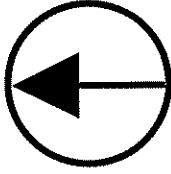


Date : 8/13/98AM 8/12/98PM

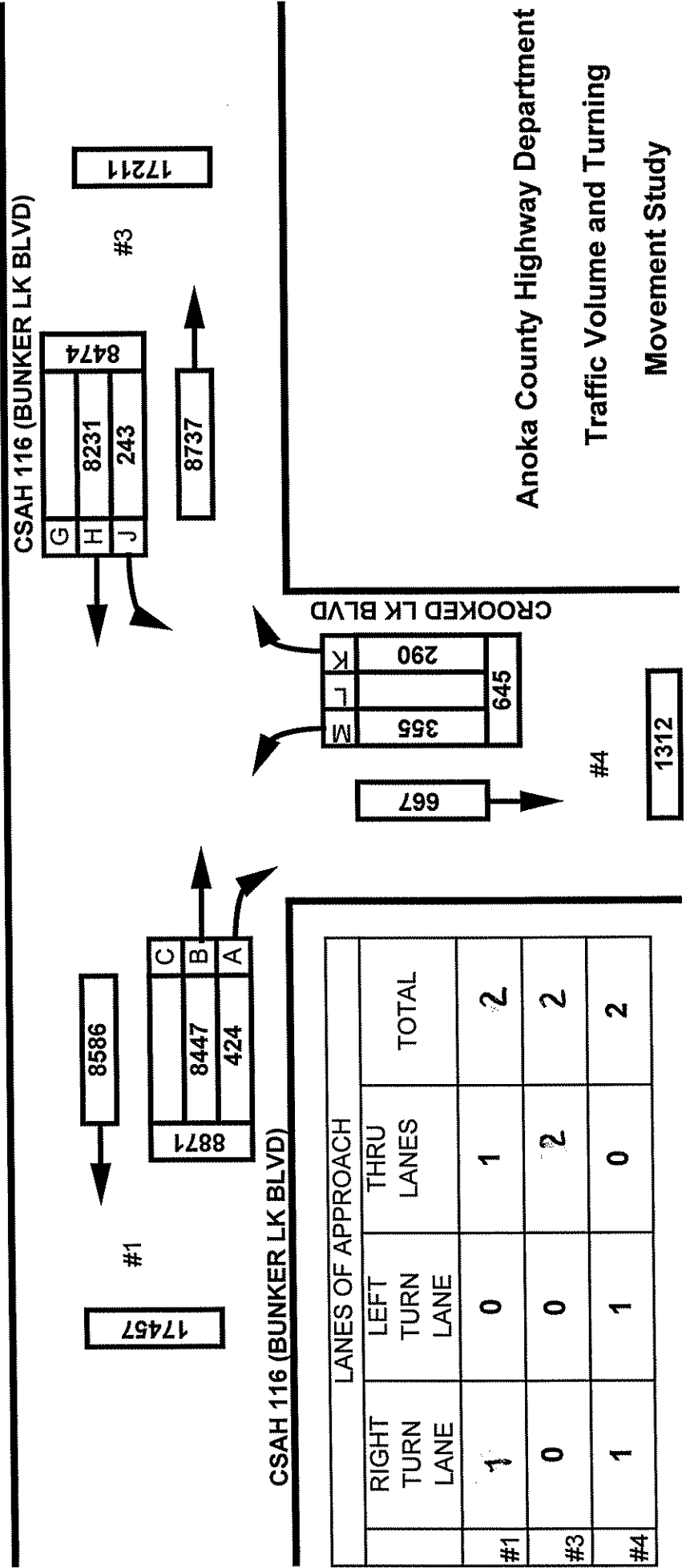
Count Number : TMC9812

Location : CSAH 116 (BUNKER LK BLVD)

@ CROOKED LK BLVD



North



Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

#4
1312

PETRA Software

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

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 Horsham, PA.

Study Name: TMC9812
 Site Code : 98120202
 Start Date: 08/13/98
 Page : 1

Vehicle group 1

Start Time	CSAH 116 (BUNKER LK BL) Westbound			CROOKED LK BLVD. Northbound			CSAH 116 (BUNKER LK BL) Eastbound			Intrvl. Total	Exclude Total	Include Total
	Left	Thru	Other	Left	Right	Other	Thru	Right	Other			
08/13/98												
06:00	2	55	1	1	2	0	47	2	3	113	4	109
06:15	4	80	1	2	6	0	59	1	2	155	3	152
06:30	2	118	5	5	3	0	79	0	4	216	9	207
06:45	1	150	2	2	2	0	104	2	5	268	7	261
Hour	9	403	9	10	13	0	289	5	14	752	23	729
07:00	1	116	4	2	6	0	98	2	8	237	12	225
07:15	0	108	8	4	6	1	105	1	5	238	14	224
07:30	0	144	5	8	2	0	108	4	9	280	14	266
07:45	1	160	3	6	3	0	104	5	4	286	7	279
Hour	2	528	20	20	17	1	415	12	26	1041	47	994
08:00	5	105	6	2	4	0	101	2	8	233	14	219
08:15	4	98	7	6	2	0	84	0	8	209	15	194
08:30	2	86	6	5	2	1	81	3	5	191	12	179
08:45	4	120	3	4	4	0	89	1	3	228	6	222
Hour	15	409	22	17	12	1	355	6	24	861	47	814
09:00	4	99	5	3	4	0	98	2	5	220	10	210
09:15	5	105	7	1	3	0	73	7	11	212	18	194
09:30	7	93	3	7	6	1	102	4	13	236	17	219
09:45	8	108	7	7	13	0	83	9	5	240	12	228
Hour	24	405	22	18	26	1	356	22	34	908	57	851
10:00	2	111	11	6	9	2	79	1	2	223	15	208
10:15	5	114	10	4	4	0	107	5	6	255	16	239
10:30	4	84	4	5	6	0	86	2	3	194	7	187
10:45	3	92	6	5	8	0	128	5	8	255	14	241
Hour	14	401	31	20	27	2	400	13	19	927	52	875
11:00	4	103	6	7	3	0	93	7	2	225	8	217
11:15	8	132	9	7	11	0	99	4	8	278	17	261
11:30	7	117	2	4	7	0	116	6	10	269	12	257
11:45	4	130	4	7	6	0	122	7	6	286	10	276
Hour	23	482	21	25	27	0	430	24	26	1058	47	1011
12:00	3	134	11	7	5	0	119	6	5	290	16	274
12:15	2	126	9	5	4	0	129	7	7	289	16	273
12:30	4	149	5	5	4	0	131	8	8	314	13	301
12:45	5	138	5	9	6	0	132	4	7	306	12	294
Hour	14	547	30	26	19	0	511	25	27	1199	57	1142

PETRA Software

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

Study Name: TMC9812
 Site Code : 98120202
 Start Date: 08/13/98
 Page : 2

Vehicle group 1

Start Time	CSAH 116 (BUNKER LK BL Westbound)			CROOKED LK BLVD. Northbound			CSAH 116 (BUNKER LK BL Eastbound)			Intrvl. Total	Exclude Total	Include Total
	Left	Thru	Other	Left	Right	Other	Thru	Right	Other			
13:00	6	105	4	5	5	0	129	5	4	263	8	255
13:15	5	129	8	9	0	0	122	6	5	284	13	271
13:30	4	123	6	8	4	1	114	10	3	273	10	263
13:45	7	108	5	6	3	0	110	7	11	257	16	241
Hour	22	465	23	28	12	1	475	28	23	1077	47	1030
14:00	2	127	6	5	4	0	124	5	4	277	10	267
14:15	5	103	5	12	3	0	101	6	3	238	8	230
14:30	5	126	4	2	2	0	123	0	10	272	14	258
14:45	5	117	6	2	2	0	138	5	12	287	18	269
Hour	17	473	21	21	11	0	486	16	29	1074	50	1024
15:00	2	145	7	7	2	0	141	5	9	318	16	302
15:15	5	116	2	3	3	0	171	15	5	320	7	313
15:30	4	138	9	2	6	0	171	6	6	342	15	327
15:45	5	151	2	11	2	2	170	10	5	358	9	349
Hour	16	550	20	23	13	2	653	36	25	1338	47	1291
16:00	3	145	3	8	4	0	166	13	7	349	10	339
16:15	3	145	4	6	3	1	156	18	4	340	9	331
16:30	5	147	3	7	3	0	183	12	1	361	4	357
16:45	2	181	7	6	11	0	228	11	3	449	10	439
Hour	13	618	17	27	21	1	733	54	15	1499	33	1466
17:00	3	187	6	5	2	1	206	14	5	429	12	417
17:15	3	188	5	10	5	0	218	15	9	453	14	439
17:30	5	214	5	6	8	1	202	5	1	447	7	440
17:45	2	203	1	6	5	0	187	15	2	421	3	418
Hour	13	792	17	27	20	2	813	49	17	1750	36	1714
18:00	5	182	0	9	4	0	184	10	2	396	2	394
18:15	4	206	5	9	5	0	183	7	6	425	11	414
18:30	1	182	2	6	8	0	170	15	2	386	4	382
18:45	3	193	2	9	10	0	162	15	2	396	4	392
Hour	13	763	9	33	27	0	699	47	12	1603	21	1582
19:00	0	159	0	6	2	0	167	7	2	343	2	341
19:15	3	139	3	5	2	0	176	10	2	340	5	335
19:30	5	162	4	13	2	0	188	7	4	385	8	377
19:45	4	112	1	4	7	0	162	9	1	300	2	298
Hour	12	572	8	28	13	0	693	33	9	1368	17	1351

PETRA Software

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

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Study Name: TMC9812
 Site Code : 98120202
 Start Date: 08/13/98
 Page : 3

Vehicle group 1

Start Time	CSAH 116 (BUNKER LK BL) Westbound			CROOKED LK BLVD. Northbound			CSAH 116 (BUNKER LK BL) Eastbound			Intrvl. Total	Exclude Total	Include Total
	Left	Thru	Other	Left	Right	Other	Thru	Right	Other			
20:00	5	107	0	4	1	0	156	14	0	287	0	287
20:15	4	126	0	3	4	0	182	6	2	327	2	325
20:30	3	128	1	3	4	0	150	5	1	295	2	293
20:45	3	109	1	2	6	0	147	6	1	275	2	273
Hour	15	470	2	12	15	0	635	31	4	1184	6	1178
21:00	5	99	0	5	5	0	149	7	1	271	1	270
21:15	4	99	0	10	4	0	141	7	1	266	1	265
21:30	9	90	1	1	5	0	113	6	0	225	1	224
21:45	3	65	0	4	3	1	101	3	0	180	1	179
Hour	21	353	1	20	17	1	504	23	2	942	4	938
Total	243	8231	273	355	290	12	8447	424	306	18581	591	17990
% Apr.	2.7	94.1	3.1	54.0	44.1	1.8	92.0	4.6	3.3	-	-	-
% Int.	1.3	44.2	1.4	1.9	1.5	-	45.4	2.2	1.6	-	-	-

or Street Approaches:

Eastbound:

CSAH 116 (BUNKER LK BLVD)
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9812.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/13/98
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 8871

Westbound:

CSAH 116 (BUNKER LK BLVD)
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9812.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/13/98
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 8474

Minor Street Approaches:

Northbound:

CROOKED LK BLVD.
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9812.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/13/98
 Number of Lanes: 2
 Approach Speed: 0
 Total Approach Traffic: 645

Southbound:

Data File: C:\APPS\PETRA2\DATAFILE\TMC9812.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/13/98
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 0

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	Meets?	Criteria
0	0	0	N	17		140		70		112
1	0	0	N	18		140		70		112
2	0	0	N	19		140		70		112
3	0	0	N	20		140		70		112
4	0	0	N	21		140		70		112
5	0	0	N	22		140		70		112
6	706	23	N	16	MAIN	140	MAIN	70	MAIN	112
7	957	37	N	10	MAIN	140	MAIN	70	MAIN	112
8	785	29	N	14	MAIN	140	MAIN	70	MAIN	112
9	807	44	N	7	MAIN	140	MAIN	70	MAIN	112
10	828	47	N	4	MAIN	140	MAIN	70	MAIN	112
11	959	52	N	2	MAIN	140	MAIN	70	MAIN	112
12	1097	45	N	6	MAIN	140	MAIN	70	MAIN	112
13	990	40	N	9	MAIN	140	MAIN	70	MAIN	112
14	992	32	N	13	MAIN	140	MAIN	70	MAIN	112
15	1255	36	N	12	MAIN	140	MAIN	70	MAIN	112
16	1418	48	N	3	MAIN	140	MAIN	70	MAIN	112
17	1667	47	N	5	MAIN	140	MAIN	70	MAIN	112
18	1522	60	N	1	MAIN	140	MAIN	70	MAIN	112
19	1310	41	N	8	MAIN	140	MAIN	70	MAIN	112
20	1151	27	N	15	MAIN	140	MAIN	70	MAIN	112
21	901	37	N	11	MAIN	140	MAIN	70	MAIN	112
22	0	0	N	23		140		70		112
23	0	0	N	24		140		70		112

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 0 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: 1714.

- 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

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 1 hours.

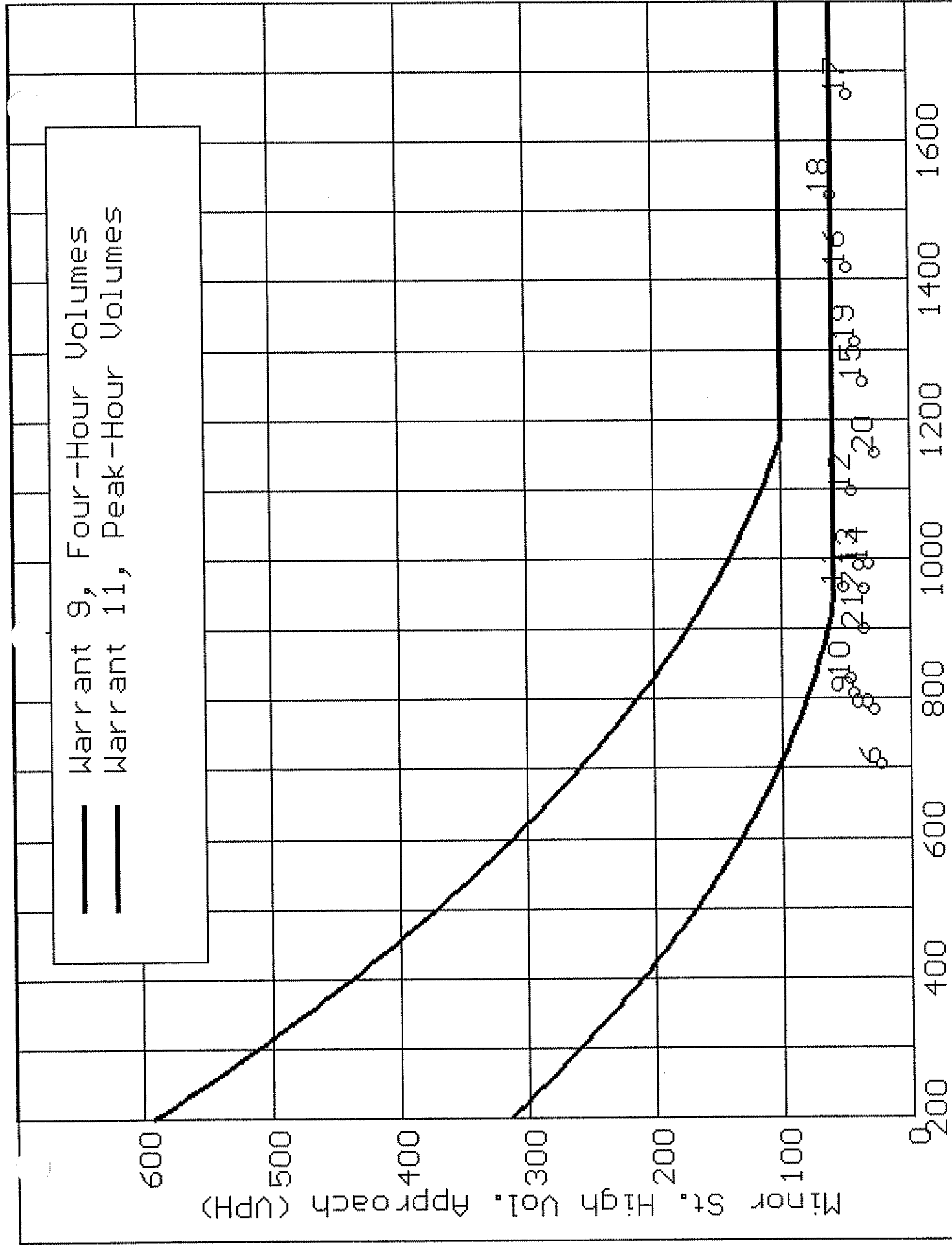
Warrant 10 - Peak Hour Delay

NOT SATISFIED. Peak hour (1700 hours) volume not adequate.

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

Warrant 11 - Peak Hour Volume

NOT SATISFIED.



Major St. Total of Both Approaches (VPH)



COUNT LOCATION:

CSAH 116 (BUNKER LK BLVD)

DATE:

8/13/98

@ CROOKED LK BLVD

APP. #1= EB CSAH 116
(BUNKER LK BLVD)
APP. #2 = SB
(DITCH)
APP. #3=WB CSAH 116
(BUNKER LK BLVD)
APP. #4=NB
(CROOKED LK BLVD)

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
6:00-6:15AM						4		
6:15-6:30						4		
6:30-6:45						9		
6:45-7:00						7		
HOURLY TOTAL						HOURLY TOTAL		24
7:00-7:15				1	1	12		
7:15-7:30						14		
7:30-7:45						14		
7:45-8:00				1	1	6		1
HOURLY TOTAL					2	HOURLY TOTAL		47
8:00-8:15						15		1
8:15-8:30				1	1	13		
8:30-8:45						12		
8:45-9:00						6		
HOURLY TOTAL					1	HOURLY TOTAL		47
9:00-9:15						11		
9:15-9:30						19		
9:30-9:45						14		2
9:45-10:00						12		
HOURLY TOTAL						HOURLY TOTAL		58
10:00-10:15						17		
10:15-10:30				2	2	12		3
10:30-10:45	1			1	2	7		
10:45-11:00			2		2	14		
HOURLY TOTAL					6	HOURLY TOTAL		53
11:00-11:15						10		
11:15-11:30				2	2	15		
11:30-11:45						11		1
11:45-12:00						10		
HOURLY TOTAL					2	HOURLY TOTAL		47
12:00-12:15						16		
12:15-12:30			1	1	2	16		
12:30-12:45				1	1	13		
12:45-1:00						12		
HOURLY TOTAL					3	HOURLY TOTAL		57
1:00-1:15						8		
1:15-1:30						11		2
1:30-1:45				2	2	10		
1:45-2:00						15		
HOURLY TOTAL					2	HOURLY TOTAL		46



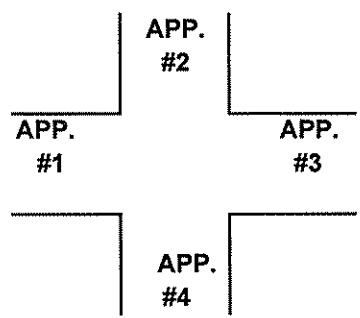
COUNT LOCATION:

CSAH 116 (BUNKER LK BLVD)
@ CROOKED LK BLVD

DATE:

8/12/98

APP. #1= EB CSAH 116
(BUNKER LK BLVD)
APP. #2 = SB
(DITCH)
APP. #3=WB CSAH 116
(BUNKER LK BLVD)
APP. #4=NB
(CROOKED LK BLVD)



- 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.
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 - 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				1	1	8		2
2:15-2:30						8		
2:30-2:45				2	2	12		2
2:45-3:00				1	1	15		2
HOURLY TOTAL					4	HOURLY TOTAL		49
3:00-3:15				2	2	13	1	1
3:15-3:30				1	1	6	1	
3:30-3:45						12	1	2
3:45-4:00						7		1
HOURLY TOTAL					3	HOURLY TOTAL		45
4:00-4:15				1	1	17		3
4:15-4:30								
4:30-4:45						2		1
4:45-5:00						9	1	
HOURLY TOTAL					1	HOURLY TOTAL		33
5:00-5:15						9	1	
5:15-5:30				2	2	12		
5:30-5:45						7	1	
5:45-6:00				1	1	3		
HOURLY TOTAL					3	HOURLY TOTAL		33
6:00-6:15						2		
6:15-6:30						12		
6:30-6:45				2	2	4		
6:45-7:00				4	4	5		
HOURLY TOTAL					6	HOURLY TOTAL		23
7:00-7:15				1	1	2		
7:15-7:30				1	1	6		
7:30-7:45						6		
7:45-8:00				1	1	3		
HOURLY TOTAL					3	HOURLY TOTAL		17
8:00-8:15				3	3			
8:15-8:30				3	3	4		
8:30-8:45				1	1	1		
8:45-9:00				1	1	1		
HOURLY TOTAL					8	HOURLY TOTAL		6
9:00-9:15						1		
9:15-9:30				1	1	1		
9:30-9:45						1		
9:45-10:00						1		
HOURLY TOTAL					1	HOURLY TOTAL		4