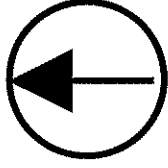


Date: 7/22/98 AM 7/23/98 PM

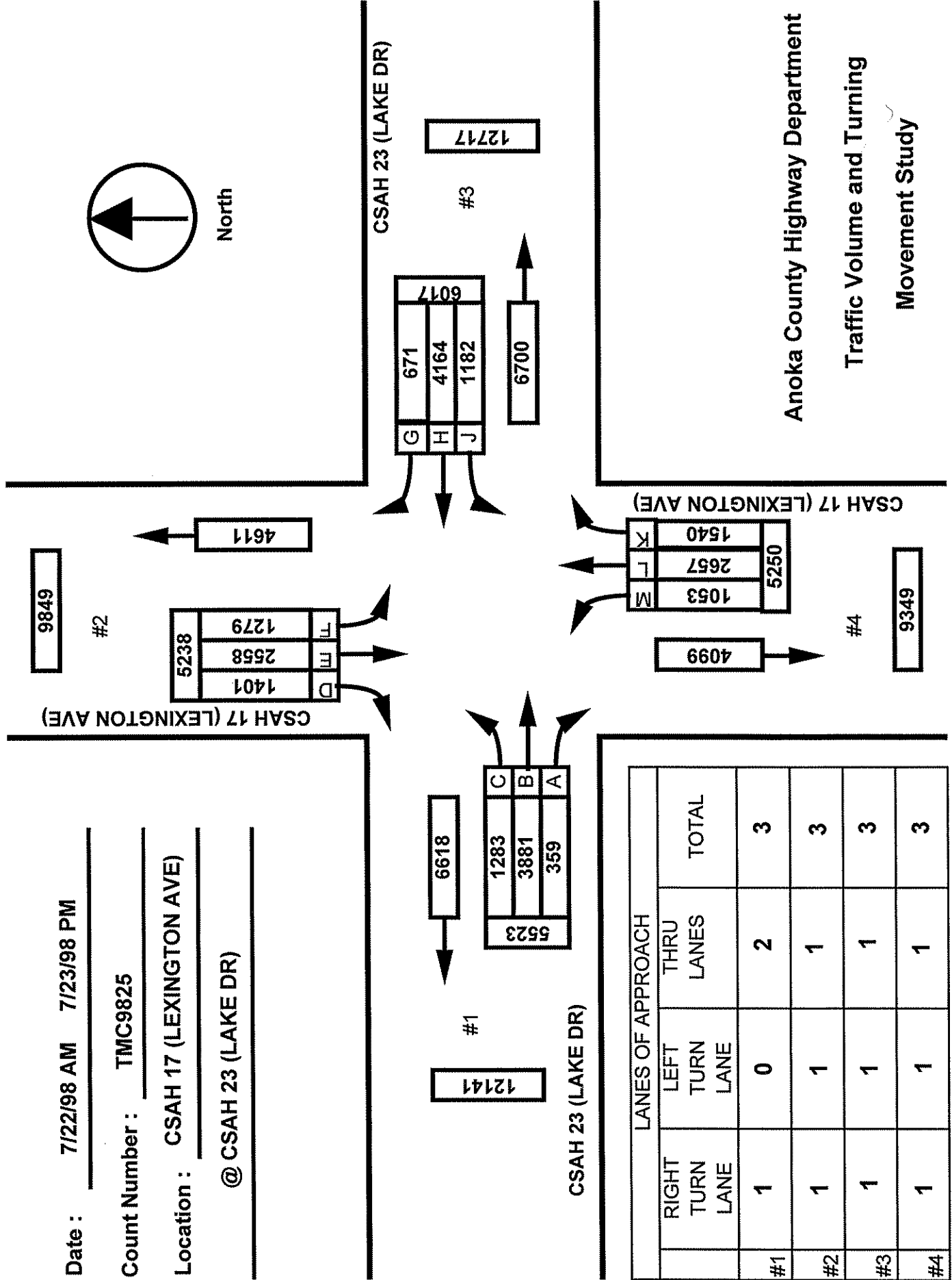
Count Number: TMC9825

Location: CSAH 17 (LEXINGTON AVE)

@ CSAH 23 (LAKE DR)



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Weather :
 Counted by: Sarah and Vallie
 Board # :
 cher :

PETRA Software
 Copyright (C) 1990, 1995
 Jamar Technologies, Inc.
 Horsham, PA.

Study Name: TMC9825
 Site Code : 98250202
 Start Date: 07/22/98
 Page : 1

Vehicle group 1

Start Time	CSAH 17 (LEXINGTON AVE Southbound)				CSAH 23 (LAKE DR Westbound)				CSAH 17 (LEXINGTON AVE Northbound)				CSAH 23 (LAKE DR Eastbound)				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
07/22/98																			
06:00	8	62	25	0	19	64	1	4	7	4	7	2	6	14	1	3	227	9	218
06:15	13	89	16	2	24	78	3	1	2	11	2	0	7	10	4	1	263	4	259
06:30	10	82	33	1	16	97	8	1	10	14	7	0	10	20	3	3	315	5	310
06:45	14	72	36	5	19	95	5	2	13	17	10	0	6	19	4	6	323	13	310
Hour	45	305	110	8	78	334	17	8	32	46	26	2	29	63	12	13	1128	31	1097
07:00	8	87	31	3	16	95	8	3	17	18	3	0	4	22	5	4	324	10	314
07:15	12	86	18	5	24	82	12	4	8	26	5	0	3	19	4	3	311	12	299
07:30	19	90	33	6	21	83	5	4	12	32	11	6	4	26	13	6	371	22	349
07:45	16	64	29	12	15	96	10	7	5	20	15	2	12	31	4	3	341	24	317
Hour	55	327	111	26	76	356	35	18	42	96	34	8	23	98	26	16	1347	68	1279
08:00	10	53	21	4	14	58	4	1	15	18	10	3	10	23	13	5	262	13	249
08:15	15	30	14	5	12	62	2	1	12	23	8	4	5	33	6	4	236	14	222
08:30	10	39	13	2	13	77	7	5	11	18	7	2	12	27	2	5	250	14	236
08:45	15	34	17	4	13	60	5	4	12	19	12	4	5	28	4	2	238	14	224
Hour	50	156	65	15	52	257	18	11	50	78	37	13	32	111	25	16	986	55	931
09:00	5	26	15	2	21	59	7	6	15	12	13	2	7	26	6	3	225	13	212
09:15	11	23	19	4	12	62	1	6	18	15	11	1	7	37	5	6	238	17	221
09:30	17	17	13	0	15	57	3	3	7	21	21	0	7	38	6	5	230	8	222
09:45	13	22	21	0	19	46	4	1	12	26	20	2	11	40	10	0	247	3	244
Hour	46	88	68	6	67	224	15	16	52	74	65	5	32	141	27	14	940	41	899
10:00	9	28	16	6	11	54	5	3	14	27	20	3	14	36	5	2	253	14	239
10:15	21	27	15	4	21	44	4	2	19	23	18	6	9	42	8	4	267	16	251
10:30	20	22	23	6	16	53	7	2	13	19	16	1	17	46	7	2	270	11	259
10:45	9	20	12	1	15	41	4	3	17	18	13	1	20	45	1	3	223	8	215
Hour	59	97	66	17	63	192	20	10	63	87	67	11	60	169	21	11	1013	49	964
11:00	11	35	17	9	16	70	3	3	18	27	20	1	13	47	9	4	303	17	286
11:15	16	39	19	3	22	59	1	5	24	26	21	5	18	43	6	3	310	16	294
11:30	30	33	28	5	18	51	5	4	27	40	25	2	15	65	7	5	360	16	344
11:45	32	37	35	7	11	53	11	5	31	30	24	3	27	48	8	3	365	18	347
Hour	89	144	99	24	67	233	20	17	100	123	90	11	73	203	30	15	1338	67	1271
12:00	28	43	33	5	21	71	13	5	31	44	26	6	21	61	6	7	421	23	398
12:15	32	36	16	3	20	53	8	2	18	29	22	5	18	51	5	4	322	14	308
12:30	25	33	20	4	23	70	11	4	20	46	20	9	15	38	6	1	345	18	327
12:45	26	35	22	2	17	56	17	5	20	39	21	1	30	42	3	4	340	12	328
Hour	111	147	91	14	81	250	49	16	89	158	89	21	84	192	20	16	1428	67	1361

Weather :
 Counted by: Sarah and Vallie
 Board # :
 Character :

PETRA Software
 Copyright (C) 1990, 1995
 Jamar Technologies, Inc.
 Horsham, PA.

Study Name: TMC9825
 Site Code : 98250202
 Start Date: 07/22/98
 Page : 2

Vehicle group 1

Start Time	CSAH 17 (LEXINGTON AVE Southbound)				CSAH 23 (LAKE DR Westbound)				CSAH 17 (LEXINGTON AVE Northbound)				CSAH 23 (LAKE DR Eastbound)				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
13:00	27	35	25	2	12	71	12	2	24	33	22	3	27	47	0	4	346	11	335
13:15	21	36	32	5	14	72	9	3	23	25	26	1	17	50	3	5	342	14	328
13:30	18	39	18	7	23	50	12	3	20	35	19	7	13	45	6	1	316	18	298
13:45	20	30	26	4	23	60	11	1	9	36	17	4	21	48	4	3	317	12	305
Hour	86	140	101	18	72	253	44	9	76	129	84	15	78	190	13	13	1321	55	1266
14:00	12	39	16	6	11	52	9	2	20	43	24	2	29	63	5	6	339	16	323
14:15	15	26	21	3	17	46	6	6	17	36	17	5	17	53	5	6	296	20	276
14:30	21	30	15	8	13	61	24	5	15	49	23	6	19	60	6	3	358	22	336
14:45	18	19	10	0	9	62	9	2	19	38	23	3	25	97	5	3	342	8	334
Hour	66	114	62	17	50	221	48	15	71	166	87	16	90	273	21	18	1335	66	1269
15:00	24	31	19	2	22	53	15	3	8	44	22	1	21	93	8	4	370	10	360
15:15	26	32	11	3	14	63	22	7	17	53	33	3	23	82	7	1	397	14	383
15:30	12	37	20	3	25	66	25	1	16	76	34	4	29	103	14	5	470	13	457
15:45	36	26	25	3	19	58	20	3	20	82	34	5	30	103	9	3	476	14	462
Hour	98	126	75	11	80	240	82	14	61	255	123	13	103	381	38	13	1713	51	1662
16:00	31	36	21	4	19	62	9	2	25	83	56	9	29	111	5	2	504	17	487
16:15	17	44	19	1	32	70	23	3	13	99	47	3	40	96	12	0	519	7	512
16:30	32	45	29	2	14	72	16	2	31	93	54	0	43	96	10	3	542	7	535
16:45	41	54	23	2	17	59	14	3	34	126	71	3	28	101	23	3	602	11	591
Hour	121	179	92	9	82	263	62	10	103	401	228	15	140	404	50	8	2167	42	2125
17:00	24	57	28	2	28	73	24	4	27	115	63	3	49	99	5	1	602	10	592
17:15	35	39	23	0	13	81	5	2	18	85	46	1	26	134	0	2	510	5	505
17:30	31	48	25	2	35	70	32	3	36	104	53	2	52	127	6	3	629	10	619
17:45	28	49	21	2	15	66	27	0	19	97	42	4	31	116	6	1	524	7	517
Hour	118	193	97	6	91	290	88	9	100	401	204	10	158	476	17	7	2265	32	2233
18:00	24	34	25	1	21	74	14	4	16	66	44	4	31	123	3	1	485	10	475
18:15	29	43	27	1	11	82	13	0	25	51	38	0	35	99	6	4	464	5	459
18:30	28	40	31	2	24	74	13	1	23	49	32	7	29	74	3	1	431	11	420
18:45	24	43	30	2	12	71	16	1	19	51	26	1	22	93	9	2	422	6	416
Hour	105	160	113	6	68	301	56	6	83	217	140	12	117	389	21	8	1802	32	1770
19:00	23	49	21	1	37	82	16	3	16	39	21	0	26	76	7	0	417	4	413
19:15	22	40	27	0	41	78	13	0	21	38	25	2	24	65	2	4	402	6	396
19:30	13	30	24	0	25	50	12	0	6	27	18	1	18	75	8	2	309	3	306
19:45	18	37	20	0	21	71	10	0	16	46	15	1	26	79	3	2	365	3	362
Hour	76	156	92	1	124	281	51	3	59	150	79	4	94	295	20	8	1493	16	1477

Weather :
 Counted by: Sarah and Vallie
 Board # :
 Character :

PETRA Software
 Copyright (C) 1990, 1995
 Jamar Technologies, Inc.
 Horsham, PA.

Study Name: TMC9825
 Site Code : 98250202
 Start Date: 07/22/98
 Page : 3

Vehicle group 1

Start Time	CSAH 17 (LEXINGTON AVE Southbound)				CSAH 23 (LAKE DR) Westbound				CSAH 17 (LEXINGTON AVE) Northbound				CSAH 23 (LAKE DR) Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
20:00	12	41	16	0	22	65	10	2	10	55	25	1	24	54	8	0	345	3	342
20:15	17	33	24	3	20	70	7	2	11	27	24	1	22	59	3	0	323	6	317
20:30	38	43	18	1	19	74	5	0	10	41	34	2	21	55	4	0	365	3	362
20:45	14	24	18	0	13	61	7	0	7	48	24	4	26	74	1	1	322	5	317
Hour	81	141	76	4	74	270	29	4	38	171	107	8	93	242	16	1	1355	17	1338
21:00	15	25	22	0	15	52	6	0	13	31	27	1	19	67	0	1	294	2	292
21:15	27	19	20	0	17	51	17	1	8	26	24	0	36	70	1	1	318	2	316
21:30	18	22	27	0	13	48	5	1	8	29	15	1	11	59	1	0	258	2	256
21:45	13	19	14	0	12	48	9	0	5	19	14	0	11	58	0	1	223	1	222
Hour	73	85	83	0	57	199	37	2	34	105	80	2	77	254	2	3	1093	7	1086
Total	1279	2558	1401	182	1182	4164	671	168	1053	2657	1540	166	1283	3881	359	180	22724	696	22028
% Apr.	23.5	47.1	25.8	3.3	19.1	67.3	10.8	2.7	19.4	49.0	28.4	3.0	22.4	68.0	6.2	3.1	-	-	-
% Int.	5.6	11.2	6.1	0.8	5.2	18.3	2.9	0.7	4.6	11.6	6.7	0.7	5.6	17.0	1.5	0.7	-	-	-

or Street Approaches:

Lastbound:

CSAH 23 (LAKE DR)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9825.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/22/98
 Number of Lanes: 2
 Approach Speed: 45
 Total Approach Traffic: 5523

Westbound:

CSAH 23 (LAKE DR)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9825.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/22/98
 Number of Lanes: 2
 Approach Speed: 45
 Total Approach Traffic: 6017

Minor Street Approaches:

Northbound:

CSAH 17 (LEXINGTON AVE)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9825.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/22/98
 Number of Lanes: 2
 Approach Speed: 35
 Total Approach Traffic: 5250

Southbound:

CSAH 17 (LEXINGTON AVE)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9825.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/22/98
 Number of Lanes: 2
 Approach Speed: 35
 Total Approach Traffic: 5238

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

Hour	Main	Side	Warrant 1		Warrant 2		Warrant 8	
Begin	(Total)	Vol.	Dir.	Rank	Meets?	Criteria	Meets?	Criteria
0	0	0	S	17		140	70	112
1	0	0	S	18		140	70	112
2	0	0	S	19		140	70	112
3	0	0	S	20		140	70	112
4	0	0	S	21		140	70	112
5	0	0	S	22		140	70	112
6	533	460	S	4	--BOTH--	140	SIDE 70	--BOTH-- 112
7	614	493	S	3	--BOTH--	140	SIDE 70	--BOTH-- 112
8	495	271	S	13	--BOTH--	140	SIDE 70	SIDE 112
9	506	202	S	16	--BOTH--	140	SIDE 70	--BOTH-- 112
10	525	222	S	15	--BOTH--	140	SIDE 70	--BOTH-- 112
11	626	332	S	8	--BOTH--	140	SIDE 70	--BOTH-- 112
12	676	349	S	7	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
13	650	327	S	9	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
14	703	324	N	10	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
15	924	439	N	6	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
16	1001	732	N	1	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
17	1120	705	N	2	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
18	952	440	N	5	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
19	865	324	S	11	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
20	724	316	N	12	--BOTH--	140	--BOTH-- 70	--BOTH-- 112
21	626	241	S	14	--BOTH--	140	SIDE 70	--BOTH-- 112
22	0	0	S	23		140	70	112
23	0	0	S	24		140	70	112

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 16 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 9 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.

Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. Ped volumes too low. Criteria--190 Peds in peak hour, 100 peds in 4th high hour.

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: 2233.

- Approaches which are part of the principal through traffic roadway network.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- 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 15 hours.

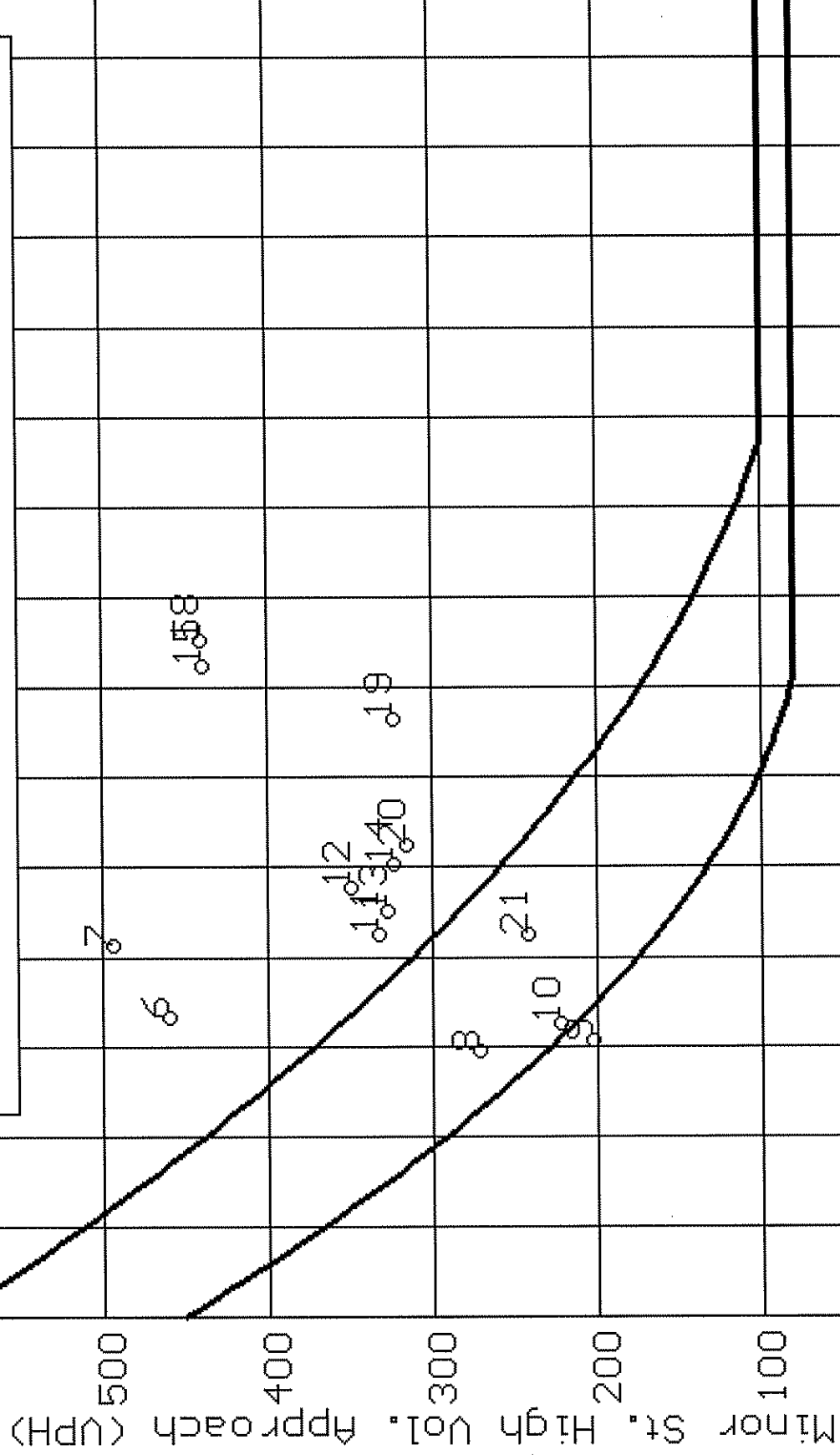
Warrant 10 - Peak Hour Delay

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

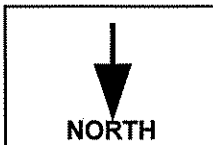
Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 150.

Warrant 11 - Peak Hour Volume

SATISFIED for 12 hours.



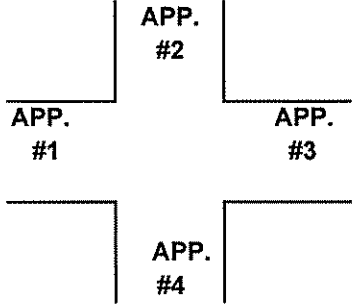
Major St. Total of Both Approaches (VPH)



COUNT LOCATION: CSAH 17 (LEXINGTON AVE) @
CSAH 23 (LAKE DR)

DATE: 7/22/98

- APP. #1= WB CSAH 23 (LAKE DR)
- APP. #2 = NB CSAH 17 (LEXINGTON AVE)
- APP. #3= EB CSAH 23 (LAKE DR)
- APP. #4= SB CSAH 17 (LEXINGTON AVE)



- 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						6	1	2
6:15-6:30		1			1	2		2
6:30-6:45						3	1	2
6:45-7:00						7	2	2
HOURLY TOTAL					1	HOURLY TOTAL		30
7:00-7:15						9	1	
7:15-7:30						10	2	1
7:30-7:45		1		1	2	15	3	4
7:45-8:00						19	3	3
HOURLY TOTAL					2	HOURLY TOTAL		70
8:00-8:15	1			1	2	9	2	2
8:15-8:30						5	2	6
8:30-8:45						11	1	2
8:45-9:00						8	3	2
HOURLY TOTAL					2	HOURLY TOTAL		53
9:00-9:15						10		2
9:15-9:30						11	4	1
9:30-9:45						6	1	1
9:45-10:00						2	1	
HOURLY TOTAL						HOURLY TOTAL		39
10:00-10:15						11		3
10:15-10:30						14	1	1
10:30-10:45						9	2	
10:45-11:00						8		
HOURLY TOTAL						HOURLY TOTAL		49
11:00-11:15						16	2	1
11:15-11:30			2	1	3	10	2	3
11:30-11:45						10	2	3
11:45-12:00						13	2	3
HOURLY TOTAL					3	HOURLY TOTAL		67
12:00-12:15						18	2	
12:15-12:30						15	2	
12:30-12:45		31	31		62	12	2	3
12:45-1:00						11	1	1
HOURLY TOTAL					62	HOURLY TOTAL		67
1:00-1:15		1	1		2	9	2	
1:15-1:30		2	2		4	13	1	
1:30-1:45		3			3	16	3	
1:45-2:00	3					10	3	
HOURLY TOTAL					9	HOURLY TOTAL		57



COUNT LOCATION:

CSAH 17 (LEXINGTON AVE) @
CSAH 23 (LAKE DR)

DATE:

7/23/98

APP. #1= WB CSAH 23
(LAKE DR)
APP. #2 = NB CSAH 17
(LEXINGTON AVE)
APP. #3= EB CSAH 23
(LAKE DR)
APP. #4= SB CSAH 17
(LEXINGTON AVE)

APP.
#1

APP.
#2

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
2:00-2:15PM			8		8	15	1	
2:15-2:30						18	1	
2:30-2:45	5		1	4	10	21	1	
2:45-3:00	1				1	10		
HOURLY TOTAL					19	HOURLY TOTAL		67
3:00-3:15						3	5	
3:15-3:30	1	2	1		4	12	2	
3:30-3:45			1		1	10	1	2
3:45-4:00			3		3	11	3	
HOURLY TOTAL					8	HOURLY TOTAL		49
4:00-4:15				1	1	9	7	1
4:15-4:30			1		1	4	2	1
4:30-4:45	1	2	2	2	7	3	3	1
4:45-5:00		2	1		3	6	4	1
HOURLY TOTAL					12	HOURLY TOTAL		42
5:00-5:15		1	1		2	6	3	1
5:15-5:30						4	2	
5:30-5:45	2				2	6	1	3
5:45-6:00	2			2	4	5	1	
HOURLY TOTAL					8	HOURLY TOTAL		32
6:00-6:15	2				2	6	3	
6:15-6:30						2	3	
6:30-6:45			3		3	9	2	
6:45-7:00	3		2		5	4	2	
HOURLY TOTAL					10	HOURLY TOTAL		31
7:00-7:15	2				2	1	4	
7:15-7:30	1				1	5		
7:30-7:45	2				2	1	2	
7:45-8:00	2	1			3	1	2	
HOURLY TOTAL					8	HOURLY TOTAL		16
8:00-8:15			1		1	2	1	
8:15-8:30						5	1	
8:30-8:45			1		1	3		
8:45-9:00	2		1	1	4	2	3	
HOURLY TOTAL					6	HOURLY TOTAL		17
9:00-9:15		1			1	1	1	
9:15-9:30			2		2	2		
9:30-9:45						2		
9:45-10:00						1		
HOURLY TOTAL					3	HOURLY TOTAL		7