

Date : 05/24/23

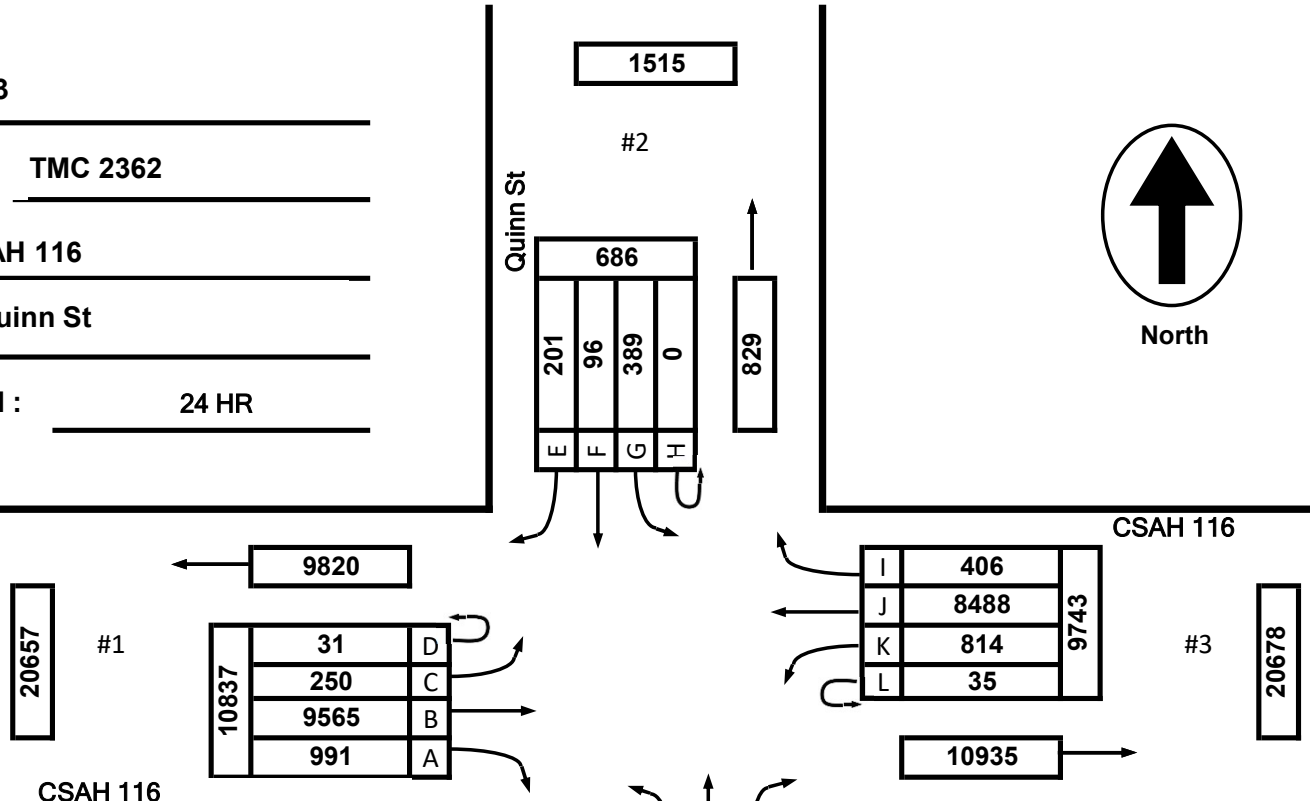
Count Number : TMC 2362

Location : CSAH 116
@ Quinn St

Collection Period : 24 HR



CSAH 116



CSAH 116

Quinn St

Quinn St

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	1	1	1	3

Anoka County Highway Department

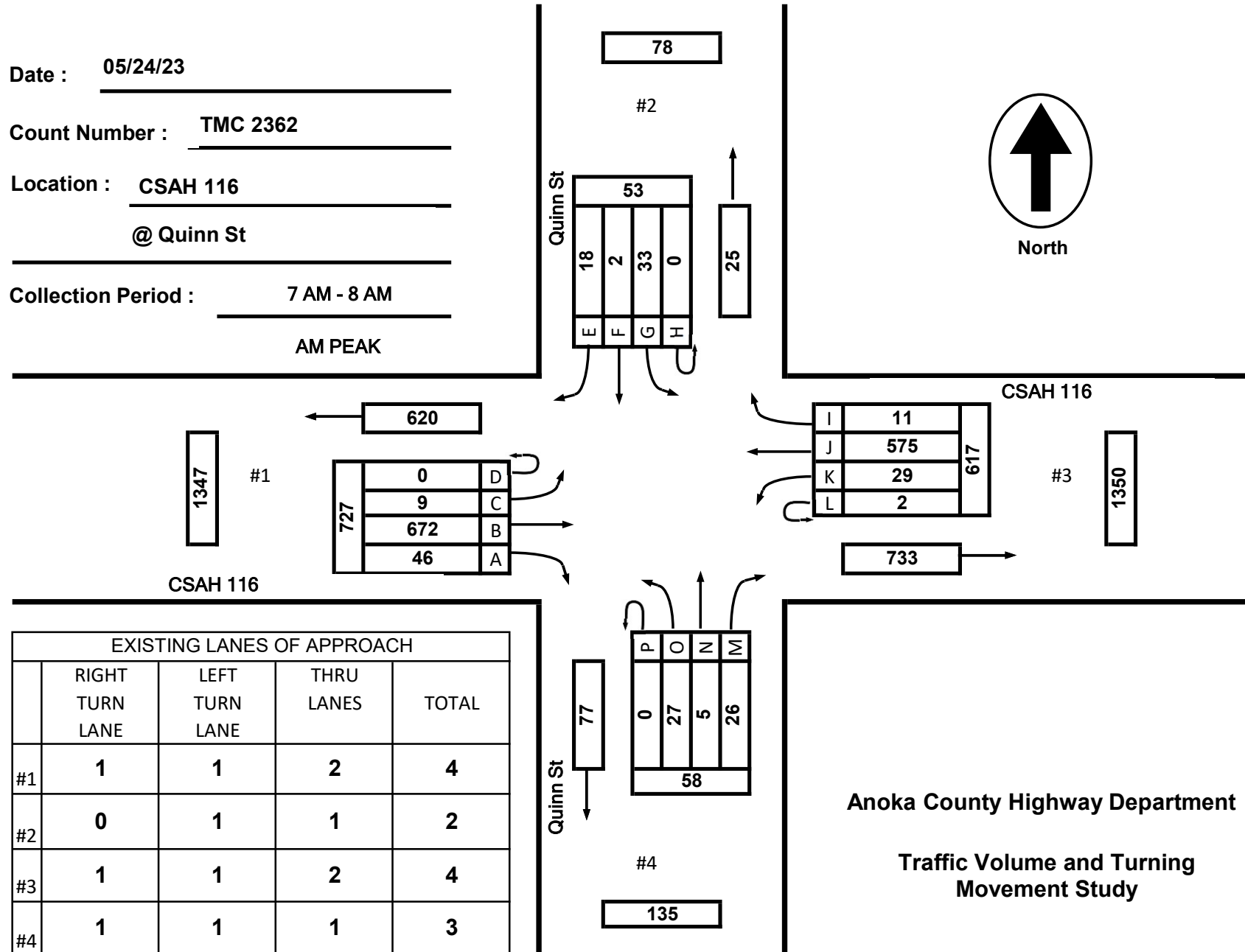
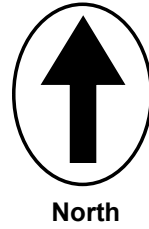
Traffic Volume and Turning Movement Study

Date : 05/24/23

Count Number : TMC 2362

Location : CSAH 116
@ Quinn 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	0	1	1	2
#3	1	1	2	4
#4	1	1	1	3

Anoka County Highway Department

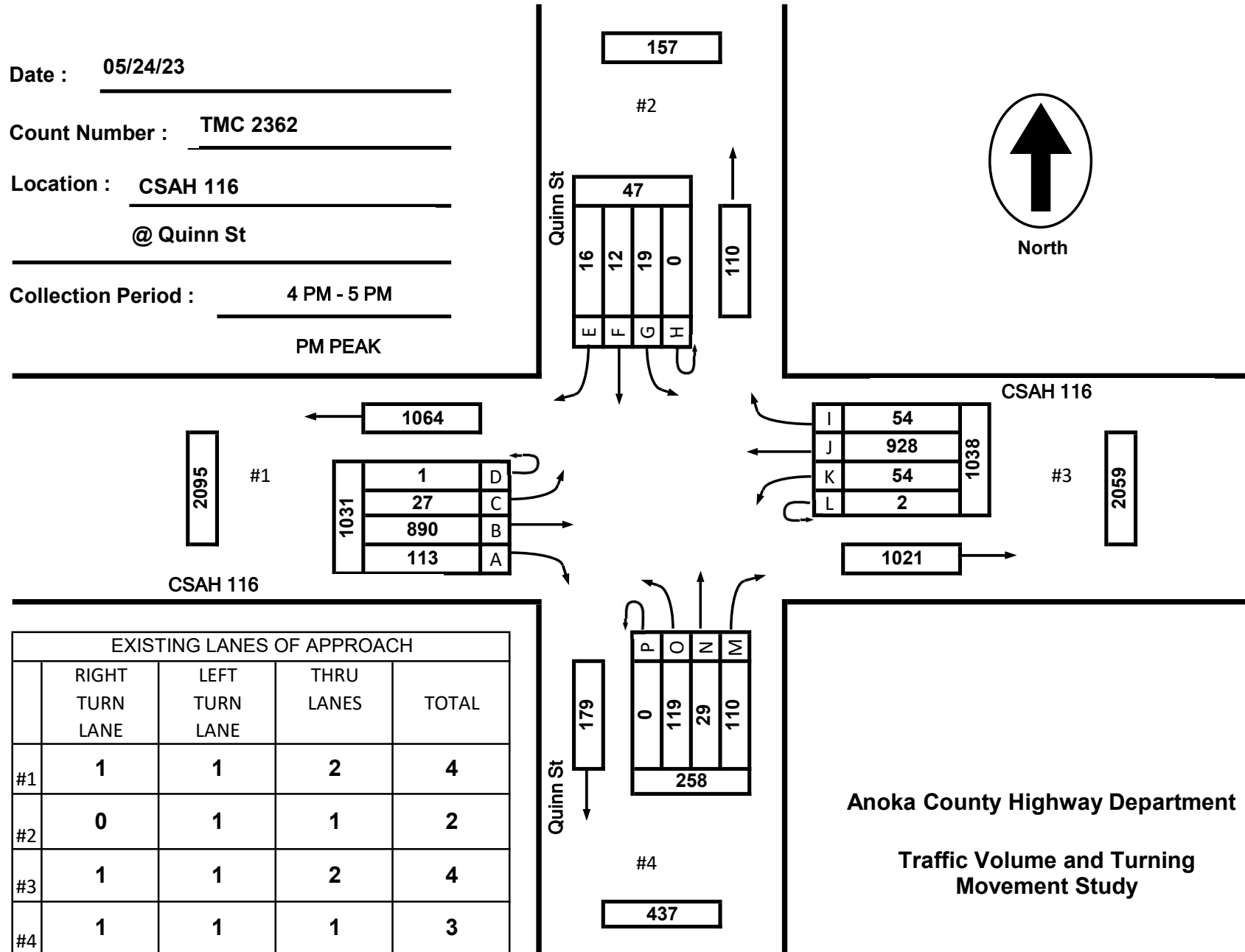
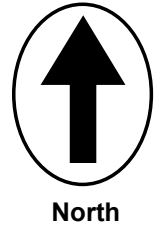
Traffic Volume and Turning Movement Study

Date : 05/24/23

Count Number : TMC 2362

Location : CSAH 116
@ Quinn St

Collection Period : 4 PM - 5 PM
PM PEAK



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	1	1	1	3

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

TMC 2362 - CSAH 116 @ Quinn St

0 0

Wednesday, May 24, 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	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	0	7	0	0	7	10
12:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	5	0	0	5	6
12:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	8
12:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	4
Hourly Total	0	1	0	0	0	1	0	0	7	0	0	7	0	0	0	0	0	0	0	0	20	0	0	20	28
1:00 AM	0	0	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	0	0	3	0	0	3	10
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	7
1:30 AM	0	0	0	0	0	0	1	0	1	1	0	3	0	0	0	0	0	0	0	0	4	0	0	4	7
1:45 AM	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	0	0	3	0	0	3	7
Hourly Total	0	0	0	0	0	0	1	0	10	3	0	14	0	0	0	0	0	0	0	0	17	0	0	17	31
2:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	4	0	0	5	8
2:15 AM	0	0	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	0	0	1	0	0	1	6
2:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	4
2:45 AM	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	0	0	2	0	0	2	6
Hourly Total	0	0	0	0	0	0	0	0	10	3	0	13	0	0	0	0	0	0	0	2	9	0	0	11	24
3:00 AM	0	1	0	0	0	1	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2	0	0	2	5
3:15 AM	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	4	0	0	4	7
3:30 AM	0	1	0	0	0	1	0	3	5	0	0	8	0	0	0	0	0	0	0	1	6	1	0	8	17
3:45 AM	0	0	0	1	0	1	0	1	4	0	0	5	0	0	0	0	0	0	0	0	9	0	0	9	15
Hourly Total	0	2	0	1	0	3	0	5	12	1	0	18	0	0	0	0	0	0	0	1	21	1	0	23	44
4:00 AM	0	1	0	1	0	2	0	0	5	0	0	5	0	0	0	1	0	1	0	0	5	0	0	5	13
4:15 AM	0	1	0	0	0	1	0	0	6	0	0	6	0	1	0	1	0	2	0	0	13	0	0	13	22
4:30 AM	0	2	0	0	0	2	0	4	12	0	0	16	0	0	0	0	0	0	0	0	20	0	0	20	38
4:45 AM	0	3	1	0	0	4	0	2	11	0	0	13	0	0	0	1	0	1	0	0	18	0	0	18	36
Hourly Total	0	7	1	1	0	9	0	6	34	0	0	40	0	1	0	3	0	4	0	0	56	0	0	56	109
5:00 AM	0	2	1	1	0	4	0	1	18	0	0	19	0	0	0	0	2	0	0	0	16	0	0	16	39
5:15 AM	0	2	0	4	0	6	0	0	14	0	1	14	0	0	0	0	2	0	0	0	26	1	0	27	47
5:30 AM	0	10	0	4	0	14	0	8	22	0	0	30	0	2	0	2	1	4	0	0	49	0	0	49	97
5:45 AM	0	1	0	4	0	5	0	7	31	0	0	38	0	1	0	4	0	5	0	0	61	4	0	65	113
Hourly Total	0	15	1	13	0	29	0	16	85	0	1	101	0	3	0	6	5	9	0	0	152	5	0	157	296
6:00 AM	0	7	0	3	0	10	0	0	38	1	0	39	0	0	0	3	0	3	0	1	58	0	0	59	111
6:15 AM	0	9	0	3	0	12	0	1	55	3	1	59	0	0	0	0	1	0	0	0	90	2	0	92	163
6:30 AM	0	13	3	3	0	19	0	2	62	1	0	65	0	2	1	0	0	3	2	0	118	3	0	123	210
6:45 AM	0	7	1	3	0	11	0	12	96	1	0	109	0	1	0	3	1	4	0	1	136	5	0	142	266
Hourly Total	0	36	4	12	0	52	0	15	251	6	1	272	0	3	1	6	2	10	2	2	402	10	0	416	750
7:00 AM	0	9	3	3	0	15	0	6	88	5	0	99	0	7	0	5	1	12	0	1	122	3	0	126	252
7:15 AM	0	8	0	4	1	12	0	6	185	3	0	194	0	7	1	2	1	10	0	1	138	6	0	145	361
7:30 AM	0	6	0	4	0	10	1	6	162	3	0	172	0	3	3	3	1	9	0	5	207	18	0	230	421
7:45 AM	0	13	0	8	0	21	0	11	125	3	0	139	0	12	1	7	0	20	0	1	197	12	0	210	390
Hourly Total	0	36	3	19	1	58	1	29	560	14	0	604	0	29	5	17	3	51	0	8	664	39	0	711	1424

TMC 2362 - CSAH 116 @ Quinn St

0 0

Wednesday, May 24, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	
8:00 AM	0	6	2	2	1	10	1	6	103	2	0	112	0	5	0	14	0	19	0	2	130	10	1	142	283
8:15 AM	0	7	1	1	0	9	0	15	107	4	0	126	0	10	1	4	0	15	0	0	106	6	0	112	262
8:30 AM	0	6	2	3	0	11	0	5	96	2	0	103	0	3	3	5	0	11	0	3	123	7	0	133	258
8:45 AM	0	3	2	7	0	12	1	9	88	2	0	100	0	8	2	8	0	18	0	1	127	8	0	136	266
Hourly Total	0	22	7	13	1	42	2	35	394	10	0	441	0	26	6	31	0	63	0	6	486	31	1	523	1069
9:00 AM	0	7	0	2	0	9	0	14	104	1	0	119	0	16	0	4	0	20	0	1	135	18	0	154	302
9:15 AM	0	7	0	6	0	13	2	16	100	1	0	119	0	12	2	8	1	22	0	1	120	19	0	140	294
9:30 AM	0	7	2	3	0	12	1	11	100	3	0	115	0	15	2	14	1	31	0	1	131	18	0	150	308
9:45 AM	0	0	1	4	0	5	1	7	107	3	0	118	0	14	2	6	0	22	1	1	132	16	0	150	295
Hourly Total	0	21	3	15	0	39	4	48	411	8	0	471	0	57	6	32	2	95	1	4	518	71	0	594	1199
10:00 AM	0	2	3	2	0	7	0	12	116	5	0	133	0	11	4	11	0	26	1	4	102	14	0	121	287
10:15 AM	0	4	1	2	0	7	1	13	82	6	0	102	0	14	1	9	0	24	0	2	122	16	0	140	273
10:30 AM	0	7	2	0	0	9	1	9	102	6	0	118	0	12	2	13	0	27	1	2	110	16	0	129	283
10:45 AM	0	4	0	2	0	6	1	11	101	2	2	115	0	16	1	15	1	32	1	2	124	18	0	145	298
Hourly Total	0	17	6	6	0	29	3	45	401	19	2	468	0	53	8	48	1	109	3	10	458	64	0	535	1141
11:00 AM	0	5	0	0	0	5	1	12	96	5	0	114	0	14	3	13	0	30	0	4	146	13	0	163	312
11:15 AM	0	2	1	2	0	5	0	12	112	2	1	126	0	16	1	20	1	37	1	3	127	15	0	146	314
11:30 AM	0	6	1	7	0	14	1	19	122	2	0	144	0	22	1	14	0	37	0	1	127	14	0	142	337
11:45 AM	0	1	2	7	0	10	0	12	133	3	0	148	0	21	1	20	0	42	0	0	134	22	0	156	356
Hourly Total	0	14	4	16	0	34	2	55	463	12	1	532	0	73	6	67	1	146	1	8	534	64	0	607	1319
12:00 PM	0	3	3	3	0	9	1	15	119	5	0	140	0	15	5	11	1	31	2	4	147	18	0	171	351
12:15 PM	0	7	0	1	0	8	0	19	110	4	0	133	0	19	2	17	0	38	1	8	141	21	0	171	350
12:30 PM	0	5	2	3	0	10	0	10	115	5	0	130	0	22	0	16	1	38	1	1	138	16	0	156	334
12:45 PM	0	2	3	2	0	7	3	20	110	3	0	136	0	24	3	23	3	50	0	2	155	19	0	176	369
Hourly Total	0	17	8	9	0	34	4	64	454	17	0	539	0	80	10	67	5	157	4	15	581	74	0	674	1404
1:00 PM	0	3	1	2	1	6	0	18	109	6	0	133	0	23	1	17	1	41	3	3	153	12	0	171	351
1:15 PM	0	1	1	2	0	4	0	15	131	4	0	150	0	14	1	17	1	32	1	4	133	11	0	149	335
1:30 PM	0	1	2	1	0	4	1	14	140	5	0	160	0	16	4	11	0	31	1	3	145	10	0	159	354
1:45 PM	0	5	3	4	0	12	0	14	141	3	0	158	1	16	3	19	1	39	0	6	161	19	0	186	395
Hourly Total	0	10	7	9	1	26	1	61	521	18	0	601	1	69	9	64	3	143	5	16	592	52	0	665	1435
2:00 PM	0	5	0	2	0	7	0	15	153	4	0	172	0	27	1	11	0	39	0	3	140	20	0	163	381
2:15 PM	0	5	3	6	0	14	0	10	127	2	0	139	0	30	5	20	0	55	1	4	182	26	0	213	421
2:30 PM	0	12	5	3	0	20	1	21	183	6	0	211	0	24	1	15	0	40	0	6	177	25	0	208	479
2:45 PM	0	4	0	3	0	7	2	20	155	11	0	188	0	24	7	27	2	58	2	6	199	19	0	226	479
Hourly Total	0	26	8	14	0	48	3	66	618	23	0	710	0	105	14	73	2	192	3	19	698	90	0	810	1760
3:00 PM	0	5	1	2	0	8	1	15	163	12	0	191	1	17	1	21	2	40	0	2	210	22	0	234	473
3:15 PM	0	6	0	4	0	10	2	17	188	11	0	218	0	26	5	21	0	52	1	11	185	17	0	214	494
3:30 PM	0	8	2	3	0	13	0	23	200	4	1	227	0	25	3	23	0	51	0	2	201	29	0	232	523
3:45 PM	0	12	1	2	0	15	2	23	187	13	1	225	0	25	3	26	0	54	1	6	237	21	0	265	559
Hourly Total	0	31	4	11	0	46	5	78	738	40	2	861	1	93	12	91	2	197	2	21	833	89	0	945	2049

TMC 2362 - CSAH 116 @ Quinn St

0 0

Wednesday, May 24, 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	9	3	3	0	15	0	26	204	11	1	241	0	23	6	33	0	62	0	6	207	22	0	235	553
4:15 PM	0	5	2	3	0	10	1	27	254	9	0	291	0	33	3	31	0	67	1	12	196	18	0	227	595
4:30 PM	0	6	3	7	0	16	1	20	229	11	0	261	0	33	13	27	2	73	0	6	203	28	0	237	587
4:45 PM	0	7	1	3	1	11	0	15	231	11	0	257	0	28	6	28	0	62	0	8	212	23	0	243	573
Hourly Total	0	27	9	16	1	52	2	88	918	42	1	1050	0	117	28	119	2	264	1	32	818	91	0	942	2308
5:00 PM	0	1	4	1	0	6	1	6	217	25	0	249	0	37	8	26	0	71	1	5	237	38	0	281	607
5:15 PM	0	5	4	5	0	14	0	13	251	7	0	271	0	21	2	29	3	52	0	8	238	24	0	270	607
5:30 PM	0	13	1	2	0	16	0	10	218	18	0	246	0	28	5	21	0	54	0	7	172	23	0	202	518
5:45 PM	0	8	2	2	0	12	0	18	193	10	0	221	0	27	4	19	1	50	1	6	208	22	1	237	520
Hourly Total	0	27	11	10	0	48	1	47	879	60	0	987	0	113	19	95	4	227	2	26	855	107	1	990	2252
6:00 PM	0	5	1	2	0	8	0	18	137	9	0	164	0	26	2	26	2	54	1	8	179	14	0	202	428
6:15 PM	0	11	1	5	0	17	0	17	143	10	0	170	0	26	3	14	0	43	2	7	145	14	0	168	398
6:30 PM	0	2	1	3	0	6	0	12	127	8	0	147	0	20	0	23	0	43	1	4	145	24	0	174	370
6:45 PM	0	6	1	5	0	12	0	12	137	6	0	155	0	23	4	16	2	43	0	4	158	13	0	175	385
Hourly Total	0	24	4	15	0	43	0	59	544	33	0	636	0	95	9	79	4	183	4	23	627	65	0	719	1581
7:00 PM	0	5	2	2	0	9	1	12	120	5	0	138	0	23	5	13	1	41	0	5	121	15	0	141	329
7:15 PM	0	6	2	3	0	11	0	12	120	10	0	142	0	22	1	11	0	34	0	9	115	19	1	143	330
7:30 PM	0	1	1	2	0	4	1	16	116	13	0	146	0	22	7	14	3	43	0	4	121	14	0	139	332
7:45 PM	0	3	2	1	0	6	0	13	91	6	0	110	0	17	8	26	0	51	0	6	88	14	0	108	275
Hourly Total	0	15	7	8	0	30	2	53	447	34	0	536	0	84	21	64	4	169	0	24	445	62	1	531	1266
8:00 PM	0	3	2	2	0	7	0	11	86	4	0	101	0	23	3	18	0	44	2	5	118	16	0	141	293
8:15 PM	0	3	2	0	0	5	0	12	79	6	2	97	0	15	3	18	0	36	0	1	90	13	0	104	242
8:30 PM	0	4	1	1	0	6	0	8	91	8	0	107	0	10	1	13	2	24	1	1	109	21	0	132	269
8:45 PM	0	6	0	2	0	8	1	4	77	6	0	88	0	11	0	8	0	19	0	3	97	8	0	108	223
Hourly Total	0	16	5	5	0	26	1	35	333	24	2	393	0	59	7	57	2	123	3	10	414	58	0	485	1027
9:00 PM	0	6	2	1	0	9	0	1	72	3	0	76	0	12	1	10	0	23	0	4	83	6	0	93	201
9:15 PM	0	4	1	3	0	8	0	2	45	5	0	52	0	11	3	8	0	22	0	3	62	6	0	71	153
9:30 PM	0	6	0	1	0	7	1	2	51	6	0	60	0	4	3	2	1	9	0	6	57	4	0	67	143
9:45 PM	0	2	1	0	0	3	0	0	49	3	0	52	0	3	1	3	0	7	0	1	37	2	0	40	102
Hourly Total	0	18	4	5	0	27	1	5	217	17	0	240	0	30	8	23	1	61	0	14	239	18	0	271	599
10:00 PM	0	4	0	0	0	4	0	0	45	5	0	50	0	6	1	2	0	9	0	3	22	0	0	25	88
10:15 PM	0	1	0	1	0	2	0	2	50	6	0	58	0	1	0	0	0	1	0	0	38	0	0	38	99
10:30 PM	0	0	0	1	0	1	0	1	28	7	0	36	0	1	1	1	0	3	0	1	14	0	0	15	55
10:45 PM	0	0	0	1	0	1	0	1	20	1	0	22	0	2	0	1	0	3	0	1	14	0	0	15	41
Hourly Total	0	5	0	3	0	8	0	4	143	19	0	166	0	10	2	4	0	16	0	5	88	0	0	93	283
11:00 PM	0	0	0	0	0	0	1	0	17	1	0	19	0	0	1	0	0	1	0	3	14	0	0	17	37
11:15 PM	0	1	0	0	0	1	1	0	9	2	0	12	0	0	0	0	0	0	0	0	9	0	0	9	22
11:30 PM	0	1	0	0	0	1	0	0	7	0	0	7	0	0	1	0	0	1	0	0	9	0	0	9	18
11:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	1	6	0	0	7	12
Hourly Total	0	2	0	0	0	2	2	0	38	3	0	43	0	0	2	0	0	2	0	4	38	0	0	42	89
DAILY TOTAL	0	389	96	201	4	686	35	814	8488	406	10	9743	2	1100	173	946	43	2221	31	250	9565	991	3	10837	23487
Cars	0	384	95	196	2	675	35	809	8283	400	6	9527	2	1089	173	938	23	2202	31	247	9361	984	2	10623	23027
Heavy Vehicles	0	5	1	5	2	11	0	5	205	6	4	216	0	11	0	8	20	19	0	3	204	7	1	214	460
Heavy Vehicle %	0.00%	1.29%	1.04%	2.49%	50.00%	1.60%	0.00%	0.61%	2.42%	1.48%	40.00%	2.22%	0.00%	1.00%	0.00%	0.85%	46.51%	0.86%	0.00%	1.20%	2.13%	0.71%	33.33%	1.97%	1.96%

TMC 2362 - CSAH 116 @ Quinn St

0 0

Wednesday, May 24, 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	
7:15 AM	0	8	0	4	1	12	0	6	185	3	0	194	0	7	1	2	1	10	0	1	138	6	0	145	361
7:30 AM	0	6	0	4	0	10	1	6	162	3	0	172	0	3	3	3	1	9	0	5	207	18	0	230	421
7:45 AM	0	13	0	8	0	21	0	11	125	3	0	139	0	12	1	7	0	20	0	1	197	12	0	210	390
8:00 AM	0	6	2	2	1	10	1	6	103	2	0	112	0	5	0	14	0	19	0	2	130	10	1	142	283
Peak Hour Total	0	33	2	18	2	53	2	29	575	11	0	617	0	27	5	26	2	58	0	9	672	46	1	727	1455
PHF	0.000	0.635	0.250	0.563	0.500	0.631	0.500	0.659	0.777	0.917	0.000	0.795	0.000	0.563	0.417	0.464	0.500	0.725	0.000	0.450	0.812	0.639	0.250	0.790	0.864

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	6	3	7	0	16	1	20	229	11	0	261	0	33	13	27	2	73	0	6	203	28	0	237	587
4:45 PM	0	7	1	3	1	11	0	15	231	11	0	257	0	28	6	28	0	62	0	8	212	23	0	243	573
5:00 PM	0	1	4	1	0	6	1	6	217	25	0	249	0	37	8	26	0	71	1	5	237	38	0	281	607
5:15 PM	0	5	4	5	0	14	0	13	251	7	0	271	0	21	2	29	3	52	0	8	238	24	0	270	607
Peak Hour Total	0	19	12	16	1	47	2	54	928	54	0	1038	0	119	29	110	5	258	1	27	890	113	0	1031	2374
PHF	0.000	0.679	0.750	0.571	0.250	0.734	0.500	0.675	0.924	0.540	0.000	0.958	0.000	0.804	0.558	0.948	0.417	0.884	0.250	0.844	0.935	0.743	0.000	0.917	0.978

Total Vehicles On Leg				1515	
Vehicles Entering Intersection		686	Vehicles Exiting Intersection		829
Southbound					
Cars	196	95	384	0	2
Heavy	5	1	5	0	2
Total	201	96	389	0	4



Total Vehicles on Leg 20657	Vehicles Entering Intersection 10837	Eastbound	Cars	Heavy	Total	
			2	1	3	
			31	0	31	
			247	3	250	
	Vehicles Exiting Intersection 9820		9361	204	9565	
	984	7	991			

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 9743	Total Vehicles on Leg 20678
400	6	406			
8283	205	8488			
809	5	814			
35	0	35			
6	4	10	Vehicles Exiting Intersection 10935		



Cars	23	2	1089	173	938
Heavy	20	0	11	0	8
Total	43	2	1100	173	946
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
2221			1903		
Total Vehicles On Leg			4124		

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
05/24/2023	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	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	1	0	0
	3:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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	1	0	0	0	0	0	1	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	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	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	5:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
	6:30	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0
	6:45	0	0	0	0	0	0	0	0	12	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0
	7:00	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
	7:15	0	0	0	0	1	0	0	0	13	0	0	0	0	0	0	0	1	0	0	0	0	6	0	0
	7:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	7	0	0
	7:45	0	0	0	2	0	0	0	1	2	0	0	0	0	0	1	0	0	0	0	0	0	7	1	0
	8:00	0	2	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	5	0	0
	8:15	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0
	8:30	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	1	0	0	0	0	0	5	0	0
	8:45	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0
	9:00	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0
	9:15	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
	9:30	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0
	9:45	0	0	0	0	0	0	0	1	3	0	0	0	0	0	2	0	0	0	0	0	0	2	1	0
	10:00	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0
	10:15	0	0	0	0	0	0	0	0	2	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	3	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
	10:45	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	5	0	0
	11:00	0	0	0	0	0	0	0	1	3	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0
	11:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0
	11:30	0	1	0	0	0	0	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	4	0	0
	11:45	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362

Study Date : 06/15/2023

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 116

Number of Lanes : 2+

Total Approach Volume: 10,837

Westbound: CSAH 116

Number of Lanes : 2+

Total Approach Volume: 9,743

Minor Street Approaches

Northbound: Quinn St

Number of Lanes : 1

Total Approach Volume: 2,221

Southbound: Quinn St

Number of Lanes : 1

Total Approach Volume: 686

Warrant Summary (Urban Values Apply)

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

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

Required volumes reached for 8 hours, 8 are needed

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

Required volumes reached for 12 hours, 8 are needed

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

Required 1A volumes reached for 10 hours, 8 are needed

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

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

Number of hours (9) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (44) 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 2362

Study Date : 06/15/2023

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

8 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **600**

Veh/Hr Minor = **150**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	1031	+	1038	=	2069	258	47	Yes
15:30 - 16:30	959	+	984	=	1943	234	53	Yes
14:30 - 15:30	882	+	808	=	1690	190	45	Yes
17:30 - 18:30	809	+	801	=	1610	201	53	Yes
13:30 - 14:30	721	+	629	=	1350	164	37	Yes
18:30 - 19:30	633	+	582	=	1215	161	38	Yes
12:00 - 13:00	674	+	539	=	1213	157	34	Yes
19:30 - 20:30	492	+	454	=	946	174	22	Yes
07:15 - 08:15	727	+	617	=	1344	58	53	No
07:00 - 08:00	711	+	604	=	1315	51	58	No
13:15 - 14:15	657	+	640	=	1297	141	27	No
13:00 - 14:00	665	+	601	=	1266	143	26	No
07:30 - 08:30	694	+	549	=	1243	63	50	No
06:45 - 07:45	643	+	574	=	1217	35	48	No
11:45 - 12:45	654	+	551	=	1205	149	37	No
11:30 - 12:30	640	+	565	=	1205	148	41	No
11:15 - 12:15	615	+	558	=	1173	147	38	No
11:00 - 12:00	607	+	532	=	1139	146	34	No
10:45 - 11:45	596	+	499	=	1095	136	30	No
07:45 - 08:45	597	+	480	=	1077	65	51	No
09:00 - 10:00	594	+	471	=	1065	95	39	No
10:30 - 11:30	583	+	473	=	1056	126	25	No
09:15 - 10:15	561	+	485	=	1046	101	37	No
08:45 - 09:45	580	+	453	=	1033	91	46	No
09:30 - 10:30	561		468		1029	103	31	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362

Study Date : 06/15/2023

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

12 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **900**

Veh/Hr Minor = **75**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 116					Quinn St		
16:45 - 17:45	996	+	1023	=	2019	239	47	Yes
15:45 - 16:45	964	+	1018	=	1982	256	56	Yes
14:45 - 15:45	906	+	824	=	1730	201	38	Yes
17:45 - 18:45	781	+	702	=	1483	190	43	Yes
13:45 - 14:45	770	+	680	=	1450	173	53	Yes
12:45 - 13:45	655	+	579	=	1234	154	21	Yes
11:45 - 12:45	654	+	551	=	1205	149	37	Yes
18:45 - 19:45	598	+	581	=	1179	161	36	Yes
10:45 - 11:45	596	+	499	=	1095	136	30	Yes
08:45 - 09:45	580	+	453	=	1033	91	46	Yes
09:45 - 10:45	540	+	471	=	1011	99	28	Yes
19:45 - 20:45	485	+	415	=	900	155	24	Yes
07:15 - 08:15	727	+	617	=	1344	58	53	No
07:00 - 08:00	711	+	604	=	1315	51	58	No
07:30 - 08:30	694	+	549	=	1243	63	50	No
06:45 - 07:45	643	+	574	=	1217	35	48	No
07:45 - 08:45	597	+	480	=	1077	65	51	No
08:30 - 09:30	563	+	441	=	1004	71	45	No
06:30 - 07:30	536	+	467	=	1003	29	57	No
08:15 - 09:15	535	+	448	=	983	64	41	No
08:00 - 09:00	523	+	441	=	964	63	42	No
06:15 - 07:15	483	+	332	=	815	19	57	No
06:00 - 07:00	416	+	272	=	688	10	52	No
20:45 - 21:45	339	+	276	=	615	73	32	No
05:45 - 06:45	339		201		540	11	46	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362

Study Date : 06/15/2023

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

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

Site Data Required

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

Volume Requirements

Warrant 1A 1B
Veh/Hr Major = **480 720**

Veh/Hr Minor = **120 60**

Major Road CSAH 116

Minor Road Quinn St

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:30 - 17:30	1031	+	1038	=	2069	258	47	Yes
15:30 - 16:30	959	+	984	=	1943	234	53	Yes
14:30 - 15:30	882	+	808	=	1690	190	45	Yes
17:30 - 18:30	809	+	801	=	1610	201	53	Yes
13:30 - 14:30	721	+	629	=	1350	164	37	Yes
18:30 - 19:30	633	+	582	=	1215	161	38	Yes
11:30 - 12:30	640	+	565	=	1205	148	41	Yes
12:30 - 13:30	652	+	549	=	1201	161	27	Yes
10:30 - 11:30	583	+	473	=	1056	126	25	Yes
19:30 - 20:30	492	+	454	=	946	174	22	Yes
07:15 - 08:15	727	+	617	=	1344	58	53	No
07:00 - 08:00	711	+	604	=	1315	51	58	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:30 - 17:30	1031	+	1038	=	2069	258	47	Yes
15:30 - 16:30	959	+	984	=	1943	234	53	Yes
14:30 - 15:30	882	+	808	=	1690	190	45	Yes
17:30 - 18:30	809	+	801	=	1610	201	53	Yes
13:30 - 14:30	721	+	629	=	1350	164	37	Yes
07:30 - 08:30	694	+	549	=	1243	63	50	Yes
18:30 - 19:30	633	+	582	=	1215	161	38	Yes
11:30 - 12:30	640	+	565	=	1205	148	41	Yes
12:30 - 13:30	652	+	549	=	1201	161	27	Yes
10:30 - 11:30	583	+	473	=	1056	126	25	Yes
09:30 - 10:30	561	+	468	=	1029	103	31	Yes
08:30 - 09:30	563	+	441	=	1004	71	45	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362

Study Date : 06/15/2023

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.

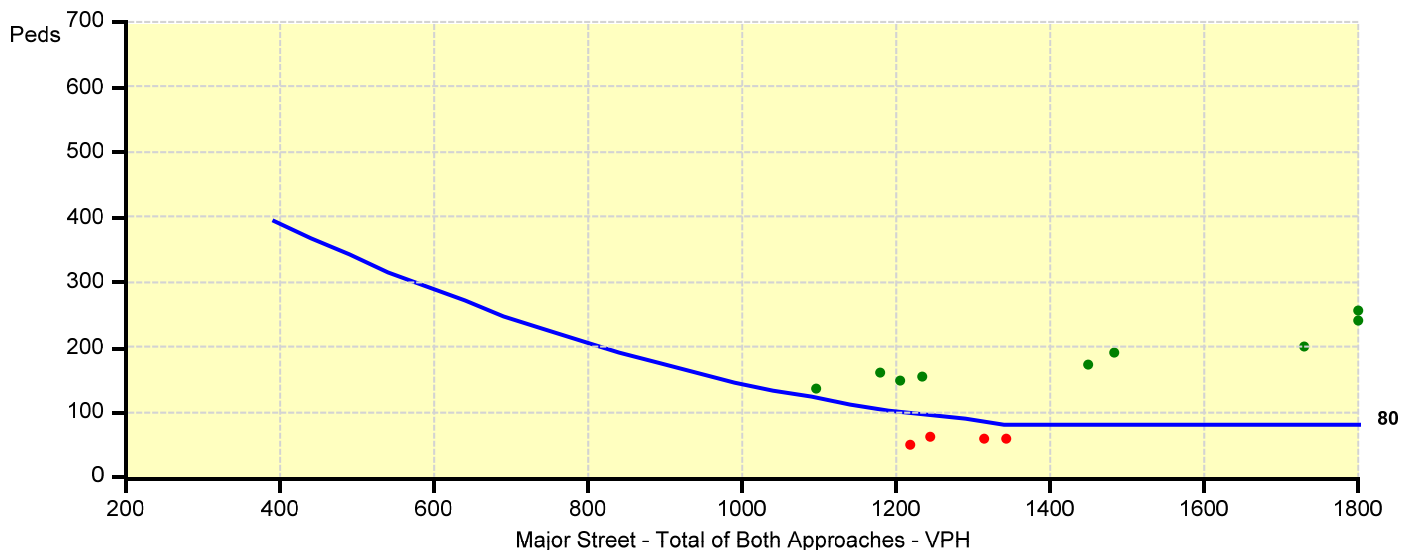
Summary

9 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 116				Total	Minor Road Quinn St		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:45 - 17:45	996	+	1023	=	2019	239	47	Yes
15:45 - 16:45	964	+	1018	=	1982	256	56	Yes
14:45 - 15:45	906	+	824	=	1730	201	38	Yes
17:45 - 18:45	781	+	702	=	1483	190	43	Yes
13:45 - 14:45	770	+	680	=	1450	173	53	Yes
12:45 - 13:45	655	+	579	=	1234	154	21	Yes
11:45 - 12:45	654	+	551	=	1205	149	37	Yes
18:45 - 19:45	598	+	581	=	1179	161	36	Yes
10:45 - 11:45	596	+	499	=	1095	136	30	Yes
07:15 - 08:15	727	+	617	=	1344	58	53	No
07:00 - 08:00	711	+	604	=	1315	51	58	No
07:30 - 08:30	694	+	549	=	1243	63	50	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362

Study Date : 06/15/2023

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.

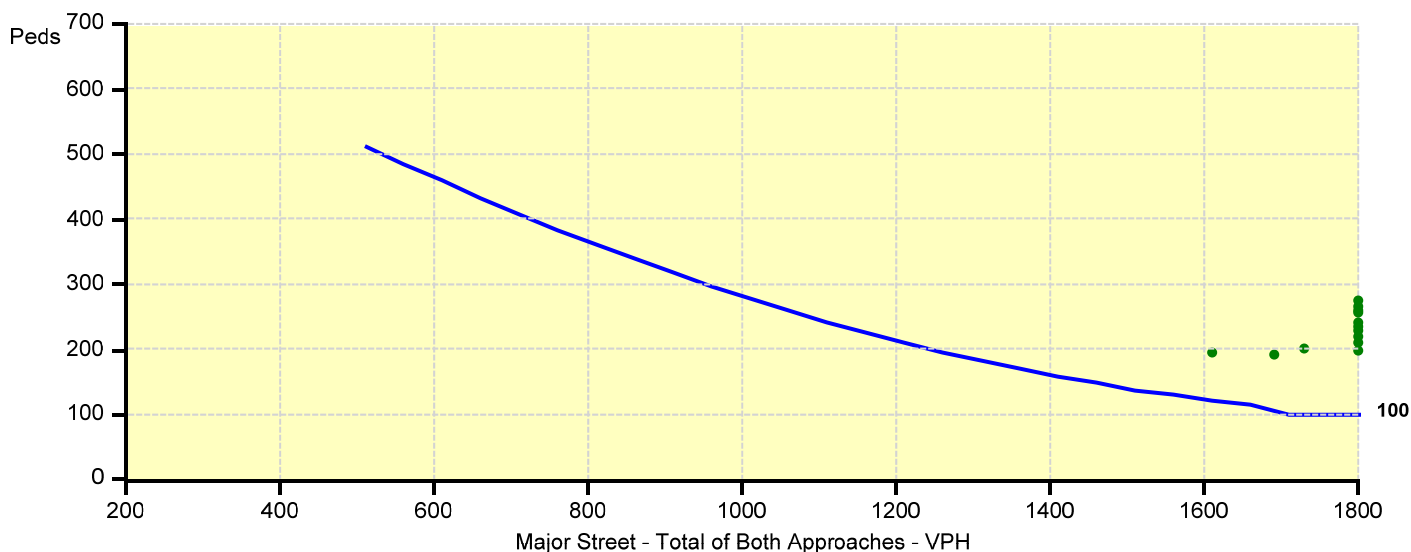
Summary

18 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 116				Total	Minor Road Quinn St		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	1031	+	1038	=	2069	258	47	Yes
16:15 - 17:15	988	+	1058	=	2046	273	43	Yes
16:45 - 17:45	996	+	1023	=	2019	239	47	Yes
16:00 - 17:00	942	+	1050	=	1992	264	52	Yes
15:45 - 16:45	964	+	1018	=	1982	256	56	Yes
17:00 - 18:00	990	+	987	=	1977	227	48	Yes
15:30 - 16:30	959	+	984	=	1943	234	53	Yes
15:15 - 16:15	946	+	911	=	1857	219	53	Yes
17:15 - 18:15	911	+	902	=	1813	210	50	Yes
15:00 - 16:00	945	+	861	=	1806	197	46	Yes
14:45 - 15:45	906	+	824	=	1730	201	38	Yes
14:30 - 15:30	882	+	808	=	1690	190	45	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362 A

Study Date : 06/15/2023

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 116

Number of Lanes : 2+

Total Approach Volume: 10,837

Westbound: CSAH 116

Number of Lanes : 2+

Total Approach Volume: 9,743

Minor Street Approaches

Northbound: Quinn St

Number of Lanes : 1

Total Approach Volume: 1,275

Southbound: Quinn St

Number of Lanes : 1

Total Approach Volume: 686

**NO RIGHT
TURNS**

Warrant Summary (Urban Values Apply)

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

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

Required volumes reached for 1 hours, 8 are needed

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

Required volumes reached for 9 hours, 8 are needed

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

Required 1A volumes reached for 3 hours, 8 are needed

Required 1B volumes reached for 12 hours, 8 are needed

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

Number of hours (6) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (23) 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 2362 A

Study Date : 06/15/2023

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 1 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **600**

Veh/Hr Minor = **150**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:15 - 17:15	988	+	1058	=	2046	161	43	Yes
16:00 - 17:00	942	+	1050	=	1992	145	52	No
15:45 - 16:45	964	+	1018	=	1982	139	56	No
15:30 - 16:30	959	+	984	=	1943	121	53	No
15:15 - 16:15	946	+	911	=	1857	116	53	No
17:15 - 18:15	911	+	902	=	1813	115	50	No
15:00 - 16:00	945	+	861	=	1806	106	46	No
14:45 - 15:45	906	+	824	=	1730	109	38	No
14:30 - 15:30	882	+	808	=	1690	106	45	No
14:15 - 15:15	881	+	729	=	1610	110	49	No
17:30 - 18:30	809	+	801	=	1610	121	53	No
14:00 - 15:00	810	+	710	=	1520	119	48	No
17:45 - 18:45	781	+	702	=	1483	108	43	No
13:45 - 14:45	770	+	680	=	1450	108	53	No
18:00 - 19:00	719	+	636	=	1355	104	43	No
13:30 - 14:30	721	+	629	=	1350	103	37	No
07:15 - 08:15	727	+	617	=	1344	32	53	No
07:00 - 08:00	711	+	604	=	1315	34	58	No
13:15 - 14:15	657	+	640	=	1297	83	27	No
18:15 - 19:15	658	+	610	=	1268	104	44	No
13:00 - 14:00	665	+	601	=	1266	79	26	No
07:30 - 08:30	694	+	549	=	1243	35	50	No
12:45 - 13:45	655	+	579	=	1234	86	21	No
06:45 - 07:45	643	+	574	=	1217	22	48	No
18:30 - 19:30	633		582		1215	98	38	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362 A

Study Date : 06/15/2023

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

9 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **900**

Veh/Hr Minor = **75**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:00 - 17:00	942	+	1050	=	1992	145	52	Yes
17:00 - 18:00	990	+	987	=	1977	132	48	Yes
15:00 - 16:00	945	+	861	=	1806	106	46	Yes
14:00 - 15:00	810	+	710	=	1520	119	48	Yes
18:00 - 19:00	719	+	636	=	1355	104	43	Yes
13:00 - 14:00	665	+	601	=	1266	79	26	Yes
12:00 - 13:00	674	+	539	=	1213	90	34	Yes
11:00 - 12:00	607	+	532	=	1139	79	34	Yes
19:00 - 20:00	531	+	536	=	1067	105	30	Yes
07:15 - 08:15	727	+	617	=	1344	32	53	No
07:00 - 08:00	711	+	604	=	1315	34	58	No
07:30 - 08:30	694	+	549	=	1243	35	50	No
06:45 - 07:45	643	+	574	=	1217	22	48	No
10:45 - 11:45	596	+	499	=	1095	74	30	No
07:45 - 08:45	597	+	480	=	1077	35	51	No
09:00 - 10:00	594	+	471	=	1065	63	39	No
10:30 - 11:30	583	+	473	=	1056	65	25	No
09:15 - 10:15	561	+	485	=	1046	62	37	No
08:45 - 09:45	580	+	453	=	1033	57	46	No
09:30 - 10:30	561	+	468	=	1029	63	31	No
10:15 - 11:15	577	+	449	=	1026	63	27	No
09:45 - 10:45	540	+	471	=	1011	60	28	No
08:30 - 09:30	563	+	441	=	1004	46	45	No
06:30 - 07:30	536	+	467	=	1003	19	57	No
10:00 - 11:00	535		468		1003	61	29	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362 A

Study Date : 06/15/2023

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 3 hours meet 1A minimums.
12 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Warrant 1A 1B
Veh/Hr Major = **480 720**

Veh/Hr Minor = **120 60**

Major Road CSAH 116						Minor Road Quinn St				
Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?		
16:30 - 17:30	1031	+	1038	=	2069	148	47	Yes		
15:30 - 16:30	959	+	984	=	1943	121	53	Yes		
17:30 - 18:30	809	+	801	=	1610	121	53	Yes		
15:15 - 16:15	946	+	911	=	1857	116	53	No		
15:00 - 16:00	945	+	861	=	1806	106	46	No		
14:45 - 15:45	906	+	824	=	1730	109	38	No		
14:30 - 15:30	882	+	808	=	1690	106	45	No		
14:15 - 15:15	881	+	729	=	1610	110	49	No		
14:00 - 15:00	810	+	710	=	1520	119	48	No		
13:45 - 14:45	770	+	680	=	1450	108	53	No		
13:30 - 14:30	721	+	629	=	1350	103	37	No		
07:15 - 08:15	727		617		1344	32	53	No		

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?	
16:00 - 17:00	942	+	1050	=	1992	145	52	Yes	
17:00 - 18:00	990	+	987	=	1977	132	48	Yes	
15:00 - 16:00	945	+	861	=	1806	106	46	Yes	
14:00 - 15:00	810	+	710	=	1520	119	48	Yes	
18:00 - 19:00	719	+	636	=	1355	104	43	Yes	
13:00 - 14:00	665	+	601	=	1266	79	26	Yes	
12:00 - 13:00	674	+	539	=	1213	90	34	Yes	
11:00 - 12:00	607	+	532	=	1139	79	34	Yes	
19:00 - 20:00	531	+	536	=	1067	105	30	Yes	
09:00 - 10:00	594	+	471	=	1065	63	39	Yes	
10:00 - 11:00	535	+	468	=	1003	61	29	Yes	
20:00 - 21:00	485		393		878	66	26	Yes	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362 A

Study Date : 06/15/2023

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.

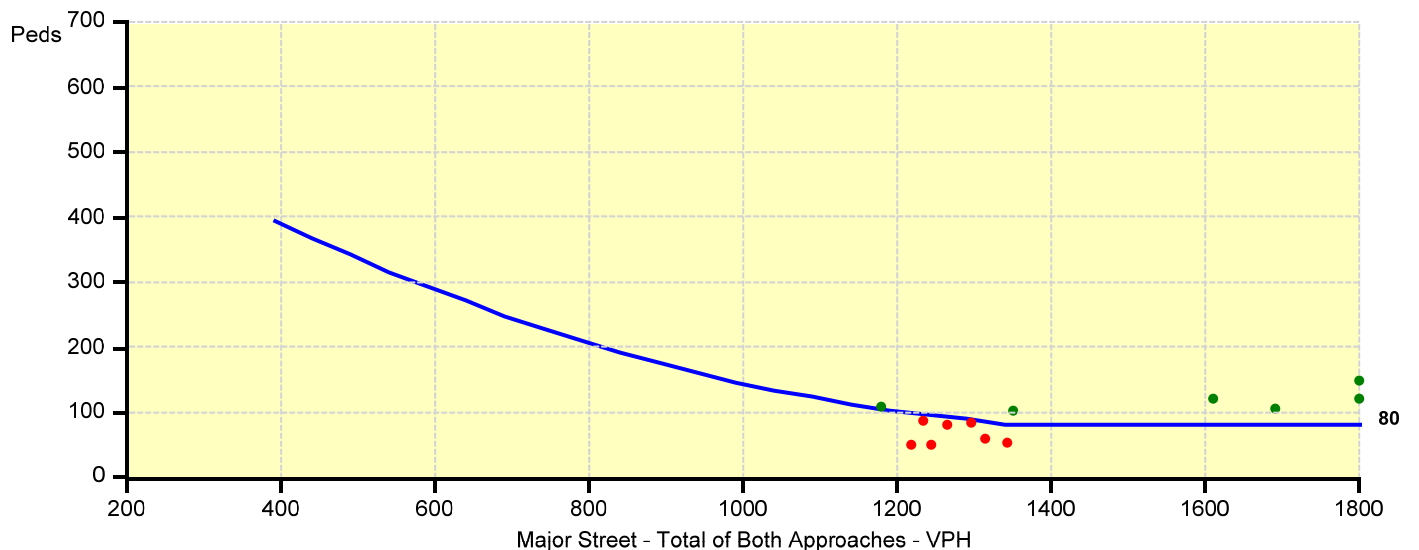
Summary

6 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 116				Total	Minor Road Quinn St		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	1031	+	1038	=	2069	148	47	Yes
15:30 - 16:30	959	+	984	=	1943	121	53	Yes
14:30 - 15:30	882	+	808	=	1690	106	45	Yes
17:30 - 18:30	809	+	801	=	1610	121	53	Yes
13:30 - 14:30	721	+	629	=	1350	103	37	Yes
18:45 - 19:45	598	+	581	=	1179	107	36	Yes
07:15 - 08:15	727	+	617	=	1344	32	53	No
07:00 - 08:00	711	+	604	=	1315	34	58	No
13:15 - 14:15	657	+	640	=	1297	83	27	No
13:00 - 14:00	665	+	601	=	1266	79	26	No
07:30 - 08:30	694	+	549	=	1243	35	50	No
12:45 - 13:45	655	+	579	=	1234	86	21	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2362 A

Study Date : 06/15/2023

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

12 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 116				Total	Minor Road Quinn St		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	1031	+	1038	=	2069	148	47	Yes
16:15 - 17:15	988	+	1058	=	2046	161	43	Yes
16:45 - 17:45	996	+	1023	=	2019	135	47	Yes
16:00 - 17:00	942	+	1050	=	1992	145	52	Yes
15:45 - 16:45	964	+	1018	=	1982	139	56	Yes
17:00 - 18:00	990	+	987	=	1977	132	48	Yes
15:30 - 16:30	959	+	984	=	1943	121	53	Yes
15:15 - 16:15	946	+	911	=	1857	116	53	Yes
17:15 - 18:15	911	+	902	=	1813	115	50	Yes
15:00 - 16:00	945	+	861	=	1806	106	46	Yes
14:45 - 15:45	906	+	824	=	1730	109	38	Yes
17:30 - 18:30	809		801		1610	121	53	Yes

