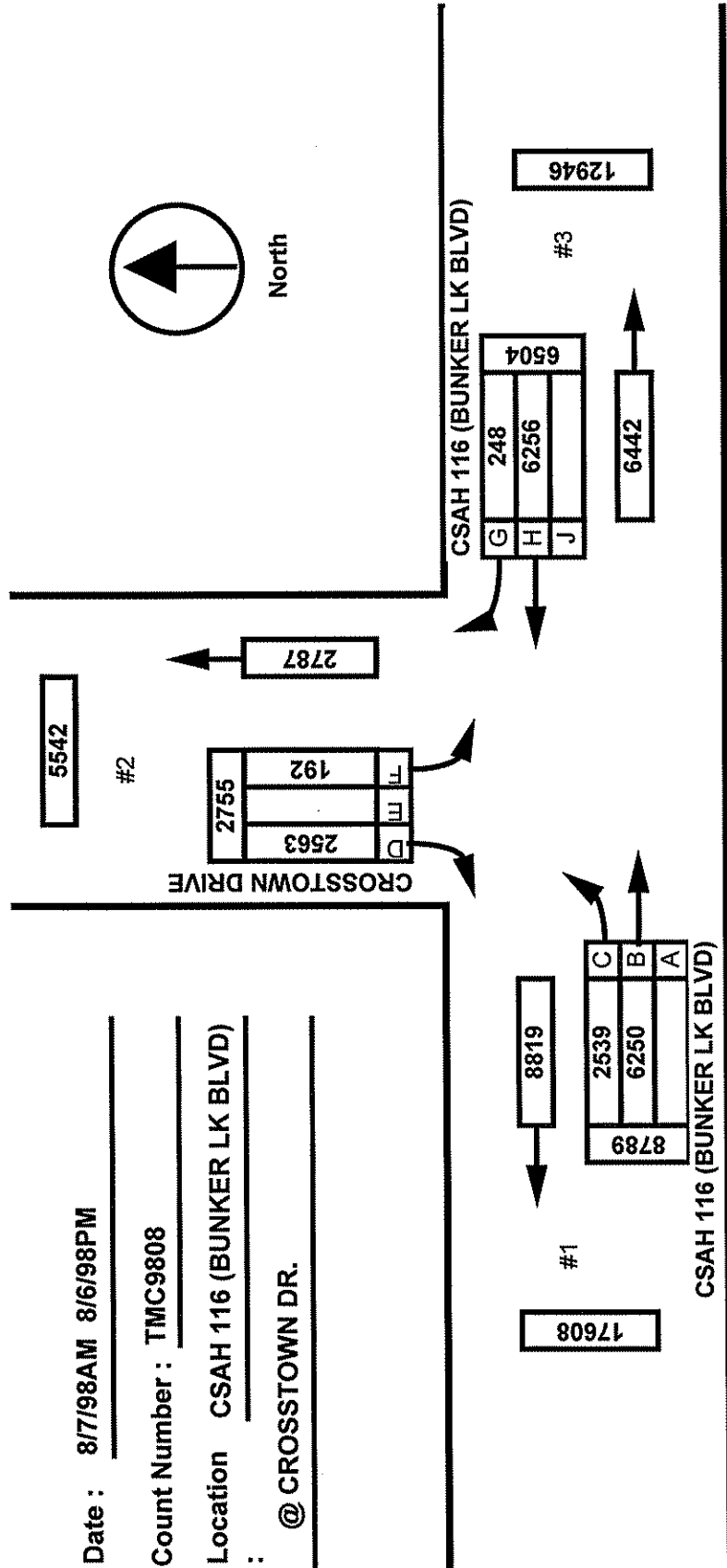


Date : 8/7/98AM 8/6/98PM

Count Number : TMC9808

Location CSAH 116 (BUNKER LK BLVD)

@ CROSSTOWN DR.



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

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

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

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 Horsham, PA.

Study Name: TMC9808
 Site Code : 98080202
 Start Date: 08/07/98
 Page : 1

Vehicle group 1

Start Time	CROSSTOWN DRIVE			CSAH 116 (BUNKER LK BL Westbound)			CSAH 116 (BUNKER LK BL Eastbound)			Intrvl. Total	Exclude Total	Include Total
	Southbound Left	Southbound Right	Southbound Other	Thru	Right	Other	Left	Thru	Other			
08/07/98												
06:00	4	23	0	23	1	0	8	49	1	109	1	108
06:15	2	43	0	34	0	0	10	56	5	150	5	145
06:30	5	48	2	75	1	1	8	59	4	203	7	196
06:45	2	52	1	62	0	0	14	82	2	215	3	212
Hour	13	166	3	194	2	1	40	246	12	677	16	661
07:00	5	38	0	61	1	4	15	73	5	202	9	193
07:15	4	55	3	80	1	9	15	86	5	258	17	241
07:30	5	48	1	77	1	4	14	82	7	239	12	227
07:45	7	59	2	77	3	0	36	84	11	279	13	266
Hour	21	200	6	295	6	17	80	325	28	978	51	927
08:00	2	52	1	67	1	4	29	79	5	240	10	230
08:15	3	23	0	68	1	7	12	60	6	180	13	167
08:30	1	25	1	64	1	3	21	73	5	194	9	185
08:45	4	33	0	47	0	3	14	73	6	180	9	171
Hour	10	133	2	246	3	17	76	285	22	794	41	753
09:00	9	38	1	61	3	5	29	56	8	210	14	196
09:15	2	27	2	66	1	5	18	70	6	197	13	184
09:30	4	38	2	81	1	4	19	74	4	227	10	217
09:45	1	46	1	79	2	2	22	83	6	242	9	233
Hour	16	149	6	287	7	16	88	283	24	876	46	830
10:00	2	36	2	72	2	4	22	67	4	211	10	201
10:15	6	38	1	93	6	3	15	75	5	242	9	233
10:30	6	30	0	76	3	4	27	86	7	239	11	228
10:45	1	46	1	79	1	3	32	87	11	261	15	246
Hour	15	150	4	320	12	14	96	315	27	953	45	908
11:00	2	35	1	85	3	6	25	81	5	243	12	231
11:15	0	38	2	92	4	7	46	100	5	294	14	280
11:30	2	34	1	93	1	5	27	95	3	261	9	252
11:45	1	47	0	89	2	7	26	104	7	283	14	269
Hour	5	154	4	359	10	25	124	380	20	1081	49	1032
12:00	4	28	1	91	4	7	38	84	0	257	8	249
12:15	1	39	3	92	0	4	38	104	4	285	11	274
12:30	3	23	1	87	5	4	40	110	4	277	9	268
12:45	2	36	0	107	5	3	43	99	5	300	8	292
Hour	10	126	5	377	14	18	159	397	13	1119	36	1083

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

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Study Name: TMC9808
 Site Code : 98080202
 Start Date: 08/07/98
 Page : 2

Vehicle group 1

Start Time	CROSSTOWN DRIVE			CSAH 116 (BUNKER LK BL)			CSAH 116 (BUNKER LK BL)			Intrvl. Total	Exclude Total	Include Total
	Southbound			Westbound			Eastbound					
	Left	Right	Other	Thru	Right	Other	Left	Thru	Other			
13:00	2	33	0	91	2	0	41	91	7	267	7	260
13:15	2	34	1	109	3	7	41	96	4	297	12	285
13:30	2	40	0	95	2	3	55	89	5	291	8	283
13:45	0	47	0	118	4	3	35	106	7	320	10	310
Hour	6	154	1	413	11	13	172	382	23	1175	37	1138
14:00	2	32	1	90	4	6	24	83	4	246	11	235
14:15	6	28	2	72	4	2	32	95	11	252	15	237
14:30	3	38	1	96	0	9	36	99	2	284	12	272
14:45	3	43	4	100	4	8	42	75	6	285	18	267
Hour	14	141	8	358	12	25	134	352	23	1067	56	1011
15:00	2	35	1	92	2	7	51	120	8	318	16	302
15:15	2	32	2	111	8	6	48	105	5	319	13	306
15:30	4	29	3	162	4	7	44	136	7	396	17	379
15:45	1	39	1	119	6	3	70	126	6	371	10	361
Hour	9	135	7	484	20	23	213	487	26	1404	56	1348
16:00	0	48	1	134	9	6	47	127	3	375	10	365
16:15	3	46	0	136	8	5	52	139	1	390	6	384
16:30	2	54	1	152	5	2	58	142	3	419	6	413
16:45	2	60	1	166	12	4	78	139	5	467	10	457
Hour	7	208	3	588	34	17	235	547	12	1651	32	1619
17:00	3	48	1	164	12	7	71	133	1	440	9	431
17:15	2	41	0	168	9	1	78	140	3	442	4	438
17:30	2	67	0	148	10	5	81	118	3	434	8	426
17:45	5	76	0	159	6	2	70	176	6	500	8	492
Hour	12	232	1	639	37	15	300	567	13	1816	29	1787
18:00	1	58	0	160	8	4	65	127	1	424	5	419
18:15	8	57	1	131	4	0	59	151	1	412	2	410
18:30	5	76	0	144	8	0	50	139	0	422	0	422
18:45	3	59	1	141	1	1	51	123	3	383	5	378
Hour	17	250	2	576	21	5	225	540	5	1641	12	1629
19:00	0	49	1	129	5	2	62	112	4	364	7	357
19:15	4	40	1	102	7	0	52	105	0	311	1	310
19:30	6	37	1	106	3	0	43	99	0	295	1	294
19:45	4	41	0	103	7	1	61	96	1	314	2	312
Hour	14	167	3	440	22	3	218	412	5	1284	11	1273

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

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Study Name: TMC9808
 Site Code : 98080202
 Start Date: 08/07/98
 Page : 3

Vehicle group 1

Start Time	CROSSTOWN DRIVE			CSAH 116 (BUNKER LK BL)			CSAH 116 (BUNKER LK BL)			Intrvl. Total	Exclude Total	Include Total
	Southbound			Westbound			Eastbound					
	Left	Right	Other	Thru	Right	Other	Left	Thru	Other			
20:00	4	31	0	111	4	0	55	123	1	329	1	328
20:15	2	18	0	94	4	0	59	85	0	262	0	262
20:30	7	34	1	100	7	0	33	103	1	286	2	284
20:45	3	29	0	92	3	0	39	100	0	266	0	266
Hour	16	112	1	397	18	0	186	411	2	1143	3	1140
21:00	2	24	0	73	4	0	60	86	0	249	0	249
21:15	3	18	0	83	8	0	48	94	1	255	1	254
21:30	2	27	0	55	4	0	53	75	0	216	0	216
21:45	0	17	1	72	3	0	32	66	0	191	1	190
Hour	7	86	1	283	19	0	193	321	1	911	2	909
Total	192	2563	57	6256	248	209	2539	6250	256	18570	522	18048
% Apr.	6.8	91.1	2.0	93.1	3.6	3.1	28.0	69.0	2.8	-	-	-
% Int.	1.0	13.8	0.3	33.6	1.3	1.1	13.6	33.6	1.3	-	-	-

or Street Approaches:

Eastbound:

CSAH 116 (BUNKER LK BLVD)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9808.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/ 7/98
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 8789

Westbound:

CSAH 116 (BUNKER LK BLVD)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9808.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/ 7/98
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 6504

Minor Street Approaches:

Northbound:

Data File: C:\APPS\PETRA2\DATAFILE\TMC9808.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/ 7/98
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 0

Southbound:

CROSTOWN DRIVE

Data File: C:\APPS\PETRA2\DATAFILE\TMC9808.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/ 7/98
 Number of Lanes: 2
 Approach Speed: 0
 Total Approach Traffic: 2755

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 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	482	179 S 6	--BOTH-- 140	SIDE 70	SIDE 112
7	706	221 S 3	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
8	610	143 S 13	--BOTH-- 140	SIDE 70	--BOTH-- 112
9	665	165 S 7	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
10	743	165 S 8	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
11	873	159 S 10	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
12	947	136 S 14	MAIN 140	--BOTH-- 70	--BOTH-- 112
13	978	160 S 9	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
14	856	155 S 11	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
15	1204	144 S 12	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
16	1404	215 S 4	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
17	1543	244 S 2	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
18	1362	267 S 1	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
19	1092	181 S 5	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
20	1012	128 S 15	MAIN 140	--BOTH-- 70	--BOTH-- 112
21	816	93 S 16	MAIN 140	--BOTH-- 70	MAIN 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 13 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 14 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: 1787.

- 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 14 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 13 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.

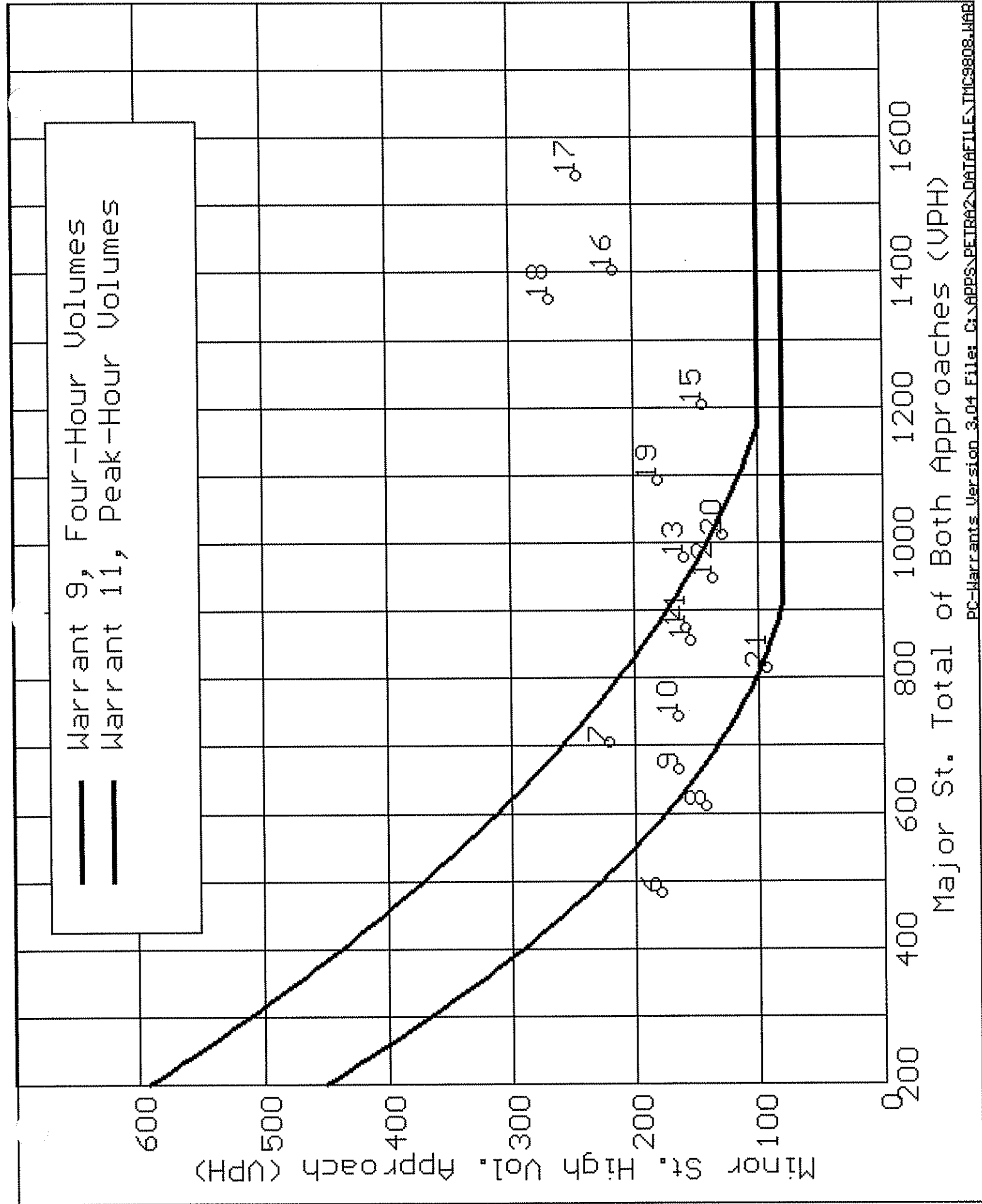
Warrant 11 - Peak Hour Volume

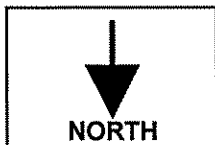
SATISFIED for 6 hours.

Minor St. High Vol. Approach (VPH)

Warrant 9, Four-Hour Volumes
Warrant 11, Peak-Hour Volumes

Major St. Total of Both Approaches (VPH)





COUNT LOCATION:

CSAH 116 (BUNKER LAKE BLVD)
@ CROSSTOWN DR.

DATE:

8/7/98

APP. #1= WB CSAH 116
(BUNKER LAKE BLVD)
APP. #2 = NB
(DITCH)
APP. #3= EB CSAH 116
(BUNKER LAKE BLVD)
APP. #4= SB
CROSSTOWN DRIVE

APP.
#1

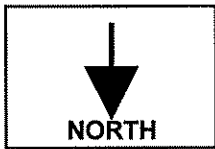
APP.
#2

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						1		
6:15-6:30						4		1
6:30-6:45						6		
6:45-7:00						3		
HOURLY TOTAL						HOURLY TOTAL		15
7:00-7:15						8		2
7:15-7:30						16		
7:30-7:45						11		
7:45-8:00						10	1	2
HOURLY TOTAL						HOURLY TOTAL		50
8:00-8:15						7		3
8:15-8:30						13		
8:30-8:45						8		1
8:45-9:00						9		
HOURLY TOTAL						HOURLY TOTAL		41
9:00-9:15						14		
9:15-9:30						13		
9:30-9:45						10		
9:45-10:00						7		1
HOURLY TOTAL						HOURLY TOTAL		45
10:00-10:15						9		1
10:15-10:30						8		1
10:30-10:45						11		1
10:45-11:00						14		
HOURLY TOTAL						HOURLY TOTAL		45
11:00-11:15						11	1	
11:15-11:30						14		
11:30-11:45						9		
11:45-12:00						12		
HOURLY TOTAL						HOURLY TOTAL		47
12:00-12:15				1	1	8		
12:15-12:30						8	1	1
12:30-12:45						10		
12:45-1:00						8		
HOURLY TOTAL					1	HOURLY TOTAL		36
1:00-1:15						7		
1:15-1:30						11		
1:30-1:45						6	2	
1:45-2:00						10		
HOURLY TOTAL						HOURLY TOTAL		36



COUNT LOCATION: CSAH 116 (BUNKER LAKE BLVD)
@ CROSSTOWN DR.

DATE: 8/6/98

APP. #1= WB CSAH 116
(BUNKER LAKE BLVD)
 APP. #2 = NB
(DITCH)
 APP. #3= EB CSAH 116
(BUNKER LAKE BLVD)
 APP. #4= SB
CROSSTOWN 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
2:00-2:15PM						11		
2:15-2:30						15		
2:30-2:45						12		
2:45-3:00						15		3
HOURLY TOTAL						HOURLY TOTAL		56
3:00-3:15						16		
3:15-3:30						10	1	3
3:30-3:45						16		1
3:45-4:00						8		2
HOURLY TOTAL						HOURLY TOTAL		57
4:00-4:15						9		1
4:15-4:30			2		2	5	1	
4:30-4:45						6		
4:45-5:00				1	1	10		
HOURLY TOTAL					3	HOURLY TOTAL		32
5:00-5:15				1	1	9		
5:15-5:30						4		
5:30-5:45				1	1	7	1	
5:45-6:00						7	1	
HOURLY TOTAL					2	HOURLY TOTAL		29
6:00-6:15						5		
6:15-6:30						3		
6:30-6:45								
6:45-7:00						5		
HOURLY TOTAL						HOURLY TOTAL		13
7:00-7:15						7		
7:15-7:30						1		
7:30-7:45						1		
7:45-8:00						2		
HOURLY TOTAL						HOURLY TOTAL		11
8:00-8:15			1	1	2	1		
8:15-8:30								
8:30-8:45				1	1	2		
8:45-9:00								
HOURLY TOTAL					3	HOURLY TOTAL		3
9:00-9:15								
9:15-9:30	3				3	1		
9:30-9:45	3				3			
9:45-10:00						1		
HOURLY TOTAL					6	HOURLY TOTAL		2