

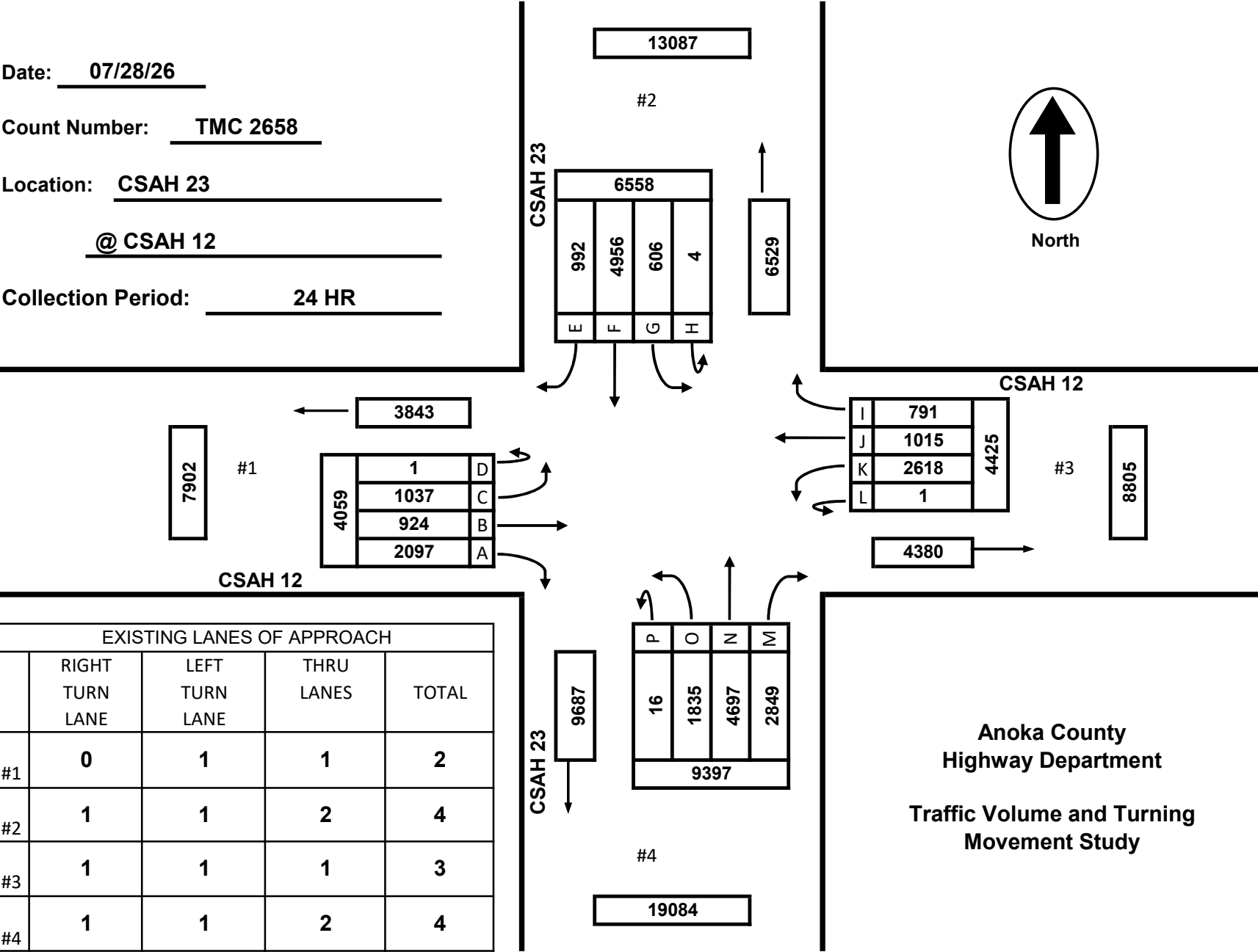
Date: 07/28/26

Count Number: TMC 2658

Location: CSAH 23

@ CSAH 12

Collection Period: 24 HR



Date: 07/28/26

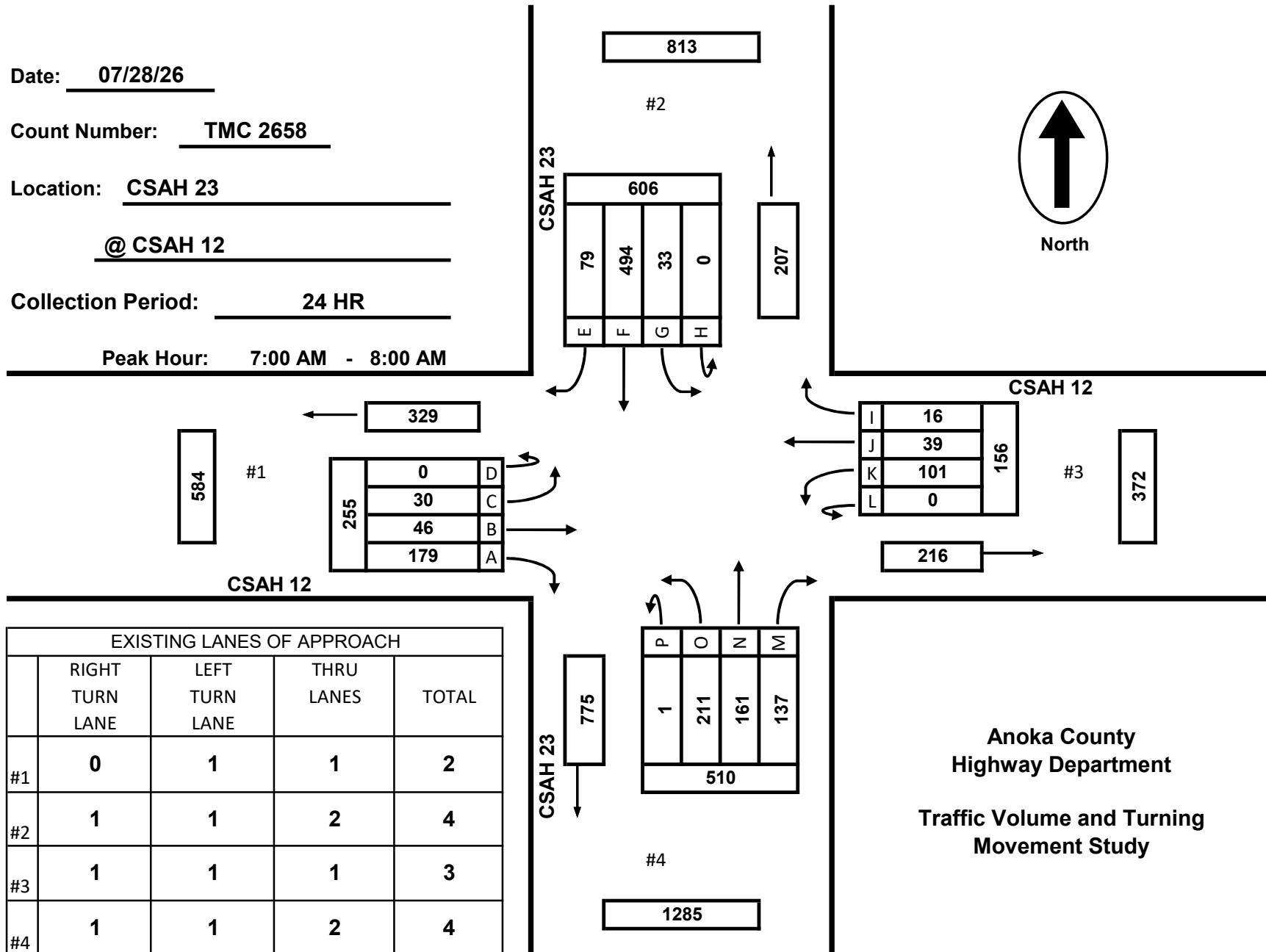
Count Number: TMC 2658

Location: CSAH 23

@ CSAH 12

Collection Period: 24 HR

Peak Hour: 7:00 AM - 8:00 AM



Date: 07/28/26

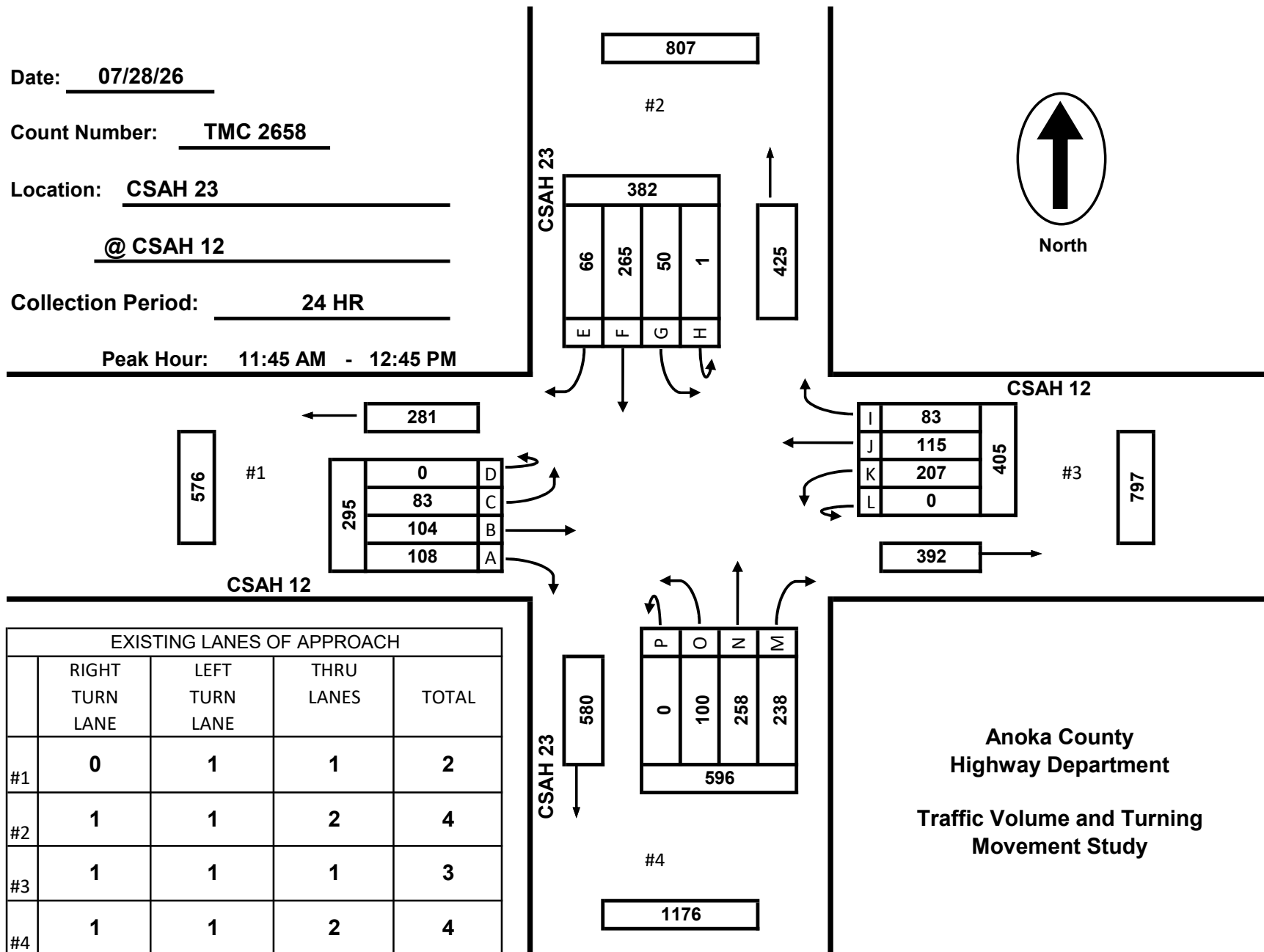
Count Number: TMC 2658

Location: CSAH 23

@ CSAH 12

Collection Period: 24 HR

Peak Hour: 11:45 AM - 12:45 PM



Date: 07/28/26

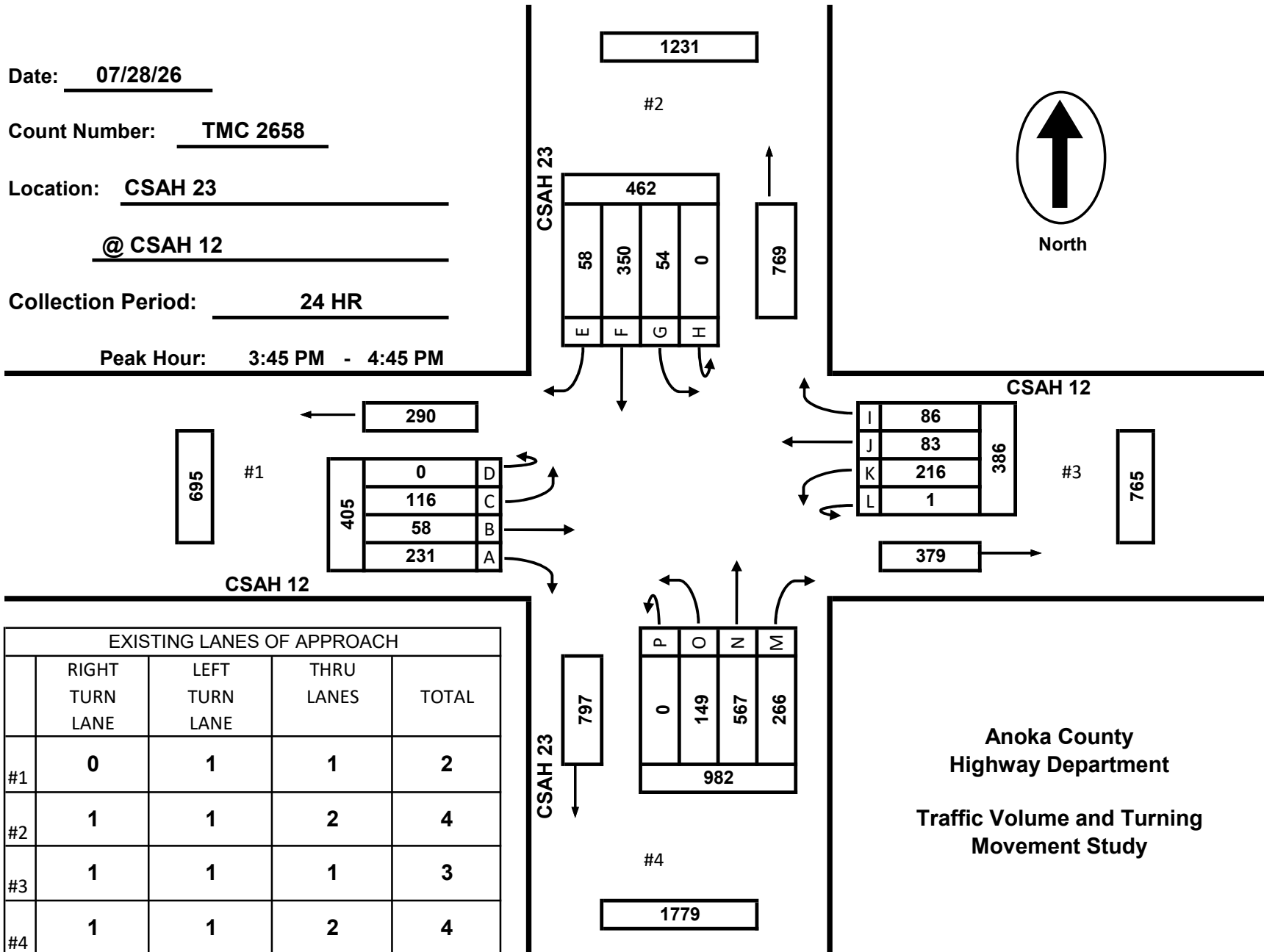
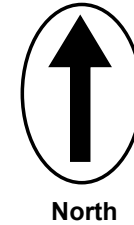
Count Number: TMC 2658

Location: CSAH 23

@ CSAH 12

Collection Period: 24 HR

Peak Hour: 3:45 PM - 4:45 PM



**Anoka County
Highway Department**

**Traffic Volume and Turning
Movement Study**

TMC 2658 - CSAH 23 @ CSAH 12
Lino Lakes MN
Tuesday, July 28, 2026

Time	Southbound CSAH 23						Westbound CSAH 12						Northbound CSAH 23						Eastbound CSAH 12						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	1	0	1	10
12:15 AM	0	0	3	0	0	3	0	1	0	0	0	1	0	1	14	1	0	16	0	0	0	2	0	2	22
12:30 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	2	6	0	0	8	0	2	0	3	0	5	16
12:45 AM	0	0	5	0	0	5	0	0	0	0	0	0	1	0	5	1	0	7	0	1	0	0	0	1	13
Hourly Total	0	0	15	0	0	15	0	1	0	0	0	1	1	4	29	2	0	36	0	3	0	6	0	9	61
1:00 AM	0	0	1	2	0	3	0	2	0	0	0	2	1	0	2	1	0	4	0	0	0	0	0	0	9
1:15 AM	0	0	4	1	0	5	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
1:30 AM	0	0	1	2	0	3	0	0	0	0	0	0	1	1	6	1	0	9	0	0	0	1	0	1	13
1:45 AM	0	1	3	0	0	4	0	0	0	0	0	0	0	0	4	2	0	6	0	0	1	0	0	1	11
Hourly Total	0	1	9	5	0	15	0	2	0	0	0	2	2	1	13	4	0	20	0	0	1	1	0	2	39
2:00 AM	0	0	1	1	0	2	0	1	0	0	0	1	0	0	3	0	0	3	0	0	0	1	0	1	7
2:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	0	1	6
2:30 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	1	0	1	7
2:45 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	1	6	5	0	12	0	1	0	3	0	4	18
Hourly Total	0	0	8	1	0	9	0	1	0	0	0	1	0	2	14	5	0	21	0	2	0	5	0	7	38
3:00 AM	0	0	1	1	0	2	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	1	0	1	7
3:15 AM	0	0	4	1	0	5	0	1	0	0	0	1	0	1	2	1	0	4	0	0	0	2	0	2	12
3:30 AM	0	0	9	0	0	9	0	0	0	0	0	0	0	5	1	2	0	8	0	0	1	1	0	2	19
3:45 AM	0	0	8	1	0	9	0	1	0	0	0	1	0	12	1	4	0	17	0	0	0	1	0	1	28
Hourly Total	0	0	22	3	0	25	0	2	0	0	0	2	0	20	6	7	0	33	0	0	1	5	0	6	66
4:00 AM	0	0	8	2	0	10	0	0	0	0	0	0	0	1	3	0	0	4	0	1	0	3	0	4	18
4:15 AM	0	0	18	1	0	19	0	0	0	0	0	0	0	5	1	0	0	6	0	1	0	3	0	4	29
4:30 AM	0	1	29	8	0	38	0	0	0	0	0	0	0	22	7	2	0	31	0	1	1	3	0	5	74
4:45 AM	0	0	31	5	0	36	0	0	0	1	0	1	1	11	6	3	0	21	0	0	2	9	0	11	69
Hourly Total	0	1	86	16	0	103	0	0	0	1	0	1	1	39	17	5	0	62	0	3	3	18	0	24	190
5:00 AM	0	0	43	0	0	43	0	2	1	2	0	5	0	13	7	7	0	27	0	0	3	10	0	13	88
5:15 AM	0	0	59	11	0	70	0	3	2	1	0	6	0	16	7	8	0	31	0	1	2	14	0	17	124
5:30 AM	0	1	59	8	0	68	0	4	3	1	0	8	0	19	21	7	0	47	0	4	1	16	0	21	144
5:45 AM	0	5	53	8	0	66	0	4	5	4	0	13	0	33	18	18	1	69	0	3	2	18	0	23	171
Hourly Total	0	6	214	27	0	247	0	13	11	8	0	32	0	81	53	40	1	174	0	8	8	58	0	74	527
6:00 AM	0	1	84	13	0	98	0	8	2	0	0	10	0	27	23	11	0	61	0	2	3	20	0	25	194
6:15 AM	0	4	103	20	0	127	0	10	5	1	0	16	0	24	31	14	0	69	0	9	4	35	0	48	260
6:30 AM	0	5	115	18	0	138	0	17	5	4	0	26	0	40	32	20	0	92	0	10	3	34	0	47	303
6:45 AM	0	10	103	23	0	136	0	14	8	1	0	23	0	45	33	23	0	101	0	13	3	41	0	57	317
Hourly Total	0	20	405	74	0	499	0	49	20	6	0	75	0	136	119	68	0	323	0	34	13	130	0	177	1074
7:00 AM	0	10	127	18	0	155	0	22	7	4	0	33	0	53	33	36	0	122	0	1	8	49	0	58	368
7:15 AM	0	5	135	15	0	155	0	32	10	2	1	44	1	58	31	25	0	115	0	4	13	50	0	67	381
7:30 AM	0	3	118	20	0	141	0	20	7	7	0	34	0	46	42	38	0	126	0	13	12	43	0	68	369
7:45 AM	0	15	114	26	0	155	0	27	15	3	0	45	0	54	55	38	1	147	0	12	13	37	0	62	409
Hourly Total	0	33	494	79	0	606	0	101	39	16	1	156	1	211	161	137	1	510	0	30	46	179	0	255	1527

TMC 2658 - CSAH 23 @ CSAH 12
Lino Lakes MN
Tuesday, July 28, 2026

Time	Southbound CSAH 23						Westbound CSAH 12						Northbound CSAH 23						Eastbound CSAH 12						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	11	102	12	0	125	0	28	9	5	0	42	0	29	46	33	0	108	0	11	15	33	0	59	334
8:15 AM	0	8	110	16	0	134	0	35	16	11	1	62	0	26	60	38	0	124	0	12	14	35	0	61	381
8:30 AM	0	7	112	19	0	138	0	32	9	4	0	45	0	22	45	27	1	94	0	16	13	27	0	56	333
8:45 AM	0	7	88	17	0	112	0	28	10	4	0	42	0	32	59	43	0	134	0	12	18	37	0	67	355
Hourly Total	0	33	412	64	0	509	0	123	44	24	1	191	0	109	210	141	1	460	0	51	60	132	0	243	1403
9:00 AM	0	16	80	22	0	118	0	35	10	12	0	57	0	27	64	46	0	137	0	17	17	35	0	69	381
9:15 AM	0	14	85	14	0	113	0	36	14	16	0	66	1	24	43	39	0	107	0	9	12	39	0	60	346
9:30 AM	0	11	71	12	0	94	0	35	4	10	0	49	1	20	49	36	0	106	0	10	8	21	0	39	288
9:45 AM	0	13	62	11	0	86	0	34	15	11	0	60	0	15	49	52	0	116	0	13	12	22	0	47	309
Hourly Total	0	54	298	59	0	411	0	140	43	49	0	232	2	86	205	173	0	466	0	49	49	117	0	215	1324
10:00 AM	0	13	54	8	0	75	0	35	12	16	1	63	0	25	48	40	0	113	0	15	17	26	0	58	309
10:15 AM	0	16	72	12	0	100	0	35	17	11	0	63	2	24	58	44	0	128	0	17	10	18	0	45	336
10:30 AM	0	10	70	17	0	97	0	45	8	14	0	67	0	31	50	42	2	123	0	13	16	25	0	54	341
10:45 AM	0	8	67	22	0	97	0	34	13	14	0	61	0	27	63	57	0	147	1	6	18	23	0	48	339
Hourly Total	0	47	263	59	0	369	0	149	50	55	1	254	2	107	219	183	2	511	1	51	61	92	0	205	1339
11:00 AM	0	4	56	16	0	76	0	45	16	11	0	72	0	26	51	60	1	137	0	12	23	28	0	63	348
11:15 AM	0	7	83	12	0	102	0	46	23	15	0	84	0	18	74	59	0	151	0	12	23	27	0	62	399
11:30 AM	2	7	60	17	0	96	0	42	22	10	2	74	0	24	65	62	2	151	0	13	27	33	0	73	394
11:45 AM	0	11	63	18	0	92	0	56	25	24	0	105	0	22	55	66	0	143	0	20	24	25	0	69	409
Hourly Total	2	39	262	63	0	366	0	189	86	60	2	335	0	90	245	247	3	582	0	57	97	113	0	267	1550
12:00 PM	0	16	68	16	0	100	0	56	29	19	0	104	0	26	70	53	4	149	0	19	25	37	0	81	434
12:15 PM	1	12	65	16	0	94	0	46	30	20	1	96	0	24	70	72	1	166	0	23	25	20	0	68	424
12:30 PM	0	11	69	16	0	96	0	49	31	20	2	100	0	28	63	47	0	138	0	21	30	26	0	77	411
12:45 PM	0	12	55	10	0	77	0	41	25	14	0	80	0	18	64	59	0	141	0	23	15	26	0	64	362
Hourly Total	1	51	257	58	0	367	0	192	115	73	3	380	0	96	267	231	5	594	0	86	95	109	0	290	1631
1:00 PM	0	13	62	13	0	88	0	52	27	15	0	94	1	14	65	60	0	140	0	14	26	23	0	63	385
1:15 PM	0	17	61	9	0	87	0	46	17	14	1	77	1	30	76	43	0	150	0	17	13	34	0	64	378
1:30 PM	0	13	65	16	0	94	0	60	17	14	0	91	0	25	81	45	0	151	0	18	23	27	0	68	404
1:45 PM	0	19	59	20	0	98	0	41	31	14	0	86	0	30	62	50	2	142	0	17	15	24	0	56	382
Hourly Total	0	62	247	58	0	367	0	199	92	57	1	348	2	99	284	198	2	583	0	66	77	108	0	251	1549
2:00 PM	0	9	61	18	0	88	0	56	21	12	0	89	0	35	73	55	0	163	0	11	15	44	0	70	410
2:15 PM	0	6	55	19	0	80	0	47	16	15	0	78	0	25	82	53	1	160	0	21	16	37	0	74	392
2:30 PM	0	7	70	24	0	101	0	62	7	15	0	84	0	26	102	57	0	185	0	24	10	38	0	72	442
2:45 PM	0	11	76	18	0	105	0	48	14	18	1	80	0	41	112	63	0	216	0	16	19	45	0	80	481
Hourly Total	0	33	262	79	0	374	0	213	58	60	1	331	0	127	369	228	1	724	0	72	60	164	0	296	1725
3:00 PM	1	19	59	19	0	98	0	55	22	23	0	100	1	24	103	59	0	187	0	31	25	81	0	137	522
3:15 PM	0	5	75	11	0	91	0	60	17	18	0	95	0	35	129	60	0	224	0	14	13	44	0	71	481
3:30 PM	0	9	89	13	0	111	0	65	11	16	0	92	0	30	122	72	1	224	0	34	19	53	0	106	533
3:45 PM	0	16	99	10	0	125	0	57	17	19	0	93	0	34	156	67	0	257	0	23	16	55	0	94	569
Hourly Total	1	49	322	53	0	425	0	237	67	76	0	380	1	123	510	258	1	892	0	102	73	233	0	408	2105

TMC 2658 - CSAH 23 @ CSAH 12
Lino Lakes MN
Tuesday, July 28, 2026

Time	Southbound CSAH 23						Westbound CSAH 12						Northbound CSAH 23						Eastbound CSAH 12						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	13	76	8	0	97	0	54	22	20	0	96	0	33	141	53	1	227	0	35	18	72	0	125	545
4:15 PM	0	11	71	16	0	98	0	54	19	22	1	95	0	41	135	63	2	239	0	24	14	49	0	87	519
4:30 PM	0	14	104	24	0	142	1	51	25	25	0	102	0	41	135	83	0	259	0	34	10	55	0	99	602
4:45 PM	0	5	80	22	0	107	0	64	21	12	0	97	0	43	118	57	0	218	0	31	13	45	0	89	511
Hourly Total	0	43	331	70	0	444	1	223	87	79	1	390	0	158	529	256	3	943	0	124	55	221	0	400	2177
5:00 PM	0	9	71	23	0	103	0	59	21	16	1	96	0	28	131	70	1	229	0	36	16	57	0	109	537
5:15 PM	0	20	90	24	0	134	0	59	17	14	1	90	1	28	131	54	0	214	0	22	11	34	1	67	505
5:30 PM	0	14	80	17	0	111	0	63	24	13	1	100	0	21	129	51	0	201	0	26	21	23	0	70	482
5:45 PM	0	8	63	16	0	87	0	38	21	13	0	72	1	21	95	48	0	165	0	27	19	18	0	64	388
Hourly Total	0	51	304	80	0	435	0	219	83	56	3	358	2	98	486	223	1	809	0	111	67	132	1	310	1912
6:00 PM	0	15	61	8	0	84	0	48	19	13	2	80	0	18	97	48	2	163	0	17	8	24	2	49	376
6:15 PM	0	7	63	10	0	80	0	43	12	14	0	69	0	21	92	46	0	159	0	20	16	16	0	52	360
6:30 PM	0	1	64	14	0	79	0	49	18	14	0	81	0	13	61	45	0	119	0	10	17	14	0	41	320
6:45 PM	0	7	64	14	0	85	0	43	15	16	3	74	0	16	63	37	0	116	0	18	16	19	0	53	328
Hourly Total	0	30	252	46	0	328	0	183	64	57	5	304	0	68	313	176	2	557	0	65	57	73	2	195	1384
7:00 PM	0	7	51	13	0	71	0	47	12	18	4	77	0	7	55	39	2	101	0	16	18	17	0	51	300
7:15 PM	0	9	38	12	0	59	0	48	12	8	0	68	0	15	51	23	0	89	0	7	11	17	0	35	251
7:30 PM	0	5	40	6	0	51	0	26	20	9	1	55	0	16	56	35	0	107	0	11	10	16	0	37	250
7:45 PM	0	5	40	6	0	51	0	27	18	8	4	53	0	6	49	16	0	71	0	15	6	16	0	37	212
Hourly Total	0	26	169	37	0	232	0	148	62	43	9	253	0	44	211	113	2	368	0	49	45	66	0	160	1013
8:00 PM	0	4	28	7	0	39	0	28	20	7	1	55	0	15	47	28	0	90	0	13	8	7	0	28	212
8:15 PM	0	4	34	7	0	45	0	28	9	7	1	44	0	10	54	24	0	88	0	10	5	13	0	28	205
8:30 PM	0	5	36	5	0	46	0	26	6	8	1	40	0	9	48	23	0	80	0	8	5	12	0	25	191
8:45 PM	0	2	29	4	0	35	0	45	13	18	1	76	0	14	41	21	0	76	0	9	12	20	0	41	228
Hourly Total	0	15	127	23	0	165	0	127	48	40	4	215	0	48	190	96	0	334	0	40	30	52	0	122	836
9:00 PM	0	6	24	4	0	34	0	30	15	7	0	52	0	11	40	12	2	63	0	6	8	9	0	23	172
9:15 PM	0	1	35	2	0	38	0	15	6	5	0	26	0	13	34	12	0	59	0	6	9	9	0	24	147
9:30 PM	0	3	22	6	0	31	0	22	12	4	0	38	0	14	29	14	2	57	0	2	4	7	0	13	139
9:45 PM	0	0	20	1	1	21	0	15	6	4	0	25	1	9	22	6	0	38	0	4	2	2	1	8	92
Hourly Total	0	10	101	13	1	124	0	82	39	20	0	141	1	47	125	44	4	217	0	18	23	27	1	68	550
10:00 PM	0	0	24	7	0	31	0	14	3	4	1	21	0	9	23	0	0	32	0	2	1	5	0	8	92
10:15 PM	0	1	15	2	0	18	0	2	0	2	1	4	0	10	29	3	1	42	0	3	1	3	0	7	71
10:30 PM	0	1	17	5	0	23	0	3	3	3	0	9	0	8	13	5	0	26	0	5	1	15	0	21	79
10:45 PM	0	0	12	4	0	16	0	2	0	1	0	3	0	8	11	2	0	21	0	3	0	19	0	22	62
Hourly Total	0	2	68	18	0	88	0	21	6	10	2	37	0	35	76	10	1	121	0	13	3	42	0	58	304
11:00 PM	0	0	8	3	0	11	0	1	0	0	0	1	0	1	12	2	0	15	0	2	0	9	0	11	38
11:15 PM	0	0	11	2	0	13	0	1	1	0	0	2	0	2	11	1	0	14	0	1	0	1	0	2	31
11:30 PM	0	0	5	1	0	6	0	2	0	1	0	3	1	3	10	0	0	14	0	0	0	4	0	4	27
11:45 PM	0	0	4	1	0	5	0	0	0	0	0	0	0	0	13	1	0	14	0	0	0	0	0	0	19
Hourly Total	0	0	28	7	0	35	0	4	1	1	0	6	1	6	46	4	0	57	0	3	0	14	0	17	115
DAILY TOTAL	4	606	4956	992	1	6558	1	2618	1015	791	34	4425	16	1835	4697	2849	30	9397	1	1037	924	2097	4	4059	24439
Cars	4	604	4696	951	1	6255	1	2597	1009	786	17	4393	15	1722	4483	2826	16	9046	1	1007	919	1965	3	3892	23586
Heavy Vehicles	0	2	260	41	0	303	0	21	6	5	17	32	1	113	214	23	14	351	0	30	5	132	1	167	853
Heavy Vehicle %	0.00%	0.33%	5.25%	4.13%	0.00%	4.62%	0.00%	0.80%	0.59%	0.63%	50.00%	0.72%	6.25%	6.16%	4.56%	0.81%	46.67%	3.74%	0.00%	2.89%	0.54%	6.29%	25.00%	4.11%	3.49%

TMC 2658 - CSAH 23 @ CSAH 12
Lino Lakes MN
Tuesday, July 28, 2026
AM Peak Hour (00:00 to 10:00)

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
7:00 AM	0	10	127	18	0	155	0	22	7	4	0	33	0	53	33	36	0	122	0	1	8	49	0	58	368
7:15 AM	0	5	135	15	0	155	0	32	10	2	1	44	1	58	31	25	0	115	0	4	13	50	0	67	381
7:30 AM	0	3	118	20	0	141	0	20	7	7	0	34	0	46	42	38	0	126	0	13	12	43	0	68	369
7:45 AM	0	15	114	26	0	155	0	27	15	3	0	45	0	54	55	38	1	147	0	12	13	37	0	62	409
Peak Hour Total	0	33	494	79	0	606	0	101	39	16	1	156	1	211	161	137	1	510	0	30	46	179	0	255	1527
Peak Hour Heavy Vehicle	0	0	37	5	0	42	0	0	0	1	1	7	0	12	9	1	0	22	0	1	0	12	0	13	78
Peak Hour Heavy Vehicle PHF	0.00%	0.00%	7.49%	6.33%	0.00%	6.93%	0.00%	0.00%	0.00%	6.25%	100.00%	0.64%	0.00%	5.69%	5.59%	0.73%	0.00%	4.31%	0.00%	3.33%	0.00%	6.70%	0.00%	5.10%	5.11%
	0.000	0.550	0.915	0.760	0.000	0.977	0.000	0.789	0.650	0.571	0.250	0.867	0.250	0.909	0.732	0.901	0.250	0.867	0.000	0.577	0.885	0.895	0.000	0.938	0.933

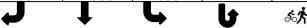
Mid Peak Hour (10:00 - 14:00)

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	
11:45 AM	0	11	63	18	0	92	0	56	25	24	0	105	0	22	55	66	0	143	0	20	24	25	0	69	409
12:00 PM	0	16	68	16	0	100	0	56	29	19	0	104	0	26	70	53	4	149	0	19	25	37	0	81	434
12:15 PM	1	12	65	16	0	94	0	46	30	20	1	96	0	24	70	72	1	166	0	23	25	20	0	68	424
12:30 PM	0	11	69	16	0	96	0	49	31	20	2	100	0	28	63	47	0	138	0	21	30	26	0	77	411
Peak Hour Total	1	50	265	66	0	382	0	207	115	83	3	405	0	100	258	238	5	596	0	83	104	108	0	295	1678
Peak Hour Heavy Vehicle	0	0	13	3	0	16	0	1	0	1	2	2	0	16	15	2	0	33	0	4	1	17	0	22	73
Peak Hour Heavy Vehicle PHF	0.00%	0.00%	4.91%	4.55%	0.00%	4.19%	0.00%	0.48%	0.00%	1.20%	66.67%	0.49%	0.00%	16.00%	5.81%	0.84%	0.00%	5.54%	0.00%	4.82%	0.96%	15.74%	0.00%	7.46%	4.35%
	0.250	0.781	0.960	0.917	0.000	0.955	0.000	0.924	0.927	0.865	0.375	0.964	0.000	0.893	0.921	0.826	0.313	0.898	0.000	0.902	0.867	0.730	0.000	0.910	0.967

PM Peak Hour (14:00 - 24:00)

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	
3:45 PM	0	16	99	10	0	125	0	57	17	19	0	93	0	34	156	67	0	257	0	23	16	55	0	94	569
4:00 PM	0	13	76	8	0	97	0	54	22	20	0	96	0	33	141	53	1	227	0	35	18	72	0	125	545
4:15 PM	0	11	71	16	0	98	0	54	19	22	1	95	0	41	135	63	2	239	0	24	14	49	0	87	519
4:30 PM	0	14	104	24	0	142	1	51	25	25	0	102	0	41	135	83	0	259	0	34	10	55	0	99	602
Peak Hour Total	0	54	350	58	0	462	1	216	83	86	1	386	0	149	567	266	3	982	0	116	58	231	0	405	2235
Peak Hour Heavy Vehicle	0	0	16	2	0	18	0	1	0	0	0	7	0	4	22	1	0	27	0	2	0	5	0	7	53
Peak Hour Heavy Vehicle PHF	0.00%	0.00%	4.57%	3.45%	0.00%	3.90%	0.00%	0.46%	0.00%	0.00%	0.00%	0.26%	0.00%	2.68%	3.88%	0.38%	0.00%	2.75%	0.00%	1.72%	0.00%	2.16%	0.00%	1.73%	2.37%
	0.000	0.844	0.841	0.604	0.000	0.813	0.250	0.947	0.830	0.860	0.250	0.946	0.000	0.909	0.909	0.801	0.375	0.948	0.000	0.829	0.806	0.802	0.000	0.810	0.928

Total Vehicles On Leg		13087	
Vehicles Entering Intersection	6558	Vehicles Exiting Intersection	6529
Southbound			
Cars	951	4696	604
Heavy	41	260	2
Total	992	4956	606



Total Vehicles on Leg 7902	Vehicles Entering Intersection 4059	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 3843				
			3	1	4
			1	0	1
			1007	30	1037
			919	5	924
			1965	132	2097



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 4425	Total Vehicles on Leg 8805
786	5	791		Vehicles Exiting Intersection 4380	
1009	6	1015			
2597	21	2618			
1	0	1			
17	17	34			



Cars	16	15	1722	4483	2826
Heavy	14	1	113	214	23
Total	30	16	1835	4697	2849
Northbound					
Vehicles Entering Intersection 9397			Vehicles Exiting Intersection 9687		
Total Vehicles On Leg			19084		



TMC 2658 - CSAH 23 @ CSAH 12
Lino Lakes MN
Tuesday, July 28, 2026

	Southbound Heavy CSAH 23						Westbound Heavy CSAH 12						Northbound Heavy CSAH 23						Eastbound Heavy CSAH 12						VEHICLE TOTAL	
Time	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 AM	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	
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
12:45 AM	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	
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
1:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
1:15 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	
1:30 AM	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	
1:45 AM	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	
Hourly 'Heavy Vehicles'	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
2:00 AM	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	
2:15 AM	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	
2:30 AM	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	
2:45 AM	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	
Hourly 'Heavy Vehicles'	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	
3:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	3	
3:15 AM	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	
3:30 AM	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	
3:45 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	
Hourly 'Heavy Vehicles'	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	4
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	
4:15 AM	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	
4:30 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	
4:45 AM	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	3	
Hourly 'Heavy Vehicles'	0	0	2	1	0	3	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	2	0	2	7	
5:00 AM	0	0	2	0	0	2	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	1	0	1	5	
5:15 AM	0	0	4	1	0	5	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	3	0	3	9	
5:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	0	2	5	
5:45 AM	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	5	
Hourly 'Heavy Vehicles'	0	0	9	2	0	11	0	0	0	1	0	1	0	0	3	2	0	5	0	1	0	6	0	7	24	
6:00 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	2	0	2	10	
6:15 AM	0	0	9	0	0	9	0	1	0	0	0	1	0	1	2	1	0	4	0	0	0	7	0	7	21	
6:30 AM	0	0	9	0	0	9	0	2	0	1	0	3	0	3	1	0	0	4	0	0	0	1	0	1	17	
6:45 AM	0	0	14	2	0	16	0	0	0	0	0	0	0	2	1	1	0	4	0	0	0	3	0	3	23	
Hourly 'Heavy Vehicles'	0	0	37	2	0	39	0	3	0	1	0	4	0	6	5	4	0	15	0	0	0	13	0	13	71	
7:00 AM	0	0	9	2	0	11	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	2	0	2	18	
7:15 AM	0	0	12	1	0	13	0	0	0	1	1	1	0	3	3	0	0	6	0	1	0	6	0	7	27	
7:30 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	2	0	2	11	
7:45 AM	0	0	12	2	0	14	0	0	0	0	0	0	0	3	2	1	1	6	0	0	0	2	0	2	22	
Hourly 'Heavy Vehicles'	0	0	37	5	0	42	0	0	0	1	1	1	0	12	9	1	1	22	0	1	0	12	0	13	78	

TMC 2658 - CSAH 23 @ CSAH 12
Lino Lakes MN
Tuesday, July 28, 2026

	Southbound Heavy CSAH 23						Westbound Heavy CSAH 12						Northbound Heavy CSAH 23						Eastbound Heavy CSAH 12						VEHICLE 'Heavy Vehicles'
Time	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	
8:00 AM	0	0	5	1	0	6	0	0	0	0	0	0	0	2	6	1	0	9	0	1	0	3	0	4	19
8:15 AM	0	0	6	1	0	7	0	1	0	0	1	1	0	3	7	0	0	10	0	2	0	8	0	10	28
8:30 AM	0	0	8	0	0	8	0	0	0	0	0	0	0	5	3	0	0	8	0	1	1	1	0	3	19
8:45 AM	0	0	7	0	0	7	0	0	1	0	0	1	0	5	7	1	0	13	0	0	0	4	0	4	25
Hourly 'Heavy Vehicles'	0	0	26	2	0	28	0	1	1	0	1	2	0	15	23	2	0	40	0	4	1	16	0	21	91
9:00 AM	0	0	7	0	0	7	0	0	0	0	0	0	0	3	6	0	0	9	0	0	0	4	0	4	20
9:15 AM	0	0	8	1	0	9	0	1	0	0	0	1	0	2	4	0	0	6	0	0	1	5	0	6	22
9:30 AM	0	0	5	0	0	5	0	3	0	0	0	3	0	3	4	0	0	7	0	0	0	3	0	3	18
9:45 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	4	0	4	10
Hourly 'Heavy Vehicles'	0	0	22	1	0	23	0	4	0	0	0	4	0	9	17	0	0	26	0	0	1	16	0	17	70
10:00 AM	0	0	7	0	0	7	0	0	0	0	1	0	0	5	4	1	0	10	0	2	1	3	0	6	23
10:15 AM	0	0	5	1	0	6	0	2	0	0	0	2	0	2	3	0	0	5	0	1	0	3	0	4	17
10:30 AM	0	0	4	2	0	6	0	1	0	0	0	1	0	3	7	0	2	10	0	1	0	3	0	4	21
10:45 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	2	4	0	0	6	0	0	0	2	0	2	13
Hourly 'Heavy Vehicles'	0	0	21	3	0	24	0	3	0	0	1	3	0	12	18	1	2	31	0	4	1	11	0	16	74
11:00 AM	0	0	2	1	0	3	0	0	0	0	0	0	0	4	6	1	1	11	0	1	0	1	0	2	16
11:15 AM	0	0	4	2	0	6	0	0	1	0	0	1	0	2	4	0	0	6	0	0	0	2	0	2	15
11:30 AM	0	0	4	1	0	5	0	0	0	0	1	0	0	3	1	1	1	5	0	2	0	3	0	5	15
11:45 AM	0	0	4	0	0	4	0	1	0	0	0	1	0	3	6	0	0	9	0	1	0	3	0	4	18
Hourly 'Heavy Vehicles'	0	0	14	4	0	18	0	1	1	0	1	2	0	12	17	2	2	31	0	4	0	9	0	13	64
12:00 PM	0	0	5	1	0	6	0	0	0	1	0	1	0	4	2	1	0	7	0	0	0	8	0	8	22
12:15 PM	0	0	2	2	0	4	0	0	0	0	0	0	0	5	5	1	0	11	0	0	1	4	0	5	20
12:30 PM	0	0	2	0	0	2	0	0	0	0	2	0	0	4	2	0	0	6	0	3	0	2	0	5	13
12:45 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	2	3	0	0	5	0	2	0	4	0	6	15
Hourly 'Heavy Vehicles'	0	0	13	3	0	16	0	0	0	1	2	1	0	15	12	2	0	29	0	5	1	18	0	24	70
1:00 PM	0	0	8	0	0	8	0	1	0	0	0	1	0	3	2	1	0	6	0	1	0	4	0	5	20
1:15 PM	0	0	4	1	0	5	0	0	1	0	1	1	0	4	2	0	0	6	0	1	0	2	0	3	15
1:30 PM	0	0	0	0	0	0	0	1	1	0	0	2	0	1	8	1	0	10	0	1	0	5	0	6	18
1:45 PM	0	0	4	3	0	7	0	0	0	0	0	0	0	1	4	1	0	6	0	0	0	2	0	2	15
Hourly 'Heavy Vehicles'	0	0	16	4	0	20	0	2	2	0	1	4	0	9	16	3	0	28	0	3	0	13	0	16	68
2:00 PM	0	1	5	1	0	7	0	0	0	0	0	0	0	2	6	0	0	8	0	0	0	4	0	4	19
2:15 PM	0	0	2	0	0	2	0	0	1	0	0	1	0	3	7	0	0	10	0	1	0	1	0	2	15
2:30 PM	0	0	4	3	0	7	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	3	0	3	17
2:45 PM	0	0	5	2	0	7	0	0	0	0	1	0	0	5	4	0	0	9	0	0	0	0	0	0	16
Hourly 'Heavy Vehicles'	0	1	16	6	0	23	0	0	1	0	1	1	0	10	24	0	0	34	0	1	0	8	0	9	67
3:00 PM	0	0	3	1	0	4	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	7
3:15 PM	0	0	3	1	0	4	0	1	0	0	0	1	0	0	10	0	0	10	0	1	0	1	0	2	17
3:30 PM	0	1	7	0	0	8	0	0	0	1	0	1	0	3	7	0	1	10	0	0	0	1	0	1	20
3:45 PM	0	0	3	2	0	5	0	0	0	0	0	0	0	2	6	1	0	9	0	1	0	2	0	3	17
Hourly 'Heavy Vehicles'	0	1	16	4	0	21	0	1	0	1	0	2	0	5	25	1	1	31	0	3	0	4	0	7	61

TMC 2658 - CSAH 23 @ CSAH 12
Lino Lakes MN
Tuesday, July 28, 2026

	Southbound Heavy CSAH 23						Westbound Heavy CSAH 12						Northbound Heavy CSAH 23						Eastbound Heavy CSAH 12						VEHICLE 'Heavy Vehicles'
Time	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	
4:00 PM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	6	0	1	6	0	1	0	1	0	2	10
4:15 PM	0	0	5	0	0	5	0	0	0	0	0	0	0	2	4	0	2	6	0	0	0	1	0	1	12
4:30 PM	0	0	7	0	0	7	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	14
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3
Hourly 'Heavy Vehicles'	0	0	13	0	0	13	0	1	0	0	0	1	0	2	19	0	3	21	0	1	0	3	0	4	39
5:00 PM	0	0	2	2	0	4	0	0	0	0	1	0	0	0	3	0	1	3	0	0	0	0	0	0	7
5:15 PM	0	0	2	0	0	2	0	0	1	0	1	1	0	2	0	0	0	2	0	0	0	0	1	0	5
5:30 PM	0	0	0	1	0	1	0	0	0	0	1	0	0	0	5	0	0	5	0	0	0	0	0	0	6
5:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5
Hourly 'Heavy Vehicles'	0	0	5	3	0	8	0	0	1	0	3	1	0	2	12	0	1	14	0	0	0	0	1	0	23
6:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	0	1	0	0	0	1	6
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
6:30 PM	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
6:45 PM	0	0	3	0	0	3	0	0	0	0	2	0	0	1	0	1	0	2	0	0	0	0	0	0	5
Hourly 'Heavy Vehicles'	0	0	5	0	0	5	0	0	0	0	2	0	0	1	6	1	0	8	0	1	0	0	0	1	14
7:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
7:30 PM	0	0	1	0	0	1	0	1	0	0	1	1	0	0	2	0	0	2	0	0	0	0	0	0	4
7:45 PM	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
Hourly 'Heavy Vehicles'	0	0	4	0	0	4	0	1	0	0	1	1	0	0	4	0	0	4	0	0	0	0	0	0	9
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
8:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	2	0	0	0	0	0	0	2
8:45 PM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hourly 'Heavy Vehicles'	0	0	1	0	0	1	0	1	0	0	2	1	0	0	1	2	0	3	0	0	0	0	0	0	5
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	1	1
9:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	2	3
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	1
9:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	1	4	1	0	1	1	1	0	3	6
10:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	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
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
10:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
11:00 PM	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
11:15 PM	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
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
11:45 PM	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
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	3
DAILY 'Heavy Vehicles'	0	2	260	41	0	303	0	21	6	5	17	32	1	113	214	23	14	351	0	30	5	132	1	167	853

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2658

Study Date : 08/13/2026

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 23

Number of Lanes : 2+

Total Approach Volume: 9,397

Southbound: CSAH 23

Number of Lanes :2+

Total Approach Volume: 6,558

Minor Street Approaches

Eastbound: CSAH 12

Number of Lanes :2+

Total Approach Volume: 4,059

Westbound: CSAH 12

Number of Lanes :2+

Total Approach Volume: 3,634

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 17 hours, 8 are needed

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

Required volumes reached for 16 hours, 8 are needed

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

Required 1A volumes reached for 17 hours, 8 are needed

Required 1B volumes reached for 17 hours, 8 are needed

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

Number of hours (14) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....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.....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 2658

Study Date : 08/13/2026

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

17 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 = **252**

Veh/Hr Minor = **84**

Major Road						Minor Road		
CSAH 23						CSAH 12		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:15 - 17:15	945	+	450	=	1395	384	315	Yes
15:15 - 16:15	932	+	424	=	1356	396	303	Yes
17:15 - 18:15	743	+	416	=	1159	250	289	Yes
14:15 - 15:15	748	+	384	=	1132	363	271	Yes
07:15 - 08:15	496	+	576	=	1072	256	148	Yes
08:15 - 09:15	489	+	502	=	991	253	175	Yes
11:15 - 12:15	594	+	390	=	984	285	299	Yes
13:15 - 14:15	606	+	367	=	973	258	289	Yes
12:15 - 13:15	585	+	355	=	940	272	301	Yes
06:15 - 07:15	384	+	556	=	940	210	88	Yes
10:15 - 11:15	535	+	370	=	905	210	213	Yes
18:15 - 19:15	495	+	315	=	810	197	239	Yes
09:15 - 10:15	442	+	368	=	810	204	185	Yes
19:15 - 20:15	357	+	200	=	557	137	199	Yes
05:15 - 06:15	208	+	302	=	510	86	31	Yes
20:15 - 21:15	307	+	160	=	467	117	172	Yes
21:15 - 22:15	186	+	121	=	307	53	93	Yes
05:00 - 06:00	174	+	247	=	421	74	24	No
04:45 - 05:45	126	+	217	=	343	62	15	No
04:30 - 05:30	110	+	187	=	297	46	8	No
04:15 - 05:15	85	+	136	=	221	33	3	No
22:15 - 23:15	104	+	68	=	172	61	11	No
04:00 - 05:00	62	+	103	=	165	24	0	No
22:30 - 23:30	76	+	63	=	139	56	11	No
03:45 - 04:45	58		76		134	14	1	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2658

Study Date : 08/13/2026

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

16 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 = **378**

Veh/Hr Minor = **42**

Major Road						Minor Road		
CSAH 23						CSAH 12		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:00 - 17:00	943	+	444	=	1387	400	311	Yes
15:00 - 16:00	892	+	425	=	1317	408	304	Yes
17:00 - 18:00	809	+	435	=	1244	310	302	Yes
07:00 - 08:00	510	+	606	=	1116	255	140	Yes
14:00 - 15:00	724	+	374	=	1098	296	271	Yes
08:00 - 09:00	460	+	509	=	969	243	167	Yes
12:00 - 13:00	594	+	367	=	961	290	307	Yes
13:00 - 14:00	583	+	367	=	950	251	291	Yes
11:00 - 12:00	582	+	366	=	948	267	275	Yes
18:00 - 19:00	557	+	328	=	885	195	247	Yes
10:00 - 11:00	511	+	369	=	880	205	199	Yes
09:00 - 10:00	466	+	411	=	877	215	183	Yes
06:00 - 07:00	323	+	499	=	822	177	69	Yes
19:00 - 20:00	368	+	232	=	600	160	210	Yes
20:00 - 21:00	334	+	165	=	499	122	175	Yes
05:00 - 06:00	174	+	247	=	421	74	24	Yes
04:45 - 05:45	126	+	217	=	343	62	15	No
21:00 - 22:00	217	+	124	=	341	68	121	No
21:15 - 22:15	186	+	121	=	307	53	93	No
04:30 - 05:30	110	+	187	=	297	46	8	No
21:30 - 22:30	169	+	101	=	270	36	74	No
21:45 - 22:45	138	+	93	=	231	44	46	No
04:15 - 05:15	85	+	136	=	221	33	3	No
22:00 - 23:00	121	+	88	=	209	58	27	No
22:15 - 23:15	104		68		172	61	11	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2658

Study Date : 08/13/2026

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

17 hours meet 1A minimums.
17 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 = **202 302**
Veh/Hr Minor = **67 34**

Major Road CSAH 23						Minor Road CSAH 12				
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?		
16:00 - 17:00	943	+	444	=	1387	400	311	Yes		
15:00 - 16:00	892	+	425	=	1317	408	304	Yes		
17:00 - 18:00	809	+	435	=	1244	310	302	Yes		
07:00 - 08:00	510	+	606	=	1116	255	140	Yes		
14:00 - 15:00	724	+	374	=	1098	296	271	Yes		
08:00 - 09:00	460	+	509	=	969	243	167	Yes		
12:00 - 13:00	594	+	367	=	961	290	307	Yes		
13:00 - 14:00	583	+	367	=	950	251	291	Yes		
11:00 - 12:00	582	+	366	=	948	267	275	Yes		
18:00 - 19:00	557	+	328	=	885	195	247	Yes		
10:00 - 11:00	511	+	369	=	880	205	199	Yes		
09:00 - 10:00	466		411		877	215	183	Yes		

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?	
15:45 - 16:45	982	+	462	=	1444	405	300	Yes	
16:45 - 17:45	862	+	455	=	1317	335	328	Yes	
14:45 - 15:45	851	+	405	=	1256	394	292	Yes	
06:45 - 07:45	464	+	587	=	1051	250	120	Yes	
07:45 - 08:45	473	+	552	=	1025	238	171	Yes	
13:45 - 14:45	650	+	367	=	1017	272	281	Yes	
11:45 - 12:45	596	+	382	=	978	295	322	Yes	
10:45 - 11:45	586	+	371	=	957	246	241	Yes	
17:45 - 18:45	606	+	330	=	936	206	248	Yes	
12:45 - 13:45	582	+	346	=	928	259	285	Yes	
08:45 - 09:45	484	+	437	=	921	235	172	Yes	
09:45 - 10:45	480	+	358	=	838	204	201	Yes	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2658

Study Date : 08/13/2026

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.

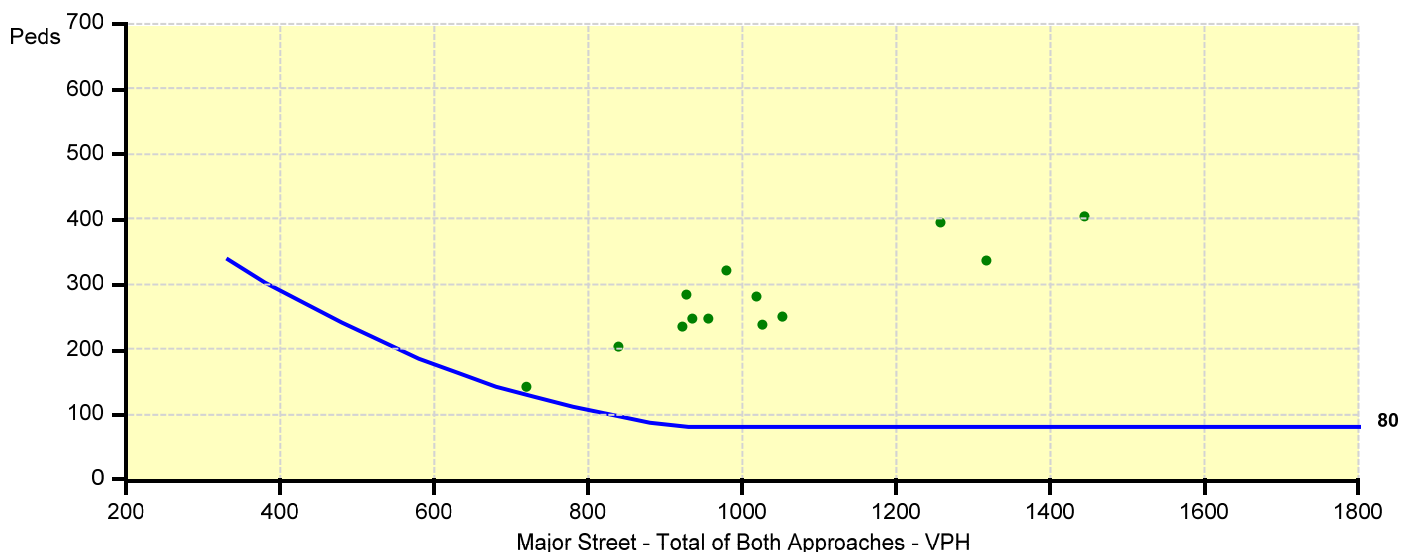
Summary

14 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**

Major Road CSAH 23						Minor Road CSAH 12		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
15:45 - 16:45	982	+	462	=	1444	405	300	Yes
16:45 - 17:45	862	+	455	=	1317	335	328	Yes
14:45 - 15:45	851	+	405	=	1256	394	292	Yes
06:45 - 07:45	464	+	587	=	1051	250	120	Yes
07:45 - 08:45	473	+	552	=	1025	238	171	Yes
13:45 - 14:45	650	+	367	=	1017	272	281	Yes
11:45 - 12:45	596	+	382	=	978	295	322	Yes
10:45 - 11:45	586	+	371	=	957	246	241	Yes
17:45 - 18:45	606	+	330	=	936	206	248	Yes
12:45 - 13:45	582	+	346	=	928	259	285	Yes
08:45 - 09:45	484	+	437	=	921	235	172	Yes
09:45 - 10:45	480		358		838	204	201	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2658

Study Date : 08/13/2026

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

48 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**

Major Road CSAH 23						Minor Road CSAH 12		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
15:45 - 16:45	982	+	462	=	1444	405	300	Yes
16:30 - 17:30	920	+	486	=	1406	364	318	Yes
16:15 - 17:15	945	+	450	=	1395	384	315	Yes
16:00 - 17:00	943	+	444	=	1387	400	311	Yes
15:30 - 16:30	947	+	431	=	1378	412	299	Yes
15:15 - 16:15	932	+	424	=	1356	396	303	Yes
15:00 - 16:00	892	+	425	=	1317	408	304	Yes
16:45 - 17:45	862	+	455	=	1317	335	328	Yes
14:45 - 15:45	851	+	405	=	1256	394	292	Yes
17:00 - 18:00	809	+	435	=	1244	310	302	Yes
14:30 - 15:30	812	+	395	=	1207	360	285	Yes
17:15 - 18:15	743		416		1159	250	289	Yes

