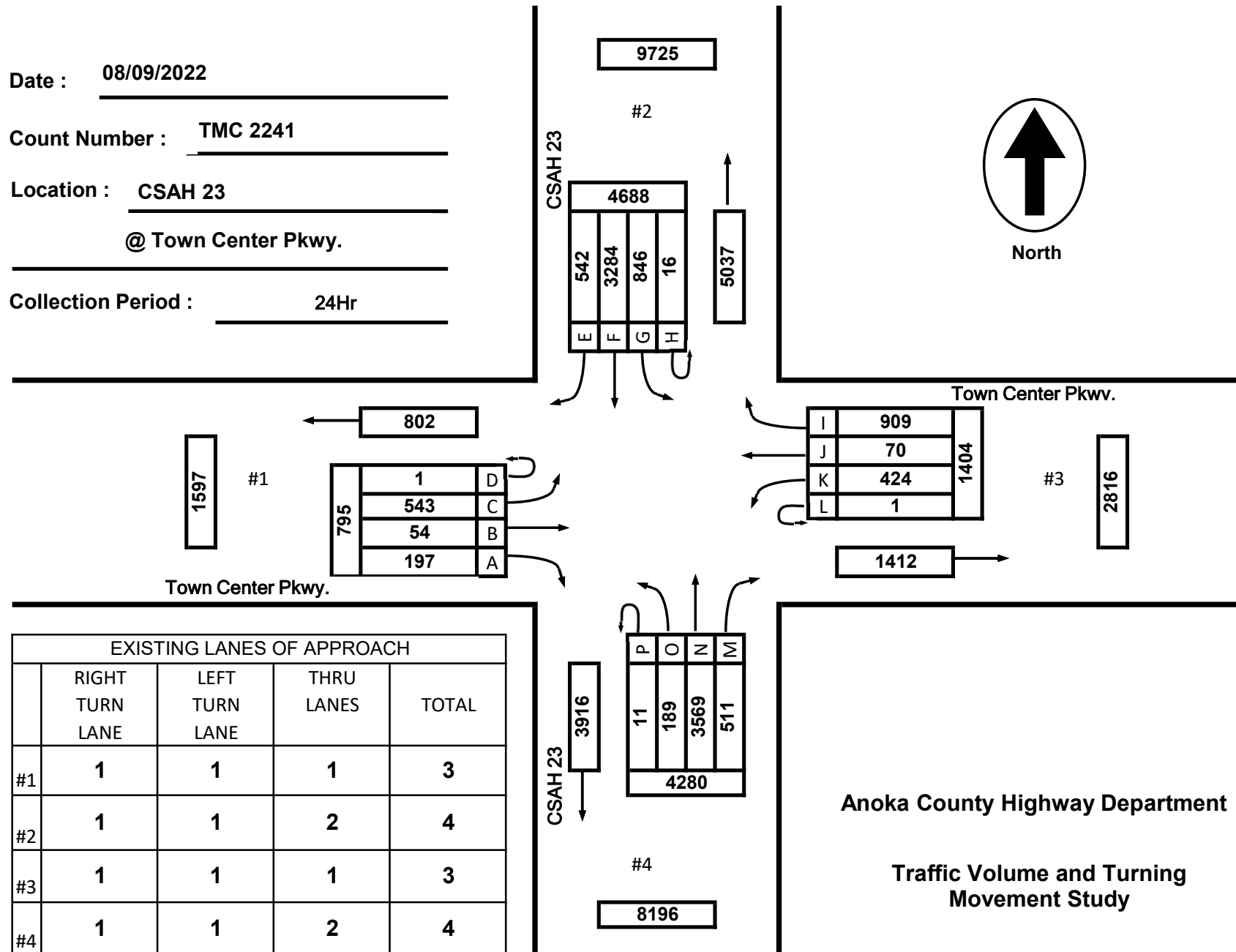


Date : 08/09/2022

Count Number : TMC 2241

Location : CSAH 23
@ Town Center Pkwy.

Collection Period : 24Hr



Anoka County Highway Department

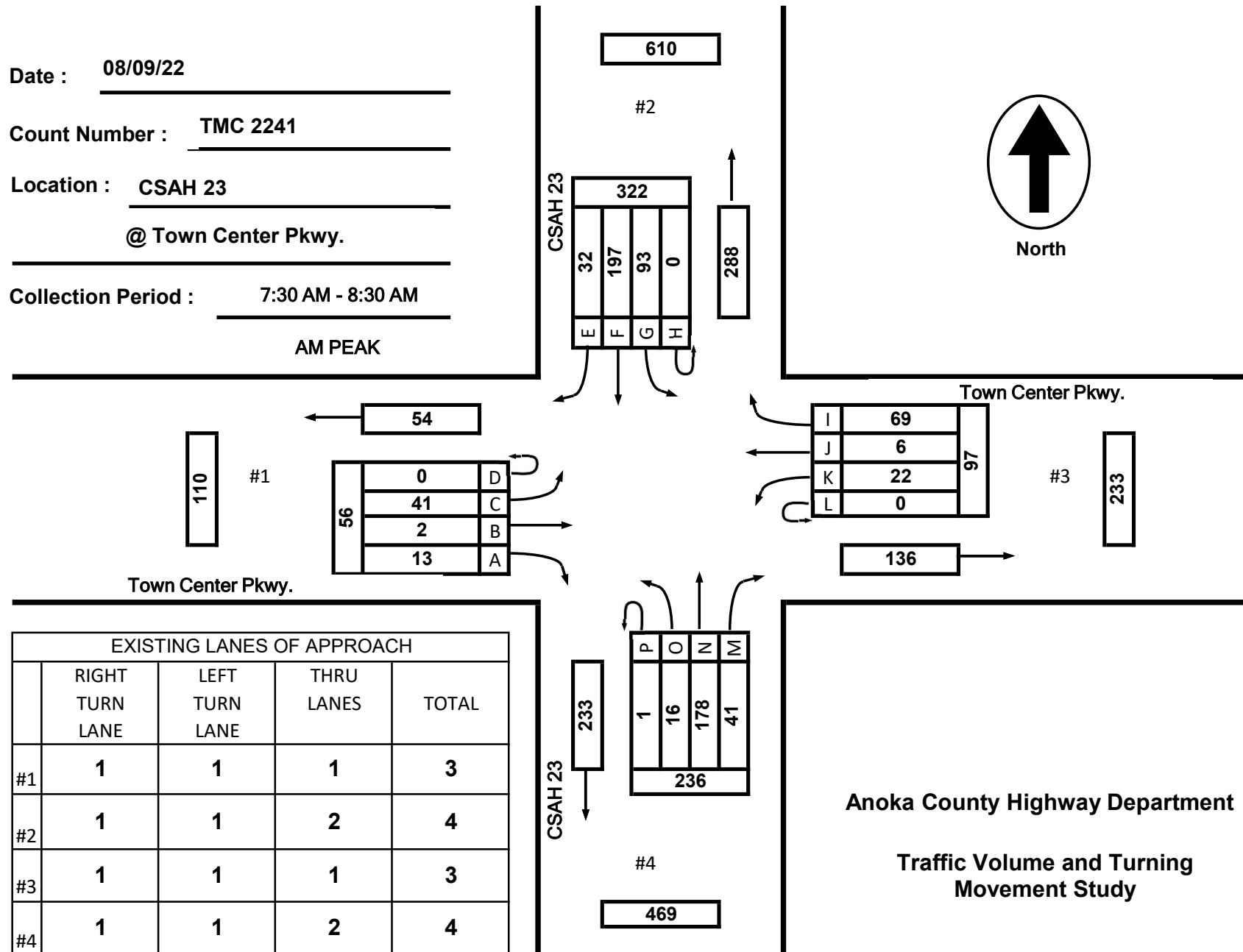
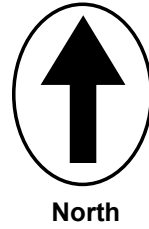
Traffic Volume and Turning Movement Study

Date : 08/09/22

Count Number : TMC 2241

Location : CSAH 23
@ Town Center Pkwy.

Collection Period : 7:30 AM - 8:30 AM
AM PEAK



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

Anoka County Highway Department
Traffic Volume and Turning Movement Study

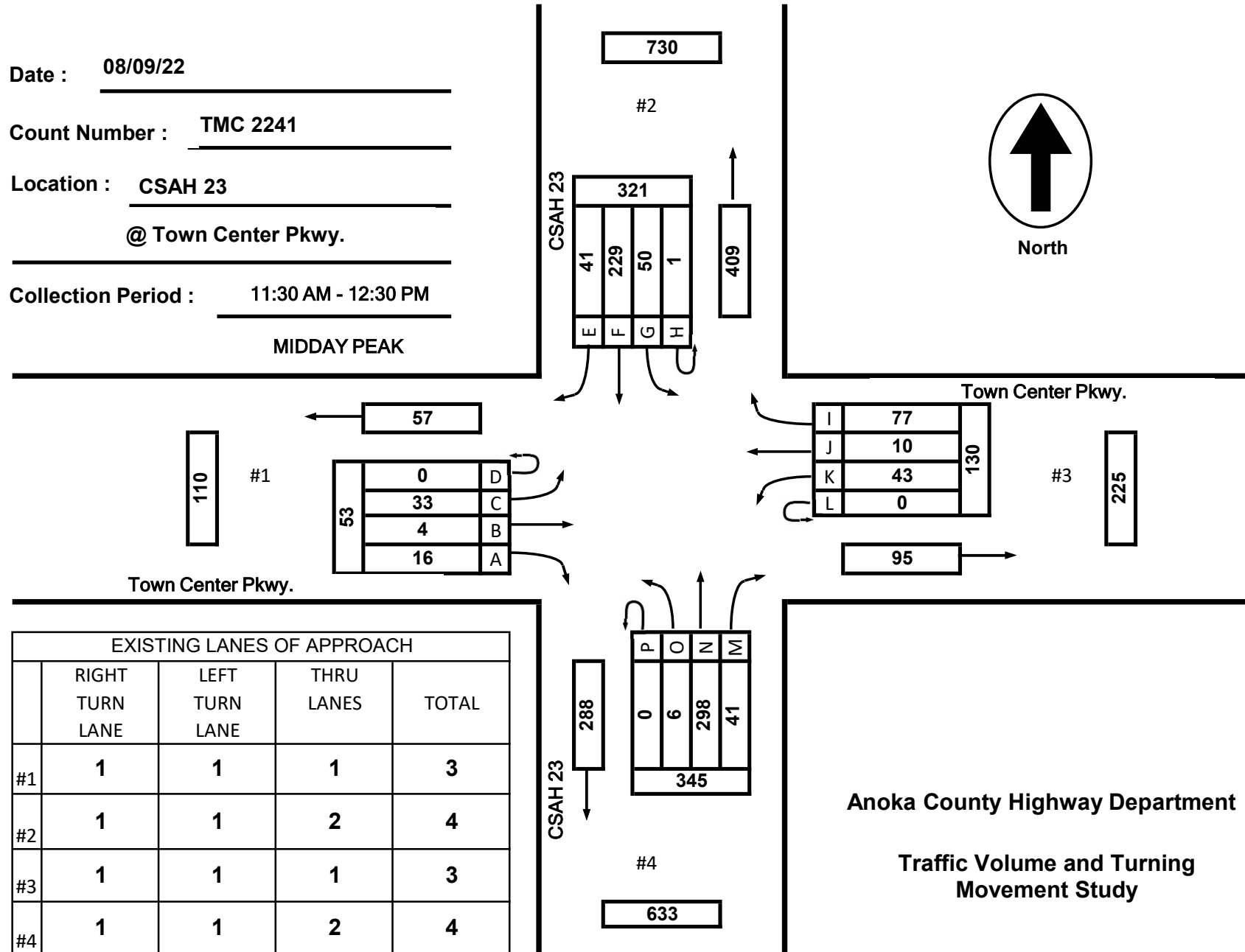
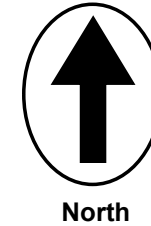
Date : 08/09/22

Count Number : TMC 2241

Location : CSAH 23
@ Town Center Pkwy.

Collection Period : 11:30 AM - 12:30 PM

MIDDAY PEAK



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

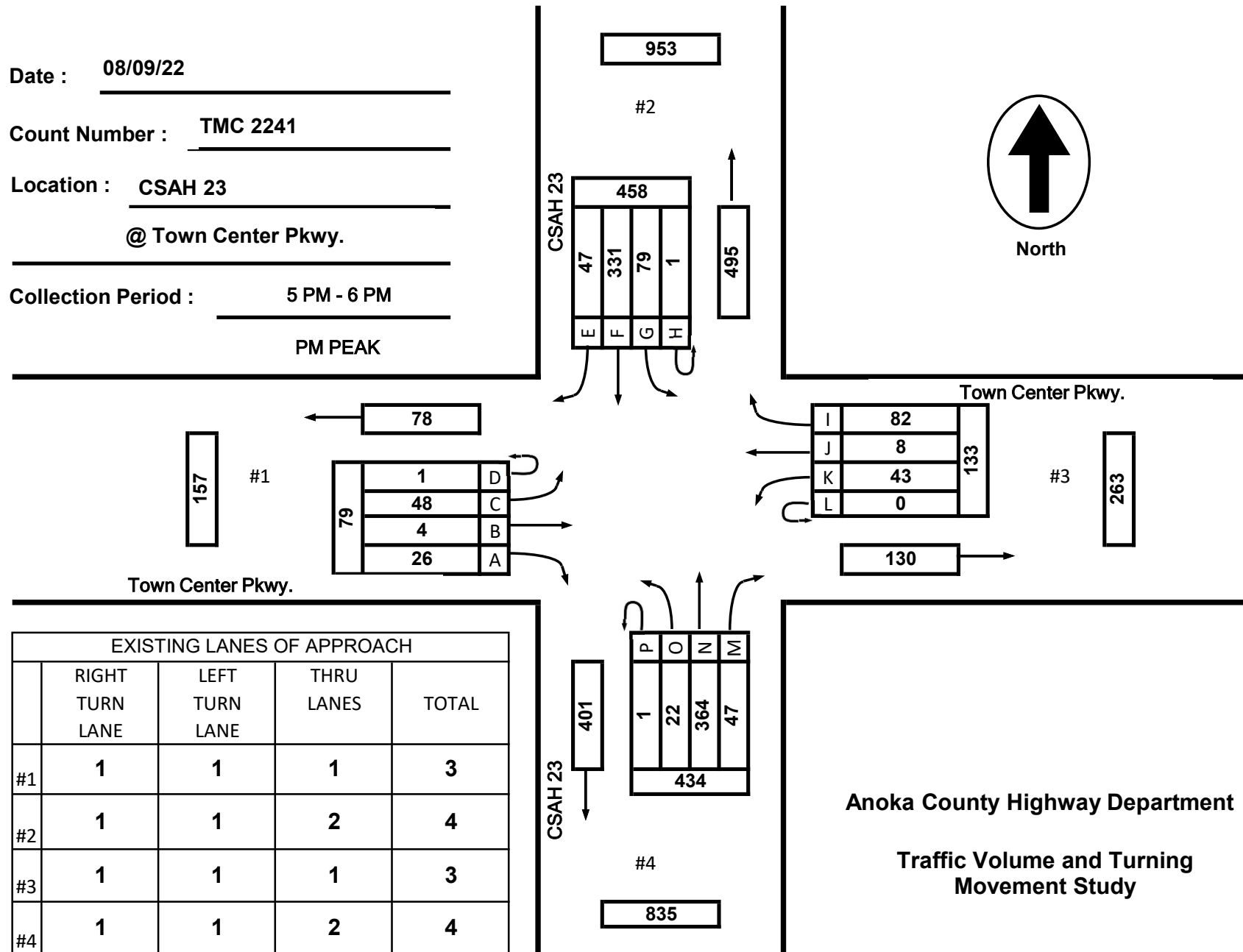
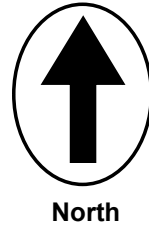
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 08/09/22

Count Number : TMC 2241

Location : CSAH 23
@ Town Center Pkwy.

Collection Period : 5 PM - 6 PM
PM PEAK



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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2241
 Site Code :
 Start Date : 08/22/2022
 Page No : 1

Weather: Warm & Sunny
 CountCAM 3
 Study Conducted by: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 Southbound						Town Center Pkwy. Westbound						CSAH 23 Northbound						Town Center Pkwy. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
06:00	5	23	6	0	0	34	5	0	1	0	0	6	3	17	2	0	1	22	3	1	5	0	0	9	1	71	72
06:15	15	33	7	0	0	55	7	1	1	0	0	9	3	19	4	0	0	26	5	1	7	0	0	13	0	103	103
06:30	13	40	5	0	0	58	6	0	3	0	0	9	0	24	3	0	0	27	1	0	14	0	0	15	0	109	109
06:45	10	48	14	0	0	72	9	4	6	0	0	19	4	45	3	0	0	52	3	1	8	0	0	12	0	155	155
Total	43	144	32	0	0	219	27	5	11	0	0	43	10	105	12	0	1	127	12	3	34	0	0	49	1	438	439
07:00	10	28	15	0	0	53	11	1	3	0	0	15	1	30	4	0	0	35	5	1	15	0	1	21	1	124	125
07:15	10	36	18	1	0	65	15	1	3	0	0	19	3	40	5	0	0	48	4	0	10	0	0	14	0	146	146
07:30	7	41	16	0	0	64	24	4	6	0	0	34	5	43	4	0	0	52	3	1	12	0	0	16	0	166	166
07:45	6	57	38	0	0	101	18	1	6	0	0	25	15	50	7	0	0	72	2	1	10	0	0	13	0	211	211
Total	33	162	87	1	0	283	68	7	18	0	0	93	24	163	20	0	0	207	14	3	47	0	1	64	1	647	648
08:00	15	42	23	0	0	80	11	0	5	0	0	16	10	35	1	1	0	47	2	0	10	0	0	12	0	155	155
08:15	4	57	16	0	0	77	16	1	5	0	0	22	11	50	4	0	0	65	6	0	9	0	0	15	0	179	179
08:30	7	41	14	0	0	62	18	1	6	0	1	25	15	40	4	1	0	60	2	2	6	0	0	10	1	157	158
08:45	5	59	12	0	0	76	9	0	9	0	1	18	11	48	3	1	0	63	1	2	7	0	0	10	1	167	168
Total	31	199	65	0	0	295	54	2	25	0	2	81	47	173	12	3	0	235	11	4	32	0	0	47	2	658	660
09:00	8	41	19	1	0	69	17	0	8	0	1	25	11	61	4	0	0	76	3	1	4	0	0	8	1	178	179
09:15	8	46	14	0	0	68	12	0	7	0	0	19	15	52	3	0	0	70	1	1	10	0	0	12	0	169	169
09:30	9	38	7	0	1	54	15	1	7	0	1	23	11	44	4	0	1	59	6	1	9	0	0	16	3	152	155
09:45	7	54	8	0	0	69	13	2	5	0	1	20	10	46	2	0	0	58	2	1	7	0	0	10	1	157	158
Total	32	179	48	1	1	260	57	3	27	0	3	87	47	203	13	0	1	263	12	4	30	0	0	46	5	656	661
10:00	5	40	8	0	0	53	8	0	3	0	0	11	5	69	2	0	0	76	5	0	3	0	0	8	0	148	148
10:15	9	42	13	0	0	64	12	2	13	0	0	27	8	52	3	1	0	64	3	0	8	0	0	11	0	166	166
10:30	8	34	12	0	0	54	31	2	7	0	0	40	8	56	4	1	0	69	4	1	11	0	0	16	0	179	179
10:45	11	46	16	0	0	73	14	1	10	0	0	25	10	55	2	0	0	67	4	2	11	0	0	17	0	182	182
Total	33	162	49	0	0	244	65	5	33	0	0	103	31	232	11	2	0	276	16	3	33	0	0	52	0	675	675
11:00	2	58	10	1	0	71	19	0	3	0	1	22	8	51	0	0	1	59	1	1	5	0	0	7	2	159	161
11:15	9	60	15	0	1	84	18	0	7	0	0	25	4	63	3	0	1	70	1	0	4	0	0	5	2	184	186
11:30	12	51	12	1	0	76	16	2	5	0	1	23	5	84	2	0	0	91	4	0	8	0	0	12	1	202	203
11:45	11	60	13	0	0	84	16	1	10	0	0	27	15	65	1	0	0	81	6	0	12	0	0	18	0	210	210
Total	34	229	50	2	1	315	69	3	25	0	2	97	32	263	6	0	2	301	12	1	29	0	0	42	5	755	760



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2241
 Site Code :
 Start Date : 08/22/2022
 Page No : 2

Weather: Warm & Sunny
 CountCAM 3
 Study Conducted by: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 Southbound						Town Center Pkwy. Westbound						CSAH 23 Northbound						Town Center Pkwy. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
12:00	11	49	10	0	0	70	20	5	21	0	0	46	10	87	2	0	0	99	4	2	7	0	0	13	0	228	228
12:15	7	69	15	0	0	91	25	2	7	0	0	34	11	62	1	0	0	74	2	2	6	0	0	10	0	209	209
12:30	7	63	20	0	0	90	21	0	9	0	1	30	11	44	2	1	0	58	2	1	8	0	0	11	1	189	190
12:45	16	63	14	0	0	93	19	1	4	0	0	24	13	56	5	1	0	75	5	1	11	0	0	17	0	209	209
Total	41	244	59	0	0	344	85	8	41	0	1	134	45	249	10	2	0	306	13	6	32	0	0	51	1	835	836
13:00	12	55	17	1	0	85	15	1	8	0	1	24	6	53	2	0	0	61	3	1	11	0	0	15	1	185	186
13:15	7	39	15	0	0	61	11	2	7	0	0	20	8	48	3	0	0	59	4	0	6	0	0	10	0	150	150
13:30	12	51	8	0	0	71	12	5	8	0	0	25	9	50	5	0	0	64	2	1	14	0	0	17	0	177	177
13:45	14	48	21	0	0	83	22	0	6	0	0	28	8	68	4	0	0	80	5	3	13	0	0	21	0	212	212
Total	45	193	61	1	0	300	60	8	29	0	1	97	31	219	14	0	0	264	14	5	44	0	0	63	1	724	725
14:00	7	47	17	0	0	71	15	0	6	0	0	21	5	65	3	0	0	73	4	1	9	0	0	14	0	179	179
14:15	12	69	5	0	0	86	13	1	6	0	0	20	10	45	1	0	1	56	3	2	14	0	0	19	1	181	182
14:30	11	57	11	0	0	79	11	1	3	0	0	15	9	95	1	0	0	105	1	1	8	0	0	10	0	209	209
14:45	21	51	8	1	0	81	5	2	7	0	3	14	7	58	3	0	0	68	2	1	20	0	0	23	3	186	189
Total	51	224	41	1	0	317	44	4	22	0	3	70	31	263	8	0	1	302	10	5	51	0	0	66	4	755	759
15:00	12	70	12	2	0	96	10	0	8	0	0	18	5	57	6	0	0	68	1	1	16	0	0	18	0	200	200
15:15	9	59	13	1	0	82	20	0	7	1	0	28	9	73	3	0	0	85	5	0	9	0	0	14	0	209	209
15:30	9	63	13	0	0	85	18	0	2	0	0	20	9	105	2	1	0	117	2	0	7	0	0	9	0	231	231
15:45	10	88	21	2	0	121	16	0	3	0	5	19	14	79	3	0	0	96	4	0	11	0	0	15	5	251	256
Total	40	280	59	5	0	384	64	0	20	1	5	85	37	314	14	1	0	366	12	1	43	0	0	56	5	891	896
16:00	14	66	17	0	0	97	26	1	19	0	0	46	17	84	7	0	0	108	8	2	10	0	0	20	0	271	271
16:15	13	62	21	0	0	96	24	3	11	0	0	38	13	90	3	0	0	106	3	1	10	0	0	14	0	254	254
16:30	13	76	21	1	0	111	32	3	13	0	2	48	9	94	0	0	0	103	5	1	18	0	0	24	2	286	288
16:45	8	78	24	0	0	110	23	2	8	0	1	33	10	98	5	0	0	113	5	1	7	0	0	13	1	269	270
Total	48	282	83	1	0	414	105	9	51	0	3	165	49	366	15	0	0	430	21	5	45	0	0	71	3	1080	1083
17:00	11	72	16	0	0	99	24	0	12	0	0	36	11	76	4	0	0	91	6	2	15	0	0	23	0	249	249
17:15	14	82	16	0	0	112	22	6	8	0	2	36	11	84	7	1	0	103	4	2	9	1	0	16	2	267	269
17:30	9	88	23	0	1	120	17	1	9	0	0	27	16	104	4	0	0	124	5	0	16	0	0	21	1	292	293
17:45	13	89	24	1	0	127	19	1	14	0	0	34	9	100	7	0	0	116	11	0	8	0	0	19	0	296	296
Total	47	331	79	1	1	458	82	8	43	0	2	133	47	364	22	1	0	434	26	4	48	1	0	79	3	1104	1107
18:00	9	77	14	0	0	100	17	2	7	0	1	26	13	74	2	0	0	89	5	0	17	0	0	22	1	237	238
18:15	7	70	12	1	0	90	11	0	15	0	0	26	8	79	2	0	0	89	1	3	6	0	0	10	0	215	215
18:30	7	66	13	0	0	86	9	0	6	0	1	15	8	67	5	0	0	80	2	1	5	0	0	8	1	189	190



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2241
 Site Code :
 Start Date : 08/22/2022
 Page No : 3

Weather: Warm & Sunny
 CountCAM 3
 Study Conducted by: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 Southbound						Town Center Pkwy. Westbound						CSAH 23 Northbound						Town Center Pkwy. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
18:45	7	49	18	0	0	74	8	0	7	0	0	15	13	60	1	1	0	75	6	0	4	0	0	10	0	174	174
Total	30	262	57	1	0	350	45	2	35	0	2	82	42	280	10	1	0	333	14	4	32	0	0	50	2	815	817
19:00	5	48	12	0	0	65	19	1	4	0	0	24	11	54	4	0	0	69	3	2	4	0	0	9	0	167	167
19:15	5	52	10	0	0	67	12	2	7	0	0	21	7	68	5	0	1	80	0	2	9	0	0	11	1	179	180
19:30	4	69	8	1	1	82	11	1	4	0	0	16	7	50	2	1	0	60	0	0	7	0	0	7	1	165	166
19:45	3	45	9	0	0	57	11	0	5	0	0	16	3	57	2	0	1	62	3	0	5	0	0	8	1	143	144
Total	17	214	39	1	1	271	53	4	20	0	0	77	28	229	13	1	2	271	6	4	25	0	0	35	3	654	657
20:00	8	54	11	0	0	73	5	0	3	0	0	8	1	51	2	0	3	54	0	0	4	0	0	4	3	139	142
20:15	2	53	9	0	0	64	6	0	2	0	0	8	1	35	5	0	4	41	2	1	6	0	0	9	4	122	126
20:30	3	36	11	0	0	50	4	1	5	0	0	10	2	33	1	0	0	36	1	0	5	0	0	6	0	102	102
20:45	4	36	6	1	0	47	16	1	14	0	1	31	6	27	1	0	0	34	1	1	3	0	0	5	1	117	118
Total	17	179	37	1	0	234	31	2	24	0	1	57	10	146	9	0	7	165	4	2	18	0	0	24	8	480	488
Grand Total	542	3284	846	16	4	4688	909	70	424	1	25	1404	511	3569	189	11	14	4280	197	54	543	1	1	795	44	11167	11211
Apprch %	11.6	70.1	18	0.3			64.7	5	30.2	0.1			11.9	83.4	4.4	0.3		24.8	6.8	68.3	0.1						
Total %	4.9	29.4	7.6	0.1		42	8.1	0.6	3.8	0	12.6		4.6	32	1.7	0.1	38.3		1.8	0.5	4.9	0	7.1	0.4	99.6		
Cars +	481	3136	832	16		4469	894	67	421	1	1408	506	3425	175	11		4131	187	54	474	1		717	0	0	10725	
% Cars +	88.7	95.5	98.3	100	100	95.2	98.3	95.7	99.3	100	98.5	99	96	92.6	100	100	96.2	94.9	100	87.3	100	100	90.1	0	0	95.7	
Trucks	61	148	14	0		223	15	3	3	0	21	5	144	14	0		163	10	0	69	0		79	0	0	486	
% Trucks	11.3	4.5	1.7	0	0	4.8	1.7	4.3	0.7	0	1.5	1	4	7.4	0	0	3.8	5.1	0	12.7	0	0	9.9	0	0	4.3	

Start Time	CSAH 23 Southbound						Town Center Pkwy. Westbound						CSAH 23 Northbound						Town Center Pkwy. Eastbound						Int. Total		
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																											
Peak Hour for Entire Intersection Begins at 07:30																											
07:30	7	41	16	0	0	64	24	4	6	0	34	5	43	4	0	52	3	1	12	0	0	16	166				
07:45	6	57	38	0	0	101	18	1	6	0	25	15	50	7	0	72	2	1	10	0	0	13	211				
08:00	15	42	23	0	0	80	11	0	5	0	16	10	35	1	1	47	2	0	10	0	0	12	155				
08:15	4	57	16	0	0	77	16	1	5	0	22	11	50	4	0	65	6	0	9	0	0	15	179				
Total Volume	32	197	93	0	0	322	69	6	22	0	97	41	178	16	1	236	13	2	41	0	0	56	711				
% App. Total	9.9	61.2	28.9	0	0		71.1	6.2	22.7	0		17.4	75.4	6.8	0.4		23.2	3.6	73.2	0	0						
PHF	.533	.864	.612	.000	.000	.797	.719	.375	.917	.000	.713	.683	.890	.571	.250	.819	.542	.500	.854	.000	.000	.875	.842				



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2241
 Site Code :
 Start Date : 08/22/2022
 Page No : 4

Weather: Warm & Sunny
 CountCAM 3
 Study Conducted by: Sam

Start Time	CSAH 23 Southbound					Town Center Pkwy. Westbound					CSAH 23 Northbound					Town Center Pkwy. Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30																					
11:30	12	51	12	1	76	16	2	5	0	23	5	84	2	0	91	4	0	8	0	12	202
11:45	11	60	13	0	84	16	1	10	0	27	15	65	1	0	81	6	0	12	0	18	210
12:00	11	49	10	0	70	20	5	21	0	46	10	87	2	0	99	4	2	7	0	13	228
12:15	7	69	15	0	91	25	2	7	0	34	11	62	1	0	74	2	2	6	0	10	209
Total Volume	41	229	50	1	321	77	10	43	0	130	41	298	6	0	345	16	4	33	0	53	849
% App. Total	12.8	71.3	15.6	0.3		59.2	7.7	33.1	0		11.9	86.4	1.7	0		30.2	7.5	62.3	0		
PHF	.854	.830	.833	.250	.882	.770	.500	.512	.000	.707	.683	.856	.750	.000	.871	.667	.500	.688	.000	.736	.931

Peak Hour Analysis From 14:00 to 20:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	11	72	16	0	99	24	0	12	0	36	11	76	4	0	91	6	2	15	0	23	249
17:15	14	82	16	0	112	22	6	8	0	36	11	84	7	1	103	4	2	9	1	16	267
17:30	9	88	23	0	120	17	1	9	0	27	16	104	4	0	124	5	0	16	0	21	292
17:45	13	89	24	1	127	19	1	14	0	34	9	100	7	0	116	11	0	8	0	19	296
Total Volume	47	331	79	1	458	82	8	43	0	133	47	364	22	1	434	26	4	48	1	79	1104
% App. Total	10.3	72.3	17.2	0.2		61.7	6	32.3	0		10.8	83.9	5.1	0.2		32.9	5.1	60.8	1.3		
PHF	.839	.930	.823	.250	.902	.854	.333	.768	.000	.924	.734	.875	.786	.250	.875	.591	.500	.750	.250	.859	.932



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2241
 Site Code :
 Start Date : 08/22/2022
 Page No : 1

Weather: Warm & Sunny
 CountCAM 3+
 Study Conducted by: Sam

Groups Printed- Trucks

Start Time	CSAH 23 Southbound					Town Center Pkwy. Westbound					CSAH 23 Northbound					Town Center Pkwy. Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
06:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
06:15	2	2	0	0	4	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	7
06:30	4	5	0	0	9	0	0	0	0	0	0	0	1	0	1	0	0	3	0	3	13
06:45	4	2	0	0	6	0	0	0	0	0	0	2	1	0	3	0	0	3	0	3	12
Total	11	9	0	0	20	0	0	0	0	0	0	2	3	0	5	0	0	9	0	9	34
07:00	4	1	0	0	5	0	0	0	0	0	0	1	0	0	1	2	0	4	0	6	12
07:15	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	2	0	3	7
07:30	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	1	0	1	4
07:45	0	4	1	0	5	0	0	0	0	0	0	2	1	0	3	0	0	1	0	1	9
Total	5	6	1	0	12	0	0	0	0	0	0	7	2	0	9	3	0	8	0	11	32
08:00	5	3	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	12
08:15	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	5	0	5	14
08:30	0	5	1	0	6	1	1	0	0	2	1	2	0	0	3	0	0	1	0	1	12
08:45	3	6	0	0	9	1	0	0	0	1	0	2	0	0	2	0	0	1	0	1	13
Total	8	17	1	0	26	2	1	0	0	3	1	13	0	0	14	0	0	8	0	8	51
09:00	0	1	0	0	1	0	0	0	0	0	0	3	1	0	4	0	0	2	0	2	7
09:15	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	2	0	2	8
09:30	1	1	0	0	2	0	0	0	0	0	1	3	0	0	4	1	0	0	0	1	7
09:45	1	4	0	0	5	1	0	0	0	1	0	4	1	0	5	0	0	0	0	0	11
Total	2	8	0	0	10	1	0	0	0	1	1	14	2	0	17	1	0	4	0	5	33
10:00	2	5	1	0	8	1	0	0	0	1	0	2	0	0	2	2	0	0	0	2	13
10:15	2	2	1	0	5	1	0	0	0	1	0	4	0	0	4	0	0	4	0	4	14
10:30	1	5	0	0	6	2	0	0	0	2	0	3	0	0	3	0	0	0	0	0	11
10:45	2	3	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	10
Total	7	15	2	0	24	4	0	0	0	4	0	13	0	0	13	2	0	5	0	7	48
11:00	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	5
11:15	0	6	2	0	8	0	0	0	0	0	0	2	1	0	3	0	0	1	0	1	12
11:30	3	2	0	0	5	0	1	1	0	2	0	4	0	0	4	0	0	0	0	0	11
11:45	1	4	2	0	7	0	0	0	0	0	0	5	0	0	5	1	0	2	0	3	15
Total	4	14	4	0	22	0	1	1	0	2	0	12	1	0	13	1	0	5	0	6	43
12:00	1	3	0	0	4	2	1	0	0	3	0	3	0	0	3	0	0	3	0	3	13
12:15	2	4	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	2	0	2	12
12:30	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	6
12:45	2	2	0	0	4	0	0	0	0	0	1	6	0	0	7	0	0	2	0	2	13
Total	6	10	0	0	16	2	1	0	0	3	1	16	0	0	17	0	0	8	0	8	44
13:00	1	9	0	0	10	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	12
13:15	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	9
13:30	0	5	0	0	5	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	9
13:45	1	2	1	0	4	1	0	0	0	1	1	5	1	0	7	0	0	1	0	1	13
Total	2	20	2	0	24	2	0	0	0	2	1	13	1	0	15	0	0	2	0	2	43
14:00	2	4	0	0	6	0	0	1	0	1	1	4	1	0	6	1	0	0	0	1	14
14:15	1	3	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	8
14:30	2	1	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	7
14:45	2	5	0	0	7	0	0	0	0	0	0	4	1	0	5	0	0	2	0	2	14
Total	7	13	0	0	20	0	0	1	0	1	1	12	2	0	15	1	0	6	0	7	43
15:00	2	5	0	0	7	0	0	0	0	0	0	4	1	0	5	0	0	2	0	2	14



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2241
 Site Code :
 Start Date : 08/22/2022
 Page No : 2

Weather: Warm & Sunny
 CountCAM 3+
 Study Conducted by: Sam

Groups Printed- Trucks

Start Time	CSAH 23 Southbound					Town Center Pkwy. Westbound					CSAH 23 Northbound					Town Center Pkwy. Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
15:15	0	2	1	0	3	1	0	0	0	1	0	5	0	0	5	0	0	2	0	2	11
15:30	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
15:45	1	4	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
Total	3	13	2	0	18	1	0	0	0	1	0	16	1	0	17	0	0	5	0	5	41
16:00	2	4	0	0	6	1	0	0	0	1	0	2	0	0	2	0	0	1	0	1	10
16:15	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	6
16:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	4
16:45	0	2	1	0	3	1	0	1	0	2	0	2	1	0	3	0	0	1	0	1	9
Total	3	10	1	0	14	2	0	1	0	3	0	6	1	0	7	1	0	4	0	5	29
17:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	4
17:15	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
17:30	1	4	0	0	5	0	0	0	0	0	0	2	1	0	3	0	0	2	0	2	10
17:45	0	3	1	0	4	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	10
Total	2	9	1	0	12	0	0	0	0	0	0	12	1	0	13	1	0	3	0	4	29
18:00	1	0	0	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4
18:15	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	4
18:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	4	0	0	5	1	0	0	0	1	0	4	0	0	4	0	0	1	0	1	11
19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
19:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
20:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
Grand Total	61	148	14	0	223	15	3	3	0	21	5	144	14	0	163	10	0	69	0	79	486
Apprch %	27.4	66.4	6.3	0		71.4	14.3	14.3	0		3.1	88.3	8.6	0		12.7	0	87.3	0		
Total %	12.6	30.5	2.9	0	45.9	3.1	0.6	0.6	0	4.3	1	29.6	2.9	0	33.5	2.1	0	14.2	0	16.3	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/09/2022

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 23

Number of Lanes : 2+

Total Approach Volume: 4,280

Southbound: CSAH 23

Number of Lanes :2+

Total Approach Volume: 4,688

Minor Street Approaches

Eastbound: Town Center Pkwy.

Number of Lanes :2+

Total Approach Volume: 795

Westbound: Town Center Pkwy.

Number of Lanes :2+

Total Approach Volume: 1,404

Warrant Summary (Urban Values Apply)

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

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

Required volumes reached for 0 hours, 8 are needed

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

Required volumes reached for 0 hours, 8 are needed

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

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

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

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

Number of hours (0) volumes exceed minimum < minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (4) volumes exceed minimum >= required (1). Delay data not evaluated.

Warrant 3B - Peak Hour Volumes.....Not Satisfied

Volumes do not exceed minimums for any one hour period.

Warrant 4 - Pedestrian Volumes.....Not Evaluated

Warrant 5 - School Crossing.....Not Evaluated

Warrant 6 - Coordinated Signal System.....Not Evaluated

Warrant 7 - Crash Experience.....Not Evaluated

Warrant 8 - Roadway Network.....Not Evaluated

Warrant 9 - Intersection Near a Grade Crossing.....Not Evaluated

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/09/2022

Warrant 1A - Minimum Volumes

Description

Intended for sites where the volume of intersecting traffic is the principal reason for consideration of a signal installation.

Summary

Only 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **600**

Veh/Hr Minor = **200**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
17:00 - 18:00	434	+	458	=	892	79	133	No
17:15 - 18:15	432	+	459	=	891	78	123	No
16:45 - 17:45	431	+	441	=	872	73	132	No
17:30 - 18:30	418	+	437	=	855	72	113	No
16:00 - 17:00	430	+	414	=	844	71	165	No
16:30 - 17:30	410	+	432	=	842	76	153	No
15:45 - 16:45	413	+	425	=	838	73	151	No
16:15 - 17:15	413	+	416	=	829	74	155	No
15:30 - 16:30	427	+	399	=	826	58	123	No
15:15 - 16:15	406	+	385	=	791	58	113	No
17:45 - 18:45	374	+	403	=	777	59	101	No
15:00 - 16:00	366	+	384	=	750	56	85	No
18:00 - 19:00	333	+	350	=	683	50	82	No
14:45 - 15:45	338	+	344	=	682	64	80	No
11:30 - 12:30	345	+	321	=	666	53	130	No
14:30 - 15:30	326	+	338	=	664	65	75	No
11:15 - 12:15	341	+	314	=	655	48	121	No
12:00 - 13:00	306	+	344	=	650	51	134	No
11:45 - 12:45	312	+	335	=	647	52	137	No
14:15 - 15:15	297	+	342	=	639	70	67	No
13:45 - 14:45	314	+	319	=	633	64	84	No
18:15 - 19:15	313	+	315	=	628	37	80	No
12:15 - 13:15	268	+	359	=	627	53	112	No
14:00 - 15:00	302	+	317	=	619	66	70	No
11:00 - 12:00	301		315		616	42	97	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/09/2022

Warrant 1B - Interruption of Continuous Traffic

Description

Intended for sites where the volume of the major street is so heavy that traffic on the minor street suffers excessive delay or hazard.

Summary

Only 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **900**

Veh/Hr Minor = **100**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 23					Town Center Pkwy.		
17:00 - 18:00	434	+	458	=	892	79	133	No
17:15 - 18:15	432	+	459	=	891	78	123	No
16:45 - 17:45	431	+	441	=	872	73	132	No
17:30 - 18:30	418	+	437	=	855	72	113	No
16:00 - 17:00	430	+	414	=	844	71	165	No
16:30 - 17:30	410	+	432	=	842	76	153	No
15:45 - 16:45	413	+	425	=	838	73	151	No
16:15 - 17:15	413	+	416	=	829	74	155	No
15:30 - 16:30	427	+	399	=	826	58	123	No
15:15 - 16:15	406	+	385	=	791	58	113	No
17:45 - 18:45	374	+	403	=	777	59	101	No
15:00 - 16:00	366	+	384	=	750	56	85	No
18:00 - 19:00	333	+	350	=	683	50	82	No
14:45 - 15:45	338	+	344	=	682	64	80	No
11:30 - 12:30	345	+	321	=	666	53	130	No
14:30 - 15:30	326	+	338	=	664	65	75	No
11:15 - 12:15	341	+	314	=	655	48	121	No
12:00 - 13:00	306	+	344	=	650	51	134	No
11:45 - 12:45	312	+	335	=	647	52	137	No
14:15 - 15:15	297	+	342	=	639	70	67	No
13:45 - 14:45	314	+	319	=	633	64	84	No
18:15 - 19:15	313	+	315	=	628	37	80	No
12:15 - 13:15	268	+	359	=	627	53	112	No
14:00 - 15:00	302	+	317	=	619	66	70	No
11:00 - 12:00	301		315		616	42	97	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/09/2022

Warrant 1C Combination of Warrants

Description

Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are both met to 80% of their stated values.

Summary

Only 1 hours meet 1A minimums.
Only 3 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Warrant 1A 1B
Veh/Hr Major = **480 720**

Veh/Hr Minor = **160 80**

Major Road CSAH 23

Minor Road Town Center Pkwy.

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:00 - 17:00	430	+	414	=	844	71	165	Yes
17:00 - 18:00	434	+	458	=	892	79	133	No
17:15 - 18:15	432	+	459	=	891	78	123	No
17:30 - 18:30	418	+	437	=	855	72	113	No
15:45 - 16:45	413	+	425	=	838	73	151	No
15:30 - 16:30	427	+	399	=	826	58	123	No
15:15 - 16:15	406	+	385	=	791	58	113	No
17:45 - 18:45	374	+	403	=	777	59	101	No
15:00 - 16:00	366	+	384	=	750	56	85	No
18:00 - 19:00	333	+	350	=	683	50	82	No
14:45 - 15:45	338	+	344	=	682	64	80	No
11:30 - 12:30	345	+	321	=	666	53	130	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
17:00 - 18:00	434	+	458	=	892	79	133	Yes
16:00 - 17:00	430	+	414	=	844	71	165	Yes
15:00 - 16:00	366	+	384	=	750	56	85	Yes
18:00 - 19:00	333	+	350	=	683	50	82	No
14:45 - 15:45	338	+	344	=	682	64	80	No
11:30 - 12:30	345	+	321	=	666	53	130	No
14:30 - 15:30	326	+	338	=	664	65	75	No
11:15 - 12:15	341	+	314	=	655	48	121	No
12:00 - 13:00	306	+	344	=	650	51	134	No
11:45 - 12:45	312	+	335	=	647	52	137	No
14:15 - 15:15	297	+	342	=	639	70	67	No
13:45 - 14:45	314	+	319	=	633	64	84	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/09/2022

Warrant 2 - Four Hour Volumes

Description

Intended for sites where the volume of intersecting traffic during any four hours of the day is the principal reason for consideration of a signal installation.

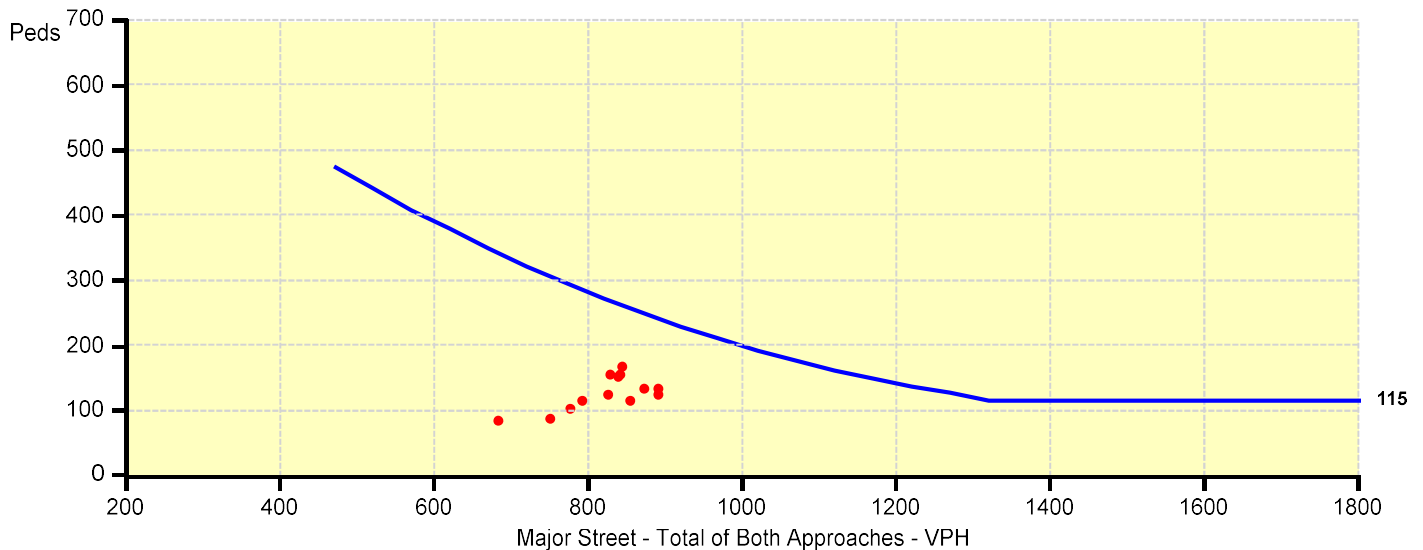
Summary

Only 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Time	Major Road CSAH 23					Minor Road Town Center Pkwy.			Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB		
17:00 - 18:00	434	+	458	=	892	79	133	No	
17:15 - 18:15	432	+	459	=	891	78	123	No	
16:45 - 17:45	431	+	441	=	872	73	132	No	
17:30 - 18:30	418	+	437	=	855	72	113	No	
16:00 - 17:00	430	+	414	=	844	71	165	No	
16:30 - 17:30	410	+	432	=	842	76	153	No	
15:45 - 16:45	413	+	425	=	838	73	151	No	
16:15 - 17:15	413	+	416	=	829	74	155	No	
15:30 - 16:30	427	+	399	=	826	58	123	No	
15:15 - 16:15	406	+	385	=	791	58	113	No	
17:45 - 18:45	374	+	403	=	777	59	101	No	
15:00 - 16:00	366		384		750	56	85	No	



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 08/09/2022

Warrant 3B - Peak Hour Volumes

Description

Intended for sites where the volume of intersecting traffic during one hour of the day is the principal reason for consideration of a signal installation.

Summary

Only 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Time	Major Road CSAH 23					Minor Road Town Center Pkwy.			Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB		
17:00 - 18:00	434	+	458	=	892	79	133	No	
17:15 - 18:15	432	+	459	=	891	78	123	No	
16:45 - 17:45	431	+	441	=	872	73	132	No	
17:30 - 18:30	418	+	437	=	855	72	113	No	
16:00 - 17:00	430	+	414	=	844	71	165	No	
16:30 - 17:30	410	+	432	=	842	76	153	No	
15:45 - 16:45	413	+	425	=	838	73	151	No	
16:15 - 17:15	413	+	416	=	829	74	155	No	
15:30 - 16:30	427	+	399	=	826	58	123	No	
15:15 - 16:15	406	+	385	=	791	58	113	No	
17:45 - 18:45	374	+	403	=	777	59	101	No	
15:00 - 16:00	366		384		750	56	85	No	

