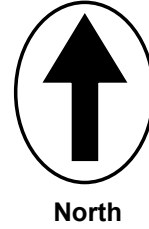


Date : 09/21/22

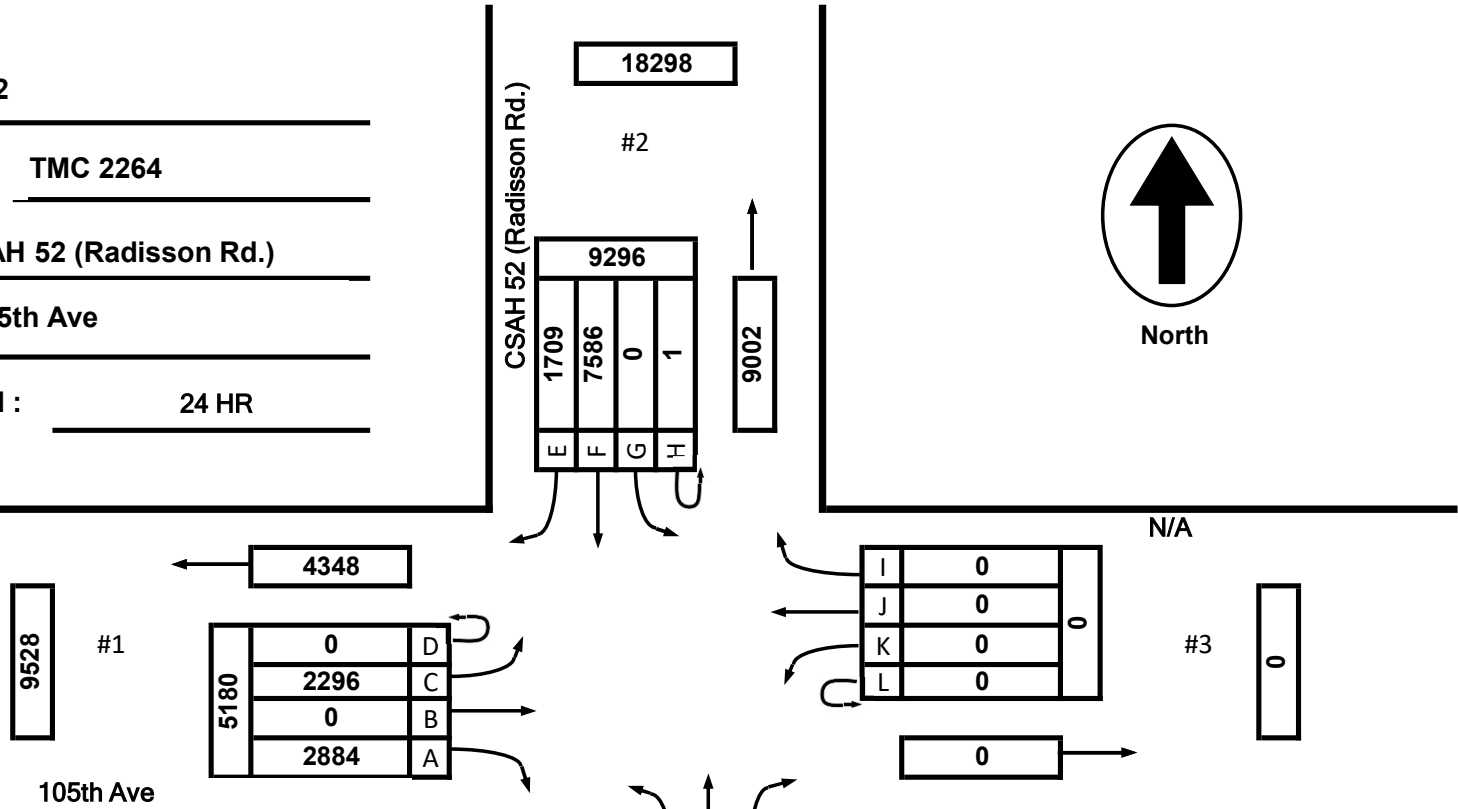
Count Number : TMC 2264

Location : CSAH 52 (Radisson Rd.)
@ 105th Ave

Collection Period : 24 HR



North



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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study

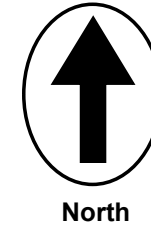
Date : 09/21/22

Count Number : TMC 2264

Location : CSAH 52 (Radisson Rd.)
@ 105th Ave

Collection Period : 7:15 AM - 8:15 AM

AM PEAK



N/A

#3

1547

#2

CSAH 52 (Radisson Rd.)

1242			
E	F	G	H
161	1081	0	0

305

518

#1

291

227	0	D
	78	C
	0	B
	149	A

I	0	0
J	0	
K	0	
L	0	

105th Ave

0

EXISTING LANES OF APPROACH

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

CSAH 52 (Radisson Rd.)

1230

P	O	N	M
0	130	227	0
357			

#4

1587

Anoka County Highway Department

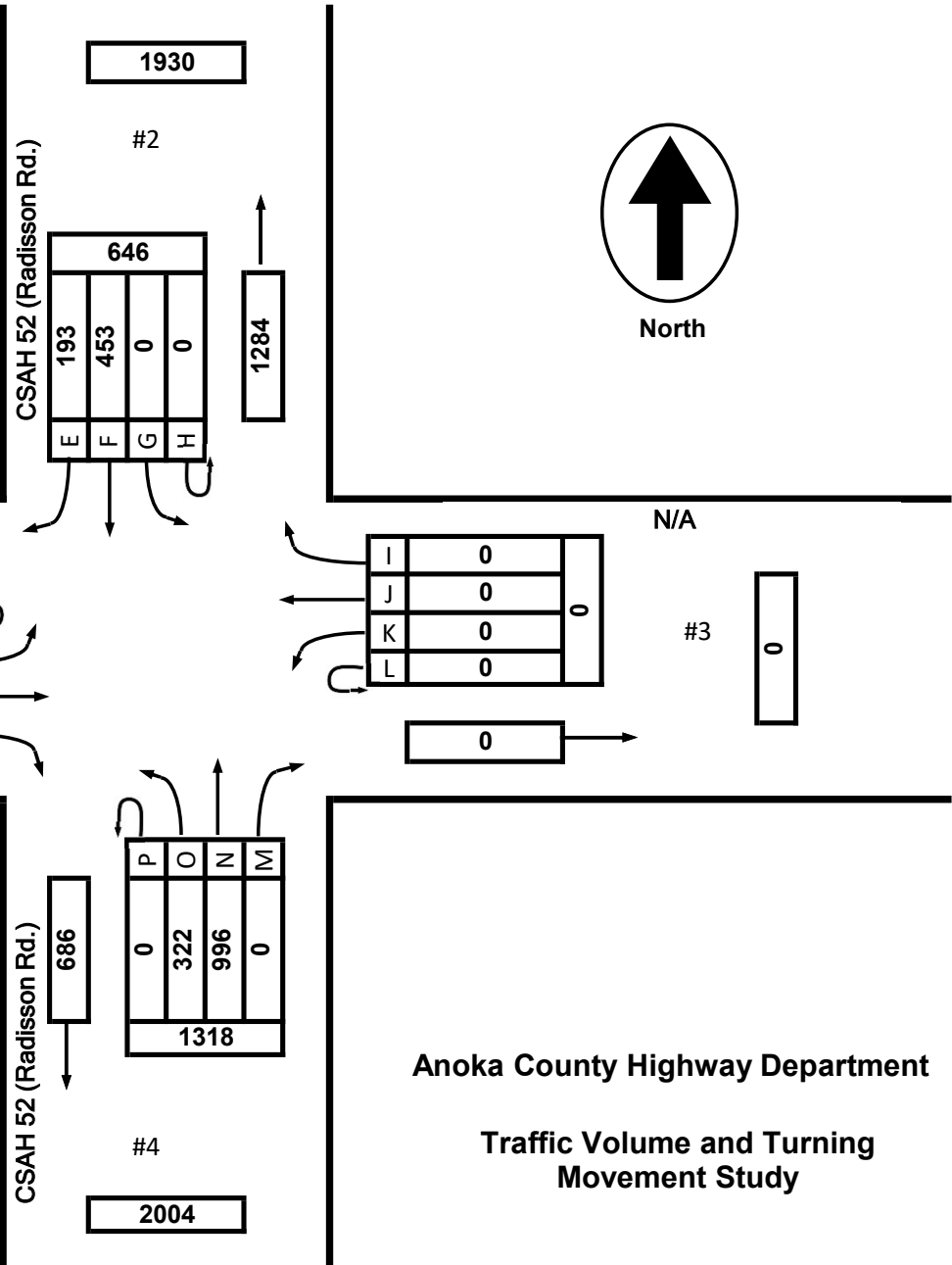
Traffic Volume and Turning Movement Study

Date : 09/21/22

Count Number : TMC 2264

Location : CSAH 52 (Radisson Rd.)
@ 105th Ave

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



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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study

TMC 2264
Blaine Minnesota
Wednesday, September 21, 2022

Time	Southbound CSAH 52 (Radisson Rd.)						Westbound 0						Northbound CSAH 52 (Radisson Rd.)						Eastbound 105th Ave.						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	20	2	0	22	0	0	0	0	0	0	0	4	12	0	0	16	0	5	0	2	0	7	45
12:15 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	3	11	0	0	14	0	0	0	2	0	2	20
12:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	3	6	0	0	9	0	2	0	3	0	5	15
12:45 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	2	3	0	0	5	0	1	0	7	0	8	18
Hourly Total	0	0	30	2	0	32	0	0	0	0	0	0	0	12	32	0	0	44	0	8	0	14	0	22	98
1:00 AM	0	0	1	1	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	0	4	7
1:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	1	0	1	7
1:30 AM	0	0	5	1	0	6	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	1	0	1	10
1:45 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	2	3	0	0	5	0	1	0	2	0	3	11
Hourly Total	0	0	10	2	0	12	0	0	0	0	0	0	0	4	10	0	0	14	0	3	0	6	0	9	35
2:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	1	0	1	7
2:15 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5
2:30 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	2	0	2	11
2:45 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	0	2	7
Hourly Total	0	0	13	0	0	13	0	0	0	0	0	0	0	0	12	0	0	12	0	1	0	4	0	5	30
3:00 AM	0	0	5	1	0	6	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	8
3:15 AM	0	0	5	1	0	6	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	3	0	3	12
3:30 AM	0	0	17	0	0	17	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	7	0	7	28
3:45 AM	0	0	16	0	0	16	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	4	0	4	26
Hourly Total	0	0	43	2	0	45	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	15	0	15	74
4:00 AM	0	0	13	1	0	14	0	0	0	0	0	0	0	3	2	0	0	5	0	1	0	3	0	4	23
4:15 AM	0	0	33	0	0	33	0	0	0	0	0	0	0	3	6	0	0	9	0	3	0	3	0	6	48
4:30 AM	0	0	43	0	0	43	0	0	0	0	0	0	0	4	7	0	0	11	0	1	0	11	0	12	66
4:45 AM	0	0	46	0	0	46	0	0	0	0	0	0	0	7	11	0	0	18	0	0	0	6	0	6	70
Hourly Total	0	0	135	1	0	136	0	0	0	0	0	0	0	17	26	0	0	43	0	5	0	23	0	28	207
5:00 AM	0	0	56	0	0	56	0	0	0	0	0	0	0	5	9	0	0	14	0	0	0	3	0	3	73
5:15 AM	0	0	86	4	0	90	0	0	0	0	0	0	0	10	11	0	0	21	0	0	0	2	0	2	113
5:30 AM	0	0	104	6	0	110	0	0	0	0	0	0	0	13	16	0	0	29	0	7	0	12	0	19	158
5:45 AM	0	0	107	8	0	115	0	0	0	0	0	0	0	7	21	0	0	28	0	4	0	25	0	29	172
Hourly Total	0	0	353	18	0	371	0	0	0	0	0	0	0	35	57	0	0	92	0	11	0	42	0	53	516
6:00 AM	0	0	152	11	0	163	0	0	0	0	0	0	0	11	21	0	0	32	0	1	0	22	0	23	218
6:15 AM	0	0	157	10	0	167	0	0	0	0	0	0	0	18	20	0	0	38	0	7	0	12	0	19	224
6:30 AM	0	0	180	19	0	199	0	0	0	0	0	0	0	16	29	0	0	45	0	6	0	31	0	37	281
6:45 AM	0	0	225	33	0	258	0	0	0	0	0	0	0	22	35	0	0	57	0	13	0	19	0	32	347
Hourly Total	0	0	714	73	0	787	0	0	0	0	0	0	0	67	105	0	0	172	0	27	0	84	0	111	1070
7:00 AM	0	0	200	24	0	224	0	0	0	0	0	0	0	18	50	0	0	68	0	16	0	28	0	44	336
7:15 AM	0	0	283	34	0	317	0	0	0	0	0	0	0	23	56	0	0	79	0	13	0	35	0	48	444
7:30 AM	0	0	260	43	0	303	0	0	0	0	0	0	0	31	54	0	0	85	0	19	0	29	0	48	436
7:45 AM	0	0	309	58	0	367	0	0	0	0	0	0	0	44	62	0	0	106	0	22	0	33	0	55	528
Hourly Total	0	0	1052	159	0	1211	0	0	0	0	0	0	0	116	222	0	0	338	0	70	0	125	0	195	1744

TMC 2264
Blaine Minnesota
Wednesday, September 21, 2022

Time	Southbound CSAH 52 (Radisson Rd.)						Westbound 0						Northbound CSAH 52 (Radisson Rd.)						Eastbound 105th Ave.						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	229	26	0	255	0	0	0	0	0	0	0	32	55	0	0	87	0	24	0	52	0	76	418
8:15 AM	0	0	176	17	0	193	0	0	0	0	0	0	0	23	54	0	0	77	0	12	0	37	0	49	319
8:30 AM	0	0	192	26	0	218	0	0	0	0	0	0	0	32	64	0	0	96	0	20	0	28	0	48	362
8:45 AM	0	0	124	26	0	150	0	0	0	0	0	0	0	44	71	0	0	115	0	21	0	34	0	55	320
Hourly Total	0	0	721	95	0	816	0	0	0	0	0	0	0	131	244	0	0	375	0	77	0	151	0	228	1419
9:00 AM	0	0	131	30	0	161	0	0	0	0	0	0	0	25	47	0	0	72	0	31	0	51	0	82	315
9:15 AM	0	0	118	31	0	149	0	0	0	0	0	0	0	39	55	0	0	94	0	27	0	42	1	69	312
9:30 AM	0	0	122	30	0	152	0	0	0	0	0	0	0	31	56	0	0	87	0	15	0	35	0	50	289
9:45 AM	0	0	99	30	0	129	0	0	0	0	0	0	0	31	61	0	0	92	0	14	0	23	0	37	258
Hourly Total	0	0	470	121	0	591	0	0	0	0	0	0	0	126	219	0	0	345	0	87	0	151	1	238	1174
10:00 AM	0	0	94	15	0	109	0	0	0	0	0	0	0	25	58	0	0	83	0	18	0	30	0	48	240
10:15 AM	0	0	99	19	0	118	0	0	0	0	0	0	0	26	41	0	0	67	1	16	0	19	0	36	221
10:30 AM	0	0	83	20	0	103	0	0	0	0	0	0	0	37	58	0	0	95	0	21	0	27	2	48	246
10:45 AM	0	0	102	29	0	131	0	0	0	0	0	0	0	36	58	0	0	94	0	18	0	35	0	53	278
Hourly Total	0	0	378	83	0	461	0	0	0	0	0	0	0	124	215	0	0	339	1	73	0	111	2	185	985
11:00 AM	0	0	91	19	0	110	0	0	0	0	0	0	0	48	60	0	0	108	0	15	0	38	1	53	271
11:15 AM	0	0	85	33	0	118	0	0	0	0	0	0	0	32	59	0	0	91	0	30	0	35	0	65	274
11:30 AM	0	0	93	33	0	126	0	0	0	0	0	0	0	59	85	0	0	144	0	27	0	34	0	61	331
11:45 AM	0	0	88	31	0	119	0	0	0	0	0	0	0	38	60	0	0	98	0	27	0	48	0	75	292
Hourly Total	0	0	357	116	0	473	0	0	0	0	0	0	0	177	264	0	0	441	0	99	0	155	1	254	1168
12:00 PM	0	0	101	35	0	136	0	0	0	0	0	0	0	49	92	0	0	141	0	22	0	50	0	72	349
12:15 PM	0	0	104	21	0	125	0	0	0	0	0	0	0	45	77	0	0	122	0	22	0	55	0	77	324
12:30 PM	0	0	97	26	0	123	0	0	0	0	0	0	0	45	76	0	0	121	0	36	0	52	0	88	332
12:45 PM	0	0	95	20	0	115	0	0	0	0	0	0	0	44	100	0	0	144	0	35	0	48	0	83	342
Hourly Total	0	0	397	102	0	499	0	0	0	0	0	0	0	183	345	0	0	528	0	115	0	205	0	320	1347
1:00 PM	0	0	102	18	0	120	0	0	0	0	0	0	0	38	58	0	0	96	0	28	0	45	0	73	289
1:15 PM	0	0	74	22	0	96	0	0	0	0	0	0	0	32	80	0	0	112	0	41	0	42	0	83	291
1:30 PM	0	0	71	13	0	84	0	0	0	0	0	0	0	40	90	0	0	130	0	38	0	41	0	79	293
1:45 PM	0	0	90	22	0	112	0	0	0	0	0	0	0	50	95	0	0	145	0	25	0	44	0	69	326
Hourly Total	0	0	337	75	0	412	0	0	0	0	0	0	0	160	323	0	0	483	0	132	0	172	0	304	1199
2:00 PM	0	0	83	22	0	105	0	0	0	0	0	0	0	33	108	0	0	141	0	36	0	43	0	79	325
2:15 PM	0	0	74	19	0	93	0	0	0	0	0	0	0	27	124	0	0	151	0	33	0	35	0	68	312
2:30 PM	0	0	95	23	0	118	0	0	0	0	0	0	0	46	130	0	0	176	0	27	0	33	0	60	354
2:45 PM	0	0	88	17	0	105	0	0	0	0	0	0	0	40	128	0	0	168	0	39	0	42	0	81	354
Hourly Total	0	0	340	81	0	421	0	0	0	0	0	0	0	146	490	0	0	636	0	135	0	153	0	288	1345
3:00 PM	0	0	82	20	0	102	0	0	0	0	0	0	0	43	147	0	0	190	0	71	0	53	0	124	416
3:15 PM	0	0	104	34	0	138	0	0	0	0	0	0	0	57	185	0	0	242	0	44	0	43	0	87	467
3:30 PM	0	0	93	42	0	135	0	0	0	0	0	0	0	60	181	0	0	241	0	61	0	50	0	111	487
3:45 PM	0	0	96	44	0	140	0	0	0	0	0	0	0	79	254	0	0	333	0	58	0	42	0	100	573
Hourly Total	0	0	375	140	0	515	0	0	0	0	0	0	0	239	767	0	0	1006	0	234	0	188	0	422	1943

TMC 2264
Blaine Minnesota
Wednesday, September 21, 2022

Time	Southbound CSAH 52 (Radisson Rd.)						Westbound 0						Northbound CSAH 52 (Radisson Rd.)						Eastbound 105th Ave.						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	112	36	0	148	0	0	0	0	0	0	0	72	255	0	0	327	0	73	0	64	0	137	612
4:15 PM	0	0	113	37	0	150	0	0	0	0	0	0	0	60	262	0	0	322	0	68	0	57	0	125	597
4:30 PM	0	0	120	41	0	161	0	0	0	0	0	0	0	57	250	0	0	307	0	82	0	58	0	140	608
4:45 PM	0	0	103	58	0	161	0	0	0	0	0	0	0	71	253	0	0	324	1	77	0	56	0	134	619
Hourly Total	0	0	448	172	0	620	0	0	0	0	0	0	0	260	1020	0	0	1280	1	300	0	235	0	536	2436
5:00 PM	0	0	127	45	0	172	0	0	0	0	0	0	0	104	251	0	0	355	0	65	0	59	1	124	651
5:15 PM	0	0	103	49	0	152	0	0	0	0	0	0	0	90	242	0	0	332	0	64	0	60	1	124	608
5:30 PM	0	0	76	30	0	106	0	0	0	0	0	0	0	72	205	0	0	277	0	71	0	75	0	146	529
5:45 PM	0	0	113	51	0	164	0	0	0	0	0	0	0	71	185	0	0	256	0	60	0	60	0	120	540
Hourly Total	0	0	419	175	0	594	0	0	0	0	0	0	0	337	883	0	0	1220	0	260	0	254	2	514	2328
6:00 PM	0	0	118	42	0	160	0	0	0	0	0	0	0	78	164	0	0	242	0	56	0	55	0	111	513
6:15 PM	0	0	76	40	0	116	0	0	0	0	0	0	0	69	164	0	0	233	0	65	0	81	0	146	495
6:30 PM	0	0	104	31	0	135	0	0	0	0	0	0	0	43	115	0	0	158	0	70	0	69	0	139	432
6:45 PM	0	0	60	25	0	85	0	0	0	0	0	0	0	32	84	0	0	116	0	38	0	49	0	87	288
Hourly Total	0	0	358	138	0	496	0	0	0	0	0	0	0	222	527	0	0	749	0	229	0	254	0	483	1728
7:00 PM	0	0	53	20	0	73	0	0	0	0	0	0	0	44	84	0	0	128	0	61	0	56	0	117	318
7:15 PM	0	0	81	30	0	111	0	0	0	0	0	0	0	38	92	0	0	130	0	55	0	61	1	116	357
7:30 PM	0	0	65	19	0	84	0	0	0	0	0	0	0	33	98	0	0	131	0	53	0	63	0	116	331
7:45 PM	0	0	64	21	0	85	0	0	0	0	0	0	0	30	90	0	0	120	0	28	0	37	0	65	270
Hourly Total	0	0	263	90	0	353	0	0	0	0	0	0	0	145	364	0	0	509	0	197	0	217	1	414	1276
8:00 PM	0	0	55	11	0	66	0	0	0	0	0	0	0	20	56	0	0	76	0	29	0	30	0	59	201
8:15 PM	1	0	40	8	0	49	0	0	0	0	0	0	0	15	66	0	0	81	0	30	0	31	0	61	191
8:30 PM	0	0	29	10	0	39	0	0	0	0	0	0	0	20	65	0	0	85	0	38	0	44	0	82	206
8:45 PM	0	0	35	6	0	41	0	0	0	0	0	0	0	12	47	0	0	59	0	20	0	44	0	64	164
Hourly Total	1	0	159	35	0	195	0	0	0	0	0	0	0	67	234	0	0	301	0	117	0	149	0	266	762
9:00 PM	0	0	37	5	0	42	0	0	0	0	0	0	0	15	47	0	0	62	0	22	0	23	0	45	149
9:15 PM	0	0	31	10	0	41	0	0	0	0	0	0	0	20	71	0	0	91	0	20	0	29	0	49	181
9:30 PM	0	0	39	5	0	44	0	0	0	0	0	0	0	9	51	0	0	60	0	17	0	28	0	45	149
9:45 PM	0	0	23	2	0	25	0	0	0	0	0	0	0	4	30	0	0	34	0	8	0	16	0	24	83
Hourly Total	0	0	130	22	0	152	0	0	0	0	0	0	0	48	199	0	0	247	0	67	0	96	0	163	562
10:00 PM	0	0	24	2	0	26	0	0	0	0	0	0	0	6	23	0	0	29	0	4	0	11	0	15	70
10:15 PM	0	0	9	1	0	10	0	0	0	0	0	0	0	3	23	0	0	26	0	8	0	17	0	25	61
10:30 PM	0	0	10	1	0	11	0	0	0	0	0	0	0	2	18	0	0	20	2	12	0	17	0	31	62
10:45 PM	0	0	9	0	0	9	0	0	0	0	0	0	0	4	17	0	0	21	0	9	0	17	0	26	56
Hourly Total	0	0	52	4	0	56	0	0	0	0	0	0	0	15	81	0	0	96	2	33	0	62	0	97	249
11:00 PM	0	0	11	1	0	12	0	0	0	0	0	0	0	2	19	0	0	21	0	6	0	7	0	13	46
11:15 PM	0	0	9	0	0	9	0	0	0	0	0	0	0	3	11	0	0	14	0	3	0	7	0	10	33
11:30 PM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	15	0	0	15	0	5	0	2	0	7	28
11:45 PM	0	0	6	2	0	8	0	0	0	0	0	0	0	3	7	0	0	10	0	2	0	2	0	4	22
Hourly Total	0	0	32	3	0	35	0	0	0	0	0	0	0	8	52	0	0	60	0	16	0	18	0	34	129
DAILY TOTAL	1	0	7586	1709	0	9296	0	0	0	0	0	0	0	2639	6705	0	0	9344	4	2296	0	2884	7	5184	23824
Cars	1	0	7301	1652	0	8954	0	0	0	0	0	0	0	2487	6496	0	0	8983	4	2263	0	2741	5	5008	22945
Heavy Vehicles	0	0	285	57	0	342	0	0	0	0	0	0	0	152	209	0	0	361	0	33	0	143	2	176	879
Heavy Vehicle %	0.00%	0.00%	3.76%	3.34%	0.00%	3.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.76%	3.12%	0.00%	0.00%	3.86%	0.00%	1.44%	0.00%	4.96%	28.57%	3.40%	3.69%

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2264

Study Date : 11/18/2022

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 52

Number of Lanes : 2+

Total Approach Volume: 9,344

Southbound: CSAH 52

Number of Lanes :2+

Total Approach Volume: 9,296

Minor Street Approaches

Eastbound: 105th Ave.

Number of Lanes :2+

Total Approach Volume: 5,184

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 15 hours, 8 are needed

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

Required volumes reached for 15 hours, 8 are needed

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

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

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

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

Number of hours (15) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour..... Satisfied

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

Number of one hour periods (57) 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 2264

Study Date : 11/18/2022

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

15 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**

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **420**
 Veh/Hr Minor = **140**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 52					105th Ave.		
16:30 - 17:30	1318	+	646	=	1964	522	0	Yes
15:30 - 16:30	1223	+	573	=	1796	473	0	Yes
17:30 - 18:30	1008	+	546	=	1554	523	0	Yes
07:30 - 08:30	355	+	1118	=	1473	228	0	Yes
06:30 - 07:30	249	+	998	=	1247	161	0	Yes
14:30 - 15:30	776	+	463	=	1239	352	0	Yes
08:30 - 09:30	377	+	678	=	1055	254	0	Yes
11:30 - 12:30	505	+	506	=	1011	285	0	Yes
13:30 - 14:30	567	+	394	=	961	295	0	Yes
18:30 - 19:30	532	+	404	=	936	459	0	Yes
12:30 - 13:30	473	+	454	=	927	327	0	Yes
10:30 - 11:30	388	+	462	=	850	219	0	Yes
09:30 - 10:30	329	+	508	=	837	171	0	Yes
19:30 - 20:30	408	+	284	=	692	301	0	Yes
20:30 - 21:30	297	+	163	=	460	240	0	Yes
06:15 - 07:15	208	+	848	=	1056	132	0	No
06:00 - 07:00	172	+	787	=	959	111	0	No
05:45 - 06:45	143	+	644	=	787	108	0	No
05:30 - 06:30	127	+	555	=	682	90	0	No
05:15 - 06:15	110	+	478	=	588	73	0	No
05:00 - 06:00	92	+	371	=	463	53	0	No
04:45 - 05:45	82	+	302	=	384	30	0	No
04:30 - 05:30	64	+	235	=	299	23	0	No
21:30 - 22:30	149	+	105	=	254	109	0	No
04:15 - 05:15	52		178		230	27	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2264

Study Date : 11/18/2022

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

15 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**

Volume Requirements

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

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 52					105th Ave.		
16:30 - 17:30	1318	+	646	=	1964	522	0	Yes
15:30 - 16:30	1223	+	573	=	1796	473	0	Yes
17:30 - 18:30	1008	+	546	=	1554	523	0	Yes
07:30 - 08:30	355	+	1118	=	1473	228	0	Yes
06:30 - 07:30	249	+	998	=	1247	161	0	Yes
14:30 - 15:30	776	+	463	=	1239	352	0	Yes
08:30 - 09:30	377	+	678	=	1055	254	0	Yes
11:30 - 12:30	505	+	506	=	1011	285	0	Yes
13:30 - 14:30	567	+	394	=	961	295	0	Yes
18:30 - 19:30	532	+	404	=	936	459	0	Yes
12:30 - 13:30	473	+	454	=	927	327	0	Yes
10:30 - 11:30	388	+	462	=	850	219	0	Yes
09:30 - 10:30	329	+	508	=	837	171	0	Yes
19:30 - 20:30	408	+	284	=	692	301	0	Yes
05:30 - 06:30	127	+	555	=	682	90	0	Yes
05:15 - 06:15	110	+	478	=	588	73	0	No
05:00 - 06:00	92	+	371	=	463	53	0	No
20:30 - 21:30	297	+	163	=	460	240	0	No
20:45 - 21:45	272	+	168	=	440	203	0	No
21:00 - 22:00	247	+	152	=	399	163	0	No
04:45 - 05:45	82	+	302	=	384	30	0	No
21:15 - 22:15	214	+	136	=	350	133	0	No
04:30 - 05:30	64	+	235	=	299	23	0	No
21:30 - 22:30	149	+	105	=	254	109	0	No
04:15 - 05:15	52		178		230	27	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2264

Study Date : 11/18/2022

Warrant 1C Combination of Warrants

Description

Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are both met to 80% of their stated values.

Summary

16 hours meet 1A minimums.
15 hours meet 1B 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**

Volume Requirements

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

Veh/Hr Minor = **112 56**

Major Road

CSAH 52

Minor Road

105th Ave.

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:15 - 17:15	1308	+	644	=	1952	523	0	Yes
15:15 - 16:15	1143	+	561	=	1704	435	0	Yes
17:15 - 18:15	1107	+	582	=	1689	501	0	Yes
07:15 - 08:15	357	+	1242	=	1599	227	0	Yes
14:15 - 15:15	685	+	418	=	1103	333	0	Yes
08:15 - 09:15	360	+	722	=	1082	234	0	Yes
06:15 - 07:15	208	+	848	=	1056	132	0	Yes
18:15 - 19:15	635	+	409	=	1044	489	0	Yes
11:15 - 12:15	474	+	499	=	973	273	0	Yes
12:15 - 13:15	483	+	483	=	966	321	0	Yes
13:15 - 14:15	528	+	397	=	925	310	0	Yes
09:15 - 10:15	356	+	539	=	895	204	0	Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:15 - 17:15	1308	+	644	=	1952	523	0	Yes
15:15 - 16:15	1143	+	561	=	1704	435	0	Yes
17:15 - 18:15	1107	+	582	=	1689	501	0	Yes
07:15 - 08:15	357	+	1242	=	1599	227	0	Yes
14:15 - 15:15	685	+	418	=	1103	333	0	Yes
08:15 - 09:15	360	+	722	=	1082	234	0	Yes
06:15 - 07:15	208	+	848	=	1056	132	0	Yes
18:15 - 19:15	635	+	409	=	1044	489	0	Yes
11:15 - 12:15	474	+	499	=	973	273	0	Yes
12:15 - 13:15	483	+	483	=	966	321	0	Yes
13:15 - 14:15	528	+	397	=	925	310	0	Yes
09:15 - 10:15	356	+	539	=	895	204	0	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2264

Study Date : 11/18/2022

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.

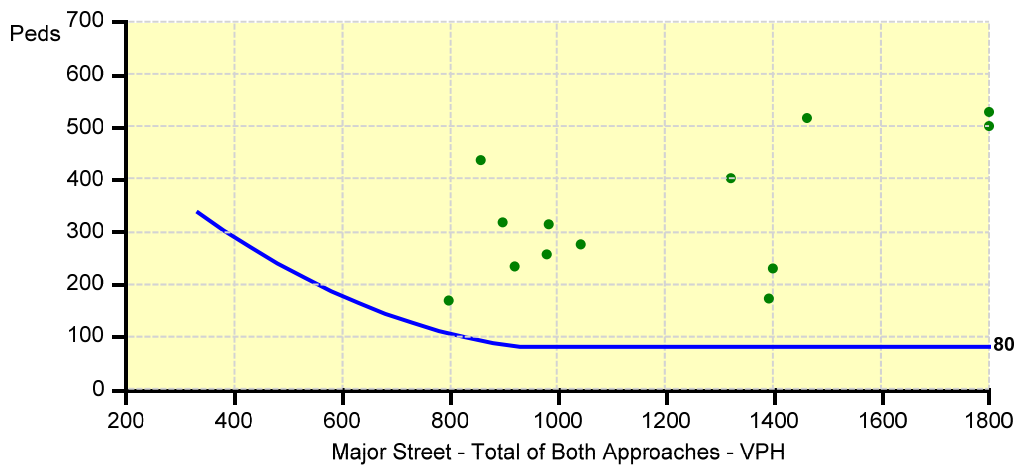
Summary

15 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 52				=	Total	Minor Road 105th Ave.		Met?
	Major NB	+	Major SB				Minor EB	Minor WB	
15:45 - 16:45	1289	+	599	=	1888	502	0	Yes	
16:45 - 17:45	1288	+	591	=	1879	528	0	Yes	
17:45 - 18:45	889	+	575	=	1464	516	0	Yes	
07:45 - 08:45	366	+	1033	=	1399	228	0	Yes	
06:45 - 07:45	289	+	1102	=	1391	172	0	Yes	
14:45 - 15:45	841	+	480	=	1321	403	0	Yes	
13:45 - 14:45	613	+	428	=	1041	276	0	Yes	
11:45 - 12:45	482	+	503	=	985	312	0	Yes	
08:45 - 09:45	368	+	612	=	980	256	0	Yes	
10:45 - 11:45	437	+	485	=	922	232	0	Yes	
12:45 - 13:45	482	+	415	=	897	318	0	Yes	



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2264

Study Date : 11/18/2022

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

50 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 52				Total	Minor Road 105th Ave.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	1318	+	646	=	1964	522	0	Yes
16:15 - 17:15	1308	+	644	=	1952	523	0	Yes
16:00 - 17:00	1280	+	620	=	1900	536	0	Yes
15:45 - 16:45	1289	+	599	=	1888	502	0	Yes
16:45 - 17:45	1288	+	591	=	1879	528	0	Yes
17:00 - 18:00	1220	+	594	=	1814	514	0	Yes
15:30 - 16:30	1223	+	573	=	1796	473	0	Yes
15:15 - 16:15	1143	+	561	=	1704	435	0	Yes
17:15 - 18:15	1107	+	582	=	1689	501	0	Yes
07:15 - 08:15	357	+	1242	=	1599	227	0	Yes
17:30 - 18:30	1008	+	546	=	1554	523	0	Yes

