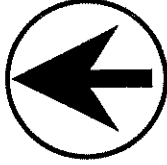


Date : 08/16/00

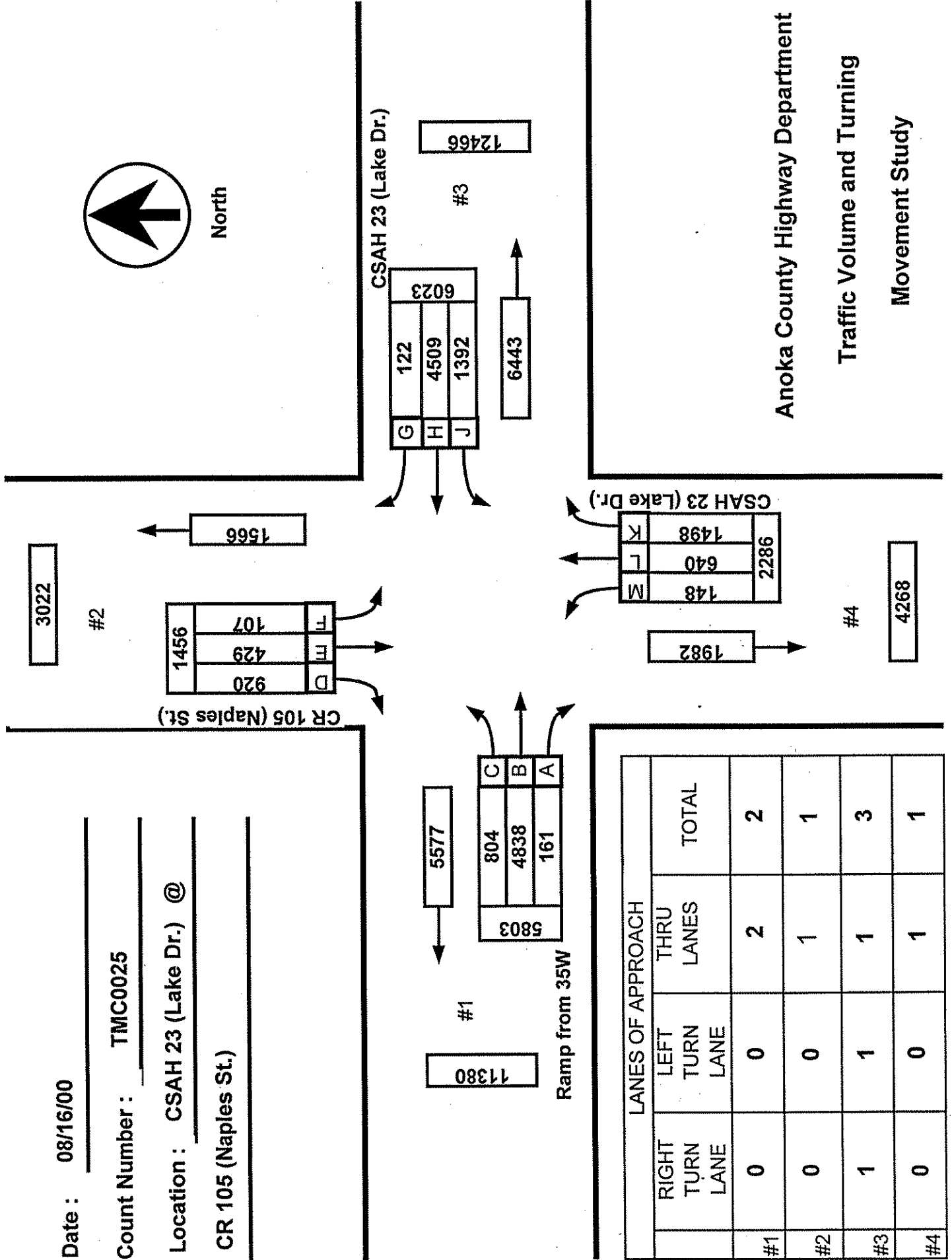
Count Number : TMC0025

Location : CSAH 23 (Lake Dr.) @

CR 105 (Naples St.)



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Anoka County Highway Department Traffic Engineering

Traffic Volume and Turning Movement Study

Weather: Partly Cloudy
Counter TDC-8
Counted by: Ryan & Justin

File Name : TMC0025
Site Code : 00250101
Start Date : 08/16/2000
Page No : 1

Groups Printed- 1 - 1 - Unshifted

Start Time	CR 105 (Naples St.) Southbound					CSAH 23 (Lake Dr.) Westbound					CSAH 23 (Lake Dr.) Northbound					Ramp from 35VW Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total			
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0				
06:00	0	25	40	1	65	31	109	0	0	140	2	3	2	1	7	4	28	6	1	38	3	250	253
06:15	3	19	41	0	63	46	105	1	1	152	10	6	10	2	26	6	29	2	4	37	7	278	285
06:30	4	24	25	1	53	48	105	1	1	154	4	6	9	0	19	5	36	7	2	48	4	274	278
06:45	2	13	32	1	47	49	136	1	0	186	9	6	7	0	22	4	36	5	2	45	3	300	303
Total	9	81	138	3	228	174	455	3	2	632	25	21	28	3	74	19	129	20	9	168	17	1102	1119
07:00	1	12	26	1	39	43	113	0	0	156	4	4	10	0	18	4	40	5	0	49	1	262	263
07:15	2	19	28	0	49	54	104	1	0	159	7	10	17	3	34	5	48	2	3	55	6	297	303
07:30	0	10	21	1	31	39	102	1	0	142	12	6	22	3	40	5	42	1	0	48	4	261	265
07:45	2	8	17	0	27	24	82	0	4	106	9	4	8	2	21	6	27	1	1	34	7	188	195
Total	5	49	92	2	146	160	401	2	4	563	32	24	57	8	113	20	157	9	4	186	18	1008	1025
08:00	1	5	19	1	25	18	76	5	2	99	4	7	8	4	19	2	37	5	2	44	9	187	196
08:15	3	8	8	0	19	14	97	2	2	113	2	7	9	0	18	6	38	0	2	44	4	194	198
08:30	2	0	26	0	28	17	94	0	3	111	1	4	4	0	9	3	36	1	0	40	3	188	191
08:45	1	4	17	0	22	26	69	1	2	96	10	3	9	1	22	4	42	2	1	48	4	188	192
Total	7	17	70	1	94	75	336	8	9	419	17	21	30	5	68	15	153	8	5	176	20	757	777
09:00	0	6	11	0	17	18	77	1	2	96	4	2	15	2	21	3	41	0	0	44	4	178	182
09:15	0	6	8	0	14	26	83	0	1	109	4	5	11	1	20	13	33	0	0	46	2	189	191
09:30	0	5	10	1	15	18	72	0	0	90	1	9	17	2	27	8	40	5	3	53	6	185	191
09:45	1	2	4	0	7	10	54	0	1	64	1	2	16	0	19	4	31	4	1	39	2	129	131
Total	1	19	33	1	53	72	286	1	4	359	10	18	59	5	87	28	145	9	4	182	14	681	695
10:00	2	1	9	0	12	20	72	4	1	96	2	2	11	0	15	4	34	2	0	40	1	163	164
10:15	1	0	9	0	10	26	50	2	2	78	5	5	14	0	24	13	39	1	0	53	2	165	167
10:30	0	1	9	0	10	25	68	1	1	94	2	3	21	0	26	11	44	2	0	57	1	187	188
10:45	2	0	8	1	10	19	59	1	0	79	1	4	17	0	22	5	49	3	1	57	2	168	170
Total	5	2	35	1	42	90	249	8	4	347	10	14	63	0	87	33	166	8	1	207	6	683	689
11:00	1	11	10	0	22	18	60	0	1	78	5	4	11	1	20	6	41	2	0	49	2	169	171
11:15	0	0	14	0	14	25	76	1	3	102	1	9	15	1	25	6	35	1	0	42	4	183	187
11:30	1	8	19	0	28	23	62	1	0	86	4	9	27	1	40	8	71	4	1	83	2	237	239
11:45	1	10	11	0	22	27	66	2	0	95	4	6	34	1	44	6	52	4	3	62	4	223	227
Total	3	29	54	0	86	93	264	4	4	361	14	28	87	4	129	26	199	11	4	236	12	812	824
12:00	1	4	15	0	20	14	79	1	1	94	1	4	26	0	31	8	77	6	2	91	3	236	239
12:15	0	8	11	0	19	36	75	1	0	112	2	10	15	0	27	15	56	5	2	76	2	234	236
12:30	1	4	15	0	20	8	69	1	2	78	0	16	32	0	48	8	61	2	1	71	3	217	220
12:45	3	12	16	0	31	22	83	1	1	106	2	10	30	1	42	8	66	2	2	76	4	255	259
Total	5	28	57	0	90	80	306	4	4	390	5	40	103	1	148	39	260	15	7	314	12	942	954
13:00	1	4	11	0	16	32	65	0	0	97	2	6	15	0	23	4	80	2	2	86	2	222	224
13:15	3	10	10	0	23	18	63	1	1	82	2	12	21	0	35	12	68	4	2	84	3	224	227
13:30	2	8	13	0	23	22	73	1	0	96	4	8	12	0	24	7	66	2	0	75	0	218	218
13:45	2	6	17	0	25	27	71	2	1	100	1	15	24	1	40	8	75	5	2	88	4	253	257
Total	8	28	51	0	87	99	272	4	2	375	9	41	72	1	122	31	289	13	6	333	9	917	926
14:00	2	5	17	0	24	14	69	2	2	85	4	9	27	1	40	10	81	0	1	91	4	240	244
14:15	2	11	15	0	28	22	82	8	1	112	3	13	26	1	42	10	94	1	1	105	3	287	290
14:30	3	2	14	0	19	19	68	3	2	90	2	12	33	1	47	22	105	2	4	129	7	285	292
14:45	1	8	10	0	19	28	73	3	2	104	1	13	22	0	36	16	121	1	2	138	4	297	301
Total	8	26	56	0	90	83	292	16	7	391	10	47	108	3	165	58	401	4	8	463	18	1109	1127
15:00	2	4	15	0	21	16	60	5	1	81	2	10	45	1	57	26	113	2	3	141	5	300	305
15:15	4	2	21	0	27	17	56	6	1	79	0	18	34	0	52	17	138	0	1	155	2	313	315
15:30	3	9	13	0	25	17	68	8	1	93	2	20	50	3	72	18	145	4	3	167	7	357	364
15:45	3	7	11	0	21	29	53	3	0	85	1	19	37	0	57	22	138	2	2	162	2	325	327
Total	12	22	60	0	94	79	237	22	3	338	5	67	166	4	238	83	534	8	9	625	16	1295	1311
16:00	3	10	8	0	21	14	73	6	2	93	0	19	46	1	65	35	145	7	4	187	7	366	373
16:15	2	3	12	0	17	24	62	3	1	89	0	16	60	1	76	31	181	2	5	214	7	396	403
16:30	1	8	17	0	26	22	71	3	0	96	0	19	72	0	91	32	160	2	1	194	1	407	408
16:45	1	6	10	0	17	23	71	8	1	102	3	30	49	1	82	47	155	3	4	205	6	406	412
Total	7	27	47	0	81	83	277	20	4	380	3	84	227	3	314	145	641	14	14	800	21	1575	1596

Anoka County Highway Department

Traffic Engineering

Traffic Volume and Turning Movement Study

Weather: Partly Cloudy

Counter TDC-8

Counted by: Ryan & Justin

File Name : TMC0025

Site Code : 00250101

Start Date : 08/16/2000

Page No : 2

Groups Printed- 1 - 1 - Unshifted

Start Time	CR 105 (Naples St.) Southbound					CSAH 23 (Lake Dr.) Westbound					CSAH 23 (Lake Dr.) Northbound					Ramp from 35W Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total			
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0				
17:00	1	8	19	0	28	33	62	4	1	99	2	28	60	0	90	27	168	8	4	203	5	420	425
17:15	3	8	15	0	26	26	66	0	0	92	2	14	48	0	64	20	164	3	1	187	1	369	370
17:30	6	10	15	0	31	24	69	1	2	94	0	11	53	0	64	32	112	2	2	146	4	335	339
17:45	2	3	10	0	15	12	61	0	0	73	0	16	23	0	39	15	86	12	5	113	5	240	245
Total	12	29	59	0	100	95	258	5	3	358	4	69	184	0	257	94	530	25	12	649	15	1364	1379
18:00	0	10	19	0	29	16	67	4	2	87	1	18	41	0	60	18	105	4	1	127	3	303	306
18:15	4	9	13	0	26	17	80	2	0	99	0	8	28	0	36	14	121	4	0	139	0	300	300
18:30	1	4	10	0	15	18	63	1	0	82	0	5	25	0	30	18	86	1	2	105	2	232	234
18:45	3	9	10	0	22	12	62	1	0	75	1	20	16	0	37	16	83	0	0	99	0	233	233
Total	8	32	52	0	92	63	272	8	2	343	2	51	110	0	163	66	395	9	3	470	5	1058	1073
19:00	3	4	15	0	22	20	76	1	1	97	0	7	19	0	26	10	76	3	1	89	2	234	236
19:15	3	8	13	0	24	21	70	0	1	91	0	11	26	0	37	34	66	4	2	104	3	256	259
19:30	0	2	9	0	11	16	51	5	0	72	1	14	28	0	43	20	64	0	1	84	1	210	211
19:45	3	4	11	0	18	13	64	1	1	78	0	10	16	0	26	15	75	0	0	90	1	212	213
Total	9	18	48	0	75	70	261	7	3	338	1	42	89	0	132	79	281	7	4	367	7	912	919
20:00	1	1	12	0	14	8	57	1	0	66	1	15	23	0	39	6	81	0	0	87	0	206	206
20:15	0	6	11	0	17	8	52	2	0	62	0	10	30	2	40	19	70	0	1	89	3	208	211
20:30	1	2	2	0	5	12	45	1	0	58	0	8	14	0	22	5	69	0	1	74	1	159	160
20:45	2	0	16	0	18	4	43	0	1	47	0	14	10	0	24	16	60	0	1	76	2	165	167
Total	4	9	41	0	54	32	197	4	1	233	1	47	77	2	125	46	280	0	3	326	6	738	744
21:00	3	10	10	0	23	9	38	2	1	49	0	12	5	0	17	6	80	0	0	86	1	175	176
21:15	0	0	6	0	6	13	36	1	1	50	0	2	17	0	19	7	71	0	0	78	1	153	154
21:30	0	2	6	0	8	12	35	0	0	47	0	10	9	0	19	3	65	0	0	68	0	142	142
21:45	1	1	5	0	7	10	37	3	0	50	0	2	7	0	9	6	62	1	0	69	0	135	135
Total	4	13	27	0	44	44	146	6	2	196	0	26	38	0	64	22	278	1	0	301	2	605	607
Grand Total	107	429	920	8	1456	139	450	122	58	6023	148	640	149	39	2286	804	483	161	93	5803	198	15568	15766
Apprch %	7.3	29.5	63.2			23.1	74.9	2.0			6.5	28.0	65.5			13.9	83.4	2.8			1.3	98.7	
Total %	0.7	2.8	5.9		9.4	8.9	29.0	0.8		38.7	1.0	4.1	9.6		14.7	5.2	31.1	1.0		37.3			

Major Street Approaches:

Eastbound:

Ramp from 35W

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0025.war

Count Type: IMC. Channel: 0. Count Date: 8/16/00

Number of Lanes: 2

Approach Speed: 45

Total Approach Traffic: 5803

Westbound:

CSAH 23 (Lake Dr.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0025.war

Count Type: IMC. Channel: 0. Count Date: 8/16/00

Number of Lanes: 2

Approach Speed: 50

Total Approach Traffic: 6023

Minor Street Approaches:

Northbound:

CSAH 23 (Lake Dr.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0025.war

Count Type: IMC. Channel: 0. Count Date: 8/16/00

Number of Lanes: 1

Approach Speed: 45

Total Approach Traffic: 2286

Southbound:

CR 105 (Naples St.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0025.war

Count Type: IMC. Channel: 0. Count Date: 8/16/00

Number of Lanes: 1

Approach Speed: 35

Total Approach Traffic: 1456

Analysis of 8-Hour Volume Warrants (Criteria refers to high volume side street for that hour):

Hour	Main	Side	Warrant 1		Warrant 2		Warrant 3	
Begin	(Total)	Vol. Dir.	Rank	Meets? Criteria	Meets? Criteria	Meets? Criteria	Meets? Criteria	
0	0	0 S	17	105	52		84	
1	0	0 S	18	105	52		84	
2	0	0 S	19	105	52		84	
3	0	0 S	20	105	52		84	
4	0	0 S	21	105	52		84	
5	0	0 S	22	105	52		84	
-6	800	228 S	4	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
-7	749	146 S	8	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
8	595	94 S	13	MAIN 105	SIDE 52	--BOTH--	84	
9	541	87 N	14	MAIN 105	SIDE 52	--BOTH--	84	
10	554	87 N	15	MAIN 105	SIDE 52	--BOTH--	84	
11	597	129 N	10	--BOTH-- 105	SIDE 52	--BOTH--	84	
-12	704	148 N	7	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
-13	708	122 N	12	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
-14	854	165 N	5	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
-15	963	238 N	3	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
-16	1180	314 N	1	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
-17	1007	257 N	2	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
-18	813	163 N	6	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
-19	705	132 N	9	--BOTH-- 105	--BOTH-- 52	--BOTH--	84	
20	559	125 N	11	--BOTH-- 105	SIDE 52	--BOTH--	84	
21	497	64 N	16	MAIN 105	SIDE 52		84	
22	0	0 S	23	105	52		84	
23	0	0 S	24	105	52		84	

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 12 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 10 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.

Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. 8th-High Hour--Pedestrians: 3; Vehicles: 1180. Criteria--Pedestrians: 105; Vehicles: 420.

Warrant 4 - School Crossing

NOT APPLICABLE. Gap data has not been defined.

Warrant 5 - Progressive Movement

NOT SATISFIED. Adjacent signals closer than 1000 feet and/or not part of coordinated system.

Warrant 6 - Accident Experience

NOT SATISFIED. 0 correctable accidents is fewer than required 5.

Correctable Accidents: 0; Right Angle Accidents: 0; Left Turn Accidents: 0; Other Accidents: 0.

Warrant 7 - Systems Warrant

NOT SATISFIED. At least one street has no major approaches. Peak hour total entering volume: 1575.

- Approaches which are part of the principal through traffic roadway network.
- Approaches which connect areas of principal traffic generation.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which have surface street freeway or expressway ramp terminals.
- Approaches which appear as a major route in an official transportation plan.

Warrant 8 - Combination of Warrants

SATISFIED for 15 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 11 hours.

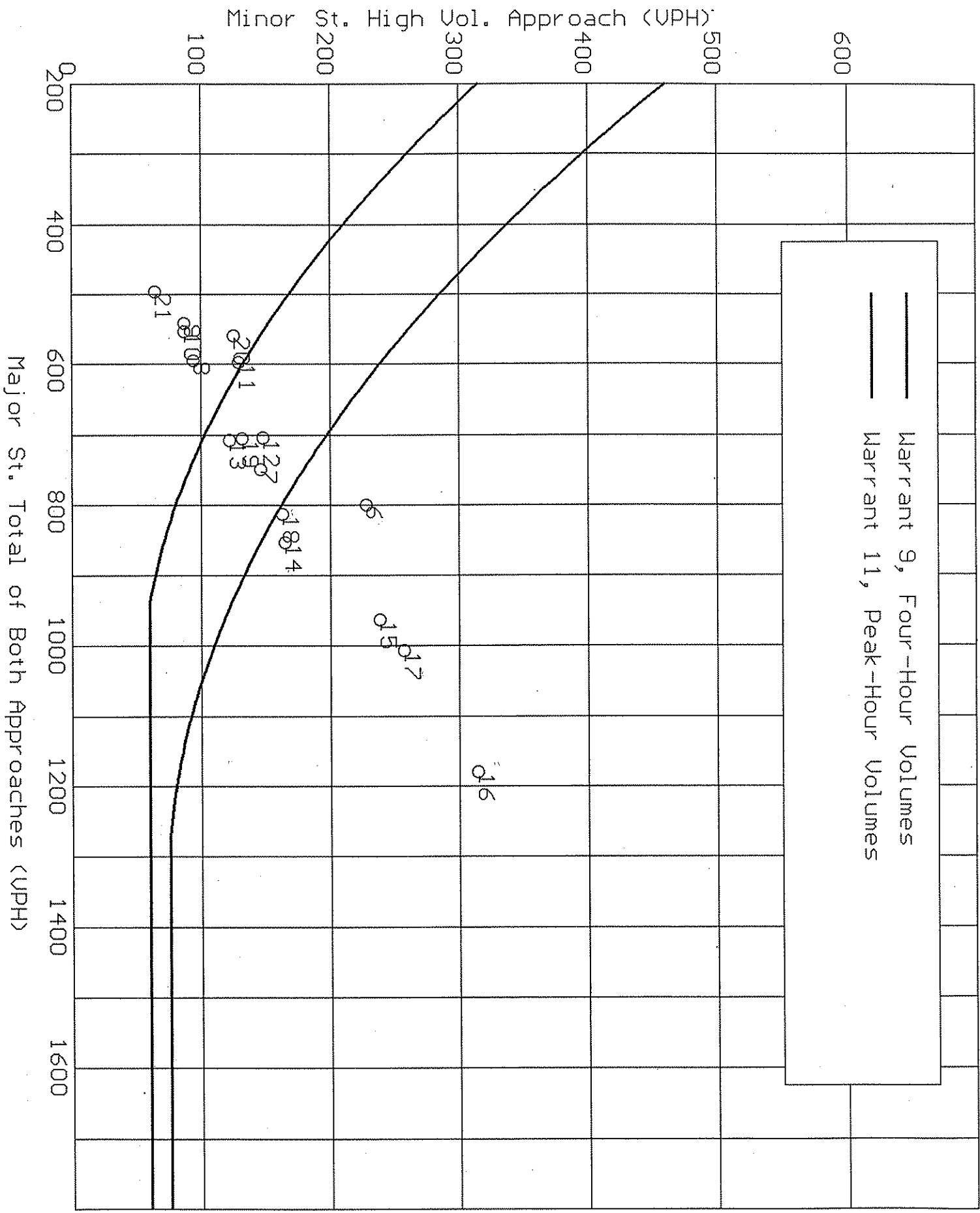
Warrant 10 - Peak Hour Delay

NOT APPLICABLE. Volume requirements satisfied, but side street peak hour delay not defined.

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 100.

Warrant 11 - Peak Hour Volume

SATISFIED for 6 hours.





COUNT LOCATION: CSAH 23(Lake Drive) / at 35W ramp DATE: 8/16/00
@ CR 105(Naples St.)

APP. #1 = NB CSAH 23
(Naples St.)
 APP. #2 = EB 35W Ramp
 APP. #3 = SB CR 105
(Naples St.)
 APP. #4 = WB CSAH 23
(Lake Drive)

APP. #2
 APP. #1 APP. #3
 APP. #4

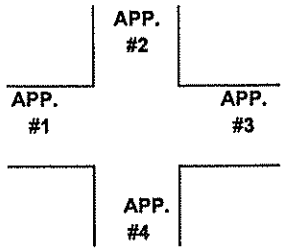
HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
 A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
 B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
 C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM						3		
6:15-6:30						5		2
6:30-6:45						4		
6:45-7:00						1		2
HOURLY TOTAL						HOURLY TOTAL		17
7:00-7:15								
7:15-7:30						4		2
7:30-7:45						1		3
7:45-8:00						6		1
HOURLY TOTAL						HOURLY TOTAL		17
8:00-8:15						8		1
8:15-8:30						3		1
8:30-8:45						2		1
8:45-9:00						4		
HOURLY TOTAL						HOURLY TOTAL		20
9:00-9:15						4		
9:15-9:30						2		
9:30-9:45						6		
9:45-10:00						1		1
HOURLY TOTAL						HOURLY TOTAL		14
10:00-10:15								1
10:15-10:30						1		1
10:30-10:45						1		
10:45-11:00						2		
HOURLY TOTAL						HOURLY TOTAL		6
11:00-11:15						2		
11:15-11:30						4		
11:30-11:45						1		
11:45-12:00						4		
HOURLY TOTAL						HOURLY TOTAL		11
12:00-12:15						3		
12:15-12:30						2		
12:30-12:45						3		
12:45-1:00						3		1
HOURLY TOTAL						HOURLY TOTAL		12
1:00-1:15						2		
1:15-1:30						3		
1:30-1:45								
1:45-2:00						4		
HOURLY TOTAL						HOURLY TOTAL		9



COUNT LOCATION: CSAH 23(Lake Drive) / at 35W ramp DATE: 8/14/00
@ CR 105(Naples St.)

- APP. #1 = NB CSAH 23 (Naples St.)
- APP. #2 = EB 35W Ramp
- APP. #3 = SB CR 105 (Naples St.)
- APP. #4 = WB CSAH 23 (Lake Drive)



HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT

A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.

B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.

C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
2:00-2:15PM						3		
2:15-2:30						3		
2:30-2:45						7		
2:45-3:00						4		
HOURLY TOTAL						HOURLY TOTAL		17
3:00-3:15						3		2
3:15-3:30						2		
3:30-3:45						6	1	
3:45-4:00						1		1
HOURLY TOTAL						HOURLY TOTAL		16
4:00-4:15						7		
4:15-4:30						6		1
4:30-4:45						1		
4:45-5:00						5		1
HOURLY TOTAL						HOURLY TOTAL		21
5:00-5:15						4		1
5:15-5:30						1		
5:30-5:45						3		1
5:45-6:00						5		
HOURLY TOTAL						HOURLY TOTAL		15
6:00-6:15						2		1
6:15-6:30								
6:30-6:45						1		
6:45-7:00								
HOURLY TOTAL						HOURLY TOTAL		4
7:00-7:15						2		
7:15-7:30						2		
7:30-7:45						1		
7:45-8:00						1		
HOURLY TOTAL						HOURLY TOTAL		6
8:00-8:15								
8:15-8:30						3		
8:30-8:45						1		
8:45-9:00						2		
HOURLY TOTAL						HOURLY TOTAL		6
9:00-9:15						1		
9:15-9:30						1		
9:30-9:45								
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		2