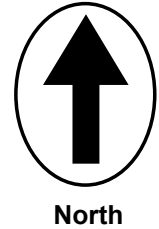


Date : 02/28/23

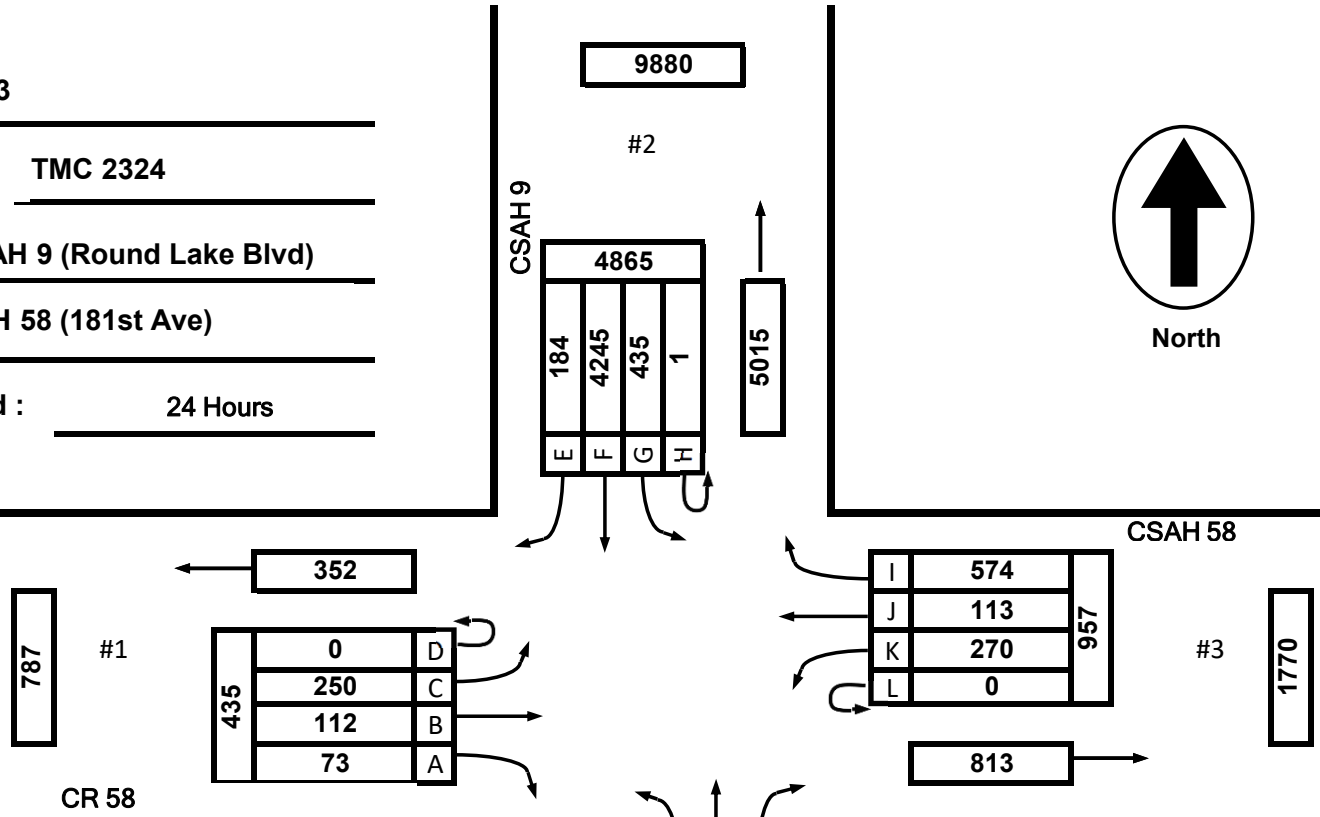
Count Number : TMC 2324

Location : CSAH 9 (Round Lake Blvd)
CSAH 58 (181st Ave)

Collection Period : 24 Hours



North



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

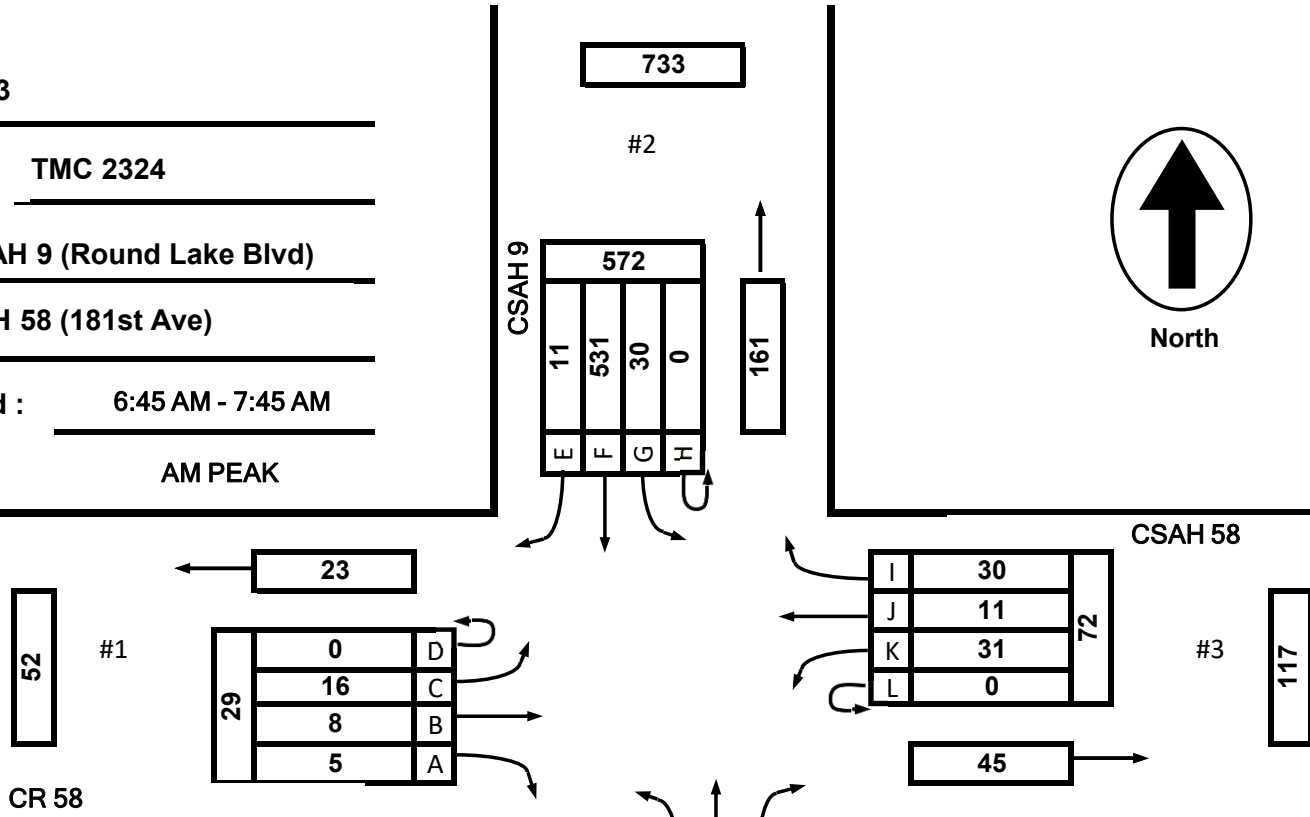
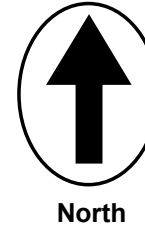
Traffic Volume and Turning Movement Study

Date : 02/28/23

Count Number : TMC 2324

Location : CSAH 9 (Round Lake Blvd)
CSAH 58 (181st Ave)

Collection Period : 6:45 AM - 7:45 AM
AM PEAK



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

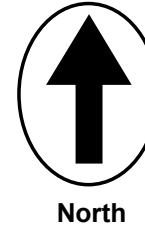
Traffic Volume and Turning
Movement Study

Date : 02/28/23

Count Number : TMC 2324

Location : CSAH 9 (Round Lake Blvd)
CSAH 58 (181st Ave)

Collection Period : 4 PM - 5 PM
 PM PEAK



North

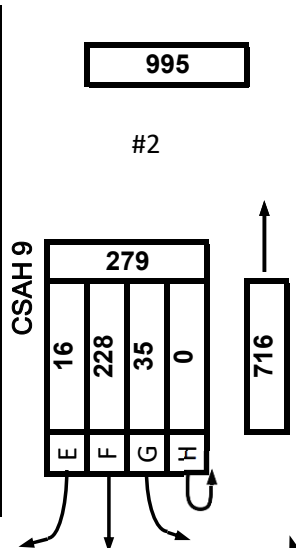
78

#1

CR 58

41	0	D
	27	C
	12	B
	2	A

37



995

#2

CSAH 9

279			
16	228	35	0
E	F	G	H

716

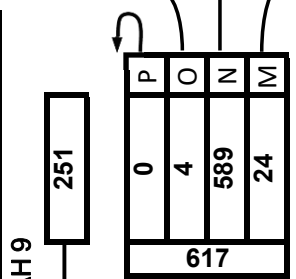
CSAH 58

I	100	138
J	17	
K	21	
L	0	

#3

209

71



251

CSAH 9

P	O	N	M
0	4	589	24
617			

#4

868

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

**CSAH 9 (Round Lake Blvd) @ CSAH 58 (181st Ave)
Tuesday, February 28, 2023**

Time	Southbound CSAH 9						Westbound CSAH 58						Northbound CSAH 9						Eastbound CR 58						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	1	0	0	1	0	0	0	1	0	1	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5
12:15 AM	0	0	1	0	0	1	0	0	0	2	0	2	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	11
12:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Hourly Total	0	0	3	0	0	3	0	0	0	3	0	3	0	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	24
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
1:15 AM	0	1	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
1:30 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	7
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Hourly Total	0	1	4	0	0	5	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	20
2:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
2:15 AM	0	1	3	0	0	4	0	1	0	0	0	1	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	8
2:30 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	13
2:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	1	5	0	0	6	0	1	0	0	0	0	0	1	0	0	0	1	11
Hourly Total	0	1	14	0	0	15	0	1	0	0	0	1	0	2	16	1	0	19	0	1	0	0	0	0	0	1	0	0	0	1	36
3:00 AM	0	1	8	0	0	9	0	0	0	1	0	1	0	0	2	0	0	2	0	0	0	1	0	1	0	0	0	1	0	1	13
3:15 AM	0	1	8	0	0	9	0	2	0	0	0	2	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	16
3:30 AM	0	0	9	1	0	10	0	0	0	2	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	13
3:45 AM	0	2	8	0	0	10	0	1	0	0	0	1	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	14
Hourly Total	0	4	33	1	0	38	0	3	0	3	0	6	0	0	11	0	0	11	0	0	0	1	0	1	0	0	0	1	0	1	56
4:00 AM	0	1	18	0	0	19	0	2	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	22
4:15 AM	0	1	24	1	0	26	0	2	1	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	30
4:30 AM	0	0	34	1	0	35	0	1	1	1	0	3	0	0	2	0	0	2	0	0	1	2	0	3	0	0	1	2	0	3	43
4:45 AM	0	3	37	0	0	40	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	42
Hourly Total	0	5	113	2	0	120	0	5	2	2	0	9	0	0	3	1	0	4	0	1	1	2	0	4	0	1	1	2	0	4	137
5:00 AM	0	3	63	1	0	67	0	2	0	4	0	6	0	0	6	0	0	6	0	2	0	1	0	3	0	2	0	1	0	3	82
5:15 AM	0	6	83	1	0	90	0	3	0	0	0	3	0	0	6	0	0	6	0	0	1	0	0	1	0	0	1	0	0	1	100
5:30 AM	0	1	83	1	0	85	0	4	0	2	0	6	0	0	7	0	0	7	0	1	0	1	0	2	0	1	0	1	0	2	100
5:45 AM	0	3	89	0	0	92	0	2	0	1	0	3	0	0	6	0	0	6	0	3	1	0	0	4	0	3	1	0	0	4	105
Hourly Total	0	13	318	3	0	334	0	11	0	7	0	18	0	0	25	0	0	25	0	6	2	2	0	10	0	6	2	2	0	10	387
6:00 AM	0	4	105	0	0	109	0	8	0	1	0	9	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	125
6:15 AM	0	3	131	2	0	136	0	5	0	3	0	8	0	0	12	0	0	12	0	2	1	4	0	7	0	2	1	4	0	7	163
6:30 AM	0	10	122	5	0	137	0	6	2	4	0	12	0	0	18	3	0	21	0	4	2	2	0	8	0	4	2	2	0	8	178
6:45 AM	0	7	140	2	0	149	0	5	4	7	0	16	0	0	26	1	0	27	0	3	0	0	0	3	0	3	0	0	0	3	195
Hourly Total	0	24	498	9	0	531	0	24	6	15	0	45	0	0	63	4	0	67	0	9	3	6	0	18	0	9	3	6	0	18	661
7:00 AM	0	9	151	3	0	163	0	5	1	5	0	11	0	1	30	3	0	34	0	1	3	2	0	6	0	1	3	2	0	6	214
7:15 AM	0	7	144	1	0	152	0	9	2	11	0	22	0	0	33	1	0	34	0	4	2	0	0	6	0	4	2	0	0	6	214
7:30 AM	0	7	126	5	0	138	0	12	4	7	0	23	0	0	26	2	0	28	0	8	3	3	0	14	0	8	3	3	0	14	203
7:45 AM	0	7	110	3	0	120	0	7	1	9	0	17	0	0	36	3	0	39	0	4	2	0	0	6	0	4	2	0	0	6	182
Hourly Total	0	30	531	12	0	573	0	33	8	32	0	73	0	1	125	9	0	135	0	17	10	5	0	32	0	17	10	5	0	32	813

**CSAH 9 (Round Lake Blvd) @ CSAH 58 (181st Ave)
Tuesday, February 28, 2023**

Time	Southbound CSAH 9						Westbound CSAH 58						Northbound CSAH 9						Eastbound CR 58						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	13	91	1	0	105	0	5	2	6	0	13	0	1	14	4	0	19	0	5	1	1	0	7	0	144
8:15 AM	0	2	90	2	0	94	0	4	1	4	0	9	0	0	15	3	0	18	0	4	0	1	0	5	0	126
8:30 AM	0	5	82	1	0	88	0	7	2	2	0	11	0	0	29	3	0	32	0	3	3	0	0	6	0	137
8:45 AM	0	5	68	3	0	76	0	3	2	3	0	8	0	0	30	3	0	33	0	4	0	1	0	5	0	122
Hourly Total	0	25	331	7	0	363	0	19	7	15	0	41	0	1	88	13	0	102	0	16	4	3	0	23	0	529
9:00 AM	0	11	64	2	0	77	0	6	0	4	0	10	0	0	23	4	0	27	0	1	4	0	0	5	0	119
9:15 AM	0	11	76	1	0	88	0	6	1	11	0	18	0	2	28	2	0	32	0	1	0	1	0	2	0	140
9:30 AM	0	4	75	3	0	82	0	4	1	5	0	10	0	0	27	7	0	34	0	1	1	2	0	4	0	130
9:45 AM	0	4	63	2	0	69	0	2	0	5	0	7	0	0	30	2	0	32	0	1	1	2	0	4	0	112
Hourly Total	0	30	278	8	0	316	0	18	2	25	0	45	0	2	108	15	0	125	0	4	6	5	0	15	0	501
10:00 AM	0	4	59	0	0	63	0	6	0	2	0	8	0	1	29	1	0	31	0	6	3	4	0	13	0	115
10:15 AM	0	2	51	2	0	55	0	4	2	4	0	10	0	0	32	4	0	36	0	3	4	2	0	9	0	110
10:30 AM	0	4	75	3	0	82	0	3	0	0	0	3	0	0	44	3	0	47	0	1	1	0	0	2	0	134
10:45 AM	0	8	54	0	0	62	0	2	3	5	0	10	0	1	39	5	0	45	0	0	0	1	0	1	0	118
Hourly Total	0	18	239	5	0	262	0	15	5	11	0	31	0	2	144	13	0	159	0	10	8	7	0	25	0	477
11:00 AM	0	6	53	4	0	63	0	7	1	1	0	9	0	2	47	1	0	50	0	1	0	1	0	2	0	124
11:15 AM	0	4	61	3	0	68	0	3	2	2	0	7	0	0	44	7	0	51	0	4	0	2	0	6	0	132
11:30 AM	0	8	72	0	0	80	0	8	0	6	0	14	0	0	54	2	0	56	0	4	2	0	0	6	0	156
11:45 AM	0	17	42	1	0	60	0	1	1	10	0	12	0	1	63	5	0	69	0	0	3	1	0	4	0	145
Hourly Total	0	35	228	8	0	271	0	19	4	19	0	42	0	3	208	15	0	226	0	9	5	4	0	18	0	557
12:00 PM	0	7	65	3	0	75	0	2	0	4	0	6	0	1	59	2	0	62	0	9	7	1	0	17	0	160
12:15 PM	0	4	44	5	0	53	0	7	1	6	0	14	0	0	54	4	0	58	0	3	2	1	0	6	0	131
12:30 PM	0	3	58	5	0	66	0	5	1	10	0	16	0	1	57	4	0	62	0	1	1	3	0	5	0	149
12:45 PM	0	9	42	5	0	56	0	5	3	8	0	16	0	1	60	5	0	66	0	1	1	1	0	3	0	141
Hourly Total	0	23	209	18	0	250	0	19	5	28	0	52	0	3	230	15	0	248	0	14	11	6	0	31	0	581
1:00 PM	0	1	48	5	0	54	0	5	1	10	0	16	0	0	55	1	0	56	0	3	3	1	0	7	0	133
1:15 PM	0	2	60	4	0	66	0	2	1	9	0	12	0	2	51	4	0	57	0	3	0	2	0	5	0	140
1:30 PM	0	6	53	4	0	63	0	3	2	8	0	13	0	1	73	4	0	78	0	2	0	0	0	2	0	156
1:45 PM	0	2	49	0	0	51	0	6	1	6	0	13	0	1	68	3	0	72	0	3	3	0	0	6	0	142
Hourly Total	0	11	210	13	0	234	0	16	5	33	0	54	0	4	247	12	0	263	0	11	6	3	0	20	0	571
2:00 PM	0	11	51	1	0	63	0	3	1	8	0	12	0	1	67	6	0	74	0	5	3	2	0	10	0	159
2:15 PM	0	7	53	1	0	61	0	2	4	11	0	17	0	0	76	2	0	78	0	6	0	2	0	8	0	164
2:30 PM	0	6	63	4	0	73	0	2	1	11	0	14	0	1	106	5	0	112	0	5	4	1	0	10	0	209
2:45 PM	0	8	63	5	0	76	0	3	1	16	0	20	0	0	104	9	0	113	0	6	0	1	0	7	0	216
Hourly Total	0	32	230	11	0	273	0	10	7	46	0	63	0	2	353	22	0	377	0	22	7	6	0	35	0	748
3:00 PM	0	8	43	2	0	53	0	3	1	15	0	19	0	3	108	6	0	117	0	10	3	2	0	15	0	204
3:15 PM	0	9	49	8	0	66	0	6	5	19	0	30	0	3	127	10	0	140	0	9	2	2	0	13	0	249
3:30 PM	0	18	58	3	0	79	0	6	5	18	0	29	0	1	119	9	0	129	0	4	2	0	0	6	0	243
3:45 PM	0	12	47	5	0	64	0	5	2	22	0	29	0	1	130	13	0	144	0	9	1	0	0	10	0	247
Hourly Total	0	47	197	18	0	262	0	20	13	74	0	107	0	8	484	38	0	530	0	32	8	4	0	44	0	943

**CSAH 9 (Round Lake Blvd) @ CSAH 58 (181st Ave)
Tuesday, February 28, 2023**

Time	Southbound CSAH 9						Westbound CSAH 58						Northbound CSAH 9						Eastbound CR 58						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	15	59	4	0	78	0	6	6	32	0	44	0	1	132	5	0	138	0	1	4	0	0	5	265
4:15 PM	0	6	56	2	0	64	0	4	3	18	0	25	0	2	162	4	0	168	0	6	2	2	0	10	267
4:30 PM	0	8	67	5	0	80	0	7	3	28	0	38	0	0	144	6	0	150	0	10	2	0	0	12	280
4:45 PM	0	6	46	5	0	57	0	4	5	22	0	31	0	1	151	9	0	161	0	10	4	0	0	14	263
Hourly Total	0	35	228	16	0	279	0	21	17	100	0	138	0	4	589	24	0	617	0	27	12	2	0	41	1075
5:00 PM	0	14	52	5	0	71	0	2	2	24	0	28	0	2	123	9	0	134	0	9	5	1	0	15	248
5:15 PM	0	11	60	7	0	78	0	4	2	22	0	28	0	5	121	7	0	133	0	10	2	1	0	13	252
5:30 PM	0	10	44	3	0	57	0	1	3	15	0	19	0	1	124	5	0	130	0	4	3	2	0	9	215
5:45 PM	0	1	43	4	0	48	0	1	3	11	0	15	0	2	99	10	0	111	0	7	4	0	0	11	185
Hourly Total	0	36	199	19	0	254	0	8	10	72	0	90	0	10	467	31	0	508	0	30	14	4	0	48	900
6:00 PM	0	8	36	5	0	49	0	6	0	4	0	10	0	0	83	8	0	91	0	5	1	1	0	7	157
6:15 PM	0	9	50	2	0	61	0	2	0	11	0	13	0	1	95	4	0	100	0	1	0	1	0	2	176
6:30 PM	0	6	39	2	0	47	0	5	1	8	0	14	0	0	91	5	0	96	0	6	1	0	0	7	164
6:45 PM	0	2	31	2	0	35	0	3	2	13	0	18	0	1	73	1	0	75	0	3	0	1	0	4	132
Hourly Total	0	25	156	11	0	192	0	16	3	36	0	55	0	2	342	18	0	362	0	15	2	3	0	20	629
7:00 PM	0	3	21	2	0	26	0	1	4	6	0	11	0	1	76	2	0	79	0	0	0	0	0	0	116
7:15 PM	0	6	17	3	0	26	0	2	2	4	0	8	0	4	59	3	0	66	0	4	2	0	0	6	106
7:30 PM	0	6	17	2	0	25	0	1	3	7	0	11	0	0	43	4	0	47	0	3	1	1	0	5	88
7:45 PM	0	2	23	2	0	27	0	2	0	3	0	5	0	1	44	5	0	50	0	2	1	1	0	4	86
Hourly Total	0	17	78	9	0	104	0	6	9	20	0	35	0	6	222	14	0	242	0	9	4	2	0	15	396
8:00 PM	0	2	12	2	0	16	0	1	0	4	0	5	0	0	40	5	0	45	0	3	1	0	0	4	70
8:15 PM	0	2	19	4	0	25	0	0	0	5	0	5	0	0	57	1	0	58	0	5	2	2	0	9	97
8:30 PM	1	5	11	1	0	18	0	1	1	5	0	7	0	1	40	1	0	42	0	1	0	0	0	1	68
8:45 PM	0	4	18	2	0	24	0	0	1	5	0	6	0	0	38	2	0	40	0	1	2	4	0	7	77
Hourly Total	1	13	60	9	0	83	0	2	2	19	0	23	0	1	175	9	0	185	0	10	5	6	0	21	312
9:00 PM	0	2	19	1	0	22	0	2	1	2	0	5	0	0	38	3	0	41	0	4	0	0	0	4	72
9:15 PM	0	3	19	3	0	25	0	0	1	4	0	5	0	1	43	1	0	45	0	1	1	1	0	3	78
9:30 PM	0	1	9	0	0	10	0	0	2	1	0	3	0	0	22	1	0	23	0	0	0	0	0	0	36
9:45 PM	0	1	11	1	0	13	0	0	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	37
Hourly Total	0	7	58	5	0	70	0	2	4	7	0	13	0	1	127	5	0	133	0	5	1	1	0	7	223
10:00 PM	0	0	9	0	0	9	0	0	1	3	0	4	0	0	28	0	0	28	0	0	0	0	0	0	41
10:15 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	27	3	0	31	0	0	0	0	0	0	34
10:30 PM	0	1	3	0	0	4	0	0	3	3	0	6	0	1	17	0	0	18	0	0	1	0	0	1	29
10:45 PM	0	1	3	0	0	4	0	0	0	0	0	0	0	1	12	1	0	14	0	0	1	1	0	2	20
Hourly Total	0	2	18	0	0	20	0	0	4	6	0	10	0	3	84	4	0	91	0	0	2	1	0	3	124
11:00 PM	0	1	5	0	0	6	0	1	0	1	0	2	0	0	18	0	0	18	0	1	0	0	0	1	27
11:15 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	9	1	0	10	0	0	1	0	0	1	13
11:30 PM	0	0	5	0	0	5	0	1	0	0	0	1	0	0	10	1	0	11	0	1	0	0	0	1	18
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	10
Hourly Total	0	1	12	0	0	13	0	2	0	1	0	3	0	0	46	3	0	49	0	2	1	0	0	3	68
DAILY TOTAL	1	435	4245	184	0	4865	0	270	113	574	0	957	0	55	4190	266	0	4511	0	250	112	73	0	435	10768
Cars	1	426	4183	179	0	4789	0	269	111	560	0	940	0	54	4144	263	0	4461	0	241	105	70	0	416	10606
Heavy Vehicles	0	9	62	5	0	76	0	1	2	14	0	17	0	1	46	3	0	50	0	9	7	3	0	19	162
Heavy Vehicle %	0.00%	2.07%	1.46%	2.72%	0.00%	1.56%	0.00%	0.37%	1.77%	2.44%	0.00%	1.78%	0.00%	1.82%	1.10%	1.13%	0.00%	1.11%	0.00%	3.60%	6.25%	4.11%	0.00%	4.37%	1.50%

CSAH 9 (Round Lake Blvd) @ CSAH 58 (181st Ave)
Tuesday, February 28, 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																																																																																																																									
6:45 AM	0	7	140	2	0	149	0	5	4	7	0	16	0	0	26	1	0	27	0	3	0	0	0	3	0	9	151	3	0	163	0	5	1	5	0	11	0	1	30	3	0	34	0	1	3	2	0	6	0	7	144	1	0	152	0	9	2	11	0	22	0	0	33	1	0	34	0	4	2	0	0	6	0	7	126	5	0	138	0	12	4	7	0	23	0	0	26	2	0	28	0	8	3	3	0	14	0	30	561	11	0	602	0	31	11	30	0	72	0	1	115	7	0	123	0	16	8	5	0	29	0.000	0.833	0.929	0.550	0.000	0.923	0.000	0.646	0.688	0.682	0.000	0.783	0.000	0.250	0.871	0.583	0.000	0.904	0.000	0.500	0.667	0.417	0.000	0.518	0.965
Peak Hour Total	0	30	561	11	0	602	0	31	11	30	0	72	0	1	115	7	0	123	0	16	8	5	0	29	0	9	151	3	0	163	0	5	1	5	0	11	0	1	30	3	0	34	0	1	3	2	0	6	0	7	144	1	0	152	0	9	2	11	0	22	0	0	33	1	0	34	0	4	2	0	0	6	0	7	126	5	0	138	0	12	4	7	0	23	0	0	26	2	0	28	0	8	3	3	0	14	0	30	561	11	0	602	0	31	11	30	0	72	0	1	115	7	0	123	0	16	8	5	0	29	0.000	0.833	0.929	0.550	0.000	0.923	0.000	0.646	0.688	0.682	0.000	0.783	0.000	0.250	0.871	0.583	0.000	0.904	0.000	0.500	0.667	0.417	0.000	0.518	0.965

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	15	59	4	0	78	0	6	6	32	0	44	0	1	132	5	0	138	0	1	4	0	0	5	0	6	56	2	0	64	0	4	3	18	0	25	0	2	162	4	0	168	0	6	2	2	0	10	0	8	67	5	0	80	0	7	3	28	0	38	0	0	144	6	0	150	0	10	2	0	0	12	0	6	46	5	0	57	0	4	5	22	0	31	0	1	151	9	0	161	0	10	4	0	0	14	0	35	228	16	0	279	0	21	17	100	0	138	0	4	589	24	0	617	0	27	12	2	0	41	0.000	0.583	0.851	0.800	0.000	0.872	0.000	0.750	0.708	0.781	0.000	0.784	0.000	0.500	0.909	0.667	0.000	0.918	0.000	0.675	0.750	0.250	0.000	0.732	0.960
Peak Hour Total	0	35	228	16	0	279	0	21	17	100	0	138	0	4	589	24	0	617	0	27	12	2	0	41	0	6	56	2	0	64	0	4	3	18	0	25	0	2	162	4	0	168	0	6	2	2	0	10	0	8	67	5	0	80	0	7	3	28	0	38	0	0	144	6	0	150	0	10	2	0	0	12	0	6	46	5	0	57	0	4	5	22	0	31	0	1	151	9	0	161	0	10	4	0	0	14	0	35	228	16	0	279	0	21	17	100	0	138	0	4	589	24	0	617	0	27	12	2	0	41	0.000	0.583	0.851	0.800	0.000	0.872	0.000	0.750	0.708	0.781	0.000	0.784	0.000	0.500	0.909	0.667	0.000	0.918	0.000	0.675	0.750	0.250	0.000	0.732	0.960

Total Vehicles On Leg				9880			
Vehicles Entering Intersection		4865		Vehicles Exiting Intersection		5015	
Southbound							
Cars	179	4183	426	1	0		
Heavy	5	62	9	0	0		
Total	184	4245	435	1	0		



Total Vehicles on Leg 787	Vehicles Entering Intersection	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 352		0	0	0
			0	0	0
			241	9	250
			105	7	112
70	3	73			



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	Total Vehicles on Leg 1770
560	14	574		Vehicles Exiting Intersection 957	
111	2	113			
269	1	270			
0	0	0			
0	0	0	Vehicles Exiting Intersection 813		



Cars	0	0	54	4144	263
Heavy	0	0	1	46	3
Total	0	0	55	4190	266
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
4511			4588		
Total Vehicles On Leg			9099		



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/20/2023

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 9 (Round Lake Blvd)

Number of Lanes : 1

Total Approach Volume: 4,561

Southbound: CSAH 9 (Round Lake Blvd)

Number of Lanes : 1

Total Approach Volume: 4,941

Minor Street Approaches

Eastbound: CR 58 (181st Ave)

Number of Lanes : 1

Total Approach Volume: 454

Westbound: CSAH 58 (181st Ave)

Number of Lanes : 1

Total Approach Volume: 974

Warrant Summary (Rural Values Apply)

Warrant 1 - Eight Hour Vehicular Volumes.....Not Satisfied

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

Required volumes reached for 2 hours, 8 are needed

Warrant 1B - Interruption of Continuous Traffic.....Not Satisfied

Required volumes reached for 7 hours, 8 are needed

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

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

Required 1B volumes reached for 11 hours, 8 are needed

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

Number of hours (5) volumes exceed minimum \geq minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (8) volumes exceed minimum \geq 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:

Study Date : 03/20/2023

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

Site Data Required

Rural Settings Apply = **True**
 Number of Major Lanes = **1**
 Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **350**
 Veh/Hr Minor = **105**

Time	Major Road					Minor Road			Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB		
	CSAH 9 (Round Lake Blvd)					CR 58 (181st Ave)			
16:00 - 17:00	618	+	286	=	904	42	140	Yes	
15:00 - 16:00	533	+	263	=	796	46	108	Yes	
14:45 - 15:45	501	+	277	=	778	43	99	No	
17:00 - 18:00	509	+	256	=	765	49	92	No	
14:30 - 15:30	484	+	272	=	756	47	84	No	
06:45 - 07:45	130	+	605	=	735	32	74	No	
06:30 - 07:30	123	+	605	=	728	25	64	No	
07:00 - 08:00	140	+	579	=	719	35	73	No	
17:15 - 18:15	467	+	234	=	701	40	74	No	
06:15 - 07:15	100	+	595	=	695	27	50	No	
14:15 - 15:15	421	+	267	=	688	40	71	No	
14:00 - 15:00	378	+	278	=	656	35	63	No	
17:30 - 18:30	434	+	218	=	652	29	57	No	
07:15 - 08:15	124	+	520	=	644	35	75	No	
06:00 - 07:00	72	+	541	=	613	20	48	No	
17:45 - 18:45	400	+	207	=	607	27	52	No	
13:45 - 14:45	336	+	252	=	588	34	56	No	
07:30 - 08:30	106	+	463	=	569	35	62	No	
18:00 - 19:00	364	+	193	=	557	20	56	No	
13:30 - 14:30	303	+	241	=	544	26	55	No	
11:15 - 12:15	243	+	293	=	536	35	40	No	
05:45 - 06:45	49	+	485	=	534	21	33	No	
11:30 - 12:30	250	+	281	=	531	36	48	No	
13:15 - 14:15	282	+	245	=	527	24	50	No	
07:45 - 08:45	111		414		525	25	50	No	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/20/2023

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

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **525**

Veh/Hr Minor = **52**

Time	Major Road					Minor Road		Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	
	CSAH 9 (Round Lake Blvd)					CR 58 (181st Ave)		
15:30 - 16:30	582	+	288	=	870	31	128	Yes
16:30 - 17:30	579	+	290	=	869	56	128	Yes
14:30 - 15:30	484	+	272	=	756	47	84	Yes
06:30 - 07:30	123	+	605	=	728	25	64	Yes
17:30 - 18:30	434	+	218	=	652	29	57	Yes
07:30 - 08:30	106	+	463	=	569	35	62	Yes
13:30 - 14:30	303	+	241	=	544	26	55	Yes
06:15 - 07:15	100	+	595	=	695	27	50	No
06:00 - 07:00	72	+	541	=	613	20	48	No
11:15 - 12:15	243	+	293	=	536	35	40	No
05:45 - 06:45	49	+	485	=	534	21	33	No
11:30 - 12:30	250	+	281	=	531	36	48	No
13:15 - 14:15	282	+	245	=	527	24	50	No
11:45 - 12:45	258	+	264	=	522	35	51	No
12:00 - 13:00	254	+	261	=	515	35	55	No
11:00 - 12:00	234	+	279	=	513	18	43	No
12:45 - 13:45	259	+	244	=	503	19	58	No
13:00 - 14:00	264	+	236	=	500	21	54	No
12:30 - 13:30	245	+	247	=	492	22	62	No
10:45 - 11:45	210	+	278	=	488	15	40	No
12:15 - 13:15	247	+	237	=	484	23	65	No
10:30 - 11:30	202	+	278	=	480	11	29	No
05:30 - 06:30	34	+	433	=	467	14	26	No
08:30 - 09:30	126	+	332	=	458	19	47	No
10:15 - 11:15	186		268		454	15	32	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/20/2023

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.
11 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **280 420**

Veh/Hr Minor = **84 42**

Major Road

CSAH 9 (Round Lake Blvd)

Minor Road

CR 58 (181st Ave)

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:30 - 16:30	582	+	288	=	870	31	128	Yes
16:30 - 17:30	579	+	290	=	869	56	128	Yes
14:30 - 15:30	484	+	272	=	756	47	84	Yes
06:45 - 07:45	130	+	605	=	735	32	74	No
06:30 - 07:30	123	+	605	=	728	25	64	No
07:00 - 08:00	140	+	579	=	719	35	73	No
06:15 - 07:15	100	+	595	=	695	27	50	No
14:15 - 15:15	421	+	267	=	688	40	71	No
14:00 - 15:00	378	+	278	=	656	35	63	No
17:30 - 18:30	434	+	218	=	652	29	57	No
07:15 - 08:15	124	+	520	=	644	35	75	No
06:00 - 07:00	72	+	541	=	613	20	48	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:00 - 17:00	618	+	286	=	904	42	140	Yes
15:00 - 16:00	533	+	263	=	796	46	108	Yes
17:00 - 18:00	509	+	256	=	765	49	92	Yes
07:00 - 08:00	140	+	579	=	719	35	73	Yes
14:00 - 15:00	378	+	278	=	656	35	63	Yes
06:00 - 07:00	72	+	541	=	613	20	48	Yes
18:00 - 19:00	364	+	193	=	557	20	56	Yes
12:00 - 13:00	254	+	261	=	515	35	55	Yes
11:00 - 12:00	234	+	279	=	513	18	43	Yes
13:00 - 14:00	264	+	236	=	500	21	54	Yes
08:30 - 09:30	126	+	332	=	458	19	47	Yes
05:45 - 06:45	49	+	485	=	534	21	33	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/20/2023

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.

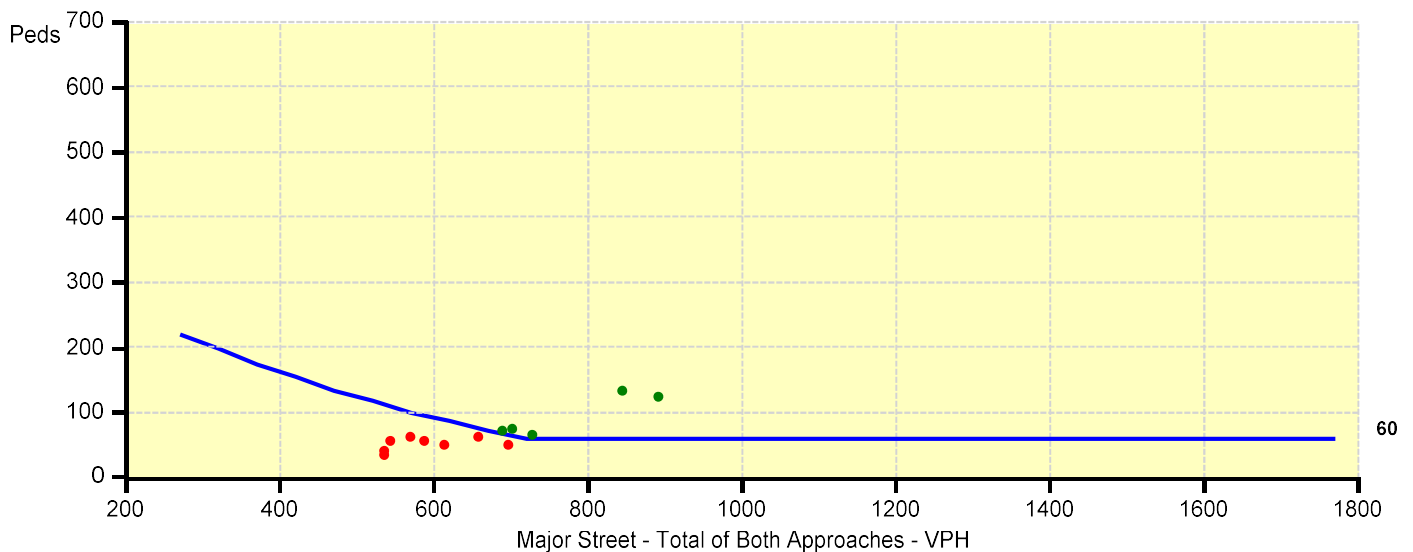
Summary

5 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
 Number of Major Lanes = **1**
 Number of Minor Lanes = **1**

Time	Major Road CSAH 9 (Round Lake Blvd)				Total	Minor Road CR 58 (181st Ave)		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:15 - 17:15	615	+	276	=	891	53	123	Yes
15:15 - 16:15	554	+	291	=	845	36	133	Yes
06:30 - 07:30	123	+	605	=	728	25	64	Yes
17:15 - 18:15	467	+	234	=	701	40	74	Yes
14:15 - 15:15	421	+	267	=	688	40	71	Yes
06:15 - 07:15	100	+	595	=	695	27	50	No
14:00 - 15:00	378	+	278	=	656	35	63	No
06:00 - 07:00	72	+	541	=	613	20	48	No
13:45 - 14:45	336	+	252	=	588	34	56	No
07:30 - 08:30	106	+	463	=	569	35	62	No
13:30 - 14:30	303	+	241	=	544	26	55	No
11:15 - 12:15	243		293		536	35	40	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/20/2023

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

6 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
 Number of Major Lanes = **1**
 Number of Minor Lanes = **1**

Time	Major Road CSAH 9 (Round Lake Blvd)					Minor Road CR 58 (181st Ave)		Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	
16:00 - 17:00	618	+	286	=	904	42	140	Yes
15:45 - 16:45	603	+	292	=	895	38	138	Yes
16:15 - 17:15	615	+	276	=	891	53	123	Yes
15:30 - 16:30	582	+	288	=	870	31	128	Yes
16:30 - 17:30	579	+	290	=	869	56	128	Yes
15:15 - 16:15	554	+	291	=	845	36	133	Yes
16:45 - 17:45	559	+	265	=	824	52	108	No
15:00 - 16:00	533	+	263	=	796	46	108	No
14:45 - 15:45	501	+	277	=	778	43	99	No
17:00 - 18:00	509	+	256	=	765	49	92	No
14:30 - 15:30	484	+	272	=	756	47	84	No
06:45 - 07:45	130	+	605	=	735	32	74	No

