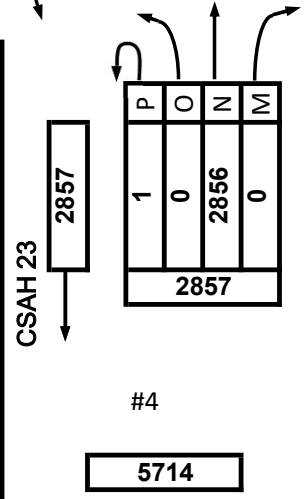
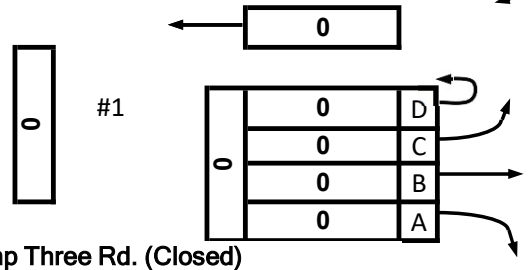
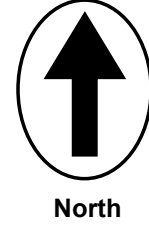
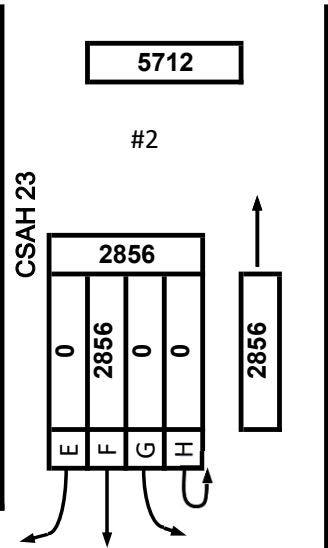


Date : 10/12/21

Count Number : TMC 2147

Location : CSAH 23 (Lake Dr.)
@ Camp Three Rd.

Collection Period : 24 Hours



Camp Three Rd. (Closed)

EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	0	0	0	0
#2	0	0	1	1
#3	0	0	0	0
#4	0	0	1	1

Anoka County Highway Department

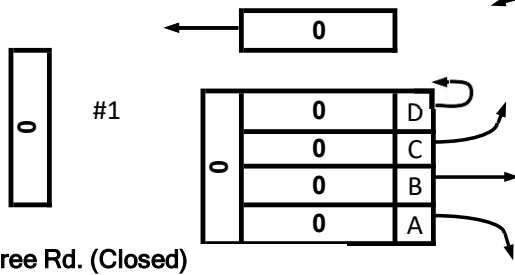
Traffic Volume and Turning Movement Study

Date : 10/12/21

Count Number : TMC 2147

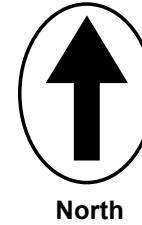
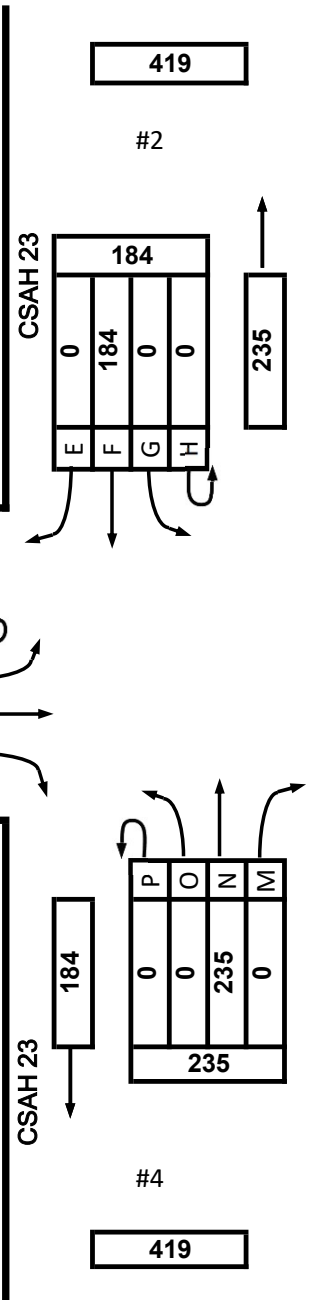
Location : CSAH 23 (Lake Dr.)
@ Camp Three Rd.

Collection Period : 7 AM - 8 AM
AM PEAK



Camp Three Rd. (Closed)

EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	0	0	0	0
#2	0	0	1	1
#3	0	0	0	0
#4	0	0	1	1



Anoka County Highway Department

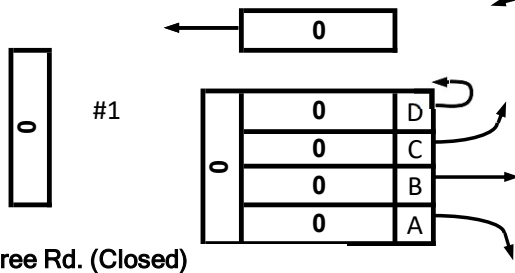
Traffic Volume and Turning
 Movement Study

Date : 10/12/21

Count Number : TMC 2147

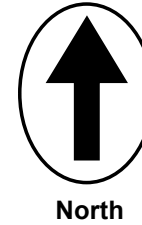
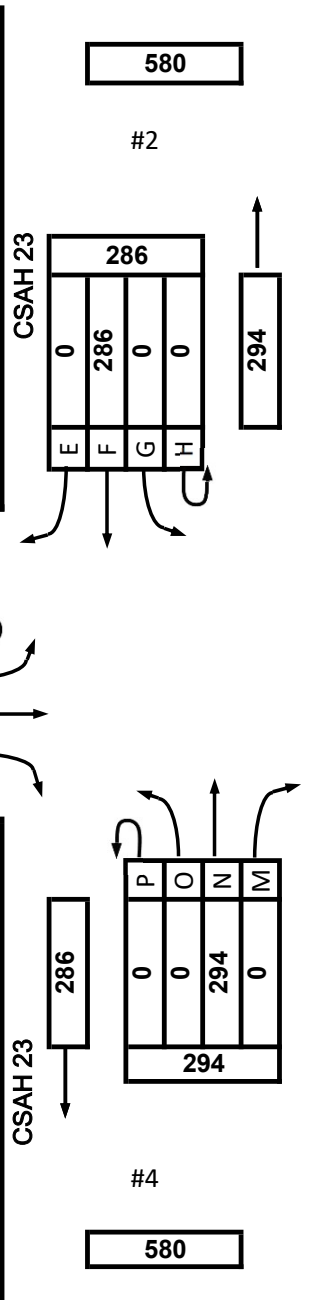
Location : CSAH 23 (Lake Dr.)
@ Camp Three Rd.

Collection Period : 4 PM - 5 PM
 PM PEAK



Camp Three Rd. (Closed)

EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	0	0	0	0
#2	0	0	1	1
#3	0	0	0	0
#4	0	0	1	1



Anoka County Highway Department

Traffic Volume and Turning Movement Study

**CSAH 23 @ Camp Three Rd. (Closed)
Columbus MN
Tuesday, October 12, 2021**

Time	Southbound CSAH 23						Westbound 0						Northbound CSAH 23						Eastbound Camp Three Rd. (Closed)						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	2	0	0	0	2	0	0	0	0	0	0	2
12:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	5
12:30 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	0	2
12:45 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	0	2
Hourly Total	0	0	4	0	0	4	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	11
1:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	4
1:15 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	0	2
1:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hourly Total	0	0	7	0	0	7	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	11
2:00 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	0	2
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	0
2:30 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
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 Total	0	0	5	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	6
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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	6
3:45 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	6
Hourly Total	0	0	9	0	0	9	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	13
4:00 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	10
4:15 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	15
4:30 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	11	0	0	0	11	0	0	0	0	0	0	17
4:45 AM	0	0	9	0	0	9	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	11
Hourly Total	0	0	25	0	0	25	0	0	0	0	0	0	0	0	28	0	0	0	28	0	0	0	0	0	0	53
5:00 AM	0	0	17	0	0	17	0	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	27
5:15 AM	0	0	20	0	0	20	0	0	0	0	0	0	0	0	19	0	0	0	19	0	0	0	0	0	0	39
5:30 AM	0	0	29	0	0	29	0	0	0	0	0	0	0	0	19	0	0	0	19	0	0	0	0	0	0	48
5:45 AM	0	0	30	0	0	30	0	0	0	0	0	0	0	0	26	0	0	0	26	0	0	0	0	0	0	56
Hourly Total	0	0	96	0	0	96	0	0	0	0	0	0	0	0	74	0	0	0	74	0	0	0	0	0	0	170
6:00 AM	0	0	30	0	0	30	0	0	0	0	0	0	0	0	33	0	0	0	33	0	0	0	0	0	0	63
6:15 AM	0	0	40	0	0	40	0	0	0	0	0	0	0	0	37	0	0	0	37	0	0	0	0	0	0	77
6:30 AM	0	0	36	0	0	36	0	0	0	0	0	0	0	0	33	0	0	0	33	0	0	0	0	0	0	69
6:45 AM	0	0	36	0	0	36	0	0	0	0	0	0	0	0	51	0	0	0	51	0	0	0	0	0	0	87
Hourly Total	0	0	142	0	0	142	0	0	0	0	0	0	0	0	154	0	0	0	154	0	0	0	0	0	0	296
7:00 AM	0	0	37	0	0	37	0	0	0	0	0	0	0	0	51	0	0	0	51	0	0	0	0	0	0	88
7:15 AM	0	0	35	0	0	35	0	0	0	0	0	0	0	0	71	0	0	0	71	0	0	0	0	0	0	106
7:30 AM	0	0	52	0	0	52	0	0	0	0	0	0	0	0	60	0	0	0	60	0	0	0	0	0	0	112
7:45 AM	0	0	60	0	0	60	0	0	0	0	0	0	0	0	53	0	0	0	53	0	0	0	0	0	0	113
Hourly Total	0	0	184	0	0	184	0	0	0	0	0	0	0	0	235	0	0	0	235	0	0	0	0	0	0	419

CSAH 23 @ Camp Three Rd. (Closed)
Columbus MN
Tuesday, October 12, 2021

Time	Southbound CSAH 23						Westbound 0						Northbound CSAH 23						Eastbound Camp Three Rd. (Closed)						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	0	44	0	0	44	0	0	0	0	0	0	0	0	43	0	0	43	0	0	0	0	0	0	87
8:15 AM	0	0	32	0	0	32	0	0	0	0	0	0	0	0	51	0	0	51	0	0	0	0	0	0	83
8:30 AM	0	0	26	0	0	26	0	0	0	0	0	0	0	0	39	0	0	39	0	0	0	0	0	0	65
8:45 AM	0	0	45	0	0	45	0	0	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	77
Hourly Total	0	0	147	0	0	147	0	0	0	0	0	0	0	0	165	0	0	165	0	0	0	0	0	0	312
9:00 AM	0	0	30	0	0	30	0	0	0	0	0	0	0	0	46	0	0	46	0	0	0	0	0	0	76
9:15 AM	0	0	54	0	0	54	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0	99
9:30 AM	0	0	41	0	0	41	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	0	66
9:45 AM	0	0	46	0	0	46	0	0	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	78
Hourly Total	0	0	171	0	0	171	0	0	0	0	0	0	0	0	148	0	0	148	0	0	0	0	0	0	319
10:00 AM	0	0	32	0	0	32	0	0	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	0	79
10:15 AM	0	0	21	0	0	21	0	0	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	53
10:30 AM	0	0	39	0	0	39	0	0	0	0	0	0	0	0	31	0	0	31	0	0	0	0	0	0	70
10:45 AM	0	0	34	0	0	34	0	0	0	0	0	0	0	0	34	0	0	34	0	0	0	0	0	0	68
Hourly Total	0	0	126	0	0	126	0	0	0	0	0	0	0	0	144	0	0	144	0	0	0	0	0	0	270
11:00 AM	0	0	50	0	0	50	0	0	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	82
11:15 AM	0	0	40	0	0	40	0	0	0	0	0	0	0	0	39	0	0	39	0	0	0	0	0	0	79
11:30 AM	0	0	34	0	0	34	0	0	0	0	0	0	0	0	38	0	0	38	0	0	0	0	0	0	72
11:45 AM	0	0	43	0	0	43	0	0	0	0	0	0	0	0	38	0	0	38	0	0	0	0	0	0	81
Hourly Total	0	0	167	0	0	167	0	0	0	0	0	0	0	0	147	0	0	147	0	0	0	0	0	0	314
12:00 PM	0	0	36	0	0	36	0	0	0	0	0	0	0	0	33	0	0	33	0	0	0	0	0	0	69
12:15 PM	0	0	35	0	0	35	0	0	0	0	0	0	0	0	35	0	0	35	0	0	0	0	0	0	70
12:30 PM	0	0	43	0	0	43	0	0	0	0	0	0	0	0	33	0	0	33	0	0	0	0	0	0	76
12:45 PM	0	0	40	0	0	40	0	0	0	0	0	0	0	0	34	0	0	34	0	0	0	0	0	0	74
Hourly Total	0	0	154	0	0	154	0	0	0	0	0	0	0	0	135	0	0	135	0	0	0	0	0	0	289
1:00 PM	0	0	45	0	0	45	0	0	0	0	0	0	0	0	41	0	0	41	0	0	0	0	0	0	86
1:15 PM	0	0	43	0	0	43	0	0	0	0	0	0	0	0	39	0	0	39	0	0	0	0	0	0	82
1:30 PM	0	0	38	0	0	38	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0	83
1:45 PM	0	0	40	0	0	40	0	0	0	0	0	0	0	0	49	0	0	49	0	0	0	0	0	0	89
Hourly Total	0	0	166	0	0	166	0	0	0	0	0	0	0	0	174	0	0	174	0	0	0	0	0	0	340
2:00 PM	0	0	40	0	0	40	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	67
2:15 PM	0	0	41	0	0	41	0	0	0	0	0	0	0	0	42	0	0	42	0	0	0	0	0	0	83
2:30 PM	0	0	58	0	0	58	0	0	0	0	0	0	0	0	49	0	0	49	0	0	0	0	0	0	107
2:45 PM	0	0	71	0	0	71	0	0	0	0	0	0	1	0	34	0	0	35	0	0	0	0	0	0	106
Hourly Total	0	0	210	0	0	210	0	0	0	0	0	0	1	0	152	0	0	153	0	0	0	0	0	0	363
3:00 PM	0	0	58	0	0	58	0	0	0	0	0	0	0	0	59	0	0	59	0	0	0	0	0	0	117
3:15 PM	0	0	58	0	0	58	0	0	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	0	108
3:30 PM	0	0	69	0	0	69	0	0	0	0	0	0	0	0	72	0	0	72	0	0	0	0	0	0	141
3:45 PM	0	0	50	0	0	50	0	0	0	0	0	0	0	0	89	0	0	89	0	0	0	0	0	0	139
Hourly Total	0	0	235	0	0	235	0	0	0	0	0	0	0	0	270	0	0	270	0	0	0	0	0	0	505

CSAH 23 @ Camp Three Rd. (Closed)

Columbus MN

Tuesday, October 12, 2021

AM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
7:00 AM	0	0	37	0	0	37	0	0	0	0	0	0	0	0	51	0	0	51	0	0	0	0	0	0	88
7:15 AM	0	0	35	0	0	35	0	0	0	0	0	0	0	0	71	0	0	71	0	0	0	0	0	0	106
7:30 AM	0	0	52	0	0	52	0	0	0	0	0	0	0	0	60	0	0	60	0	0	0	0	0	0	112
7:45 AM	0	0	60	0	0	60	0	0	0	0	0	0	0	0	53	0	0	53	0	0	0	0	0	0	113
Peak Hour Total PHF	0	0	184	0	0	184	0	0	0	0	0	0	0	0	235	0	0	235	0	0	0	0	0	0	419
	0.000	0.000	0.767	0.000	0.000	0.767	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.827	0.000	0.000	0.827	0.000	0.000	0.000	0.000	0.000	0.000	0.927

PM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:00 PM	0	0	72	0	0	72	0	0	0	0	0	0	0	0	67	0	0	67	0	0	0	0	0	0	139
4:15 PM	0	0	81	0	0	81	0	0	0	0	0	0	0	0	72	0	0	72	0	0	0	0	0	0	153
4:30 PM	0	0	65	0	0	65	0	0	0	0	0	0	0	0	81	0	0	81	0	0	0	0	0	0	146
4:45 PM	0	0	68	0	0	68	0	0	0	0	0	0	0	0	74	0	0	74	0	0	0	0	0	0	142
Peak Hour Total PHF	0	0	286	0	0	286	0	0	0	0	0	0	0	0	294	0	0	294	0	0	0	0	0	0	580
	0.000	0.000	0.883	0.000	0.000	0.883	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.907	0.000	0.000	0.907	0.000	0.000	0.000	0.000	0.000	0.000	0.948

Total Vehicles On Leg		5712	
Vehicles Entering Intersection	2856	Vehicles Exiting Intersection	2856
Southbound			
Cars	0	2493	0
Heavy	0	363	0
Total	0	2856	0



Total Vehicles on Leg 0	Vehicles Entering Intersection	Eastbound	Cars	Heavy	Total
	0		0	0	
	0		0	0	
	Vehicles Exiting Intersection		0	0	0
	0		0	0	



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	Total Vehicles on Leg 0
0	0	0			
0	0	0			
Vehicles Exiting Intersection	0				
0	0	0			



Cars	0	1	0	2631	0
Heavy	0	0	0	225	0
Total	0	1	0	2856	0
Northbound					
Vehicles Entering Intersection	2857		Vehicles Exiting Intersection	2857	
Total Vehicles On Leg			5714		

Heavy Vehicles

Date	Time	Southbound					Westbound					Northbound					Eastbound				
		U Turns	Left Turns	Straight Through	Right Turns	Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	Bicycles in Crosswalk
10/12/2021	0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
	4:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
	4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	5:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
	5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00	0	0	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
	6:15	0	0	1	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
	6:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
	6:45	0	0	1	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
	7:00	0	0	3	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0
	7:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
	7:30	0	0	7	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
	7:45	0	0	9	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
	8:00	0	0	6	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0
	8:15	0	0	3	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
	8:30	0	0	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
	8:45	0	0	9	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
	9:00	0	0	4	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0
	9:15	0	0	16	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
	9:30	0	0	9	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
	9:45	0	0	18	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
	10:00	0	0	12	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0
	10:15	0	0	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
	10:30	0	0	9	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
	10:45	0	0	12	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0
	11:00	0	0	11	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
	11:15	0	0	9	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
	11:30	0	0	8	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
	11:45	0	0	5	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2147

Study Date : 11/18/2021

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 23 (Lake Dr.)

Number of Lanes : 1

Total Approach Volume: 2,857

Southbound: CSAH 23 (Lake Dr.)

Number of Lanes : 1

Total Approach Volume: 2,856

Minor Street Approaches

Eastbound: Camp Three Rd.

Number of Lanes : 1

Total Approach Volume: 1

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 0 hours, 8 are needed

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

Required volumes reached for 0 hours, 8 are needed

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

Required 1A volumes reached for 0 hours, 8 are needed

Required 1B volumes reached for 0 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.....Not Satisfied

Warrant 3A - Peak Hour Delay.....Not Satisfied

Approach volumes on minor street don't exceed minimums for any one hour period. Delay data not evaluated.

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

Volumes do not exceed minimums for any one hour period.

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

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

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

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

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

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

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2147

Study Date : 11/18/2021

Warrant 1A - Minimum Volumes

Description

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

Summary

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

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **350**

Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 23 (Lake Dr.)					Camp Three Rd.		
16:15 - 17:15	298	+	282	=	580	0	0	No
16:00 - 17:00	294	+	286	=	580	0	0	No
15:45 - 16:45	309	+	268	=	577	0	0	No
15:30 - 16:30	300	+	272	=	572	0	0	No
16:30 - 17:30	300	+	270	=	570	0	0	No
16:45 - 17:45	295	+	260	=	555	0	0	No
15:15 - 16:15	278	+	249	=	527	0	0	No
17:00 - 18:00	280	+	236	=	516	0	0	No
15:00 - 16:00	270	+	235	=	505	0	0	No
17:15 - 18:15	251	+	235	=	486	0	0	No
14:45 - 15:45	216	+	256	=	472	0	0	No
14:30 - 15:30	193	+	245	=	438	0	0	No
17:30 - 18:30	227	+	205	=	432	0	0	No
07:00 - 08:00	235	+	184	=	419	0	0	No
07:15 - 08:15	227	+	191	=	418	0	0	No
14:15 - 15:15	185	+	228	=	413	0	0	No
07:30 - 08:30	207	+	188	=	395	0	0	No
06:45 - 07:45	233	+	160	=	393	0	0	No
17:45 - 18:45	191	+	183	=	374	0	0	No
14:00 - 15:00	153	+	210	=	363	0	0	No
06:30 - 07:30	206	+	144	=	350	0	0	No
07:45 - 08:45	186	+	162	=	348	0	0	No
13:45 - 14:45	167	+	179	=	346	0	0	No
13:00 - 14:00	174	+	166	=	340	0	0	No
18:00 - 19:00	168		168		336	0	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2147

Study Date : 11/18/2021

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 = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **525**

Veh/Hr Minor = **52**

Time	Major Road				Minor Road			Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	
16:15 - 17:15	298	+	282	=	580	0	0	No
16:00 - 17:00	294	+	286	=	580	0	0	No
15:45 - 16:45	309	+	268	=	577	0	0	No
15:30 - 16:30	300	+	272	=	572	0	0	No
16:30 - 17:30	300	+	270	=	570	0	0	No
16:45 - 17:45	295	+	260	=	555	0	0	No
15:15 - 16:15	278	+	249	=	527	0	0	No
17:00 - 18:00	280	+	236	=	516	0	0	No
15:00 - 16:00	270	+	235	=	505	0	0	No
17:15 - 18:15	251	+	235	=	486	0	0	No
14:45 - 15:45	216	+	256	=	472	0	0	No
14:30 - 15:30	193	+	245	=	438	0	0	No
17:30 - 18:30	227	+	205	=	432	0	0	No
07:00 - 08:00	235	+	184	=	419	0	0	No
07:15 - 08:15	227	+	191	=	418	0	0	No
14:15 - 15:15	185	+	228	=	413	0	0	No
07:30 - 08:30	207	+	188	=	395	0	0	No
06:45 - 07:45	233	+	160	=	393	0	0	No
17:45 - 18:45	191	+	183	=	374	0	0	No
14:00 - 15:00	153	+	210	=	363	0	0	No
06:30 - 07:30	206	+	144	=	350	0	0	No
07:45 - 08:45	186	+	162	=	348	0	0	No
13:45 - 14:45	167	+	179	=	346	0	0	No
13:00 - 14:00	174	+	166	=	340	0	0	No
18:00 - 19:00	168		168		336	0	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2147

Study Date : 11/18/2021

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 0 hours meet 1A minimums.
Only 0 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **280 420**

Veh/Hr Minor = **84 42**

Major Road CSAH 23 (Lake Dr.)

Minor Road Camp Three Rd.

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:00 - 17:00	294	+	286	=	580	0	0	No
16:15 - 17:15	298	+	282	=	580	0	0	No
15:45 - 16:45	309	+	268	=	577	0	0	No
15:30 - 16:30	300	+	272	=	572	0	0	No
16:30 - 17:30	300	+	270	=	570	0	0	No
16:45 - 17:45	295	+	260	=	555	0	0	No
15:15 - 16:15	278	+	249	=	527	0	0	No
17:00 - 18:00	280	+	236	=	516	0	0	No
15:00 - 16:00	270	+	235	=	505	0	0	No
17:15 - 18:15	251	+	235	=	486	0	0	No
14:45 - 15:45	216	+	256	=	472	0	0	No
14:30 - 15:30	193	+	245	=	438	0	0	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:15 - 17:15	298	+	282	=	580	0	0	No
16:00 - 17:00	294	+	286	=	580	0	0	No
15:45 - 16:45	309	+	268	=	577	0	0	No
15:30 - 16:30	300	+	272	=	572	0	0	No
16:30 - 17:30	300	+	270	=	570	0	0	No
16:45 - 17:45	295	+	260	=	555	0	0	No
15:15 - 16:15	278	+	249	=	527	0	0	No
17:00 - 18:00	280	+	236	=	516	0	0	No
15:00 - 16:00	270	+	235	=	505	0	0	No
17:15 - 18:15	251	+	235	=	486	0	0	No
14:45 - 15:45	216	+	256	=	472	0	0	No
14:30 - 15:30	193	+	245	=	438	0	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2147

Study Date : 11/18/2021

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.

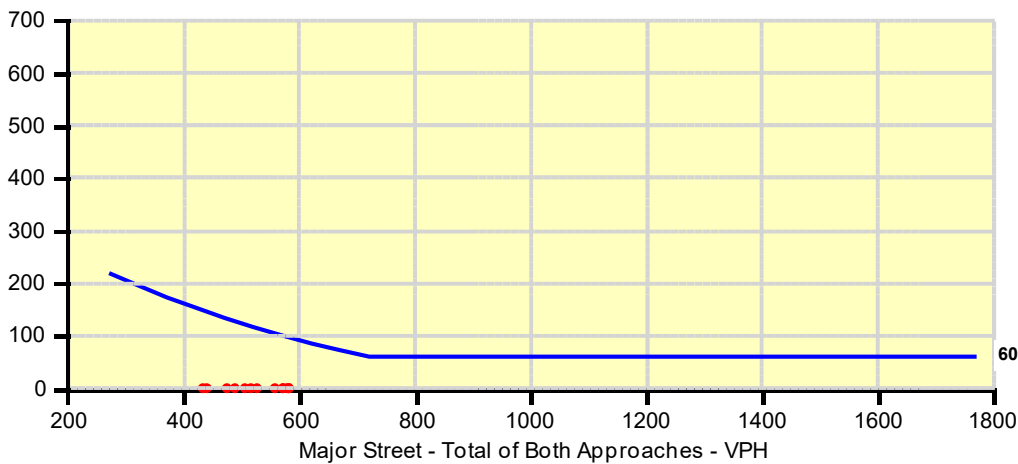
Summary

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

Site Data Required

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

Time	Major Road CSAH 23 (Lake Dr.)				Total	Minor Road Camp Three Rd.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:15 - 17:15	298	+	282	=	580	0	0	No
16:00 - 17:00	294	+	286	=	580	0	0	No
15:45 - 16:45	309	+	268	=	577	0	0	No
15:30 - 16:30	300	+	272	=	572	0	0	No
16:30 - 17:30	300	+	270	=	570	0	0	No
16:45 - 17:45	295	+	260	=	555	0	0	No
15:15 - 16:15	278	+	249	=	527	0	0	No
17:00 - 18:00	280	+	236	=	516	0	0	No
15:00 - 16:00	270	+	235	=	505	0	0	No
17:15 - 18:15	251	+	235	=	486	0	0	No
14:45 - 15:45	216	+	256	=	472	0	0	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2147

Study Date : 11/18/2021

Warrant 3B - Peak Hour Volumes

Description

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

Summary

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

Site Data Required

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

Time	Major Road CSAH 23 (Lake Dr.)				Total	Minor Road Camp Three Rd.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:15 - 17:15	298	+	282	=	580	0	0	No
16:00 - 17:00	294	+	286	=	580	0	0	No
15:45 - 16:45	309	+	268	=	577	0	0	No
15:30 - 16:30	300	+	272	=	572	0	0	No
16:30 - 17:30	300	+	270	=	570	0	0	No
16:45 - 17:45	295	+	260	=	555	0	0	No
15:15 - 16:15	278	+	249	=	527	0	0	No
17:00 - 18:00	280	+	236	=	516	0	0	No
15:00 - 16:00	270	+	235	=	505	0	0	No
17:15 - 18:15	251	+	235	=	486	0	0	No
14:45 - 15:45	216	+	256	=	472	0	0	No

