

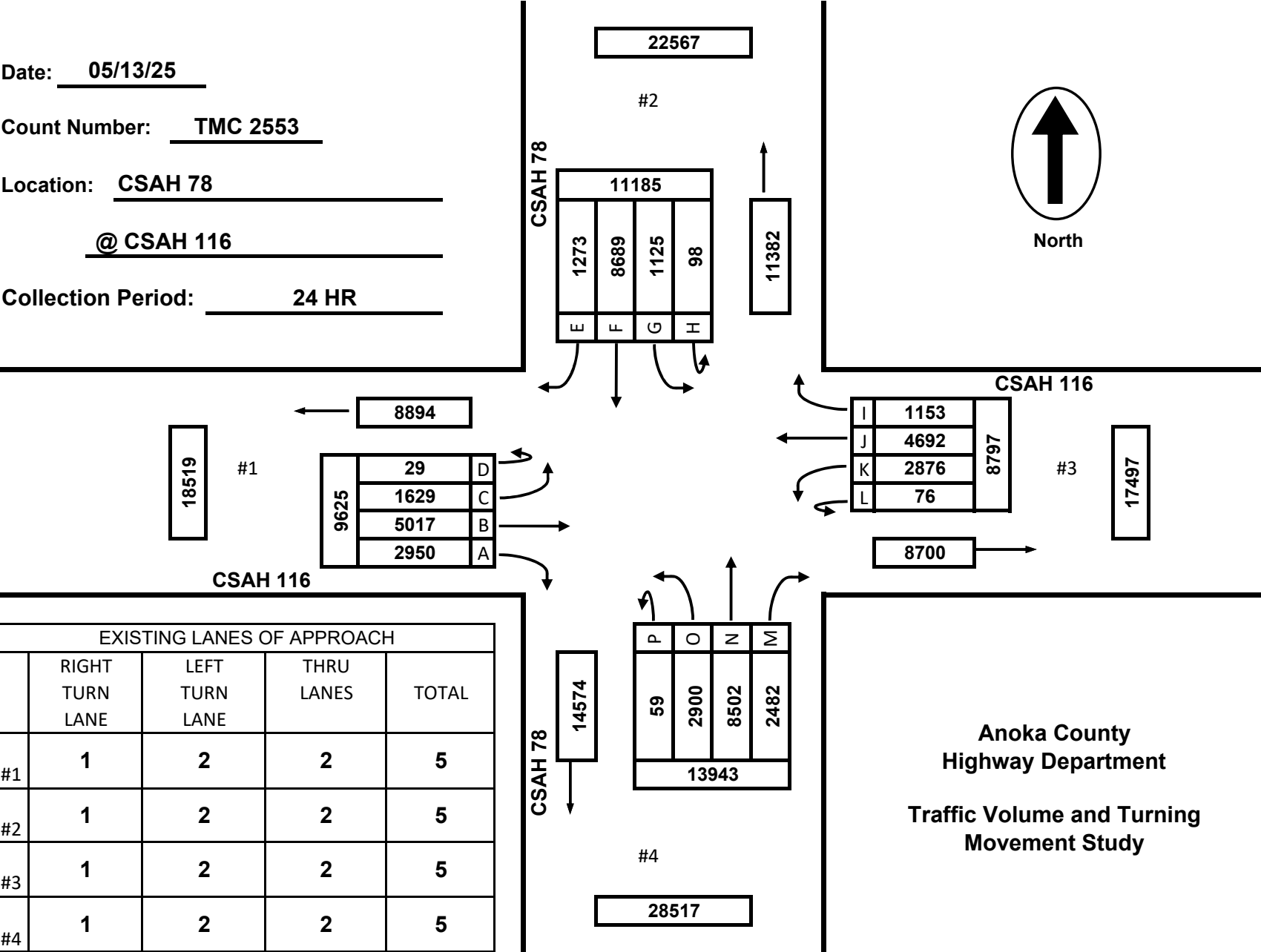
Date: 05/13/25

Count Number: TMC 2553

Location: CSAH 78

@ CSAH 116

Collection Period: 24 HR



Date: 05/13/25

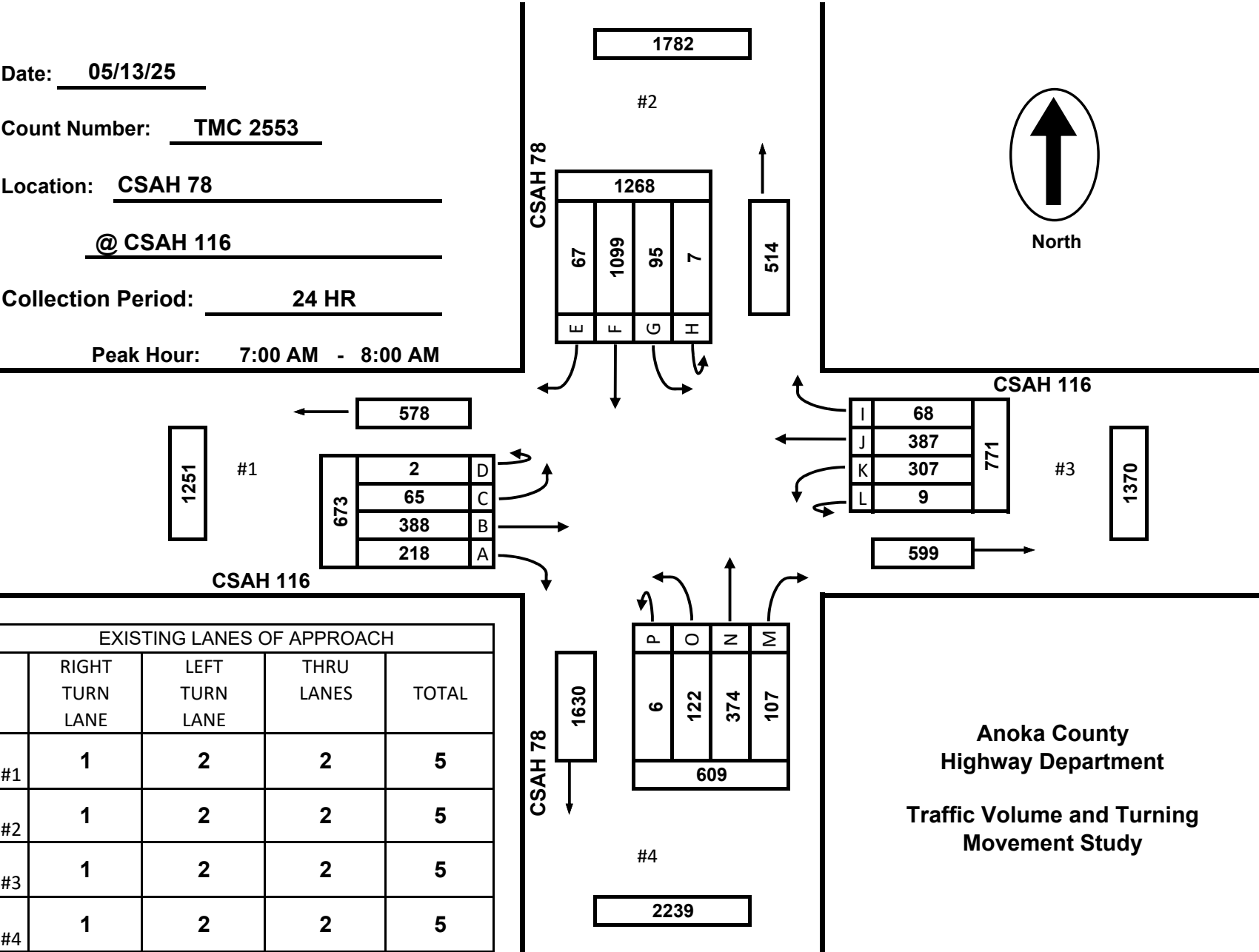
Count Number: TMC 2553

Location: CSAH 78

@ CSAH 116

Collection Period: 24 HR

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



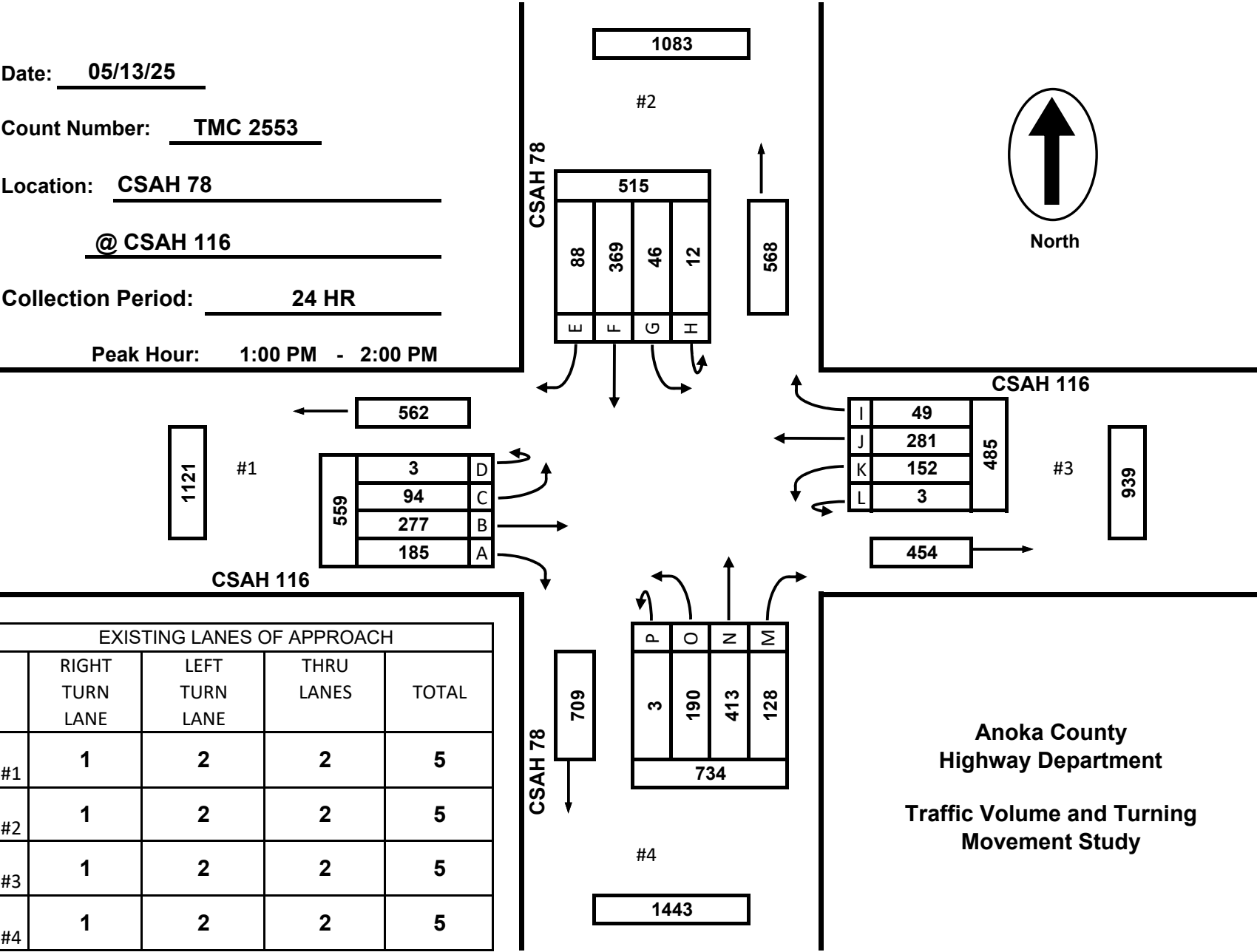
Date: 05/13/25

Count Number: TMC 2553

Location: CSAH 78
@ CSAH 116

Collection Period: 24 HR

Peak Hour: 1:00 PM - 2:00 PM



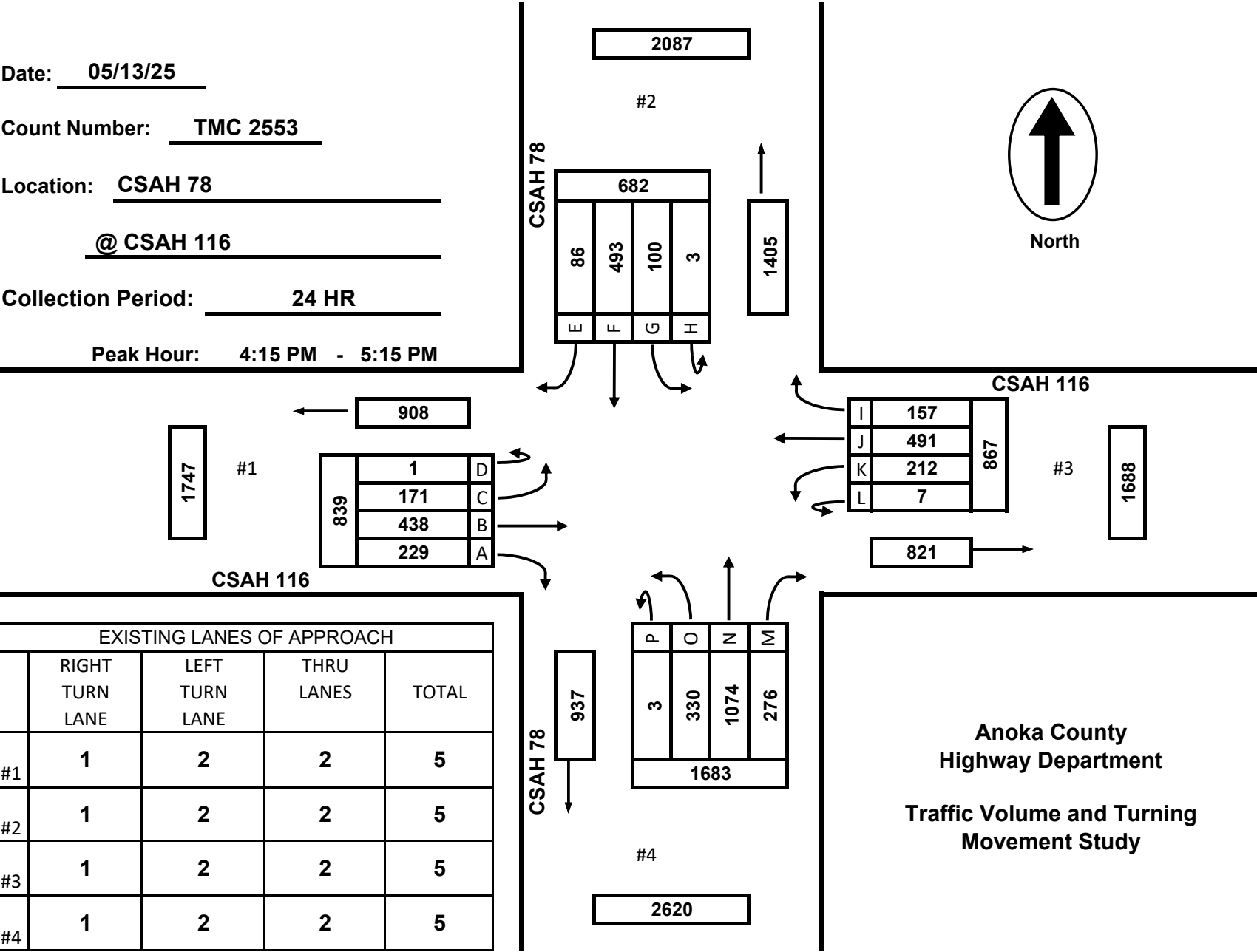
Date: 05/13/25

Count Number: TMC 2553

Location: CSAH 78
@ CSAH 116

Collection Period: 24 HR

Peak Hour: 4:15 PM - 5:15 PM



TMC 2553 - CSAH 78 @ CSAH 116

Andover MN

Tuesday, May 13, 2025

Time	Southbound CSAH 78						Westbound CSAH 116						Northbound CSAH 78						Eastbound CSAH 116						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	0	1	9	0	0	10	0	3	6	0	0	9	0	2	20	2	0	24	0	3	9	6	0	18	61
12:15 AM	0	2	9	2	0	13	0	1	4	1	0	6	0	2	13	2	0	17	0	0	3	2	0	5	41
12:30 AM	0	0	3	0	0	3	0	2	1	1	0	4	0	4	10	1	0	15	0	1	3	1	0	5	27
12:45 AM	0	0	1	0	0	1	0	0	1	1	0	2	0	2	4	1	0	7	0	0	2	4	0	6	16
Hourly Total	0	3	22	2	0	27	0	6	12	3	0	21	0	10	47	6	0	63	0	4	17	13	0	34	145
1:00 AM	0	0	3	0	0	3	0	0	2	1	0	3	0	0	8	2	0	10	1	1	2	1	0	5	21
1:15 AM	0	1	6	0	0	7	0	1	1	2	0	4	0	0	7	2	0	9	0	0	1	1	0	2	22
1:30 AM	0	0	1	0	0	1	0	0	1	1	0	2	0	1	9	1	0	11	0	3	3	1	0	7	21
1:45 AM	0	0	7	0	0	7	0	1	0	0	0	1	0	2	3	1	0	6	0	2	0	0	0	2	16
Hourly Total	0	1	17	0	0	18	0	2	4	4	0	10	0	3	27	6	0	36	1	6	6	3	0	16	80
2:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	3	8	1	0	12	0	0	2	2	0	4	18
2:15 AM	1	0	5	1	0	7	0	0	3	0	0	3	0	2	12	2	0	16	0	0	2	2	0	4	30
2:30 AM	0	0	4	0	0	4	0	2	0	0	0	2	0	1	2	0	0	3	0	1	2	2	0	5	14
2:45 AM	0	1	6	2	0	9	0	0	2	0	0	2	0	3	7	0	0	10	0	2	2	1	0	5	26
Hourly Total	1	1	17	3	0	22	0	2	5	0	0	7	0	9	29	3	0	41	0	3	8	7	0	18	88
3:00 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	2	1	1	0	4	0	0	1	2	0	3	12
3:15 AM	0	0	13	0	0	13	0	3	0	0	0	3	0	1	6	0	0	7	0	0	1	1	0	2	25
3:30 AM	0	0	12	4	0	16	0	0	5	0	0	5	0	5	2	0	0	7	0	0	0	4	0	4	32
3:45 AM	0	0	13	1	0	14	0	1	3	0	0	4	0	4	5	1	0	10	0	0	1	4	0	5	33
Hourly Total	0	0	43	5	0	48	0	4	8	0	0	12	0	12	14	2	0	28	0	0	3	11	0	14	102
4:00 AM	0	2	16	0	0	18	0	4	2	0	0	6	0	4	3	0	0	7	0	1	0	4	0	5	36
4:15 AM	0	1	28	1	0	30	0	8	12	1	0	21	0	2	2	2	0	6	0	0	5	9	0	14	71
4:30 AM	0	5	41	8	0	54	0	12	6	0	0	18	0	5	6	0	0	11	0	1	11	5	0	17	100
4:45 AM	0	5	45	4	0	54	0	15	12	1	0	28	0	4	11	2	0	17	0	2	7	8	0	17	116
Hourly Total	0	13	130	13	0	156	0	39	32	2	0	73	0	15	22	4	0	41	0	4	23	26	0	53	323
5:00 AM	0	4	73	9	0	86	0	22	7	3	0	32	0	3	4	8	0	15	0	1	7	13	0	21	154
5:15 AM	0	7	113	4	0	124	0	27	7	1	0	35	0	7	7	3	0	17	0	1	18	17	0	36	212
5:30 AM	1	6	128	12	0	147	0	32	18	2	0	52	0	7	24	9	0	40	0	2	23	13	0	38	277
5:45 AM	0	7	150	14	0	171	0	24	20	6	0	50	0	6	25	10	0	41	0	5	20	18	0	43	305
Hourly Total	1	24	464	39	0	528	0	105	52	12	0	169	0	23	60	30	0	113	0	9	68	61	0	138	948
6:00 AM	0	9	168	8	0	185	0	35	25	6	0	66	0	7	26	6	0	39	0	6	35	25	1	66	356
6:15 AM	3	17	206	13	0	239	0	42	41	5	0	88	0	16	61	16	0	93	0	14	38	40	0	92	512
6:30 AM	0	20	257	7	0	284	2	49	55	6	0	112	0	23	59	13	1	95	0	11	54	46	0	111	602
6:45 AM	0	18	255	14	0	287	0	75	54	5	0	134	3	23	105	34	0	165	0	22	69	60	0	151	737
Hourly Total	3	64	886	42	0	995	2	201	175	22	0	400	3	69	251	69	1	392	0	53	196	171	1	420	2207
7:00 AM	2	23	285	13	0	323	2	85	67	17	0	171	2	24	75	16	0	117	0	20	59	43	0	122	733
7:15 AM	0	23	272	19	0	314	4	78	134	22	0	238	1	32	91	34	0	158	2	17	91	54	0	164	874
7:30 AM	0	26	273	20	0	319	2	74	113	12	0	201	0	32	101	23	0	156	0	8	132	61	0	201	877
7:45 AM	5	23	269	15	0	312	1	70	73	17	0	161	3	34	107	34	0	178	0	20	106	60	0	186	837
Hourly Total	7	95	1099	67	0	1268	9	307	387	68	0	771	6	122	374	107	0	609	2	65	388	218	0	673	3321

TMC 2553 - CSAH 78 @ CSAH 116
Andover MN
Tuesday, May 13, 2025

Time	Southbound CSAH 78						Westbound CSAH 116						Northbound CSAH 78						Eastbound CSAH 116						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	22	216	23	0	261	4	61	63	26	0	154	2	21	76	31	0	130	0	22	71	49	1	142	687
8:15 AM	1	18	174	20	0	213	0	59	59	15	0	133	1	35	77	30	0	143	1	15	61	45	0	122	611
8:30 AM	3	12	136	17	0	168	1	54	59	15	0	129	1	36	82	31	0	150	2	19	62	36	0	119	566
8:45 AM	1	11	140	9	0	161	2	49	72	18	0	141	1	31	97	31	0	160	2	16	71	38	2	127	589
Hourly Total	5	63	666	69	0	803	7	223	253	74	0	557	5	123	332	123	0	583	5	72	265	168	3	510	2453
9:00 AM	4	14	127	20	0	165	1	52	62	19	1	134	1	30	85	33	0	149	1	26	59	40	2	126	574
9:15 AM	3	18	186	37	0	244	0	62	58	14	0	134	1	35	64	21	0	121	0	24	46	30	0	100	599
9:30 AM	2	21	143	24	0	190	1	38	56	8	1	103	4	29	62	21	0	116	0	26	70	41	2	137	546
9:45 AM	1	11	125	15	0	152	4	42	66	13	0	125	2	30	86	28	0	146	1	20	61	31	0	113	536
Hourly Total	10	64	581	96	0	751	6	194	242	54	2	496	8	124	297	103	0	532	2	96	236	142	4	476	2255
10:00 AM	0	8	91	19	0	118	3	32	42	8	0	85	1	27	72	17	0	117	0	24	46	34	0	104	424
10:15 AM	0	8	113	25	0	146	0	43	48	19	0	110	2	28	90	21	0	141	0	27	55	35	0	117	514
10:30 AM	2	11	93	25	0	131	2	45	45	16	0	108	0	37	59	34	1	130	0	22	56	50	0	128	497
10:45 AM	0	8	94	17	0	119	1	40	56	8	0	105	2	45	99	31	0	177	0	21	51	32	0	104	540
Hourly Total	2	35	391	86	0	514	6	160	191	51	0	408	5	137	320	103	1	565	0	94	208	151	0	453	1940
11:00 AM	1	10	97	16	0	124	1	42	65	14	0	122	1	23	79	22	0	125	3	25	48	52	0	128	499
11:15 AM	3	18	92	21	0	134	0	32	68	15	0	115	0	42	81	26	0	149	0	23	57	39	2	119	517
11:30 AM	0	13	111	24	3	148	0	38	56	12	0	106	1	36	86	44	0	167	0	15	49	36	0	100	521
11:45 AM	1	14	82	19	1	116	1	36	62	9	0	108	0	52	105	35	0	192	0	22	66	39	1	127	543
Hourly Total	5	55	382	80	4	522	2	148	251	50	0	451	2	153	351	127	0	633	3	85	220	166	3	474	2080
12:00 PM	0	14	107	18	0	139	0	32	62	6	0	100	2	25	84	31	0	142	0	29	61	40	0	130	511
12:15 PM	0	9	87	31	0	127	1	53	64	12	0	130	0	37	97	34	0	168	1	28	71	36	0	136	561
12:30 PM	1	4	75	21	0	101	1	31	75	11	0	118	1	44	95	29	0	169	1	20	82	46	0	149	537
12:45 PM	3	10	92	24	1	129	0	41	78	7	0	126	0	29	110	35	0	174	0	23	87	43	0	153	582
Hourly Total	4	37	361	94	1	496	2	157	279	36	0	474	3	135	386	129	0	653	2	100	301	165	0	568	2191
1:00 PM	2	9	98	19	0	128	0	37	68	13	0	118	1	38	87	28	0	154	0	12	64	43	0	119	519
1:15 PM	6	11	92	35	3	144	1	28	66	20	0	115	0	41	114	38	0	193	0	24	61	29	0	114	566
1:30 PM	2	15	85	19	0	121	1	39	73	7	0	120	1	65	109	30	0	205	1	26	76	59	0	162	608
1:45 PM	2	11	94	15	0	122	1	48	74	9	0	132	1	46	103	32	0	182	2	32	76	54	1	164	600
Hourly Total	12	46	369	88	3	515	3	152	281	49	0	485	3	190	413	128	0	734	3	94	277	185	1	559	2293
2:00 PM	5	4	109	18	1	136	1	33	76	19	0	129	2	56	111	49	2	218	2	25	91	70	1	188	671
2:15 PM	2	14	108	19	0	143	1	25	75	9	0	110	1	59	128	36	0	224	2	34	107	49	1	192	669
2:30 PM	3	33	112	14	0	162	3	43	63	18	0	127	2	46	152	32	0	232	1	35	100	60	0	196	717
2:45 PM	2	17	105	14	0	138	4	32	80	17	0	133	0	62	232	50	0	344	0	36	104	37	0	177	792
Hourly Total	12	68	434	65	1	579	9	133	294	63	0	499	5	223	623	167	2	1018	5	130	402	216	2	753	2849
3:00 PM	1	12	106	20	0	139	0	69	94	25	1	188	1	71	191	64	0	327	1	35	108	48	0	192	846
3:15 PM	3	23	124	18	0	168	2	51	96	28	0	177	1	72	207	62	0	342	0	39	107	37	1	183	870
3:30 PM	3	19	108	32	1	162	0	47	99	26	0	172	0	73	239	60	0	372	0	40	115	37	1	192	898
3:45 PM	3	12	136	17	0	168	0	61	106	27	0	194	2	85	254	58	0	399	0	26	121	59	3	206	967
Hourly Total	10	66	474	87	1	637	2	228	395	106	1	731	4	301	891	244	0	1440	1	140	451	181	5	773	3581

TMC 2553 - CSAH 78 @ CSAH 116
Andover MN
Tuesday, May 13, 2025

Time	Southbound CSAH 78						Westbound CSAH 116						Northbound CSAH 78						Eastbound CSAH 116						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	4	29	131	36	0	200	1	64	119	38	0	222	1	66	250	70	0	387	0	35	97	56	1	188	997
4:15 PM	0	34	143	28	1	205	3	51	117	49	0	220	1	94	262	76	0	433	1	40	116	52	2	209	1067
4:30 PM	0	23	127	18	0	168	2	50	133	37	0	222	1	83	272	64	0	420	0	43	115	68	1	226	1036
4:45 PM	1	19	105	22	0	147	1	59	117	39	0	216	1	74	259	72	0	406	0	41	100	56	0	197	966
Hourly Total	5	105	506	104	1	720	7	224	486	163	0	880	4	317	1043	282	0	1646	1	159	428	232	4	820	4066
5:00 PM	2	24	118	18	0	162	1	52	124	32	0	209	0	79	281	64	0	424	0	47	107	53	1	207	1002
5:15 PM	3	25	111	25	1	164	3	47	102	34	0	186	0	100	231	63	0	394	0	27	119	62	0	208	952
5:30 PM	0	20	122	19	0	161	0	49	109	37	0	195	1	83	238	74	0	396	0	27	106	56	0	189	941
5:45 PM	2	26	130	28	0	186	2	31	92	36	0	161	0	71	215	40	0	326	0	25	87	51	4	163	836
Hourly Total	7	95	481	90	1	673	6	179	427	139	0	751	1	333	965	241	0	1540	0	126	419	222	5	767	3731
6:00 PM	1	22	112	20	0	155	1	48	88	29	0	166	0	47	129	46	1	222	0	29	103	42	0	174	717
6:15 PM	0	23	94	20	0	137	0	37	87	24	0	148	0	52	185	55	0	292	0	39	71	47	0	157	734
6:30 PM	0	30	119	15	0	164	2	33	71	21	0	127	0	60	176	45	0	281	1	19	78	49	0	147	719
6:45 PM	2	31	110	15	0	158	0	23	70	27	1	120	1	47	147	43	0	238	1	28	92	38	0	159	685
Hourly Total	3	106	435	70	0	614	3	141	316	101	1	561	1	206	637	189	1	1033	2	115	344	176	0	637	2845
7:00 PM	1	19	107	21	0	148	1	39	55	20	0	115	3	33	143	59	0	238	0	28	79	48	0	155	656
7:15 PM	1	15	94	23	0	133	1	17	71	9	0	98	2	27	109	40	0	178	0	25	78	52	0	155	564
7:30 PM	0	24	85	20	0	129	1	24	45	9	0	79	0	43	105	34	0	182	0	30	90	39	0	159	549
7:45 PM	2	13	73	12	0	100	1	18	44	15	0	78	0	29	93	31	1	153	0	22	62	26	0	110	441
Hourly Total	4	71	359	76	0	510	4	98	215	53	0	370	5	132	450	164	1	751	0	105	309	165	0	579	2210
8:00 PM	2	20	90	20	0	132	1	22	18	14	0	55	0	33	95	29	0	157	1	16	57	34	0	108	452
8:15 PM	0	19	77	10	1	106	2	26	52	12	1	92	1	28	121	30	0	180	0	20	62	27	1	109	487
8:30 PM	0	22	81	19	0	122	1	16	58	14	0	89	0	37	110	31	0	178	0	22	39	36	0	97	486
8:45 PM	1	16	57	9	0	83	1	23	39	12	0	75	0	24	72	28	0	124	1	14	42	27	0	84	366
Hourly Total	3	77	305	58	1	443	5	87	167	52	1	311	1	122	398	118	0	639	2	72	200	124	1	398	1791
9:00 PM	0	10	53	6	0	69	0	23	54	11	0	88	0	21	83	18	0	122	0	18	63	23	0	104	383
9:15 PM	1	3	33	6	1	43	1	12	36	8	0	57	1	25	79	21	0	126	0	13	37	24	1	74	300
9:30 PM	1	10	57	5	0	73	0	9	26	7	0	42	1	21	67	13	0	102	0	16	36	15	0	67	284
9:45 PM	0	3	27	3	0	33	0	9	25	5	0	39	0	19	61	19	0	99	0	9	23	17	0	49	220
Hourly Total	2	26	170	20	1	218	1	53	141	31	0	226	2	86	290	71	0	449	0	56	159	79	1	294	1187
10:00 PM	1	3	21	7	0	32	1	11	17	8	1	37	0	15	59	17	1	91	0	8	19	16	0	43	203
10:15 PM	0	2	27	3	0	32	0	7	13	6	0	26	0	10	55	10	0	75	0	10	20	13	0	43	176
10:30 PM	0	2	17	1	0	20	0	3	18	3	0	24	0	11	38	10	0	59	0	3	13	7	0	23	126
10:45 PM	1	0	5	2	0	8	1	2	6	1	0	10	1	7	27	4	0	39	0	10	8	8	0	26	83
Hourly Total	2	7	70	13	0	92	2	23	54	18	1	97	1	43	179	41	1	264	0	31	60	44	0	135	588
11:00 PM	0	0	13	2	0	15	0	2	6	2	0	10	0	5	28	6	0	39	0	3	14	8	0	25	89
11:15 PM	0	1	5	1	0	7	0	1	9	0	0	10	0	4	22	10	0	36	0	2	6	6	0	14	67
11:30 PM	0	2	2	2	0	6	0	4	8	0	0	12	0	3	35	4	0	42	0	1	6	8	0	15	75
11:45 PM	0	0	7	1	0	8	0	3	2	0	0	5	0	0	18	5	0	23	0	4	3	2	0	9	45
Hourly Total	0	3	27	6	0	36	0	10	25	2	0	37	0	12	103	25	0	140	0	10	29	24	0	63	276
DAILY TOTAL	98	1125	8689	1273	14	11185	76	2876	4692	1153	6	8797	59	2900	8502	2482	7	13943	29	1629	5017	2950	30	9625	43550
Cars	98	1113	8513	1253	6	10977	74	2801	4582	1125	3	8582	59	2847	8336	2435	4	13677	29	1602	4899	2806	5	9336	42572
Heavy Vehicles	0	12	176	20	8	208	2	75	110	28	3	215	0	53	166	47	3	266	0	27	118	144	25	289	978
Heavy Vehicle %	0.00%	1.07%	2.03%	1.57%	57.14%	1.86%	2.63%	2.61%	2.34%	2.43%	50.00%	2.44%	0.00%	1.83%	1.95%	1.89%	42.86%	1.91%	0.00%	1.66%	2.35%	4.88%	83.33%	3.00%	2.25%

TMC 2553 - CSAH 78 @ CSAH 116
Andover MN
Tuesday, May 13, 2025
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	2	23	285	13	0	323	2	85	67	17	0	171	2	24	75	16	0	117	0	20	59	43	0	122	733
7:15 AM	0	23	272	19	0	314	4	78	134	22	0	238	1	32	91	34	0	158	2	17	91	54	0	164	874
7:30 AM	0	26	273	20	0	319	2	74	113	12	0	201	0	32	101	23	0	156	0	8	132	61	0	201	877
7:45 AM	5	23	269	15	0	312	1	70	73	17	0	161	3	34	107	34	0	178	0	20	106	60	0	186	837
Peak Hour Total	7	95	1099	67	0	1268	9	307	387	68	0	771	6	122	374	107	0	609	2	65	388	218	0	673	3321
Peak Hour Heavy Vehicles	0	2	9	0	0	11	1	8	11	4	0	24	0	4	14	4	0	22	0	1	9	17	0	27	84
Peak Hour Heavy Vehicles %	0.00%	2.11%	0.82%	0.00%	0.00%	0.87%	11.11%	2.61%	2.84%	5.88%	0.00%	3.11%	0.00%	3.28%	3.74%	3.74%	0.00%	3.61%	0.00%	1.54%	2.32%	7.80%	0.00%	4.01%	2.53%
PHF	0.350	0.913	0.964	0.838	0.000	0.981	0.563	0.903	0.722	0.773	0.000	0.810	0.500	0.897	0.874	0.787	0.000	0.855	0.250	0.813	0.735	0.893	0.000	0.837	0.947

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	
1:00 PM	2	9	98	19	0	128	0	37	68	13	0	118	1	38	87	28	0	154	0	12	64	43	0	119	519
1:15 PM	6	11	92	35	3	144	1	28	66	20	0	115	0	41	114	38	0	193	0	24	61	29	0	114	566
1:30 PM	2	15	85	19	0	121	1	39	73	7	0	120	1	65	109	30	0	205	1	26	76	59	0	162	608
1:45 PM	2	11	94	15	0	122	1	48	74	9	0	132	1	46	103	32	0	182	2	32	76	54	1	164	600
Peak Hour Total	12	46	369	88	3	515	3	152	281	49	0	485	3	190	413	128	0	734	3	94	277	185	1	559	2293
Peak Hour Heavy Vehicles	0	1	11	0	3	12	0	3	7	1	0	11	0	4	9	2	3	15	0	2	8	22	1	32	70
Peak Hour Heavy Vehicles %	0.00%	2.17%	2.98%	0.00%	100.00%	2.33%	0.00%	1.97%	2.49%	2.04%	0.00%	2.27%	0.00%	2.11%	2.18%	1.56%	0.00%	2.04%	0.00%	2.13%	2.89%	11.89%	100.00%	5.72%	3.05%
PHF	0.500	0.767	0.941	0.629	0.250	0.894	0.750	0.792	0.949	0.613	0.000	0.919	0.750	0.731	0.906	0.842	0.000	0.895	0.375	0.734	0.911	0.784	0.250	0.852	0.943

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	
4:15 PM	0	34	143	28	1	205	3	51	117	49	0	220	1	94	262	76	0	433	1	40	116	52	2	209	1067
4:30 PM	0	23	127	18	0	168	2	50	133	37	0	222	1	83	272	64	0	420	0	43	115	68	1	226	1036
4:45 PM	1	19	105	22	0	147	1	59	117	39	0	216	1	74	259	72	0	406	0	41	100	56	0	197	966
5:00 PM	2	24	118	18	0	162	1	52	124	32	0	209	0	79	281	64	0	424	0	47	107	53	1	207	1002
Peak Hour Total	3	100	493	86	1	682	7	212	491	157	0	867	3	330	1074	276	0	1683	1	171	438	229	4	839	4071
Peak Hour Heavy Vehicles	0	0	21	3	0	24	0	16	11	4	0	31	0	3	7	3	0	13	0	1	7	3	1	11	79
Peak Hour Heavy Vehicles %	0.00%	0.00%	4.26%	3.49%	0.00%	3.52%	0.00%	7.55%	2.24%	2.55%	0.00%	3.58%	0.00%	0.91%	0.65%	1.09%	0.00%	0.77%	0.00%	0.58%	1.60%	1.31%	25.00%	1.31%	1.94%
PHF	0.375	0.735	0.862	0.768	0.250	0.832	0.583	0.898	0.923	0.801	0.000	0.976	0.750	0.878	0.956	0.908	0.000	0.972	0.250	0.910	0.944	0.842	0.500	0.928	0.954

Total Vehicles On Leg			22567		
Vehicles Entering Intersection 11185			Vehicles Exiting Intersection 11382		
Southbound					
Cars	1253	8513	1113	98	6
Heavy	20	176	12	0	8
Total	1273	8689	1125	98	14



Total Vehicles on Leg 18519	Vehicles Entering Intersection 9625	Eastbound	Cars	Heavy	Total	
			5	25	30	
			29	0	29	
	Exiting Intersection 8894		1602	27	1629	
			4899	118	5017	
			2806	144	2950	

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 8797	Total Vehicles on Leg 17497
1125	28	1153			
4582	110	4692			
2801	75	2876		Exiting Intersection 8700	
74	2	76			
3	3	6			

Northbound					
Cars	4	59	2847	8336	2435
Heavy	3	0	53	166	47
Total	7	59	2900	8502	2482
Vehicles Entering Intersection 13943					
Vehicles Exiting Intersection 14574					
Total Vehicles On Leg 28517					

TMC 2553 - CSAH 78 @ CSAH 116

Andover MN

Tuesday, May 13, 2025

Time	Southbound Heavy CSAH 78						Westbound Heavy CSAH 116						Northbound Heavy CSAH 78						Eastbound Heavy CSAH 116						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>	
12:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
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	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
1:00 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
1:15 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
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	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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Hourly 'Heavy Vehicles'	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
3:00 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
3:15 AM	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
3:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 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	0	0	1	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	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
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:30 AM	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
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	2
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	2	0	2	5
5:00 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
5:15 AM	0	0	2	1	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	5
5:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	3
5:45 AM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	4	0	6	8
Hourly 'Heavy Vehicles'	0	0	3	1	0	4	0	2	0	0	0	2	0	1	1	0	0	2	0	0	2	6	0	8	16
6:00 AM	0	0	2	0	0	2	0	0	1	0	0	1	0	0	2	0	0	2	0	1	3	2	1	6	11
6:15 AM	0	0	5	0	0	5	0	1	2	0	0	3	0	1	1	1	0	3	0	2	7	6	0	15	26
6:30 AM	0	0	3	0	0	3	0	0	1	1	0	2	0	1	2	0	1	3	0	1	6	17	0	24	32
6:45 AM	0	1	2	1	0	4	0	1	0	0	0	1	0	0	8	1	0	9	0	4	6	8	0	18	32
Hourly 'Heavy Vehicles'	0	1	12	1	0	14	0	2	4	1	0	7	0	2	13	2	1	17	0	8	22	33	1	63	101
7:00 AM	0	0	0	0	0	0	0	3	2	2	0	7	0	3	2	1	0	6	0	1	2	4	0	7	20
7:15 AM	0	0	2	0	0	2	1	0	6	0	0	7	0	0	4	0	0	4	0	0	0	3	0	3	16
7:30 AM	0	1	3	0	0	4	0	3	2	0	0	5	0	1	3	2	0	6	0	0	5	5	0	10	25
7:45 AM	0	1	4	0	0	5	0	2	1	2	0	5	0	0	5	1	0	6	0	0	2	5	0	7	23
Hourly 'Heavy Vehicles'	0	2	9	0	0	11	1	8	11	4	0	24	0	4	14	4	0	22	0	1	9	17	0	27	84

TMC 2553 - CSAH 78 @ CSAH 116

Andover MN

Tuesday, May 13, 2025

Time	Southbound Heavy CSAH 78						Westbound Heavy CSAH 116						Northbound Heavy CSAH 78						Eastbound Heavy CSAH 116						VEHICLE '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'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	
8:00 AM	0	0	7	2	0	9	0	0	1	2	0	3	0	2	1	2	0	5	0	1	4	0	1	5	22
8:15 AM	0	0	5	0	0	5	0	3	2	1	0	6	0	5	5	3	0	13	0	0	4	1	0	5	29
8:30 AM	0	1	5	0	0	6	0	1	2	0	0	3	0	0	3	3	0	6	0	0	4	0	0	4	19
8:45 AM	0	0	8	0	0	8	0	1	0	2	0	3	0	1	5	1	0	7	0	0	7	0	2	7	25
Hourly 'Heavy Vehicles'	0	1	25	2	0	28	0	5	5	5	0	15	0	8	14	9	0	31	0	1	19	1	3	21	95
9:00 AM	0	0	4	0	0	4	0	0	3	2	0	5	0	0	2	1	0	3	0	1	3	1	2	5	17
9:15 AM	0	0	22	1	0	23	0	4	2	0	0	6	0	1	0	1	0	2	0	1	0	0	0	1	32
9:30 AM	0	0	10	2	0	12	0	4	2	0	0	6	0	1	2	1	0	4	0	1	1	4	2	6	28
9:45 AM	0	1	2	0	0	3	0	2	1	0	0	3	0	0	1	2	0	3	0	0	2	1	0	3	12
Hourly 'Heavy Vehicles'	0	1	38	3	0	42	0	10	8	2	0	20	0	2	5	5	0	12	0	3	6	6	4	15	89
10:00 AM	0	0	2	0	0	2	0	1	2	0	0	3	0	1	3	0	0	4	0	0	0	0	0	0	9
10:15 AM	0	0	3	1	0	4	0	0	2	0	0	2	0	1	7	0	0	8	0	0	3	0	0	3	17
10:30 AM	0	1	1	0	0	2	0	3	0	0	0	3	0	1	2	2	0	5	0	0	3	2	0	5	15
10:45 AM	0	0	4	0	0	4	0	3	3	0	0	6	0	2	2	1	0	5	0	2	2	3	0	7	22
Hourly 'Heavy Vehicles'	0	1	10	1	0	12	0	7	7	0	0	14	0	5	14	3	0	22	0	2	8	5	0	15	63
11:00 AM	0	0	2	0	0	2	0	1	3	1	0	5	0	0	1	0	0	1	0	0	1	5	0	6	14
11:15 AM	0	0	2	0	0	2	0	0	1	0	0	1	0	2	4	0	0	6	0	0	5	1	2	6	15
11:30 AM	0	0	3	1	2	4	0	0	1	0	0	1	0	0	3	1	0	4	0	1	3	1	0	5	14
11:45 AM	0	1	1	0	0	2	0	0	2	0	0	2	0	1	5	0	0	6	0	1	0	5	0	6	16
Hourly 'Heavy Vehicles'	0	1	8	1	2	10	0	1	7	1	0	9	0	3	13	1	0	17	0	2	9	12	2	23	59
12:00 PM	0	0	1	0	0	1	0	0	3	1	0	4	0	3	3	0	0	6	0	0	2	2	0	4	15
12:15 PM	0	0	1	2	0	3	0	1	2	1	0	4	0	0	7	1	0	8	0	1	3	1	0	5	20
12:30 PM	0	0	1	0	0	1	0	3	3	1	0	7	0	0	3	4	0	7	0	0	0	2	0	2	17
12:45 PM	0	1	3	0	1	4	0	1	2	0	0	3	0	1	3	0	0	4	0	0	1	1	0	2	13
Hourly 'Heavy Vehicles'	0	1	6	2	1	9	0	5	10	3	0	18	0	4	16	5	0	25	0	1	6	6	0	13	65
1:00 PM	0	0	1	0	0	1	0	1	4	1	0	6	0	1	0	0	0	1	0	0	2	1	0	3	11
1:15 PM	0	1	2	0	3	3	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	2	0	3	7
1:30 PM	0	0	5	0	0	5	0	0	2	0	0	2	0	1	4	0	0	5	0	0	4	3	0	7	19
1:45 PM	0	0	3	0	0	3	0	2	1	0	0	3	0	1	5	2	0	8	0	1	2	16	1	19	33
Hourly 'Heavy Vehicles'	0	1	11	0	3	12	0	3	7	1	0	11	0	4	9	2	0	15	0	2	8	22	1	32	70
2:00 PM	0	0	0	0	1	0	0	2	2	1	0	5	0	2	5	1	0	8	0	1	2	20	1	23	36
2:15 PM	0	0	1	1	0	2	0	0	1	0	0	1	0	1	7	0	0	8	0	0	7	3	1	10	21
2:30 PM	0	1	2	0	0	3	0	0	4	0	0	4	0	0	2	0	0	2	0	0	2	0	0	2	11
2:45 PM	0	0	3	1	0	4	0	2	4	2	0	8	0	5	11	1	0	17	0	2	1	0	0	3	32
Hourly 'Heavy Vehicles'	0	1	6	2	1	9	0	4	11	3	0	18	0	8	25	2	0	35	0	3	12	23	2	38	100
3:00 PM	0	0	3	0	0	3	0	3	2	0	0	5	0	3	3	3	0	9	0	1	0	0	0	1	18
3:15 PM	0	0	5	0	0	5	0	2	5	2	0	9	0	0	4	1	0	5	0	0	2	3	1	5	24
3:30 PM	0	0	0	0	1	0	0	1	1	0	0	2	0	0	5	0	0	5	0	0	1	3	1	4	11
3:45 PM	0	0	3	0	0	3	0	1	2	0	0	3	0	0	2	2	0	4	0	0	2	0	3	2	12
Hourly 'Heavy Vehicles'	0	0	11	0	1	11	0	7	10	2	0	19	0	3	14	6	0	23	0	1	5	6	5	12	65

TMC 2553 - CSAH 78 @ CSAH 116

Andover MN

Tuesday, May 13, 2025

	Southbound Heavy CSAH 78						Westbound Heavy CSAH 116						Northbound Heavy CSAH 78						Eastbound Heavy CSAH 116						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	1	1	3	0	5	0	1	3	0	0	4	0	1	2	0	0	3	0	0	0	1	1	1	13
4:15 PM	0	0	8	2	0	10	0	3	2	1	0	6	0	2	2	0	0	4	0	0	2	1	0	3	23
4:30 PM	0	0	6	0	0	6	0	2	4	1	0	7	0	1	1	2	0	4	0	0	4	1	0	5	22
4:45 PM	0	0	5	0	0	5	0	8	3	2	0	13	0	0	1	0	0	1	0	1	1	1	0	3	22
Hourly 'Heavy Vehicles'	0	1	20	5	0	26	0	14	12	4	0	30	0	4	6	2	0	12	0	1	7	4	1	12	80
5:00 PM	0	0	2	1	0	3	0	3	2	0	0	5	0	0	3	1	0	4	0	0	0	0	1	0	12
5:15 PM	0	1	1	1	0	3	0	1	1	0	0	2	0	2	2	0	0	4	0	1	0	0	0	1	10
5:30 PM	0	0	0	0	0	0	0	0	3	1	0	4	0	0	2	0	0	2	0	0	0	0	0	0	6
5:45 PM	0	0	1	0	0	1	0	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0	5
Hourly 'Heavy Vehicles'	0	1	4	2	0	7	0	6	8	1	0	15	0	2	7	1	0	10	0	1	0	0	5	1	33
6:00 PM	0	0	2	0	0	2	0	0	2	0	0	2	0	0	1	1	0	2	0	0	0	0	0	0	6
6:15 PM	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	4
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	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	2	0	0	0	0	0	0	2
Hourly 'Heavy Vehicles'	0	0	4	0	0	4	0	0	3	0	1	3	0	0	4	2	0	6	0	0	1	0	0	1	14
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	4
7:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	1	0	3	0	0	1	0	0	1	5
7:30 PM	0	0	1	0	0	1	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	1	0	1	2
Hourly 'Heavy Vehicles'	0	0	2	0	0	2	1	0	2	0	0	3	0	1	4	2	1	7	0	0	1	1	0	2	14
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:15 PM	0	0	0	0	0	0	0	0	1	0	1	1	0	0	2	0	0	2	0	0	0	0	0	0	3
8:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	2
8:45 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hourly 'Heavy Vehicles'	0	0	3	0	0	3	0	0	2	0	1	2	0	0	3	0	0	3	0	0	1	0	0	1	9
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
9:30 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
9:45 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	0	0	0	1	0	1	0	0	1	1	2
10:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
10:15 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
10:30 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
10:45 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	1	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	2
11:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 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
11:30 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
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	1	1	0	2	0	0	0	1	0	1	0	0	0	0	0	0	3
DAILY 'Heavy Vehicles'	0	12	176	20	8	208	2	75	110	28	3	215	0	53	166	47	3	266	0	27	118	144	25	289	978

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2553

Study Date : 05/29/2025

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 78

Number of Lanes : 2+

Total Approach Volume: 13,943

Southbound: CSAH 78

Number of Lanes :2+

Total Approach Volume: 11,185

Minor Street Approaches

Eastbound: CSAH 116

Number of Lanes :2+

Total Approach Volume: 6,675

Westbound: CSAH 116

Number of Lanes :2+

Total Approach Volume: 7,644

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 17 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 (16) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (66) 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 2553

Study Date : 05/29/2025

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

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 = **420**

Veh/Hr Minor = **140**

Major Road						Minor Road		
CSAH 78						CSAH 116		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
15:45 - 16:45	1639	+	741	=	2380	594	707	Yes
16:45 - 17:45	1620	+	634	=	2254	574	664	Yes
14:45 - 15:45	1385	+	607	=	1992	585	574	Yes
06:45 - 07:45	596	+	1243	=	1839	420	688	Yes
17:45 - 18:45	1121	+	642	=	1763	452	492	Yes
07:45 - 08:45	601	+	954	=	1555	379	504	Yes
13:45 - 14:45	856	+	563	=	1419	507	443	Yes
18:45 - 19:45	836	+	568	=	1404	451	347	Yes
08:45 - 09:45	546	+	760	=	1306	341	453	Yes
12:45 - 13:45	726	+	522	=	1248	374	432	Yes
11:45 - 12:45	671	+	483	=	1154	381	418	Yes
05:45 - 06:45	268	+	879	=	1147	183	293	Yes
10:45 - 11:45	618	+	525	=	1143	292	399	Yes
19:45 - 20:45	668	+	460	=	1128	301	259	Yes
09:45 - 10:45	534	+	547	=	1081	312	372	Yes
20:45 - 21:45	474	+	268	=	742	240	224	Yes
04:45 - 05:45	89	+	411	=	500	61	140	Yes
21:45 - 22:45	324	+	117	=	441	105	104	No
04:30 - 05:30	60	+	318	=	378	48	108	No
22:00 - 23:00	264	+	92	=	356	91	79	No
22:15 - 23:15	212	+	75	=	287	81	58	No
04:15 - 05:15	49	+	224	=	273	34	94	No
22:30 - 23:30	173	+	50	=	223	59	48	No
04:00 - 05:00	41	+	156	=	197	27	71	No
22:45 - 23:45	156		36		192	50	39	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2553

Study Date : 05/29/2025

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

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 = **630**

Veh/Hr Minor = **70**

Major Road						Minor Road		
CSAH 78						CSAH 116		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:00 - 17:00	1646	+	720	=	2366	588	717	Yes
17:00 - 18:00	1540	+	673	=	2213	545	612	Yes
15:00 - 16:00	1440	+	637	=	2077	592	625	Yes
07:00 - 08:00	609	+	1268	=	1877	455	703	Yes
18:00 - 19:00	1033	+	614	=	1647	461	460	Yes
14:00 - 15:00	1018	+	579	=	1597	537	436	Yes
06:00 - 07:00	392	+	995	=	1387	249	378	Yes
08:00 - 09:00	583	+	803	=	1386	342	483	Yes
09:00 - 10:00	532	+	751	=	1283	334	442	Yes
19:00 - 20:00	751	+	510	=	1261	414	317	Yes
13:00 - 14:00	734	+	515	=	1249	374	436	Yes
11:00 - 12:00	633	+	522	=	1155	308	401	Yes
12:00 - 13:00	653	+	496	=	1149	403	438	Yes
20:00 - 21:00	639	+	443	=	1082	274	259	Yes
10:00 - 11:00	565	+	514	=	1079	302	357	Yes
21:00 - 22:00	449	+	218	=	667	215	195	Yes
05:00 - 06:00	113	+	528	=	641	77	157	Yes
04:45 - 05:45	89	+	411	=	500	61	140	No
04:30 - 05:30	60	+	318	=	378	48	108	No
22:00 - 23:00	264	+	92	=	356	91	79	No
22:15 - 23:15	212	+	75	=	287	81	58	No
04:15 - 05:15	49	+	224	=	273	34	94	No
22:30 - 23:30	173	+	50	=	223	59	48	No
04:00 - 05:00	41	+	156	=	197	27	71	No
22:45 - 23:45	156		36		192	50	39	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2553

Study Date : 05/29/2025

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

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 = **336 504**
Veh/Hr Minor = **112 56**

Major Road						Minor Road					
CSAH 78						CSAH 116					
Time	Major NB	+	Major SB	=	Total		Minor EB		Minor WB		Met1A?
15:45 - 16:45	1639	+	741	=	2380		594		707		Yes
16:45 - 17:45	1620	+	634	=	2254		574		664		Yes
14:45 - 15:45	1385	+	607	=	1992		585		574		Yes
06:45 - 07:45	596	+	1243	=	1839		420		688		Yes
17:45 - 18:45	1121	+	642	=	1763		452		492		Yes
07:45 - 08:45	601	+	954	=	1555		379		504		Yes
13:45 - 14:45	856	+	563	=	1419		507		443		Yes
18:45 - 19:45	836	+	568	=	1404		451		347		Yes
08:45 - 09:45	546	+	760	=	1306		341		453		Yes
12:45 - 13:45	726	+	522	=	1248		374		432		Yes
11:45 - 12:45	671	+	483	=	1154		381		418		Yes
05:45 - 06:45	268		879		1147		183		293		Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:00 - 17:00	1646	+	720	=	2366	588	717	Yes
17:00 - 18:00	1540	+	673	=	2213	545	612	Yes
15:00 - 16:00	1440	+	637	=	2077	592	625	Yes
07:00 - 08:00	609	+	1268	=	1877	455	703	Yes
18:00 - 19:00	1033	+	614	=	1647	461	460	Yes
14:00 - 15:00	1018	+	579	=	1597	537	436	Yes
06:00 - 07:00	392	+	995	=	1387	249	378	Yes
08:00 - 09:00	583	+	803	=	1386	342	483	Yes
09:00 - 10:00	532	+	751	=	1283	334	442	Yes
19:00 - 20:00	751	+	510	=	1261	414	317	Yes
13:00 - 14:00	734	+	515	=	1249	374	436	Yes
11:00 - 12:00	633		522		1155	308	401	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2553

Study Date : 05/29/2025

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.

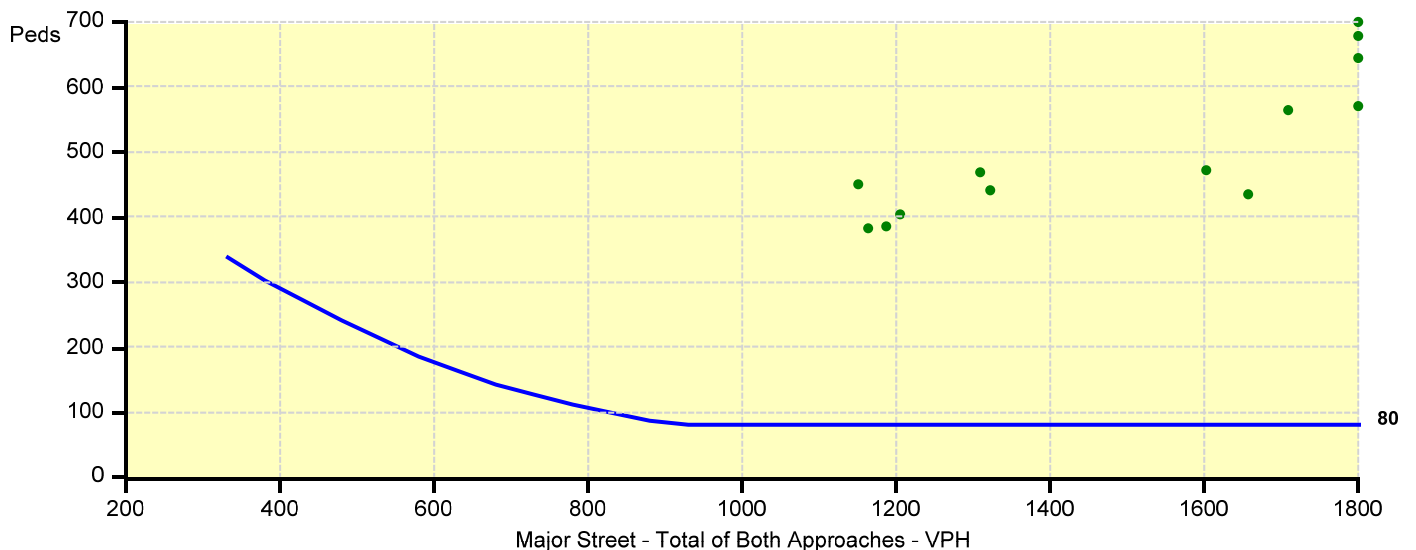
Summary

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**

Major Road CSAH 78						Minor Road CSAH 116		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:15 - 17:15	1683	+	682	=	2365	610	710	Yes
15:15 - 16:15	1500	+	698	=	2198	580	646	Yes
17:15 - 18:15	1338	+	666	=	2004	523	572	Yes
07:15 - 08:15	622	+	1206	=	1828	469	677	Yes
14:15 - 15:15	1127	+	582	=	1709	563	489	Yes
18:15 - 19:15	1049	+	607	=	1656	436	418	Yes
06:15 - 07:15	470	+	1133	=	1603	287	472	Yes
13:15 - 14:15	798	+	523	=	1321	416	441	Yes
08:15 - 09:15	602	+	707	=	1309	335	470	Yes
09:15 - 10:15	500	+	704	=	1204	318	404	Yes
11:15 - 12:15	650	+	537	=	1187	322	387	Yes
19:15 - 20:15	670		494		1164	381	263	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2553

Study Date : 05/29/2025

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

62 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						Minor Road			
CSAH 78						CSAH 116			
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?	
15:45 - 16:45	1639	+	741	=	2380	594	707	Yes	
16:00 - 17:00	1646	+	720	=	2366	588	717	Yes	
16:15 - 17:15	1683	+	682	=	2365	610	710	Yes	
15:30 - 16:30	1591	+	735	=	2326	591	668	Yes	
16:30 - 17:30	1644	+	641	=	2285	599	691	Yes	
16:45 - 17:45	1620	+	634	=	2254	574	664	Yes	
17:00 - 18:00	1540	+	673	=	2213	545	612	Yes	
15:15 - 16:15	1500	+	698	=	2198	580	646	Yes	
15:00 - 16:00	1440	+	637	=	2077	592	625	Yes	
17:15 - 18:15	1338	+	666	=	2004	523	572	Yes	
14:45 - 15:45	1385	+	607	=	1992	585	574	Yes	
07:00 - 08:00	609		1268		1877	455	703	Yes	

