

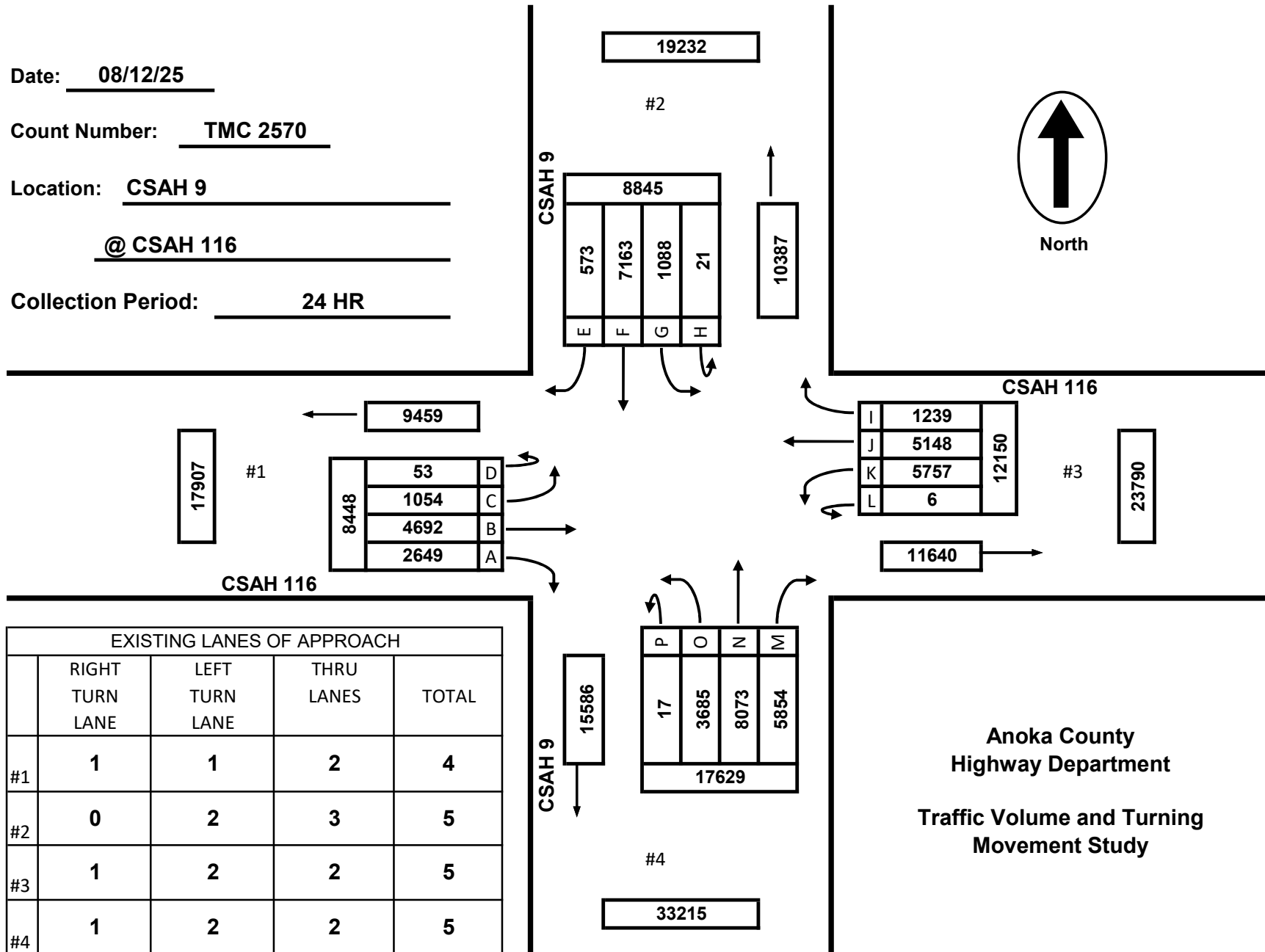
Date: 08/12/25

Count Number: TMC 2570

Location: CSAH 9

@ CSAH 116

Collection Period: 24 HR



Date: 08/12/25

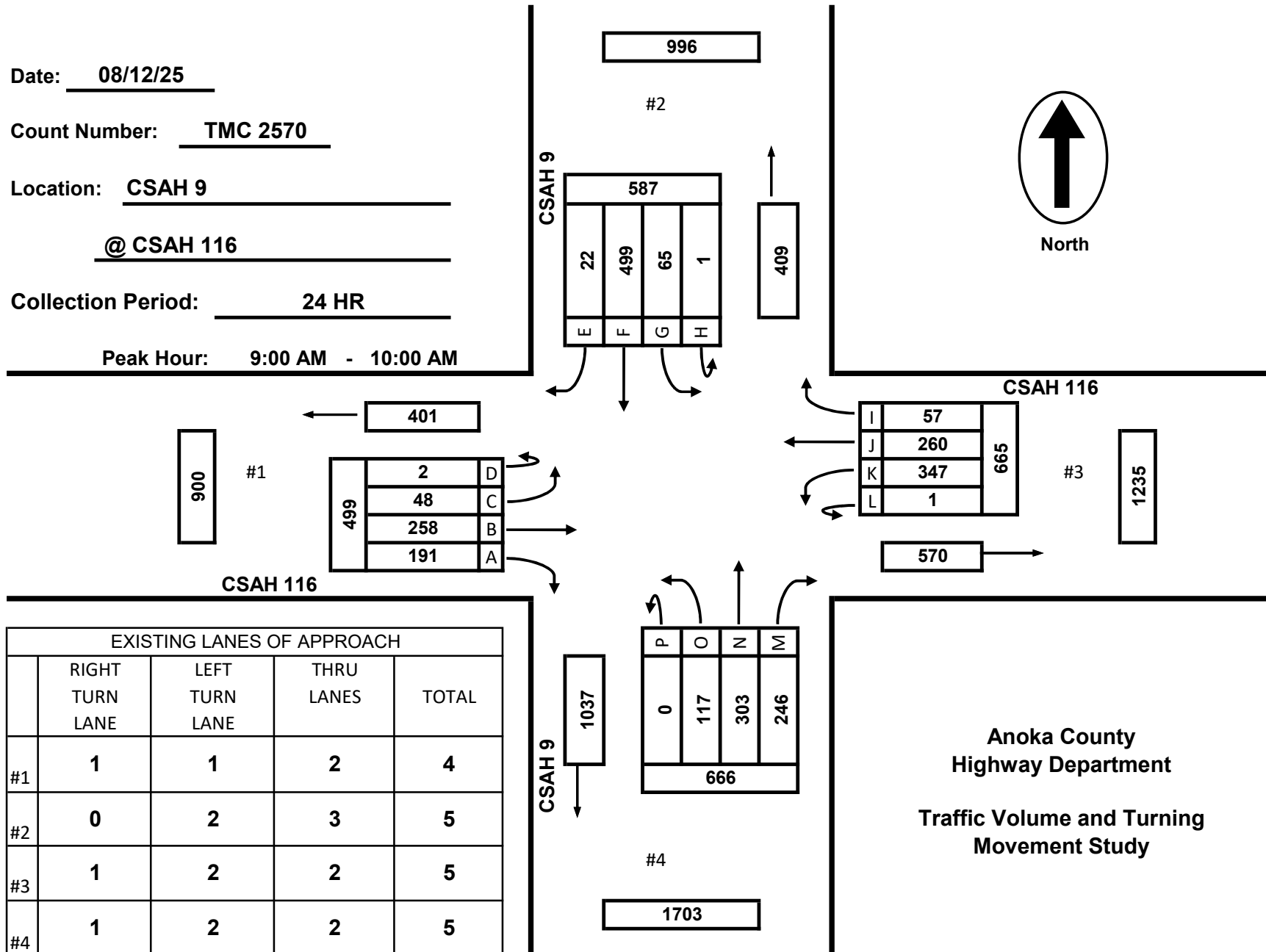
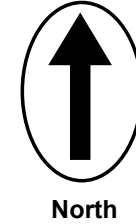
Count Number: TMC 2570

Location: CSAH 9

@ CSAH 116

Collection Period: 24 HR

Peak Hour: 9:00 AM - 10:00 AM



Anoka County
Highway Department
Traffic Volume and Turning
Movement Study

Date: 08/12/25

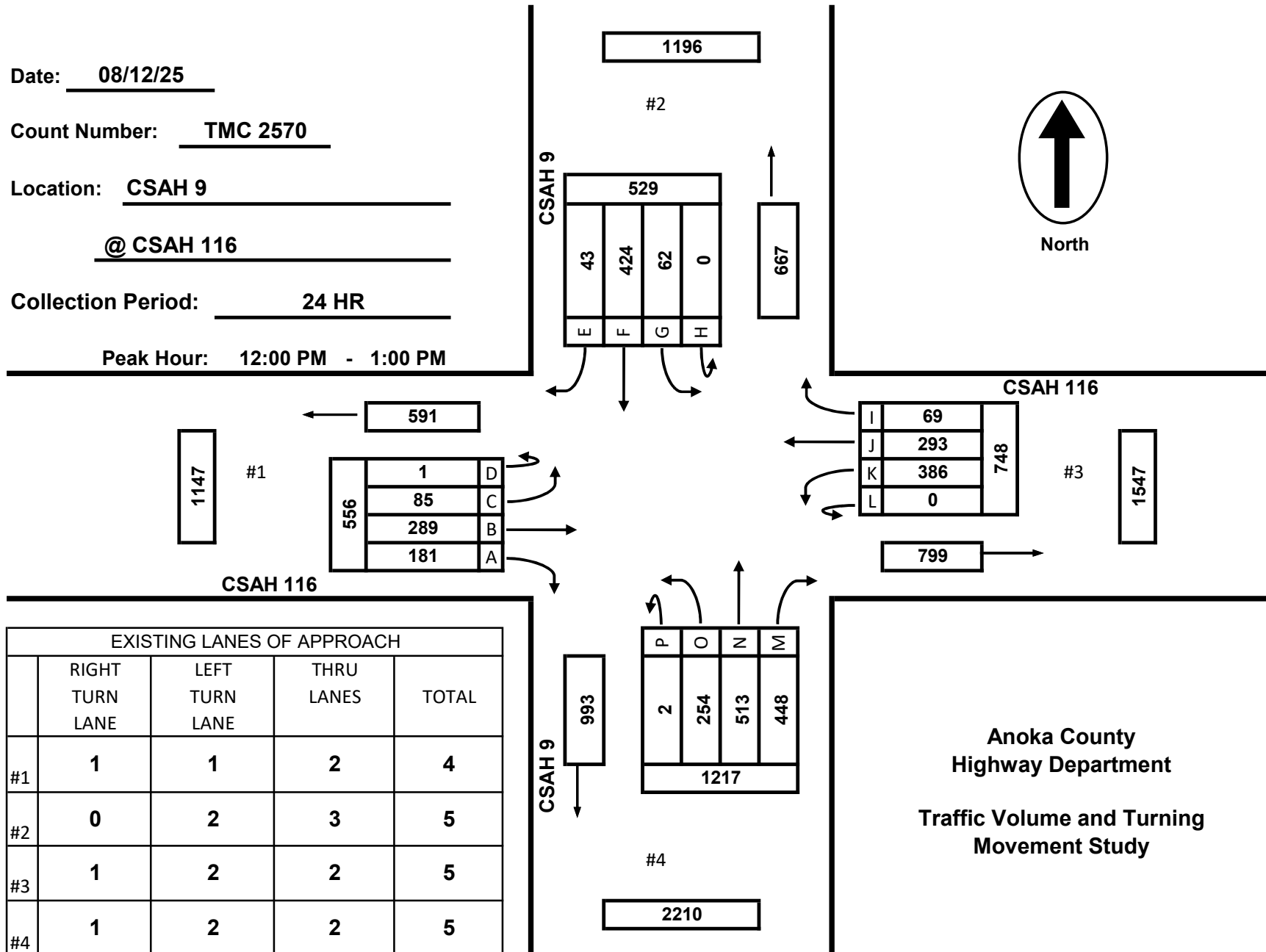
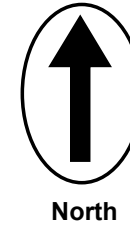
Count Number: TMC 2570

Location: CSAH 9

@ CSAH 116

Collection Period: 24 HR

Peak Hour: 12:00 PM - 1:00 PM



Anoka County
Highway Department
Traffic Volume and Turning
Movement Study

Date: 08/12/25

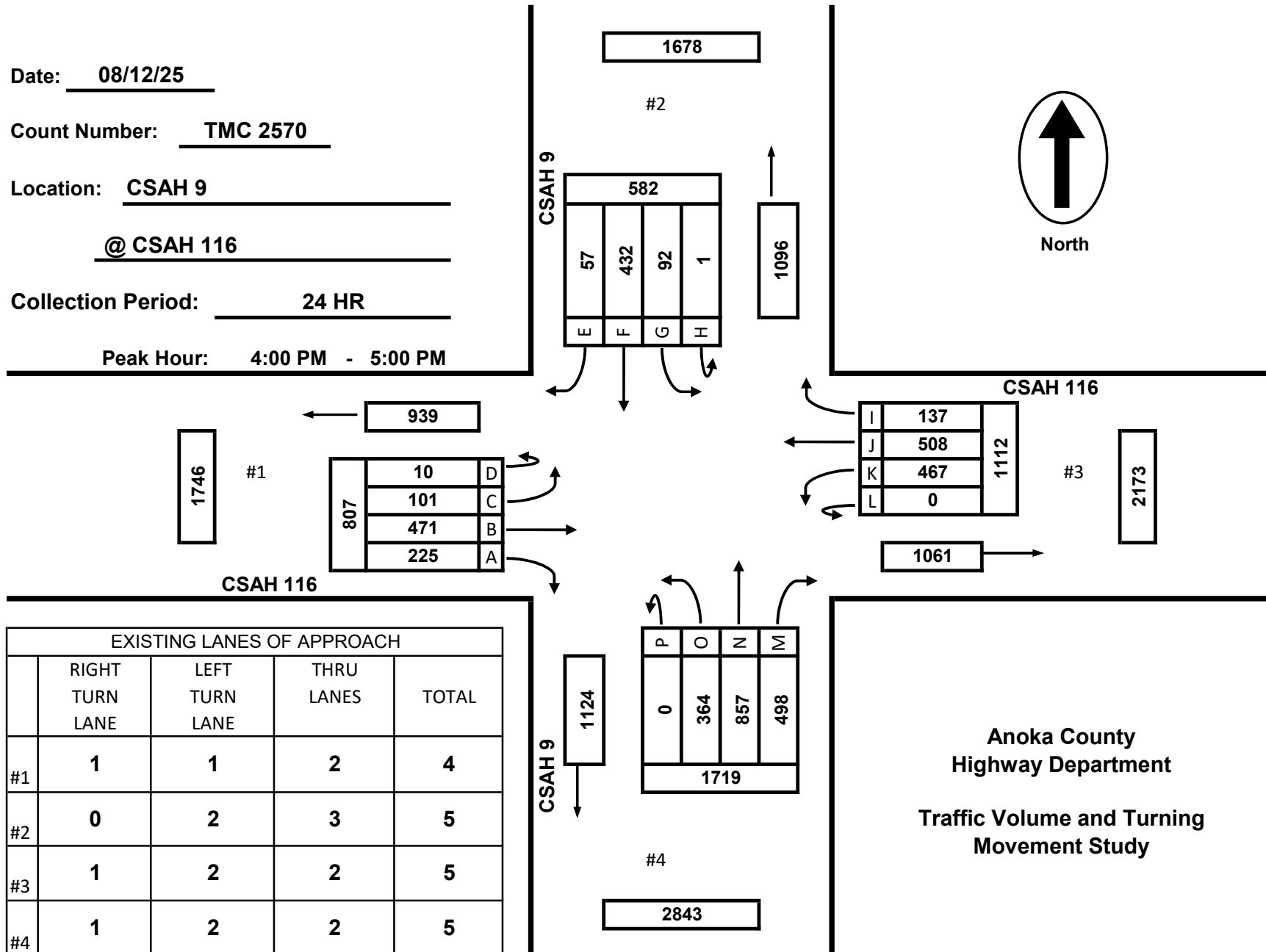
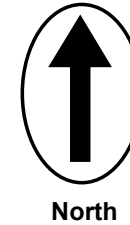
Count Number: TMC 2570

Location: CSAH 9

@ CSAH 116

Collection Period: 24 HR

Peak Hour: 4:00 PM - 5:00 PM



TMC 2570 - CSAH 9 @ CSAH 116
Andover MN
Tuesday, August 12, 2025

Time	Southbound CSAH 9						Westbound CSAH 116						Northbound CSAH 9						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	4	1	0	6	0	6	4	0	0	10	0	3	17	4	0	24	0	1	4	4	0	9	49
12:15 AM	0	2	1	0	0	3	0	5	4	1	0	10	0	4	12	4	0	20	0	1	1	1	0	3	36
12:30 AM	0	1	6	0	0	7	0	4	0	1	0	5	0	1	9	8	0	18	0	1	3	1	0	5	35
12:45 AM	0	3	3	0	0	6	0	4	3	1	0	8	0	1	8	4	0	13	0	2	2	0	0	4	31
Hourly Total	0	7	14	1	0	22	0	19	11	3	0	33	0	9	46	20	0	75	0	5	10	6	0	21	151
1:00 AM	0	0	2	0	0	2	0	4	4	1	0	9	0	3	5	0	0	8	0	2	3	3	0	8	27
1:15 AM	0	0	2	0	0	2	0	6	2	0	0	8	0	3	5	6	0	14	0	0	5	1	0	6	30
1:30 AM	0	0	2	0	0	2	0	1	4	0	0	5	0	6	7	1	0	14	0	0	5	0	0	5	26
1:45 AM	0	0	2	0	0	2	0	3	1	1	0	5	0	1	4	4	0	9	0	2	3	0	0	5	21
Hourly Total	0	0	8	0	0	8	0	14	11	2	0	27	0	13	21	11	0	45	0	4	16	4	0	24	104
2:00 AM	0	0	5	0	0	5	0	7	1	0	0	8	0	2	3	3	0	8	0	3	4	1	0	8	29
2:15 AM	0	0	2	1	0	3	0	4	1	0	0	5	0	0	6	2	0	8	0	1	3	1	0	5	21
2:30 AM	0	2	5	0	0	7	0	3	2	0	0	5	0	0	5	4	0	9	0	0	0	2	0	2	23
2:45 AM	0	0	5	0	0	5	0	1	1	0	0	2	0	1	7	3	0	11	0	1	1	1	0	3	21
Hourly Total	0	2	17	1	0	20	0	15	5	0	0	20	0	3	21	12	0	36	0	5	8	5	0	18	94
3:00 AM	0	0	4	0	0	4	0	2	2	0	0	4	0	1	4	1	0	6	0	0	1	0	0	1	15
3:15 AM	0	0	8	1	0	9	0	1	1	0	0	2	0	2	5	1	0	8	0	0	3	2	0	5	24
3:30 AM	0	0	10	0	0	10	0	10	4	0	0	14	0	2	4	3	0	9	0	0	3	3	0	6	39
3:45 AM	0	1	16	1	0	18	0	11	2	0	0	13	0	0	4	2	0	6	0	1	1	0	0	2	39
Hourly Total	0	1	38	2	0	41	0	24	9	0	0	33	0	5	17	7	0	29	0	1	8	5	0	14	117
4:00 AM	0	0	25	0	0	25	0	8	3	0	0	11	0	1	4	1	0	6	0	0	0	3	0	3	45
4:15 AM	1	1	38	2	0	42	0	11	6	1	0	18	0	4	4	5	0	13	0	1	5	5	0	11	84
4:30 AM	0	1	31	1	0	33	0	16	11	0	0	27	0	3	3	5	0	11	0	1	6	8	0	15	86
4:45 AM	0	1	51	1	0	53	0	10	10	0	0	20	0	5	11	9	0	25	0	1	16	10	0	27	125
Hourly Total	1	3	145	4	0	153	0	45	30	1	0	76	0	13	22	20	0	55	0	3	27	26	0	56	340
5:00 AM	0	2	69	2	0	73	0	20	7	1	0	28	0	3	8	5	0	16	0	1	9	10	0	20	137
5:15 AM	0	5	102	2	0	109	0	17	17	0	0	34	0	1	13	11	0	25	0	1	9	18	0	28	196
5:30 AM	0	3	102	3	0	108	0	37	22	2	0	61	0	6	22	13	0	41	0	3	35	16	0	54	264
5:45 AM	0	9	95	4	0	108	0	30	37	4	0	71	0	6	16	13	0	35	0	2	23	13	0	38	252
Hourly Total	0	19	368	11	0	398	0	104	83	7	0	194	0	16	59	42	0	117	0	7	76	57	0	140	849
6:00 AM	0	3	123	1	0	127	0	37	27	3	0	67	0	5	31	20	0	56	0	4	25	15	0	44	294
6:15 AM	0	1	151	4	0	156	0	64	28	4	0	96	0	6	40	29	0	75	0	3	48	27	0	78	405
6:30 AM	0	8	182	8	0	198	0	80	38	9	0	127	0	13	30	29	0	72	0	7	55	25	0	87	484
6:45 AM	0	12	206	10	0	228	0	55	38	10	0	103	0	13	41	50	0	104	1	14	78	36	0	129	564
Hourly Total	0	24	662	23	0	709	0	236	131	26	0	393	0	37	142	128	0	307	1	28	206	103	0	338	1747
7:00 AM	0	8	149	6	0	163	0	55	41	6	0	102	0	10	46	45	0	101	0	8	50	34	0	92	458
7:15 AM	0	23	150	3	0	176	0	98	53	17	0	168	0	16	46	43	0	105	0	11	84	41	0	136	585
7:30 AM	0	21	167	5	0	193	0	95	85	6	0	186	0	21	57	61	0	139	0	12	82	37	0	131	649
7:45 AM	0	25	149	16	0	190	0	101	70	9	1	180	0	20	58	61	0	139	0	8	92	49	0	149	658
Hourly Total	0	77	615	30	0	722	0	349	249	38	1	636	0	67	207	210	0	484	0	39	308	161	0	508	2350

TMC 2570 - CSAH 9 @ CSAH 116
Andover MN
Tuesday, August 12, 2025

Time	Southbound CSAH 9						Westbound CSAH 116						Northbound CSAH 9						Eastbound 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>	
8:00 AM	0	11	123	5	0	139	0	69	69	8	0	146	0	20	51	46	0	117	0	16	59	22	0	97	499
8:15 AM	0	15	161	7	0	183	0	75	54	9	1	138	0	19	56	51	0	126	0	6	49	42	0	97	544
8:30 AM	0	7	134	7	0	148	0	92	60	11	0	163	0	18	63	54	0	135	0	15	65	44	0	124	570
8:45 AM	0	10	133	7	0	150	0	77	53	11	0	141	0	31	70	60	0	161	0	14	86	45	0	145	597
Hourly Total	0	43	551	26	0	620	0	313	236	39	1	588	0	88	240	211	0	539	0	51	259	153	0	463	2210
9:00 AM	1	11	111	9	0	132	0	76	62	13	0	151	0	24	79	61	0	164	0	13	68	42	0	123	570
9:15 AM	0	21	121	3	0	145	1	94	52	11	1	158	0	32	74	70	0	176	2	13	69	31	0	115	594
9:30 AM	0	16	123	6	0	145	0	71	62	16	1	149	0	30	64	58	0	152	0	13	51	55	0	119	565
9:45 AM	0	17	144	4	0	165	0	106	84	17	0	207	0	31	86	57	0	174	0	9	70	63	0	142	688
Hourly Total	1	65	499	22	0	587	1	347	260	57	2	665	0	117	303	246	0	666	2	48	258	191	0	499	2417
10:00 AM	0	17	115	3	0	135	0	75	44	13	2	132	1	33	80	71	0	185	1	11	54	50	0	116	568
10:15 AM	0	12	122	1	0	135	0	93	63	14	2	170	0	49	78	93	0	220	1	13	52	41	0	107	632
10:30 AM	0	15	110	15	0	140	0	101	55	19	1	175	0	39	96	85	0	220	2	10	60	45	0	117	652
10:45 AM	0	18	112	8	0	138	1	83	64	13	1	161	0	54	89	102	0	245	0	16	84	57	0	157	701
Hourly Total	0	62	459	27	0	548	1	352	226	59	6	638	1	175	343	351	0	870	4	50	250	193	0	497	2553
11:00 AM	0	27	109	6	0	142	0	60	69	17	1	146	0	57	108	83	0	248	0	16	62	48	0	126	662
11:15 AM	1	17	123	9	0	150	0	109	66	23	0	198	3	52	115	90	0	260	0	13	59	48	0	120	728
11:30 AM	1	12	92	7	0	112	0	110	79	13	0	202	1	66	106	90	0	263	1	11	89	51	0	152	729
11:45 AM	0	16	101	5	0	122	0	97	90	16	1	203	0	74	103	100	0	277	0	14	68	51	0	133	735
Hourly Total	2	72	425	27	0	526	0	376	304	69	2	749	4	249	432	363	0	1048	1	54	278	198	0	531	2854
12:00 PM	0	16	102	11	1	129	0	96	61	14	0	171	0	61	104	99	2	264	0	30	81	53	0	164	728
12:15 PM	0	14	102	9	1	125	0	77	74	16	0	167	1	54	131	108	0	294	1	14	70	32	0	117	703
12:30 PM	0	19	100	11	2	130	0	108	77	20	0	205	1	82	132	118	0	333	0	19	70	40	0	129	797
12:45 PM	0	13	120	12	1	145	0	105	81	19	1	205	0	57	146	123	1	326	0	22	68	56	0	146	822
Hourly Total	0	62	424	43	5	529	0	386	293	69	1	748	2	254	513	448	3	1217	1	85	289	181	0	556	3050
1:00 PM	1	9	99	4	2	113	0	84	59	21	0	164	2	57	103	99	1	261	0	14	59	53	0	126	664
1:15 PM	0	27	94	7	2	128	0	93	93	14	0	200	0	66	144	91	0	301	0	23	64	36	0	123	752
1:30 PM	1	15	91	5	0	112	0	84	67	10	0	161	0	62	146	119	0	327	1	17	72	28	0	118	718
1:45 PM	0	13	88	5	1	106	0	84	85	15	0	184	0	73	148	127	0	348	0	18	74	26	0	118	756
Hourly Total	2	64	372	21	5	459	0	345	304	60	0	709	2	258	541	436	1	1237	1	72	269	143	0	485	2890
2:00 PM	0	18	76	10	3	104	0	90	90	17	0	197	1	76	190	142	1	409	0	13	72	43	0	128	838
2:15 PM	1	29	102	10	4	142	0	98	100	23	2	221	1	80	172	107	0	360	1	23	85	51	0	160	883
2:30 PM	0	24	110	18	1	152	0	103	81	35	0	219	0	72	156	109	0	337	0	20	77	44	1	141	849
2:45 PM	0	15	85	9	0	109	0	105	97	30	0	232	0	95	160	131	0	386	1	23	78	27	0	129	856
Hourly Total	1	86	373	47	8	507	0	396	368	105	2	869	2	323	678	489	1	1492	2	79	312	165	1	558	3426
3:00 PM	0	28	90	11	2	129	0	93	106	33	0	232	0	73	196	103	0	372	0	20	93	39	0	152	885
3:15 PM	0	31	117	10	1	158	1	91	108	22	0	222	0	98	208	122	2	428	1	19	109	44	1	173	981
3:30 PM	0	20	79	12	0	111	0	101	120	33	1	254	0	79	210	119	0	408	0	20	89	37	1	146	919
3:45 PM	0	25	99	14	0	138	1	96	101	30	0	228	0	75	229	132	0	436	0	24	114	45	0	183	985
Hourly Total	0	104	385	47	3	536	2	381	435	118	1	936	0	325	843	476	2	1644	1	83	405	165	2	654	3770

TMC 2570 - CSAH 9 @ CSAH 116
Andover MN
Tuesday, August 12, 2025

Time	Southbound CSAH 9						Westbound CSAH 116						Northbound CSAH 9						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	0	26	89	13	0	128	0	127	133	37	0	297	0	88	193	114	0	395	5	19	123	49	0	196	1016
4:15 PM	0	26	104	10	0	140	0	102	121	34	0	257	0	98	248	130	1	476	1	25	121	66	0	213	1086
4:30 PM	1	18	121	16	0	156	0	117	144	41	0	302	0	92	205	132	0	429	3	24	110	63	0	200	1087
4:45 PM	0	22	118	18	0	158	0	121	110	25	0	256	0	86	211	122	0	419	1	33	117	47	0	198	1031
Hourly Total	1	92	432	57	0	582	0	467	508	137	0	1112	0	364	857	498	1	1719	10	101	471	225	0	807	4220
5:00 PM	1	12	107	10	0	130	0	119	137	33	0	289	0	109	187	115	0	411	0	23	117	43	0	183	1013
5:15 PM	0	28	93	9	1	130	1	100	133	32	0	266	0	77	222	149	0	448	1	24	78	58	0	161	1005
5:30 PM	1	19	97	16	1	133	0	119	117	36	0	272	0	85	172	136	0	393	2	15	107	51	1	175	973
5:45 PM	0	23	100	12	0	135	0	82	89	21	0	192	0	107	178	131	0	416	2	30	95	61	0	188	931
Hourly Total	2	82	397	47	2	528	1	420	476	122	0	1019	0	378	759	531	0	1668	5	92	397	213	1	707	3922
6:00 PM	1	21	88	11	0	121	0	112	94	26	0	232	0	81	191	99	0	371	1	20	74	36	0	131	855
6:15 PM	1	15	99	12	0	127	0	92	98	29	0	219	1	67	156	102	0	326	0	21	78	44	0	143	815
6:30 PM	0	16	68	13	2	97	0	78	93	21	0	192	1	86	157	101	0	345	1	9	73	40	0	123	757
6:45 PM	1	19	61	5	0	86	0	90	69	28	2	187	0	65	130	90	0	285	2	16	64	36	0	118	676
Hourly Total	3	71	316	41	2	431	0	372	354	104	2	830	2	299	634	392	0	1327	4	66	289	156	0	515	3103
7:00 PM	1	22	90	8	0	121	0	79	80	19	0	178	0	63	138	95	0	296	2	18	67	29	1	116	711
7:15 PM	0	11	70	7	0	88	0	81	84	11	0	176	1	64	132	87	1	284	1	19	45	27	0	92	640
7:30 PM	0	20	54	10	1	84	0	55	55	29	0	139	0	59	139	94	0	292	1	18	41	32	0	92	607
7:45 PM	1	13	45	7	0	66	0	64	72	19	0	155	2	67	118	79	0	266	0	12	42	30	0	84	571
Hourly Total	2	66	259	32	1	359	0	279	291	78	0	648	3	253	527	355	1	1138	4	67	195	118	1	384	2529
8:00 PM	1	21	40	10	0	72	0	71	68	11	0	150	0	74	104	71	0	249	1	7	53	23	0	84	555
8:15 PM	3	9	45	9	0	66	0	74	62	22	0	158	0	44	107	83	0	234	3	18	37	24	0	82	540
8:30 PM	1	10	54	8	0	73	0	46	67	12	0	125	0	57	91	78	0	226	1	12	48	20	0	81	505
8:45 PM	0	3	42	4	0	49	0	49	70	10	0	129	0	40	88	58	0	186	0	11	36	17	0	64	428
Hourly Total	5	43	181	31	0	260	0	240	267	55	0	562	0	215	390	290	0	895	5	48	174	84	0	311	2028
9:00 PM	0	8	27	6	0	41	0	46	60	14	0	120	0	42	59	50	0	151	1	10	37	24	0	72	384
9:15 PM	1	4	32	5	0	42	0	38	46	11	0	95	0	19	70	43	0	132	3	6	28	12	1	49	318
9:30 PM	0	5	19	4	1	28	0	30	35	12	0	77	1	31	77	47	0	156	0	10	23	11	0	44	305
9:45 PM	0	2	28	2	0	32	0	31	26	14	0	71	0	26	63	44	0	133	2	6	20	8	0	36	272
Hourly Total	1	19	106	17	1	143	0	145	167	51	0	363	1	118	269	184	0	572	6	32	108	55	1	201	1279
10:00 PM	0	7	37	5	0	49	0	24	30	9	0	63	0	29	40	27	0	96	2	7	16	7	1	32	240
10:15 PM	0	7	20	3	0	30	1	31	15	8	0	55	0	15	26	28	0	69	2	6	11	12	0	31	185
10:30 PM	0	3	11	3	0	17	0	19	19	3	0	41	0	18	22	21	0	61	1	3	12	4	0	20	139
10:45 PM	0	4	13	1	0	18	0	11	17	6	0	34	0	17	33	17	0	67	0	5	12	4	0	21	140
Hourly Total	0	21	81	12	0	114	1	85	81	26	0	193	0	79	121	93	0	293	5	21	51	27	1	104	704
11:00 PM	0	2	13	2	1	17	0	12	16	3	0	31	0	6	33	12	0	51	0	4	8	5	0	17	116
11:15 PM	0	0	8	1	0	9	0	17	9	3	0	29	0	6	21	13	0	40	0	3	6	3	0	12	90
11:30 PM	0	1	8	1	0	10	0	9	7	3	0	19	0	8	21	11	0	40	0	6	10	5	0	21	90
11:45 PM	0	0	7	0	0	7	0	9	17	4	0	30	0	7	13	5	0	25	1	0	4	2	0	7	69
Hourly Total	0	3	36	4	1	43	0	47	49	13	0	109	0	27	88	41	0	156	1	13	28	15	0	57	365
DAILY TOTAL	21	1088	7163	573	28	8845	6	5757	5148	1239	18	12150	17	3685	8073	5854	9	17629	53	1054	4692	2649	7	8448	47072
Cars	21	1071	7030	560	15	8682	6	5705	5056	1233	13	12000	17	3663	7998	5800	8	17478	53	1040	4606	2629	5	8328	46488
Heavy Vehicles	0	17	133	13	13	163	0	52	92	6	5	150	0	22	75	54	1	151	0	14	86	20	2	120	584
Heavy Vehicle %	0.00%	1.56%	1.86%	2.27%	46.43%	1.84%	0.00%	0.90%	1.79%	0.48%	27.78%	1.23%	0.00%	0.60%	0.93%	0.92%	11.11%	0.86%	0.00%	1.33%	1.83%	0.76%	28.57%	1.42%	1.24%

TMC 2570 - CSAH 9 @ CSAH 116
Andover MN
Tuesday, August 12, 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	
9:00 AM	1	11	111	9	0	132	0	76	62	13	0	151	0	24	79	61	0	164	0	13	68	42	0	123	570
9:15 AM	0	21	121	3	0	145	1	94	52	11	1	158	0	32	74	70	0	176	2	13	69	31	0	115	594
9:30 AM	0	16	123	6	0	145	0	71	62	16	1	149	0	30	64	58	0	152	0	13	51	55	0	119	565
9:45 AM	0	17	144	4	0	165	0	106	84	17	0	207	0	31	86	57	0	174	0	9	70	63	0	142	688
Peak Hour Total	1	65	499	22	0	587	1	347	260	57	2	665	0	117	303	246	0	666	2	48	258	191	0	499	2417
Peak Hour Heavy Vehicle	0	1	13	2	0	16	0	5	8	1	0	14	0	3	1	6	0	10	0	2	5	1	0	8	48
Peak Hour Heavy Vehicle PHF	0.00%	1.54%	2.61%	9.09%	0.00%	2.73%	0.00%	1.44%	3.08%	1.75%	0.00%	2.11%	0.00%	2.56%	0.33%	2.44%	0.00%	1.50%	0.00%	4.17%	1.94%	0.52%	0.00%	1.60%	1.99%
	0.250	0.774	0.866	0.611	0.000	0.889	0.250	0.818	0.774	0.838	0.500	0.803	0.000	0.914	0.881	0.879	0.000	0.946	0.250	0.923	0.921	0.758	0.000	0.879	0.878

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	
12:00 PM	0	16	102	11	1	129	0	96	61	14	0	171	0	61	104	99	2	264	0	30	81	53	0	164	728
12:15 PM	0	14	102	9	1	125	0	77	74	16	0	167	1	54	131	108	0	294	1	14	70	32	0	117	703
12:30 PM	0	19	100	11	2	130	0	108	77	20	0	205	1	82	132	118	0	333	0	19	70	40	0	129	797
12:45 PM	0	13	120	12	1	145	0	105	81	19	1	205	0	57	146	123	1	326	0	22	68	56	0	146	822
Peak Hour Total	0	62	424	43	5	529	0	386	293	69	1	748	2	254	513	448	3	1217	1	85	289	181	0	556	3050
Peak Hour Heavy Vehicle	0	2	13	0	1	15	0	6	10	1	0	17	0	0	3	3	1	6	0	0	10	2	0	12	50
Peak Hour Heavy Vehicle PHF	0.00%	3.23%	3.07%	0.00%	20.00%	2.84%	0.00%	1.55%	3.41%	1.45%	0.00%	2.27%	0.00%	0.00%	0.58%	0.67%	33.33%	0.49%	0.00%	0.00%	3.46%	1.10%	0.00%	2.16%	1.64%
	0.000	0.816	0.883	0.896	0.625	0.912	0.000	0.894	0.904	0.863	0.250	0.912	0.500	0.774	0.878	0.911	0.375	0.914	0.250	0.708	0.892	0.808	0.000	0.848	0.928

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	
4:00 PM	0	26	89	13	0	128	0	127	133	37	0	297	0	88	193	114	0	395	5	19	123	49	0	196	1016
4:15 PM	0	26	104	10	0	140	0	102	121	34	0	257	0	98	248	130	1	476	1	25	121	66	0	213	1086
4:30 PM	1	18	121	16	0	156	0	117	144	41	0	302	0	92	205	132	0	429	3	24	110	63	0	200	1087
4:45 PM	0	22	118	18	0	158	0	121	110	25	0	256	0	86	211	122	0	419	1	33	117	47	0	198	1031
Peak Hour Total	1	92	432	57	0	582	0	467	508	137	0	1112	0	364	857	498	1	1719	10	101	471	225	0	807	4220
Peak Hour Heavy Vehicle	0	0	5	0	0	5	0	3	0	0	0	3	0	2	4	3	0	9	0	0	3	0	0	3	20
Peak Hour Heavy Vehicle PHF	0.00%	0.00%	1.16%	0.00%	0.00%	0.86%	0.00%	0.64%	0.00%	0.00%	0.00%	0.27%	0.00%	0.55%	0.47%	0.60%	0.00%	0.52%	0.00%	0.00%	0.64%	0.00%	0.00%	0.37%	0.47%
	0.250	0.885	0.893	0.792	0.000	0.921	0.000	0.919	0.882	0.835	0.000	0.921	0.000	0.929	0.864	0.943	0.250	0.903	0.500	0.765	0.957	0.852	0.000	0.947	0.971

Total Vehicles On Leg			19232		
Vehicles Entering		8845	Vehicles Exiting		10387
Southbound					
Cars	560	7030	1071	21	15
Heavy	13	133	17	0	13
Total	573	7163	1088	21	28

Total Vehicles on Leg 17907	Vehicles Entering Intersection 8448	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 9459		5	2	7
			53	0	53
			1040	14	1054
			4606	86	4692
			2629	20	2649

Daily Volumes					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 12150	Total Vehicles on Leg 23790
1233	6	1239		Vehicles Exiting Intersection 11640	
5056	92	5148			
5705	52	5757			
6	0	6			
13	5	18			

Cars	8	17	3663	7998	5800
Heavy	1	0	22	75	54
Total	9	17	3685	8073	5854
Northbound					
Vehicles Entering 17629			Vehicles Exiting 15586		
Total Vehicles On Leg			33215		

TMC 2570 - CSAH 9 @ CSAH 116

Andover MN

Tuesday, August 12, 2025

Time	Southbound Heavy CSAH 9						Westbound Heavy CSAH 116						Northbound Heavy CSAH 9						Eastbound Heavy 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	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
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	0
12:30 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	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	0
Hourly 'Heavy Vehicles'	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
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	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	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	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	1	2
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	1	2
2:00 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	0	1
2:15 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	0	1
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	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	0
Hourly 'Heavy Vehicles'	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 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	0
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	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	3
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	0
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	3
4:00 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	0	1
4:15 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	0	1
4:30 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	0
4:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	2	0	3	0	0	0	0	0	0	0	4
Hourly 'Heavy Vehicles'	0	0	1	0	0	1	0	1	1	0	0	2	0	1	0	2	0	3	0	0	0	0	0	0	0	6
5:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	0	1	5	5
5:15 AM	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	1	0	2	0	0	0	0	0	0	4	4
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	2
5:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	2	0	4	0	0	0	0	0	0	5	5
Hourly 'Heavy Vehicles'	0	0	3	0	0	3	0	1	1	0	0	2	0	1	4	3	0	8	0	1	2	0	0	3	16	16
6:00 AM	0	0	3	0	0	3	0	2	2	0	0	4	0	0	2	2	0	4	0	0	0	0	0	0	11	11
6:15 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	7	7
6:30 AM	0	1	3	0	0	4	0	0	2	1	0	3	0	0	3	1	0	4	0	1	4	0	0	5	16	16
6:45 AM	0	0	6	1	0	7	0	1	2	0	0	3	0	0	4	0	0	4	0	3	7	0	0	10	24	24
Hourly 'Heavy Vehicles'	0	1	16	1	0	18	0	3	6	1	0	10	0	0	9	3	0	12	0	4	14	0	0	18	58	58
7:00 AM	0	2	5	0	0	7	0	0	0	0	0	0	0	1	1	1	0	3	0	3	1	1	0	5	15	15
7:15 AM	0	1	5	0	0	6	0	1	1	0	0	2	0	0	2	2	0	4	0	1	1	1	0	3	15	15
7:30 AM	0	1	2	0	0	3	0	2	3	0	0	5	0	0	1	0	0	1	0	0	1	0	0	1	10	10
7:45 AM	0	0	2	2	0	4	0	2	1	0	0	3	0	2	1	1	0	4	0	0	1	2	0	3	14	14
Hourly 'Heavy Vehicles'	0	4	14	2	0	20	0	5	5	0	0	10	0	3	5	4	0	12	0	4	4	4	0	12	54	54

TMC 2570 - CSAH 9 @ CSAH 116

Andover MN

Tuesday, August 12, 2025

Time	Southbound Heavy CSAH 9						Westbound Heavy CSAH 116						Northbound Heavy CSAH 9						Eastbound Heavy CSAH 116						VEHICLE 'Heavy Vehicles'
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach 'Heavy Vehicles'</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach 'Heavy Vehicles'</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach 'Heavy Vehicles'</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach 'Heavy Vehicles'</i>	
8:00 AM	0	0	2	0	0	2	0	0	4	0	0	4	0	0	1	1	0	2	0	0	1	0	0	1	9
8:15 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	1	0	4	0	1	2	1	0	4	11
8:30 AM	0	1	5	0	0	6	0	1	1	0	0	2	0	1	2	0	0	3	0	0	3	0	0	3	14
8:45 AM	0	1	7	0	0	8	0	0	1	0	0	1	0	1	0	0	0	1	0	0	4	0	0	4	14
Hourly 'Heavy Vehicles'	0	2	17	0	0	19	0	1	6	0	0	7	0	2	6	2	0	10	0	1	10	1	0	12	48
9:00 AM	0	0	4	1	0	5	0	1	4	0	0	5	0	1	1	3	0	5	0	1	1	0	0	2	17
9:15 AM	0	0	4	0	0	4	0	1	1	0	0	2	0	2	0	0	0	2	0	0	2	0	0	2	10
9:30 AM	0	0	2	0	0	2	0	1	2	1	0	4	0	0	0	2	0	2	0	0	2	0	0	2	10
9:45 AM	0	1	3	1	0	5	0	2	1	0	0	3	0	0	0	1	0	1	0	1	0	1	0	2	11
Hourly 'Heavy Vehicles'	0	1	13	2	0	16	0	5	8	1	0	14	0	3	1	6	0	10	0	2	5	1	0	8	48
10:00 AM	0	0	3	0	0	3	0	2	4	0	0	6	0	2	0	0	0	2	0	0	2	4	0	6	17
10:15 AM	0	0	4	0	0	4	0	1	1	0	0	2	0	2	2	1	0	5	0	0	3	0	0	3	14
10:30 AM	0	1	3	2	0	6	0	2	2	1	0	5	0	0	1	0	0	1	0	0	2	0	0	2	14
10:45 AM	0	1	3	0	0	4	0	1	1	0	0	2	0	0	2	1	0	3	0	0	5	1	0	6	15
Hourly 'Heavy Vehicles'	0	2	13	2	0	17	0	6	8	1	0	15	0	4	5	2	0	11	0	0	12	5	0	17	60
11:00 AM	0	0	6	0	0	6	0	0	0	0	1	0	0	1	2	3	0	6	0	0	0	1	0	1	13
11:15 AM	0	0	2	0	0	2	0	3	2	0	0	5	0	0	3	1	0	4	0	0	1	0	0	1	12
11:30 AM	0	0	3	1	0	4	0	1	2	0	0	3	0	0	2	3	0	5	0	0	2	1	0	3	15
11:45 AM	0	1	2	1	0	4	0	1	2	0	0	3	0	0	2	2	0	4	0	1	1	0	0	2	13
Hourly 'Heavy Vehicles'	0	1	13	2	0	16	0	5	6	0	1	11	0	1	9	9	0	19	0	1	4	2	0	7	53
12:00 PM	0	1	6	0	0	7	0	3	4	0	0	7	0	0	1	1	1	2	0	0	4	1	0	5	21
12:15 PM	0	0	1	0	0	1	0	2	2	1	0	5	0	0	2	2	0	4	0	0	3	0	0	3	13
12:30 PM	0	1	3	0	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	8
12:45 PM	0	0	3	0	1	3	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	1	0	1	8
Hourly 'Heavy Vehicles'	0	2	13	0	1	15	0	6	10	1	0	17	0	0	3	3	1	6	0	0	10	2	0	12	50
1:00 PM	0	1	3	0	1	4	0	0	2	0	0	2	0	0	0	2	0	2	0	0	0	0	0	0	8
1:15 PM	0	2	4	0	0	6	0	0	3	0	0	3	0	0	1	1	0	2	0	0	4	1	0	5	16
1:30 PM	0	1	2	0	0	3	0	1	2	0	0	3	0	0	2	1	0	3	0	0	2	0	0	2	11
1:45 PM	0	0	0	0	0	0	0	1	3	0	0	4	0	1	3	3	0	7	0	0	4	0	0	4	15
Hourly 'Heavy Vehicles'	0	4	9	0	1	13	0	2	10	0	0	12	0	1	6	7	0	14	0	0	10	1	0	11	50
2:00 PM	0	0	1	0	2	1	0	2	6	0	0	8	0	0	2	2	0	4	0	0	1	0	0	1	14
2:15 PM	0	0	4	1	2	5	0	1	5	1	2	7	0	0	0	0	0	0	0	0	1	0	0	1	13
2:30 PM	0	0	0	1	1	1	0	1	2	0	0	3	0	0	1	0	0	1	0	0	0	1	1	1	6
2:45 PM	0	0	3	1	0	4	0	1	4	0	0	5	0	3	0	0	0	3	0	0	1	0	0	1	13
Hourly 'Heavy Vehicles'	0	0	8	3	5	11	0	5	17	1	2	23	0	3	3	2	0	8	0	0	3	1	1	4	46
3:00 PM	0	0	2	0	2	2	0	0	7	0	0	7	0	0	3	2	0	5	0	0	2	0	0	2	16
3:15 PM	0	0	0	0	1	0	0	0	3	1	0	4	0	0	3	0	0	3	0	0	1	0	1	1	8
3:30 PM	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	4
3:45 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	4	0	3	4	0	1	11	1	0	13	0	0	6	2	0	8	0	0	5	0	1	5	30

TMC 2570 - CSAH 9 @ CSAH 116

Andover MN

Tuesday, August 12, 2025

Time	Southbound Heavy CSAH 9						Westbound Heavy CSAH 116						Northbound Heavy CSAH 9						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'			
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	1	0	0	0	3	0	0	0	0	0	0	4
4:15 PM	0	0	2	0	0	2	0	1	0	0	0	1	0	0	0	2	0	0	2	0	0	2	0	0	2	7	
4:30 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	1	6	
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	2	0	0	0	0	0	0	3	
Hourly 'Heavy Vehicles'	0	0	5	0	0	5	0	3	0	0	0	3	0	2	4	3	0	9	0	0	3	0	0	0	3	20	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	0	0	0	2	4	
5:15 PM	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	3	
5:30 PM	0	0	0	0	1	0	0	1	0	0	0	1	0	0	2	0	0	2	0	0	1	0	0	0	1	4	
5:45 PM	0	0	0	0	0	0	0	1	1	0	0	2	0	1	2	0	0	3	0	0	0	0	0	0	0	5	
Hourly 'Heavy Vehicles'	0	0	1	0	2	1	0	2	1	0	0	3	0	1	7	0	0	8	0	0	4	0	0	0	4	16	
6:00 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	0	1	
6:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
6:30 PM	0	0	0	0	0	0	0	1	1	0	0	2	0	0	1	1	0	2	0	0	0	1	0	0	1	5	
6:45 PM	0	0	0	0	0	0	0	2	1	0	2	3	0	0	1	0	0	1	0	0	0	0	0	0	0	4	
Hourly 'Heavy Vehicles'	0	0	1	0	0	1	0	3	2	0	2	5	0	0	3	1	0	4	0	0	0	1	0	0	1	11	
7:00 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	0	
7:15 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	0	
7:30 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	0	1	
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	0	
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	
8:00 PM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	3	
8:15 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	0	1	
8:30 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	0	
8:45 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	0	
Hourly 'Heavy Vehicles'	0	0	1	0	0	1	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	4	
9:00 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	0	
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	0	0	0	0	
9:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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	0	
Hourly 'Heavy Vehicles'	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 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	0	
10:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	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	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	0	
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	2	
11:00 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	0	1	
11:15 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	0	1	
11:30 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	0	
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	0	
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	2	
DAILY 'Heavy Vehicles'	0	17	133	13	13	163	0	52	92	6	5	150	0	22	75	54	1	151	0	14	86	20	2	120	584		

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2570

Study Date : 08/29/2025

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 9

Number of Lanes : 2+

Total Approach Volume: 17,629

Southbound: CSAH 9

Number of Lanes :2+

Total Approach Volume: 8,845

Minor Street Approaches

Eastbound: CSAH 116

Number of Lanes :2+

Total Approach Volume: 5,799

Westbound: CSAH 116

Number of Lanes :2+

Total Approach Volume: 10,911

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 18 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 18 hours, 8 are needed

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

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

Number of hours (17) 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 2570

Study Date : 08/29/2025

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

18 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 9						CSAH 116			
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?	
15:45 - 16:45	1736	+	562	=	2298	569	942	Yes	
16:45 - 17:45	1671	+	551	=	2222	518	957	Yes	
14:45 - 15:45	1594	+	507	=	2101	453	822	Yes	
13:45 - 14:45	1454	+	504	=	1958	383	731	Yes	
17:45 - 18:45	1458	+	480	=	1938	404	738	Yes	
12:45 - 13:45	1215	+	498	=	1713	340	666	Yes	
11:45 - 12:45	1168	+	506	=	1674	367	680	Yes	
10:45 - 11:45	1016	+	542	=	1558	351	641	Yes	
18:45 - 19:45	1157	+	379	=	1536	294	593	Yes	
09:45 - 10:45	799	+	575	=	1374	283	621	Yes	
19:45 - 20:45	975	+	277	=	1252	234	524	Yes	
08:45 - 09:45	653	+	572	=	1225	329	548	Yes	
06:45 - 07:45	449	+	760	=	1209	340	520	Yes	
07:45 - 08:45	517	+	660	=	1177	310	590	Yes	
05:45 - 06:45	238	+	589	=	827	167	341	Yes	
20:45 - 21:45	625	+	160	=	785	165	374	Yes	
21:45 - 22:45	359	+	128	=	487	88	196	Yes	
04:45 - 05:45	107	+	343	=	450	75	140	Yes	
04:30 - 05:30	77	+	268	=	345	44	108	No	
04:15 - 05:15	65	+	201	=	266	40	91	No	
22:45 - 23:45	198	+	54	=	252	54	98	No	
04:00 - 05:00	55	+	153	=	208	30	75	No	
23:00 - 00:00	156	+	43	=	199	42	96	No	
03:45 - 04:45	36	+	118	=	154	15	68	No	
23:15 - 00:15	105		26		131	30	68	No	

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2570

Study Date : 08/29/2025

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

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 = **630**

Veh/Hr Minor = **70**

Major Road						Minor Road		
CSAH 9						CSAH 116		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:30 - 17:30	1707	+	574	=	2281	531	982	Yes
15:30 - 16:30	1715	+	517	=	2232	541	902	Yes
14:30 - 15:30	1523	+	548	=	2071	441	785	Yes
17:30 - 18:30	1506	+	516	=	2022	445	803	Yes
13:30 - 14:30	1444	+	464	=	1908	376	698	Yes
12:30 - 13:30	1221	+	516	=	1737	339	700	Yes
18:30 - 19:30	1210	+	392	=	1602	317	654	Yes
11:30 - 12:30	1098	+	488	=	1586	379	684	Yes
10:30 - 11:30	973	+	570	=	1543	322	608	Yes
19:30 - 20:30	1041	+	288	=	1329	233	521	Yes
09:30 - 10:30	731	+	580	=	1311	275	598	Yes
07:30 - 08:30	521	+	705	=	1226	324	618	Yes
08:30 - 09:30	636	+	575	=	1211	345	567	Yes
06:30 - 07:30	382	+	765	=	1147	308	458	Yes
20:30 - 21:30	695	+	205	=	900	193	422	Yes
05:30 - 06:30	207	+	499	=	706	143	282	Yes
05:15 - 06:15	157	+	452	=	609	102	224	No
21:30 - 22:30	454	+	139	=	593	105	223	No
05:00 - 06:00	117	+	398	=	515	83	187	No
21:45 - 22:45	359	+	128	=	487	88	196	No
04:45 - 05:45	107	+	343	=	450	75	140	No
22:00 - 23:00	293	+	114	=	407	77	167	No
04:30 - 05:30	77	+	268	=	345	44	108	No
22:15 - 23:15	248	+	82	=	330	64	141	No
22:30 - 23:30	219		61		280	54	120	No

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2570

Study Date : 08/29/2025

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

18 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 9						CSAH 116				
Time	Major NB	+	Major SB	=	Total	Minor EB		Minor WB		Met1A?
15:45 - 16:45	1736	+	562	=	2298	569		942		Yes
16:45 - 17:45	1671	+	551	=	2222	518		957		Yes
14:45 - 15:45	1594	+	507	=	2101	453		822		Yes
13:45 - 14:45	1454	+	504	=	1958	383		731		Yes
17:45 - 18:45	1458	+	480	=	1938	404		738		Yes
12:45 - 13:45	1215	+	498	=	1713	340		666		Yes
11:45 - 12:45	1168	+	506	=	1674	367		680		Yes
10:45 - 11:45	1016	+	542	=	1558	351		641		Yes
18:45 - 19:45	1157	+	379	=	1536	294		593		Yes
09:45 - 10:45	799	+	575	=	1374	283		621		Yes
19:45 - 20:45	975	+	277	=	1252	234		524		Yes
08:45 - 09:45	653		572		1225	329		548		Yes

Time	Major NB	+	Major SB	=	Total	Minor EB		Minor WB		Met1B?
16:00 - 17:00	1719	+	582	=	2301	582		975		Yes
17:00 - 18:00	1668	+	528	=	2196	494		897		Yes
15:00 - 16:00	1644	+	536	=	2180	489		818		Yes
14:00 - 15:00	1492	+	507	=	1999	393		764		Yes
18:00 - 19:00	1327	+	431	=	1758	359		726		Yes
12:00 - 13:00	1217	+	529	=	1746	375		679		Yes
13:00 - 14:00	1237	+	459	=	1696	342		649		Yes
11:00 - 12:00	1048	+	526	=	1574	333		680		Yes
19:00 - 20:00	1138	+	359	=	1497	266		570		Yes
10:00 - 11:00	870	+	548	=	1418	304		579		Yes
09:00 - 10:00	666	+	587	=	1253	308		608		Yes
07:00 - 08:00	484		722		1206	347		598		Yes

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2570

Study Date : 08/29/2025

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.

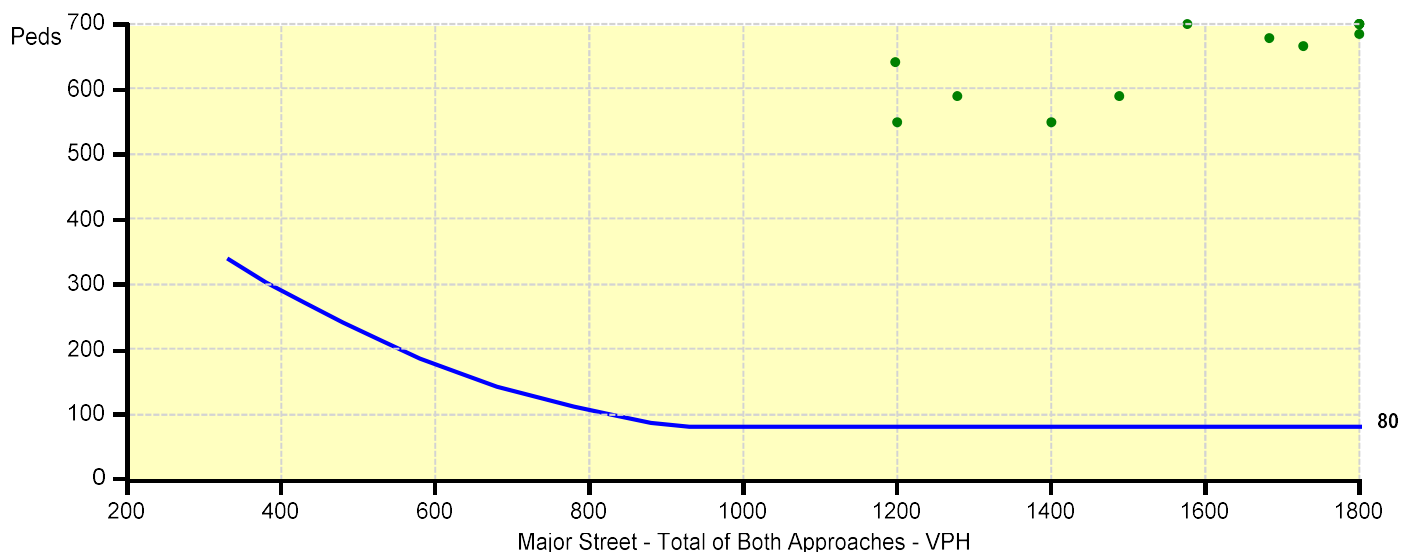
Summary

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**

Major Road CSAH 9						Minor Road CSAH 116		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:15 - 17:15	1735	+	584	=	2319	575	971	Yes
15:15 - 16:15	1667	+	535	=	2202	523	879	Yes
17:15 - 18:15	1628	+	519	=	2147	449	847	Yes
14:15 - 15:15	1455	+	532	=	1987	421	783	Yes
13:15 - 14:15	1385	+	450	=	1835	354	686	Yes
12:15 - 13:15	1214	+	513	=	1727	337	665	Yes
18:15 - 19:15	1252	+	431	=	1683	351	679	Yes
11:15 - 12:15	1064	+	513	=	1577	366	708	Yes
10:15 - 11:15	933	+	555	=	1488	316	589	Yes
19:15 - 20:15	1091	+	310	=	1401	240	550	Yes
09:15 - 10:15	687	+	590	=	1277	293	589	Yes
08:15 - 09:15	586		613		1199	316	549	Yes



ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2570

Study Date : 08/29/2025

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.

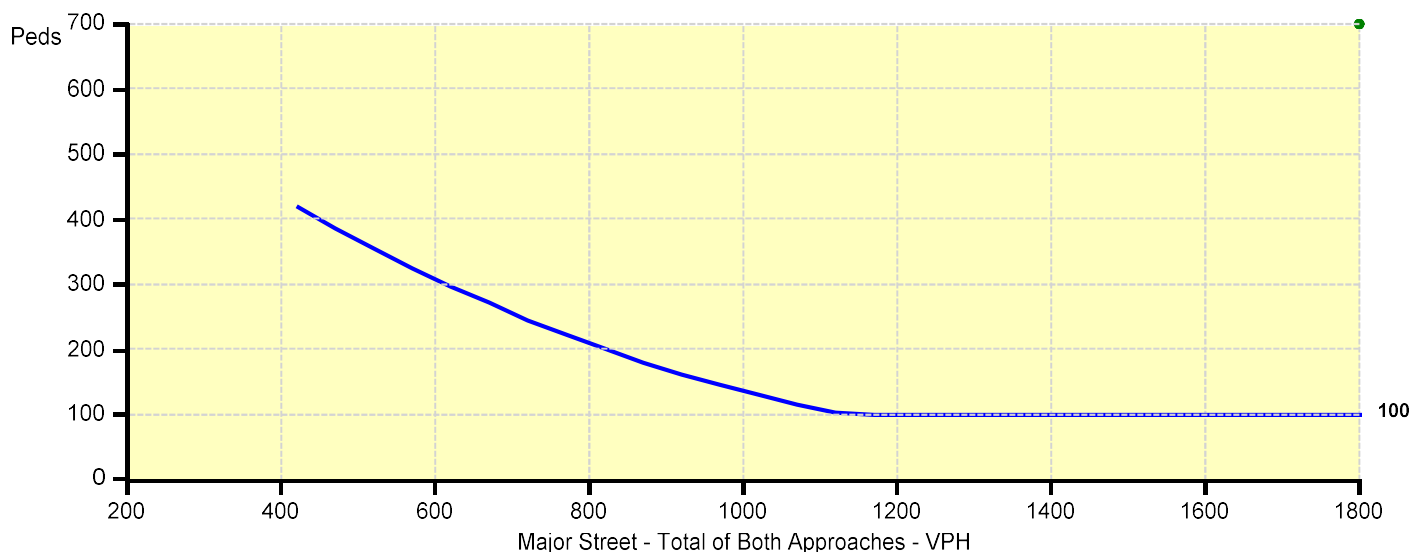
Summary

63 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 9						Minor Road CSAH 116		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:15 - 17:15	1735	+	584	=	2319	575	971	Yes
16:00 - 17:00	1719	+	582	=	2301	582	975	Yes
15:45 - 16:45	1736	+	562	=	2298	569	942	Yes
16:30 - 17:30	1707	+	574	=	2281	531	982	Yes
15:30 - 16:30	1715	+	517	=	2232	541	902	Yes
16:45 - 17:45	1671	+	551	=	2222	518	957	Yes
15:15 - 16:15	1667	+	535	=	2202	523	879	Yes
17:00 - 18:00	1668	+	528	=	2196	494	897	Yes
15:00 - 16:00	1644	+	536	=	2180	489	818	Yes
17:15 - 18:15	1628	+	519	=	2147	449	847	Yes
14:45 - 15:45	1594	+	507	=	2101	453	822	Yes
14:30 - 15:30	1523		548		2071	441	785	Yes



ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2570

Study Date : 08/29/2025

Multiway Stop Warrants - Summary

Major Street Approaches

Northbound: CSAH 9

Number of Lanes : 2+

Total Approach Volume: 17,629

Southbound: CSAH 9

Number of Lanes :2+

Total Approach Volume: 8,845

Minor Street Approaches

Eastbound: CSAH 116

Number of Lanes :2+

Total Approach Volume: 5,799

Westbound: CSAH 116

Number of Lanes :2+

Total Approach Volume: 10,911

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..... **Satisfied**
Average of 8 highest hours meets or exceeds 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 meets or exceeds volume criteria.

Criteria C Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
16:15 - 17:15	2319	1936.6	1546	1205.9	210	140	Yes
15:15 - 16:15	2202		1404				
17:15 - 18:15	2147		1300				
14:15 - 15:15	1987		1208				
13:15 - 14:15	1835		1055				
12:00 - 13:00	1746		1074				
18:15 - 19:15	1683		1036				
11:00 - 12:00	1574		1024				
10:00 - 11:00	1418		896				
07:15 - 08:15	1198		1010				
19:15 - 20:15	1401		792				
09:00 - 10:00	1253		932				

Criteria D Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
16:15 - 17:15	2319	1936.6	1546	1205.9	240	160	Yes
15:15 - 16:15	2202		1404				
17:15 - 18:15	2147		1300				
14:15 - 15:15	1987		1208				
13:15 - 14:15	1835		1055				
12:00 - 13:00	1746		1074				
18:15 - 19:15	1683		1036				
11:00 - 12:00	1574		1024				
10:00 - 11:00	1418		896				
07:15 - 08:15	1198		1010				
19:15 - 20:15	1401		792				
09:00 - 10:00	1253		932				