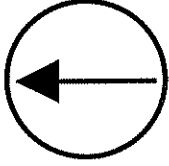


Date : 6/30/99AM 6/28/99PM

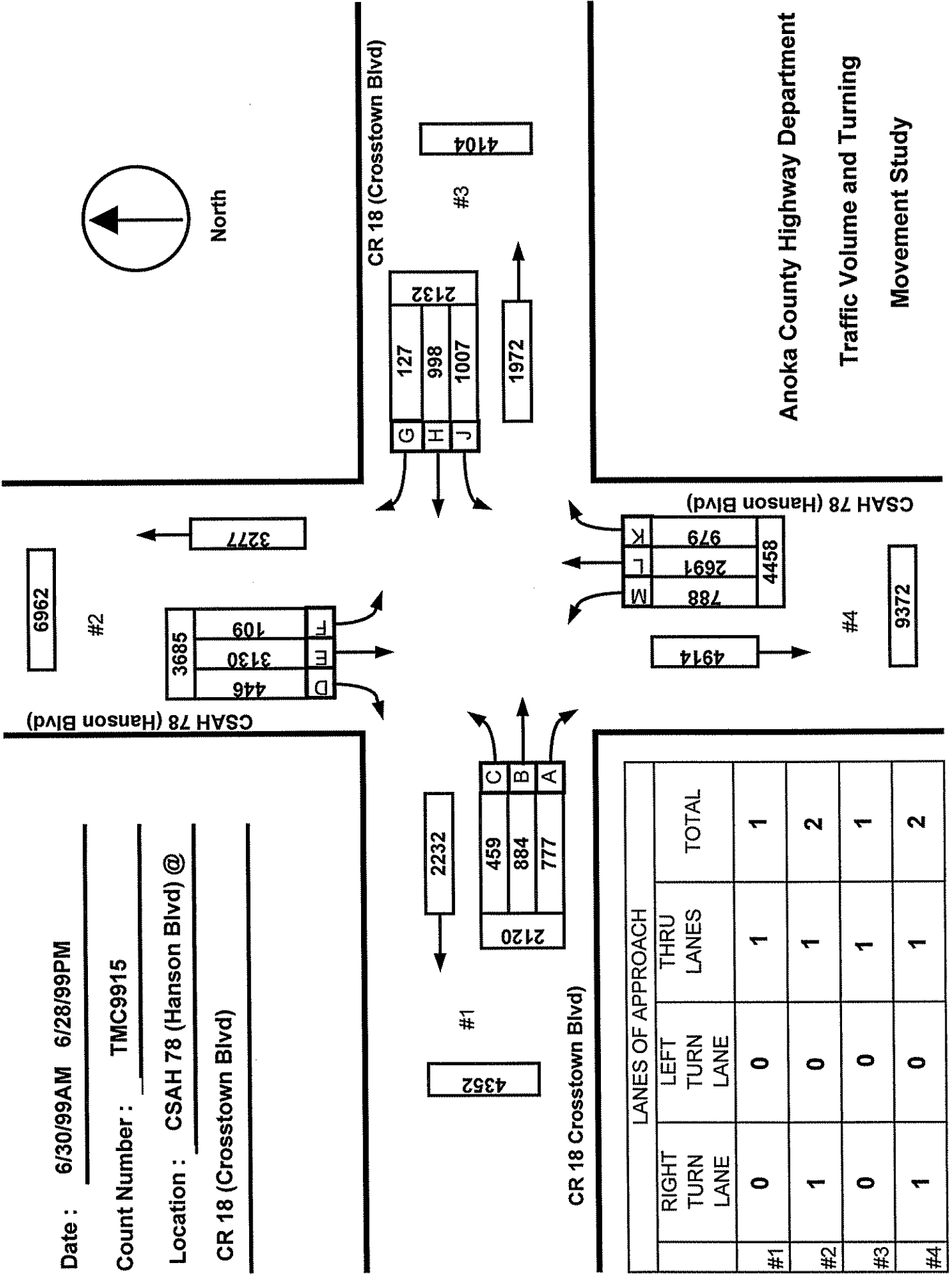
Count Number : TMC9915

Location : CSAH 78 (Hanson Blvd) @

CR 18 (Crosstown Blvd)



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Anoka County Highway Department Traffic Volume & Turning Movement Study

Weather
Counter TDC-8
Counted by Mike and Ryan

File Name : TMC9915
Site Code : 99150101
Start Date : 06/28/1999
Page No : 1

Groups Printed 1 - 1 - Unshifted

Start Time	CSAH 78 (Hanson Blvd) Southbound				CR 18 (Crosstown Blvd) Westbound				CSAH 78 (Hanson Blvd) Northbound				CR 18 (Crosstown Blvd) Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy			
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	1	74	0	1	36	14	0	0	3	10	4	0	1	8	3	0	1	154	155
06:15	0	81	4	1	29	14	0	0	1	9	11	0	1	4	1	0	1	155	156
06:30	0	93	6	3	32	14	0	1	2	14	8	1	1	9	1	0	5	180	185
06:45	0	95	6	3	33	20	0	1	8	22	20	1	4	11	4	0	5	223	228
Total	1	343	16	8	130	62	0	2	14	55	43	2	7	32	9	0	12	712	724
07:00	3	70	3	2	20	17	1	0	5	9	14	5	1	6	5	3	10	154	164
07:15	2	70	7	3	26	20	1	1	8	26	11	1	5	11	4	1	6	191	197
07:30	2	93	6	5	16	16	1	1	6	25	15	2	9	9	7	3	11	205	216
07:45	3	74	4	6	25	16	0	1	10	44	18	14	9	15	11	6	27	229	256
Total	10	307	20	16	87	69	3	3	29	104	58	22	24	41	27	13	54	779	833
08:00	0	88	8	10	24	19	5	4	5	32	14	6	5	8	7	0	20	215	235
08:15	2	58	3	2	18	12	2	2	5	35	6	3	7	8	4	2	9	160	169
08:30	2	72	2	1	12	21	3	0	6	33	8	4	14	10	6	2	7	189	196
08:45	1	47	7	0	11	16	2	1	19	23	11	2	4	10	6	3	6	157	163
Total	5	265	20	13	65	68	12	7	35	123	39	15	30	36	23	7	42	721	763
09:00	2	48	5	2	7	15	1	0	8	25	7	2	5	10	9	2	6	142	148
09:15	2	47	7	3	3	12	4	1	5	31	8	2	12	6	2	0	6	139	145
09:30	0	51	14	0	10	17	2	0	7	25	7	1	2	6	2	0	1	143	144
09:45	1	59	6	4	12	7	1	2	4	27	12	0	7	19	15	5	11	170	181
Total	5	205	32	9	32	51	8	3	24	108	34	5	26	41	28	7	24	594	618
10:00	3	38	5	3	14	11	1	1	9	25	3	2	8	3	6	2	8	126	134
10:15	1	55	7	4	14	19	4	5	9	35	7	2	3	6	9	0	11	169	180
10:30	0	37	1	1	14	13	1	2	4	26	11	5	4	14	9	2	10	134	144
10:45	0	51	4	2	6	13	3	1	7	40	5	13	10	12	7	1	17	158	175
Total	4	181	17	10	48	56	9	9	29	126	26	22	25	35	31	5	46	587	633
11:00	1	77	14	23	10	11	2	1	21	31	12	6	9	12	16	1	31	216	247
11:15	0	51	4	3	23	9	1	0	10	30	8	1	7	12	10	0	4	165	169
11:30	0	48	5	0	12	13	0	4	10	32	15	2	5	10	7	0	6	157	163
11:45	3	43	10	4	21	12	0	1	14	27	14	3	5	6	10	0	8	165	173
Total	4	219	33	30	66	45	3	6	55	120	49	12	26	40	43	1	49	703	752
12:00	0	42	12	2	14	10	2	3	4	21	11	2	8	16	22	1	8	162	170
12:15	1	33	3	2	19	6	0	1	6	34	19	3	2	6	11	1	7	140	147
12:30	2	45	6	5	16	8	1	0	4	37	13	2	4	7	8	1	8	151	159
12:45	2	37	4	3	18	16	2	1	12	22	11	1	2	12	8	0	5	146	151
Total	5	157	25	12	67	40	5	5	26	114	54	8	16	41	49	3	28	599	627
13:00	0	41	6	3	15	16	1	0	7	42	18	3	5	9	8	0	6	168	174
13:15	2	29	4	3	17	10	0	2	4	43	16	3	3	17	11	0	8	156	164
13:30	2	31	2	0	16	17	1	1	3	26	16	2	6	11	3	0	3	134	137
13:45	2	35	4	2	19	24	4	5	12	52	14	6	4	11	4	0	13	185	198
Total	6	136	16	8	67	67	6	8	26	163	64	14	18	48	26	0	30	643	673
14:00	4	36	3	1	12	13	0	0	7	28	4	2	7	18	8	0	3	140	143
14:15	0	27	7	2	8	17	0	1	4	33	14	1	6	10	6	0	4	132	136
14:30	4	42	3	0	10	21	1	1	9	45	18	2	4	10	2	1	4	169	173
14:45	0	42	5	2	21	11	2	1	12	40	12	2	4	7	6	0	5	162	167
Total	8	147	18	5	51	62	3	3	32	146	48	7	21	45	22	1	16	603	619
15:00	2	53	2	2	11	18	1	0	5	49	15	1	7	9	8	0	3	180	183
15:15	3	37	7	2	13	12	1	1	11	61	20	2	3	33	5	1	6	206	212
15:30	4	49	4	1	11	21	0	1	7	60	18	1	9	14	6	1	4	203	207
15:45	0	44	8	1	15	15	2	0	10	74	24	0	13	20	11	0	1	236	237
Total	9	183	21	6	50	66	4	2	33	244	77	4	32	76	30	2	14	825	839

Anoka County Highway Department
Traffic Volume & Turning Movement Study

File Name : TMC9915
Site Code : 99150101
Start Date : 06/28/1999
Page No : 2

Groups Printed1 - 1 - Unshifted

Start Time	CSAH 78 (Hanson Blvd) Southbound				CR 18 (Crosstown Blvd) Westbound				CSAH 78 (Hanson Blvd) Northbound				CR 18 (Crosstown Blvd) Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy			
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			
16:00	2	46	5	1	24	12	2	1	12	79	21	0	11	20	12	1	3	246	249
16:15	0	47	5	1	25	12	2	0	3	84	22	1	5	15	6	2	4	226	230
16:30	3	36	1	0	12	19	6	0	12	75	31	2	15	21	20	3	5	251	256
16:45	5	40	9	0	27	11	3	0	8	89	30	1	4	20	8	0	1	254	255
Total	10	169	20	2	88	54	13	1	35	327	104	4	35	76	46	6	13	977	990
17:00	0	51	5	2	26	19	5	0	8	87	19	0	10	19	8	0	2	257	259
17:15	5	39	12	2	22	25	6	1	20	93	31	4	12	15	9	0	7	289	296
17:30	1	56	31	0	11	32	6	0	27	81	24	1	15	25	9	0	1	318	319
17:45	4	50	18	0	15	28	11	0	52	91	32	3	11	29	15	1	4	356	360
Total	10	196	66	4	74	104	28	1	107	352	106	8	48	88	41	1	14	1220	1234
18:00	2	59	11	1	11	18	2	0	45	74	24	2	24	23	10	1	4	303	307
18:15	1	40	6	0	12	26	5	3	26	80	32	0	16	22	14	0	3	280	283
18:30	1	41	9	0	18	23	1	0	37	61	17	1	6	16	10	0	1	240	241
18:45	1	39	10	0	12	34	6	0	34	60	19	0	10	8	16	0	0	249	249
Total	5	179	36	1	53	101	14	3	142	275	92	3	56	69	50	1	8	1072	1080
19:00	3	50	23	0	8	16	3	0	42	41	18	1	6	13	45	0	1	268	269
19:15	3	50	21	0	7	10	2	0	28	43	21	0	17	27	65	0	0	294	294
19:30	3	39	5	1	13	22	0	0	22	52	11	1	13	21	13	0	2	214	216
19:45	0	35	2	0	8	20	1	0	27	34	19	0	9	22	11	0	0	188	188
Total	9	174	51	1	36	68	6	0	119	170	69	2	45	83	134	0	3	964	967
20:00	2	25	1	0	12	21	3	2	21	36	18	0	7	30	47	0	2	223	225
20:15	4	45	8	0	9	11	2	0	18	39	12	0	9	23	26	0	0	206	206
20:30	7	39	14	0	11	14	2	0	15	37	19	0	10	8	34	0	0	210	210
20:45	2	41	20	0	14	8	2	0	4	32	14	0	5	21	27	0	0	190	190
Total	15	150	43	0	46	54	9	2	58	144	63	0	31	82	134	0	2	829	831
21:00	0	37	4	0	16	9	1	0	6	24	16	0	11	11	20	0	0	155	155
21:15	1	21	6	1	7	10	2	0	6	38	10	0	3	18	29	1	2	151	153
21:30	1	39	0	1	14	6	0	0	6	32	13	0	4	12	29	1	2	156	158
21:45	1	22	2	1	10	6	1	0	6	26	14	0	1	10	6	0	1	105	106
Total	3	119	12	3	47	31	4	0	24	120	53	0	19	51	84	2	5	567	572
Grand Total	109	3130	446	128	1007	998	127	55	788	2691	979	128	459	884	777	49	360	12395	12755
Apprch %	3.0	84.9	12.1		47.2	46.8	6.0		17.7	60.4	22.0		21.7	41.7	36.7				
Total %	0.9	25.3	3.6		8.1	8.1	1.0		6.4	21.7	7.9		3.7	7.1	6.3		2.8	97.2	

Major Street Approaches:

Northbound:

CSAH 78 (Hanson Blvd)
 Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9915.war
 Count Type: IMC. Channel: 0. Count Date: 6/28/99
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 4458

Southbound:

CSAH 78 (Hanson Blvd)
 Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9915.war
 Count Type: IMC. Channel: 0. Count Date: 6/28/99
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 3685

Minor Street Approaches:

Eastbound:

CR 18 (Crosstown Blvd)
 Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9915.war
 Count Type: IMC. Channel: 0. Count Date: 6/28/99
 Number of Lanes: 1
 Approach Speed: 45
 Total Approach Traffic: 2120

Westbound:

CR 18 (Crosstown Blvd)
 Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9915.war
 Count Type: IMC. Channel: 0. Count Date: 6/28/99
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Traffic: 2132

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

Hour	Main (Total)	Side Vol.	Side Dir.	Side Rank	Warrant 1 Meets?	Warrant 1 Criteria	Warrant 2 Meets?	Warrant 2 Criteria	Warrant 8 Meets?	Warrant 8 Criteria
0	0	0	W	17		105		52		84
1	0	0	W	18		105		52		84
2	0	0	W	19		105		52		84
3	0	0	W	20		105		52		84
4	0	0	W	21		105		52		84
5	0	0	W	22		105		52		84
6	472	192	W	4	--BOTH--	105	SIDE	52	SIDE	84
7	528	159	W	6	--BOTH--	105	SIDE	52	--BOTH--	84
8	487	145	W	9	--BOTH--	105	SIDE	52	SIDE	84
9	408	95	E	16		105	SIDE	52	SIDE	84
10	383	113	W	14	SIDE	105	SIDE	52	SIDE	84
11	480	114	W	13	--BOTH--	105	SIDE	52	SIDE	84
12	381	112	W	15	SIDE	105	SIDE	52	SIDE	84
13	411	140	W	10	SIDE	105	SIDE	52	SIDE	84
14	399	116	W	12	SIDE	105	SIDE	52	SIDE	84
15	567	138	E	11	--BOTH--	105	SIDE	52	--BOTH--	84
16	665	157	E	7	--BOTH--	105	--BOTH--	52	--BOTH--	84
17	837	206	W	3	--BOTH--	105	--BOTH--	52	--BOTH--	84
18	729	175	E	5	--BOTH--	105	--BOTH--	52	--BOTH--	84
19	592	262	E	1	--BOTH--	105	SIDE	52	--BOTH--	84
20	473	247	E	2	--BOTH--	105	SIDE	52	SIDE	84
21	331	154	E	8	SIDE	105	SIDE	52	SIDE	84
22	0	0	W	23		105		52		84
23	0	0	W	24		105		52		84

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 10 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 3 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: 1220.

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

Warrant 9 - Four Hour Volumes

SATISFIED for 8 hours.

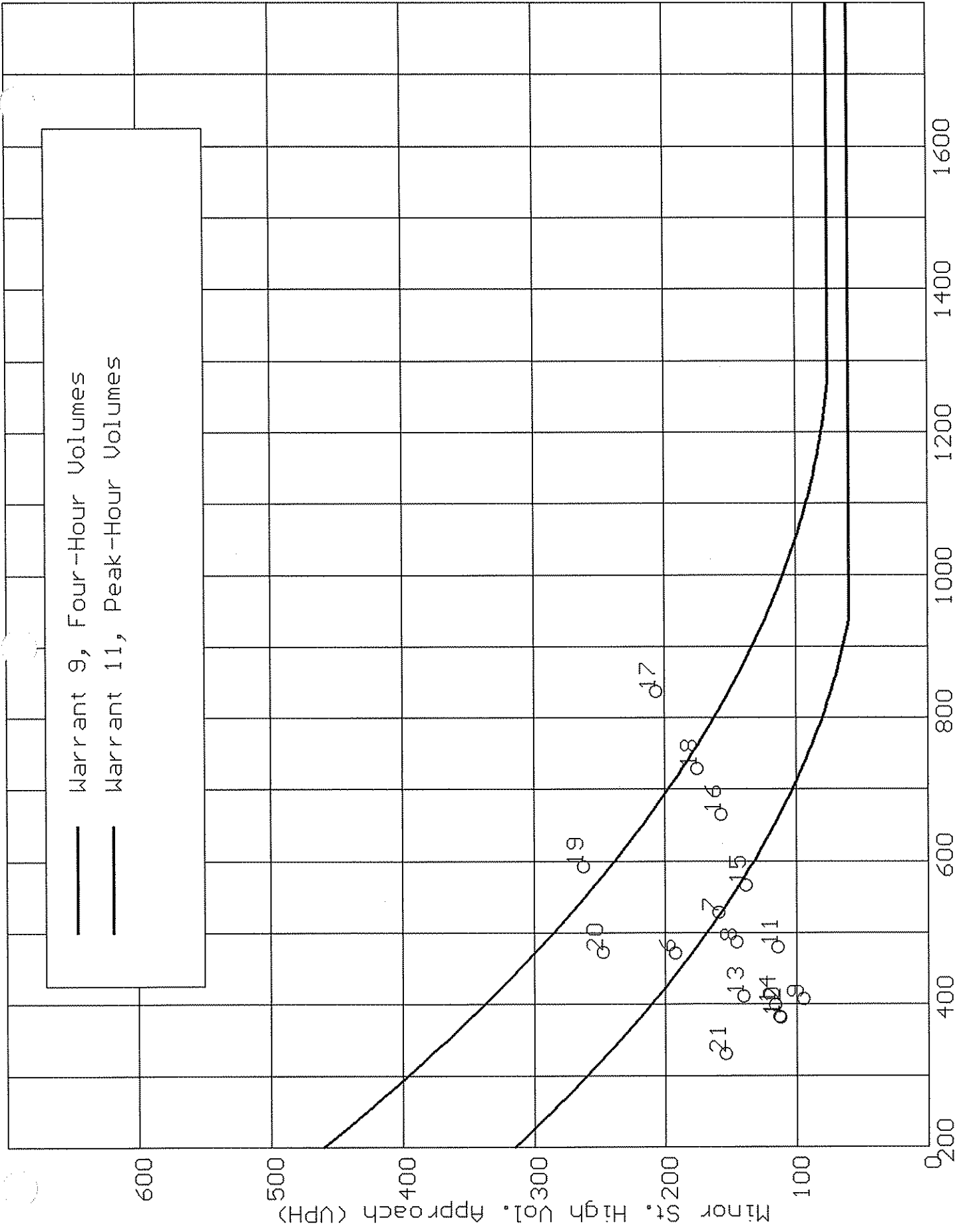
Warrant 10 - Peak Hour Delay

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

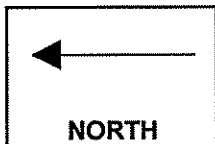
Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 100.

Warrant 11 - Peak Hour Volume

SATISFIED for 2 hours.



Major St. Total of Both Approaches (UPH)



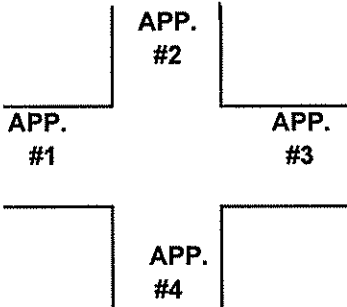
COUNT LOCATION:

CSAH 78 (Hanson Blvd) @
CR 18 (Crosstown Blvd)

DATE:

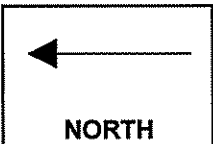
6/30/99

APP. #1= SB CSAH 78
(Hanson Blvd)
APP. #2 =WB CR 18
(Crosstown Blvd)
APP. #3=NB CSAH 78
(Hanson Blvd)
APP. #4=EB CR 18
(Crosstown 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.
 - 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	1				1	1		
6:30-6:45		2			2	4		1
6:45-7:00						3		1
HOURLY TOTAL					3	HOURLY TOTAL		11
7:00-7:15						8		3
7:15-7:30						6		
7:30-7:45						9		3
7:45-8:00						7		20
HOURLY TOTAL						HOURLY TOTAL		56
8:00-8:15						8		12
8:15-8:30						8		1
8:30-8:45						5		1
8:45-9:00						6		
HOURLY TOTAL						HOURLY TOTAL		41
9:00-9:15						6		
9:15-9:30						6		
9:30-9:45						1		
9:45-10:00						11		
HOURLY TOTAL						HOURLY TOTAL		24
10:00-10:15						8		
10:15-10:30			2		2	11		
10:30-10:45		1		1	2	9		
10:45-11:00						7		11
HOURLY TOTAL					4	HOURLY TOTAL		46
11:00-11:15						3		20
11:15-11:30		1			1	3	1	
11:30-11:45			1		1	3		2
11:45-12:00				2	2	4		4
HOURLY TOTAL					4	HOURLY TOTAL		40
12:00-12:15						7		
12:15-12:30		2	4		6	5	1	1
12:30-12:45						7		
12:45-1:00			1	1	2	5		
HOURLY TOTAL					8	HOURLY TOTAL		26
1:00-1:15						5		1
1:15-1:30	1	1			2	6		2
1:30-1:45			2	1	3	3		
1:45-2:00						12		
HOURLY TOTAL					5	HOURLY TOTAL		29



COUNT LOCATION:

CSAH 78 (Hanson Blvd) @
CR 18 (Crosstown Blvd)

DATE:

6/28/99

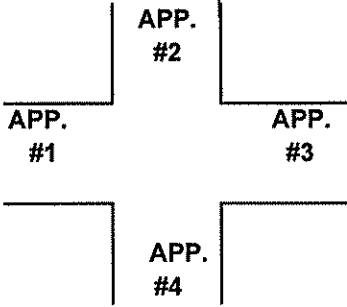
NORTH

APP. #1= SB CSAH 78
(Hanson Blvd)

APP. #2 =WB CR 18
(Crosstown Blvd)

APP. #3=NB CSAH 78
(Hanson Blvd)

APP. #4=EB CR 18
(Crosstown 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.
- 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		4	1		5	3		
2:15-2:30	2		3		5	4		
2:30-2:45		1			1	4		
2:45-3:00	1	1	1		3	4		1
HOURLY TOTAL					14	HOURLY TOTAL		16
3:00-3:15	3		2	1	6	3		
3:15-3:30	1	1			2	5	1	
3:30-3:45		1	1	1	3	3		1
3:45-4:00	1	1			2	1		
HOURLY TOTAL					13	HOURLY TOTAL		14
4:00-4:15						3		
4:15-4:30	2		1	1	4	4		
4:30-4:45						5		
4:45-5:00		1		2	3	1		
HOURLY TOTAL					7	HOURLY TOTAL		13
5:00-5:15			2		2	2		
5:15-5:30		1			1	5		1
5:30-5:45	2		1		3	1		
5:45-6:00		2		3	5	5		
HOURLY TOTAL					11	HOURLY TOTAL		14
6:00-6:15		1	1	2	4	1		2
6:15-6:30	1		1		2	3		
6:30-6:45		1	1		2			1
6:45-7:00	1			1	2			
HOURLY TOTAL					10	HOURLY TOTAL		7
7:00-7:15						1		
7:15-7:30								
7:30-7:45						1		
7:45-8:00								
HOURLY TOTAL						HOURLY TOTAL		2
8:00-8:15						1		
8:15-8:30								
8:30-8:45						1		
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		2
9:00-9:15								
9:15-9:30						1		
9:30-9:45						1		
9:45-10:00						1		
HOURLY TOTAL						HOURLY TOTAL		3