
		Total	0	0	0	
		Vehicles Entering Intersection 0	Cars	0	0	0
			Heavy	0	0	0



Total Vehicles On Leg	20555	Northbound	Cars	0	10	95	9942	0
			Heavy	0	0	0	160	0
			Total	0	10	95	10102	0
Vehicles Entering Intersection		10207		Vehicles Exiting Intersection		10348		



ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2360

Study Date : 08/24/2023

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 17

Number of Lanes : 2+

Total Approach Volume: 10,207

Southbound: CSAH 17

Number of Lanes :2+

Total Approach Volume: 10,247

Minor Street Approaches

Eastbound: 114th Ave

Number of Lanes :1

Total Approach Volume: 127

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 0 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 0 hours, 8 are needed

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

Number of hours (0) volumes exceed minimum < minimum required (4).

Warrant 3 - Peak Hour.....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: TMC 2360

Study Date : 08/24/2023

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 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 = **1**

Volume Requirements

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

Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	1340	+	581	=	1921	5	0	No
16:30 - 17:30	1344	+	565	=	1909	6	0	No
16:15 - 17:15	1332	+	569	=	1901	6	0	No
15:45 - 16:45	1260	+	569	=	1829	5	0	No
16:45 - 17:45	1288	+	536	=	1824	7	0	No
15:30 - 16:30	1210	+	538	=	1748	6	0	No
17:00 - 18:00	1208	+	507	=	1715	5	0	No
15:15 - 16:15	1136	+	524	=	1660	9	0	No
17:15 - 18:15	1107	+	497	=	1604	6	0	No
15:00 - 16:00	1063	+	514	=	1577	8	0	No
07:00 - 08:00	306	+	1235	=	1541	12	0	No
14:45 - 15:45	1012	+	519	=	1531	8	0	No
06:45 - 07:45	288	+	1241	=	1529	10	0	No
07:15 - 08:15	299	+	1210	=	1509	11	0	No
17:30 - 18:30	953	+	477	=	1430	9	0	No
07:30 - 08:30	303	+	1123	=	1426	10	0	No
14:30 - 15:30	902	+	519	=	1421	7	0	No
14:15 - 15:15	880	+	532	=	1412	4	0	No
06:30 - 07:30	272	+	1135	=	1407	12	0	No
14:00 - 15:00	817	+	543	=	1360	10	0	No
07:45 - 08:45	327	+	979	=	1306	10	0	No
13:45 - 14:45	749	+	543	=	1292	9	0	No
17:45 - 18:45	812	+	460	=	1272	8	0	No
06:15 - 07:15	244	+	1018	=	1262	10	0	No
13:30 - 14:30	697		558		1255	9	0	No

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2360

Study Date : 08/24/2023

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

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 = **1**

Volume Requirements

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

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	1340	+	581	=	1921	5	0	No
16:30 - 17:30	1344	+	565	=	1909	6	0	No
16:15 - 17:15	1332	+	569	=	1901	6	0	No
15:45 - 16:45	1260	+	569	=	1829	5	0	No
16:45 - 17:45	1288	+	536	=	1824	7	0	No
15:30 - 16:30	1210	+	538	=	1748	6	0	No
17:00 - 18:00	1208	+	507	=	1715	5	0	No
15:15 - 16:15	1136	+	524	=	1660	9	0	No
17:15 - 18:15	1107	+	497	=	1604	6	0	No
15:00 - 16:00	1063	+	514	=	1577	8	0	No
07:00 - 08:00	306	+	1235	=	1541	12	0	No
14:45 - 15:45	1012	+	519	=	1531	8	0	No
06:45 - 07:45	288	+	1241	=	1529	10	0	No
07:15 - 08:15	299	+	1210	=	1509	11	0	No
17:30 - 18:30	953	+	477	=	1430	9	0	No
07:30 - 08:30	303	+	1123	=	1426	10	0	No
14:30 - 15:30	902	+	519	=	1421	7	0	No
14:15 - 15:15	880	+	532	=	1412	4	0	No
06:30 - 07:30	272	+	1135	=	1407	12	0	No
14:00 - 15:00	817	+	543	=	1360	10	0	No
07:45 - 08:45	327	+	979	=	1306	10	0	No
13:45 - 14:45	749	+	543	=	1292	9	0	No
17:45 - 18:45	812	+	460	=	1272	8	0	No
06:15 - 07:15	244	+	1018	=	1262	10	0	No
13:30 - 14:30	697		558		1255	9	0	No

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2360

Study Date : 08/24/2023

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 0 hours meet 1A minimums.
Only 0 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 17

Minor Road 114th Ave

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:00 - 17:00	1340	+	581	=	1921	5	0	No
16:30 - 17:30	1344	+	565	=	1909	6	0	No
16:15 - 17:15	1332	+	569	=	1901	6	0	No
15:45 - 16:45	1260	+	569	=	1829	5	0	No
16:45 - 17:45	1288	+	536	=	1824	7	0	No
15:30 - 16:30	1210	+	538	=	1748	6	0	No
17:00 - 18:00	1208	+	507	=	1715	5	0	No
15:15 - 16:15	1136	+	524	=	1660	9	0	No
17:15 - 18:15	1107	+	497	=	1604	6	0	No
15:00 - 16:00	1063	+	514	=	1577	8	0	No
07:00 - 08:00	306	+	1235	=	1541	12	0	No
14:45 - 15:45	1012		519		1531	8	0	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:00 - 17:00	1340	+	581	=	1921	5	0	No
16:30 - 17:30	1344	+	565	=	1909	6	0	No
16:15 - 17:15	1332	+	569	=	1901	6	0	No
15:45 - 16:45	1260	+	569	=	1829	5	0	No
16:45 - 17:45	1288	+	536	=	1824	7	0	No
15:30 - 16:30	1210	+	538	=	1748	6	0	No
17:00 - 18:00	1208	+	507	=	1715	5	0	No
15:15 - 16:15	1136	+	524	=	1660	9	0	No
17:15 - 18:15	1107	+	497	=	1604	6	0	No
15:00 - 16:00	1063	+	514	=	1577	8	0	No
07:00 - 08:00	306	+	1235	=	1541	12	0	No
14:45 - 15:45	1012		519		1531	8	0	No

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2360

Study Date : 08/24/2023

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.

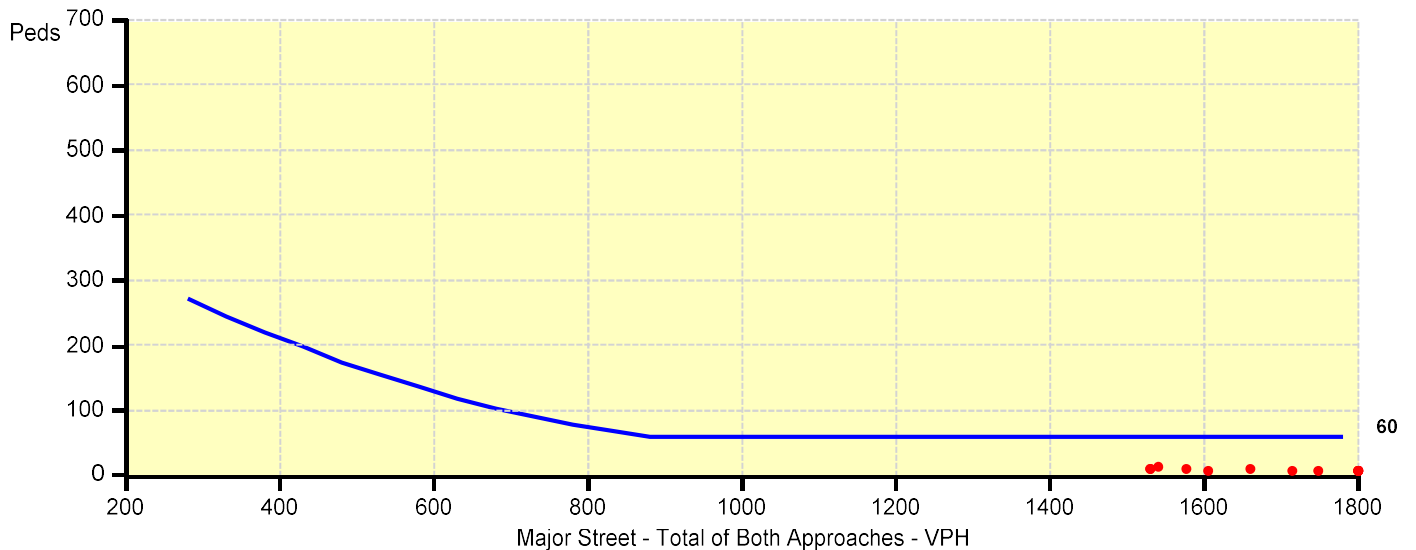
Summary

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 = **1**

Time	Major Road CSAH 17				Total	Minor Road 114th Ave		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	1340	+	581	=	1921	5	0	No
16:30 - 17:30	1344	+	565	=	1909	6	0	No
16:15 - 17:15	1332	+	569	=	1901	6	0	No
15:45 - 16:45	1260	+	569	=	1829	5	0	No
16:45 - 17:45	1288	+	536	=	1824	7	0	No
15:30 - 16:30	1210	+	538	=	1748	6	0	No
17:00 - 18:00	1208	+	507	=	1715	5	0	No
15:15 - 16:15	1136	+	524	=	1660	9	0	No
17:15 - 18:15	1107	+	497	=	1604	6	0	No
15:00 - 16:00	1063	+	514	=	1577	8	0	No
07:00 - 08:00	306	+	1235	=	1541	12	0	No
14:45 - 15:45	1012		519		1531	8	0	No



ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2360

Study Date : 08/24/2023

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

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 = **1**

Time	Major Road CSAH 17				Total	Minor Road 114th Ave		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	1340	+	581	=	1921	5	0	No
16:30 - 17:30	1344	+	565	=	1909	6	0	No
16:15 - 17:15	1332	+	569	=	1901	6	0	No
15:45 - 16:45	1260	+	569	=	1829	5	0	No
16:45 - 17:45	1288	+	536	=	1824	7	0	No
15:30 - 16:30	1210	+	538	=	1748	6	0	No
17:00 - 18:00	1208	+	507	=	1715	5	0	No
15:15 - 16:15	1136	+	524	=	1660	9	0	No
17:15 - 18:15	1107	+	497	=	1604	6	0	No
15:00 - 16:00	1063	+	514	=	1577	8	0	No
07:00 - 08:00	306	+	1235	=	1541	12	0	No
14:45 - 15:45	1012		519		1531	8	0	No

