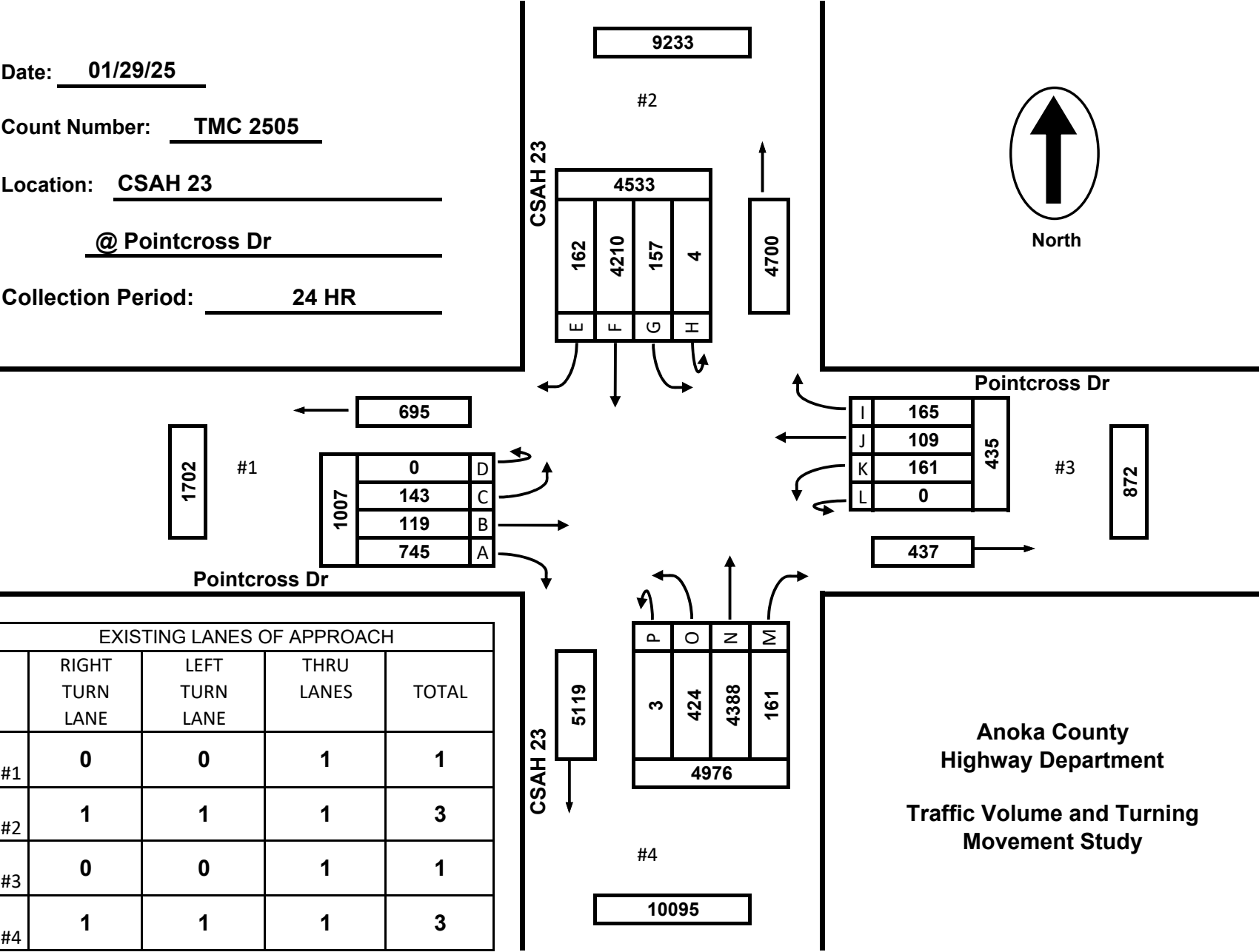
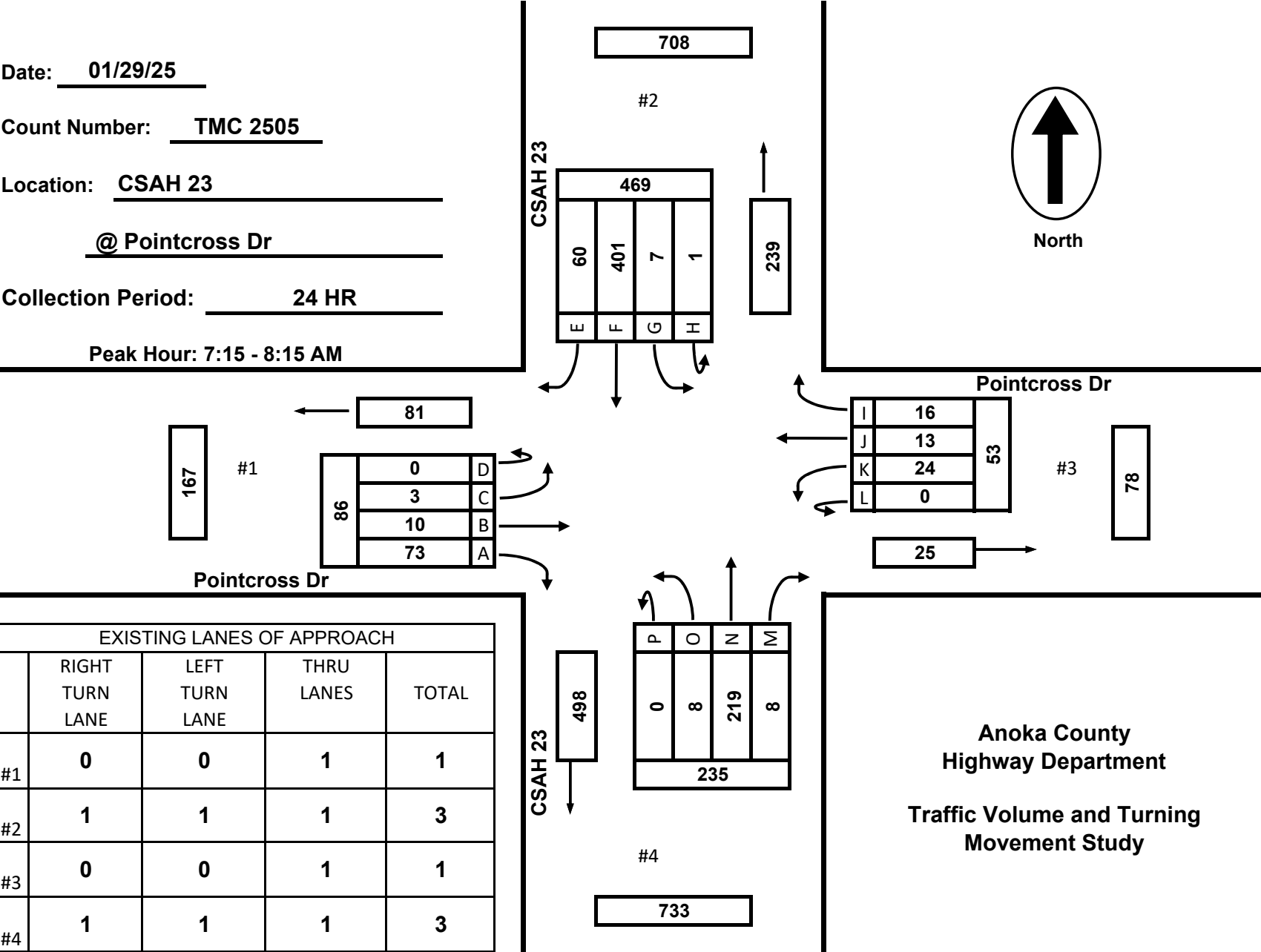


Date: 01/29/25
Count Number: TMC 2505
Location: CSAH 23
@ Pointcross Dr
Collection Period: 24 HR



Date: 01/29/25
Count Number: TMC 2505
Location: CSAH 23
@ Pointcross Dr
Collection Period: 24 HR
Peak Hour: 7:15 - 8:15 AM



Date: 01/29/25

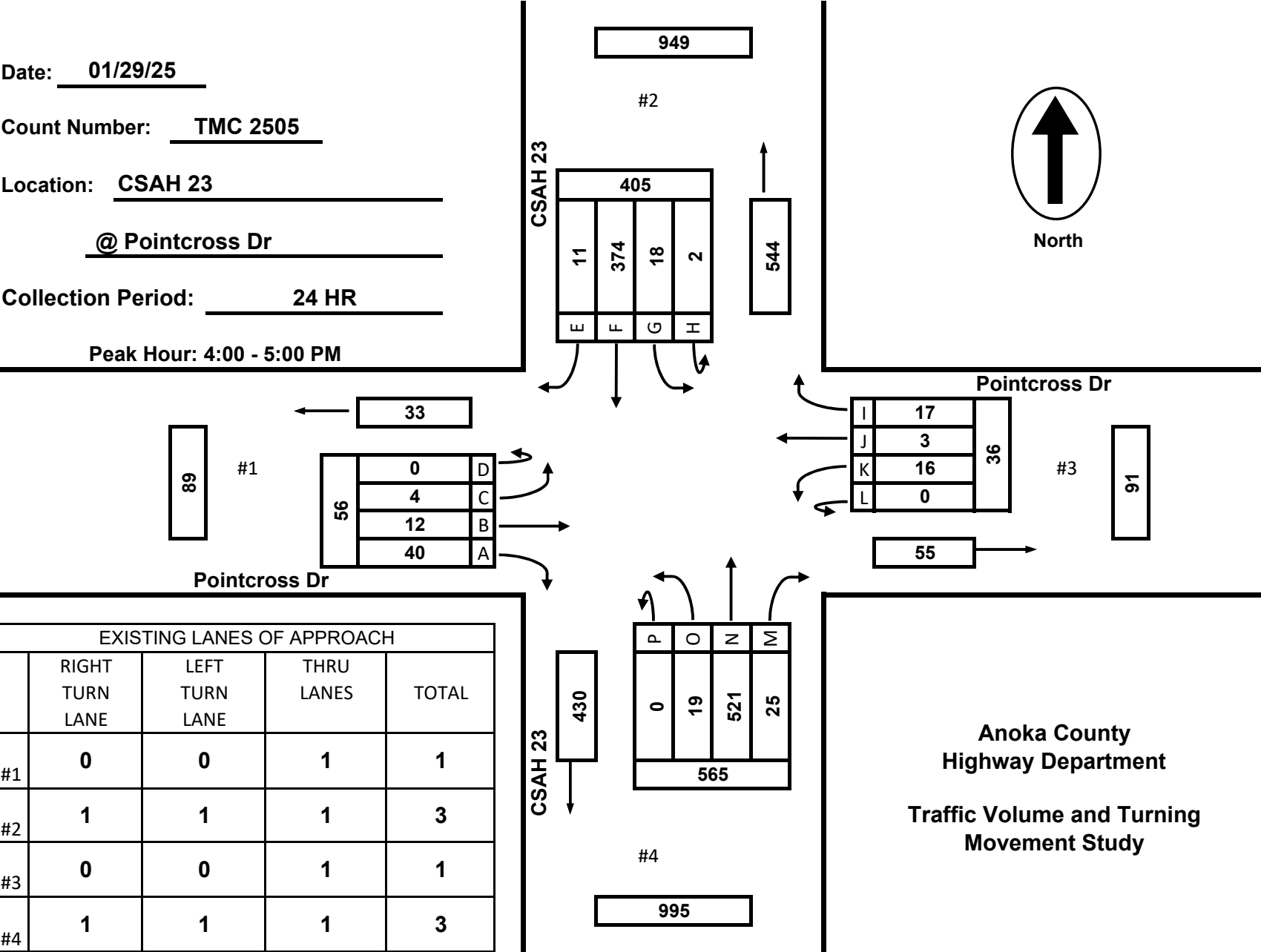
Count Number: TMC 2505

Location: CSAH 23

@ Pointcross Dr

Collection Period: 24 HR

Peak Hour: 4:00 - 5:00 PM



Anoka County
Highway Department

Traffic Volume and Turning
Movement Study

TMC 2505 - CSAH 23 @ Pointcross Dr
Circle Pines MN
Wednesday, January 29, 2025

Time	Southbound CSAH 23						Westbound Pointcross Dr						Northbound CSAH 23						Eastbound Pointcross Dr						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	1	0	1	0	2	0	1	3	0	0	4	0	0	0	4	0	4	11
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	0	1	4
12:30 AM	0	0	3	1	0	4	0	0	0	0	0	0	0	1	2	1	0	4	0	0	0	0	0	0	8
12:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	2	4	0	0	6	0	0	0	0	0	0	10
Hourly Total	0	0	8	1	0	9	0	1	0	1	0	2	0	4	12	1	0	17	0	1	0	4	0	5	33
1:00 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	8
1:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
1:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2
Hourly Total	0	0	7	0	0	7	0	0	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	0	13
2:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5
2:15 AM	0	0	2	1	0	3	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	1	0	3	8
2:30 AM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	1	0	1	5
2:45 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	1	6
Hourly Total	0	0	8	1	0	9	0	1	0	0	0	1	0	0	9	0	0	9	0	2	0	3	0	5	24
3:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	2	0	2	4
3:15 AM	0	1	3	0	0	4	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
3:30 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	6
3:45 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	0	2	9
Hourly Total	0	1	11	0	0	12	0	1	0	0	0	1	0	0	5	0	0	5	0	1	1	5	0	7	25
4:00 AM	0	0	6	0	0	6	0	1	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	1	9
4:15 AM	0	0	6	0	0	6	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	2	0	2	11
4:30 AM	0	0	9	0	0	9	0	1	1	1	0	3	0	0	3	0	0	3	0	1	0	3	0	4	19
4:45 AM	0	0	8	0	0	8	0	2	0	2	0	4	0	0	7	0	0	7	0	0	0	3	0	3	22
Hourly Total	0	0	29	0	0	29	0	5	1	3	0	9	0	1	12	0	0	13	0	2	0	8	0	10	61
5:00 AM	0	0	24	0	0	24	0	0	0	1	0	1	0	0	6	0	0	6	0	1	0	7	0	8	39
5:15 AM	0	0	34	0	0	34	0	3	0	2	0	5	0	0	8	0	0	8	0	1	0	6	0	7	54
5:30 AM	0	0	30	0	0	30	0	2	0	0	0	2	0	0	11	0	0	11	0	3	0	9	0	12	55
5:45 AM	0	1	40	0	0	41	0	2	1	1	0	4	0	0	22	0	0	22	0	3	0	9	0	12	79
Hourly Total	0	1	128	0	0	129	0	7	1	4	0	12	0	0	47	0	0	47	0	8	0	31	0	39	227
6:00 AM	0	0	34	0	0	34	0	1	1	2	0	4	0	2	14	0	0	16	0	6	0	9	0	15	69
6:15 AM	0	1	58	1	0	60	0	2	3	0	0	5	0	5	25	0	0	30	0	6	0	12	0	18	113
6:30 AM	0	0	67	0	0	67	0	2	1	5	0	8	0	4	33	0	0	37	0	2	0	16	0	18	130
6:45 AM	0	0	62	0	0	62	0	7	1	2	0	10	0	6	30	0	0	36	0	3	1	16	0	20	128
Hourly Total	0	1	221	1	0	223	0	12	6	9	0	27	0	17	102	0	0	119	0	17	1	53	0	71	440
7:00 AM	0	0	78	1	0	79	0	6	2	2	0	10	0	0	44	0	0	44	0	0	0	15	0	15	148
7:15 AM	0	4	82	6	0	92	0	8	2	3	0	13	0	2	47	1	0	50	0	0	2	16	0	18	173
7:30 AM	0	0	84	42	0	126	0	4	6	4	0	14	0	3	68	1	0	72	0	2	1	16	0	19	231
7:45 AM	1	1	131	12	0	145	0	9	4	5	0	18	0	1	64	4	0	69	0	0	6	22	0	28	260
Hourly Total	1	5	375	61	0	442	0	27	14	14	0	55	0	6	223	6	0	235	0	2	9	69	0	80	812

**TMC 2505 - CSAH 23 @ Pointcross Dr
Circle Pines MN
Wednesday, January 29, 2025**

Time	Southbound CSAH 23						Westbound Pointcross Dr						Northbound CSAH 23						Eastbound Pointcross Dr						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	
8:00 AM	0	2	104	0	0	106	0	3	1	4	0	8	0	2	40	2	0	44	0	1	1	19	0	21	179
8:15 AM	0	4	74	0	1	78	0	4	2	3	0	9	0	2	51	1	0	54	0	1	0	12	0	13	154
8:30 AM	0	0	63	0	0	63	0	2	0	3	0	5	0	2	63	1	0	66	0	2	1	8	0	11	145
8:45 AM	0	2	68	1	0	71	0	3	4	4	0	11	0	1	70	1	0	72	0	0	2	16	0	18	172
Hourly Total	0	8	309	1	1	318	0	12	7	14	0	33	0	7	224	5	0	236	0	4	4	55	0	63	650
9:00 AM	0	1	91	1	0	93	0	3	1	6	0	10	0	9	63	0	0	72	0	2	1	16	0	19	194
9:15 AM	0	5	77	3	0	85	0	1	1	4	0	6	0	5	53	2	0	60	0	4	0	19	0	23	174
9:30 AM	0	1	70	0	0	71	0	2	2	3	0	7	0	4	42	1	0	47	0	4	1	5	0	10	135
9:45 AM	0	1	58	1	1	60	0	2	3	1	0	6	0	4	46	0	0	50	0	3	3	7	0	13	129
Hourly Total	0	8	296	5	1	309	0	8	7	14	0	29	0	22	204	3	0	229	0	13	5	47	0	65	632
10:00 AM	0	1	43	2	0	46	0	2	0	5	0	7	0	4	42	2	0	48	0	0	2	9	0	11	112
10:15 AM	0	1	57	1	0	59	0	2	1	3	0	6	0	5	39	2	0	46	0	2	1	17	0	20	131
10:30 AM	0	3	40	2	0	45	0	2	0	1	0	3	0	6	53	0	0	59	0	3	2	14	0	19	126
10:45 AM	0	1	54	0	0	55	0	0	1	3	0	4	0	3	49	2	0	54	0	1	1	16	0	18	131
Hourly Total	0	6	194	5	0	205	0	6	2	12	0	20	0	18	183	6	0	207	0	6	6	56	0	68	500
11:00 AM	0	3	63	0	0	66	0	1	1	2	0	4	1	8	50	1	0	60	0	4	1	9	0	14	144
11:15 AM	0	2	47	2	0	51	0	2	0	3	0	5	0	10	58	0	0	68	0	0	0	11	0	11	135
11:30 AM	0	2	61	2	0	65	0	3	2	1	0	6	0	6	42	0	0	48	0	3	0	11	0	14	133
11:45 AM	0	1	56	1	0	58	0	3	0	3	0	6	0	6	64	4	0	74	0	3	2	9	0	14	152
Hourly Total	0	8	227	5	0	240	0	9	3	9	0	21	1	30	214	5	0	250	0	10	3	40	0	53	564
12:00 PM	0	0	48	1	0	49	0	1	2	0	0	3	1	7	62	2	0	72	0	4	2	9	0	15	139
12:15 PM	0	3	74	2	0	79	0	1	3	1	0	5	0	9	51	1	1	61	0	5	3	9	0	17	162
12:30 PM	0	2	62	4	0	68	0	0	3	3	0	6	0	5	69	2	0	76	0	4	0	15	0	19	169
12:45 PM	0	0	57	2	0	59	0	0	2	4	0	6	0	8	73	2	0	83	0	2	2	14	0	18	166
Hourly Total	0	5	241	9	0	255	0	2	10	8	0	20	1	29	255	7	1	292	0	15	7	47	0	69	636
1:00 PM	0	1	64	2	0	67	0	2	1	1	0	4	0	8	61	2	0	71	0	2	2	8	0	12	154
1:15 PM	0	1	47	3	0	51	0	1	0	2	0	3	0	2	63	2	0	67	0	2	1	3	0	6	127
1:30 PM	0	1	56	0	0	57	0	2	1	1	0	4	0	12	62	1	0	75	0	0	1	7	0	8	144
1:45 PM	0	1	58	4	0	63	0	1	2	4	0	7	0	13	80	0	0	93	0	1	2	9	0	12	175
Hourly Total	0	4	225	9	0	238	0	6	4	8	0	18	0	35	266	5	0	306	0	5	6	27	0	38	600
2:00 PM	0	1	51	2	0	54	0	3	0	1	0	4	0	14	81	1	0	96	0	2	2	10	0	14	168
2:15 PM	0	6	58	1	0	65	0	3	1	0	0	4	0	13	75	2	0	90	0	1	1	13	0	15	174
2:30 PM	0	2	67	3	0	72	0	2	4	1	0	7	0	12	91	3	0	106	0	4	2	14	0	20	205
2:45 PM	0	3	66	3	0	72	0	2	3	4	0	9	0	11	130	5	0	146	0	11	7	18	0	36	263
Hourly Total	0	12	242	9	0	263	0	10	8	6	0	24	0	50	377	11	0	438	0	18	12	55	0	85	810
3:00 PM	0	1	92	1	0	94	0	1	3	1	0	5	0	3	93	4	0	100	0	2	3	6	0	11	210
3:15 PM	0	7	82	3	0	92	0	1	2	2	0	5	0	3	106	5	0	114	0	0	3	14	0	17	228
3:30 PM	0	5	68	3	0	76	0	0	1	7	0	8	0	2	112	3	0	117	0	0	1	13	0	14	215
3:45 PM	0	12	89	3	0	104	0	2	2	3	0	7	0	7	103	4	0	114	0	0	1	8	0	9	234
Hourly Total	0	25	331	10	0	366	0	4	8	13	0	25	0	15	414	16	0	445	0	2	8	41	0	51	887

**TMC 2505 - CSAH 23 @ Pointcross Dr
Circle Pines MN
Wednesday, January 29, 2025**

Time	Southbound CSAH 23						Westbound Pointcross Dr						Northbound CSAH 23						Eastbound Pointcross Dr						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>	
4:00 PM	1	3	104	2	0	110	0	3	2	5	0	10	0	6	149	7	0	162	0	0	3	8	0	11	293
4:15 PM	0	6	94	1	0	101	0	3	1	3	0	7	0	3	128	5	0	136	0	2	1	12	0	15	259
4:30 PM	1	4	91	2	0	98	0	7	0	6	0	13	0	6	111	6	0	123	0	1	5	7	0	13	247
4:45 PM	0	5	85	6	0	96	0	3	0	3	0	6	0	4	133	7	0	144	0	1	3	13	0	17	263
Hourly Total	2	18	374	11	0	405	0	16	3	17	0	36	0	19	521	25	0	565	0	4	12	40	0	56	1062
5:00 PM	0	4	82	2	0	88	0	1	3	5	0	9	0	7	117	8	0	132	0	0	1	13	0	14	243
5:15 PM	0	3	86	3	0	92	0	2	2	1	0	5	0	6	139	5	0	150	0	0	1	14	0	15	262
5:30 PM	0	4	69	2	0	75	0	3	3	2	0	8	0	6	91	4	0	101	0	3	5	14	0	22	206
5:45 PM	0	6	106	0	0	112	0	2	3	4	0	9	1	7	80	8	0	96	0	3	1	12	0	16	233
Hourly Total	0	17	343	7	0	367	0	8	11	12	0	31	1	26	427	25	0	479	0	6	8	53	0	67	944
6:00 PM	0	4	59	1	0	64	0	1	3	2	0	6	0	13	77	3	0	93	0	1	0	10	0	11	174
6:15 PM	0	3	61	0	0	64	0	3	2	5	0	10	0	14	88	7	0	109	0	0	2	6	0	8	191
6:30 PM	0	2	61	2	0	65	0	4	2	0	0	6	0	9	59	2	0	70	0	0	3	10	0	13	154
6:45 PM	0	4	34	6	0	44	0	1	4	1	0	6	0	9	46	2	0	57	0	4	4	7	0	15	122
Hourly Total	0	13	215	9	0	237	0	9	11	8	0	28	0	45	270	14	0	329	0	5	9	33	0	47	641
7:00 PM	0	5	38	1	0	44	0	2	1	0	0	3	0	7	67	1	0	75	0	3	1	5	0	9	131
7:15 PM	0	2	39	1	0	42	0	1	0	0	0	1	0	11	46	1	0	58	0	0	3	14	0	17	118
7:30 PM	0	1	46	1	0	48	0	1	0	0	0	1	0	12	58	0	0	70	0	1	3	6	0	10	129
7:45 PM	0	2	20	0	0	22	0	0	3	0	0	3	0	7	55	3	0	65	0	0	3	5	0	8	98
Hourly Total	0	10	143	3	0	156	0	4	4	0	0	8	0	37	226	5	0	268	0	4	10	30	0	44	476
8:00 PM	0	4	42	3	0	49	0	3	3	1	0	7	0	5	50	1	0	56	0	1	5	3	0	9	121
8:15 PM	0	3	22	1	0	26	0	1	1	5	0	7	0	6	34	2	0	42	0	2	4	7	0	13	88
8:30 PM	0	2	40	1	0	43	0	1	1	3	0	5	0	6	39	3	0	48	0	2	1	8	0	11	107
8:45 PM	0	1	44	1	0	46	0	2	1	1	0	4	0	4	50	3	0	57	0	2	1	4	0	7	114
Hourly Total	0	10	148	6	0	164	0	7	6	10	0	23	0	21	173	9	0	203	0	7	11	22	0	40	430
9:00 PM	0	1	30	0	0	31	0	0	0	0	0	0	0	7	36	0	0	43	0	3	0	3	0	6	80
9:15 PM	0	2	20	1	0	23	0	3	0	1	0	4	0	9	36	1	0	46	0	1	1	6	0	8	81
9:30 PM	0	0	18	1	0	19	0	1	0	0	0	1	0	2	37	3	0	42	0	0	3	4	0	7	69
9:45 PM	0	1	14	1	0	16	0	0	0	0	0	0	0	2	19	0	0	21	0	2	1	3	0	6	43
Hourly Total	0	4	82	3	0	89	0	4	0	1	0	5	0	20	128	4	0	152	0	6	5	16	0	27	273
10:00 PM	0	1	12	1	0	14	0	1	1	1	0	3	0	5	28	3	0	36	0	3	2	2	0	7	60
10:15 PM	0	0	11	2	0	13	0	0	0	1	0	1	0	4	14	1	0	19	0	1	0	3	0	4	37
10:30 PM	0	0	5	0	0	5	0	1	1	0	0	2	0	4	22	3	0	29	0	0	0	1	0	1	37
10:45 PM	0	0	10	0	0	10	0	0	0	0	0	0	0	1	11	2	0	14	0	0	0	0	0	0	24
Hourly Total	0	1	38	3	0	42	0	2	2	2	0	6	0	14	75	9	0	98	0	4	2	6	0	12	158
11:00 PM	1	0	4	0	0	5	0	0	1	0	0	1	0	1	3	1	0	5	0	0	0	0	0	0	11
11:15 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	3	3	0	0	6	0	0	0	2	0	2	11
11:30 PM	0	0	4	2	0	6	0	0	0	0	0	0	0	1	5	2	0	8	0	0	0	2	0	2	16
11:45 PM	0	0	4	1	0	5	0	0	0	0	0	0	0	3	5	1	0	9	0	1	0	0	0	1	15
Hourly Total	1	0	15	3	0	19	0	0	1	0	0	1	0	8	16	4	0	28	0	1	0	4	0	5	53
DAILY TOTAL Cars	4	157	4210	162	2	4533	0	161	109	165	0	435	3	424	4388	161	1	4976	0	143	119	745	0	1007	10951
Heavy Vehicles	4	151	4114	143	2	4412	0	161	107	161	0	429	3	420	4289	160	1	4872	0	143	118	738	0	999	10712
Heavy Vehicle %	0	6	96	19	0	121	0	0	2	4	0	6	0	4	99	1	0	104	0	0	1	7	0	8	239
	0.00%	3.82%	2.28%	11.73%	0.00%	2.67%	0.00%	0.00%	1.83%	2.42%	0.00%	1.38%	0.00%	0.94%	2.26%	0.62%	0.00%	2.09%	0.00%	0.00%	0.84%	0.94%	0.00%	0.79%	2.18%

TMC 2505 - CSAH 23 @ Pointcross Dr
Circle Pines MN

Wednesday, January 29, 2025

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	4	82	6	0	92	0	8	2	3	0	13	0	2	47	1	0	50	0	0	2	16	0	18	173
7:30 AM	0	0	84	42	0	126	0	4	6	4	0	14	0	3	68	1	0	72	0	2	1	16	0	19	231
7:45 AM	1	1	131	12	0	145	0	9	4	5	0	18	0	1	64	4	0	69	0	0	6	22	0	28	260
8:00 AM	0	2	104	0	0	106	0	3	1	4	0	8	0	2	40	2	0	44	0	1	1	19	0	21	179
Peak Hour Total PHF	1	7	401	60	0	469	0	24	13	16	0	53	0	8	219	8	0	235	0	3	10	73	0	86	843
	0.250	0.438	0.765	0.357	0.000	0.809	0.000	0.667	0.542	0.800	0.000	0.736	0.000	0.667	0.805	0.500	0.000	0.816	0.000	0.375	0.417	0.830	0.000	0.768	0.811

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	1	3	104	2	0	110	0	3	2	5	0	10	0	6	149	7	0	162	0	0	3	8	0	11	293
4:15 PM	0	6	94	1	0	101	0	3	1	3	0	7	0	3	128	5	0	136	0	2	1	12	0	15	259
4:30 PM	1	4	91	2	0	98	0	7	0	6	0	13	0	6	111	6	0	123	0	1	5	7	0	13	247
4:45 PM	0	5	85	6	0	96	0	3	0	3	0	6	0	4	133	7	0	144	0	1	3	13	0	17	263
Peak Hour Total PHF	2	18	374	11	0	405	0	16	3	17	0	36	0	19	521	25	0	565	0	4	12	40	0	56	1062
	0.500	0.750	0.899	0.458	0.000	0.920	0.000	0.571	0.375	0.708	0.000	0.692	0.000	0.792	0.874	0.893	0.000	0.872	0.000	0.500	0.600	0.769	0.000	0.824	0.906

Total Vehicles On Leg		9233	
Vehicles Entering Intersection	4533	Vehicles Exiting Intersection	4700
Southbound			
Cars	143	4114	151
Heavy	19	96	6
Total	162	4210	157



Total Vehicles on Leg 1702	Vehicles Entering Intersection 1007	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 695		0	0	0
			0	0	0
			143	0	143
			118	1	119
			738	7	745



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 435	Total Vehicles on Leg 872
161	4	165		Vehicles Exiting Intersection 437	
107	2	109			
161	0	161			
0	0	0			
0	0	0			



					
Cars	1	3	420	4289	160
Heavy	0	0	4	99	1
Total	1	3	424	4388	161
Northbound					
Vehicles Entering Intersection 4976			Vehicles Exiting Intersection 5119		
Total Vehicles On Leg			10095		

Heavy Vehicles

[illegible]

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2505

Study Date : 02/10/2025

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 23

Number of Lanes : 2+

Total Approach Volume: 4,976

Southbound: CSAH 23

Number of Lanes :2+

Total Approach Volume: 4,533

Minor Street Approaches

Eastbound: Pointcross Dr

Number of Lanes :1

Total Approach Volume: 1,007

Westbound: Pointcross Dr

Number of Lanes :1

Total Approach Volume: 435

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 5 hours, 8 are needed

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

Required 1A volumes reached for 2 hours, 8 are needed

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

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

Number of hours (2) 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 2505

Study Date : 02/10/2025

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**

Major Road						Minor Road			
CSAH 23						Pointcross Dr			
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?	
16:00 - 17:00	565	+	405	=	970	56	36	No	
15:45 - 16:45	535	+	413	=	948	48	37	No	
16:30 - 17:30	549	+	374	=	923	59	33	No	
15:30 - 16:30	529	+	391	=	920	49	32	No	
16:15 - 17:15	535	+	383	=	918	59	35	No	
15:15 - 16:15	507	+	382	=	889	51	30	No	
16:45 - 17:45	527	+	351	=	878	68	28	No	
17:00 - 18:00	479	+	367	=	846	67	31	No	
14:45 - 15:45	477	+	334	=	811	78	27	No	
15:00 - 16:00	445	+	366	=	811	51	25	No	
14:30 - 15:30	466	+	330	=	796	84	26	No	
17:15 - 18:15	440	+	343	=	783	64	28	No	
14:15 - 15:15	442	+	303	=	745	82	25	No	
17:30 - 18:30	399	+	315	=	714	57	33	No	
07:15 - 08:15	235	+	469	=	704	86	53	No	
14:00 - 15:00	438	+	263	=	701	85	24	No	
07:30 - 08:30	239	+	455	=	694	81	49	No	
07:00 - 08:00	235	+	442	=	677	80	55	No	
17:45 - 18:45	368	+	305	=	673	48	31	No	
13:45 - 14:45	385	+	254	=	639	61	22	No	
07:45 - 08:45	233	+	392	=	625	73	40	No	
13:30 - 14:30	354	+	239	=	593	49	19	No	
08:30 - 09:30	270	+	312	=	582	71	32	No	
08:45 - 09:45	251	+	320	=	571	70	34	No	
08:15 - 09:15	264		305		569	61	35	No	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2505

Study Date : 02/10/2025

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

Site Data Required

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

Volume Requirements

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

Veh/Hr Minor = **53**

Major Road						Minor Road		
CSAH 23						Pointcross Dr		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:00 - 17:00	565	+	405	=	970	56	36	Yes
17:00 - 18:00	479	+	367	=	846	67	31	Yes
14:45 - 15:45	477	+	334	=	811	78	27	Yes
07:00 - 08:00	235	+	442	=	677	80	55	Yes
13:45 - 14:45	385	+	254	=	639	61	22	Yes
15:45 - 16:45	535	+	413	=	948	48	37	No
13:30 - 14:30	354	+	239	=	593	49	19	No
08:30 - 09:30	270	+	312	=	582	71	32	No
08:45 - 09:45	251	+	320	=	571	70	34	No
08:15 - 09:15	264	+	305	=	569	61	35	No
18:00 - 19:00	329	+	237	=	566	47	28	No
12:15 - 13:15	291	+	273	=	564	66	21	No
06:45 - 07:45	202	+	359	=	561	72	47	No
13:15 - 14:15	331	+	225	=	556	40	18	No
08:00 - 09:00	236	+	318	=	554	63	33	No
12:00 - 13:00	292	+	255	=	547	69	20	No
13:00 - 14:00	306	+	238	=	544	38	18	No
12:30 - 13:30	297	+	245	=	542	55	19	No
09:00 - 10:00	229	+	309	=	538	65	29	No
11:45 - 12:45	283	+	254	=	537	65	20	No
12:45 - 13:45	296	+	234	=	530	44	17	No
18:15 - 19:15	311	+	217	=	528	45	25	No
11:30 - 12:30	255	+	251	=	506	60	20	No
11:00 - 12:00	250	+	240	=	490	53	21	No
11:15 - 12:15	262		223		485	54	20	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2505

Study Date : 02/10/2025

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 2 hours meet 1A minimums.
10 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						Minor Road				
CSAH 23						Pointcross Dr				
Time	Major NB	+	Major SB	=	Total	Minor EB		Minor WB		Met1A?
07:15 - 08:15	235	+	469	=	704	86		53		Yes
14:00 - 15:00	438	+	263	=	701	85		24		Yes
16:00 - 17:00	565	+	405	=	970	56		36		No
15:45 - 16:45	535	+	413	=	948	48		37		No
16:30 - 17:30	549	+	374	=	923	59		33		No
15:30 - 16:30	529	+	391	=	920	49		32		No
16:15 - 17:15	535	+	383	=	918	59		35		No
15:15 - 16:15	507	+	382	=	889	51		30		No
16:45 - 17:45	527	+	351	=	878	68		28		No
17:00 - 18:00	479	+	367	=	846	67		31		No
15:00 - 16:00	445	+	366	=	811	51		25		No
17:15 - 18:15	440	+	343	=	783	64		28		No

Time	Major NB	+	Major SB	=	Total	Minor EB		Minor WB		Met1B?
16:30 - 17:30	549	+	374	=	923	59		33		Yes
15:30 - 16:30	529	+	391	=	920	49		32		Yes
14:30 - 15:30	466	+	330	=	796	84		26		Yes
17:30 - 18:30	399	+	315	=	714	57		33		Yes
07:45 - 08:45	233	+	392	=	625	73		40		Yes
13:30 - 14:30	354	+	239	=	593	49		19		Yes
08:45 - 09:45	251	+	320	=	571	70		34		Yes
06:45 - 07:45	202	+	359	=	561	72		47		Yes
12:30 - 13:30	297	+	245	=	542	55		19		Yes
11:30 - 12:30	255	+	251	=	506	60		20		Yes
11:00 - 12:00	250	+	240	=	490	53		21		No
11:15 - 12:15	262	+	223	=	485	54		20		No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2505

Study Date : 02/10/2025

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.

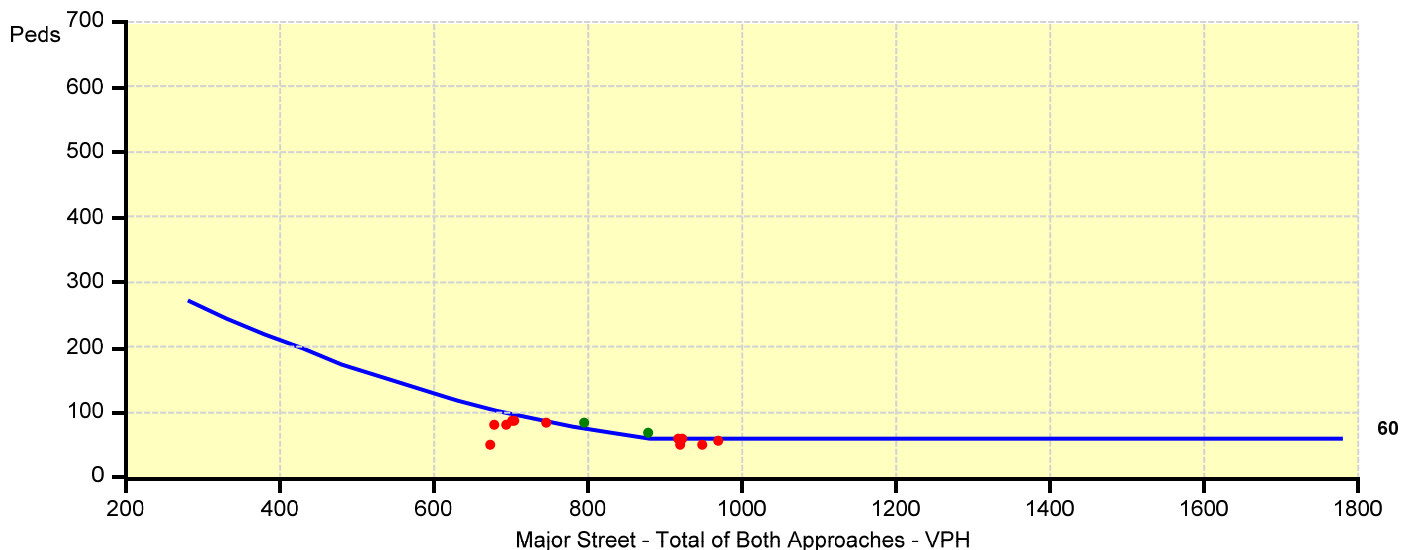
Summary

Only 2 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**

Major Road						Minor Road		
CSAH 23						Pointcross Dr		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:45 - 17:45	527	+	351	=	878	68	28	Yes
14:30 - 15:30	466	+	330	=	796	84	26	Yes
16:00 - 17:00	565	+	405	=	970	56	36	No
15:45 - 16:45	535	+	413	=	948	48	37	No
16:30 - 17:30	549	+	374	=	923	59	33	No
15:30 - 16:30	529	+	391	=	920	49	32	No
16:15 - 17:15	535	+	383	=	918	59	35	No
14:15 - 15:15	442	+	303	=	745	82	25	No
07:15 - 08:15	235	+	469	=	704	86	53	No
14:00 - 15:00	438	+	263	=	701	85	24	No
07:30 - 08:30	239	+	455	=	694	81	49	No
07:00 - 08:00	235	+	442	=	677	80	55	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2505

Study Date : 02/10/2025

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.

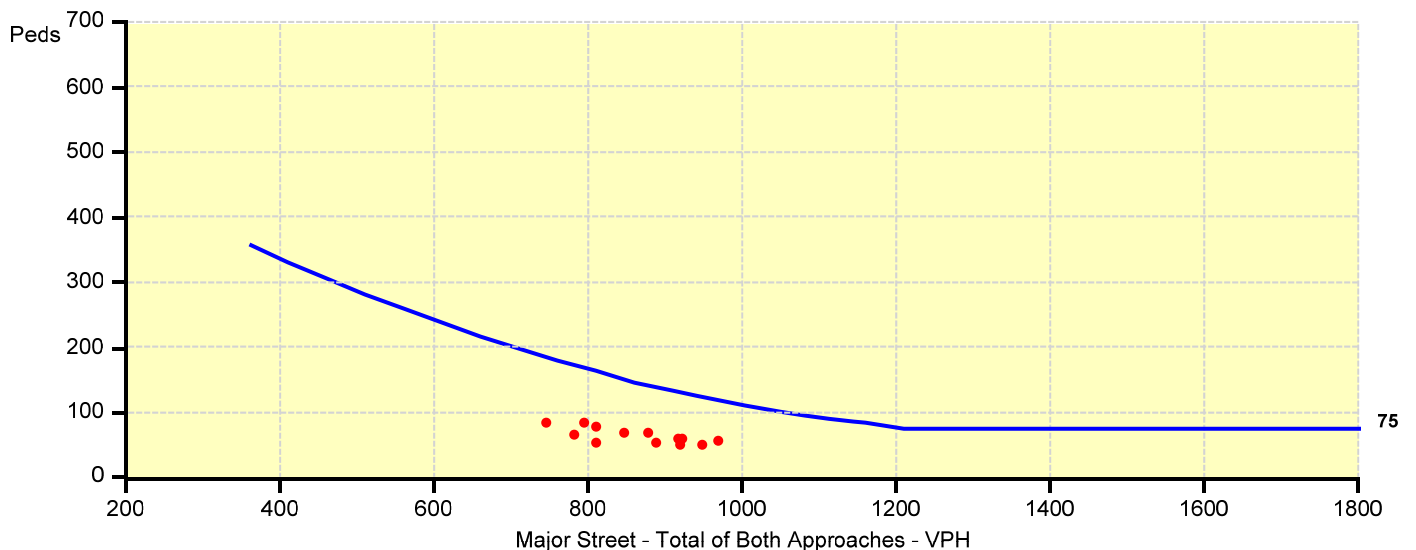
Summary

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**

Major Road CSAH 23						Minor Road Pointcross Dr		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:00 - 17:00	565	+	405	=	970	56	36	No
15:45 - 16:45	535	+	413	=	948	48	37	No
16:30 - 17:30	549	+	374	=	923	59	33	No
15:30 - 16:30	529	+	391	=	920	49	32	No
16:15 - 17:15	535	+	383	=	918	59	35	No
15:15 - 16:15	507	+	382	=	889	51	30	No
16:45 - 17:45	527	+	351	=	878	68	28	No
17:00 - 18:00	479	+	367	=	846	67	31	No
14:45 - 15:45	477	+	334	=	811	78	27	No
15:00 - 16:00	445	+	366	=	811	51	25	No
14:30 - 15:30	466	+	330	=	796	84	26	No
17:15 - 18:15	440	+	343	=	783	64	28	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2505

Study Date : 02/25/2025

Multiway Stop Warrants - Summary

Major Street Approaches

Northbound: CSAH 23

Number of Lanes : 1

Total Approach Volume: 4,976

Southbound: CSAH 23

Number of Lanes : 1

Total Approach Volume: 4,533

Minor Street Approaches

Eastbound: Pointcross Dr

Number of Lanes : 1

Total Approach Volume: 1,007

Westbound: Pointcross Dr

Number of Lanes : 1

Total Approach Volume: 435

Warrant Summary (Rural Values Apply)

Criteria A - Interim Measure..... **Not Evaluated**
If traffic signals are justified, stop signs can be installed as an interim measure.

Criteria B - Crash Experience..... **Not Satisfied**
Number of crashes (-1) is less than minimum required (5).

Criteria C - Minimum Volumes and Delays..... **Not Satisfied**
Average of 8 highest hours is less than volume criteria.

Criteria D - 80% of Volumes, Delays, and Crashes..... **Not Satisfied**
Number of crashes (-1) is less than minimum required (4).
Average of 8 highest hours is less than volume criteria.

Criteria C Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
16:00 - 17:00	970	710.3	92	98.4	210	140	No
17:00 - 18:00	846		98				
14:45 - 15:45	811		105				
07:15 - 08:15	704		142				
13:45 - 14:45	639		83				
08:30 - 09:30	582		105				
12:15 - 13:15	564		87				
18:00 - 19:00	566		75				
11:00 - 12:00	490		74				
06:15 - 07:15	415		104				
09:30 - 10:30	427		82				
19:00 - 20:00	424		52				

Criteria D Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
16:00 - 17:00	970	710.3	92	98.4	240	160	No
17:00 - 18:00	846		98				
14:45 - 15:45	811		105				
07:15 - 08:15	704		142				
13:45 - 14:45	639		83				
08:30 - 09:30	582		105				
12:15 - 13:15	564		87				
18:00 - 19:00	566		75				
11:00 - 12:00	490		74				
06:15 - 07:15	415		104				
09:30 - 10:30	427		82				
19:00 - 20:00	424		52				