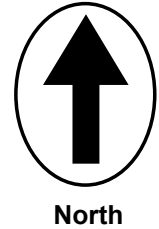


Date : 12/21/23

Count Number : TMC 2397

Location : CSAH 78 @ Station Parkway
& Highway/Sheriff's Entrance

Collection Period : 24 HR



27227

#2

CSAH 78

13857			
415	13273	147	22
E	F	G	H

13370

Highway/Sheriff's Entrance

I	154	249
J	21	
K	74	
L	0	

#3

552

303

6148

#1

2615	0	D
	46	C
	5	B
	2564	A

Station Parkway

CSAH 78

15915

P	O	N	M
4	3097	13148	151
16400			

#4

32315

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

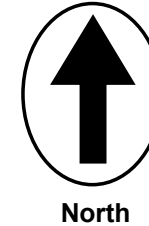
Date : 12/21/23

Count Number : TMC 2397

Location : CSAH 78 @ Station Parkway
& Highway/Sheriff's Entrance

Collection Period : 7:00 AM - 8:00 AM

AM PEAK



Station Parkway

Highway/Sheriff's Entrance

CSAH 78

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

240

#1

0	D
0	C
0	B
101	A

139

CSAH 78

17	1299	18	1
E	F	G	H

1941

#2

606

9	12
0	
3	
0	
I	
J	
K	
L	

#3

62

50

1404

1	122	596	32
P	O	N	M
751			

#4

2155

Anoka County Highway Department

Traffic Volume and Turning Movement Study

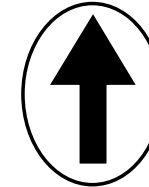
Date : 12/21/23

Count Number : TMC 2397

Location : CSAH 78 @ Station Parkway
& Highway/Sheriff's Entrance

Collection Period : 4:00 PM - 5:00 PM

PM PEAK



North

2550

#2

CSAH 78

1059			
E	F	G	H
60	995	2	2

1491

Highway/Sheriff's Entrance

I	25	27
J	1	
K	1	
L	0	

#3

31

4

649

#1

241	0	D
	1	C
	0	B
	240	A

Station Parkway

408

CSAH 78

P	O	N	M
0	347	1463	2
1812			

#4

3048

Anoka County Highway Department

Traffic Volume and Turning
Movement Study

EXISTING LANES OF APPROACH

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

**TMC 2397 - CSAH 78 @ Station Parkway & Highway/Sheriff's Entrance
Andover MN
Thursday, December 21, 2023**

Time	Southbound CSAH 78						Westbound Highway/Sheriff's Entrance						Northbound CSAH 78						Eastbound Station Parkway						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	19	0	0	19	0	2	0	0	0	2	0	0	11	0	0	11	0	0	0	3	0	3	35
12:15 AM	0	0	8	0	0	8	0	0	0	1	0	1	0	1	17	0	0	18	0	0	0	2	0	2	29
12:30 AM	0	0	8	0	0	8	0	0	0	0	0	0	0	3	16	0	0	19	0	0	0	1	0	1	28
12:45 AM	0	0	11	0	0	11	0	0	0	0	0	0	0	1	10	0	0	11	0	0	0	3	0	3	25
Hourly Total	0	0	46	0	0	46	0	2	0	1	0	3	0	5	54	0	0	59	0	0	0	9	0	9	117
1:00 AM	0	0	10	0	0	10	0	0	0	0	0	0	0	1	17	1	0	19	0	0	0	2	0	2	31
1:15 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	2	12	0	0	14	0	0	0	0	0	0	19
1:30 AM	0	1	6	0	0	7	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	13
1:45 AM	0	0	7	0	0	7	0	0	0	1	0	1	0	1	4	0	0	5	0	0	0	2	0	2	15
Hourly Total	0	1	28	0	0	29	0	0	0	1	0	1	0	4	39	1	0	44	0	0	0	4	0	4	78
2:00 AM	0	0	4	0	0	4	0	1	0	0	0	1	0	1	8	1	0	10	0	0	0	1	0	1	16
2:15 AM	0	1	6	0	0	7	0	0	0	0	0	0	0	2	10	0	0	12	0	0	0	0	0	0	19
2:30 AM	0	0	8	0	0	8	0	0	0	1	0	1	0	1	10	0	0	11	0	0	0	1	0	1	21
2:45 AM	0	0	5	0	0	5	0	0	0	1	0	1	0	1	5	0	0	6	0	0	0	0	0	0	12
Hourly Total	0	1	23	0	0	24	0	1	0	2	0	3	0	5	33	1	0	39	0	0	0	2	0	2	68
3:00 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	1	0	1	7
3:15 AM	0	0	13	0	0	13	0	0	0	0	0	0	0	1	10	0	0	11	0	0	0	1	0	1	25
3:30 AM	0	0	11	0	0	11	0	0	0	1	0	1	0	1	5	0	0	6	0	0	0	2	0	2	20
3:45 AM	0	0	15	0	0	15	0	0	0	0	0	0	0	3	4	0	0	7	0	0	0	2	0	2	24
Hourly Total	0	0	42	0	0	42	0	0	0	1	0	1	0	6	21	0	0	27	0	0	0	6	0	6	76
4:00 AM	0	0	20	0	0	20	0	0	0	0	0	0	0	2	8	0	0	10	0	0	0	1	0	1	31
4:15 AM	0	1	44	0	0	45	0	0	0	0	0	0	0	3	6	0	0	9	0	0	0	2	0	2	56
4:30 AM	0	0	52	0	0	52	0	0	0	0	0	0	0	9	12	0	0	21	0	0	0	6	0	6	79
4:45 AM	0	0	63	0	0	63	0	0	0	0	0	0	0	7	27	0	0	34	0	0	0	3	0	3	100
Hourly Total	0	1	179	0	0	180	0	0	0	0	0	0	0	21	53	0	0	74	0	0	0	12	0	12	266
5:00 AM	0	1	84	1	0	86	0	0	0	0	0	0	0	8	12	0	0	20	0	0	0	9	0	9	115
5:15 AM	0	2	128	1	0	131	0	0	1	0	0	1	0	12	23	2	0	37	0	1	0	7	0	8	177
5:30 AM	0	0	158	3	0	161	0	0	0	0	0	0	0	18	30	1	0	49	0	0	0	7	0	7	217
5:45 AM	0	3	143	1	0	147	0	0	0	0	0	0	0	22	27	12	0	61	0	0	0	14	0	14	222
Hourly Total	0	6	513	6	0	525	0	0	1	0	0	1	0	60	92	15	0	167	0	1	0	37	0	38	731
6:00 AM	1	3	157	7	0	168	0	0	0	2	0	2	0	25	37	2	0	64	0	0	0	21	0	21	255
6:15 AM	0	3	195	6	0	204	0	0	0	1	0	1	0	33	56	5	0	94	0	0	0	19	0	19	318
6:30 AM	1	3	295	4	0	303	0	1	0	1	0	2	0	30	74	4	0	108	0	0	0	35	0	35	448
6:45 AM	0	3	243	7	0	253	0	0	0	2	0	2	0	24	109	4	0	137	0	0	0	33	0	33	425
Hourly Total	2	12	890	24	0	928	0	1	0	6	0	7	0	112	276	15	0	403	0	0	0	108	0	108	1446
7:00 AM	1	2	326	1	0	330	0	0	0	0	0	0	1	18	123	5	0	147	0	0	0	26	0	26	503
7:15 AM	0	2	346	7	0	355	0	1	0	3	0	4	0	34	159	8	0	201	0	0	0	21	0	21	581
7:30 AM	0	9	324	7	0	340	0	1	0	1	0	2	0	30	150	6	0	186	0	0	0	33	0	33	561
7:45 AM	0	5	303	2	0	310	0	1	0	5	0	6	0	40	164	13	0	217	0	0	0	21	0	21	554
Hourly Total	1	18	1299	17	0	1335	0	3	0	9	0	12	1	122	596	32	0	751	0	0	0	101	0	101	2199

**TMC 2397 - CSAH 78 @ Station Parkway & Highway/Sheriff's Entrance
Andover MN**

Thursday, December 21, 2023

Time	Southbound CSAH 78						Westbound Highway/Sheriff's Entrance						Northbound CSAH 78						Eastbound Station Parkway						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	6	232	5	0	243	0	3	1	2	0	6	0	33	111	6	0	150	0	2	0	24	0	26	425
8:15 AM	0	2	252	5	0	259	0	0	0	4	0	4	0	29	141	2	0	172	0	1	1	23	0	25	460
8:30 AM	0	2	179	6	0	187	0	1	0	0	0	1	0	30	104	6	0	140	0	0	0	27	0	27	355
8:45 AM	0	3	222	4	0	229	0	2	0	1	0	3	0	47	138	3	0	188	0	0	0	30	0	30	450
Hourly Total	0	13	885	20	0	918	0	6	1	7	0	14	0	139	494	17	0	650	0	3	1	104	0	108	1690
9:00 AM	0	1	196	6	0	203	0	2	1	2	0	5	0	54	152	5	0	211	0	0	0	31	0	31	450
9:15 AM	2	4	237	25	0	268	0	0	0	3	0	3	0	69	125	3	0	197	0	0	0	22	0	22	490
9:30 AM	1	4	217	17	0	239	0	0	1	6	0	7	0	82	113	1	0	196	0	0	0	51	0	51	493
9:45 AM	0	1	222	7	0	230	0	5	1	0	0	6	0	40	119	3	0	162	0	1	1	37	0	39	437
Hourly Total	3	10	872	55	0	940	0	7	3	11	0	21	0	245	509	12	0	766	0	1	1	141	0	143	1870
10:00 AM	2	1	185	7	0	195	0	5	0	1	0	6	0	42	114	1	0	157	0	1	0	43	0	44	402
10:15 AM	0	2	174	7	0	183	0	1	3	4	0	8	0	42	127	1	0	170	0	0	0	20	0	20	381
10:30 AM	0	2	177	5	0	184	0	0	1	1	0	2	0	35	124	0	0	159	0	1	0	38	0	39	384
10:45 AM	0	3	159	9	0	171	0	0	0	3	0	3	2	49	167	2	0	220	0	1	0	29	0	30	424
Hourly Total	2	8	695	28	0	733	0	6	4	9	0	19	2	168	532	4	0	706	0	3	0	130	0	133	1591
11:00 AM	0	1	203	7	0	211	0	0	0	7	0	7	0	41	174	2	0	217	0	1	0	41	0	42	477
11:15 AM	0	2	172	11	0	185	0	1	0	5	0	6	0	27	167	0	0	194	0	0	2	46	0	48	433
11:30 AM	0	4	201	8	0	213	0	3	1	3	0	7	0	45	170	3	0	218	0	1	0	44	0	45	483
11:45 AM	1	1	183	4	0	189	0	2	0	0	0	2	0	57	167	8	0	232	0	1	0	34	0	35	458
Hourly Total	1	8	759	30	0	798	0	6	1	15	0	22	0	170	678	13	0	861	0	3	2	165	0	170	1851
12:00 PM	0	6	186	9	0	201	0	1	1	8	0	10	0	49	174	1	0	224	0	0	0	36	0	36	471
12:15 PM	0	4	182	10	0	196	0	0	0	0	0	0	0	44	205	2	0	251	0	0	0	37	0	37	484
12:30 PM	1	2	241	4	0	248	0	0	0	2	0	2	0	54	180	3	0	237	0	1	0	48	0	49	536
12:45 PM	0	1	210	9	0	220	0	6	0	2	0	8	0	43	181	3	0	227	0	2	0	39	0	41	496
Hourly Total	1	13	819	32	0	865	0	7	1	12	0	20	0	190	740	9	0	939	0	3	0	160	0	163	1987
1:00 PM	0	2	185	6	0	193	0	2	0	5	0	7	0	56	210	2	0	268	0	0	0	55	0	55	523
1:15 PM	1	2	157	8	0	168	0	1	2	2	0	5	0	66	196	2	0	264	0	0	0	50	0	50	487
1:30 PM	1	5	196	6	0	208	0	3	0	4	0	7	0	55	210	4	0	269	0	3	0	44	0	47	531
1:45 PM	0	2	186	9	0	197	0	2	2	3	0	7	0	50	238	3	0	291	0	0	0	49	0	49	544
Hourly Total	2	11	724	29	0	766	0	8	4	14	0	26	0	227	854	11	0	1092	0	3	0	198	0	201	2085
2:00 PM	2	6	216	6	0	230	0	4	0	3	0	7	0	53	228	3	0	284	0	0	0	54	0	54	575
2:15 PM	0	6	207	8	0	221	0	1	0	3	0	4	0	72	265	3	0	340	0	3	0	50	0	53	618
2:30 PM	2	3	216	5	0	226	0	1	0	1	0	2	0	52	244	1	0	297	0	0	0	44	0	44	569
2:45 PM	0	4	169	5	0	178	0	4	2	1	0	7	0	57	317	2	0	376	0	0	0	55	1	55	616
Hourly Total	4	19	808	24	0	855	0	10	2	8	0	20	0	234	1054	9	0	1297	0	3	0	203	1	206	2378
3:00 PM	0	6	156	5	0	167	0	6	0	6	0	12	0	73	353	1	0	427	0	0	0	51	0	51	657
3:15 PM	0	1	209	2	0	212	0	0	0	1	0	1	0	49	299	0	0	348	0	2	0	43	0	45	606
3:30 PM	0	2	201	7	0	210	0	2	0	5	0	7	0	75	420	1	0	496	0	3	0	40	0	43	756
3:45 PM	0	1	191	10	0	202	0	0	0	2	0	2	1	91	359	0	0	451	0	0	0	44	0	44	699
Hourly Total	0	10	757	24	0	791	0	8	0	14	0	22	1	288	1431	2	0	1722	0	5	0	178	0	183	2718

**TMC 2397 - CSAH 78 @ Station Parkway & Highway/Sheriff's Entrance
Andover MN**

Thursday, December 21, 2023

Time	Southbound CSAH 78						Westbound Highway/Sheriff's Entrance						Northbound CSAH 78						Eastbound Station Parkway						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	1	0	271	8	0	280	0	0	1	6	1	7	0	74	353	1	0	428	0	0	0	54	0	54	769
4:15 PM	1	1	226	17	0	245	0	1	0	3	0	4	0	89	387	0	0	476	0	1	0	68	0	69	794
4:30 PM	0	0	256	14	0	270	0	0	0	12	0	12	0	85	349	1	0	435	0	0	0	54	0	54	771
4:45 PM	0	1	242	21	0	264	0	0	0	4	0	4	0	99	374	0	0	473	0	0	0	64	0	64	805
Hourly Total	2	2	995	60	0	1059	0	1	1	25	1	27	0	347	1463	2	0	1812	0	1	0	240	0	241	3139
5:00 PM	1	1	258	13	0	273	0	0	0	1	0	1	0	66	290	1	0	357	0	1	0	71	0	72	703
5:15 PM	0	3	262	10	0	275	0	0	0	0	0	0	0	66	325	0	0	391	0	0	0	65	0	65	731
5:30 PM	1	0	226	9	0	236	0	0	2	3	0	5	0	79	289	0	0	368	0	2	0	52	0	54	663
5:45 PM	0	1	221	3	0	225	0	1	0	0	0	1	0	56	262	0	0	318	0	1	0	34	0	35	579
Hourly Total	2	5	967	35	0	1009	0	1	2	4	0	7	0	267	1166	1	0	1434	0	4	0	222	0	226	2676
6:00 PM	0	2	197	7	0	206	0	1	0	2	0	3	0	58	309	0	0	367	0	1	0	46	0	47	623
6:15 PM	1	2	175	3	0	181	0	0	0	0	0	0	0	54	245	0	0	299	0	1	0	38	0	39	519
6:30 PM	0	0	132	0	0	132	0	0	0	1	0	1	0	48	226	0	0	274	0	1	0	43	0	44	451
6:45 PM	0	0	124	5	0	129	0	0	0	1	0	1	0	54	193	0	0	247	0	5	0	46	0	51	428
Hourly Total	1	4	628	15	0	648	0	1	0	4	0	5	0	214	973	0	0	1187	0	8	0	173	0	181	2021
7:00 PM	1	0	108	1	0	110	0	0	0	1	0	1	0	30	195	0	0	225	0	0	0	39	0	39	375
7:15 PM	0	0	120	2	0	122	0	0	0	1	0	1	0	28	165	1	0	194	0	0	0	31	0	31	348
7:30 PM	0	0	101	2	0	103	0	0	1	1	0	2	0	28	166	2	0	196	0	3	0	24	0	27	328
7:45 PM	0	1	128	5	0	134	0	0	0	1	0	0	0	29	195	2	0	226	0	0	0	18	0	18	378
Hourly Total	1	1	457	10	0	469	0	0	1	3	0	4	0	115	721	5	0	841	0	3	0	112	0	115	1429
8:00 PM	0	0	101	0	0	101	0	0	0	1	0	1	0	19	162	0	0	181	0	0	0	23	0	23	306
8:15 PM	0	1	75	1	0	77	0	0	0	3	0	3	0	17	120	0	0	137	0	1	0	24	0	25	242
8:30 PM	0	1	91	0	0	92	0	1	0	0	0	1	0	26	98	1	2	125	0	1	0	26	0	27	245
8:45 PM	0	0	104	2	0	106	0	0	0	0	0	0	0	20	115	0	0	135	0	1	0	26	0	27	268
Hourly Total	0	2	371	3	0	376	0	1	0	4	0	5	0	82	495	1	2	578	0	3	0	99	0	102	1061
9:00 PM	0	0	76	0	0	76	0	1	0	1	0	2	0	8	104	0	0	112	0	0	0	30	0	30	220
9:15 PM	0	0	58	2	0	60	0	0	0	0	0	0	0	13	127	0	0	140	0	0	0	34	0	34	234
9:30 PM	0	0	76	0	0	76	0	0	0	1	0	1	0	11	107	0	0	118	0	0	0	31	0	31	226
9:45 PM	0	0	42	0	0	42	0	1	0	0	0	1	0	5	88	0	0	93	0	0	1	10	0	11	147
Hourly Total	0	0	252	2	0	254	0	2	0	2	0	4	0	37	426	0	0	463	0	0	1	105	0	106	827
10:00 PM	0	0	45	0	0	45	0	1	0	0	0	1	0	5	97	0	0	102	0	1	0	15	0	16	164
10:15 PM	0	0	54	0	0	54	0	0	0	0	0	0	0	9	62	0	0	71	0	0	0	4	0	4	129
10:30 PM	0	0	38	0	0	38	0	1	0	0	0	1	0	10	67	0	0	77	0	0	0	11	0	11	127
10:45 PM	0	0	41	1	0	42	0	0	0	1	0	1	0	5	62	0	0	67	0	0	0	5	0	5	115
Hourly Total	0	0	178	1	0	179	0	2	0	1	0	3	0	29	288	0	0	317	0	1	0	35	0	36	535
11:00 PM	0	1	31	0	0	32	0	0	0	1	0	1	0	3	56	0	0	59	0	0	0	8	0	8	100
11:15 PM	0	0	20	0	0	20	0	0	0	0	0	0	0	2	41	0	0	43	0	0	0	5	0	5	68
11:30 PM	0	1	22	0	0	23	0	1	0	0	0	1	0	3	34	0	0	37	0	0	0	2	0	2	63
11:45 PM	0	0	13	0	0	13	0	0	0	0	0	0	0	2	29	1	0	32	0	1	0	5	0	6	51
Hourly Total	0	2	86	0	0	88	0	1	0	1	0	2	0	10	160	1	0	171	0	1	0	20	0	21	282
DAILY TOTAL	22	147	13273	415	0	13857	0	74	21	154	1	249	4	3097	13148	151	2	16400	0	46	5	2564	1	2615	33121
Cars	22	141	13005	334	0	13502	0	62	21	148	0	231	4	2896	12954	141	2	15995	0	44	4	2423	1	2471	32199
Heavy Vehicles	0	6	268	81	0	355	0	12	0	6	1	18	0	201	194	10	0	405	0	2	1	141	0	144	922
Heavy Vehicle %	0.00%	4.08%	2.02%	19.52%	0.00%	2.56%	0.00%	16.22%	0.00%	3.90%	100.00%	7.23%	0.00%	6.49%	1.48%	6.62%	0.00%	2.47%	0.00%	4.35%	20.00%	5.50%	0.00%	5.51%	2.78%

**TMC 2397 - CSAH 78 @ Station Parkway & Highway/Sheriff's Entrance
Andover MN
Thursday, December 21, 2023**

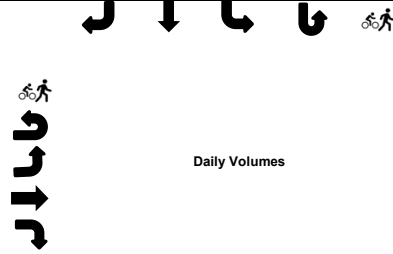
AM Peak Hour

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	1	2	326	1	0	330	0	0	0	0	0	0	1	18	123	5	0	147	0	0	0	26	0	26	0	0	0	21	0	21	503
7:15 AM	0	2	346	7	0	355	0	1	0	3	0	4	0	34	159	8	0	201	0	0	0	21	0	21	0	0	0	33	0	33	581
7:30 AM	0	9	324	7	0	340	0	1	0	1	0	2	0	30	150	6	0	186	0	0	0	21	0	21	0	0	0	21	0	21	561
7:45 AM	0	5	303	2	0	310	0	1	0	5	0	6	0	40	164	13	0	217	0	0	0	21	0	21	0	0	0	21	0	21	554
Peak Hour Total	1	18	1299	17	0	1335	0	3	0	9	0	12	1	122	596	32	0	751	0	0	0	101	0	101	0	0	0	101	0	101	2199
PHF	0.250	0.500	0.939	0.607	0.000	0.940	0.000	0.750	0.000	0.450	0.000	0.500	0.250	0.763	0.909	0.615	0.000	0.865	0.000	0.000	0.000	0.765	0.000	0.765	0.000	0.000	0.000	0.765	0.000	0.765	0.946

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	1	0	271	8	0	280	0	0	1	6	1	7	0	74	353	1	0	428	0	0	0	54	0	54	0	0	0	54	0	54	769
4:15 PM	1	1	226	17	0	245	0	1	0	3	0	4	0	89	387	0	0	476	0	1	0	68	0	69	0	1	0	68	0	69	794
4:30 PM	0	0	256	14	0	270	0	0	0	12	0	12	0	85	349	1	0	435	0	0	0	54	0	54	0	0	0	54	0	54	771
4:45 PM	0	1	242	21	0	264	0	0	0	4	0	4	0	99	374	0	0	473	0	0	0	64	0	64	0	0	0	64	0	64	805
Peak Hour Total	2	2	995	60	0	1059	0	1	1	25	1	27	0	347	1463	2	0	1812	0	1	0	240	0	241	0	1	0	241	0	241	3139
PHF	0.500	0.500	0.918	0.714	0.000	0.946	0.000	0.250	0.250	0.521	0.250	0.563	0.000	0.876	0.945	0.500	0.000	0.952	0.000	0.250	0.000	0.882	0.000	0.873	0.000	0.250	0.000	0.873	0.000	0.873	0.975

Total Vehicles On Leg		27227	
Vehicles Entering Intersection	13857	Vehicles Exiting Intersection	13370
Southbound			
Cars	334	13005	141
Heavy	81	268	6
Total	415	13273	147



Total Vehicles on Leg 6148	Vehicles Entering Intersection 2615	Eastbound	Cars	Heavy	Total	
			1	0	1	
	0		0	0		
	44		2	46		
	4		1	5		
Vehicles Exiting Intersection 3533	2423	141	2564			

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 249	Total Vehicles on Leg 552
148	6	154			
21	0	21			
62	12	74			
0	0	0			
0	1	1	Vehicles Exiting Intersection 303		

Cars	2	4	2896	12954	141
Heavy	0	0	201	194	10
Total	2	4	3097	13148	151
Northbound					
Vehicles Entering Intersection	16400		Vehicles Exiting Intersection 15915		
Total Vehicles On Leg	32315				

Heavy Vehicles

Date	Time	Southbound						Westbound						Northbound						Eastbound					
		U Turns	Left Turns	Straight Through	Right Turns	EB Bicycles in Crosswalk	WB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	NB Bicycles in Crosswalk	SB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	EB Bicycles in Crosswalk	WB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	NB Bicycles in Crosswalk	SB Bicycles in Crosswalk
12/21/2023	0:00	0	0	2	0	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	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	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	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	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	0	0	0	0
	1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0
	2:00	0	0	1	0	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	1	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	1	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	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	0	0	0	0
	3:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0
	3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	4:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
	4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	5:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	5:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
	5:45	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	6:00	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
	6:15	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0
	6:30	0	0	18	0	0	0	0	0	1	0	0	0	0	0	0	1	3	0	0	0	0	0	19	0
	6:45	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7	0
	7:00	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1	8	0	0	0	0	0	2	0
	7:15	0	0	14	0	0	0	0	0	1	0	0	0	0	0	0	4	2	0	0	0	0	0	2	0
7:30	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	4	4	1	0	0	0	0	5	0	
7:45	0	1	3	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0	0	0	0	3	0	
8:00	0	0	5	0	0	0	0	0	1	0	0	0	0	0	0	4	6	0	0	0	0	0	1	0	
8:15	0	0	5	3	0	0	0	0	0	0	1	0	0	0	0	4	12	0	0	0	0	0	2	0	
8:30	0	0	5	1	0	0	0	0	1	0	0	0	0	0	0	1	4	1	0	0	0	0	2	0	
8:45	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	6	5	1	0	0	0	0	1	0	
9:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	12	5	1	0	0	0	0	1	0	
9:15	0	0	3	20	0	0	0	0	0	0	1	0	0	0	0	19	4	1	0	0	0	0	0	0	
9:30	0	0	4	10	0	0	0	0	0	0	1	0	0	0	0	33	2	1	0	0	0	0	2	0	
9:45	0	0	8	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	
10:00	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	
10:15	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	
10:30	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	0	0	0	0	3	0	
10:45	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	5	0	0	0	0	0	1	0	
11:00	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	5	0	
11:15	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	
11:30	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	5	0	
11:45	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2397

Study Date : 12/29/2023

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 78

Number of Lanes : 2+

Total Approach Volume: 16,400

Southbound: CSAH 78

Number of Lanes : 2+

Total Approach Volume: 13,857

Minor Street Approaches

Eastbound: Station Parkway

Number of Lanes : 1

Total Approach Volume: 2,615

Westbound: Highway/Sheriff's Entrance

Number of Lanes : 1

Total Approach Volume: 249

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 14 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 16 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 (57) 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 2397

Study Date : 12/29/2023

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

14 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
 Number of Major Lanes = **2 or more**
 Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **420**
 Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 78					Station Parkway		
15:30 - 16:30	1851	+	937	=	2788	210	20	Yes
16:30 - 17:30	1656	+	1082	=	2738	255	17	Yes
14:30 - 15:30	1448	+	783	=	2231	195	22	Yes
17:30 - 18:30	1352	+	848	=	2200	175	9	Yes
13:30 - 14:30	1184	+	856	=	2040	203	25	Yes
07:30 - 08:30	725	+	1152	=	1877	105	18	Yes
12:30 - 13:30	996	+	829	=	1825	195	22	Yes
11:30 - 12:30	925	+	799	=	1724	153	19	Yes
08:30 - 09:30	736	+	887	=	1623	110	12	Yes
10:30 - 11:30	790	+	751	=	1541	159	18	Yes
09:30 - 10:30	685	+	847	=	1532	154	27	Yes
18:30 - 19:30	940	+	493	=	1433	165	4	Yes
06:00 - 07:00	403	+	928	=	1331	108	7	Yes
20:15 - 21:15	509	+	351	=	860	109	6	Yes
07:00 - 08:00	751	+	1335	=	2086	101	12	No
07:15 - 08:15	754	+	1248	=	2002	101	18	No
19:30 - 20:30	740	+	415	=	1155	93	6	No
05:45 - 06:45	327	+	822	=	1149	89	5	No
19:45 - 20:45	669	+	404	=	1073	93	5	No
20:00 - 21:00	578	+	376	=	954	102	5	No
05:30 - 06:30	268	+	680	=	948	61	3	No
05:15 - 06:15	211	+	607	=	818	50	3	No
05:00 - 06:00	167	+	525	=	692	38	1	No
21:15 - 22:15	453	+	223	=	676	92	3	No
21:30 - 22:30	384		217		601	62	3	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2397

Study Date : 12/29/2023

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 = **1**

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **630**
 Veh/Hr Minor = **53**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:30 - 16:30	1851	+	937	=	2788	210	20	Yes
16:30 - 17:30	1656	+	1082	=	2738	255	17	Yes
14:30 - 15:30	1448	+	783	=	2231	195	22	Yes
17:30 - 18:30	1352	+	848	=	2200	175	9	Yes
13:30 - 14:30	1184	+	856	=	2040	203	25	Yes
07:30 - 08:30	725	+	1152	=	1877	105	18	Yes
06:30 - 07:30	593	+	1241	=	1834	115	8	Yes
12:30 - 13:30	996	+	829	=	1825	195	22	Yes
11:30 - 12:30	925	+	799	=	1724	153	19	Yes
08:30 - 09:30	736	+	887	=	1623	110	12	Yes
10:30 - 11:30	790	+	751	=	1541	159	18	Yes
09:30 - 10:30	685	+	847	=	1532	154	27	Yes
18:30 - 19:30	940	+	493	=	1433	165	4	Yes
19:30 - 20:30	740	+	415	=	1155	93	6	Yes
05:30 - 06:30	268	+	680	=	948	61	3	Yes
20:30 - 21:30	512	+	334	=	846	118	3	Yes
05:15 - 06:15	211	+	607	=	818	50	3	No
05:00 - 06:00	167	+	525	=	692	38	1	No
21:30 - 22:30	384	+	217	=	601	62	3	No
04:45 - 05:45	140	+	441	=	581	27	1	No
21:45 - 22:45	343	+	179	=	522	42	3	No
22:00 - 23:00	317	+	179	=	496	36	3	No
04:30 - 05:30	112	+	332	=	444	26	1	No
22:15 - 23:15	274	+	166	=	440	28	3	No
22:30 - 23:30	246		132		378	29	3	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2397

Study Date : 12/29/2023

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

16 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 = **1**

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **336 504**

Veh/Hr Minor = **84 42**

Major Road

CSAH 78

Minor Road

Station Parkway

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:45 - 16:45	1790	+	997	=	2787	221	25	Yes
16:45 - 17:45	1589	+	1048	=	2637	255	10	Yes
14:45 - 15:45	1647	+	767	=	2414	194	27	Yes
13:45 - 14:45	1212	+	874	=	2086	200	20	Yes
17:45 - 18:45	1258	+	744	=	2002	165	5	Yes
06:45 - 07:45	671	+	1278	=	1949	113	8	Yes
12:45 - 13:45	1028	+	789	=	1817	193	27	Yes
11:45 - 12:45	944	+	834	=	1778	157	14	Yes
08:45 - 09:45	792	+	939	=	1731	134	18	Yes
07:45 - 08:45	679	+	999	=	1678	99	17	Yes
10:45 - 11:45	849	+	780	=	1629	165	23	Yes
09:45 - 10:45	648	+	792	=	1440	142	22	Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:15 - 17:15	1741	+	1052	=	2793	259	21	Yes
15:15 - 16:15	1723	+	904	=	2627	186	17	Yes
17:15 - 18:15	1444	+	942	=	2386	201	9	Yes
14:15 - 15:15	1440	+	792	=	2232	203	25	Yes
07:15 - 08:15	754	+	1248	=	2002	101	18	Yes
13:15 - 14:15	1108	+	803	=	1911	200	26	Yes
12:15 - 13:15	983	+	857	=	1840	182	17	Yes
11:15 - 12:15	868	+	788	=	1656	164	25	Yes
09:15 - 10:15	712	+	932	=	1644	156	22	Yes
18:15 - 19:15	1045	+	552	=	1597	173	3	Yes
08:15 - 09:15	711	+	878	=	1589	113	13	Yes
06:15 - 07:15	486	+	1090	=	1576	113	5	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2397

Study Date : 12/29/2023

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.

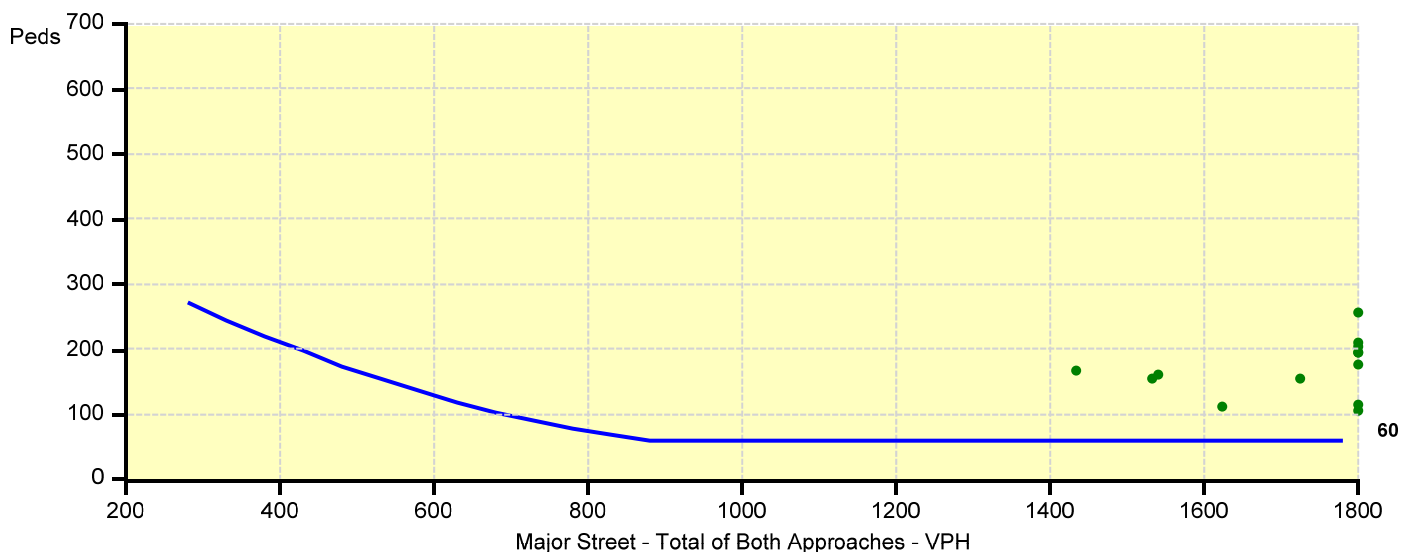
Summary

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 = **1**

Time	Major Road CSAH 78				Total	Minor Road Station Parkway		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:30 - 16:30	1851	+	937	=	2788	210	20	Yes
16:30 - 17:30	1656	+	1082	=	2738	255	17	Yes
14:30 - 15:30	1448	+	783	=	2231	195	22	Yes
17:30 - 18:30	1352	+	848	=	2200	175	9	Yes
13:30 - 14:30	1184	+	856	=	2040	203	25	Yes
07:30 - 08:30	725	+	1152	=	1877	105	18	Yes
06:30 - 07:30	593	+	1241	=	1834	115	8	Yes
12:30 - 13:30	996	+	829	=	1825	195	22	Yes
11:30 - 12:30	925	+	799	=	1724	153	19	Yes
08:30 - 09:30	736	+	887	=	1623	110	12	Yes
10:30 - 11:30	790	+	751	=	1541	159	18	Yes
09:30 - 10:30	685	+	847	=	1532	154	27	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2397

Study Date : 12/29/2023

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

56 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 = **1**

Time	Major Road CSAH 78				Total	Minor Road Station Parkway		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	1812	+	1059	=	2871	241	27	Yes
16:15 - 17:15	1741	+	1052	=	2793	259	21	Yes
15:30 - 16:30	1851	+	937	=	2788	210	20	Yes
15:45 - 16:45	1790	+	997	=	2787	221	25	Yes
16:30 - 17:30	1656	+	1082	=	2738	255	17	Yes
16:45 - 17:45	1589	+	1048	=	2637	255	10	Yes
15:15 - 16:15	1723	+	904	=	2627	186	17	Yes
15:00 - 16:00	1722	+	791	=	2513	183	22	Yes
17:00 - 18:00	1434	+	1009	=	2443	226	7	Yes
14:45 - 15:45	1647	+	767	=	2414	194	27	Yes
17:15 - 18:15	1444	+	942	=	2386	201	9	Yes
14:15 - 15:15	1440	+	792	=	2232	203	25	Yes

